**IN THE UNITED STATES DISTRICT COURT**
**FOR THE EASTERN DISTRICT OF TEXAS**
**MARSHALL DIVISION**

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| **KEYLESS LICENSING LLC,**<br>Plaintiff,<br><br>v.<br><br>**SAMSUNG ELECTRONICS AMERICA, INC. AND SAMSUNG ELECTRONICS CO., LTD.**<br>Defendants. | **Case No. 2:24-CV-00464-JRG**<br><br>**Jury Trial Demanded** |

# DEFENDANTS' INVALIDITY CONTENTIONS

Pursuant to Local Patent Rules 3-3 and 3-4 and the Court's Docket Control Order (Dkt. 43), Defendants Samsung Electronics Co., Ltd. ("SEC") and Samsung Electronics America, Inc. ("SEA") (collectively, "Defendants") provide these Preliminary Invalidity Contentions and accompanying document production to Plaintiff Keyless Licensing LLC ("Plaintiff").

## I. Overview

In this action, Plaintiff asserted in its P.R. 3-1 and 3-2 Disclosures of October 9, 2024 ("Infringement Contentions") that Defendants infringe claims 1-13, 15-19, and 21-36 of U.S. Patent No. 9,304,602 (the "'602 Patent"), claims 1-21 of U.S. Patent No. 10,976,922 (the "'922 Patent"), and claims 1-5 and 7-20 of U.S. Patent No. 11,503,144 (the "'144 Patent") (collectively, the "Patents-in-Suit" and the "Asserted Claims").

This Court has not yet construed any of the terms in the Patents-in-Suit. Defendants' Invalidity Contentions are based on Defendants' present understanding of Plaintiff's apparent interpretation of the Asserted Claims, as advanced by Plaintiff in its Complaint and Infringement Contentions, and Defendants' own understanding of the scope of the Asserted Claims. Defendants



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take no position on any matter of claim construction or interpretation in these contentions. Defendants' contentions herein are not, and should in no way be seen as, admissions about or adoptions of any particular claim scope or construction, or as any admission that any particular element is met in any particular way. Defendants object to any attempt to imply claim constructions from any identification or application of potential prior art. Any statement herein describing or tending to describe any claim element is provided solely for the purpose of understanding the relevant prior art. By including prior art that anticipates or renders obvious claims based on Plaintiff's apparent claim construction, Defendants do not thereby adopt Plaintiff's apparent claim construction.

Moreover, nothing herein should be construed as an admission that Defendants agree with Plaintiff's claim interpretations or that Plaintiff has a plausible basis to allege infringement. Similarly, nothing herein shall be construed as an admission regarding the application of the Asserted Claims to any of Defendants' accused products. Defendants do not agree with Plaintiff's application of the claims to the accused products, and Defendants deny infringement. Furthermore, these contentions do not represent an agreement with Plaintiff's views as to the meaning, definiteness, written description support for, or enablement of any of the Asserted Claims. In fact, Defendants provide grounds for invalidity under § 112 below. Pursuant to the Court's Docket Control Order (Dkt. 43), Defendants reserve the right to include arguments directed to indefiniteness in their *Markman* briefing. Nothing stated herein shall be construed as a waiver of any argument available under 35 U.S.C. §§ 101, 102, 103, and/or 112. Defendants expressly reserve the right to propose alternative interpretations to those advocated by Plaintiff and to rebut Plaintiff's actual claim interpretation and infringement positions. Defendants reserve the right to modify or supplement these contentions in response to the Court's construction of the claim terms at issue.

Prior art not included in this disclosure may also become relevant. Defendants are currently unaware of the extent, if any, to which Plaintiff may contend that certain limitations of the Asserted

Claims are not disclosed in the prior art identified by Defendants. Defendants reserve the right to identify other relevant prior art with respect to such allegedly missing limitation(s).

Defendants' invalidity claim charts attached hereto cite to exemplary portions, teachings, and disclosures of the prior art as applied to limitations of the Asserted Claims. Persons skilled in the art, however, would recognize these as exemplary and may view an item of prior art in the context of other publications, literature, products, and understanding. Again, this is because the cited portions of prior art identified herein are exemplary only. The citations and discussion in the charts are organized by claim (and claim limitation) for convenience, but each limitation or claim section applies to the larger context of each claim, to any related dependent or independent claims, as well as all claims containing similar limitations or elements in the particular Patent-in-Suit or other related patents also being asserted by Plaintiff. For example, citations as to any recited limitation, step, or component in the claims apply wherever each such limitation, step, or component is repeated elsewhere in the claim of that patent or other related patent also being asserted by Plaintiff. Any and all citations to particular figures in the attached charts or elsewhere in these contentions shall be deemed to wholly incorporate the figure by reference, and include the figure as if it had been inserted into the chart itself, as well as any text discussing the figure. Similarly, where Defendants cite to particular text in a prior art reference concerning a drawing or figure, the citation encompasses that drawing or figure as well as any other associated information in the prior art reference. Defendants may therefore rely on the entirety of the prior art references listed herein, including uncited portions of those prior art references, as well as additional information including products, documents, materials, and expert testimony.

The references cited herein disclose the limitations of the Asserted Claims explicitly or inherently, and/or they may be relied upon to demonstrate how the state of the art in the relevant time frame invalidates each Asserted Claim. In the context of the knowledge of a person of ordinary skill

in the art, each reference's disclosure applies in the context of both anticipation and obviousness. Therefore, any suggested single reference obviousness positions and obviousness combinations are provided in the alternative to Defendants' anticipation contentions and are not to be construed to suggest that any reference included in the combinations is somehow deficient or is not by itself anticipatory. Further, the combinations listed herein are exemplary and not exhaustive. There are many possible invalidating combinations of the references listed herein, and it is not practical, at this early stage, to identify and list all potentially relevant combinations without the benefit of further factual investigation and the Court's claim construction.

In addition to the positions and prior art identified below, and the accompanying invalidity claim charts, Defendants also incorporate by reference all invalidity contentions, prior art, and invalidity claim charts (including, without limitation, all anticipation positions, obviousness positions (including all prior art combinations and motivations to combine), indefiniteness positions, written description positions, and enablement positions) that have been or will be disclosed in any other action involving the Patents-in-Suit, including but not limited to any U.S. Patent and Trademark Office (USPTO) proceeding involving the Patents-in-Suit and that have or will be disclosed in any pending USPTO proceeding involving related patents. Such art and positions would have been obvious to combine with the prior art and combinations identified in these Invalidity Contentions. To the extent Plaintiff or the Board puts forth an argument in any USPTO proceedings contrary to the positions in the litigation, Defendants reserve the right to raise and/or address such argument or position in this litigation.

Defendants expect to rely on testimony of one or more expert witnesses and materials referenced by those expert witnesses in support of these contentions and incorporate those forthcoming expert reports as if fully set forth herein. Subsequent expert statements—including deposition and trial testimony, declarations, and reports—related to invalidity, interrogatory

responses, and other discovery or pleadings may expand and elaborate upon the positions contained in these Invalidity Contentions as originally prepared or subsequently amended, and Defendants reserve the right to incorporate such by reference. Defendants may further rely on any inventor admissions concerning the scope of the prior art relevant to the Patents-in-Suit found in, *inter alia*: the patent prosecution histories for the Patents-in-Suit and related patents, patent applications, and/or re-examinations; deposition testimony of the named inventor on the Patents-in-Suit; and the papers and any evidence submitted by Plaintiff in these actions.

Discovery has only just begun, and Defendants' investigation into prior art—including third-party prior art, and related evidence, documents, and knowledgeable witnesses—remains ongoing. Moreover, prior art may become relevant depending on the claim interpretations and/or validity positions Plaintiff or its expert witness(es) may assert, Defendants' further understanding of Plaintiff's Infringement Contentions, and any findings as to the priority date of the Asserted Claims. Accordingly, Defendants reserve the right to supplement or modify these Invalidity Contentions based on further discovery and in a manner consistent with the Federal Rules of Civil Procedure and the Court's rules and schedule. To the extent Plaintiff contends that any prior art presented in these contentions does not qualify as prior art to one or more Patents-in-Suit, the prior art remains relevant as evidence of simultaneous development as a secondary consideration of obviousness. *See George M. Martin Co. v. Alliance Mach. Sys. Int'l LLC,* 618 F.3d 1294, 1305 (Fed. Cir. 2010) ("Independently made, simultaneous inventions, made within a comparatively short space of time, are persuasive evidence that the claimed apparatus was the product only of ordinary mechanical or engineering skill.").

As set forth in detail below, and in the claim charts which accompany these Invalidity Contentions as exhibits A1-A8, B1-B7, and C1-C12, the Asserted Claims of the Patents-in-Suit are invalid over the cited prior art listed below under either pre-AIA 35 U.S.C. §§ 102 and/or 103 and/or

their post-AIA counterparts depending on the Patent-in-Suit. Regarding the obviousness of certain claims under 35 U.S.C. § 103, one or more of the principles enumerated by the United States Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) apply to the Asserted Claims of the Patents-in-Suit, including, for example:

(a) combining various claimed elements known in the prior art according to known methods to yield a predictable result;

(b) making a simple substitution of one or more known elements for another to obtain a predictable result;

(c) using a known technique to improve a similar device or method in the same way;

(d) applying a known technique, known device or method ready for improvement to yield a predictable result;

(e) choosing from a finite number of identified, predictable solutions with a reasonable expectation of success or, in other words, the solution was one which was "obvious to try;

(f) a known work in one field of endeavor prompting variations of it for use either in the same field or a different based on given design incentives or other market forces in which the variations were predictable to one of ordinary skill in the art; and/or

(g) a teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art reference or to combine the teachings of various prior art references to arrive at the claimed invention.

The above criteria may be collectively referred to herein as the "*KSR* Criteria."

Based on these considerations, as further detailed below and/or in the attached exhibits, one of ordinary skill in the art would have combined the teachings of the prior art references discussed and charted in those exhibits. The combinations of these references would have rendered obvious to

one of ordinary skill in the art the subject matter of the Asserted Claims. The references identified in the attached exhibits for the respective Asserted Claims are analogous prior art to the subject matter of the Asserted Claims and, for at least the reasons set forth below and/or in the claim chart exhibits, are properly combinable. Because these prior art references exist within a single field of art, particularly one in which individuals in the field often shared and/or collaborated on their work, it would have been obvious for one of ordinary skill in the art to look from one piece of prior art to another in order to find any missing functionality they desired to implement. Therefore, these references provide interrelated teachings and one of ordinary skill would have looked to the concepts in any of these references when seeking to solve the problems purportedly addressed by the Patents-in-Suit.

Numerous prior art references, including in the attached exhibits, reflect common knowledge and the state of the prior art before the earliest effective priority date of the Patents-in-Suit. As it would be unduly burdensome to create detailed claim charts for all of the invalidating combinations, for at least the reasons described in these Invalidity Contentions, it would have been obvious to one of ordinary skill in the art to combine any of a number of prior art references, including any combination of those identified in the attached exhibits, to meet the limitations of the Asserted Claims. Defendants' inclusion of exemplary combinations, in view of the factors and motivations identified here, does not preclude Defendants from identifying other invalidating combinations and/or motivations as appropriate.

No showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, because each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of ordinary skill in the art. *See KSR*, 500 U.S. at 415-17 (rejecting the Federal Circuit's "rigid" application of the teaching, suggestion, or motivation to combine test, instead espousing an "expansive and flexible"

approach). That said, the Supreme Court's rationale, that a person of ordinary skill in the art is "a person of ordinary creativity, not an automaton" and "in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle," applies equally here. *Id.* at 420-21.

Additional evidence that there would have been a motivation or reason to combine the prior art references identified herein includes but is not limited to the interrelated teachings of multiple prior art references; the effects of demands known to the design community or present in the marketplace; the existence of a known problem for which there was an obvious solution; the existence of a known need or problem in the field of endeavor at the time of the alleged inventions; and the background knowledge that would have been possessed by one of ordinary skill in the art. For example, the prior art references are generally directed to the same problems. Thus, a skilled artisan seeking to solve these problems would look to these cited references in combination.

Defendants contend there are no secondary considerations of non-obviousness evidencing the validity of any of the Asserted Claims. If Plaintiff presents any alleged evidence of secondary considerations of non-obviousness, Defendants reserve their right to respond to any such alleged evidence. Further, to the extent Plaintiff identifies any product as allegedly practicing the claims and having been successful, there is no nexus between the claimed invention and the products' success and Defendants reserve their right to respond to any such alleged evidence.

## II. P.R. 3-3(a): Identification of Prior Art

Pursuant to Patent Rule 3-3 and subject to Defendants' reservations of rights in these Invalidity Contentions, Defendants identify the following prior art that anticipates and/or renders obvious one or more Asserted Claims of the Patents-in-Suit as detailed in the claim chart exhibits and elsewhere in these Invalidity Contentions. Below are tables identifying individual items of prior art. The prior art references, systems, and products listed below and in the accompanying claim chart

exhibits may be relied upon for certain limitations, state of the art, and background of the art; as evidence of the level of skill in the art at the time of the filing of the Patents-in-Suit; or in support of assertions that it is proper to combine certain prior art references in certain ways.

Defendants also incorporate by reference each and every prior art reference of record in the prosecution of the Patents-in-Suit and patents or patent applications related to the Patents-in-Suit, as well as the prior art referred to in the specifications of the Patents-in-Suit. In these Invalidity Contentions, Defendants have identified each item of prior art, based on currently available information, including:

(1) each patent, constituting prior art under pre-AIA 35 U.S.C. §§ 102(a), (b), and/or (e) or under AIA 35 U.S.C. §§ 102(a)(1) and/or (a)(2), by its patent number, country of origin, and date of issue;

(2) each non-patent publication, constituting prior art under pre-AIA 35 U.S.C. §§ 102(a) and/or (b) or under AIA 35 U.S.C. §§ 102(a)(1) and/or (a)(2), by its title, date of publication, and, where feasible, author and publisher;

(3) sales or public disclosures, constituting prior art under pre-AIA 35 U.S.C. § 102(a) and/or (b) or under AIA 35 U.S.C. § 102(a)(1), by the item offered for sale or publicly used or known, the date the offer or use took place or the information became known, and the identity of the person or entity which made the use or which made and received the offer, or the person or entity which made the information known or to whom it was made known;

(4) prior art under pre-AIA 35 U.S.C. § 102(f), by the name of the person(s) from whom and the circumstances under which the invention or any part of it was derived; and

(5) prior art under pre-AIA 35 U.S.C. § 102(g), by the identities of the person(s) or entities involved in and the circumstances surrounding the making of the invention before the patent applicant(s).

Defendants' identification of patents and publications as prior art herein and in the attached invalidity claim charts includes the publications themselves as well as the use of the products and systems described therein. Defendants' investigation continues, but information available to date indicates that such products and systems were (1) known or used in the country before the alleged invention(s) of the claimed subject matter of the Asserted Claims, (2) were in public use and/or on sale in this country more than one year before the filing date of the Patents-in-Suit, and/or (3) were invented by another who did not abandon, suppress, or conceal, before the alleged invention(s) of the claimed subject matter of the Asserted Claims. Upon information and belief, these prior art products and systems and their associated references anticipate and/or render obvious one or more of the Asserted Claims of the Patents-in-Suit.

**A. Prior Art Patents, Patent Applications, and Publications**

**Table 1: Prior Art Patents and Patent Applications**

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 2008/0207188 A1 | Feb. 14, 2008 | Aug. 28, 2008 | H.S. Ahn et al. | SAM-KEY_00979955 | SAM-KEY_00979994 |
| US | 2012/0215533 A1 | Jan. 25, 2012 | Aug. 23, 2012 | M. Aravamudan et al. | SAM-KEY_00982179 | SAM-KEY_00982191 |
| US | 2011/0202836 A1 | May 20, 2010 | Aug.18, 2011 | E. Badger et al. | SAM-KEY_00982192 | SAM-KEY_00982224 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 9,165,257 B2 | May 20, 2010 | Oct. 20, 2015 | E. Badger et al. | SAM-KEY_00982225 | SAM-KEY_00982260 |
| US | 2011/0187674 A1 | Feb. 3, 2011 | Aug. 4, 2011 | J. Baker et al. | SAM-KEY_00982261 | SAM-KEY_00982268 |
| EP | 0425291 A1 | Oct. 25, 1990 | May 2, 1991 | J. T. Beran | SAM-KEY_00982298 | SAM-KEY_00982329 |
| EP | 0425291 A2 | Oct. 25, 1990 | May 2, 1991 | J, Beran et al. | SAM-KEY_00982298 | SAM-KEY_00982329 |
| US | 2010/0164959 A1 | Dec. 26, 2008 | July 1, 2010 | C. T. Brown et al. | SAM-KEY_00982330 | SAM-KEY_00982339 |
| US | 2010/0164959 A1 | Dec. 26, 2008 | July 1. 2010 | C. Brown et al. | SAM-KEY_00982330 | SAM-KEY_00982339 |
| US | 7,657,849 B2 | Dec. 23, 2005 | Feb. 2, 2010 | I. Chaudhri et al. | SAM-KEY_00982342 | SAM-KEY_00982372 |
| US | 2010/0060585 A1 | Aug. 18, 2009 | Mar. 11, 2010 | H.C. Chiu | SAM-KEY_00982373 | SAM-KEY_00982402 |
| US | 2010/0192102 A1 | Jan. 29, 2009 | Jan. 29, 2010 | P. Chmielewski et al. | SAM-KEY_00982403 | SAM-KEY_00982434 |
| US | 2009/0322695 A1 | June 16, 2009 | Dec. 31, 2009 | S. Cho et al. | SAM-KEY_00982435 | SAM-KEY_00982467 |
| US | 2011/0191717 A1 | Sept. 3, 2010 | Aug. 4, 2011 | F. Cort et al. | SAM-KEY_00982468 | SAM-KEY_00982498 |
| DE | 10122229 A1 | May 8, 2001 | Dec. 13, 2001 | R. Dutta | SAM-KEY_00982515<br><br>SAM- | SAM-KEY_00982520<br><br>SAM- |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| | | | | | KEY_00989594<br><br>SAM-KEY_00982509 | KEY_00989594<br><br>SAM-KEY_00982514 |
| EP | 1229428 A1 | Feb. 2, 2001 | Aug. 7, 2002 | T. Pensjo | SAM-KEY_00982531 | SAM-KEY_00982538 |
| EP | 1336949 A1 | Feb. 18, 2003 | Aug. 20, 2003 | C. De Bast | SAM-KEY_00982539<br><br>SAM-KEY_00982340<br><br>SAM-KEY_00982550 | SAM-KEY_00982549<br><br>SAM-KEY_00982340<br><br>SAM-KEY_00982550 |
| FR | 2830093 | Sept. 25, 2001 | Mar. 28, 2003 | C. Benoit et al. | SAM-KEY_00982563<br><br>SAM-KEY_00982341<br><br>SAM-KEY_00982574 | SAM-KEY_00982573<br><br>SAM-KEY_00982341<br><br>SAM-KEY_00982584 |
| US | 2004/0212617 A1 | Dec. 31, 2003 | Oct. 28, 2004 | G. Fitzmaurice et al. | SAM-KEY_00982585 | SAM-KEY_00982612 |
| GB | 2331204 | Nov. 5, 1998 | May 12, 1999 | F. Kobayashi | SAM-KEY_00982626 | SAM-KEY_00982677 |
| US | 2011/0169749 A1 | Jan. 13, 2010 | July 14, 2011 | H. Ganey et al. | SAM-KEY_00982765 | SAM-KEY_00982779 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 2006/0209040 | Mar. 18, 2005 | Sept. 21, 2006 | A.J. Garside et al. | SAM-KEY_00982780 | SAM-KEY_00982808 |
| US | 2004/0109013 A1 | Dec. 10, 2002 | June 10, 2004 | M. Goertz | SAM-KEY_00982809 | SAM-KEY_00982818 |
| US | 8,095,879 B2 | Dec. 10, 2002 | Jan. 10, 2012 | M. Goertz | SAM-KEY_00982819 | SAM-KEY_00982828 |
| US | 2013/0234945 A1 | Mar. 5, 2013 | Sept. 12, 2013 | C. Goktekin | SAM-KEY_00982829 | SAM-KEY_00982840 |
| US | 2011/0209093 A1 | Feb. 19, 2010 | Aug. 25, 2011 | K. P. Hinckley et al. | SAM-KEY_00983067 | SAM-KEY_00983112 |
| US | 2011/0209099 A1 | Feb. 19, 2010 | Aug. 25, 2011 | K. Hinckley et al. | SAM-KEY_00983113 | SAM-KEY_00983158 |
| JP | 2003-195998 | Dec. 26, 2001 | July 11, 2003 | T. Hisatomi | SAM-KEY_00983159<br><br>SAM-KEY_00983221 | SAM-KEY_00983220<br><br>SAM-KEY_00983259 |
| US | 2006/0278714 A1 | June 13, 2006 | Dec. 14, 2006 | D. Ho et al. | SAM-KEY_00983260 | SAM-KEY_00983270 |
| US | 2007/0089069 A1 | Aug. 3, 2006 | April 19, 2007 | K. Hsieh et al. | SAM-KEY_00983271 | SAM-KEY_00983286 |
| US | 8,806,364 B2 | April 7, 2009 | Aug. 12, 2014 | H. Hwang | SAM-KEY_00983287 | SAM-KEY_00983326 |
| US | 2010/0013780 A1 | June 19, 2009 | Jan. 21, 2010 | T. Ikeda et al. | SAM-KEY_00983327 | SAM-KEY_00983401 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| JP | JP2000-151774A | Nov. 9, 1998 | May 30, 2000 | T. Yamaguchi | SAM-KEY_00983402<br><br>SAM-KEY_00989595<br><br>SAM-KEY_00983408 | SAM-KEY_00983407<br><br>SAM-KEY_00989595<br><br>SAM-KEY_00983413 |
| KR | 2009-0002545 | July 2, 2007 | Jan. 9, 2009 | G. Jeon et al. | SAM-KEY_00983414<br><br>SAM-KEY_00991870 | SAM-KEY_00983429<br><br>SAM-KEY_00991902 |
| US | 2009/0094562 A1 | Oct. 3, 2008 | April 9, 2009 | K. Jeong et al. | SAM-KEY_00983431 | SAM-KEY_00983453 |
| US | 8,564,544 B2 | Sept. 5, 2007 | Oct. 22, 2013 | S. Jobs et al. | SAM-KEY_00983454 | SAM-KEY_00983822 |
| KR | 2010-0029026 | Aug. 17, 2009 | Mar. 15, 2010 | C. Chiu | SAM-KEY_00983823 | SAM-KEY_00983845 |
| KR | 2012-0062971 | Dec. 7, 2010 | June 15, 2012 | H. Kim et al. | SAM-KEY_00983848<br><br>SAM-KEY_00993380 | SAM-KEY_00983891<br><br>SAM-KEY_00993423 |
| US | 2008/0158189 A1 | Nov. 8, 2007 | July 3, 2008 | S. Kim | SAM-KEY_00983894 | SAM-KEY_00983907 |
| US | 2008/0163119 A1 | Aug. 28, 2007 | July 3, 2008 | H, Kim et al. | SAM-KEY_00983908 | SAM-KEY_00983930 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 2009/0228820 A1 | Dec. 30, 2008 | Sept. 10, 2009 | S. Hwa et al. | SAM-KEY_00983931 | SAM-KEY_00983971 |
| US | 2006/0045374 A1 | Aug. 30, 2005 | Mar. 2, 2006 | Y. Kim et al. | SAM-KEY_00983972 | SAM-KEY_00983992 |
| US | 2010/0008582 A1 | July 9. 2009 | Jan. 14, 2010 | S. Kim et al. | SAM-KEY_00983993 | SAM-KEY_00984029 |
| US | 8,170,620 B2 | April 30, 2009 | May 1, 2012 | H. Kim | SAM-KEY_00984030 | SAM-KEY_00984054 |
| US | 8,625,899 B2 | July 9, 2009 | Jan. 7, 2014 | S. Kim et al. | SAM-KEY_00984055 | SAM-KEY_00984090 |
| US | 8,005,720 B2 | Aug.18, 2005 | Aug. 23, 2011 | M. King et al. | SAM-KEY_00984091 | SAM-KEY_00984142 |
| US | 2012/0113023 A1 | Mar. 30, 2011 | May 10, 2012 | J. Koch et al. | SAM-KEY_00984143 | SAM-KEY_00984276 |
| US | 8,547,354 B2 | Mar. 30, 2011 | Oct.1, 2013 | J. Koch et al. | SAM-KEY_00984277 | SAM-KEY_00984411 |
| US | 2013/0187861 A1 | Jan. 19, 2012 | July 25, 2013 | J. Lavallee | SAM-KEY_00984412 | SAM-KEY_00984441 |
| US | 2013/0187861 A1 | Jan. 19, 2012 | July 25, 2013 | J. Lavallee | SAM-KEY_00984412 | SAM-KEY_00984441 |
| US | 2013/0318467 A1 | Aug. 9, 2013 | Nov. 28, 2013 | B. Lee et al. | SAM-KEY_00984442 | SAM-KEY_00984471 |
| US | 2010/0131880 A1 | Dec. 1, 2008 | May 27, 2010 | S. Lee et al. | SAM-KEY_00984472 | SAM-KEY_00984493 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 2005/0169527 A1 | Dec. 20, 2004 | Aug. 4, 2005 | M. Longe et al. | SAM-KEY_00984494 | SAM-KEY_00984548 |
| US | 5,933,525 | April 10, 1996 | Aug. 3, 1999 | J. Makhoul et al. | SAM-KEY_00984549 | SAM-KEY_00984564 |
| US | 5,933,525 | April 10, 1996 | Aug. 3, 1999 | J. Makhoul et al. | SAM-KEY_00984549 | SAM-KEY_00984564 |
| US | 2009/0288044 A1 | May 19, 2008 | Nov. 19, 2009 | D. Matthews et al. | SAM-KEY_00984565 | SAM-KEY_00984582 |
| US | 7,340,686 B2 | Mar. 22, 2005 | Mar. 4, 2008 | D. Matthews et al. | SAM-KEY_00984583 | SAM-KEY_00984606 |
| US | 8,584,031 B2 | Nov. 19, 2008 | Nov. 12, 2013 | B. Moore et al. | SAM-KEY_00984616 | SAM-KEY_00984697 |
| US | 2004/0100479 | May 9, 2003 | May 27, 2004 | M. Nakano et al. | SAM-KEY_00984701 | SAM-KEY_00984786 |
| KR | 2009-0122010 | May 23, 2008 | Nov. 26, 2009 | S. Park et al. | SAM-KEY_00986134<br><br>SAM-KEY_00993848 | SAM-KEY_00986152<br><br>SAM-KEY_00993866 |
| US | 2009/0315836 A1 | June 24, 2008 | Dec. 24, 2009 | P. Pihlaja | SAM-KEY_00986153 | SAM-KEY_00986166 |
| US | 8,249,347 B1 | May 19, 2011 | Aug. 21, 2012 | G.D. Ramkumar et al. | SAM-KEY_00986682 | SAM-KEY_00986693 |
| US | 8,249,347 B1 | May 19, 2011 | Aug. 21, 2012 | G. Ramkumar et al. | SAM-KEY_00986682 | SAM-KEY_00986693 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 8,571,862 B2 | Oct.13, 2009 | Oct. 29, 2013 | A. Rao et al. | SAM-KEY_00986694 | SAM-KEY_00986740 |
| US | 2013/0120595 A1 | June 19, 2012 | May 16, 2013 | J.J. Roach et al. | SAM-KEY_00986741 | SAM-KEY_00986829 |
| US | 2013/0120595 A1 | June 19, 2012 | May 16, 2013 | J. Roach et al. | SAM-KEY_00986741 | SAM-KEY_00986829 |
| US | 9,250,797 B2 | Sept. 30, 2008 | Feb. 2, 2016 | B. Roberts et al, | SAM-KEY_00986830 | SAM-KEY_00986861 |
| US | 2010/0050076 A1 | Aug. 29, 2008 | Feb. 25, 2010 | V. Roth | SAM-KEY_00986872 | SAM-KEY_00986885 |
| US | 2010/0088597 A1 | Sept. 29, 2009 | April 8, 2010 | S. Shin et al. | SAM-KEY_00987795 | SAM-KEY_00987833 |
| US | 8,788,964 B2 | Oct. 19, 2009 | July 22, 2014 | S. Shin et al. | SAM-KEY_00987834 | SAM-KEY_00987866 |
| US | 61/389,000 | Sept. 28, 2011 | May 3, 2012 | S. Sirpal et al. | SAM-KEY_00987912 | SAM-KEY_00988168 |
| US | 61/389,087 | Oct. 1, 2010 | | S. Sirpal et al. | SAM-KEY_00988169 | SAM-KEY_00988231 |
| US | 61/389,117 | Oct. 1, 2010 | | C. Reeves et al. | SAM-KEY_00988232 | SAM-KEY_00988375 |
| US | 61/458,150 | Nov. 17, 2010 | | P. Webber | SAM-KEY_00988376 | SAM-KEY_00988606 |
| US | 61/539,884 | Sept. 27, 2011 | | D. Burton et al. | SAM-KEY_00988607 | SAM-KEY_00989111 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 2012/0110486 | Sept. 28, 2011 | May 3, 2012 | S. Sirpal et al. | SAM-KEY_00989112 | SAM-KEY_00989149 |
| US | 8,832,577 B2 | Sept. 28, 2011 | Sept. 9, 2014 | S. Sirpal et al. | SAM-KEY_00989150 | SAM-KEY_00989188 |
| WO | 2012/044782 A1 | Sept. 29, 2011 | April 5, 2012 | S. Sirpal et al. | SAM-KEY_00989189 | SAM-KEY_00989255 |
| US | 8,200,247 B1 | Feb. 8, 2010 | June 12, 2012 | V. Starenky et al. | SAM-KEY_00989256 | SAM-KEY_00989283 |
| US | 9,588,674 B2 | Nov. 30, 2012 | Mar. 7, 2017 | P. Strutin-Belinoff et al. | SAM-KEY_00989284 | SAM-KEY_00989294 |
| US | 7,917,286 B2 | Dec. 16, 2005 | Mar. 29, 2011 | B. Taylor et al. | SAM-KEY_00989408 | SAM-KEY_00989424 |
| US | 9,933,938 B1 | June 16, 2015 | April 3, 2018 | A. Tse et al. | SAM-KEY_00989596 | SAM-KEY_00989629 |
| US | 2009/0249247 A1 | Jan. 30, 2009 | Oct. 1, 2009 | E. Tseng et al. | SAM-KEY_00989630 | SAM-KEY_00989657 |
| US | 2011/0157029 A1 | Dec. 31, 2009 | June 30, 2011 | E. Tseng | SAM-KEY_00989658 | SAM-KEY_00989682 |
| WO | 2009/097555 A2 | Jan. 30, 2009 | Aug. 6, 2009 | E. Tseng et al. | SAM-KEY_00989683 | SAM-KEY_00989756 |
| US | 2002/0067346 A1 | Sept. 21, 2001 | June 6, 2002 | E. Mouton | SAM-KEY_00989757 | SAM-KEY_00989763 |
| US | 2003/0022701 A1 | July 25, 2001 | Jan. 30, 2003 | A. Gupta | SAM-KEY_00989764 | SAM-KEY_00989775 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 2011/0161845 A1 | Dec. 31, 2009 | June 30, 2011 | E. Stallings et al. | SAM-KEY_00989776 | SAM-KEY_00989795 |
| US | 5,848,356 | Oct. 2, 1995 | Dec. 8, 1998 | S. Jambhekar et al. | SAM-KEY_00989796 | SAM-KEY_00989821 |
| US | 6,751,487 | Feb. 8, 2000 | June 15, 2004 | N. Rydbeck et al. | SAM-KEY_00989822 | SAM-KEY_00989837 |
| US | 2011/0161852 A1 | Dec. 31, 2009 | June 30, 2011 | J. Vainio et al. | SAM-KEY_00989920 | SAM-KEY_00989948 |
| US | 2010/0105443 A1 | Nov. 10, 2009 | April 29, 2010 | M. Vaisanen | SAM-KEY_00989949 | SAM-KEY_00989974 |
| US | 2010/0107067 A1 | Oct. 27, 2008 | April 29, 2010 | M. Vaisanen | SAM-KEY_00989975 | SAM-KEY_00989985 |
| US | 6,359,572 B1 | Sept. 3, 1998 | Mar. 19, 2002 | P. Vale | SAM-KEY_00989986 | SAM-KEY_00990009 |
| US | 2013/0039570 A1 | Sept. 15, 2012 | Feb. 14, 2013 | L. Vincent et al. | SAM-KEY_00990010 | SAM-KEY_00990028 |
| US | 8,744,173 B2 | Sept. 15, 2012 | June 3, 2014 | L. Vicent et al. | SAM-KEY_00990029 | SAM-KEY_00990050 |
| WO | 2004/070871 | Feb. 4, 2004 | Aug. 19, 2004 | M. Wedel et al. | SAM-KEY_00990051 | SAM-KEY_00990076 |
| US | 2013/0050102 A1 | Nov. 28, 2011 | Feb. 28, 2013 | N. Wang et al. | SAM-KEY_00990077 | SAM-KEY_00990083 |
| US | 2010/0302172 A1 | May 27, 2009 | Dec. 2, 2010 | W. Wilairat | SAM-KEY_00990087 | SAM-KEY_00990096 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 10,198,163 B2 | June 6, 2013 | Feb. 5, 2019 | M. Yabuki | SAM-KEY_00990097 | SAM-KEY_00990121 |
| WO | 2013/183722 A1 | June 6, 2013 | Dec. 12, 2013 | M. Yabuki | SAM-KEY_00990122<br><br>SAM-KEY_00992545 | SAM-KEY_00990161<br><br>SAM-KEY_00992621 |
| US | 2009/0295750 A1 | May 27, 2009 | Dec. 3, 2009 | H. Yamazaki et al. | SAM-KEY_00990162 | SAM-KEY_00990182 |
| TW | 2012484489 A1 | May 31, 2011 | Dec. 1, 2012 | Z. Zhuang | SAM-KEY_00990210<br><br>SAM-KEY_00992494 | SAM-KEY_00990234<br><br>SAM-KEY_00992544 |
| US | 9,916,081 | Feb. 1, 2013 | 13-Mar-18 | J. Zhu et al. | SAM-KEY_00990183 | SAM-KEY_00990209 |
| EP | 1445823 | Oct. 2, 2003 | Nov. 8, 2004 | M. Wedel et al. | SAM-KEY_00991834 | SAM-KEY_00991849 |
| US | 2015/0088923 A1 | Sept. 23, 2010 | Mar. 26, 2015 | L. Garcia-Barrio et al. | SAM-KEY_00993239 | SAM-KEY_00993253 |
| US | 7,921,361 | Oct. 12, 2007 | Apr. 5, 2011 | H. Gunn et al. | SAM-KEY_00993254 | SAM-KEY_00993303 |
| JP | 2012198944A | July 25, 2012 | Oct. 18, 2012 | T. Ishihara et al. | SAM-KEY_00993337<br><br>SAM-KEY_00993356 | SAM-KEY_00993355<br><br>SAM-KEY_00993379 |

| Country | Pat./App./Pub. No. | Date of Filing | Date of Issue/Pub. | Inventor(s) | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|---|
| US | 2013/0046544A1 | Mar. 14, 2011 | Feb. 21, 2013 | D. Kay et al. | SAM-KEY_00993424 | SAM-KEY_00993478 |
| US | 2013/0047114A1 | Aug. 16, 2012 | Feb. 21, 2013 | H. Murakami et al. | SAM-KEY_00993503 | SAM-KEY_00993518 |
| US | 8,745,018 | July 10, 2009 | June 3, 2014 | D. Singleton et al. | SAM-KEY_00993615 | SAM-KEY_00993647 |
| EP | 399176 | Mar. 28, 1990 | Nov. 28, 1990 | J. Tattari | SAM-KEY_00993820 | SAM-KEY_00993822 |
| EP | 651544 | Oct. 28, 1994 | May 3, 1995 | D. Allard et al. | SAM-KEY_00993823 | SAM-KEY_00993834 |
| EP | 1379101 A1 | July 1, 2002 | Jan. 7, 2004 | M. Erixon et al. | SAM-KEY_00993835 | SAM-KEY_00993847 |
| US | 9,547,375 | June 17, 2013 | Jan. 17, 2017 | T. Paek et al. | SAM-KEY_00993869 | SAM-KEY_00993898 |
| US | 2001/0044281 | June 15, 2001 | Nov. 22, 2001 | P. Peterzell et al. | SAM-KEY_00993899 | SAM-KEY_00993906 |
| US | 2003/0048257 | Sep. 6, 2001 | Mar. 13, 2003 | S. Mattila | SAM-KEY_00993907 | SAM-KEY_00993927 |
| US | 5,537,608 | June 2, 1995 | July 16, 1996 | B. Beatty et al. | SAM-KEY_00993928 | SAM-KEY_00993943 |
| US | D284,759 | Oct. 25, 1983 | July 22, 1986 | A. Nagele et al. | SAM-KEY_00993944 | SAM-KEY_00993946 |
| WO | 2004/095414 | April 19, 2004 | Nov. 4, 2004 | B. Ghassabian | SAM-KEY_00993949 | SAM-KEY_00994267 |

**Table 2: Non-Patent Publications**

| Title | Pub. Date | Author(s) | Publisher | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|
| More than dotting the I's – Foundations for crossing-based interfaces | April 1, 2002 | J. Accot et al. | Association for Computing Machinery | SAM-KEY_00979947 | SAM-KEY_00979954 |
| Newton Apple MessagePad Handbook | 1995 | Apple Computer, Inc. | Apple Computer, Inc. | SAM-KEY_00981676 | SAM-KEY_00981871 |
| Pad++: Zoomable Graphical Sketchpad For Exploring Alternate Interface Physics | 1996 | B. Bederson et al. | Academic Press Ltd. | SAM-KEY_00982269 | SAM-KEY_00982297 |
| CrossY: A Crossing-Based Drawing Application | Oct. 2004 | G. Apitz et al. | Association for Computing Machinery | SAM-KEY_00982499 | SAM-KEY_00982508 |
| Artistic Resizing: A Technique For Rich Scale-Sensitive Vector Graphics | Oct. 2005 | P. Dragicevic et al. | Association for Computing Machinery | SAM-KEY_00982521 | SAM-KEY_00982530 |
| Barrier Pointing: Using Physical Edges to Assist Target Acquisition on Mobile Device Touch Screens | Oct. 2007 | J. Froehlich et al. | Association for Computing Machinery | SAM-KEY_00982613 | SAM-KEY_00982620 |
| Samsung Galaxy User Manual | Oct. 2009 | Samsung Electronics | Samsung Electronics | SAM-KEY_00982678 | SAM-KEY_00982764 |
| FlowMenu: Combining Command, Text, and Data Entry | 2000 | F, Guimbretière et al. | Association for Computing Machinery | SAM-KEY_00982841 | SAM-KEY_00982844 |
| HTC Dream User Manual | 2009 | HTC Corp. | HTC Corp. | SAM-KEY_00982845 | SAM-KEY_00983058 |
| On-line Personalization of a Touch Screen Based Keyboard | Jan. 2003 | J. Himberg et al. | Association for Computing Machinery | SAM-KEY_00983059 | SAM-KEY_00983066 |
| Customizable Keyboard | Oct. 2010 | E. Missimer et al. | Association for Computing Machinery | SAM-KEY_00984607 | SAM-KEY_00984608 |

| Title | Pub. Date | Author(s) | Publisher | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|
| Mobile Text Entry: Relationship between Walking Speed and Text Input Task Difficulty | Sept. 2005 | S. Mizobuchi et al. | Association for Computing Machinery | SAM-KEY_00984609 | SAM-KEY_00984615 |
| *Gyrophone* ("MyOrigo Magazine") | Oct. 2, 2003 | D. Chow | What Mobile Magazine | SAM-KEY_00984698 | SAM-KEY_00984700 |
| Neonode N2 Overview | Mar. 26, 2008 | MobileBurn.com | MobileBurn.com | SAM-KEY_00984832 | SAM-KEY_00984832 |
| Palm Pre - The Missing Manual | Aug. 2009 | E. Baig | O'Reilly Media, Inc. | SAM-KEY_00985412 | SAM-KEY_00985700 |
| Palm Pre Plus User Guide | 2010 | Palm, Inc. | Palm, Inc. | SAM-KEY_00985701 | SAM-KEY_00985924 |
| Palm Pre Plus User Guide | 2009 | Palm, Inc. | Palm, Inc. | SAM-KEY_00985925 | SAM-KEY_00986133 |
| Which? Samsung Galaxy i7500 Google Android phone launches at IFA Berlin | Sept. 4, 2009 | Which? | YouTube | SAM-KEY_00986488 | SAM-KEY_00986488 |
| I bought the first Samsung Galaxy! | Mar. 22, 2023 | Destructive Dan | YouTube | SAM-KEY_00986534 | SAM-KEY_00986534 |
| Retro Review: T-Mobile MyTouch 3G Android (HTC Magic) | Mar. 30, 2016 | One Stop Reviews | YouTube | SAM-KEY_00986540 | SAM-KEY_00986540 |
| Samsung Galaxy I7500 Preview | May 27, 2009 | Phone Arena | YouTube | SAM-KEY_00986541 | SAM-KEY_00986541 |
| Samsung Galaxy Review | Aug. 10, 2009 | Phone Arena | YouTube | SAM-KEY_00986542 | SAM-KEY_00986542 |
| Samsung Galaxy I7500 Review | Aug. 7, 2009 | Phone Arena Team | Phone Arena | SAM-KEY_00986636 | SAM-KEY_00986657 |
| HTC Magic Review | June 1, 2009 | Gareth Beavis | Tech Radar, Future US Inc. | SAM-KEY_00986670 | SAM-KEY_00986681 |

| Title | Pub. Date | Author(s) | Publisher | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|
| Buttons as First Class Objects on an X Desktop | Nov. 1991 | G. Robertson et al. | Association for Computing Machinery | SAM-KEY_00986862 | SAM-KEY_00986871 |
| Bezel Swipe: Conflict-Free Scrolling and Multiple Selection on Mobile Touch Screen Devices | April 8, 2009 | V. Roth et al. | CHI 2009 ~ Multimodal Mobile Interaction | SAM-KEY_00986886 | SAM-KEY_00986889 |
| Samsung Galaxy S III: 4G LTE Smartphone User Manual | 2013 | Samsung Telecomm-unications America, LLC | Samsung Telecomm-unications America, LLC | SAM-KEY_00986890 | SAM-KEY_00987092 |
| Samsung Galaxy Tab2 7.0 Android Tablet User Manual | 2012 | Samsung Elecs. Am., Inc. | Samsung Elecs. Am., Inc. | SAM-KEY_00987180 | SAM-KEY_00987330 |
| Samsung Galaxy Note 10.1 Android Tablet User Manual | 2012 | Samsung Elecs. Am., Inc. | Samsung Elecs. Am., Inc. | SAM-KEY_00987331 | SAM-KEY_00987579 |
| Samsung Galaxy Nexus User's Guide | 2011 | Google Inc. | Google Inc. | SAM-KEY_00987580 | SAM-KEY_00987686 |
| Laser Pointer Interaction Techniques using Peripheral Areas of Screens | May 1, 2006 | B. Shizuki et al. | Association for Computing Machinery | SAM-KEY_00987867 | SAM-KEY_00987870 |
| Simon Says "Here's How!" Users Manual | 1994 | IBM Corp. | IBM Corp. | SAM-KEY_00987871 | SAM-KEY_00987911 |
| The Google Phone Pocket Guide | 2009 | J. O'Grady | Peachpit Press | SAM-KEY_00989425 | SAM-KEY_00989593 |
| Samsung Galaxy S II Mobile Phone User Manual | 2011 | Samsung Telecomm-unications America, LLC | Samsung Telecomm-unications America, LLC | SAM-KEY_00990235 | SAM-KEY_00990437 |
| Alternatives to WhatsApp: IM and VoIP Apps for Smartphones | 2013 | N. Unuth | About.com | SAM-KEY_00990443 | SAM-KEY_00990443 |
| Enter the Phablet: A History of Phone-Tablet Hybrids | Feb. 13, 2012 | S. Segan | PC Mag | SAM-KEY_00991850 | SAM-KEY_00991865 |

| Title | Pub. Date | Author(s) | Publisher | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|
| Is Samsung's 'phablet' the shape of things to come? | April 5, 2012 | J. Wagstaff et al. | NBC News | SAM-KEY_00991866 | SAM-KEY_00991869 |
| MyOrigo mydevice Z1 User Manual ("MyOrigo Manual") | No later than Dec. 19, 2003 | MyOrigo OY, Ltd. | MyOrigo OY, Ltd | SAM-KEY_00992022 | SAM-KEY_00992137 |
| Samsung ChatON Takes Chatting on your Phone to the Next Level | Sept. 25, 2012 | J. Strietelmeier | Gadgeteer | SAM-KEY_00992449 | SAM-KEY_00992463 |
| Samsung ChatON – IM App Review | Oct. 5, 2013 | N. Unuth | About.com | SAM-KEY_00992464 | SAM-KEY_00992465 |
| Samsung dazzles phablet followers with more girth, size | Sept. 26, 2013 | M. Kim | Reuters | SAM-KEY_00992466 | SAM-KEY_00992478 |
| Samsung unveils ChatON 2.0 with multiple device syncing, new social features and more | Dec. 27, 2012 | KS Sandhya Iyer | Gadgets360 | SAM-KEY_00992479 | SAM-KEY_00992484 |
| Samsung's ChatON App Updated To v2.7.3 With Voice And Video Chat For GS4, Animated GIFs, And More | June 11, 2013 | R. Whitwam | Android Police | SAM-KEY_00992485 | SAM-KEY_00992493 |
| How to Install the ICS Messaging App on ANY Android Phone | Jan. 17, 2012 | T. Schofield | YouTube | SAM-KEY_00992883 | SAM-KEY_00992883 |
| ChatON Chat Your Way Tutorial Video | Sept. 2, 2011 | Samsung | YouTube | SAM-KEY_00992885 | SAM-KEY_00992885 |
| DetroitBORG Galaxy Note 10.1 Unboxing | Aug. 25, 2012 | DetroitBORG | YouTube | SAM-KEY_00992886 | SAM-KEY_00992886 |
| The Verge, Samsung Galaxy Note 10.1 review ("Verge Note 10.1 Review") | Aug. 15, 2012 | The Verge | YouTube | SAM-KEY_00992887 | SAM-KEY_00992887 |
| Samsung Galaxy Note 10.1 Launches Tomorrow in the U.S. | Aug. 15, 2012 | Kellen | Droid Life | SAM-KEY_00992913 | SAM-KEY_00992919 |

| Title | Pub. Date | Author(s) | Publisher | Bates Range Start | Bates Range End |
|---|---|---|---|---|---|
| Samsung Relaunches the Galaxy Note 10.1 with Quad-core Processor and 2GB RAM, Arriving This Month | Aug. 6, 2012 | Kellen | Droid Life | SAM-KEY_00992920 | SAM-KEY_00992926 |
| Microsoft Lumia 640 LTE | Mar. 4, 2015 | GSMArena | GSMArena | SAM-KEY_00993867 | SAM-KEY_00993868 |
| Samsung i7500 android Hands-On | May 7, 2009 | Gear65.com | YouTube | SAM-KEY_00993948 | SAM-KEY_00993948 |
| HTC Magic Mobile Phone – Part 1 – Unboxing & Review | Aug. 10, 2009 | Geekanoids | YouTube | SAM-KEY_00993947 | SAM-KEY_00993947 |

Defendants further incorporate by reference all "U.S. Patent Documents" and "Other Publications" cited on the face of the Patents-in-Suit. Any citation to one or more of the above prior art references, or other prior art references regarding any method or system, should be construed to constitute not only a citation to the prior art reference itself, but also a reference to the system itself. Discovery has only just begun in this case, and Defendants will supplement if and when more information becomes available from Plaintiff or third parties.

**B. Prior Art Disclosures—Known/Use/Sales/Offers for Sale**

Defendants believe that there were prior art disclosures in the form of sales, offers for sale, and/or uses by others of products that qualify as prior art under pre-AIA 35 U.S.C. § 102(a) and/or (b) or under AIA 35 U.S.C. § 102(a)(1) against one or more of the Asserted Claims of the Patents-in-Suit. The below-identified prior art products include products Defendants are currently aware of through an on-going diligent and reasonable investigation at this early stage of discovery and/or based on public available information. Details regarding such offers for sale and public uses may be within the possession of third parties. As discovery progresses, Defendants intend and reserve the

right to promptly supplement and/or amend the lists below to include additional prior art products that anticipate and/or render the Asserted Claims obvious.

**Table 3: Prior Art Products**

| System[1] | Sale or Use Date |
|---|---|
| Apple Newton MessagePad 2000 | At least by March 1997 |
| HTC G1 1.6 | At least by September 23, 2008, and not later than September 15, 2009 |
| HTC Hero 1.5 | At least by October 11, 2009 |
| HTC Hero 2.1 | At least by January 2010 |
| HTC Magic 1.6 | At least by July 8, 2009 |
| Lumia 640 | At least by March 2, 2015 |
| Motorola Droid A855 | At least by November 6, 2009 |
| Motorola Moto E 2nd Gen. | At least by February 25, 2015 |
| MyOrigo MyDevice | At least by October 2003 |
| Neonode N2 | At least by 2008 |
| Palm Pre | At least by February 2009 |
| Samsung Behold II | At least by November 4, 2009 |
| Samsung Galaxy GT-i7500 | At least by June 29, 2009 |
| Samsung Galaxy Nexus | At least by November 2011, and not later than November 28, 2012 |
| Samsung Galaxy Note 10.1 | At least by July 2012, and not later than January 15, 2013 |
| Samsung Galaxy Tab2 7.0 | At least by April 2012, and not later than November 19, 2013 |
| Sony P800 | At least by October 15, 2002 |

[1] To the extent Plaintiff asserts that any prior art product does not qualify as prior art under the relevant statute, the documents and videos cited in each Exhibit as evidence of these systems' functionality are independently prior art and would anticipate or render obvious the Asserted Claims for the reasons given in each Exhibit.

For the public uses identified herein, Defendants are investigating the identities of the individuals who knew about and/or were involved in the making, first public use, offer for sale and/or sale of these products and systems. Defendants are also investigating the exact date that these products and systems were first made, first publicly used, offered for sale and/or sold. In addition, Defendants are currently investigating the dates of conception and reduction to practice of these products and systems and when these products and systems were first known or used by others.

In the course of their investigation, Defendants may identify additional prior art documents describing these products, systems, and/or disclosures that may also anticipate and/or render obvious as invalidating printed publications. Any citation to one or more of prior art references regarding these products, systems, and/or disclosures should be construed to constitute not only a citation to the prior art reference itself, but also a reference to the associated products, systems, and/or disclosures.

**C. Prior art under Pre-AIA 35 U.S.C. § 102(f) and/or AIA 35 U.S.C. § 101**

Discovery has only just recently begun, and inventor discovery is forthcoming. Based on limited discovery received to date, Defendants contend that the Asserted Claims subject to the pre-AIA statutory provisions are invalid under 35 U.S.C. § 102(f) and/or for failing to satisfy § 116 on the grounds that the named inventor of the Patents-in-Suit did not invent the subject matter claimed therein and/or improperly omitted an inventor. Similarly, Defendants contend that the Asserted Claims subject to the AIA provisions are invalid under 35 U.S.C. § 101 on the grounds that the named inventor of the Patents-in-Suit is not "[w]hoever invent[ed] or discover[ed]" the alleged inventions and, thus, is not a person who "may obtain a patent therefor." A patent is invalid if more or fewer than the true inventors are named. Should Defendants obtain additional evidence, they will provide the name of the person(s) from whom and the circumstances under which the alleged invention or any part of it was derived.

For example, Defendants believe that one or more other people may have invented or contributed to the subject matter claimed in the Patents-in-Suit, whose subject matter qualifies as prior art under pre-AIA 35 U.S.C. § 102(f) against one or more of the Patent-in-Suits. Defendants may identify additional information describing additional persons, facts, and circumstances that may also demonstrate that the named inventors are not entitled to the Patents-in-Suit under pre-AIA 35 U.S.C. § 102(f) and/or failed to satisfy the requirements under § 116 such that the Asserted Claims of the Patents-in-Suit are invalid.

Additionally, Plaintiff may have in its possession, custody, or control information related to or pertaining to prior art under pre-AIA 35 U.S.C. § 102(f) and/or information concerning the failure to satisfy § 116. Defendants will supplement these Invalidity Contentions if and when Plaintiff produces such information and Defendants have had the opportunity to obtain and analyze that information. Defendants contend that the Patents-in-Suit are invalid under pre-AIA 35 U.S.C. § 102(f) and/or § 116 in the event Defendants obtain evidence that the named inventor of any of the Patents-in-Suit did not invent (either together or in conjunction with other parties) the subject matter claimed therein and/or omitted a true inventor.

As another example, Defendants believe that one or more other people may have invented or contributed to the subject matter claimed in the Patents-in-Suit, whose subject matter qualifies as prior art under AIA 35 U.S.C. § 101 against one or more of the Patent-in-Suits. Defendants may identify additional information describing additional persons, facts, and circumstances that may also demonstrate that the named inventors are not entitled to the Patents-in-Suit under AIA 35 U.S.C. § 101 such that the Asserted Claims of the Patents-in-Suit are invalid.

Additionally, Plaintiff may have in its possession, custody, or control information related to or pertaining to prior art under AIA 35 U.S.C. § 101. Defendants will supplement these Invalidity Contentions if and when Plaintiff produces such information and Defendants have had the

opportunity to obtain and analyze that information. Defendants contend that the Patents-in-Suit subject to AIA are invalid under 35 U.S.C. § 101 in the event Defendants obtain evidence that the named inventor of any of the Patents-in-Suit did not invent (either together or in conjunction with other parties) the subject matter claimed therein and/or omitted a true inventor.

**D. Prior art under Pre-AIA 35 U.S.C. § 102(g)**

Each prior art patent, publication, or product identified above was either filed or issued (for patents), published (for publications), or known, used, offered for sale or sold (for disclosures, products, and/or systems) before the earliest priority date of the Patents-in-Suit. Additionally, each prior art patent, publication, or product identified above does not appear to have been abandoned, suppressed, or concealed, so that each such reference also constitutes evidence of prior invention pursuant to 35 U.S.C. § 102(g) to the extent that it is in the U.S. The persons or entities involved with each such invention include the named inventors on the above-identified patents, the authors listed on the above-identified publications, and the entities and individuals identified in connection with the above-identified products and systems. Plaintiff has not provided conception dates or evidence thereof earlier than the filing dates of the Patents-in-Suit or the alleged priority dates listed on the faces of the Patents-in-Suit. Nor has Plaintiff provided reduction to practice dates or evidence thereof and/or any purported diligence associated therewith. Should the Court permit Plaintiff to provide any of such evidence, Defendants reserve the right to assert that any of the prior art references identified in the sections above as pre-AIA 35 U.S.C. §102(a) prior art is also pre-AIA 35 U.S.C. §102(g) prior art. Investigation, analysis, and discovery are ongoing in this matter, and Defendants reserve the right to supplement this response as appropriate.

**E. Invalidity by Anticipation or Obviousness**

Subject to the Defendants' reservation of rights stated in these Invalidity Contentions and based on Defendants' present understanding of the Asserted Claims and the apparent interpretations

that Plaintiff is asserting based on Plaintiff's Complaint and its Infringement Contentions, Defendants provide below exemplary references and combinations of references that anticipate and/or render the Asserted Claims of the '602 Patent obvious in Table 4, exemplary references and combinations of references that anticipate and/or render the Asserted Claims of the '922 Patent obvious in Table 5, and exemplary references and combinations of references that anticipate and/or render the Asserted Claims of the '144 Patent obvious in Table 6.

Aspects of these Invalidity Contentions are based, in whole or in part, on Defendants' present understanding of Plaintiff's apparent interpretations of the Asserted Claims based on Plaintiff's Complaint and its Infringement Contentions. Given Plaintiff's apparent interpretations of the Asserted Claims, Defendants have attempted to apply those interpretations, but this application of Plaintiff's interpretations is not an agreement or admission that any of Plaintiff's interpretations are correct. To be clear, Defendants do not agree with Plaintiff's Infringement Contentions but are merely offering Invalidity Contentions based on those interpretations.

The references identified in the exhibits attached to these Invalidity Contentions may disclose the elements of the Asserted Claims explicitly and/or inherently, and/or they may be relied upon to show how the state of the art in the relevant time frame invalidates the Asserted Claims. In some instances, multiple prior art publications discuss the same underlying system, software, or other project. For example, some patents and published patent applications reflect commercial products or services offered in the market. It would have been obvious to consider and combine the teachings of a patent or patent application that relate to a certain product or service with the features of that product or service as provided commercially. Similarly, where multiple publications discuss the same underlying product, service, project, or system, it would have been obvious to combine the discussions and disclosures of the publications as they would have been understood to describe features or potential features of the underlying subject matter. Likewise, where one publication

discusses another publication, it would have been obvious to consider and combine the teachings of each publication in combination with each other.

Defendants' contentions that the references in this section, in various combinations, render the Asserted Claims of the Patents-in-Suit obvious under 35 U.S.C. § 103 are in no way an admission or suggestion that each reference does not independently anticipate the Asserted Claims under 35 U.S.C. § 102. Any of these references may be combined with other disclosed references, the disclosed products and systems, and/or with the knowledge of one of ordinary skill in the art during the relevant time period to render obvious, and, therefore, invalidate, the Asserted Claims of the Patents-in-Suit.

Although Defendants have identified at least one disclosure of a limitation for each prior art reference, each and every disclosure of the same limitation in the same reference is not necessarily identified. To focus the issues, Defendants cite only exemplary and representative portions of an identified reference, even where a reference may contain additional support for a particular claim limitation. Persons of ordinary skill in the art read an item of prior art as a whole and in the context of other publications and literature. Thus, to understand and interpret any specific statement or disclosure within a prior art reference that Defendants identify as exemplary and representative, such persons of ordinary skill in the art would rely on other information within the reference, along with other publications and their general scientific knowledge. As such, Defendants may rely upon uncited portions of the prior art references and on other publications and expert testimony to provide context, and as aids to understanding and interpreting the exemplary portions that are cited.

No showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, as each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of ordinary skill in the art. *See KSR*, 550 U.S. at 415-17 (rejecting the Federal Circuit's "rigid" application of the teaching,

suggestion, or motivation to combine test, instead espousing an "expansive and flexible" approach). That said, the Supreme Court's rationale, that a person of ordinary skill in the art is "a person of ordinary creativity, not an automaton" and "in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle," applies equally here. *Id.* at 420-21. Nevertheless, in addition to the information contained in the section(s) above and elsewhere in these contentions, Defendants hereby identify additional motivations and reasons to combine the cited art. Further motivations are provided in the attached charts.

One or more combinations of the prior art references identified herein would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. In addition, it would have been obvious to try combining the prior art references identified above because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompts variations based on predictable design incentives and/or market forces either in the same field or a different one. In addition, the combinations of the prior art references identified above would have been obvious because the combinations represent the known potential options with a reasonable expectation of success.

Motivation to combine any two or more of the identified references, systems, and/or products comes from the fact that the references, systems, and/or products teach structural designs and use of multiple display devices, and one would have been motivated by considerations of efficiency, effectiveness, convenience, cost-savings, power savings, and accessibility, to combine the various teachings. Additional evidence that there would have been a motivation or reason to combine the prior art references identified above includes the interrelated teachings of multiple prior art references; the effects of demands known to the design community or present in the marketplace; the

existence of a known problem for which there was an obvious solution; the existence of a known need or problem in the field of endeavor at the time of the invention; and the background knowledge that would have been possessed by a person having ordinary skill in the art. For example, the prior art references, systems, and/or products are generally directed to the same or similar problems. Some references expressly incorporate others by reference or are authored by the same inventor. Thus, a skilled artisan seeking to solve these problems would have looked to these cited references in combination.

Thus, the motivation or reason to combine the teachings of the prior art references disclosed herein is found in the references themselves and in: (1) the nature of the problem being solved; (2) the express, implied, and inherent teachings of the prior art; (3) the knowledge of persons of ordinary skill in the art; (4) the fact that the prior art is generally directed towards the same problem; (5) the predictable results obtained in combining the different elements of the prior art; (6) the use of a known technique to improve similar devices, methods, or products in the same way; (7) the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; (8) the finite number of identified predictable solutions having a reasonable expectation of success; and/or (9) known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

**1. ’602 Patent**

**Table 4: Exemplary Anticipatory and Combinations for the Asserted Claims of the ’602 Patent**

| Chart | Prior Art References |
|---|---|
| A1 | Tseng in view of one or more of Jeong, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, Samsung Behold II, HTC G1 1.6, HTC Hero 1.5, HTC Hero 2.1, HTC Magic 1.6, Motorola Droid A855, Palm Pre, and Neonode N2 |

| Chart | Prior Art References |
|---|---|
| A2 | Jeong in view of one or more of Tseng, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, Samsung Behold II, HTC G1 1.6, HTC Hero 1.5, HTC Hero 2.1, HTC Magic 1.6, Motorola Droid A855, Palm Pre, and Neonode N2 |
| A3 | HTC G1 1.6 in view of one or more of Jeong, Tseng, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, Samsung Behold II, HTC Hero 1.5, HTC Hero 2.1, HTC Magic 1.6, Motorola Droid A855, Palm Pre, and Neonode N2 |
| A4 | Samsung Behold II in view of one or more of Jeong, Tseng, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, HTC Hero 1.5, HTC Hero 2.1, HTC Magic 1.6, Motorola Droid A855, Palm Pre, and Neonode N2 |
| A5 | Motorola Droid A855 in view of one or more of Jeong, Tseng, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, HTC Hero 1.5, HTC Hero 2.1, HTC Magic 1.6, Palm Pre, and Neonode N2 |
| A6 | HTC Hero 1.5 and/or 2.1 in view of one or more of Jeong, Tseng, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, HTC G1 1.6, HTC Magic 1.6, Motorola Droid A855, Palm Pre, and Neonode N2 |
| A7 | Palm Pre in view of one or more of Jeong, Tseng, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, HTC G1 1.6, HTC Hero 1.5, HTC Hero 2.1, HTC Magic 1.6, Motorola Droid A855, and Neonode N2 |
| A8 | Neonode N2 in view of one or more of Jeong, Tseng, Roth, Brown, Wilairat, Hinckley, Hisatomi, Roth Bezel Swipe, Samsung Galaxy GT-i7500, HTC G1 1.6, HTC Hero 1.5, HTC Hero 2.1, HTC Magic 1.6, Motorola Droid A855, and Palm Pre |

The prior art identified above, and in the attached ’602 Patent charts, individually anticipate and/or can properly be combined in multiple ways to demonstrate the obviousness of the Asserted Claims of the ’602 Patent. Various combinations of the references would have naturally been considered as part of the exercise of ordinary skill by one skilled in the art. The references disclosed in the attached charts and herein are also directed to the same or similar features as the purported

invention claimed in the Asserted Claims of the ’602 Patent. To the extent Plaintiff contends that any of these features solved a problem in the art, the references cited herein show that that problem was known to those of ordinary skill and had already been solved using obvious solutions.

To that end, the Asserted Claims of the ’602 Patent simply combine elements already combined and well known in the art and yield no more than what one skilled in the art would have expected from such a combination. For example, with respect to the ’602 Patent, when confronted with the alleged problems described in the ’602 Patent, one of ordinary skill in the art at the time of the alleged inventions would have been motivated to consider the techniques taught by the prior art cited in these Invalidity Contentions. Consideration of the teachings of this prior art, both individually and in combination, would necessarily lead to the alleged invention claimed in the ’602 Patent. This is demonstrated by the cited prior art, which disclose all of the elements of the Asserted Claims of the ’602 Patent, as well as motivations to modify or combine their individual teachings. One of skill in the art would have been motivated to either modify the prior art identified in the claim charts or to combine that prior art in the manner indicated, by, for example, their background knowledge, design incentives, effects of demands known to the design community, or other market forces. Moreover, the cited prior art share commonalities. To the extent it is argued that any cited prior art does not expressly disclose a particular claim or element, it would have been inherent in the disclosure and/or obvious to a person of ordinary skill in the art to include the claimed element to perform the invention as claimed in the ’602 Patent.

As described in the attached charts, all the elements of the Asserted Claims of the ’602 Patent were commonplace before the alleged date of inventions. For each element, there exists evidence from the cited prior art that it was well known in the art prior to the date of invention. To the extent it is argued any of the cited prior art references, systems, and/or products do not anticipate the

Asserted Claims, it would have been obvious to a person of ordinary skill in the art that the Asserted Claims are merely combinations of well-known methods and systems resulting in expected results.

Additionally, Defendants hereby incorporate by reference the motivations to combine references set forth during the prosecution of the Asserted Claims of the '602 Patent, including the statements and reasoning set forth by the examiner, as to why it would have been obvious to modify or combine references to achieve the limitations of the Asserted Claims of the '602 Patent.

**2. '922 Patent**

**Table 5: Exemplary Anticipatory and Combinations for the Asserted Claims of the '922 Patent**

| Chart | Prior Art References |
|---|---|
| B1 | Goktekin in view of one or more of Lavallee, Sirpal-486, Sirpal-000, Makhoul, Kim-582, Beran, Wang, Yabuki, Roach, Vincent, Ramkumar, Garcia-Barrio, and Aravamudan |
| B2 | Koch in view of one or more of Lavallee, Sirpal-486, Sirpal-000, Wang, Matthews, and Yabuki |
| B3 | Samsung Galaxy Note 10.1 in view of one or more of Note 10.1 Manual, *Verge Note 10.1 Review*, *DetroitBORG Galaxy Note 10.1 Unboxing*, *ChatON Tutorial, ICS Messaging*, *About.com*, *Gadgets360*, *Android Police*, *Gadgeteer*, Lavallee, Sirpal-486, Sirpal-000, Wang, Matthews, Nexus, Koch, *PC Mag*, *NBC News*, *Reuters*, and Yabuki |
| B4 | Samsung Galaxy Tab2 7.0 in view of one or more of Tab2 7.0 Manual, *ChatON Tutorial, ICS Messaging*, *About.com*, *Gadgets360*, *Android Police*, *Gadgeteer*, Lavallee, Sirpal-486, Sirpal-000, Wang, Matthews, Nexus, Koch, *PC Mag*, *NBC News*, *Reuters*, and Yabuki |
| B5 | Samsung Galaxy Nexus in view of one or more of Nexus Manual, Lavallee, Sirpal-486, Sirpal-000, Wang, Matthews, and Yabuki |
| B6 | Zhuang in view of one or more of Koch, Sirpal-486, Sirpal-000, Lavallee, Wang, Matthews, Nexus, and Yabuki |
| B7 | Paek in view of one or more of Lavallee, Sirpal-486, Sirpal-000, Koch, Wang, Matthews, and Yabuki |

The prior art identified above, and in the attached ’922 Patent charts, individually anticipate and/or can properly be combined in multiple ways to demonstrate the obviousness of the Asserted Claims of the ’922 Patent. Various combinations of the references would have naturally been considered as part of the exercise of ordinary skill by one skilled in the art. The references disclosed in the attached charts and herein are also directed to the same or similar features as the purported invention claimed in the Asserted Claims of the ’922 Patent. To the extent Plaintiff contends that any of these features solved a problem in the art, the references cited herein show that that problem was known to those of ordinary skill and had already been solved using obvious solutions.

To that end, the Asserted Claims of the ’922 Patent simply combine elements already combined and well known in the art and yield no more than what one skilled in the art would have expected from such a combination. For example, with respect to the ’922 Patent, when confronted with the alleged problems described in the ’922 Patent, one of ordinary skill in the art at the time of the alleged inventions would have been motivated to consider the techniques taught by the prior art cited in these Invalidity Contentions. Consideration of the teachings of this prior art, both individually and in combination, would necessarily lead to the alleged invention claimed in the ’922 Patent. This is demonstrated by the cited prior art, which disclose all of the elements of the Asserted Claims of the ’922 Patent, as well as motivations to modify or combine their individual teachings. One of skill in the art would have been motivated to either modify the prior art identified in the claim charts or to combine that prior art in the manner indicated, by, for example, their background knowledge, design incentives, effects of demands known to the design community, or other market forces. Moreover, the cited prior art share commonalities. To the extent it is argued that any cited prior art does not expressly disclose a particular claim or element, it would have been inherent in the disclosure and/or obvious to a person of ordinary skill in the art to include the claimed element to perform the invention as claimed in the ’922 Patent.

As described in the attached charts, all the elements of the Asserted Claims of the ’922 Patent were commonplace before the alleged date of inventions. For each element, there exists evidence from the cited prior art that it was well known in the art prior to the date of invention. To the extent it is argued any of the cited prior art references, systems, and/or products do not anticipate the Asserted Claims, it would have been obvious to a person of ordinary skill in the art that the Asserted Claims are merely combinations of well-known methods and systems resulting in expected results.

Additionally, Defendants hereby incorporate by reference the motivations to combine references set forth during the prosecution of the Asserted Claims of the ’922 Patent, including the statements and reasoning set forth by the examiner, as to why it would have been obvious to modify or combine references to achieve the limitations of the Asserted Claims of the ’922 Patent.

### 3. ’144 Patent

**Table 6: Exemplary Anticipatory and Combinations for the Asserted Claims of the ’144 Patent**

| Chart | Prior Art References |
|---|---|
| C1 | Bast in view of one or more of Wedel, Rydbeck, Yamaguchi, Dutta, Nakano, Kobayashi, Benoit, Pensjo, Jambhekar, and Gupta |
| C2 | Pensjo in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Dutta, Nakano, Kobayashi, Benoit, Jambhekar, and Gupta |
| C3 | Mouton in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Dutta, Nakano, Kobayashi, Benoit, Pensjo, and Jambhekar |
| C4 | Nakano in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Dutta, Kobayashi, Pensjo, Jambhekar, and Gupta |
| C5 | Gupta in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Dutta, Kobayashi, Benoit, Pensjo, and Jambhekar |
| C6 | Dutta in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Nakano, Kobayashi, Benoit, Jambhekar, and Gupta |
| C7 | MyOrigo Magazine in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Dutta, Nakano, Benoit, Jambhekar, and Gupta |

| Chart | Prior Art References |
|---|---|
| C8 | MyOrigo Manual in view of one or more of Wedel, Rydbeck, Yamaguchi, Dutta, Nakano, Kobayashi, Benoit, Jambhekar, and Gupta |
| C9 | Sony P800 in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Dutta, Nakano, Kobayashi, Benoit, Pensjo, Jambhekar, and Gupta |
| C10 | Apple Newton in view of one or more of Bast, Wedel, Rydbeck, Yamaguchi, Dutta, Nakano, Kobayashi, Benoit, Pensjo, Gupta, Mouton, MyOrigo Magazine, and Sony P800 |
| C11 | Motorola Moto E 2nd Gen. in view of one or more of Bast, Pensjo, Gupta, Wedel, Rydbeck, Yamaguchi, Dutta, and Benoit |
| C12 | Lumia 640 in view of one or more of Bast, Pensjo, Gupta, Wedel, Rydbeck, Yamaguchi, and Dutta |

The prior art identified above, and in the attached ’144 Patent charts, individually anticipate and/or can properly be combined in multiple ways to demonstrate the obviousness of the Asserted Claims of the ’144 Patent. Various combinations of the references would have naturally been considered as part of the exercise of ordinary skill by one skilled in the art. The references disclosed in the attached charts and herein are also directed to the same or similar features as the purported invention claimed in the Asserted Claims of the ’144 Patent. To the extent Plaintiff contends that any of these features solved a problem in the art, the references cited herein show that that problem was known to those of ordinary skill and had already been solved using obvious solutions.

To that end, the Asserted Claims of the ’144 Patent simply combine elements already combined and well known in the art and yield no more than what one skilled in the art would have expected from such a combination. For example, with respect to the ’144 Patent, when confronted with the alleged problems described in the ’144 Patent, one of ordinary skill in the art at the time of the alleged inventions would have been motivated to consider the techniques taught by the prior art cited in these Invalidity Contentions. Consideration of the teachings of this prior art, both individually and in combination, would necessarily lead to the alleged invention claimed in the ’144 Patent. This

is demonstrated by the cited prior art, which disclose all of the elements of the Asserted Claims of the ’144 Patent, as well as motivations to modify or combine their individual teachings. One of skill in the art would have been motivated to either modify the prior art identified in the claim charts or to combine that prior art in the manner indicated, by, for example, their background knowledge, design incentives, effects of demands known to the design community, or other market forces. Moreover, the cited prior art share commonalities. To the extent it is argued that any cited prior art does not expressly disclose a particular claim or element, it would have been inherent in the disclosure and/or obvious to a person of ordinary skill in the art to include the claimed element to perform the invention as claimed in the ’144 Patent.

As described in the attached charts, all the elements of the Asserted Claims of the ’144 Patent were commonplace before the alleged date of inventions. For each element, there exists evidence from the cited prior art that it was well known in the art prior to the date of invention. To the extent it is argued any of the cited prior art references, systems, and/or products do not anticipate the Asserted Claims, it would have been obvious to a person of ordinary skill in the art that the Asserted Claims are merely combinations of well-known methods and systems resulting in expected results.

Additionally, Defendants hereby incorporate by reference the motivations to combine references set forth during the prosecution of the Asserted Claims of the ’144 Patent, including the statements and reasoning set forth by the examiner, as to why it would have been obvious to modify or combine references to achieve the limitations of the Asserted Claims of the ’144 Patent.

## III. Priority

Defendants contend that none of the Asserted Claims are entitled to their claimed priority dates. As explained below, each Patent-in-Suit purports to claim priority to prior applications whose disclosures do not support the Asserted Claims. Accordingly, the Asserted Claims are not entitled to the benefit of the earlier filing dates of these applications. *See, e.g.*, *In re Katz Interactive Call*

*Processing Litig.*, 639 F.3d 1303, 1322 (Fed. Cir. 2011); *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008). To the extent the claims are not invalid for failing to comply with 35 U.S.C. § 112, including, for example, written description,[2] the earliest priority date for the Asserted Claims is, at most, no earlier than the following for each of the Patents-in-Suit:

- '602 Patent: February 11, 2010
- '922 Patent: December 24, 2013
- '144 Patent: January 22, 2017

**A. '602 Patent**

The Asserted Claims of the '602 Patent are not entitled to the claimed priority date. Plaintiff alleges that the Asserted Claims of the '602 Patent "are entitled to a priority date at least as early as December 20, 2009, and possibly earlier than this date." Plaintiff's PR 3-1 and 3-2 Disclosures. The '602 Patent purports to claim priority to the following provisional and/or foreign applications:

- U.S. Provisional No. 61/294,382 (filed January 12, 2010);
- Israel Application No. 202852 (filed December 20, 2009);
- Israel Application No. 203090 (filed December 31, 2009);
- Israel Application No. 203560 (filed January 27, 2010);
- Israel Application No. 203922 (filed February 11, 2010);

[2] For each of the Patents-in-Suit, there exists a wealth of prior art that leads to conclusions of prior art invalidity under Sections 102 and 103. In terms of the teachings provided by this prior art and the motivations to combine different individual prior art references within this wealth of art, these Invalidity Contentions provide numerous examples. Should Plaintiff try to later dispute the teachings provided by this prior art and/or dispute any of the motivations to combine individual references within this wealth of prior art, Plaintiff's later arguments in dispute of what would have been known to person of ordinary skill may well raise additional Section 112 bases for the invalidity of the Asserted Claims, including additional examples of written description deficiencies as well as a lack of an enabling disclosure. Since Plaintiff has not yet shared those positions, should it later choose to do so, Defendants reserve their rights to amend these contentions based on this later provided information.

- Israel Application No. 205052 (filed April 13, 2010);
- Israel Application No. 205329 (filed April 25, 2010);
- Israel Application No. 206257 (filed June 9, 2010);
- Israel Application No. 207114 (filed July 20, 2010);
- Israel Application No. 207545 (filed August 11, 2010);
- Israel Application No. 207665 (filed August 17, 2010);
- Israel Application No. 208140 (filed September 14, 2010);
- Israel Application No. 208740 (filed October 14, 2010);
- Israel Application No. 208790 (filed October 18, 2010);
- Israel Application No. 209218 (filed November 9, 2010);
- Israel Application No. 209305 (filed November 14, 2010);
- Israel Application No. 209416 (filed November 18, 2010); and
- Israel Application No. 209484 (filed November 21, 2010).

*See* '602 Patent at (60), (30).

However, none of the priority applications sufficiently supports the Asserted Claims of the '602 Patent, and there is no written description support for them in the '602 Patent, as explained below in Section IV with reference to exemplary claim elements that lack such support. Because the applications to which the '602 Patent claims priority do not support the claim elements identified in Section IV, the claims containing those claim elements—and any claim(s) depending directly or indirectly therefrom—are not entitled to the benefit of an earlier filing date. To the extent the Asserted Claims of the '602 Patent are not invalid for failing to comply with Section 112, the earliest possible priority date for these claims is February 11, 2010.

**B. '922 Patent**

The Asserted Claims of the '922 Patent are not entitled to the claimed priority date. Plaintiff

alleges that the Asserted Claims of the ’922 Patent “are entitled to a priority date at least as early as February 17, 2013, and possibly earlier than this date.” Plaintiff’s PR 3-1 and 3-2 Disclosures. The ’922 Patent purports to claim priority to the following U.S. patent applications and/or provisional applications:

- U.S. App. No. 14/767,606 (filed February 18, 2014), now abandoned;
- U.S. Provisional No. 61/765,751 (filed February 17, 2013);
- U.S. Provisional No. 61/766,747 (filed February 20, 2013);
- U.S. Provisional No. 61/769,285 (filed February 26, 2013);
- U.S. Provisional No. 61/772,066 (filed March 4, 2013);
- U.S. Provisional No. 61/774,605 (filed March 8, 2013);
- U.S. Provisional No. 61/777,102 (filed March 12, 2013);
- U.S. Provisional No. 61/778,888 (filed March 13, 2013);
- U.S. Provisional No. 61/802,690 (filed March 17, 2013);
- U.S. Provisional No. 61/803,456 (filed March 20, 2013);
- U.S. Provisional No. 61/804,681 (filed March 24, 2013);
- U.S. Provisional No. 61/810,805 (filed April 11, 2013);
- U.S. Provisional No. 61/811,756 (filed April 14, 2013);
- U.S. Provisional No. 61/813,271 (filed April 13, 2013);
- U.S. Provisional No. 61/814,290 (filed April 21, 2013);
- U.S. Provisional No. 61/819,598 (filed May 5, 2013);
- U.S. Provisional No. 61/821,331 (filed May 9, 2013);
- U.S. Provisional No. 61/822,934 (filed May 14, 2013);
- U.S. Provisional No. 61/823,971 (filed May 16, 2013);

- U.S. Provisional No. 61/825,049 (filed May 19, 2013);
- U.S. Provisional No. 61/827,020 (filed May 24, 2013);
- U.S. Provisional No. 61/830,114 (filed June 2, 2013);
- U.S. Provisional No. 61/833,512 (filed June 11, 2013);
- U.S. Provisional No. 61/833,991 (filed June 12, 2013);
- U.S. Provisional No. 61/834,889 (filed June 14, 2013);
- U.S. Provisional No. 61/835,704 (filed June 17, 2013);
- U.S. Provisional No. 61/837,662 (filed June 21, 2013);
- U.S. Provisional No. 61/838,288 (file June 23, 2013);
- U.S. Provisional No. 61/838,403 (filed June 24, 2013);
- U.S. Provisional No. 61/841,360 (filed June 30, 2013);
- U.S. Provisional No. 61/843,391 (filed July 7, 2013);
- U.S. Provisional No. 61/846,030 (filed July 14, 2013);
- U.S. Provisional No. 61/858,210 (filed July 25, 2013);
- U.S. Provisional No. 61/860,396 (filed July 31, 2013);
- U.S. Provisional No. 61/865,254 (filed August 13, 2013);
- U.S. Provisional No. 61/866,119 (filed August 15, 2013);
- U.S. Provisional No. 61/868,172 (filed August 21, 2013);
- U.S. Provisional No. 61/869,722 (filed August 25, 2013);
- U.S. Provisional No. 61/875,192 (filed September 9, 2013);
- U.S. Provisional No. 61/878,695 (filed September 17, 2013);
- U.S. Provisional No. 61/879,152 (filed September 18, 2013);
- U.S. Provisional No. 61/882,160 (filed September 25, 2013);

- U.S. Provisional No. 61/893,291 (filed October 21, 2013);
- U.S. Provisional No. 61/899,240 (filed November 3, 2013);
- U.S. Provisional No. 61/902,242 (filed November 10, 2013);
- U.S. Provisional No. 61/908,122 (filed November 24, 2013);
- U.S. Provisional No. 61/908,248 (filed November 25, 2013);
- U.S. Provisional No. 61/913,472 (filed December 9, 2013);
- U.S. Provisional No. 61/920,572 (filed December 24, 2013);
- U.S. Provisional No. 61/926,474 (filed January 13, 2014);
- U.S. Provisional No. 61/927,039 (filed January 14, 2014);
- U.S. Provisional No. 61/929,187 (filed January 20, 2014);
- U.S. Provisional No. 61/931,633 (filed January 26, 2014); and
- U.S. Provisional No. 61/937,545 (filed February 9, 2014).

*See* '922 Patent at (62), (60).

However, none of the priority applications sufficiently supports the Asserted Claims of the '922 Patent, and there is no written description support for them in the '922 Patent, as explained below in Section IV with reference to exemplary claim elements that lack such support. Because the applications to which the '922 Patent claims priority do not support the claim elements identified in Section IV, the claims containing those claim elements—and any claim(s) depending directly or indirectly therefrom—are not entitled to the benefit of an earlier filing date. To the extent the Asserted Claims of the '922 Patent are not invalid for failing to comply with Section 112, the earliest possible priority date for these claims is December 24, 2013.

**C. '144 Patent**

The Asserted Claims of the '144 Patent are not entitled to the claimed priority date. Plaintiff alleges that the Asserted Claims of the '144 Patent "are entitled to a priority date at least as early as

April 18, 2003, and possibly earlier than this date." Plaintiff's PR 3-1 and 3-2 Disclosures. The '144 Patent purports to claim priority to the following patent applications and/or provisional applications:

- U.S. App. No. 14/146,125 (filed January 2, 2014), now abandoned;
- U.S. App. No. 10/553,575 (filed September 26, 2006), now abandoned;
- PCT/US2004/012082 (filed April 19, 2004);
- U.S. Provisional No. 60/463,844 (filed April 18, 2003);
- U.S. Provisional No. 60/466,594 (filed April 30, 2003);
- U.S. Provisional No. 60/468,028 (filed May 5, 2003);
- U.S. Provisional No. 60/474,447 (filed May 30, 2003);
- U.S. Provisional No. 60/475,533 (filed June 3, 2003);
- U.S. Provisional No. 60/482,706 (filed June 26, 2003);
- U.S. Provisional No. 60/482,998 (filed June 27, 2003);
- U.S. Provisional No. 60/496,702 (filed August 20, 2003);
- U.S. Provisional No. 60/500,602 (filed September 5, 2003);
- U.S. Provisional No. 60/504,331 (filed September 19, 2003);
- U.S. Provisional No. 60/510,885 (filed October 14, 2003);
- U.S. Provisional No. 60/536,564 (filed January 14, 2004);
- U.S. Provisional No. 60/552,968 (filed March 11, 2004); and
- U.S. Provisional No. 60/557,140 (filed March 26, 2004);
- U.S. Provisional No. 60/496,702.

*See* '144 Patent at (63), (60).

However, none of the priority applications sufficiently supports the Asserted Claims of the '144 Patent, and there is no written description support for them in the '144 Patent, as explained

below in Section IV with reference to exemplary claim elements that lack such support. Because the applications to which the '144 Patent claims priority do not support the claim elements identified in Section IV, the claims containing those claim elements—and any claim(s) depending directly or indirectly therefrom—are not entitled to the benefit of an earlier filing date. To the extent the Asserted Claims of the '144 Patent are not invalid for failing to comply with Section 112, the earliest possible priority date for these claims is January 22, 2017, the filing date of the application that issued as the '144 Patent.

## IV. Invalidity Under 35 U.S.C. § 112

Defendants contend that one or more of the Asserted Claims are invalid under 35 U.S.C. § 112. As explained below, these claims are indefinite and/or fail to satisfy the written description and/or enablement requirements.

### A. '602 Patent

#### 1. Inadequate Section 112 Support

One or more of the Asserted Claims of the '602 Patent are invalid under 35 U.S.C. § 112, ¶ 1, or 35 U.S.C. § 112(a).

The '602 Patent does not provide sufficient written description support to establish that the alleged inventor possessed the alleged inventions recited in the Asserted Claims of the '602 Patent. *See Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Nor does the '602 Patent permit a person of ordinary skill in the art to practice the full scope of the claimed invention without undue experimentation. *See Genentech Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997).

For example, the '602 Patent does not provide sufficient support—by itself or through any disclosure incorporated by reference—for at least the following claim terms in combination with the other recited limitations of the claim:

- "at least one window located in the touch screen on an edge of the touch screen . . . wherein . . . said gliding action at first interacting with said at least one window on the touch screen" (claim 1);
- "wherein said at least one window functions independently of an interface of an application in use on the touch screen" (Claim 1);
- "wherein a gliding action provided from outside of the touch screen towards inside of the touch screen, said gliding action at first interacting with said at least one window on the touch screen" (Claim 1);
- "wherein the system relates said gliding action to a function which is not related to a mouse function" (Claim 2);
- "the processor relates a gliding action provided towards any arbitrary direction inside the screen to presenting a same interface" (Claim 18);
- "a gliding action provided from said zone of the touch screen towards any arbitrary direction inside the touch screen at first interacts with said zone" (Claim 19);
- "wherein said zone is present on said edge regardless of the interface of an application on said touch screen" (Claim 19);
- "wherein said function is displaying a same interface for any said gliding action, said gliding action interacting with any portion of said zone" (Claim 32); and
- "wherein said gliding action is provided from outside the touchscreen towards inside the touch screen, wherein said gliding action at first interacts with said zone on said touch screen" (claim 33).

Because the '602 Patent does not support these claim elements, the foregoing claims—and any claim(s) depending directly or indirectly therefrom—are invalid under 35 U.S.C. § 112, ¶ 1, or 35 U.S.C. § 112(a).

### 2. Indefiniteness

As explained below, one or more of the Asserted Claims of the '602 Patent are also invalid as indefinite under 35 U.S.C. § 112, ¶ 2, or 35 U.S.C. § 112(b). These claims fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014); *see also IPXL Holdings, L.L.C. v. amazon.com, Inc.*, 430 F.3d 1377, 1383-84 (Fed. Cir. 2005). Accordingly, these claims are invalid as indefinite. For example, an artisan of ordinary skill could not discern, with reasonable certainty, the scope of the following claim terms of the '602 Patent:

- "at least one window located in the touch screen on an edge of the touch screen" (Claim 1);
- "wherein said at least one window functions independently of an interface of an application in use on the touch screen" (Claim 1);
- "wherein a gliding action provided from outside of the touch screen towards inside of the touch screen, said gliding action at first interacting with said at least one window on the touch screen, is processed by said processor" (Claim 1);
- "the system relates said gliding action to a function which is not related to a mouse function" (Claim 2);
- "substantial portion" (Claims 4, 16, and 36);
- "line" (Claims 5 and 23);
- "substantially equal" (Claims 8, 11, 26, 30, and 35);
- "wherein the processor relates a gliding action provided towards any arbitrary direction inside the screen to presenting a same interface" (Claim 18);
- "a gliding action provided from said zone of the touch screen towards any arbitrary direction inside the touch screen at first interacts with said zone" (Claim 19); and

- "a zone in form of a bar located in the touch screen on an edge of the touch screen" where a "gliding action is provided from outside the touch screen, wherein said gliding action first interacts with said zone on said touch screen" (Claim 33).

Accordingly, these claims—and any claim(s) depending directly or indirectly therefrom—are invalid under 35 U.S.C. § 112, ¶ 2, or 35 U.S.C. § 112(b) as indefinite.

**B. '922 Patent**

**1. Inadequate Section 112 Support**

One or more of the Asserted Claims of the '922 Patent are invalid under 35 U.S.C. § 112, ¶ 1, or 35 U.S.C. § 112(a).

The '922 Patent does not provide sufficient written description support to establish that the alleged inventor possessed the alleged inventions recited in the Asserted Claims of the '922 Patent. *See Ariad Pharm.*, 598 F.3d at 1351. Nor does the '922 Patent permit a person of ordinary skill in the art to practice the full scope of the claimed invention without undue experimentation. *See Genentech*, 108 F.3d at 1365.

For example, the '922 Patent does not provide sufficient support—by itself or through any disclosure incorporated by reference—for at least the following claim terms in combination with the other recited limitations of the claim:

- "condition under the control of said keyboard" (claims 1 and 12);
- "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone" (claims 1 and 12);
- "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application" (claim 2 and 20);

- "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen" (claims 4 and 18);
- "wherein said information is copied from one of said applications and pasted in the other application" (claim 6);
- "wherein said second application is a search application" (claim 8);
- "button of said keyboard assigned to activating said search application" / "button of said keyboard that is related to activating said search application" (claims 8 and 15);
- "wherein said search application use at least one keyword typed through said keyboard" (claims 9 and 16);
- "wherein said interface of said second application is displayed on the touch screen by using a search application" (claim 15); and
- "wherein said search application use at least one keyword typed through said keyboard after said search application is activated" (claim 17).

Because the '922 Patent does not support these claim elements, the foregoing claims—and any claim(s) depending directly or indirectly therefrom—are invalid under 35 U.S.C. § 112, ¶ 1, or 35 U.S.C. § 112(a).

**2. Indefiniteness**

As explained below, one or more of the Asserted Claims of the '922 Patent are also invalid as indefinite under 35 U.S.C. § 112, ¶ 2, or 35 U.S.C. § 112(b). These claims fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. *Nautilus*, 572 U.S. at 901; *see also IPXL Holdings*, 430 F.3d at 1383-84. Accordingly, these claims are invalid as indefinite.

For example, an artisan of ordinary skill could not discern, with reasonable certainty, the scope of the following claim terms of the ’922 Patent:

- “reduced interface” (claim 1);
- “wherein based on accomplishment of a condition under the control of said keyboard” (claim 1);
- “the focus of the system” (claim 2);
- “wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application” (claim 2);
- “wherein said keyboard is used with both of said applications” (claim 3);
- “wherein said information is copied from one of said applications and pasted in the other application” (claim 6);
- “a search application activated by interacting with a button of said keyboard” (claim 8);
- “use at least one keyword typed through said keyboard” (claim 9); and
- “said interface of said second application is displayed on the touch screen by using a search application” (claim 15).

Accordingly, these claims—and any claim(s) depending directly or indirectly therefrom—are invalid under 35 U.S.C. § 112, ¶ 2, or 35 U.S.C. § 112(b) as indefinite.

### C. ’144 Patent

#### 1. Inadequate Section 112 Support

One or more of the Asserted Claims of the ’144 Patent are invalid under 35 U.S.C. § 112, ¶ 1, or 35 U.S.C. § 112(a).

The ’144 Patent does not provide sufficient written description support to establish that the alleged inventor possessed the alleged inventions recited in the Asserted Claims of the ’144 Patent.

*See Ariad Pharm.*, 598 F.3d at 1351. Nor does the '144 Patent permit a person of ordinary skill in the art to practice the full scope of the claimed invention without undue experimentation. *See Genentech*, 108 F.3d at 1365.

For example, the '144 Patent does not provide sufficient support—by itself or through any disclosure incorporated by reference—for at least the following claim terms in combination with the other recited limitations of the claim:

- "a display unit integrated within the front surface of said housing wherein said display unit practically covers the entire front surface of said housing" (Claims 1-5, 7, and 8);
- "wherein upon providing a sweeping action on said display unit, plurality of other icons corresponding to plurality of other applications are displayed on said display unit" (Claims 3, 4, 12 and 13);
- "display text entered through a keyboard in landscape direction and in portrait direction on said display unit when the device us used, respectively, in landscape position and in portrait position" (Claim 5);
- "wherein the width of the device is approximately half of said length" (Claim 7);
- "wherein the thickness of the device is less than 20 percent of said width" (Claim 8);
- "wherein said display unit, practically occupying the entire front surface of the mobile phone, is integrated within said mobile phone" (Claims 9-14);
- "display text, entered through the virtual keyboard, in landscape direction and in portrait direction when the mobile phone is used, respectively, in landscape position and in portrait position" (Claims 9-14);
- "display unit, said display unit occupying practically the entire surface of the front surface of said device is integrated within said device" (Claims 15-20);

- "wherein upon identifying an input corresponding to a sweeping action provided on a touch sensitive surface of said device, said processor displays plurality of other icons corresponding to plurality of other applications on said display unit" (Claims 15-20); and
- "display text entered through a keyboard in landscape direction and in portrait direction on said display unit when the device is used, respectively, in landscape position and in portrait position" (Claim 20).

Because the '144 Patent does not support these claim elements, the foregoing claims—and any claim(s) depending directly or indirectly therefrom—are invalid under 35 U.S.C. § 112, ¶ 1, or 35 U.S.C. § 112(a).

**2. Indefiniteness**

As explained below, one or more of the Asserted Claims of the '144 Patent are also invalid as indefinite under 35 U.S.C. § 112, ¶ 2, or 35 U.S.C. § 112(b). These claims fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. *Nautilus*, 572 U.S. at 901; *see also IPXL Holdings*, 430 F.3d at 1383-84. Accordingly, these claims are invalid as indefinite. For example, an artisan of ordinary skill could not discern, with reasonable certainty, the scope of the following claim terms of the '144 Patent:

- "a practically rectangular-shaped housing within which the components of a mobile phone are integrated" (Claims 1-5, 7, and 8);
- "wherein the length of the front surface approximately corresponds to the distance between the ear and the mouth of a user" (Claims 1-5, 7, and 8);
- "wherein the width of the front surface is substantially shorter than the length" (Claims 1-5, 7, and 8);
- "wherein the housing has a thin thickness" (Claim 1-5, 7, and 8);

- "none of said components is noticeably extended out from said housing" (Claims 1-5, 7 and 8);
- "wherein the width of the device is approximately half of said length" (Claim 7);
- "a body having a practically rectangular shape" (Claims 9-20);
- "wherein the length of the front surface of the mobile phone corresponds to the distance between the ear and mouth of a user" (Claims 9-14);
- "wherein the width of the front surface of the mobile phone is significantly shorter than the length" (Claims 9-14);
- "wherein said body has a thin thickness" (Claim 9-14);
- "wherein the distance between said microphone and said speaker corresponds to the distance between the ear and mouth of a user" (Claim 10);
- "wherein said components of the mobile phone are integrated within the body such that none of said components is significantly extended out from the body" (Claim 14); and
- "none of said components is noticeably extended out from said the body" (Claim 19).

Accordingly, these claims—and any claim(s) depending directly or indirectly therefrom—are invalid under 35 U.S.C. § 112, ¶ 2, or 35 U.S.C. § 112(b) as indefinite.

## V. P.R. 3-4: Document Production Accompanying Invalidity Contentions

Defendants have produced documents, including SAM-KEY_00007560-SAM-KEY_00007857, SAM-KEY_00016296-SAM-KEY_00017636, SAM-KEY_00165914-SAM-KEY_00186727, SAM-KEY_00189708-SAM-KEY_00189925, SAM-KEY_00191151-SAM-KEY_00855960, SAM-KEY_00978651-SAM-KEY_00979942, SAM-KEY_00979947-SAM-

KEY_00993815, SAM-KEY_00993820-SAM-KEY_00994306, pursuant to P.R. 3-4(a) and P.R. 3-4(b). In addition, pursuant to P.R. 3-4(a) and under the Protective Order entered in this action, Defendants are making source code available in the Washington, D.C. office of their counsel.

## VI. Invalidity Under 35 U.S.C. § 101 and Defendants' Subject Matter Eligibility Contentions

The Asserted Claims of the Patents-in-Suit are invalid under 35 U.S.C. § 101 for failing to recite patent-eligible subject matter. Defendants incorporate by reference herein their Subject Matter Eligibility Contentions concurrently served with these Invalidity Contentions.

Dated: January 29, 2025

/s/*Christopher T. Blackford*
Melissa R. Smith
Texas Bar No. 24001351
melissa@gillamsmithlaw.com
**GILLAM & SMITH, LLP**
303 South Washington Ave.
Marshall, Texas 75670
Telephone: (903) 934-8450
Facsimile: (903) 934-9257

Gerald F. Ivey
Parmanand K. Sharma (*Pro Hac Vice*)
Christopher T. Blackford (*Pro Hac Vice*)
Tyler M. Akagi (*Pro Hac Vice*)
**FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP**
901 New York Avenue, N.W.
Washington, D.C. 20001-4413
Telephone: (202) 408-4000
Email: gerald.ivey@finnegan.com
Email: parmanand.sharma@finnegan.com
Email: christopher.blackford@finnegan.com
Email: tyler.akagi@finnegan.com

Charles H. Suh (*Pro Hac Vice*)
**FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP**
1875 Explorer Street, 8th Floor
Reston, Virginia 20190-6023

Telephone: (571) 203-2700
Email: charles.suh@finnegan.com

Kara A. Specht
Robert K. High (*Pro Hac Vice*)
**FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP**
271 17th Street NW Suite 1400
Atlanta, Georgia 30363-6209
Telephone: (404) 653-6400
Email: kara.specht@finnegan.com
Email: robert.high@finnegan.com

*Attorneys for Defendants*
*Samsung Electronics Co., Ltd. and*
*Samsung Electronics America, Inc.*

**CERTIFICATE OF SERVICE**

I hereby certify that on January 29, 2025, I caused to be served copies of the foregoing **DEFENDANTS' INVALIDITY CONTENTIONS** on Plaintiff through its counsel of record via email.

Dated: January 29, 2025

/s/ *Seth D. Katz*
Seth D. Katz
Case Manager

# Appendix B1

**Exhibit B1**

**Invalidity of Asserted Claims of the '922 Patent**

**in view of Goktekin**

U.S. Pub. No. 2013/0234945A1 to Goktekin et al. ("Goktekin"), filed on March 5, 2013, published on September 12, 2013, and claiming priority to European application EP12158195.3 filed March 6, 2012, qualifies as prior art to U.S. Patent No. 10,976,922 ("'922 patent") at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2).[1] Goktekin anticipates or, alone or with other references, renders obvious one or more of asserted claims 1-21 of the '922 patent. To the extent Keyless contends Goktekin does not disclose one or more limitations of the claims, it would have been obvious to combine Goktekin with the knowledge of a person of ordinary skill in the art ("POSITA") and/or with one or more of the following references to render the claims at issue in the '922 patent invalid. The chart below illustrates how the asserted claims of the '922 patent are invalid in view of Goktekin and/or additional secondary references listed below, including but not limited to the prior art identified in Defendant's Invalidity Contentions.

- U.S. Patent Application Publication No. 2013/0187861A1 to Lavallee ("Lavallee"), filed on January 19, 2012, and published on July 25, 2013. Lavallee qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0110486A1 to Sirpal et al. ("Sirpal-486"), filed on September 28, 2011, and published on May 3, 2012. Sirpal-486 further claims priority as early as October 1, 2010, through one or more provisional applications identified on its face. Sirpal-486 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Additionally, PCT Publication No. WO2012/044782 (filed on September 29, 2011, and published on April 5, 2012) ("Sirpal-782") and U.S. Patent No. 8,832,577 ("Sirpal-577") (filed September 28, 2011, and issued on September 9, 2014) include equivalent disclosure to Sirpal-486 and qualify as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on any of Sirpal-782 or Sirpal-577 for their disclosures equivalent to Sirpal-486.
- U.S. Provisional Patent Application No. 61/389,000 to Sirpal et al. ("Sirpal-000"), filed on October 1, 2010, and published at least by May 3, 2012, upon the publication of U.S. Patent Application No. 13/247,801 (as Sirpal-486), which claimed

[1] Keyless Licensing LLC (or "Keyless") alleges that the asserted claims of the '922 patent are entitled to priority as early as February 17, 2013. However, as explained in the cover pleading, the asserted claims of the '922 patent are not entitled to Keyless's claimed priority date due to inadequate written description support. Assuming the claims are not invalid under Section 112 (*see, e.g.*, cover pleading), the earliest possible priority date for the asserted '922 patent claims is December 24, 2013. As a result, the '922 patent is subject to the AIA. The inclusion of any pre-AIA statutes is predicated on Keyless's interpretation of priority, which Defendants disagree with.

priority to Sirpal-000. Sirpal-000 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).

- U.S. Patent No. 5,933,525 to Makhoul et al. ("Makhoul"), filed on April 10, 1996, and issued on August 3, 1999. Makhoul qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a), (b) and/or (e).
- U.S. Patent Application Publication No. 2010/0008582A1 to Kim et al. ("Kim-582"), filed on July 9, 2009, and published on January 14, 2010. Kim-582 further claims priority to as early as July 10, 2008, via Korean Application No. KR10-2008-0067098. Kim qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a), (b) and/or (e). Additionally, U.S. Patent No. 8,625,899 to Kim et al. ("Kim-899," filed on July 9, 2009, and issued on January 7, 2014) includes equivalent disclosure to Kim-582 and qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on Kim-899 for its disclosures equivalent to Kim-582.
- European Patent Application No. EP0425291A2 to Beran et al. ("Beran"), filed on October 25, 1990, and published on May 2, 1991. Beran qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Pub. No. 2013/0050102 A1 to Wang et al. ("Wang"), was filed November 28, 2011, and published February 28, 2013. Wang qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 10,198,163 to Yabuki ("Yabuki"), was filed as Application No. 14/406,377 on December 8, 2014, and issued on February 5, 2019. Yabuki was filed as a national phase application of PCT Application No. PCT/JP2013/065733, which was filed on June 6, 2013, designated the United States, and claimed priority to Japanese Application No. 2012-130755 (filed on June 8, 2012). Yabuki qualifies as prior art at least under 35 U.S.C. § 102(a)(2). Yabuki's PCT Application claims priority to Japanese Application No. 2012-130755 (filed on June 8, 2012), designated the United States, and was published as WO2013/183722 on December 12, 2013, and thus the PCT publication also qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on WO2013/183722 as prior art for the same reasons described below for Yabuki.
- U.S. Patent Application Publication No. 2013/0120595 to Roach et al. ("Roach"), filed June 19, 2012, and published on May 16, 2013. Roach qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).

- U.S. Patent Application Publication No. 2013/0039570 to Vincent et al. ("Vincent"), filed September 15, 2012, and published on February 14, 2013. Vincent qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 8,249,347 to Ramkumar et al. ("Ramkumar"), filed May 19, 2011, and issued on August 21, 2012. Ramkumar qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).
- U.S. Patent Application Publication No. 2015/0088923 to Garcia-Barrio et al. ("Garcia-Barrio"), filed September 23, 2013, and published March 26, 2015. Garcia-Barrio qualifies as prior art at least under 35 U.S.C. § 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0215533 to Aravamudan et al. ("Aravamudan"), filed January 25, 2012, published August 23, 2012, and claiming priority to January 26, 2011, via Provisional Application No. 61/436,442. Aravamudan qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).

With respect to the proposed modifications to Goktekin, such modification would have been obvious to try, an obvious combination of prior art elements according to known methods to yield predictable results, a simple substitution of one known element for another to obtain predictable results, a use of known techniques to improve a similar device or method in the same way, an application of a known technique to a known device or method ready for improvement to yield predictable results, a variation of a known work in one field of endeavor for use in either the same field or a different one based on design incentives or other market forces with variations that are predictable to a POSITA, and/or obvious in view of teachings, suggestions, and motivations in the prior art that would have led a POSITA to modify or combine the prior art references.

To the extent any of the art describes different embodiments of its inventions, a POSITA would have found it obvious to combine Goktekin's teachings regarding these embodiments. A POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the embodiments, and would have a reasonable expectation of success in doing so, at least because the embodiments use known variations of existing technology to solve routine and well understood problems in predictable ways. A POSITA would have recognized that Goktekin's embodiments describe related advancements for mobile devices, and a POSITA would have been motivated to combine elements of the embodiments to achieve Goktekin's goals.

The excerpts cited herein are exemplary. For any claim limitation, Samsung may rely on excerpts cited for any other limitation and/or additional excerpts not set forth fully herein to the extent necessary to provide further explanation for a reference's disclosure

of a limitation. Where an excerpt refers to or discusses a figure or figure items, that figure and any additional descriptions of that figure should be understood to be incorporated by reference as if set forth fully herein. Samsung reserves the right to further supplement this chart.

To the extent that these Invalidity Contentions rely on or otherwise embody particular interpretations of terms or phrases in the asserted claims, Samsung is not proposing any such interpretations as proper interpretations or constructions of those terms or phrases. Various positions put forth in this document are predicated on Keyless's interpretation of its claims as evidenced by its Infringement Contentions. Those positions are not intended to and do not necessarily reflect Samsung's interpretation of the true and proper scope of the asserted claims. Samsung further incorporates by reference all reservations of rights set forth in the Invalidity Contentions, as if fully set forth herein.

Defendants' arguments throughout these Invalidity Contentions are based on Keyless's apparent interpretation of the claims in its infringement contentions. Defendants do not agree that such interpretation is proper and reserve the right to argue that the mapped actions do not infringe any claims of the '922 patent. In the alternative, should the Court or factfinder construe and/or apply the claims in a manner consistent with Keyless's interpretations in its infringement contentions for the '922 patent, the claims are invalid for at least the reasons set forth herein.

In some instances, the referenced prior art includes priority applications, including prior provisional applications, that provide adequate §112 support for the claim(s) in the referenced prior art. *See, e.g.*, Sirpal-486. In those instances, the consistent disclosures in those earlier applications, including prior provisional applications, are incorporated herein by reference. As such, those earlier disclosures apply equally in terms of their application to the elements of the asserted claims, and thus provide even earlier dates in terms of prior art, state of the art, and the knowledge base of those of ordinary skill in the art. *See Dynamic Drinkware LLC v. National Graphics Inc*., 800 F.3d 1375 (Fed. Cir. 2015).

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[1P]** A system for using multiple applications on a screen of a device, comprising: | To the extent that the preamble is held to be limiting, Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses a "system for using multiple applications on a screen of a device."<br><br>For example, Goktekin discloses "[m]ethods and modules for a multimodal text input in a mobile device." Goktekin, Abstract. As Goktekin explains, "[m]obile devices such as mobile phones or smart phones with an integrated camera module and with a display such as a touch screen display, for instance, show a good market penetration and a use in daily life far beyond a simple phone application. The mobile device is used as well as a pocket book, a memo book, a calendar with planner, an address book, for receiving and writing SMS and emails and so on." Goktekin, ¶[0003]. Goktekin teaches that its "module can replace the original keyboard module on the mobile device 1, advantageously offering all applications multimodal text input features as described." Goktekin, ¶[0032].<br><br>Goktekin states, "[f]or clarity, the 'application' stands for instance for a translation application, a search application such as google search or the like searching for a keyword in the internet, a phone application requesting for a phone number or a name or for any other application requesting text input." Goktekin, ¶[0034]. Further "[t]he 'original keyboard module' stands preferably for a standard keyboard module or sub-program, being already available for the respective mobile device 1 with its respective operating system and respective applications"—i.e., multiple applications—"but a new proprietary or separate keyboard module for a certain mobile device 1 is also conceivable." Goktekin, ¶[0041].<br><br>Moreover, as detailed below in [1B] ("first application") and [1D] ("second application"), Goktekin's system is for using at least a first application in the form of a translation application and a second application in the form of a camera application or module. *See* Goktekin, ¶[0033] ("An alternative solution instead of replacing the original keyboard module by the complete integral multimodal text input program module is a provision of a separate camera text input module, wherein the camera text input module is like a complement or supplement to the original keyboard module and always active in the background to detect whether the original keyboard module is activated by the application. In case the keyboard module is detected as activated, the camera text input module activates the camera mode and preferably displays an additional field on the display 2 |

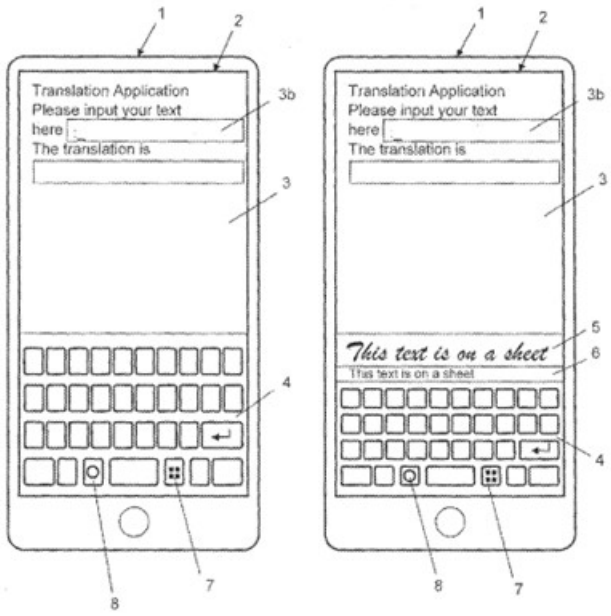
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | displaying the captured written text and preferably the recognized text which can be selected by a keypress, a gesture 9, by a voice command or the like. Thus the text can be input either via the keyboard or via the camera text input module in the camera mode and the input text will be sent to the application. In case the original keyboard module gets closed, by the application, a key, a timer or the like, the keyboard module is not detected anymore by the camera text input module, whereupon the camera text input module will deactivate the camera mode and delete any displayed second field 5 or third field 6 on the display 2.").<br><br>Goktekin's system is for using multiple applications "on a screen of a device"—e.g., on a "touch screen." *See* Goktekin, ¶[0046] ("FIG. 1a shows a preferred embodiment of an implementation of the multimodal text input method according to the present invention. FIG. 1 shows the mobile device 1 with the display 2 being the touch screen. On the touch screen there is displayed an application window 3 with a graphical user interface (GUI) of the application, the GUI comprising a text input field 3 b and preferably a text output field below. As the text input field 3 b has been activated by the application or by the user the application requested the text input and started the text input module being the multimodal text input module. The multimodal text input module starts displaying the conventional keyboard being the A-Z-keyboard in the first field 4. Preferably the first field 4 for the A-Z-keyboard has the same size as an original keyboard module which has been replaced on the mobile device 1 by the multimodal text input module. Thus the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode."); *see also* Goktekin at Fig. 1.<br><br>Additional exemplary citations include:<br><br>"The 'mobile device 1' stands preferably for any mobile-phone, smart-phone or the like." Goktekin, ¶[0044].<br><br>"The 'display 2' stands preferably for any conventional non-touch-screen display as well as for any touch screen with touch key functionality." Goktekin, ¶[0045].<br><br>"Another preferred selection can be made by touching or pressing, respectively, on the word on the touch screen." Goktekin, ¶[0050].<br><br>"FIG. 2a shows another preferred embodiment of an implementation of the present invention. On the display 2 being the touchscreen there are displayed three third fields 6, wherein preferably the |

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| | first one displays the recognized text and the second and the third one beneath display suggestion candidates. The one or more Suggestion candidates are preferably generated by an algorithm in connection to a database, wherein according the recognized character text, which might not be correctly recognized or spelled wrong, best fitting words with a high probability to be correct are generated as the Suggestion candidates. The database is preferably a dictionary or a lookup-table. Thus the user can select whatever fits best as the input text. It is also imaginable that only one or more closest fitting words are generated as Suggestion candidates for a recognized word in the recognized text which has not been found in the database. The keyboard in the first field 4 is in the camera mode preferably a reduced keyboard, wherein preferably only some necessary control keys or the bottom line of the A-Z-keyboard are displayed in order to provide more space for the camera mode input GUI being the second field 5 and one or more third fields 6 preferably in an area and of the size of the GUI of the original keyboard module." Goktekin, ¶[0055].<br><br>"FIG. 4 shows also hidden touch keys 10 within the second 5 and the third field 6. Such preferred hidden touch keys can also be seen as a reduced keyboard, wherein the hidden touch keys are displayed to the user by the frame or frame sides of the second 5 and/or the third field 6, for instance, or the like. A keypress on one of the hidden touch keys 10 within the preferred embodiment of FIG. 4 would select the recognized text, for instance." Goktekin, ¶[0063].<br><br>"Preferably the embodiment of FIG. 4 of the implementation of the present invention can also be used for another mobile device 1 with a conventional mechanical keyboard, wherein the second field 5 and/or the third field 6 are displayed and wherein the selection of the part or the whole of the recognized character text or of the suggestion candidate could be performed by the touch screen, by voice, by a rarely used key, by a certain pattern of an acceleration sensor, by an optical signal, or by another control signal. In the case of the conventional mechanical keyboard and if the display 2 is no touch screen, an additional key on the mechanical keyboard for the selection of a recognized text is rather difficult. Thus the selection could be controlled by another key event, such as for instance one generated by a voice command, by detection that a recognized text is in a repetitive sequence is for a longer time than a time limit the same one, by an acceleration sensor pattern or the like." Goktekin, ¶[0064].<br><br>"28. The mobile device as in claim 27 wherein the processor is configured to generate the keyboard on the display using a touch screen interface, the keyboard being compatible with one or more |

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| | standard applications, as for instance a phone application or an internet search application, running on the mobile device and requiring the text input and/or the first and the second means are adapted to display the first field and the second field and the third field, if available, occupying together always a same size on the display." Goktekin, claim 28. |
| **[1A]** an electronic device having a touchscreen; | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an electronic device having a touchscreen."<br><br>For example, Goktekin discloses "[m]ethods and modules for a multimodal text input in a mobile device." Goktekin, Abstract. The mobile device is an electronic device. As Goktekin explains, "[m]obile devices such as mobile phones or smart phones with an integrated camera module and with a display such as a touch screen display, for instance, show a good market penetration and a use in daily life far beyond a simple phone application. The mobile device is used as well as a pocket book, a memo book, a calendar with planner, an address book, for receiving and writing SMS and emails and so on." Goktekin, ¶[0003].<br><br>Additional exemplary citations include:<br><br>"Said method allows the multimodal text input in the mobile device via a conventional keyboard or in a touch screen keyboard as well as in a camera mode, wherein the camera of the mobile device has to be simply held over a written text, such that an image is taken of the written text and the written text is recognized and output to an application as it would have been input via the keyboard. Especially in a case of a text input in a foreign language such a text input possibility is very advantageous, for instance, in case of a translation application for traveling, wherein the input has to be done in Chinese, Greek or Latin language." Goktekin, ¶[0015].<br><br>"The 'mobile device 1' stands preferably for any mobile-phone, smart-phone or the like." Goktekin, ¶[0044].<br><br>"The 'display 2' stands preferably for any conventional non-touch-screen display as well as for any touch screen with touch key functionality." Goktekin, ¶[0045]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "FIG. 1a shows a preferred embodiment of an implementation of the multimodal text input method according to the present invention. FIG. 1 shows the mobile device 1 with the display 2 being the touch screen. On the touch screen there is displayed an application window 3 with a graphical user interface (GUI) of the application, the GUI comprising a text input field 3 b and preferably a text output field below. As the text input field 3 b has been activated by the application or by the user the application requested the text input and started the text input module being the multimodal text input module. The multimodal text input module starts displaying the conventional keyboard being the A-Z-keyboard in the first field 4. Preferably the first field 4 for the A-Z-keyboard has the same size as an original keyboard module which has been replaced on the mobile device 1 by the multimodal text input module. Thus the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode." Goktekin, ¶[0046].<br><br>"Another preferred selection can be made by touching or pressing, respectively, on the word on the touch screen." Goktekin, ¶[0050].<br><br>"FIG. 2a shows another preferred embodiment of an implementation of the present invention. On the display 2 being the touchscreen there are displayed three third fields 6, wherein preferably the first one displays the recognized text and the second and the third one beneath display suggestion candidates. The one or more Suggestion candidates are preferably generated by an algorithm in connection to a database, wherein according the recognized character text, which might not be correctly recognized or spelled wrong, best fitting words with a high probability to be correct are generated as the Suggestion candidates. The database is preferably a dictionary or a lookup-table. Thus the user can select whatever fits best as the input text. It is also imaginable that only one or more closest fitting words are generated as Suggestion candidates for a recognized word in the recognized text which has not been found in the database. The keyboard in the first field 4 is in the camera mode preferably a reduced keyboard, wherein preferably only some necessary control keys or the bottom line of the A-Z-keyboard are displayed in order to provide more space for the camera mode input GUI being the second field 5 and one or more third fields 6 preferably in an area and of the size of the GUI of the original keyboard module." Goktekin, ¶[0055.])<br><br>"FIG. 3a shows another preferred embodiment of an implementation of the present invention, wherein the mobile phone 1 is in the camera mode. In this preferred embodiment the GUI of the |

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| | camera mode occupies a certain display area of the touch screen and none of the keyboard keys of the A-Z keyboard is visible." Goktekin, ¶[0058].<br><br>"17. The method according to claim 16, wherein the A-Z keyboard is provided as a touchscreen keyboard in a first field of the display being a touch screen display." Goktekin at Claim 17.<br><br>"20. The method according claim 16, wherein in step f) a keypress is for instance a mechanical keypress, a touch key press or a Swype gesture on a touch screen, on either a visible key, a hidden key, within one of the fields of the display, on the part of the recognized text or on another text on the display, for a certain selection." Goktekin at Claim 20.<br><br>"28. The mobile device as in claim 27 wherein the processor is configured to generate the keyboard on the display using a touch screen interface, the keyboard being compatible with one or more standard applications, as for instance a phone application or an internet search application, running on the mobile device and requiring the text input and/or the first and the second means are adapted to display the first field and the second field and the third field, if available, occupying together always a same size on the display." Goktekin at Claim 28.<br><br>"30. A mobile device according to claim 29, wherein the processor is arranged to configure the keyboard as a A-Z touchscreen interface such that the A-Z touchscreen interface and the camera are active at the same time." Goktekin at Claim 30.<br><br>"31. A mobile device according to claim 29, wherein the processor is arranged to configured the keyboard as a touch screen interface; the processor being further configured to display the captured image in the second field and of the recognized text and enable by a single keypress or control command, or by a single gesture both: the selection of the part of the character text; and the selection of the respective character key; and the immediate outputting of the input text to the application." Goktekin at Claim 31. |
| **[1B]** an on-screen keyboard for entering text in a first application running within said device | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an on-screen keyboard for entering text in a first application running within said device." |

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| | For example, Goktekin discloses "FIG. 1a is a drawing of a mobile device with a display showing a text in an application window, an A-Z keyboard with a camera mode key in a first field, a captured written text in the second field and a recognized text in a third field" and "FIG. 1b is a drawing of the mobile device with the display showing the text in the application window and the A-Z-keyboard with the camera mode key in the first field." Goktekin, ¶[0023]-[0024].<br>  <br><br>Goktekin, Figs. 1A-1B.<br>According to Goktekin, "FIG. 1a shows a preferred embodiment of the present invention being a multimodal text input method and module on a mobile device 1. The multimodal text input method and module allow a user to input a text into an application on the mobile device 1 either via a keyboard or via a camera integrated in the mobile phone, wherein the user holds the mobile phone with the camera over a written text, the mobile phone captures an image of the written text and converts it via optical character recognition (OCR) into character text, such that parts of the recognized text can be selected as input text for the application. In other words, the user may input |

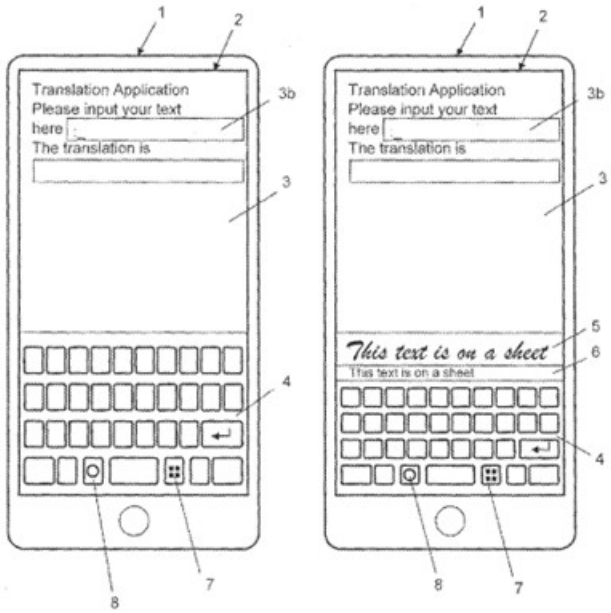
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| | the text conventionally via the keyboard in what is called a keyboard mode or he may input the text via the camera in what is called a camera mode if a written text in front of him is available." Goktekin, ¶[0031].<br><br>Additionally, "[a]n alternative solution instead of replacing the original keyboard module by the complete integral multimodal text input program module is a provision of a separate camera text input module, wherein the camera text input module is like a complement or supplement to the original keyboard module and always active in the background to detect whether the original keyboard module is activated by the application. In case the keyboard module is detected as activated, the camera text input module activates the camera mode and preferably displays an additional field on the display 2 displaying the captured written text and preferably the recognized text which can be selected by a keypress, a gesture 9, by a voice command or the like. Thus the text can be input either via the keyboard or via the camera text input module in the camera mode and the input text will be sent to the application. In case the original keyboard module gets closed, by the application, a key, a timer or the like, the keyboard module is not detected anymore by the camera text input module, whereupon the camera text input module will deactivate the camera mode and delete any displayed second field 5 or third field 6 on the display 2." Goktekin, ¶[0033].<br><br>As Goktekin explains, "The "keyboard" stands preferably for a touch screen keyboard, a mechanical conventional keyboard, a holographic keyboard or the like, wherein characters can be input manually or wherein a typing is registered." Goktekin, ¶[0039]. Further, "[t]he 'A-Z-keyboard' stands preferably for a keyboard comprising a full set of keys from A to Z or from 0 to 1 and at least one control key such as ENTER, for instance." Goktekin, ¶[0040]. Additionally, the "'original keyboard module' stands preferably for a standard keyboard module or sub-program, being already available for the respective mobile device 1 with its respective operating system and respective applications, but a new proprietary or separate keyboard module for a certain mobile device 1 is also conceivable." Goktekin, ¶[0041].<br><br>Additional exemplary citations include:<br><br>"All together, for the input of text in the mobile device the keyboard will be probably always kept as a first option, however multimodal additional input possibilities are advantageous in many cases and could be incorporated, as far as possible. Thus, the multimodal text input via the keyboard and via the camera with OCR implemented in a text input program module would be greatly desirable. |

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| | It would allow the same keyboard input functionality as before with a standard keyboard input module but also the additional camera based text input possibility. It would be also desirable if the multimodal text input program module could replace the standard keyboard module on the standard mobile devices, such as for instance on mobile phones, smart phones or the like, and under respective operating systems." Goktekin, ¶[0011].<br><br>"The objective of the invention is to overcome the shortcomings explained above and to provide a method for a multimodal text input in a mobile device via a keyboard or in a camera mode by holding the camera of the mobile device on a written text, wherein the written text is recognized and selectable, such that a respective key character or a part of the recognized text is selectable by a single keypress or command for an immediate output to an application requesting the text input." Goktekin, ¶[0012].<br><br>"Another objective of the invention is a program module executing said method to either replace or complement an original standard keyboard text input module, such that a multimodal text input via the conventional keyboard and via the camera mode is made possible." Goktekin, ¶[0013].<br><br>"The above objectives as well as further objectives which will also become apparent from the following description are achieved by a method and a module for a multimodal text input in a mobile device either by a keyboard or in a camera mode by recognizing text within a captured image of a written text according to the features mentioned in the independent claims 1, 2 and 12, respectively. Additional features and characteristics of the invention are mentioned in the dependent claims." Goktekin, ¶[0014].<br><br>"Said method allows the multimodal text input in the mobile device via a conventional keyboard or in a touch screen keyboard as well as in a camera mode, wherein the camera of the mobile device has to be simply held over a written text, such that an image is taken of the written text and the written text is recognized and output to an application as it would have been input via the keyboard. Especially in a case of a text input in a foreign language such a text input possibility is very advantageous, for instance, in case of a translation application for traveling, wherein the input has to be done in Chinese, Greek or Latin language." Goktekin, ¶[0015].<br><br>"For clarity, the 'application' stands for instance for a translation application, a search application such as google search or the like searching for a keyword in the internet, a phone application |

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| | requesting for a phone number or a name or for any other application requesting text input." Goktekin, ¶[0034].<br><br>"The 'original keyboard module' stands preferably for a standard keyboard module or sub-program, being already available for the respective mobile device 1 with its respective operating system and respective applications, but a new proprietary or separate keyboard module for a certain mobile device 1 is also conceivable." Goktekin, ¶[0041].<br><br>"FIG. 2 a shows another preferred embodiment of an implementation of the present invention. On the display 2 being the touch screen there are displayed three third fields 6, wherein preferably the first one displays the recognized text and the second and the third one beneath display suggestion candidates. The one or more suggestion candidates are preferably generated by an algorithm in connection to a database, wherein according the recognized character text, which might not be correctly recognized or spelled wrong, best fitting words with a high probability to be correct are generated as the suggestion candidates. The database is preferably a dictionary or a lookup-table. Thus the user can select whatever fits best as the input text. It is also imaginable that only one or more closest fitting words are generated as suggestion candidates for a recognized word in the recognized text which has not been found in the database. The keyboard in the first field 4 is in the camera mode preferably a reduced keyboard, wherein preferably only some necessary control keys or the bottom line of the A-Z-keyboard are displayed in order to provide more space for the camera mode input GUI being the second field 5 and one or more third fields 6 preferably in an area and of the size of the GUI of the original keyboard module." Goktekin, ¶[0055].<br><br>"FIG. 4 shows another preferred embodiment of the implementation of the present invention, wherein the original keyboard module is kept on the mobile device 1 and wherein the multimodal keyboard input module is reduced to the camera text input module complementary to the original keyboard module. The preferred camera text input module is preferably adapted to enhance the original keyboard module on the mobile device 1 by the features of the camera mode. As the application requires the text input it starts the original keyboard module which is detected by the camera text input module being always active for detecting in the background. Upon the detection of the activated original keyboard module the camera text input module activates the camera and preferably opens the second field 5 and displays the part of the captured image with the written text." Goktekin, ¶[0060]. |

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| | "FIG. 4 shows also hidden touch keys 10 within the second 5 and the third field 6. Such preferred hidden touch keys can also be seen as a reduced keyboard, wherein the hidden touch keys are displayed to the user by the frame or frame sides of the second 5 and/or the third field 6, for instance, or the like. A keypress on one of the hidden touch keys 10 within the preferred embodiment of FIG. 4 would select the recognized text, for instance." Goktekin, ¶[0063].<br><br>"method comprising: a) activating a keyboard mode; b) providing an A-A-keyboard in a first field for text input … f) outputting a selected character as the input text to the application upon a selection of the character on the A-Z keyboard, or outputting a selected part of the recognized character text as the input text to the application upon a selection of the part of the recognized character text; wherein the respective selection takes place by a single keypress or control command, or by a single gesture." " Goktekin, claim 16.<br><br>"17. The method according to claim 16, wherein the A-Z keyboard is provided as a touchscreen keyboard in a first field of the display being a touch screen display." Goktekin, claim 17.<br><br>"26. A method for multimodal text input in a mobile device via a keyboard or in a camera mode by holding the camera of the mobile device over a written text, such that an image is taken of the written text and the written text is recognized, wherein the input text is output to an application requesting the input text, the method comprising: activating a keyboard mode; in the activated keyboard mode: providing an A-Z-key board in a first field for text input and a control key for a selection of the camera mode, upon a selection of the camera mode: deactivating the keyboard mode and activating the camera mode and providing a control key for a selection of the keyboard mode … outputting a selected character as the input text to the application upon a selection of the character on the A-Z keyboard, or outputting a selected part of the recognized character text as the input text to the application upon a selection of the part of the recognized character text …." Goktekin, claim 26.<br><br>"27. A mobile device arranged to facilitate multimodal text input, the mobile device comprising: a display configured to display text and image content; a keyboard configured to receive text; a camera having an camera mode; and a processor in communication with the display, the keyboard, and the camera, the processor being configured to receive text input via the keyboard or the camera mode in response to detecting the camera of the mobile device being held over a written text, such |

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| | that an image is taken of the written text and the written text is recognized, where the input text is output to an executing application requesting the input text; the processor configured to communicate with the camera to capture the image of the written text; the display configured to display the captured image with the written text in a second field of the display; the processor configured to: convert the captured image to character text by optical character recognition (OCR) and cause the recognized character text to be displayed on the display; and output a selected character as the input text to the application upon a selection of the character on the keyboard, or output a selected part of the recognized character text as the input text to the application upon a selection of the part of the recognized character text, the respective selection takes place by a single keypress or control command, or by a single gesture." Goktekin, claim 27.<br><br>*See* Goktekin Figs. 1a-1b, 2a-2b, 4 (all illustrating a keyboard and a "Translation Application"); [0023]-[0026], [0029]. |
| **[1C]** wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard; and | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard."<br><br>For example, as discussed and illustrated above in [1B], Goktekin's "first application" appears in a "first zone" (e.g., upper portion) of the touchscreen of Figure 1a. Thus, Goktekin provides "a first zone of said touchscreen is assigned to an interface of said first application."<br><br>Moreover, as also discussed and illustrated above in [1B], Goktekin's "keyboard" appears in a "second zone" (e.g., lower portion) of the touchscreen of Figure 1a. Thus, Goktekin provides "a second zone of said touchscreen is assigned to said keyboard." |



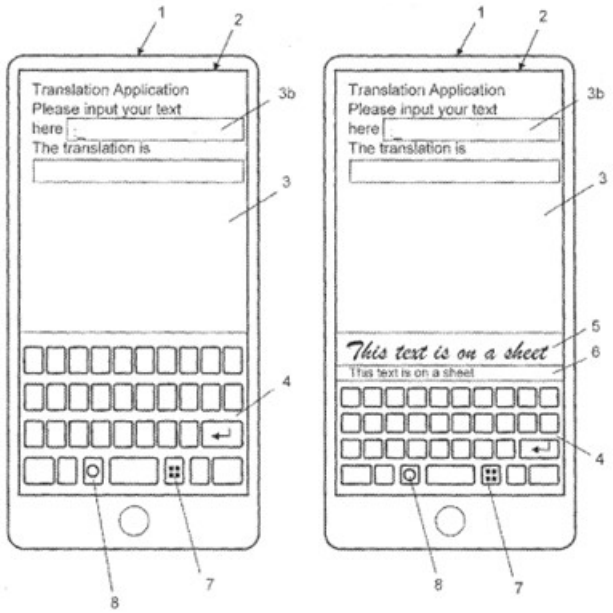

Goktekin, Figs. 1A-1B.

Additional exemplary citations include:

"FIG. 1a shows a preferred embodiment of an implementation of the multimodal text input method according to the present invention. FIG. 1 shows the mobile device 1 with the display 2 being the touch screen. On the touch screen there is displayed an application window 3 with a graphical user interface (GUI) of the application, the GUI comprising a text input field 3 b and preferably a text output field below. As the text input field 3 b has been activated by the application or by the user the application requested the text input and started the text input module being the multimodal text input module. The multimodal text input module starts displaying the conventional keyboard being the A-Z-keyboard in the first field 4. Preferably the first field 4 for the A-Z-keyboard has the same size as an original keyboard module which has been replaced on the mobile device 1 by the multimodal text input module. Thus the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode." Goktekin, ¶[0046].

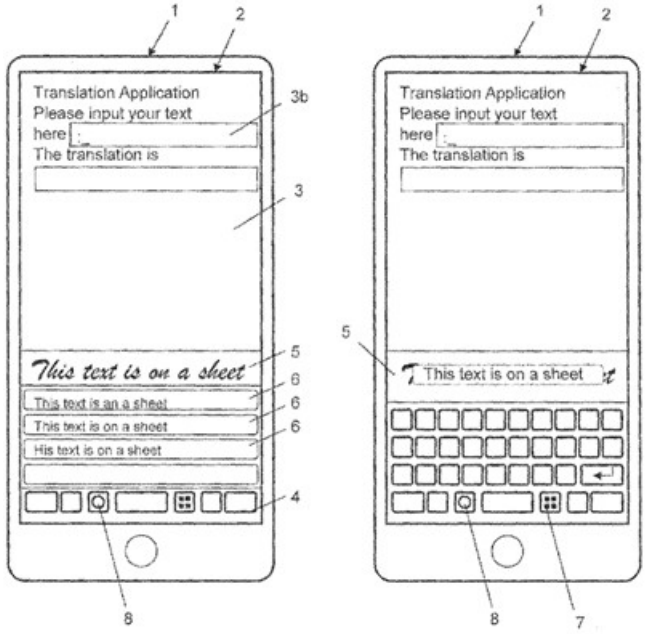
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| | "16. A method for multimodal text input in a mobile device via a keyboard or in a camera mode by holding the camera of the mobile device over a written text, such that an image is taken of the written text and the written text is recognized, wherein the input text is output to an application requesting the input text, the method comprising: a) activating a keyboard mode; b) providing an A-Z-keyboard in a first field for text input; c) activating the camera mode; d) capturing the image of the written text and displaying the captured image with the written text in a second field of a display of the mobile device; e) converting the captured image to character text by optical character recognition (OCR) and displaying the recognized character text on the display; and f) outputting a selected character as the input text to the application upon a selection of the character on the A-Z-keyboard, or outputting a selected part of the recognized character text as the input text to the application upon a selection of the part of the recognized character text; wherein the respective selection takes place by a single keypress or control command, or by a single gesture." Goktekin, claim 16.<br><br>"21. The method according to claim 16, wherein a respective size of the first field, the second field and the third field, if available, is adapted such that a surrounding frame always occupies a same frame or field size on the display, as an original standard keyboard module on the mobile device." Goktekin, claim 21. |
| **[1D]** wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone, and | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br><br>For example, in Goktekin, the "camera mode" may be provided as part of a "separate camera text input module, wherein the camera text input module is like a complement or supplement to the original keyboard module." Goktekin, ¶[0033]; *compare with* [0032]. Goktekin also teaches that, "[p]referably the keyboard text input module is independent from the camera text input module, but the camera text input module is dependent of the state of the keyboard text input module, which is |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | checked continuously by the camera text input module." Goktekin, ¶[0061]. Thus, Goktekin provides a "second application."<br><br>Further, for example, Goktekin discloses that "the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode." Goktekin, ¶[0046]. According to Goktekin, "FIG. 1b shows the same preferred embodiment of the implementation of the multimodal text input method as shown in FIG. 1a but after a keypress on the camera mode key 8. In the camera mode the first field 4 for the keyboard is preferably smaller compared to a size in the keyboard mode of FIG. 1a, such that the difference between the size of the first field 4 in the keyboard mode and the smaller size in the camera mode is used for displaying the second field 5 wherein a part of the captured written text is displayed and for displaying the third field 5 wherein the recognized text is displayed. In this preferred embodiment the size of any displayed fields in the keyboard mode as well as in the camera mode is always kept the same, such that the used size of the touch screen is kept the same as that of the original keyboard module, such that the original keyboard module can be replaced by the multimodal text input module without overlapping the application more than originally planned by a usage of the original keyboard module." Goktekin, ¶[0047]. Thus, Goktekin provides "wherein based on accomplishment of a condition under the control of said keyboard," e.g., pressing camera mode key 8, "the system activates a second application and displays an interface of the second application . . . on at least a portion of said second zone." Further, as illustrated in Figure 1b, Goktekin displays both "an interface of the second application [e.g., elements 5 and 6] and a reduced interface corresponding to said keyboard [e.g., element 4] on at least a portion of said second zone." |

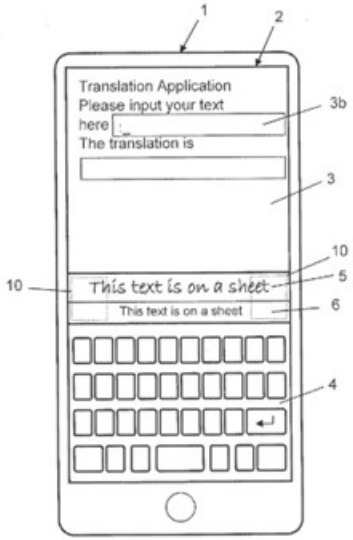



Goktekin, Figs. 1a-1b.

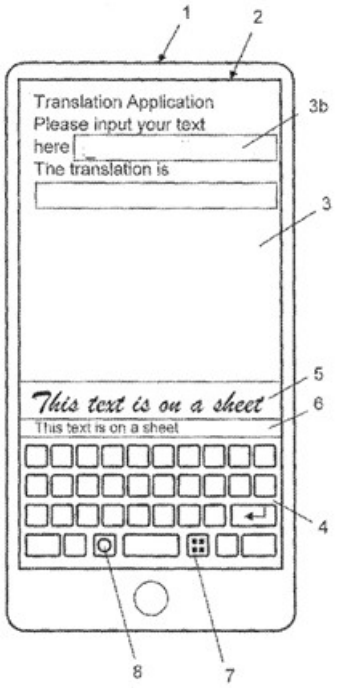
Goktekin further provides that "FIG. 2a shows another preferred embodiment of an implementation of the present invention. On the display 2 being the touch screen there are displayed three third fields 6, wherein preferably the first one displays the recognized text and the second and the third one beneath display suggestion candidates. The one or more suggestion candidates are preferably generated by an algorithm in connection to a database, wherein according the recognized character text, which might not be correctly recognized or spelled wrong, best fitting words with a high probability to be correct are generated as the suggestion candidates. The database is preferably a dictionary or a lookup-table. Thus the user can select whatever fits best as the input text. It is also imaginable that only one or more closest fitting words are generated as suggestion candidates for a recognized word in the recognized text which has not been found in the database. The keyboard in the first field 4 is in the camera mode preferably a reduced keyboard, wherein preferably only some necessary control keys or the bottom line of the A-Z-keyboard are displayed in order to provide more space for the camera mode input GUI being the second field 5 and one or more third fields 6 preferably in an area and of the size of the GUI of the original keyboard module." Goktekin,

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | ¶[0055]. Thus, Goktekin "displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br>  <br><br>Goktekin, Figs. 2a-2b.<br>Still further, Goktekin provides that "FIG. 2b shows another preferred embodiment of an implementation of the present invention, wherein the recognized text is displayed as the overlay over the text within the captured image in the second field 5. Preferably either the third field 6 with the recognized text is overlaid over the second field 5 with the captured image, or in the displayed part of the captured image the recognized characters are erased and only the recognized text in a similar size and width is overlaid." Thus, and as illustrated in Figure 2b above, Goktekin "displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone." |

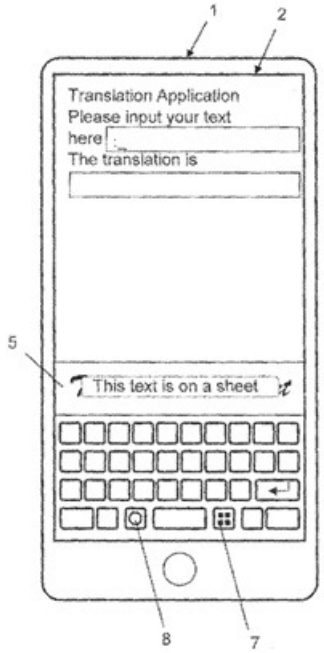
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Additionally, Goktekin provides that "FIG. 4 shows another preferred embodiment of the implementation of the present invention, wherein the original keyboard module is kept on the mobile device 1 and wherein the multimodal keyboard input module is reduced to the camera text input module complementary to the original keyboard module. The preferred camera text input module is preferably adapted to enhance the original keyboard module on the mobile device 1 by the features of the camera mode. As the application requires the text input it starts the original keyboard module which is detected by the camera text input module being always active for detecting in the background. Upon the detection of the activated original keyboard module the camera text input module activates the camera and preferably opens the second field 5 and displays the part of the captured image with the written text." Goktekin, ¶[0060]. As Goktekin explains, "FIG. 4 shows also hidden touch keys 10 within the second 5 and the third field 6. Such preferred hidden touch keys can also be seen as a reduced keyboard, wherein the hidden touch keys are displayed to the user by the frame or frame sides of the second 5 and/or the third field 6, for instance, or the like. A keypress on one of the hidden touch keys 10 within the preferred embodiment of FIG. 4 would select the recognized text, for instance." Goktekin, ¶[0063]. Thus, Goktekin "displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone." |

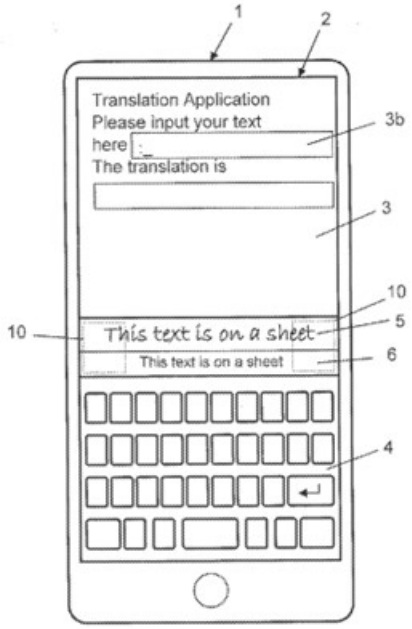
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Goktekin, Fig. 4.<br>Additional exemplary citations include:<br>"16. A method for multimodal text input in a mobile device via a keyboard or in a camera mode by holding the camera of the mobile device over a written text, such that an image is taken of the written text and the written text is recognized, wherein the input text is output to an application requesting the input text, the method comprising: a) activating a keyboard mode; b) providing an A-Z-keyboard in a first field for text input; c) activating the camera mode; d) capturing the image of the written text and displaying the captured image with the written text in a second field of a display of the mobile device; e) converting the captured image to character text by optical character recognition (OCR) and displaying the recognized character text on the display; and f) outputting a selected character as the input text to the application upon a selection of the character on the A-Z-keyboard, or outputting a selected part of the recognized character text as the input text to the application upon a selection of the part of the recognized character text; wherein the respective selection takes place by a single keypress or control command, or by a single gesture." Goktekin, claim 16. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "21. The method according to claim 16, wherein a respective size of the first field, the second field and the third field, if available, is adapted such that a surrounding frame always occupies a same frame or field size on the display, as an original standard keyboard module on the mobile device." Goktekin, claim 21.<br><br>"25. The method according to claim 16, wherein: the keyboard mode is executed by a keyboard text input module; and the camera mode is executed by a separate camera text input module; …." Goktekin, claim 25. |
| **[1E]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen. | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen."<br><br>For example, Goktekin illustrates all of the "interface of said first application" (e.g., the exemplary translation application), the "interface of said second application" (e.g., the camera mode text input application), and "the reduced interface corresponding to said keyboard" being "simultaneously displayed on said touchscreen": |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Goktekin, Fig. 1b, illustrating first application (e.g., 3), second application (e.g., 5, 6), and reduced interface (e.g., 4) simultaneously on touchscreen display (e.g., 2). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Goktekin, Fig. 2a, illustrating first application (e.g., 3), second application (e.g., 5, 6), and reduced interface (e.g., 4) simultaneously on touchscreen display (e.g., 2). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Goktekin, Fig. 2b, illustrating first application (e.g., 3), second application (e.g., 5), and reduced interface (e.g., 4) simultaneously on touchscreen display (e.g., 2). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Goktekin, Fig. 4, illustrating first application (e.g., 3), second application (e.g., 5, 6, 10), and reduced interface (e.g., 4) simultaneously on touchscreen display (e.g., 2).<br>Additional exemplary citations include:<br>"FIG. 1b shows the same preferred embodiment of the implementation of the multimodal text input method as shown in FIG. 1a but after a keypress on the camera mode key 8. In the camera mode the first field 4 for the keyboard is preferably smaller compared to a size in the keyboard mode of FIG. 1a, such that the difference between the size of the first field 4 in the keyboard mode and the smaller size in the camera mode is used for displaying the second field 5 wherein a part of the captured written text is displayed and for displaying the third field 5 wherein the recognized text is displayed. In this preferred embodiment the size of any displayed fields in the keyboard mode as well as in the camera mode is always kept the same, such that the used size of the touch screen is kept the same as that of the original keyboard module, such that the original keyboard module can |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | be replaced by the multimodal text input module without overlapping the application more than originally planned by a usage of the original keyboard module." Goktekin, ¶[0047].<br><br>"FIG. 2a shows another preferred embodiment of an implementation of the present invention. On the display 2 being the touch screen there are displayed three third fields 6, wherein preferably the first one displays the recognized text and the second and the third one beneath display suggestion candidates. The one or more suggestion candidates are preferably generated by an algorithm in connection to a database, wherein according the recognized character text, which might not be correctly recognized or spelled wrong, best fitting words with a high probability to be correct are generated as the suggestion candidates. The database is preferably a dictionary or a lookup-table. Thus the user can select whatever fits best as the input text. It is also imaginable that only one or more closest fitting words are generated as suggestion candidates for a recognized word in the recognized text which has not been found in the database. The keyboard in the first field 4 is in the camera mode preferably a reduced keyboard, wherein preferably only some necessary control keys or the bottom line of the A-Z-keyboard are displayed in order to provide more space for the camera mode input GUI being the second field 5 and one or more third fields 6 preferably in an area and of the size of the GUI of the original keyboard module." Goktekin, ¶[0055].<br><br>"FIG. 2b shows another preferred embodiment of an implementation of the present invention, wherein the recognized text is displayed as the overlay over the text within the captured image in the second field 5. Preferably either the third field 6 with the recognized text is overlaid over the second field 5 with the captured image, or in the displayed part of the captured image the recognized characters are erased and only the recognized text in a similar size and width is overlaid." Goktekin, ¶[0057].<br><br>"FIG. 4 shows another preferred embodiment of the implementation of the present invention, wherein the original keyboard module is kept on the mobile device 1 and wherein the multimodal keyboard input module is reduced to the camera text input module complementary to the original keyboard module. The preferred camera text input module is preferably adapted to enhance the original keyboard module on the mobile device 1 by the features of the camera mode. As the application requires the text input it starts the original keyboard module which is detected by the camera text input module being always active for detecting in the background. Upon the detection of the activated original keyboard module the camera text input module activates the camera and |

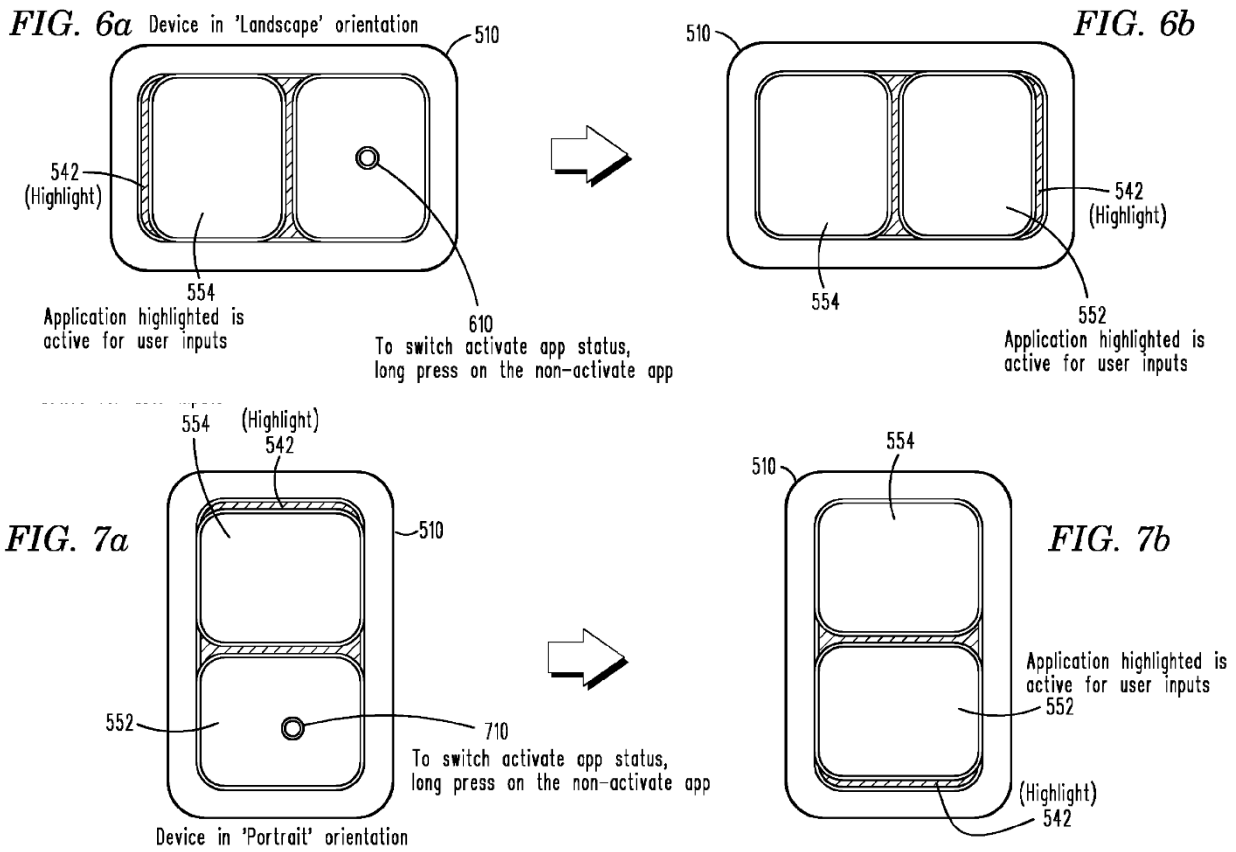
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | preferably opens the second field 5 and displays the part of the captured image with the written text." Goktekin, ¶[0060]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[2]** The system of claim 1, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 2 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 2 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>For example, in Goktekin, a GUI of an application comprises a text input field 3b and a user may "activate" the "text input field 3b" within the application. Goktekin, ¶[0046]. A POSITA would recognize that a user would interact with an interface of an application (e.g., by touching a portion of the touch screen corresponding to the first application's GUI) in order to activate a "text input field" within the application. A POSITA would further understand that such an interaction causes the focus of the system (e.g., the focus of the input method) to be given to the first application. Thus, Goktekin provides "wherein upon interacting with the interface of any of said applications," e.g., including the first application, "the focus of the system is given to the interacted application."<br><br>As another example, Goktekin describes touching the screen on the camera mode text input application interface to enter recognized text into a text field. For example, Goktekin provides that if "the recognized and displayed text is correct and desired the user selects the recognized text as input text, whereupon the selected text is output to the application preferably in the same way as the text would have been input via the keyboard." Goktekin, ¶[0048]. Likewise, according to Goktekin, "[a]nother preferred selection can be made by touching or pressing, respectively, on the word on |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | the touch screen." Goktekin, ¶[0050]; *see also* Goktekin, ¶[0055] ("user can select [from the camera modulee text input application] whatever fits best as the input text [into the first application]"). In addition, Goktekin provides, "A keypress on one of the hidden touch keys 10 [illustrated within the camera mode text input application] within the preferred embodiment of FIG. 4 would select the recognized text, for instance." Goktekin, ¶[0063]. In each instance, selecting/touching a word displayed in the camera mode text input application "interact[s] with the interface" of the camera mode text input application and causes the focus of the system (and it's input method) to be given to the camera mode text input application. Thus, for this additional reason, Goktekin provides "wherein upon interacting with the interface of any of said applications," e.g., including a second application, "the focus of the system is given to the interacted application."<br><br>Additional exemplary disclosures of Goktekin include:<br><br>• "27. A mobile device arranged to facilitate multimodal text input, the mobile device comprising: a display configured to display text and image content; a keyboard configured to receive text; a camera having an camera mode; and a processor in communication with the display, the keyboard, and the camera, the processor being configured to receive text input via the keyboard or the camera mode in response to detecting the camera of the mobile device being held over a written text, such that an image is taken of the written text and the written text is recognized, where the input text is output to an executing application requesting the input text; the processor configured to communicate with the camera to capture the image of the written text; the display configured to display the captured image with the written text in a second field of the display; the processor configured to: convert the captured image to character text by optical character recognition (OCR) and cause the recognized character text to be displayed on the display; and output a selected character as the input text to the application upon a selection of the character on the keyboard, or output a selected part of the recognized character text as the input text to the application upon a selection of the part of the recognized character text, the respective selection takes place by a single keypress or control command, or by a single gesture." Goktekin, claim 27.<br><br>To the extent Keyless argues that Goktekin does not disclose or render obvious "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application," it would have been obvious in view of Goktekin, POSITA's pre-existing |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | knowledge, and/or the teachings of Goktekin combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Sirpal-486, Sirpal-000 and Lavallee teach wherein upon interacting with the interface of any of several applications, the focus of the system is given to the interacted application.<br><br>For example, Sirpal-486 describes a "multi-screen user device and a universal clipboard application" with an "intuitive user interface" for copying information from one application on a screen of the device to be pasted into another application on another screen. Sirpal-486, Abstract. Sirpal-486 notes that a "substantial number of handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, ¶[0002]. *Sirpal* explains that the "small form factor of handheld computing devices requires a careful balancing act between the displayed graphics and the area provided for receiving inputs." Sirpal-486, ¶[0003].<br><br>Additional information about Sirpal-486's system for switching focus between applications appears in Sirpal-000, which Sirpal-486 incorporates by reference. For example, Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Sirpal-000 at 147.<br>According to Sirpal-000, as illustrated above, "[i]n this model, the user has the device open to display dual screens. On each screen is displayed an application. The keyboard spans across both screens. As shown by the highlight around the entry field in the compose view on the left and the colored title bar, the user has placed focus in the composer on the left. Therefore typing on the keyboard will input in the field on the left. The user can tap the right screen to move the focus to that screen. If the user taps a field, that field will get the focus and the title bar will change to orange. The right screen will compress and the action bar will appear. The focus state and title in the left will return to the off state; however, the action bar will remain. This allows the user to tap back and forth to enter text in both screens in a seamless fashion." Sirpal-000 at 147.<br>As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee states that "FIGS. 6a-6b and 7a-7b illustrate switching the active running application, in accordance with various aspects of the present disclosure," as illustrated below. Lavallee, ¶[0010]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>"Referring now to FIGS. 6 a-b and 7 a-b, it can be seen that the active application displayed in the split screen mode can be changed or switched. The active application refers to the application of the maximized, running applications displayed in the split screen mode that is capable of accepting inputs, such as from a user providing inputs via the touch screen 520 of the device 510 or via peripherals, such as a keyboard, mouse, etc., that may be coupled to device 510. Once the two or more running applications are open and simultaneously displayed, one application is designated as |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | active to accept user inputs. Selection of one of the other running, inactive applications, such as by a long press inside the inactive application, will activate that application and cause it to be the active application. In FIG. 6 a, mobile device 510 is shown in landscape orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in portrait orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 610 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 6 b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed. Thus, switching active control of the two or more running applications from a previous running application as the active application to a new running application as the active application can be accomplished. It has been shown that this switching active control may be accomplished by selecting the new running application to be active via the touch screen. Moreover, the previous running application can be the active application that was designated as active upon creating the combined group representation. In the example of FIGS. 5 a-5 d, application 554 was the initial active application so designated upon forming the combined group icon 530." Lavallee, ¶[0051].<br><br>"In FIG. 7 a, mobile device 510 is shown in portrait orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in landscape orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 710 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 7 b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed." Lavallee, ¶[0052].<br><br>Lavallee discloses several use cases for its application-switching system, in which the focus is switched between applications by interacting with their respective interface(s). For example, "FIGS. 10 and 11, illustrate representative examples of running applications that have been maximized and displayed in their respective split screen mode viewing areas in the split screen |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | mode after the combined group representation in which they are represented has been selected. In FIG. 10, a user of an electronic device with a touch screen is composing an email. Two maximized and displayed running applications are shown: an email application in the left split screen mode viewing area and a web browser application in the right split screen mode viewing area. The split screen mode is used to get content for their email using the web browser. In FIG. 11, a user is playing a video game. Two maximized and displayed running applications are shown: a video game application in the left split screen mode viewing area and a strategy guide application in the right split screen mode viewing area. The split screen mode is used to read the strategy guide for the game while the user is actually playing the video game displayed in the left split screen mode viewing area." Lavallee, ¶[0057].<br><br>As another example, Lavallee describes "various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059]; *see also* Lavallee, ¶[0060]-[0065] *and* Figs. 12a-15d. For example, Lavallee describes "an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area," such that a user "is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body." Lavallee, ¶[0060]. "Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060]. "It is noted that in the "copy and paste" function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage." Lavallee, ¶[0062].<br><br>By way of further examples, Lavallee discloses: |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | • "an 'insert' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application" Lavallee, ¶[0061], Figs. 13a-13d);<br>• "an 'attach file' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments," suitable for applications that "include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc." Lavallee, ¶[0061], Figs. 14a-14d);<br>• "an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application." Lavallee, ¶[0061], Figs. 15a-15d).<br>Additional exemplary disclosures of Lavallee include:<br>• "Optionally, active control of the displayed running applications in the split screen mode may be switched at Block 1750 if desired. While the application on top of the combined group representation stack may initially be active and highlighted to signify its status as the active application, this active control can be changed at any time desired, by the user selecting another application of the displayed applications to be active." Lavallee, ¶[0069].<br>• "8. The method of claim 1, wherein one running application is active and capable of receiving user inputs via the touch screen, the method further comprising: switching active control of the two or more running applications from a previous running application as active application to another running application of the two or more running applications as the active application." Lavallee at claim 8. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | • "23. The device of claim 18, wherein one running application is active and capable of receiving user inputs via the touch screen and the processor and the memory are further configured to switch active control of the two or more running applications from a previous running application as the active application to another running application of the two or more running applications as the active application." Lavallee at claim 23.<br><br>A POSITA would have found it obvious to incorporate "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application," as claimed. Each of Sirpal-486 (including through incorporation of Sirpal-000), Sirpal-000, and Lavallee teaches wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Goktekin, as an obvious and intuitive way to allocate system resources and direct keyboard inputs between either of the first and second applications of Goktekin. One obvious combination of would yield a system in which the user could select (by a touch interaction) which of the first application (e.g., the translation application illustrated in Goktekin Figs. 1a-1b) or second application (e.g., the camera mode application) the user wants to receive the focus of the system. Interacting with the first application interface would direct system to focus the system's touch interface on the first application—meaning that touch inputs would be registered by the first application so the first application can process those inputs accordingly. The same would be true of interacting with the second application interface. The resulting system would ensure that the focus of the input system(s) is/are properly directed to an interacted application. If a user has touched a text entry box (3b) in the first application (translation application), the system would understand to direct the focus of the keyboard toward entering text into that first application (so text may be typed into the text entry box). Whereas if the user has touched the camera mode application interface (e.g., OCR text 6), then the system would understand to direct focus to the camera mode to cause its text to be output to the first application. A POSITA would have been motivated to make the modification for this additional reason.<br><br>Moreover, a POSITA would recognize the focus-switching features to be an advantageous and important (and perhaps even necessary) way to achieve the multi-application/multi-mode functionalities described in Goktekin. Interacting with one of several active applications to direct system focus to the interacted application was routine and conventional to a POSITA, as shown by |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-486, Sirpal-000 and Lavallee. Incorporating the feature into Goktekin's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Goktekin, represent nothing more than combining prior art elements according to known methods and techniques (allocating system resources to interacted application(s)) to a mobile electronic touch screen device to yield predictable results (directing system resources to an active/interacted application). |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[3]** The system of claim 1, wherein said keyboard is used with both of said applications. | Claim 3 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 3 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said keyboard is used with both of said applications."<br><br>For example, Goktekin discloses that the "multimodal text input method and module allow a user to input a text into an application on the mobile device 1 either via a keyboard or via a camera integrated in the mobile phone, wherein the user holds the mobile phone with the camera over a written text, the mobile phone captures an image of the written text and converts it via optical character recognition (OCR) into character text, such that parts of the recognized text can be selected as input text for the application. In other words, the user may input the text conventionally via the keyboard in what is called a keyboard mode or he may input the text via the camera in what |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | is called a camera mode if a written text in front of him is available." Goktekin, ¶[0031]. "Thus the text can be input either via the keyboard or via the camera text input module in the camera mode and the input text will be sent to the application." Goktekin, ¶[0033]. "The multimodal text input module starts displaying the conventional keyboard being the A-Z keyboard in the first field 4. . . . Thus the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode." Goktekin, ¶[0046]. Thus, Goktekin's keyboard is used with the first application to input text.<br><br>As another example, Goktekin discloses that the keyboard is used with the camera mode text input application both to activate that second application and to input text recognized via the second application into a text field of the first application. Goktekin discloses that "the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode." Goktekin, ¶[0046]. According to Goktekin, "FIG. 1b shows the same preferred embodiment of the implementation of the multimodal text input method as shown in FIG. 1a but after a keypress on the camera mode key 8." Goktekin, ¶[0047]. Goktekin provides that "[a] selection of the recognized text in the third field can be made preferably by a second keypress on the camera key or a keypress on the third field or on the RETURN key or the like." Goktekin, ¶[0049]. Thus, Goktekin's keyboard is used with the second application at least under Keyless's interpretation, as at least the camera mode key 8 and the RETURN key of the keyboard are used with the second application.<br><br>Additional exemplary citations include:<br><br>"All together, for the input of text in the mobile device the keyboard will be probably always kept as a first option, however multimodal additional input possibilities are advantageous in many cases and could be incorporated, as far as possible. Thus, the multimodal text input via the keyboard and via the camera with OCR implemented in a text input program module would be greatly desirable. It would allow the same keyboard input functionality as before with a standard keyboard input module but also the additional camera based text input possibility. It would be also desirable if the multimodal text input program module could replace the standard keyboard module on the standard mobile devices, such as for instance on mobile phones, smart phones or the like, and under respective operating systems." Goktekin, ¶[0011]. |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "The objective of the invention is to overcome the shortcomings explained above and to provide a method for a multimodal text input in a mobile device via a keyboard or in a camera mode by holding the camera of the mobile device on a written text, wherein the written text is recognized and selectable, such that a respective key character or a part of the recognized text is selectable by a single keypress or command for an immediate output to an application requesting the text input." Goktekin, ¶[0012].<br><br>"Another objective of the invention is a program module executing said method to either replace or complement an original standard keyboard text input module, such that a multimodal text input via the conventional keyboard and via the camera mode is made possible." Goktekin, ¶[0013].<br><br>"The above objectives as well as further objectives which will also become apparent from the following description are achieved by a method and a module for a multimodal text input in a mobile device either by a keyboard or in a camera mode by recognizing text within a captured image of a written text according to the features mentioned in the independent claims 1, 2 and 12, respectively. Additional features and characteristics of the invention are mentioned in the dependent claims." Goktekin, ¶[0014].<br><br>"Said method allows the multimodal text input in the mobile device via a conventional keyboard or in a touch screen keyboard as well as in a camera mode, wherein the camera of the mobile device has to be simply held over a written text, such that an image is taken of the written text and the written text is recognized and output to an application as it would have been input via the keyboard. Especially in a case of a text input in a foreign language such a text input possibility is very advantageous, for instance, in case of a translation application for traveling, wherein the input has to be done in Chinese, Greek or Latin language." Goktekin, ¶[0015].<br><br>"Another preferred method of selecting one of the words of the recognized text displayed adjacent to the displayed keyboard is via a keypress on a key in next proximity of the desired word as input text." Goktekin, ¶[0052].<br><br>"Another preferred method of selecting one of the words of the recognized text is by displaying next to each word a respective identifier such as a certain number, for instance, and by a keypress on that respective number on the keyboard." Goktekin, ¶[0053]. |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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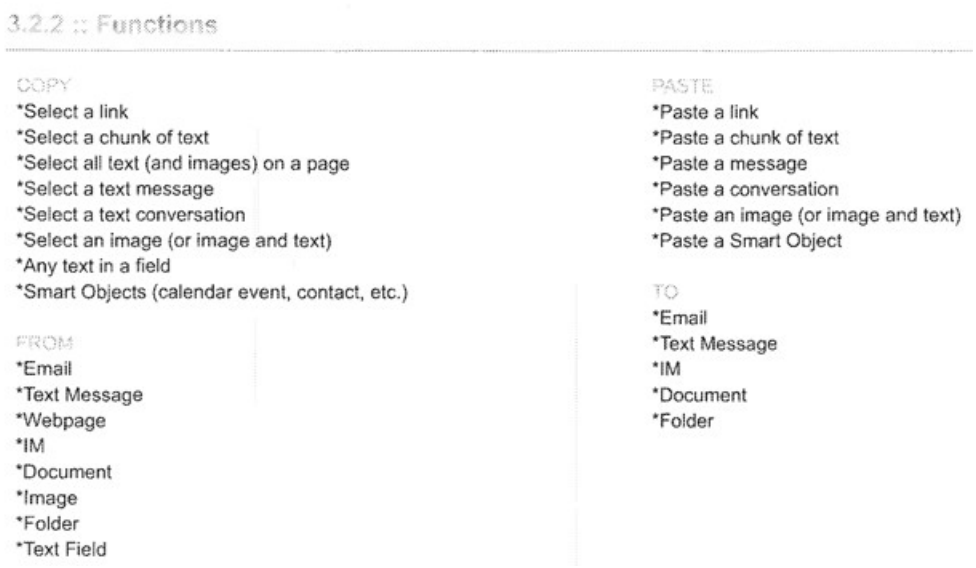
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[4]** The system of claim 1, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen. | Claim 4 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 4 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen."<br><br>For example, Goktekin discloses sharing information received from a second application with a first application while the interface of both applications are simultaneously displayed on the touchscreen. For example, Goktekin discloses in connection with a second application that if "the recognized and displayed text [in camera mode text input application] is correct and desired the user selects the recognized text as input text, whereupon the selected text is output to the application preferably in the same way as the text would have been input via the keyboard." Goktekin, ¶[0048]. As Goktekin teaches, "[a] selection of the recognized text in the third field can be made preferably by a second keypress on the camera key or a keypress on the third field or on the RETURN key or the like" and "[o]ther kinds of selection are not excluded." Goktekin, ¶[0049].<br><br>Furthermore, Goktekin describes touching the screen on the camera mode text input application interface to enter the recognized text into the text field. For example, Goktekin provides that if "the recognized and displayed text is correct and desired the user selects the recognized text as input text, whereupon the selected text is output to the application preferably in the same way as the text would have been input via the keyboard." Goktekin, ¶[0048]. Likewise, according to Goktekin, |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "[a]nother preferred selection can be made by touching or pressing, respectively, on the word on the touch screen." Goktekin, ¶[0050]; *see also* Goktekin, ¶[0055] ("user can select [from the camera mode text input application] whatever fits best as the input text [into the first application]"). In addition, Goktekin provides that "A keypress on one of the hidden touch keys 10 [illustrated within the camera mode text input application] within the preferred embodiment of FIG. 4 would select the recognized text, for instance." Goktekin, ¶[0063]. In each of Goktekin's embodiments, the interfaces of the first and second applications are simultaneously displayed on the touchscreen, as illustrated, for example, in FIGS. 1b, 2a-2b, 3a, and 4. *See supra* claim [1E]. Thus, Goktekin discloses "an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen," as required by the claim. |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[5]** The system of claim 4, wherein said information includes at least one of, a text, an image, a video, a webpage and a URL. | Claim 5 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 5 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL."<br><br>For example, and as discussed above in claim [4], the "information" shared from Goktekin's camera mode text input application to the first application includes text. *See supra* claim [4]. Thus, Goktekin provides "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL," as required by the claim. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[6]** The system of claim 4, wherein said information is copied from one of said applications and pasted in the other application. | Claim 6 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 6 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information is copied from one of said applications and pasted in the other application."<br><br>As discussed above for claim [4], information from Goktekin's camera mode text input application is shared with the first application through any of several operations (e.g., selecting the correct text, pressing a key) and "[o]ther kinds of selection are not excluded." Goktekin, ¶[0049]. *See also supra* claim [4].<br><br>To the extent Keyless argues that Goktekin does not disclose or render obvious "wherein said information is copied from one of said applications and pasted in the other application," it would have been obvious in view of Goktekin, POSITA's pre-existing knowledge, and/or the teachings of Goktekin combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000 and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000 and Lavallee teaches wherein said information is copied from one application and pasted in another application.<br><br>For example, Sirpal-486 states that "[m]ost single or dual-screen devices will allow a user to copy content from one location to another," and suggests that its "universal clipboard" offers |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | improvements upon that known feature. Sirpal-486, ¶¶[0168]-[0169]. Sirpal-486 further incorporates by reference Sirpal-000, which provides additional detail and illustration of the functionality of "Copy & Paste Text, Links[,] and Universal Clipboard." Sirpal-000, 152-82.<br><br>As discussed above for claim [2], Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. *See also supra* claim [2]. Sirpal-000 further provides functionality of "Copy & Paste Text, Links and Universal Clipboard." Sirpal-000 at 152-182. As Sirpal-000 explains:<br><br>> In the current Android model, users can copy and paste the contents of a text message from one app to another via press and hold to get a copy paste menu. In the current Android model, users can copy and paste a URL from any application to another via press and hold to get a copy/paste menu. *In the current Android model, users select text in a text field via press and hold, which invokes a contextual menu allowing users to put the field in 'select' mode, touching and dragging a chunk of text, then press and hold again to take field out of 'select' mode, which then copies the selected text. *In the current Android model, users can copy/paste plain text via invoking a contextual menu, putting the device into 'select' mode, and touching and dragging a chunk of text, then press and hold to paste the text into another app. We want to normalize the methods of copy/paste in the dual screen model, as well as to allow more efficient copy via drag and drop, direct manipulation, and better cursor placement and text selection, all while still allowing for the retention of the current Android pattern of copy and paste via menus as additional methods of performing these functinos.<br><br>Sirpal-000 at 153.<br><br>Sirpal-000 provides that any number of items may be copied from and pasted to any number of applications, as illustrated below: |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Sirpal-000 at 154.<br>Sirpal-000 describes a "first class of items" that is copied/pasted in its entirety, and a "second class of items" that first requires a user to "place the cursor and make a selection of a piece of the item" to be copied. Sirpal-000 at 155. In operation, a user can either copy text to a clipboard (for pasting later) or copy text with a "two finger press and hold gesture, which puts the item in move mode, and allows the user to move/paste the item to any available drop zone," e.g., for "images, links, paragraphs of text, messages, etc." Sirpal-000 at 155. "For anything that has been copied, users have the option to either just paste the last copied item or to select an item from the Universal Clipboard to paste." Sirpal-000 at 155. Sirpal-000 illustrates many examples of copying text from one application to another, including copying a link from a web page for pasting into an email message (Sirpal-000 at 158-164), text from a web page for pasting into an email (Sirpal-000 at 166-170), text and image from a web page for pasting into an email (Sirpal-000 at 172-175), and text from a field (e.g., in an email application) to another field (e.g., in a text message application) (Sirpal-000 at 177-182). |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-486 (including through incorporation of Sirpal-000) and Goktekin also share similarities in their discussion of ways to share information from one application to another. Goktekin shares text information between applications as discussed above in connection with claims 4 and 5. And Sirpal-486 discusses an additional way to share information, namely through copy/paste functionality. Sirpal-486, ¶¶[0160]-[0169]. As Sirpal-486 explains, the ability to copy and paste between applications is common to both "single [and] dual-screen devices":<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location (e.g., the application at which the content will be copied), select the area where the text should be placed, access a copy/paste menu pop-up window, and then select the paste command.<br><br>Sirpal-486, ¶[0168]. Sirpal-486 suggests an improvement over other copy/paste functionalities by using a "universal clipboard" from which "a user can choose an item corresponding to already-copied content, and … execute a paste command." *Id.*, ¶[0169]. According to Sirpal-486, its clipboard may be configured to store copied content from "a plurality of different applications (e.g., word-processing applications, email applications, web-browsing applications, spreadsheet applications, media player applications, data sharing applications, file-navigation applications, operating systems, etc.)," and including content "in the form of text content, hyperlinks (e.g., text representations of a URL or pointer), images, file path names, contact information, and/or video content (e.g., the image and/or audio portions thereof)." *Id.*, ¶[0162].<br><br>As another example, and as discussed above for claim [2], Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | inputs to the active application." Lavallee at Abstract. *See also supra* claim [2]. Lavallee further describes providing "a share function [that] permits sharing of items between . . . two or more running applications [simultaneously] displayed." Lavallee, ¶[0058]. According to Lavallee, "[t]he copy and paste function may be accomplished by a drag-and-drop action," "an attach file function that provides for transmitting a file attachment of a first running application of the two or more running applications to a second running application of the two or more running applications," or "an insert function that provides for inserting one or more items displayed by a first running application into a second running application of the two or more running applications." Lavallee, ¶[0058].<br><br>Additional exemplary disclosures of Lavallee include:<br><br>"Referring now to FIGS. 12 a-d, 13 a-d, 14 a-d, and 15 a-d, various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059].<br><br>"In FIG. 12 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area. The user in this example is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body. In FIG. 12 b, the user is able to select an item in the web browser application, in this example a car, as indicated by circle 1210; this selection may be accomplished by a user pressing on the picture of the car on the touch screen. Next, in FIG. 12 c, the user can drag the selected picture item from the web browser application displayed in the right split screen mode viewing area over to the left split screen mode viewing |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | area, as indicated by the dashed box 1220 surrounding the selected picture item and the accompanying arrows in FIG. 12 c. Finally, in FIG. 12 d, the user released the picture item in the desired location of the email application displayed in the left split screen mode viewing area 1230. This release may be accomplished by the user removing his finger from the selected picture item when the picture is in the desired location. In this way, a user of an electronic device can easily drag and drop a selected item from a first running application to a second running application, both simultaneously maximized and displayed in large split screen mode viewing areas of the touch screen of the electronic device. Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060], Figs. 12a-12d.<br><br>"FIGS. 13 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "insert" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application. In FIG. 13 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: a presentation application, such as POWER POINT®, is displayed in the left split screen mode viewing area and a photo application is displayed in the right split screen mode viewing area. The user in this example is creating a presentation and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the photo application into the presentation application. This example of an insert share function allows a user to insert a picture from the photo application into the presentation application. In FIG. 13 b, the user presses on the desired picture in the right split screen mode viewing area of the touch screen, as indicated by the circle 1310, to select the picture. Next, in FIG. 13 c, the user drags the selected picture into the presentation application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1320 surrounded the selected picture and the accompanying arrows in the drawing. The selected picture is dragged in to the presentation application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1330 in FIG. 13 d. The item in this application is a stored picture file, such as a file stored on the device, which can be inserted as shown." Lavallee, ¶[0061], Figs. 13a-13d. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "It is noted that in the 'copy and paste' function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage. In the 'insert' function illustrated in FIG. 13, a file type stored on device memory, such as a stored picture, contact, video, etc. for example, may be retrieved and inserted, or attached, as shown above." Lavallee, ¶[0062], Figs. 12a-13d.<br><br>"FIGS. 14 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "attach file" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments. Applications that might use the attach file function are varied and include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc. In FIG. 14 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an instant messaging (IM) application is displayed in the left split screen mode viewing area and a music application is displayed in the right split screen mode viewing area. The user in this example is chatting using an IM application and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop songs from the music application into the IM application. This example of an attach file share function allows a user to send a song attachment from the music application to the IM application. In FIG. 14 b, the user presses on a desired song in the right split screen mode viewing area of the touch screen, as indicated by the circle 1410, to select the song. Next, in FIG. 14 c, the user drags the selected song into the IM application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1420 surrounded the selected picture and the accompanying arrows in the drawing. The selected song is dragged in to the IM application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1430 in FIG. 14 d, into a conversation of the IM application to send to a friend." Lavallee, ¶[0062], Figs. 14a-14d.<br><br>"In FIG. 15 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are |

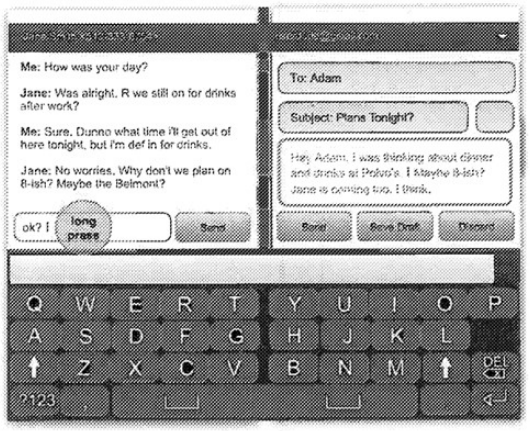
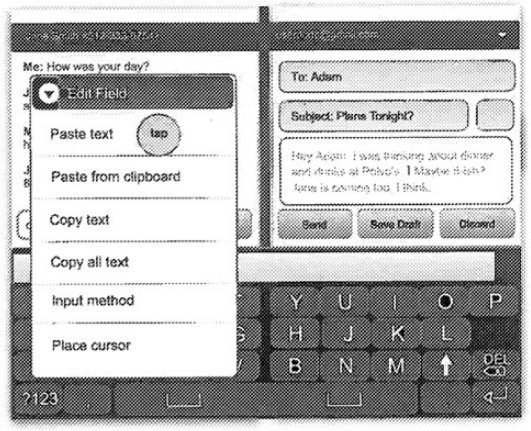
| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | shown: an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application. In FIG. 15 b, the user presses on a desired contact in the right split screen mode viewing area of the touch screen, as indicated by the circle 1510, to select the contact. Next, in FIG. 15 c, the user drags the selected contact into the email application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1520 surrounded the selected contact and the accompanying arrows in the drawing. The selected contact is dragged in to the email application displayed in the left split screen mode viewing area of the touch screen and released in the desired location into the email body 1530 in FIG. 15 d, as shown." Lavallee, ¶[0065], Figs. 15a-15d.<br><br>A POSITA would have found it obvious to incorporate "wherein said information is copied from one of said applications and pasted in the other application," as claimed. For example, a POSITA would have found it obvious to implement well-known copy/paste functionality—in which text is copied and pasted from one application into another, e.g., via clipboard or drag/drop—as an additional or alternative mechanism to share information from the camera mode text input application to the first application of Goktekin. As discussed above, each of Sirpal-486, Sirpal-000 and Lavallee teaches wherein said information is copied from one of said applications and pasted in the other application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Goktekin, as an obvious and intuitive way to transfer information (e.g., recognized/extracted text) from the camera mode text input application of Goktekin into the first application of Goktekin. A POSITA would have recognized the advantages of providing copy/paste functionality, at least because it allows a user to decide where (e.g., in which field) information copied from the second application should be pasted/inserted into the first application. Copying and pasting information between applications was routine and conventional to a POSITA, as shown by Sirpal-486, Sirpal-000 and Lavallee. Incorporating the feature into Goktekin's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more |

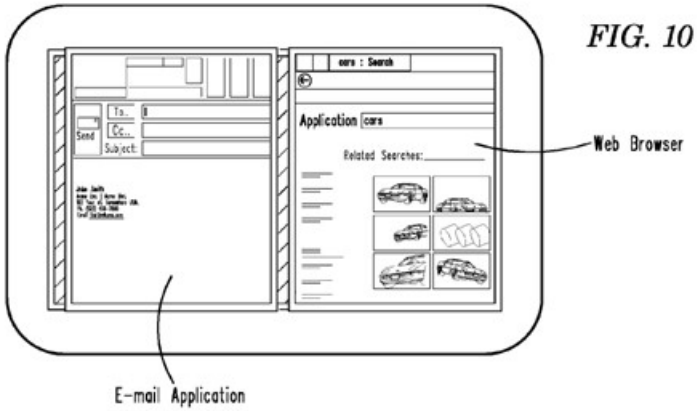
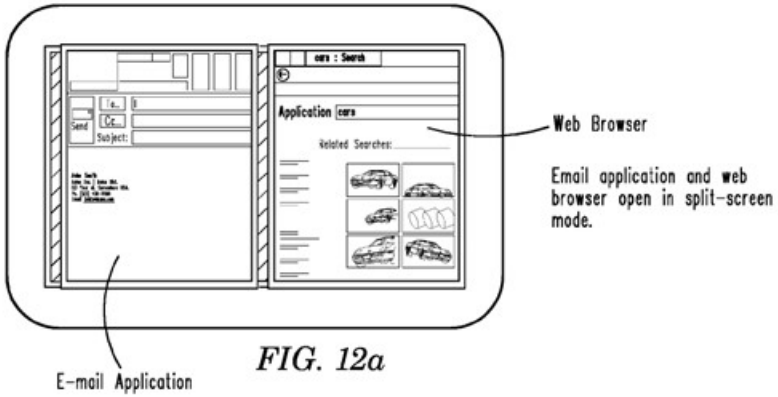
| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | than the routine combination of existing technology in predictable ways. Such processes, when combined with Goktekin, represent nothing more than combining prior art elements according to known methods and techniques (copying information from one application to be pasted into another, e.g., with a clipboard) to a mobile electronic touch screen device to yield predictable results (providing a user the ability control over when and where to copy/paste information from one application to another). |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[7]** The system of claim 1, wherein at least one of the applications is a messaging application. | Claim 7 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 7 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application."<br><br>For example, and as discussed above for claim [1], Goktekin provides that a mobile device can include SMS functionalities, and its system can be used with "any . . . application requesting text input" Goktekin, ¶[0003], [0034].. *See also supra* claim [1]. A POSITA would have recognized that a "messaging application" is an "application requesting text input," because a messaging application, axiomatically, receives and transmits text input to a recipient. A POSITA's background knowledge in this regard would have been evident, e.g., from references such as Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000 and/or Lavallee, which describe messaging applications as discussed below.<br><br>To the extent Keyless argues that Goktekin does not disclose or render obvious "wherein at least one of the applications is a messaging application," it would have been obvious in view of |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Goktekin, POSITA's pre-existing knowledge (as confirmed, e.g., by reference to Sirpal-486, Sirpal-000 and/or Lavallee), and/or the teachings of Goktekin combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486, Sirpal-000 and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000 and Lavallee teaches that wherein at least one of the applications is a messaging application.<br><br>For example, Sirpal-486 discloses a "multi-screen user device and a universal clipboard application." Sirpal-486, Abstract. Sirpal describes that "handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, ¶[0002]. Sirpal-486 teaches that "applications 564" on the device "can include programs such as email clients, web browsers, texting applications, games, media players, office suites, etc." *Id.*, ¶[0125]. Sirpal-486 further teaches:<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location (e.g., the application at which the content will be copied), select the area where the text should be placed, access a copy/paste menu pop-up window, and then select the paste command. This copy/paste routine must be completed for each different piece of information to be copied, which requires substantial time and input from the user. |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | > The device 100 allows a user to copy multiple contents to the universal clipboard application 708. From this universal clipboard application, a user can choose an item corresponding to already-copied content, and (while still providing inputs at the universal clipboard application 708) execute a paste command. By providing multiple screens where one screen displays the universal clipboard application and another screen displays an application, a user is enabled to easily and quickly copy and paste content between various different applications on different screens 104, 108 of the device 100. Moreover, the ability to quickly and easily copy and paste different information from one central location, the universal clipboard application 708, saves the user time and input. Thus, the device 100 operates very intuitively for the user.<br><br>Sirpal-486, ¶¶[0168]-[0169].<br><br>Sirpal-486 further incorporates by reference the entirety of U.S. Patent Application No. 61/389,000 (Sirpal-000), which provides additional information relating to Sirpal-486's messaging application. *See* Sirpal-486, ¶[0001].<br><br>For example, Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. As one example, Sirpal-000 illustrates a text messaging application next to an email application: |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>User presses and holds the text message compose field.<br><br>  <br>A menu is displayed with two options for pasting. 'Paste text' would paste the last copied item at the current cursor position. 'Paste from clipboard' displays the Universal Clipboard, from which the user could paste the just copied text, in addition to other items in the Clipboard. There is also an option for the user to place the cursor in a different position in the field. The user taps 'Paste Text'.<br><br>Sirpal-000 at 180-182. As Sirpal-000 explains, the text messaging application has a "text message compose field" into which text may be inserted. Sirpal-000 at 180. Thus, a POSITA would understand from Sirpal-000 both that a messaging application is an "application requesting text input" (as taught by Goktekin) and that "at least one of [two] applications is a messaging application," as claimed.<br><br>As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee includes a "keyboard 120 for entering information such as composing email messages." Lavallee, ¶[0021]. Lavallee's device also is designed to send or receive data, including "email messages, short messaging service (SMS), instant messages, web content, and other electronic content." Lavallee, ¶[0022]. Accordingly, the device runs applications such as "communications applications such as Instant Messaging (IM), presentation and email applications, |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | messaging applications . . . and the like." Lavallee, ¶[0028]. Lavallee provides several examples of a messaging application displayed simultaneously with another application, as illustrated, e.g., in Figs. 10, 12a-12d, 14a-14d, and 15a-15d, reproduced below.<br>  <br>*FIG. 10*<br><br>Lavallee, Fig. 10.<br>  <br><br>*FIG. 12a*<br>Lavallee, Fig. 12a. |

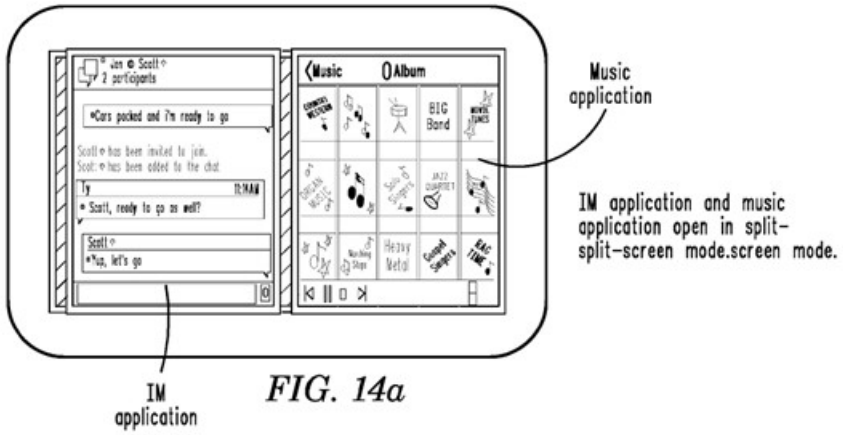



FIG. 14a

Lavallee, Fig. 14a.

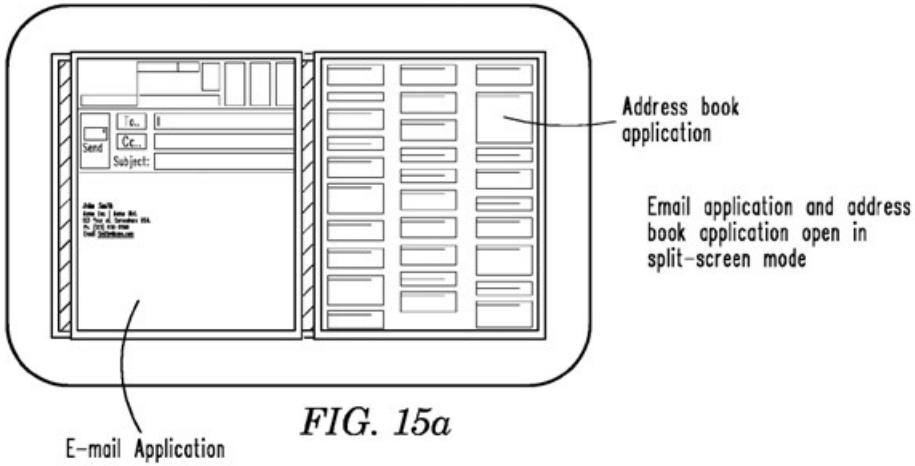



FIG. 15a

Lavallee, Fig. 15a.

The e-mail application and IM application illustrated in Lavallee both illustrate fields for text entry. Thus, a POSITA would understand from Lavallee both that a messaging application is an "application requesting text input" (as taught by Goktekin) and that "at least one of [two] applications is a messaging application," as claimed.

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Incorporating a messaging application (such as taught by Goktekin, Sirpal-486, Sirpal-000, and Lavallee) into Goktekin and using Goktekin's keyboard and camera mode input application with the messaging application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Goktekin, represent nothing more than combining prior art elements according to known methods and techniques (providing text input into a messaging application, including through use of a camera input mode) to a mobile electronic touch screen device to yield predictable results (allowing a user to send text messages on a mobile device, enhancing a user's ability to input text into a messaging application, etc.). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[8]** The system of claim 1, wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application. | Claim 8 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 8 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application."<br><br>For example, in Goktekin, the camera mode application includes search functionality and, thus, is a "search application." For example, as Goktekin explains with reference to Figure 2a, "there are displayed three third fields 6, wherein preferably the first one displays the recognized text and the second and the third one beneath display suggestion candidates. The one or more suggestion |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | candidates are preferably generated by an algorithm in connection to a database, wherein according the recognized character text, which might not be correctly recognized or spelled wrong, best fitting words with a high probability to be correct are generated as the suggestion candidates. The database is preferably a dictionary or a lookup-table. Thus the user can select whatever fits best as the input text. It is also imaginable that only one or more closest fitting words are generated as suggestion candidates for a recognized word in the recognized text which has not been found in the database." Goktekin, ¶[0055]. Further, a "preferred embodiment of the present invention foresees also a sending of the captured image or preferably of the part of the displayed image in the second field 5 as image data to a remote server, where the image data are OCR processed and the recognized text and preferably the suggestion candidates are generated and returned to the mobile device 1. This preferred method of a kind of remote computing is advantageous as it keeps the calculation power and the memory requirement on the mobile device 1 small, especially as regards the database for the OCR and as regards different languages. Also the development effort is reduced drastically with regard to an implementation of image processing and the OCR on different mobile device 1 types and operating systems." Goktekin, ¶[0056]. Goktekin's OCR processing functionality conducts a search of a dictionary/database and returns suggested matches for text recognized by the camera mode. *Compare with* '922 patent, 25:64-26:2 ("system may preferably begin to process the input information, by, for example, searching a dictionary/word database and may select words for proposal to the user"), 100:26-30 ("at least a portion of text included in scene information may be treated as text (e.g. not graphical information)" and "[a]s such, functions such as text searching, text sorting, copy, paste, cut, select, etc. may be applied to such text."). Accordingly, Goktekin provides "said second application is a search application."<br><br>A POSITA understood that OCR functionality—such as disclosed by Goktekin—involves searching. *See*, *e.g.*, U.S. Patent Application Pub. No. 2010/0008582 ("Kim-582") at Abstract ("method includes directly selecting an area to be recognized from the photographed character image and performing character recognition, translating and recognizing characters of a user's selected word in connection with dictionary data on a screen device. …. The electronic dictionary-connected search and translation is for searching the character or word selected in connection with the electronic dictionary database, and providing translation result to the user"), [0059]-[0065] and [0068] (describing OCR/search illustrated in Fig. 8); U.S. Patent No. 5,933,525 ("Makhoul") at |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | 3:57-6:25 (providing overview of OCR search technologies); EP0425291 ("Beran") at col. 1, line 5 through col. 3, line 4 (providing overview of OCR search technologies).<br><br>Further, as discussed above in claim [1D], Goktekin discloses a second application is "activated by interacting with a button of said keyboard assigned to activating [that] application." *See supra* claim [1D]. For example, Goktekin discloses that "the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode." Goktekin, ¶[0046]. According to Goktekin, "FIG. 1b shows the same preferred embodiment of the implementation of the multimodal text input method as shown in FIG. 1a but after a keypress on the camera mode key 8. In the camera mode the first field 4 for the keyboard is preferably smaller compared to a size in the keyboard mode of FIG. 1a, such that the difference between the size of the first field 4 in the keyboard mode and the smaller size in the camera mode is used for displaying the second field 5 wherein a part of the captured written text is displayed and for displaying the third field 5 wherein the recognized text is displayed. In this preferred embodiment the size of any displayed fields in the keyboard mode as well as in the camera mode is always kept the same, such that the used size of the touch screen is kept the same as that of the original keyboard module, such that the original keyboard module can be replaced by the multimodal text input module without overlapping the application more than originally planned by a usage of the original keyboard module." Goktekin, ¶[0047]. Thus, Goktekin provides for activating a second application by interacting with a button of the keyboard assigned to activating that application by, e.g., pressing camera mode key 8.<br><br>Further, Goktekin provides that a mobile device can include camera based methods for "input of the written text into a mobile device facilitates the text input for text translation applications and for internet searches about the written text in a book, for instance." Goktekin, ¶[0006]. Additionally, Goktekin provides that a mobile device can be used with and include "a search application such as google search or the like searching for a keyword in the internet." Goktekin, ¶[0034].. *See also supra* claim [1]. Goktekin also discloses a "keyboard being compatible with one or more standard applications, as for instance a phone application or an internet search application, running on the mobile device and requiring the text input and/or the first and the second means are adapted to display the first field and the second field and the third field, if available, occupying together always a same size on the display." Goktekin at claim 28. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | To the extent Keyless argues that Goktekin does not disclose or render obvious this limitation, it would have been obvious in view of Goktekin, a POSITA's pre-existing knowledge, and/or the teachings of Goktekin combined with other references charted for this patent in these invalidity contentions, including one or more of Wang, Roach, Vincent, Ramkumar, and Yabuki. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways. For example, Wang teaches to use a keyboard key to directly activate a search application and a camera application. Also for example, each of Roach, Vincent, and Ramkumar teaches to use the camera of a mobile device—such as in Goktekin—with a search application. As yet another example, Yabuki discloses reducing the size of the keyboard so that multiple applications can be displayed, including, e.g., a "search" application. And Goktekin itself provides that a mobile device can be used with and include "a search application such as google search or the like searching for a keyword in the internet." Goktekin, ¶[0034].<br><br>As one example, Wang describes a "method for programming output value of a key." Wang, Title. Wang explains that its "method for programming output value of a key is applicable to an electronic device having at least a key." Wang, Abstract, ¶[0002]. Wang observes that "[a]long with the development of technologies, portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones." Wang, ¶[0004]. Wang further observes that "although some touch-type mobile phones or computers include shortcut keys that allow the user to speedily call specific applications, the functions of the shortcut keys cannot be changed by changing corresponding key values of the shortcut keys. For example, a key preset for a shutter button of camera cannot be changed into a return key." Wang, ¶[0007]. Wang purports to improve known touch-type mobile phones or computers. *See id.*, ¶[0008]. In Wang, "[t]he method for programming output value of a key is applicable to an electronic device having at least a key. The |

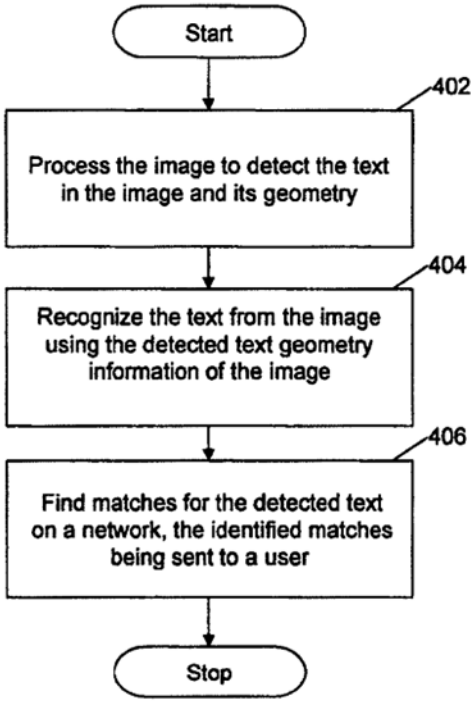
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key. The number of keys is not limited." *Id.*, ¶[0018]. Wang specifically teaches that its system can be used with "Android," which is the same operating system used by Note 10.1. *Id.*, ¶[0018]. Among other benefits, Wang discloses that its system "accelerates the input speed" by assigning a function to a key. *Id.*, ¶[0029]. Specifically, Wang discloses:<br><br>> [T]o accelerate the operation speed, the user can define one of the keys 12 as a search key for searching web pages or a camera key for starting camera, thereby quickly calling the search application or camera application of the system. In addition, since Android Supports quick launch application, by holding down one of the keys defined as a search key and pressing another key defined as a character key, the user can quickly call a corresponding application defined in the quick launch application.<br><br>Wang, ¶[0029]. Thus, Wang provides "wherein [an] application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>As another example, Roach discloses "Systems for Mobile Image Capture and Remittance Processing of Documents on a Mobile Device." Roach, Title. In Roach, "[s]ystems and methods are provided for capturing and processing images of remittance coupons using a mobile device and obtaining data from the captured image which is used to set up or carry out payment of a bill that corresponds to the remittance coupon. Optimization and enhancement of image capture and image processing are provided on the mobile device to improve the initial quality of the captured image and provide a user with real time feedback. The image is then sent from the mobile device to a remote server, where additional image processing is performed to improve the quality of the image and then extract data from the image that is relevant to paying the bill. The extracted data may be verified through comparisons with databases which store information on billers, bill formats and other relevant content that will appear on the bill." Roach, Abstract. Roach provides that after an optical character recognition data capture sweep of an image, "a fuzzy-search method is used to find a subset of OCR-result which meets the format." Roach, ¶[0147]. Roach specifically describes consulting "various dictionaries, or biller databases, [that] may be used to find the biller based on information captured from the financial document." Roach, ¶[0154]. A "fuzzy search of [an] |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | address database 106," for example, "will allow for further qualification and normalization of … address information obtained from the first pass … which improves the overall accuracy of the system." *Id.* "The fuzzy search means that an exact match is not necessary in the event that the OCR/ICR of the image was not exact and certain address or biller name fields are not perfectly accurate." *Id.* Roach describes similar "fuzzy" search improvements to match OCR candidate words with other databases, including "Biller" databases. Roach, ¶[0155]-[0163]). Thus, a POSITA would understand Roach to disclose that implementing fuzzy search functionality for OCR-recognized text can return validated results matching a database (e.g., address database) and improve the quality of OCR results.<br><br>A POSITA considering the teachings of Goktekin in view of Roach would have found it obvious, for example, to implement Goktekin's camera mode text input application with the biller/payment application described in Roach. Goktekin indicates that its method for camera module text entry can be used with any number of applications, such as, "for instance for a translation application, a search application such as google search or the like searching for a keyword in the internet, a phone application requesting for a phone number or a name or for any other application requesting text input." Goktekin, ¶[0034]. Thus, a POSITA would recognize Roach's biller/payment application to be "any other application requesting text input" and, therefore, suitable for use with Goktekin. One obvious combination of Goktekin with Roach would, for example, use Goktekin's camera mode to capture text and search the identified text against "various dictionaries, or biller databases, [that] may be used to find the biller based on information captured from the financial document," including, e.g., an "address database." *See* Roach, ¶[0154]. Such search may be used (e.g., the "fuzzy search" as described by Roach) to match the captured text (or even a partial or corrupted portion of the text) with an existing database entry. A POSITA would recognize that the combination would achieve the various benefits described in Roach, including to quickly find relevant biller/address information, to "allow for further qualification and normalization of … address information obtained from the first pass … which improves the overall accuracy of the system," and to identify matching information even when "the OCR/ICR of the image was not exact and certain address or biller name fields are not perfectly accurate." *See* Roach, ¶[0154]. A POSITA would further recognize that such a combined Goktekin-Roach implementation could provide various biller/address options as displayed suggestion candidates in the third fields of the second application interface, whereupon the user can select what fits best as already provided by |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Goktekin. Goktekin, ¶[0048-49, 0055]. Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for at least this reason. Additional motivation to combine the references comes from Wang, which teaches that a keyboard button can be used to activate a search application or a camera application (just as Goktekin teaches to activate a camera application). Wang, ¶[0029]. In view of that disclosure, a POSITA implementing Goktekin would be motivated to consult references such as Roach to include button-activated search as part of the system.<br><br>As another example, Vincent describes "Using Extracted Image Text." Vincent, Title. Vincent's disclosure "includes receiving an input of one or more image search terms and identifying keywords from the received one or more image search terms," as well as "searching a collection of keywords including keywords extracted from image text, retrieving an image associated with extracted image text corresponding to one or more of the image search terms, and presenting the image." Vincent, Abstract. According to Vincent, "[f]ollowing the character recognition process" performed on a captured image, "further filtering can be performed on the detected results in order to remove erroneously identified text." Vincent, 11:49-53. Vincent variously describes examples of filtering or constraining potential OCR results based on searching "values in a database," including "particular business names within a database." Vincent, 11:61-12:7. In addition, Vincent describes using the results of an OCR data capture process within various "[s]earching, mapping, or other applications." Vincent, 12:30-37. For example, Vincent's extracted text can be "associated with a mapping application," wherein the extracted text is used to identify matching locations, e.g., locations of businesses, locations of products within a store, or locations of exhibits or other information within a museum. Vincent, 12:38-13:50. Vincent further describes using extracted text to search for images. Vincent, 13:51-14:18. Thus, a POSITA would understand from Vincent that search functionality for OCR-recognized text can return filtered results matching a database (e.g., business names database) and improve the quality of OCR results. A POSITA would also understand from Vincent that search functionality for OCR-recognized text can also be used to search for matching information, such as matching locations, businesses, products, or exhibits.<br><br>A POSITA considering the teachings of Goktekin in view of Vincent would have found it obvious, for example, to implement Goktekin's camera mode text input application with the search application described in Vincent. Goktekin indicates that its method for camera module text entry can be used with any number of applications, such as, "for instance for a translation application, a |

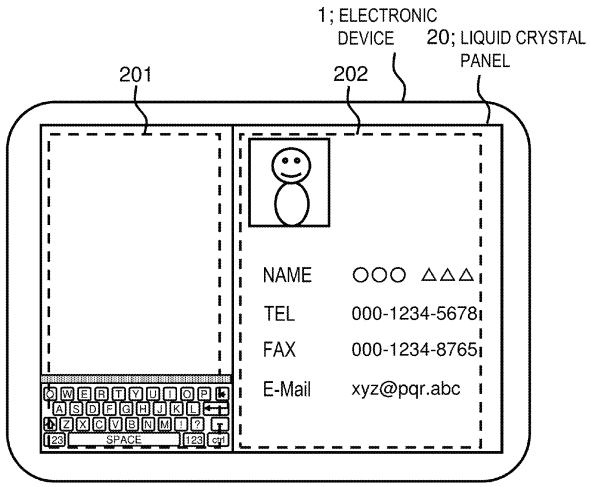
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | search application such as google search or the like searching for a keyword in the internet, a phone application requesting for a phone number or a name or for any other application requesting text input." Goktekin, ¶[0034]. Thus, a POSITA would recognize Vincent's search application to be "any other application requesting text input" and, therefore, suitable for use with Goktekin. In addition, Vincent is assigned on its face to Google, Inc., the company whose "search application" is specifically referenced by Goktekin. *See* Goktekin, ¶[0034]. That fact would have provided additional motivation for a POSITA to consult with references such as Vincent when implementing the system of Goktekin. One obvious combination of Goktekin with Vincent would, for example, use Goktekin's camera mode to capture text and then filter or constrain potential OCR results based on searching "values in a database," including "particular business names within a database." Vincent, 11:61-12:7. Another obvious combination would use Goktekin's camera mode to capture text "associated with a mapping application," such that the extracted text is then used to search for and identify matching locations, e.g., locations of businesses, locations of products within a store, or locations of exhibits or other information within a museum. Vincent, 12:38-13:50. Yet another obvious combination would use Goktekin's camera mode to search for images based on captured/extracted text. Vincent, 13:51-14:18. A POSITA would recognize that the combination would achieve the various benefits described in Vincent, including to filter/constrain OCR suggestions based on the contents of a database, or to quickly and easily search for and identify images, the locations of businesses, locations of products within a store, or locations of exhibits or other information within a museum, as Vincent teaches. *See* Vincent, 11:61-12:7, 12:38-13:50, 13:51-14:18. A POSITA would further recognize that such a combined Goktekin-Vincent implementation could provide various options as displayed suggestion candidates in the third fields of the second application interface, whereupon the user can select what fits best as already provided by Goktekin. Goktekin, ¶[0048-49, 0055]. Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for this additional reason. Additional motivation to combine the references comes from Wang, which teaches that a keyboard button can be used to activate a search application or a camera application (just as Goktekin teaches to activate a camera application). Wang, ¶[0029]. In view of that disclosure, a POSITA implementing Goktekin would be motivated to consult references such as Vincent to include button-activated search as part of the system. |

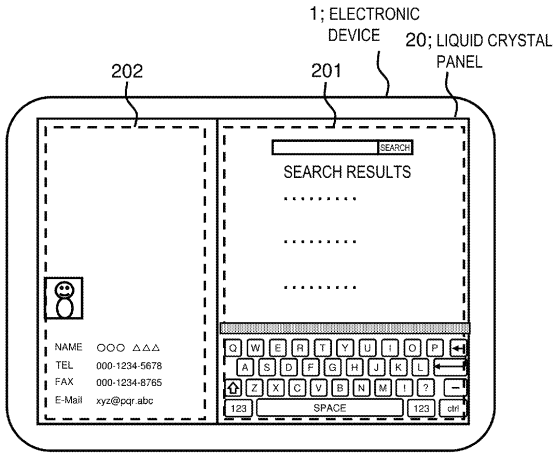
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As yet another example, Ramkumar describes a "Method and System for Searching for Information on a Network in Response to an Image Query Sent by a User from a Mobile Communications Device." Ramkumar, Title. According to Ramkumar, "[a]n image query includes an image that is captured by using a mobile communications device with a camera." Ramkumar, Abstract. "The image is processed to detect the text present in it" and the "detected text is then recognized using an OCR." *Id.* "Subsequently," according to Ramkumar, "the text is searched for matches in the corresponding domain database, selected from the various domain databases present in the network" and, thereafter, "selected matches and additional related information is sent to the user." *Id.* Ramkumar addresses the "need for a method and system for searching information that automatically searches in a domain database, based on the content information of the image," such as "text present in the image," e.g., "ASCII or Unicode interpretation of the text," in order to simplify and automate searching. Ramkumar, 2:7-23.<br><br>According to Ramkumar, a "user, using mobile communications device 102, captures an image and sends it as an image query to communication server 104," which "eliminates the need for writing or editing the query by using a keyboard or numeric keypad" and "saves time and eliminates the tedious work of writing or editing the text." Ramkumar, 3:50-55. The image query may be used to search a "domain database [that] is chosen from various domain databases 110, based on the image query." Ramkumar, 4:9-14. Domain databases may relate to "price information, location information in a selling store, product technical-specification information, and the like," as well as "address information" corresponding to an "image of [a] street sign or store sign." Ramkumar, 4:19-29; *see also* 5:23-30 (image used to search a "list of products with information on each product such as the model number, brand name, UPC codes, name of the product, price and the like" or "[i]n the case of addresses, it may include information regarding building and apartment numbers, street names, city names, country names, zip codes and the like"), 5:44-53 (train schedule and station information). Ramkumar illustrates an embodiment of its search process with reference, e.g., to Figure 4, below. Ramkumar, 6:19-37. |

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| |  <br>Ramkumar, Fig. 4.<br>Ramkumar further describes that its image search functionality may be used in numerous applications, including "as a shopping assistant," "in a language translator" (such as the language translator described in an exemplary embodiment of Goktekin), "in an encyclopedia or a dictionary lookup service," "in a business lookup application," or "in a transportation schedule finder." Ramkumar, 7:3-48.<br>A POSITA considering the teachings of Goktekin in view of Ramkumar would have found it obvious, for example, to implement Goktekin's camera mode text input application with the search |

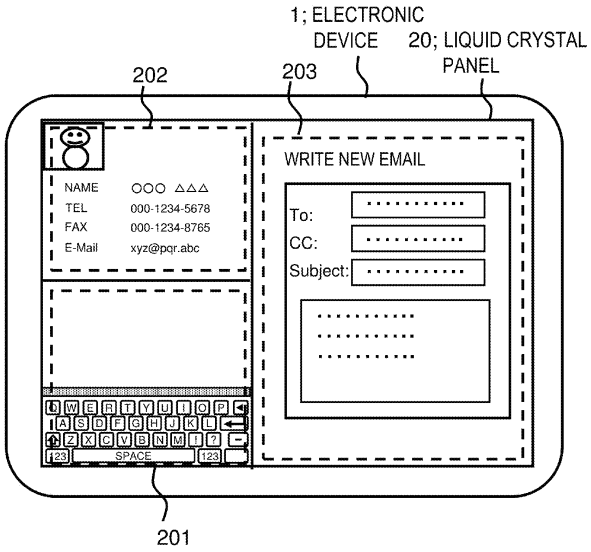
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application described in Ramkumar. Goktekin indicates that its method for camera module text entry can be used with any number of applications, such as, "for instance for a translation application, a search application such as google search or the like searching for a keyword in the internet, a phone application requesting for a phone number or a name or for any other application requesting text input." Goktekin, ¶[0034]. Thus, a POSITA would recognize Ramkumar's search application to be "any other application requesting text input" and, therefore, suitable for use with Goktekin. Notably, Ramkumar describes using its search with a "language translator"—an application similar to the exemplary translation application described in Goktekin—which would provide further motivation for a POSITA to combine the teachings of the references. One obvious combination of Goktekin with Ramkumar would, for example, use Goktekin's camera mode to capture text and then search a relevant database for (1) matching "price information, location information in a selling store, product technical-specification information, and the like," (2) "address information" corresponding to an "image of [a] street sign or store sign," (3) a "list of products with information on each product such as the model number, brand name, UPC codes, name of the product, price and the like," "information regarding building and apartment numbers, street names, city names, country names, zip codes and the like," or train schedule and station information. Ramkumar, 4:19-29, 5:23-30, 5:44-53. A POSITA would recognize that the combination would achieve the various benefits described in Ramkumar, including to filter/constrain OCR suggestions based on the contents of a database, or to quickly and easily search for and identify matching information, as Ramkumar teaches. *See* Ramkumar, 7:49-57. A POSITA would further recognize that such a combined Goktekin-Ramkumar implementation could provide various options as displayed suggestion candidates in the third fields of the second application interface, whereupon the user can select the candidate that fits best as already provided by Goktekin. Goktekin, ¶[0048-49, 0055].. Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for this additional reason. Additional motivation to combine the references comes from Wang, which teaches that a keyboard button can be used to activate a search application or a camera application (just as Goktekin teaches to activate a camera application). Wang, ¶[0029]. In view of that disclosure, a POSITA implementing Goktekin would be motivated to consult references such as Ramkumar to include button-activated search as part of the system. |

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| | As still another example, Yabuki relates to "an electronic device comprising a touch panel and a controlling method and program therefor." Yabuki, 1:10-13. Yabuki discloses that "a software keyboard may interfere with the user's operation, depending on its size or position," particularly in the case of "a small device such a smartphone." Yabuki, 1:35-39. As Yabuki discloses:<br><br>> For instance, let's assume a case where a user is performing a more detailed search based on search results using a Web browser. At this time, if the area of the software keyboard is large, it may be difficult for the user to perform an input operation while browsing the search results.<br><br>> Further, for instance, let's assume a case where a user launches a Web browser and refers to information regarding the people registered in an address book in the middle of his input operation. In this case, the user first quits the Web browser currently running. Then, he launches the address book application. After confirming the information, the user quits the address book application. Then, after launching the Web browser again, the user has a software keyboard displayed to enter the information. As described, the user must perform a plurality of operations when he refers to information included in another application while using the software keyboard.<br><br>Yabuki, 1:40-56. Yabuki discloses "there is a need in the art to contribute to facilitating an operation independent from a software keyboard while the software keyboard is being used." Yabuki, 1:60-62. According to Yabuki, "the electronic device 1 relating to the present exemplary embodiment is able to display a second application such as an address book application while having a first application such as a Web browser displayed." Yabuki, 7:7-10.<br><br>For example, Figure 4 of Yabuki depicts a full-size keyboard used with a single application. Yabuki, 4:61-5:3, Fig. 4. Yabuki describes that the full-size keyboard may be moved and reduced in size, to make room for the interface of an application (or multiple applications) to be displayed on larger portions of the screen. Yabuki, 5:4-6:63. To further illustrate, Figure 7 of Yabuki, below, "is a drawing showing an example in which different applications are displayed in a plurality of |

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| | display regions. In FIG. 7, the software keyboard is reduced and displayed in a first display region 201. Further, an address book application is displayed in the second display region 202 in FIG. 7." Yabuki, 7:11-16.<br>  <br><br>Yabuki, Fig. 7.<br>"The display region control unit 12 may switch the display modes of the first and second display regions. More concretely, according to a predetermined operation, the display region control unit 12 may enlarge the reduced first display region and reduce the second display region. Here, it is preferred that the predetermined operation that switches the display modes be a simple and easy operation such as a double tap operation." Yabuki, 7:17-24.<br>Yabuki further depicts Figure 8, which "is a drawing showing an example in which the display modes are switched. In FIG. 8, the display of the software keyboard is enlarged and displayed in the first display region 201. Further, the address book application is reduced and displayed in the second display region 202." Yabuki, 7:25-29. |

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| |  <br>Yabuki, Fig. 8.<br>According to Yabuki, even more applications may be displayed simultaneously while the keyboard is in its reduced size:<br>> The image signal generation unit 13 may have a third application displayed while displaying the images of two different applications. More concretely, when detecting a fourth operation in the second display region, the display region control unit 12 reduces and moves the second display region. It is preferred that the fourth operation be a simple and easy operation such as a double tap or flick operation. The image signal generation unit 13 displays the image of the third application in a region (a third region) made available by reducing the second display region. As described, the electronic device 1 relating to the present exemplary embodiment does not limit the number of applications displayed simultaneously.<br>Yabuki, 7:30-42. Further to that description, Yabuki depicts in Figure 9, below, "a drawing showing an example in which the image of the third application is displayed on the liquid crystal panel 20. In FIG. 9, the software keyboard is displayed in the first display region 201. Further, the |

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| | address book application is displayed in the second display region 202. Then, an email application is displayed in a third display region 203." Yabuki, 7:43-49. |




Yabuki, Fig. 9.

Thus, from the foregoing descriptions of Yabuki, a POSITA would recognize the benefits of reducing a keyboard so that multiple applications may simultaneously be displayed, including a search application (such as a web search application or an application for searching/displaying contact information). Moreover, a POSITA would recognize such features to be beneficial, as they solve problems and achieve advantages that Yabuki identified—e.g., allowing a user to perform input operations (in another application) while browsing search results or allowing a user to cross-reference between a web-browser and an address book simultaneously without closing one application or the other. *See* Yabuki, 1:40-56. Yabuki's teachings would have been pertinent to a POSITA implementing Goktekin because, for example, Yabuki would suggest to a POSITA that Goktekin's camera application interface could be used for search while a user simultaneously browses or cross-references with another application (e.g., the first application of Goktekin). Thus, Yabuki provides further teachings and motivation to a POSITA implementing Goktekin with search

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| | functionality, such as in combination with one or more of Roach, Vincent, and Ramkumar as discussed above.<br><br>Incorporating search (such as taught by Wang, Roach, Vincent, and/or Ramkumar) with Goktekin's camera mode application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Goktekin, represent nothing more than combining prior art elements according to known methods and techniques (providing image-based search functionality) to a mobile electronic touch screen device to yield predictable results (improving OCR suggestions, providing a user with information relating to searched text, etc.). |

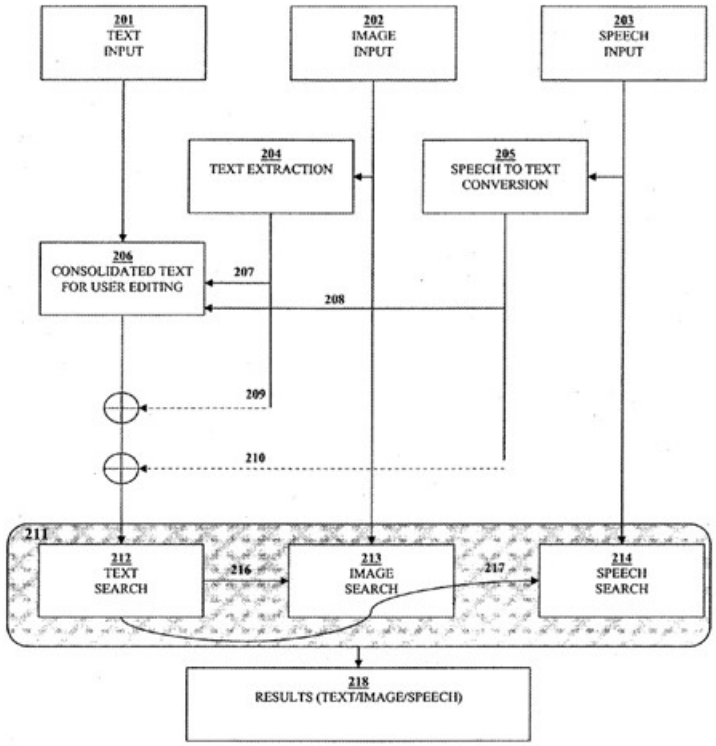
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| **[9]** The system of claim 8, wherein said search application use at least one keyword typed through said keyboard. | Claim 9 depends from claim 8. Defendants incorporate all the prior art disclosures from claim 8 here, which anticipate and/or render claims 1 and 8 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 8 to show the additional limitations of claim 9 are anticipated and/or obvious for the same reasons set out in claims 1 and 8.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>For example, in Goktekin, a camera is used to capture an image of text, which then undergoes a "search" process as described above for claim [8]. *See supra* claim [8]. The output of the camera to the OCR search database would include a "keyword" to conduct a search. Moreover, because the keys of the keyboard are used to initiate the search functionality and to input returned OCR results into the first application, Goktekin's "search application use[s] at least one keyword typed through |

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| | said keyboard." *See, e.g.,* Goktekin, ¶[0046] ("user … may press a camera mode key 8 to switch over to the camera mode"), [0052] ("Another preferred method of selecting one of the words of the recognized text displayed adjacent to the displayed keyboard is via a keypress on a key in next proximity of the desired word as input text."), [0053] ("Another preferred method of selecting one of the words of the recognized text is by displaying next to each word a respective identifier such as a certain number, for instance, and by a keypress on that respective number on the keyboard."), [0049] ("[a] selection of the recognized text in the third field can be made preferably by a second keypress on the camera key or a keypress on the third field or on the RETURN key or the like.").<br><br>To the extent Keyless argues that Goktekin does not disclose or render obvious this limitation, it would have been obvious in view of Goktekin, a POSITA's pre-existing knowledge, and/or the teachings of Goktekin combined with the other references charted for this patent in these invalidity contentions, including one or more of Roach, Vincent, and Ramkumar as discussed above for claim [8], or as further modified in view of Garcia-Barrio and/or Aravamudan. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Goktekin uses OCR and/or search to present a user with candidate text (extracted from an image) for entry into a first application. *See supra* claim [8]. In the combination of Goktekin with one or more of Roach, Vincent, and Ramkumar, a camera image is used to conduct various searches. *See supra* claim [8]. A POSITA would have found it obvious for the search application (e.g., Goktekin's camera application, either alone or as modified) to include *multi-modal* input capabilities, such that *typed text inputs* may be used in addition or as an alternative to the *camera mode input*. Each of Garcia-Barrio and Aravamudan teaches using multi-modal (e.g., OCR text and typed text) input for a search application.<br><br>For example, Garcia-Barrio discloses "Using Sensor Inputs from a Computing Device to Determine Search Query." Garcia-Barrio, Title. In Garcia-Barrio, an "image input is obtained from a |

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| | computing device when an image sensor of the computing device is directed to a scene," and a "search input is received from the computing device, where the search input is obtained from a mechanism other than the image sensor." Garcia-Barrio, Abstract. Like Goktekin, Garcia-Barrio describes a "mobile computing device 10 [that] can obtain sensor inputs from various kinds of sensors," including "an outwardly directed camera ('outward camera 14'), an inwardly directed camera ('inward camera 15') which captures an image of the user when operating the device, one or more additional input devices 16 (e.g., keypad, . . . touch-screen . . .) and a search interface 20." Garcia-Barrio, ¶[0018]. "The search interface 20 can receive . . . image input 13 from each of the outward and inward cameras 14, 15, and other input 17 from the input device 16." Garcia-Barrio, ¶[0018]. According to Garcia-Barrio, the device "can process image portion 119 [of an input] by performing image recognition 118 and generating recognition information 123 corresponding to the image portion 119 of the sensor inputs." Garcia-Barrio, ¶[0021]. "The search interface 120 of the search engine 150 can receive [a] text string 121 and/or the recognition information 123" from the image. Garcia-Barrio, ¶[0022]. The text string may result from "other inputs 17," such as "text input from the user (e.g., keypad entry)." Garcia-Barrio, ¶[0022]. Thereafter, a search query is conducted based on the input information, and search results may be provided such as "links to web pages, documents, images and/or summaries that are ranked based on a determination of relevance to the search query." Garcia-Barrio, ¶[0023]-[0029]. In one embodiment, an image-based search may be followed by a search entered via other means (e.g., typed keyword). *See* Garcia-Barrio, ¶[0033]-[0036]. Accordingly, Garcia-Barrio teaches that a camera-based search application (e.g., as in Goktekin) may *also* accept keywords typed from a keypad, as a way to refine or follow up on an initial search.<br><br>Further, Garcia-Barrio teaches that "[w]ith reference to FIG. 3B, image input is obtained from an image sensor of the computing device (360). According to an aspect, the image input reflects a scene that is being viewed through the computing device in real-time. For example, a computerized set of eyeglasses may capture image or video data, which is then communicated to search engine 150. As another example, image or video data may be captured on mobile computing device 10, which can correspond to, for example, a smart phone or tablet. Image analysis may be performed to determine an object of interest depicted in the image input (370). The image analysis may correspond to, for example, object detection and/or image recognition. In one example, facial recognition can also be performed. In one implementation, recognition information 123 is used to |

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| | determine information about the object of interest, such as a classification or type of the object, or more specific information, such as an identification of the object (372). In addition to the image input, a search input is received from the mobile computing device 10 (380). The search input may be provided from a contextual input mechanism other than the image sensor. For example, the search input may be entered as a voice signal received on the microphone of the mobile computing device 10 (381). Alternatively, an input mechanism such as a touch screen or keypad may provide input corresponding to the search input (383)." Garcia-Barrio, ¶[0050]-[0052]; *see also* Fig. 3B.<br><br>As another example, Aravamudan discloses a "Method of and System for Error Correction in Multiple Input Modality Search Engines." Aravamudan, Title. According to Aravamudan, "[s]earch engines on mobile phones (FIG. 5) are expanding the input modality from keypad based text to include speech and/or image/video. While pure speech based search and pure image based search engines are emerging, most popular ones transform the input of the new modalities to text either in-part or fully. For instance, speech is used as an alternative to input text instead of the keypad, and Optical Character Recognition (OCR) scan of images are used to populate the traditional text input box of text input based search. It has been discovered by the Applicants that, in these scenarios, just as there could be typographic or orthographic errors in text input, other forms of errors characteristic to the transformation of the input modality (e.g. speech to text) or extraction of text from the input modality (e.g., image OCR scan for text), make the challenge of understanding user intent even more difficult. It was further discovered by Applicants that the problem is further complicated by the fact that the nature and characteristics of these errors are not the same across these different modalities, making an error correction model specific to any particular input modality ineffective. Furthermore, most of the multiple modality search engines also permit the user to edit and augment the text that was either transformed or extracted from other input modalities. This further exacerbates the problem of using an error correction model tailored to a specific input type." Aravamudan, ¶[0005]-[0006].<br><br>In Figure 2, below, Aravamudan illustrates a multi-modal input search application, including both image-based and keypad-based inputs. As Aravamudan explains, "FIG. 2 illustrates the flow of input to the search engine and the transformation/extraction steps of speech and image input to text (such as could be provided by a multi-mode input interface, e.g., as in FIG. 5). The text input 201 by the user, in a text box interface, could be fed to the search engine system 211. The search engine system 211 could reside on a mobile device fully and/or reside fully or partially remotely on the |

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| | network. In certain implementations, the terms input as text 201 are tagged as 'text input source' to enable the text search engine 212 of the search engine system 211, to be aware of the nature of the input source type." Aravamudan, ¶[0037]. "Image/video input 202, captured on device by the mobile device camera could be scanned for text by a text extraction module 204. Text extraction module 204 can either reside locally on the device or it could be resident on a remote service. In an embodiment of the invention, the extracted text is sent to text input interface (at 207) and, optionally, consolidated with other text input forms 206. This consolidation of text from multiple modalities 206, enables the user to edit the terms before feeding it to text search 212. In some implementations, the text extraction module 204 tags the extracted text with the source type, e.g., 'image source' to make the text search engine 212 aware of the input source type in order to perform selected error correction methods. In another embodiment of the invention, the extracted text 204 is directly fed 209 to the text search engine 212 without consolidating the text from the input modalities 206. The text source type for the extracted text 204 is tagged as 'image source' in this path also. The input image 202 can also be fed directly to the image search engine 213 component of the search engine system 211." Aravamudan, ¶[0038]. Further, "text from the different modalities [may be] consolidated for user editing 206." Aravamudan, ¶[0039]. |

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| |  <br>FIG. 2<br>Aravamudan, Fig. 2.<br>Aravamudan's multi-modal search input system is broadly applicable to various forms of search, including searches for "any type of item," including non-limiting examples of "(1) media content, such as music, movies, television shows, web audio/video content, podcasts, picture, videos, and electronic books, (2) personal information items, such as electronic mail items, address book entries, electronic calendar items, and SMS and/or MMS message items, (3) computer system items, such as documents, applications, and server resources, and/or (4) Internet-based content, such as website links, items for sale, news articles, and any web-based content." Aravamudan, |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | ¶[0058]. And Aravamudan's system may be implemented on any "computer program product for use with a computer system or computerized electronic device (e.g., Smartphone, PDA, tablet computing device, etc.)." Aravamudan, ¶[0059]. Thus, Aravamudan also teaches that a image-based/camera-based search application (e.g., as in Goktekin) may *also* accept keywords typed from a keypad.<br><br>A POSITA would have found it obvious to incorporate "wherein said search application use at least one keyword typed through said keyboard," as claimed. Each of Garcia-Barrio and Aravamudan teaches to use multi-modal inputs for a search application, and particularly teaches to use a keypad to input search keywords *in addition* to image-based or camera-based search. A POSITA would have been motivated to combine such feature(s) with the disclosure of Goktekin, as an obvious and intuitive way to provide additional flexibility to a user, to provide the ability for follow-up searches, and/or to edit or refine a keyword or search result generated from an image scan or search. Moreover, a POSITA would recognize the feature of a keyword typed through a keyboard to be an advantageous and important way to improve the image-based search functionalities described in Goktekin (or Goktekin as modified in claim [8]). Typing a keyword through a keyboard was routine and conventional to a POSITA (as well as to a user of a device), as shown by Garcia-Barrio and Aravamudan. Moreover, providing the ability to type keywords for search would allow the search application to function even when a suitable image cannot be taken or is otherwise unavailable. Furthermore, Goktekin already provides that the keyboard may be used as an alternative way to enter text. *See* Goktekin, ¶[0046] ("Thus the user may input text as usual via the displayed touch screen keyboard."), Goktekin, ¶[0032] ("Thus the user can choose whether he wants to input the text conventionally via the keyboard."), Goktekin, ¶[0033] ("Thus the text can be input either via the keyboard or via the camera text input module in the camera mode and the input text will be sent to the application."). Extending Goktekin's existing keyboard text entry functionality to accommodate entering a keyword into the search application (e.g., in the combination with Garcia-Barrio and/or Aravamudan) would be a straightforward, intuitive modification, requiring no more than ordinary skill. Incorporating the feature into Goktekin's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | with Goktekin, represent nothing more than combining prior art elements according to known methods and techniques (using a keyboard to type a keyword for search) to a search application to yield predictable results (additional, refined, or alternate search inputs and/or results). |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[10]** The system of claim 1, wherein at least one of the applications is used for sharing at least one of text, pictures, or videos. | Claim 10 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 10 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos."<br><br>For example, and as discussed above for claims [4, 5], "information" shared from Goktekin's camera mode text input application to the first application includes text. *See supra* claims [4, 5]. Thus, Goktekin provides "at least one of the applications is used for sharing at least one of text, pictures, or videos," as required by the claim.<br><br>For example, Goktekin discloses in connection with a second application that if "the recognized and displayed text [in camera mode text input application]is correct and desired the user selects the recognized text as input text, whereupon the selected text is output to the application preferably in the same way as the text would have been input via the keyboard." Goktekin, ¶[0048]. As Goktekin teaches, "[a] selection of the recognized text in the third field can be made preferably by a second keypress on the camera key or a keypress on the third field or on the RETURN key or the like" and "[o]ther kinds of selection are not excluded." Goktekin, ¶[0049]. |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Furthermore, Goktekin describes touching the screen on the camera mode text input application interface to enter the recognized text into the text field. For example, Goktekin provides that if "the recognized and displayed text is correct and desired the user selects the recognized text as input text, whereupon the selected text is output to the application preferably in the same way as the text would have been input via the keyboard." Goktekin, ¶[0048]. Likewise, according to Goktekin, "[a]nother preferred selection can be made by touching or pressing, respectively, on the word on the touch screen." Goktekin, ¶[0050]; *see also* Goktekin, ¶[0055] ("user can select [from the camera mode text input application] whatever fits best as the input text [into the first application]"). In addition, Goktekin provides that "A keypress on one of the hidden touch keys 10 [illustrated within the camera mode text input application] within the preferred embodiment of FIG. 4 would select the recognized text, for instance." Goktekin, ¶[0063].<br><br>Additionally, and as discussed above for claim [7], Goktekin alone and/or in combination with Sirpal-000 and/or Lavallee, and/or further in light of the knowledge of a POSITA (as confirmed, e.g., by reference to Sirpal-000 and/or Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application." A messaging application is an application "used for sharing at least one of text, pictures, or videos." Thus, for at least the same reasons, Goktekin alone and/or in combination with Sirpal-000 and/or Lavallee, and/or further in light of the knowledge of a POSITA (as confirmed, e.g., by reference to Sirpal-000 and/or Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos," as claimed. |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[11]** The system of claim 1, wherein said device is a mobile phone. | Claim 11 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 11 are anticipated and/or obvious for the same reasons set out in claim 1. |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said device is a mobile phone."<br><br>For example, Goktekin discloses "[m]ethods and modules for a multimodal text input in a mobile device." Goktekin, Abstract. As Goktekin explains, "[m]obile devices such as mobile phones or smart phones with an integrated camera module and with a display such as a touch screen display, for instance, show a good market penetration and a use in daily life far beyond a simple phone application. The mobile device is used as well as a pocket book, a memo book, a calendar with planner, an address book, for receiving and writing SMS and emails and so on." Goktekin, ¶[0003]. Further, Goktekin indicates that its disclosure "could replace the standard keyboard module on the standard mobile devices, such as for instance on mobile phones, smartphones or the like, and under respective operating systems." Goktekin, ¶[0011]; *see also* Goktekin, ¶[0032] ("module can replace the original keyboard module on the mobile device 1, advantageously offering all applications multimodal text input features as described").<br><br>Additional exemplary citations include:<br><br>"For clarity, the "application" stands for instance for a translation application, a search application such as google search or the like searching for a keyword in the internet, a phone application requesting for a phone number or a name or for any other application requesting text input." Goktekin, ¶[0034].<br><br>"The "mobile device 1" stands preferably for any mobile-phone, smart-phone or the like." Goktekin, ¶[0044].<br><br>"FIG. 3 a shows another preferred embodiment of an implementation of the present invention, wherein the mobile phone 1 is in the camera mode. In this preferred embodiment the GUI of the camera mode occupies a certain display area of the touch screen and none of the keyboard keys of the A-Z-keyboard is visible. The usage within the camera mode is as explained above, wherein a switch over or a change to the keyboard mode is preferably detected by a preferred gesture 9. The switch over to the keyboard mode is also imaginable by a keypress of any other defined gesture 9, of a hidden key, on the captured image in the second field 5, or the like. The full size of the text |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | input GUI can be used in this way for the camera input mode, which is the certain display area. If the switch over to the keyboard mode is detected, preferably the image of FIG. 3 b occurs on the mobile device 1." Goktekin, ¶[0058].<br><br>"28. The mobile device as in claim 27 wherein the processor is configured to generate the keyboard on the display using a touch screen interface, the keyboard being compatible with one or more standard applications, as for instance a phone application or an internet search application, running on the mobile device and requiring the text input and/or the first and the second means are adapted to display the first field and the second field and the third field, if available, occupying together always a same size on the display." Goktekin, Claim 28. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[12P]** A method comprising: | To the extent that the preamble is held to be limiting, Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses a "method comprising."<br><br>For example, Goktekin discloses "[m]ethods and modules for a multimodal text input in a mobile device." Goktekin, Abstract.<br><br>Additional exemplary disclosures include:<br><br>"The objective of the invention is to overcome the shortcomings explained above and to provide a method for a multimodal text input in a mobile device via a keyboard or in a camera mode by holding the camera of the mobile device on a written text, wherein the written text is recognized and selectable, such that a respective key character or a part of the recognized text is selectable by a single keypress or command for an immediate output to an application requesting the text input." Goktekin, ¶[0012]. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "Another objective of the invention is a program module executing said method to either replace or complement an original standard keyboard text input module, such that a multimodal text input via the conventional keyboard and via the camera mode is made possible." Goktekin, ¶[0013].<br><br>"The above objectives as well as further objectives which will also become apparent from the following description are achieved by a method and a module for a multimodal text input in a mobile device either by a keyboard or in a camera mode by recognizing text within a captured image of a written text according to the features mentioned in the independent claims 1, 2 and 12, respectively. Additional features and characteristics of the invention are mentioned in the dependent claims." Goktekin, ¶[0014].<br><br>"Said method allows the multimodal text input in the mobile device via a conventional keyboard or in a touch screen keyboard as well as in a camera mode, wherein the camera of the mobile device has to be simply held over a written text, such that an image is taken of the written text and the written text is recognized and output to an application as it would have been input via the keyboard. Especially in a case of a text input in a foreign language such a text input possibility is very advantageous, for instance, in case of a translation application for traveling, wherein the input has to be done in Chinese, Greek or Latin language." Goktekin, ¶[0015].<br><br>"FIG. 1 a shows a preferred embodiment of the present invention being a multimodal text input method and module on a mobile device 1. The multimodal text input method and module allow a user to input a text into an application on the mobile device 1 either via a keyboard or via a camera integrated in the mobile phone, wherein the user holds the mobile phone with the camera over a written text, the mobile phone captures an image of the written text and converts it via optical character recognition (OCR) into character text, such that parts of the recognized text can be selected as input text for the application. In other words, the user may input the text conventionally via the keyboard in what is called a keyboard mode or he may input the text via the camera in what is called a camera mode if a written text in front of him is available." Goktekin, ¶[0031], Fig. 1a.<br><br>"FIG. 1 a shows a preferred embodiment of an implementation of the multimodal text input method according to the present invention." Goktekin, ¶[0046], Fig. 1a. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "FIG. 1 b shows the same preferred embodiment of the implementation of the multimodal text input method as shown in FIG. 1 a but after a keypress on the camera mode key 8." Goktekin, ¶[0047], Fig. 1b.<br><br>*See also* discussion of "method" of Goktekin at paragraphs [0052], [0053], [0056]. |
| **[12A]** assigning a first zone of a touch screen to an interface of a first application; | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "assigning a first zone of a touch screen to an interface of a first application."<br><br>As discussed *supra* claim [1C], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein a first zone of said touchscreen is assigned to an interface of said first application." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12B]** assigning a second zone of said touch screen to an on-screen keyboard; and | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "assigning a first zone of a touch screen to an interface of a first application."<br><br>As discussed *supra* claim [1C], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein . . . a second zone of said touchscreen is assigned to said keyboard." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12C]** based on accomplishment of a | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen and | Keyless's apparent interpretation of this limitation, discloses "based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen."<br><br>As discussed *supra* claim [1D], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone." *See supra* claim [1D]. This limitation is disclosed for at least the same reasons. |
| **[12D]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen. | Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen."<br><br>As discussed *supra* claim [1E], Goktekin teaches this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [1E]. |

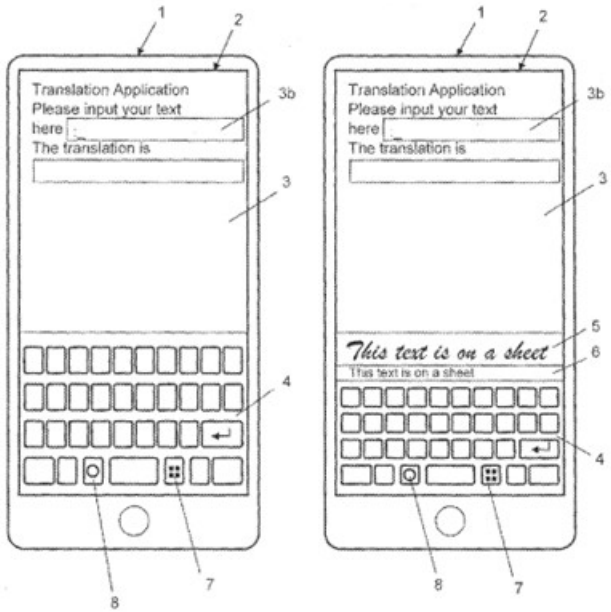
| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[13]** The method of claim 12, comprising using said | Claim 13 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| keyboard with both of said applications. | 12 to show the additional limitations of claim 13 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "using said keyboard with both of said applications."<br><br>As discussed *supra* claim [3], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said keyboard is used with both of said applications." *See supra* claim [3]. This limitation is disclosed for at least the same reasons. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[14]** The method of claim 12, wherein at least one of said applications is one of, a text messaging application and an image sharing application. | Claim 14 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 14 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein at least one of said applications is one of, a text messaging application and an image sharing application."<br><br>As discussed *supra* claim [7], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein at least one of the applications is a messaging application." *See supra* claim [7]. A "messaging |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application" is at least one of "a text messaging application and an image sharing application." Thus, this limitation is disclosed for at least the same reasons. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[15]** The method of claim 12, wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application. | Claim 15 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 15 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>As discussed *supra* claim [8], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application." *See supra* claim [8].<br><br>Further, and as discussed *supra* claim [1D], Goktekin discloses that "the user may input text as usual via the displayed touch screen keyboard or he may press a camera mode key 8 to switch over to the camera mode." Goktekin, ¶[0046]. According to Goktekin, "FIG. 1b shows the same preferred embodiment of the implementation of the multimodal text input method as shown in FIG. 1a but after a keypress on the camera mode key 8. In the camera mode the first field 4 for the keyboard is preferably smaller compared to a size in the keyboard mode of FIG. 1a, such that the difference between the size of the first field 4 in the keyboard mode and the smaller size in the |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | camera mode is used for displaying the second field 5 wherein a part of the captured written text is displayed and for displaying the third field 5 wherein the recognized text is displayed. In this preferred embodiment the size of any displayed fields in the keyboard mode as well as in the camera mode is always kept the same, such that the used size of the touch screen is kept the same as that of the original keyboard module, such that the original keyboard module can be replaced by the multimodal text input module without overlapping the application more than originally planned by a usage of the original keyboard module." Goktekin, ¶[0047]. Thus, Goktekin provides that the "search application [is] activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application." Further, as illustrated in Figure 1b, the "interface of said second application is displayed on the touch screen by using a search application activated by" interacting with Goktekin's camera mode button.<br>  <br><br>Goktekin, Figs. 1a-1b. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Thus, Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, provides "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application," as claimed. |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[16]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard. | Claim 16 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 16 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>As discussed *supra* claim [9], Goktekin teaches this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [9]. This feature is disclosed for at least the same reasons. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[17]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard after said search application is activated. | Claim 17 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 17 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated."<br><br>As discussed *supra* claim [9], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said search application use at least one keyword typed through said keyboard." *See supra* claim [9]. Claim 17 recites the same feature and further requires that the keyword be "typed through said keyboard after said search application is activated."<br><br>For example, in Goktekin, as well as Goktekin as modified (*see* claim [8] and claim [9], *supra*), a user interacts with the "second application" after it has been activated and, thus, types in the keyword after the second application has been activated.<br><br>For example, as discussed above in claim [9], in Garcia-Barrio, the "search interface 120 of the search engine 150 can receive [a] text string 121 and/or the recognition information 123" from the image. Garcia-Barrio, ¶[0022]. The text string may result from "other inputs 17," such as "text input from the user (e.g., keypad entry)." Garcia-Barrio, ¶[0022]. Thereafter, a search query is conducted based on the input information, and search results may be provided such as "links to web pages, documents, images and/or summaries that are ranked based on a determination of relevance to the search query." Garcia-Barrio, ¶[0023]-[0029]. In one embodiment, an image-based search may be followed by a search entered via other means (e.g., typed keyword). *See* Garcia-Barrio, ¶[0033]-[0036]. In another embodiment, "a search input is received from the mobile computing device 10 (380)" and "an input mechanism such as a touch screen or keypad may provide input corresponding to the search input (383)." Garcia-Barrio, ¶[0050]-[0052]. A POSITA would |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | understand that for the search interface of Garcia-Barrio to receive the entered text input or search input, the search interface must be active. Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs.<br><br>As another example, as discussed above in claim [9], Aravamudan teaches multiple forms of input into a "multi-mode input interface" for a search engine. Aravamudan, ¶[0037]. A POSITA would understand that for the search interface of Aravamudan to receive the entered text input or search input, the search interface must be active. Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs.<br><br>Thus, Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, including as modified (*see* claims [8] and [9], *supra*), and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated," as claimed. |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[18]** The method of claim 12, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen. | Claim 18 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 18 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen." |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As discussed *supra* claim [4], Goktekin teaches this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [4]. This feature is disclosed for at least the same reasons. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[19]** The method of claim 18, wherein said information includes at least one of a text, an image, a video, a webpage and a URL. | Claim 19 depends from claims 18 and 12. Defendants incorporate all the prior art disclosures from claims 18 and 12 here, which anticipate and/or render claims 18 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 18 and 12 to show the additional limitations of claim 19 are anticipated and/or obvious for the same reasons set out in claims 18 and 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said information includes at least one of a text, an image, a video, a webpage and a URL."<br><br>As discussed *supra* claim [5], Goktekin teaches this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [5]. This feature is disclosed for at least the same reasons. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[20]** The method of claim 12, wherein upon interacting with the interface of any of said | Claim 20 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| applications, the focus of the system is given to the interacted application. | 12 to show the additional limitations of claim 20 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>As discussed *supra* claim [2], Goktekin teaches this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [2]. This feature is disclosed for at least the same reasons. |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[21]** The method of claim 12, wherein said touch screen is integrated within a mobile communication device. | Claim 21 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 21 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Goktekin, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said touch screen is integrated within a mobile communication device."<br><br>As discussed *supra* claim [11] and claim [1A], Goktekin teaches, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, the "electronic device having a touchscreen" and "wherein said device is a mobile phone" *See supra* claims [1A, 11]. A "mobile phone" is a "mobile communication device," such |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | that this limitation is provided for at least the same reasons a mobile phone having a touchscreen is disclosed. *See, e.g.*, Goktekin, Figs. 1A-1B, 2A-2B, 3A-3B, 4. In addition, Goktekin includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, an application for sharing text, pictures, and/or videos with other users, as discussed *supra*, claims [7] and [10], making Goktekin a mobile communication device for this additional reason. |

# Appendix B2

**Exhibit B2**

**Invalidity of Asserted Claims of the '922 Patent**

**in view of Koch**

U.S. Patent Application Publication No. 2012/0113023 to Koch et al. ("Koch"), filed on March 30, 2011, published on May 10, 2012, and claiming priority to Provisional Application No. 61/410,862, qualifies as prior art to U.S. Patent No. 10,976,922 ("'922 patent") at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).[1] Koch anticipates or, alone or with other references, renders obvious one or more of asserted claims 1-21 of the '922 patent. To the extent Keyless contends Koch does not disclose one or more limitations of the claims, it would have been obvious to combine Koch with the knowledge of a person of ordinary skill in the art ("POSITA") and/or with one or more of the following references to render the claims at issue in the '922 patent invalid. The chart below illustrates how the asserted claims of the '922 patent are invalid in view of Koch and/or additional secondary references listed below, including but not limited to the prior art identified in Defendant's Invalidity Contentions.

- U.S. Patent Application Publication No. 2013/0187861A1 to Lavallee ("Lavallee"), filed on January 19, 2012, and published on July 25, 2013. Lavallee qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0110486A1 to Sirpal et al. ("Sirpal-486"), filed on September 28, 2011, and published on May 3, 2012. Sirpal-486 further claims priority as early as October 1, 2010, through one or more provisional applications identified on its face. Sirpal-486 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Additionally, PCT Publication No. WO2012/044782 (filed on September 29, 2011, and published on April 5, 2012) ("Sirpal-782") and U.S. Patent No. 8,832,577 ("Sirpal-577") (filed September 28, 2011, and issued on September 9, 2014) include equivalent disclosure to Sirpal-486 and qualify as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on any of Sirpal-782 or Sirpal-577 for their disclosures equivalent to Sirpal-486.

[1] Keyless Licensing LLC (or "Keyless") alleges that the asserted claims of the '922 patent are entitled to priority as early as February 17, 2013. However, as explained in the cover pleading, the asserted claims of the '922 patent are not entitled to Keyless's claimed priority date due to inadequate written description support. Assuming the claims are not invalid under Section 112 (*see, e.g.*, cover pleading), the earliest possible priority date for the asserted '922 patent claims is December 24, 2013. As a result, the '922 patent is subject to the AIA. The inclusion of any pre-AIA statutes is predicated on Keyless's interpretation of priority, which Defendants disagree with.

- U.S. Provisional Patent Application No. 61/389,000 to Sirpal et al. ("Sirpal-000"), filed on October 1, 2010, and published at least by May 3, 2012, upon the publication of U.S. Patent Application No. 13/247,801 (as Sirpal-486), which claimed priority to Sirpal-000. Sirpal-000 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent Application Pub. No. 2013/0050102 A1 to Wang et al. ("Wang"), was filed November 28, 2011, and published February 28, 2013. Wang qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 7,340,686 to Matthews et al. ("Matthews"), was filed on March 22, 2005, and issued on March 4, 2008. Matthews qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).
- U.S. Patent No. 10,198,163 to Yabuki ("Yabuki"), was filed as Application No. 14/406,377 on December 8, 2014, and issued on February 5, 2019. Yabuki was filed as a national phase application of PCT Application No. PCT/JP2013/065733, which was filed on June 6, 2013, designated the United States, and claimed priority to Japanese Application No. 2012-130755 (filed on June 8, 2012). Yabuki qualifies as prior art at least under 35 U.S.C. § 102(a)(2). Yabuki's PCT Application claims priority to Japanese Application No. 2012-130755 (filed on June 8, 2012), designated the United States, and was published as WO2013/183722 on December 12, 2013, and thus the PCT publication also qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on WO2013/183722 as prior art for the same reasons described below for Yabuki.

With respect to the proposed modifications to Koch, such modification would have been obvious to try, an obvious combination of prior art elements according to known methods to yield predictable results, a simple substitution of one known element for another to obtain predictable results, a use of known techniques to improve a similar device or method in the same way, an application of a known technique to a known device or method ready for improvement to yield predictable results, a variation of a known work in one field of endeavor for use in either the same field or a different one based on design incentives or other market forces with variations that are predictable to a POSITA, and/or obvious in view of teachings, suggestions, and motivations in the prior art that would have led a POSITA to modify or combine the prior art references.

To the extent any of the art describes different embodiments of its inventions, a POSITA would have found it obvious to combine Koch's teachings regarding these embodiments. A POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the embodiments, and would have a reasonable expectation of success in doing so, at least because the embodiments use known variations of existing technology to solve routine and

well understood problems in predictable ways. A POSITA would have recognized that Koch's embodiments describe related advancements for mobile devices, and a POSITA would have been motivated to combine elements of the embodiments to achieve Koch's goals.

The excerpts cited herein are exemplary. For any claim limitation, Samsung may rely on excerpts cited for any other limitation and/or additional excerpts not set forth fully herein to the extent necessary to provide further explanation for a reference's disclosure of a limitation. Where an excerpt refers to or discusses a figure or figure items, that figure and any additional descriptions of that figure should be understood to be incorporated by reference as if set forth fully herein. Samsung reserves the right to further supplement this chart.

To the extent that these Invalidity Contentions rely on or otherwise embody particular interpretations of terms or phrases in the asserted claims, Samsung is not proposing any such interpretations as proper interpretations or constructions of those terms or phrases. Various positions put forth in this document are predicated on Keyless's interpretation of its claims as evidenced by its Infringement Contentions. Those positions are not intended to and do not necessarily reflect Samsung's interpretation of the true and proper scope of the asserted claims. Samsung further incorporates by reference all reservations of rights set forth in the Invalidity Contentions, as if fully set forth herein.

Defendants' arguments throughout these Invalidity Contentions are based on Keyless's apparent interpretation of the claims in its infringement contentions. Defendants do not agree that such interpretation is proper and reserve the right to argue that the mapped actions do not infringe any claims of the '922 patent. In the alternative, should the Court or factfinder construe and/or apply the claims in a manner consistent with Keyless's interpretations in its infringement contentions for the '922 patent, the claims are invalid for at least the reasons set forth herein.

In some instances, the referenced prior art includes priority applications, including prior provisional applications, that provide adequate §112 support for the claim(s) in the referenced prior art. *See, e.g.*, Sirpal-486. In those instances, the consistent disclosures in those earlier applications, including prior provisional applications, are incorporated herein by reference. As such, those earlier disclosures apply equally in terms of their application to the elements of the asserted claims, and thus provide even earlier dates in terms of prior art, state of the art, and the knowledge base of those of ordinary skill in the art. *See Dynamic Drinkware LLC v. National Graphics Inc.*, 800 F.3d 1375 (Fed. Cir. 2015).

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[1P]** A system for using multiple applications on a screen of a device, comprising: | To the extent that the preamble is held to be limiting, Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses a "system for using multiple applications on a screen of a device."<br><br>For example, Koch discloses that its "device typically supports a variety of applications," including "a drawing application," "a word processing application," "a telephone application," "an e-mail application, an instant messaging application," and "a web browsing application." Koch, ¶¶[0107], [0135]-[0153]. The device includes means to "indicat[e] which applications, if any, are currently active" and "what applications, views or other information occupy various regions of touch screen display 112." Koch, ¶[0112]. Further, Koch describes simultaneously using a "user interface in an [first] application (e.g., a notes application, a web browser application, etc.)" and a "center area 5016-C" appearing between two halves of a keyboard, which are both "applications" as discussed below.<br><br>Moreover, as detailed below in [1B] ("first application") and [1D] ("second application"), Koch's system is for using at least a first application "((e.g., a notes application, a web browser application, etc.)") and a second application whose interface appears on the "center area 5016-C."<br><br>Koch's system is for using multiple applications "on a screen of a device"—e.g., on a touch screen. For example, Koch describes:<br><br>[0106] In the discussion that follows, an electronic device that includes a display and a touch-sensitive surface is described. It should be understood, however, that the electronic device may include one or more other physical user-interface devices, such as a physical keyboard, a mouse and/or a joystick.<br><br>[0107] The device typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application.<br><br>[0108] The various applications that may be executed on the device may use at least one common physical user-interface device, such as the touch-sensitive surface. One or more functions of the touch-sensitive surface as well as corresponding information displayed on the device may be adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch-sensitive surface) of the device may support the variety of applications with user interfaces that are intuitive and transparent to the user.<br><br>Koch, ¶[0106]-[0108].<br><br>Additional exemplary citations include:<br><br>Koch, ¶[0154]-[0170] (describing exemplary embodiments wherein "[i]n conjunction" with "touch screen 112," applications are used to implement functionalities including telephone, contacts, videoconferencing, e-mail, instant messaging, SMS, "captur[ing] still images or video," "brows[ing] the Internet," calendars, various "mini-applications," "search module 151 [that] includes executable instructions to search for text, music, sound, image, video, and/or other files in memory," music playback, notes, maps, etc.).<br><br>"Another aspect of the user interface associated with an application is a set of views, sometimes herein called application views or user interface windows, in which information is displayed and touch-based gestures occur. The application views (of a respective application) in which a touch is detected may correspond to programmatic levels within a programmatic or view hierarchy of the application. For example, the lowest level view in which a touch is detected may be called the hit view, and the set of events that are recognized as proper inputs may be determined based, at least in part, on the hit view of the initial touch that begins a touch-based gesture." Koch, ¶[0181]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "It shall be understood that the foregoing discussion regarding event handling of user touches on touch-sensitive displays also applies to other forms of user inputs to operate multifunction devices 100 with input-devices, not all of which are initiated on touch screens, e.g., coordinating mouse movement and mouse button presses with or without single or multiple keyboard presses or holds, user movements taps, drags, scrolls, etc., on touch-pads, pen stylus inputs, movement of the device, oral instructions, detected eye movements, biometric inputs, and/or any combination thereof, which may be utilized as inputs corresponding to sub-events which define an event to be recognized." Koch, ¶[0198].<br><br>"FIG. 2 illustrates a portable multifunction device 100 having a touch screen 112 in accordance with some embodiments. The touch screen may display one or more graphics within user interface (UI) 200. In this embodiment, as well as others described below, a user may select one or more of the graphics by making a gesture on the graphics, for example, with one or more fingers 202 (not drawn to scale in the figure) or one or more styluses 203 (not drawn to scale in the figure). In some embodiments, selection of one or more graphics occurs when the user breaks contact with the one or more graphics. In some embodiments, the gesture may include one or more taps, one or more swipes (from left to right, right to left, upward and/or downward) and/or a rolling of a finger (from right to left, left to right, upward and/or downward) that has made contact with device 100. In some embodiments, inadvertent contact with a graphic may not select the graphic. For example, a swipe gesture that sweeps over an application icon may not select the corresponding application when the gesture corresponding to selection is a tap." Koch, ¶[0199].<br><br>"FIG. 4A illustrates an exemplary user interface for a menu of applications on portable multifunction device 100 in accordance with some embodiments. Similar user interfaces may be implemented on device 300. In some embodiments, user interface 400 includes the following elements, or a subset or superset thereof," thereafter listing several exemplary applications. Koch, ¶[0205]-[0227].<br><br>"FIG. 5A depicts user interface (UI) 5000A displayed on touch-sensitive display 112 of a device (e.g., device 100). UI 5000A may be a user interface in an application (e.g., a notes application, a web browser application, etc.) on device 100. UI 5000A includes text entry area 5002. Cursor 5004 and input text 5006 are displayed in text entry area 5002." Koch, ¶[0231]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Koch further describes several gestures applied to the UI for an application, via the touch screen. *See, e.g.*, Koch, ¶[0233], [0234], [0237]-[0241], [0243]-[0250], [0254]-[0278]. Additional such gestures are described, for example, in connection with the "second application" discussed below in [1D], *infra*.<br><br>Koch further illustrates using multiple applications on a touch screen in Figures 5A-5M ("Notes" application, keyboard application, and center area application), 5O-5P ("Contacts" application, keyboard application, and center area application), 5Q-5SS ("Notes" application, keyboard application, and center area application), 5TT ("Options" application, keyboard application, and center area application), 5UU-5ZZ ("Web Page" application, keyboard application)).<br><br>"What is claimed is: 1. An electronic device, comprising: a display; a touch-sensitive surface; … and one or more programs …" Koch, Claim 1.<br><br>"The device of claim 1, wherein the display is a touch-sensitive display that includes the touch-sensitive surface." Koch, Claim 6. |
| **[1A]** an electronic device having a touchscreen; | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an electronic device having a touchscreen."<br><br>For example, Koch "relates generally to electronic devices with touch-sensitive surfaces." Koch, ¶[0003]. Koch further discloses improvements to "electronic devices with touch-sensitive surfaces," "(also known as a 'touch screen' or 'touch screen display')." Koch, ¶[0008]. In Figure 1A, Koch illustrates a "block diagram illustrating portable multifunction device 100 with touch-sensitive displays 112 in accordance with some embodiments. Touch-sensitive display 112 is sometimes called a 'touch screen' for convenience, and may also be known as or called a touch-sensitive display system." Koch, ¶[0109]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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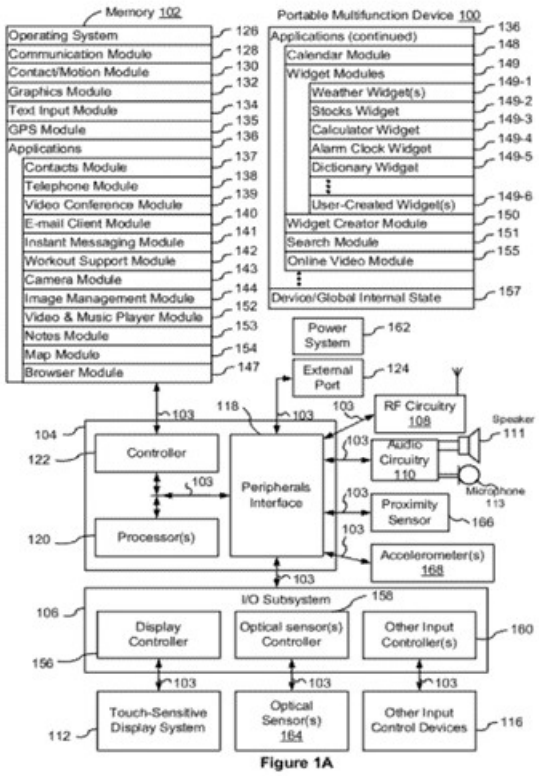


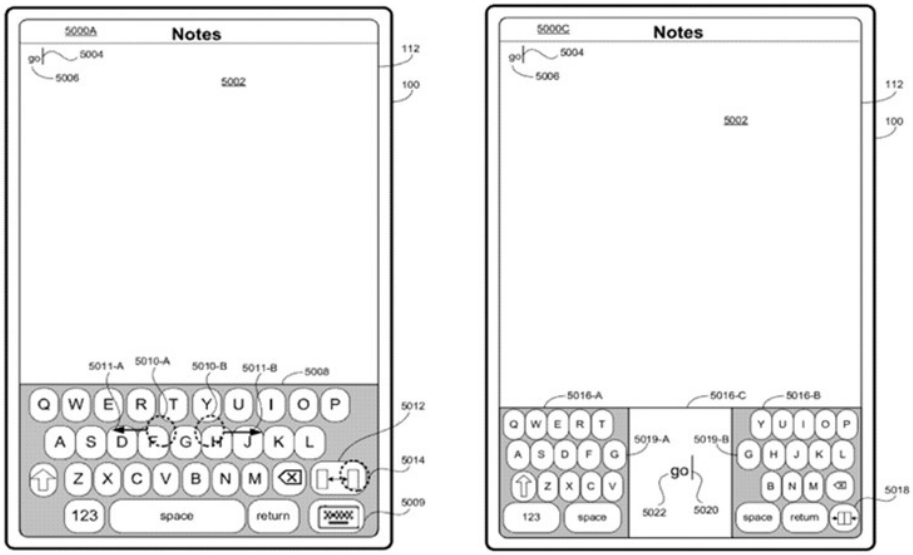

Figure 1A

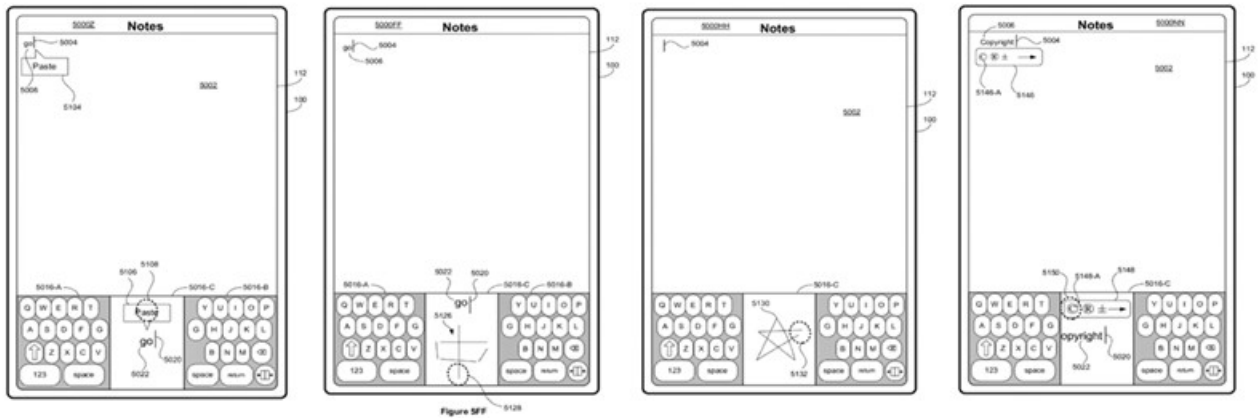
Koch at Fig. 1A.

According to Koch:

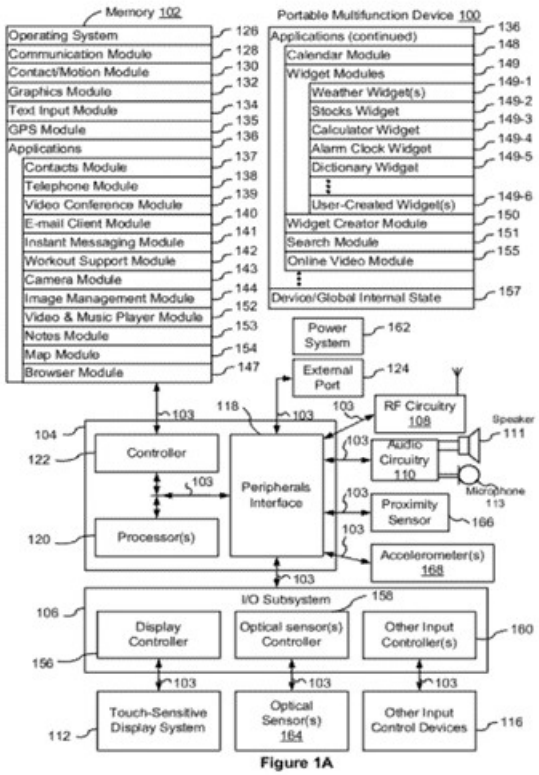
> [0117] Touch-sensitive display 112 provides an input interface and an output interface between the device and a user. Display controller 156 receives and/or sends electrical signals from/to touch screen 112. Touch screen 112 displays visual output to the user. The visual output may include graphics, text, icons, video, and any combination thereof (collectively

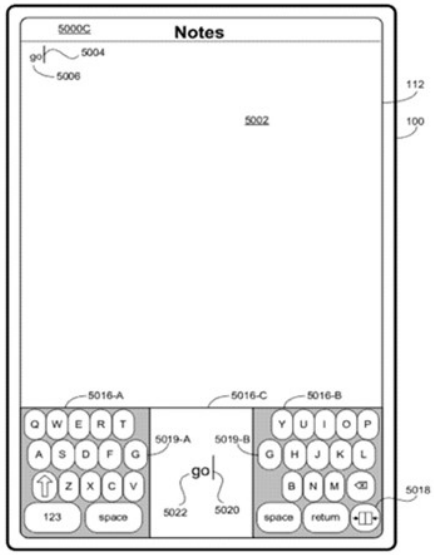
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | termed “graphics”). In some embodiments, some or all of the visual output may correspond to user-interface objects.<br><br>[0118] Touch screen 112 has a touch-sensitive surface, sensor or set of sensors that accepts input from the user based on haptic and/or tactile contact. Touch screen 112 and display controller 156 ( along with any associated modules and/or sets of instructions in memory 102) detect contact ( and any movement or breaking of the contact) on touch screen 112 and converts the detected contact into interaction with user-interface objects ( e.g., one or more soft keys, icons, web pages or images) that are displayed on touch screen 112. In an exemplary embodiment, a point of contact between touch screen 112 and the user corresponds to a finger of the user.<br><br>[0119] Touch screen 112 may use LCD (liquid crystal display) technology, LPD (light emitting polymer display) technology, or LED (light emitting diode) technology, although other display technologies may be used in other embodiments. Touch screen 112 and display controller 156 may detect contact and any movement or breaking thereof using any of a plurality of touch sensing technologies now known or later developed, including but not limited to capacitive, resistive, infrared, and surface acoustic wave technologies, as well as other proximity sensor arrays or other elements for determining one or more points of contact with touch screen 112. In an exemplary embodiment, projected mutual capacitance sensing technology is used, such as that found in the iPhone®, iPod Touch®, and iPad® from Apple Inc. of Cupertino, Calif.<br><br>[0120] Touch screen 112 may have a video resolution in excess of l00 dpi. In some embodiments, the touch screen has a video resolution of approximately 160 dpi. The user may make contact with touch screen 112 using any suitable object or appendage, such as a stylus, a finger, and so |

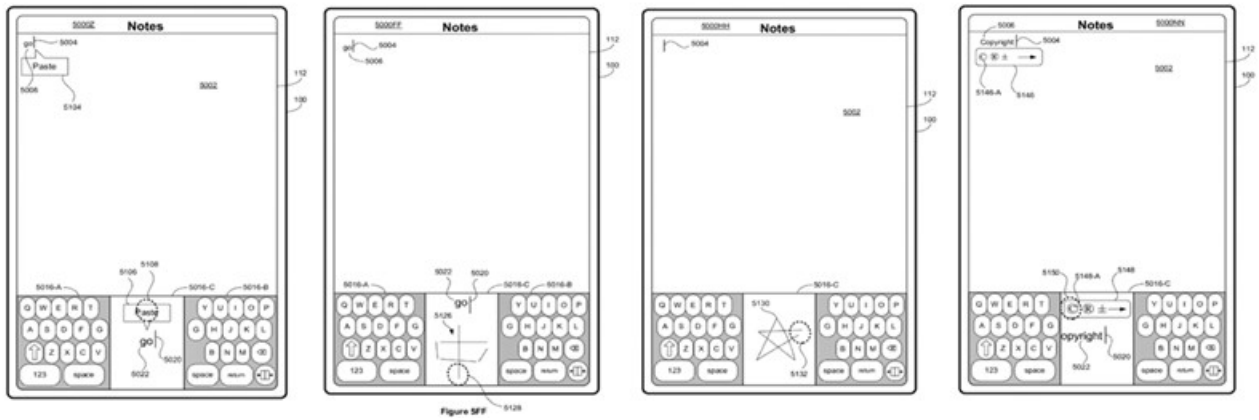
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | forth. In some embodiments, the user interface is designed to work primarily with finger-based contacts and gestures, which can be less precise than stylus-based input due to the larger area of contact of a finger on the touch screen. In some embodiments, the device translates the rough finger-based input into a precise pointer/cursor position or command for performing the actions desired by the user.<br><br>Koch, ¶[0117]-[0120].<br><br>Further, Koch illustrates "exemplary user interfaces" in FIGS. 5A-5NNN using a touch-sensitive display (designated as 112). Koch, ¶[0230]. By way of example, FIGS. 5A and 5C, illustrated below, include a touch-sensitive display (112). *See* Koch, ¶[0231]-[0234], [0235]-[0236].<br><br>  <br><br>Koch, Figs. 5A, 5C.<br><br>By way of further example, FIGS. 5Z, 5FF, 5HH, and 5NN, illustrated below, include a touch-sensitive display (112). *See* Koch, ¶[0261]-[0262], [0266]-[0267], [0272]-[0274], [0380]-[0381], [0387]-[0389], [0394]-[0397]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Koch, Figs. 5Z, 5FF, 5HH, 5NN.<br>Additional exemplary citations include:<br>"What is claimed is: 1. An electronic device, comprising: a display; a touch-sensitive surface; … and one or more programs …" Koch, Claim 1.<br>"The device of claim 1, wherein the display is a touch-sensitive display that includes the touch-sensitive surface." Koch, Claim 6. |
| **[1B]** an on-screen keyboard for entering text in a first application running within said device | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an on-screen keyboard for entering text in a first application running within said device."<br>For example, Koch "relates generally to electronic devices with touch-sensitive surfaces, including but not limited to electronic devices with touch-sensitive surfaces that control a soft keyboard on a display." Koch, ¶[0003].<br>In one embodiment, for example, Koch discloses a first application with "user interface (UI) 5000A," which "may be a user interface in an application (e.g., a notes application, a web browser |

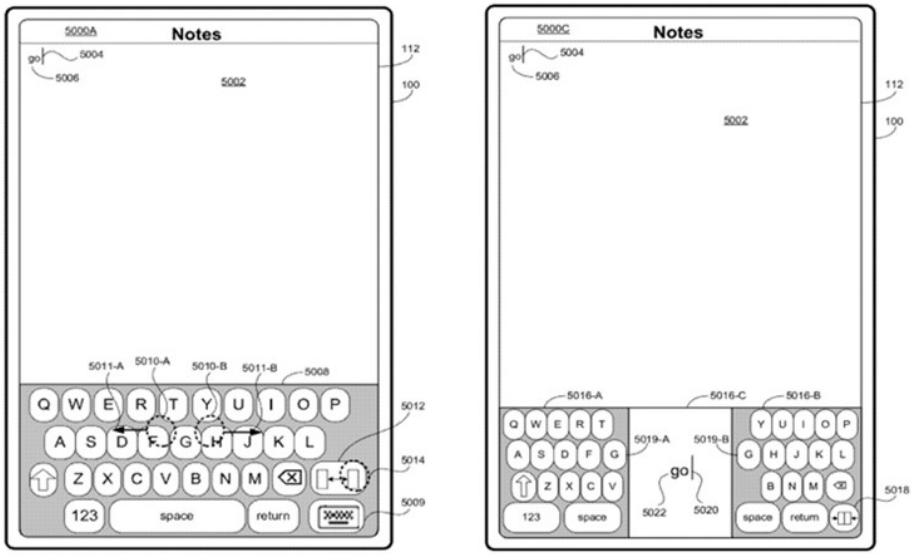
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application, etc.) on device 100" and "includes text entry area 5002." Koch, ¶[0231]. Koch further provides an "[u]nsplit soft keyboard 5008 … displayed on display 112." Koch, ¶[0232]. Koch's keyboard 5008 is an on-screen keyboard for entering text in the first application running within the device, as implemented via a "text input module 134." As Koch explains, "text input module 134" "provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, browser 147, and any other application that needs text input)." Koch, ¶[0133].<br><br>In Figure 1A, below, Koch illustrates a "block diagram illustrating portable multifunction device 100 with touch-sensitive displays 112 in accordance with some embodiments." Koch, ¶[0109]. As illustrated, "the software components stored in memory 102 include … text input module (or set of instructions) 134." Koch, ¶[0126]. "Text input module 134" "provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, browser 147, and any other application that needs text input)." Koch, ¶[0133]. |

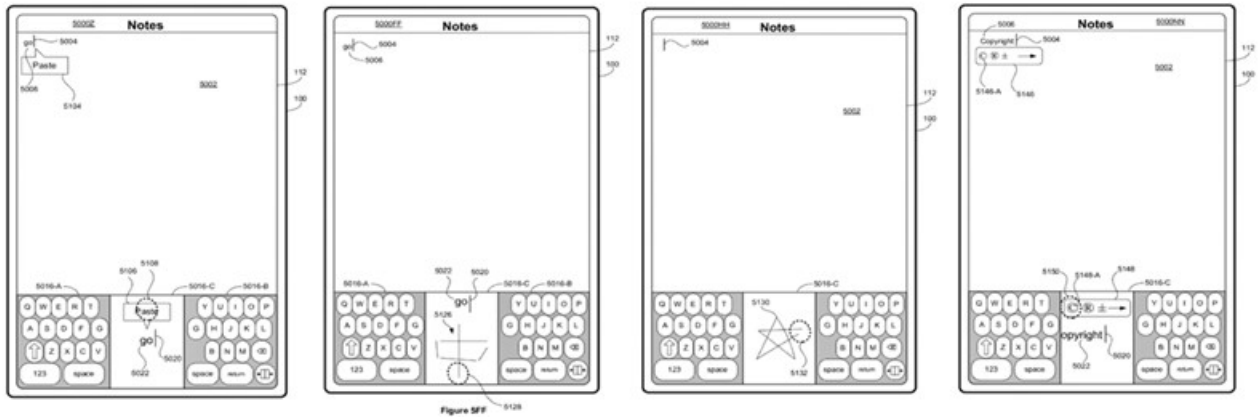
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 1A<br><br>Koch at Fig. 1A.<br><br>Further, Koch illustrates "exemplary user interfaces" in FIGS. 5A-5NNN using on-screen keyboard (designated 5008, 5016-A, and 5016-B) for entering text in a first application running within said device. Koch, ¶[0230]. By way of example, FIGS. 5A and 5C, illustrated below, include an on-screen keyboard (5008 in FIG. 5A, 5016-A and 5016-B in FIG. 5C). *See* Koch, ¶[0231]-[0234], [0235]-[0236]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |   <br>Koch, Figs. 5A, 5C.<br>By way of further example, FIGS. 5Z, 5FF, 5HH, and 5NN, illustrated below, include an on-screen keyboard (5016-A and 5016-B). *See* Koch, ¶[0261]-[0262], [0266]-[0267], [0272]-[0274], [0380]-[0381], [0387]-[0389], [0394]-[0397]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 5FF<br>Koch, Figs. 5Z, 5FF, 5HH, 5NN.<br>Additional exemplary citations include:<br>Koch, ¶[0154]-[0170] (describing exemplary embodiments wherein "[i]n conjunction" with "touch screen 112," and "text input module 134," applications are used to implement functionalities including telephone, contacts, videoconferencing, e-mail, instant messaging, SMS, "captur[ing] still images or video," "brows[ing] the Internet," calendars, various "mini-applications," "search module 151 [that] includes executable instructions to search for text, music, sound, image, video, and/or other files in memory," music playback, notes, maps, etc.).<br>"What is claimed is: 1. An electronic device, comprising: a display; a touch-sensitive surface; … and one or more programs … the one or more programs including instructions for: concurrently displaying a first text entry area and an unsplit keyboard on the display; detecting a gesture on the touch-sensitive surface; and, in response to detecting the gesture on the touch-sensitive surface, replacing the unsplit keyboard with an integrated input area, the integrated input area including: a left portion with a left side of a split keyboard; a right portion with a right side of the split keyboard; and a center portion in between the left portion and the right portion." Koch, Claim 1.<br>"The device of claim 1, wherein the display is a touch-sensitive display that includes the touch-sensitive surface." Koch, Claim 6. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[1C]** wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard; and | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard."<br><br>For example, as discussed and illustrated above in [1B], Koch's "first application" (including UI 5000A) appears in a "first zone" (e.g., upper portion) of the touchscreen of Figure 5A, while Koch's keyboard (5008) appears in a "second zone" (e.g., bottom portion) of the touchscreen. *See* Koch, ¶[0232]-[0234].<br><br>  <br>Koch, Fig. 5A. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[1D]** wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone, and | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br><br>For example, Koch discloses "gestures that, if detected, activate splitting of unsplit soft keyboard 5008 in response." Koch, ¶[0233], Fig. 5A (below-left). Specifically, "[g]esture 5010 is a two-finger de-pinch gesture performed on unsplit soft keyboard 5008" and "gesture 5014 is a tap gesture on keyboard split key 5012." *Id.*<br><br>  <br>Koch, Figs. 5A, 5C.<br><br>In response to detection of either gesture, "device 100 changes unsplit soft keyboard 5008 (FIG. 5A) into integrated input area 5016 (FIG. 5C)," which includes "center area 5016-C between split keyboard portions 5016-A and 5016-B," as illustrated above-right. As illustrated, the split |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | keyboard is a "reduced interface" as claimed. Further, as illustrated, the center area and split keyboard are displayed on at least a portion of the second zone.<br><br>Further, the center area 5016-C is an interface for an application that performs several application functions. For example, the interface may display (1) an application with "text editing controls (e.g., icons, or graphical or user interface objects for selecting, cutting, copying, and/or pasting text)" (illustrated in FIG. 5Z-5AA); (2) handwriting recognition application (FIGS. 5FF-5GG); (3) drawing application (FIG. 5HH-5II); and (4) Unicode character application (FIG. 5NN-5OO). Koch, ¶[0261]-[0262], [0266]-[0267], [0272]-[0274], [0380]-[0381], [0387]-[0389], [0394]-[0397].<br><br>  <br><br><br>Koch, Figs. 5Z, 5FF, 5HH, 5NN.<br><br>"In some embodiments, the device displays (1122) text editing controls (e.g., icons, or graphical user interface objects for selecting, cutting, copying, and/or pasting text) in the center portion of the integrated input area. In some embodiments, the text editing controls in the center portion of the integrated input area have corresponding text editing controls in the first text entry area (1124). For example, the text editing controls in the center portion may be duplicates of text editing controls in the first text entry area. For example, in FIG. 5Z, text editing control 5104, corresponding to text editing control 5106, is displayed in text entry area 5002. In some embodiments, the device detects (1126) a gesture on the touch-sensitive surface at a location that corresponds to a text editing control in the center portion of the integrated input area, and executes (1128) a text editing |

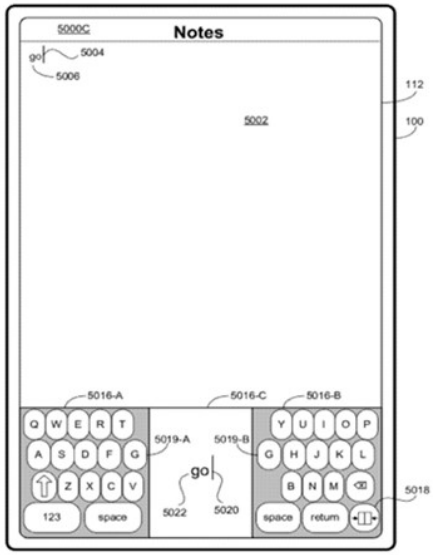
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | command in accordance with the gesture on the touch-sensitive surface at the location that corresponds to the text editing control. Editing the text via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an edit function is needed. For example, in FIG. 5Z-5AA, text editing control 5106 corresponding to a paste operation is displayed in center area 5016-C. Gesture 5108 on text editing control 5106 is detected in center area 516-C. In response to detection of gesture 5108, a paste operation is executed; text "ahead" is pasted into duplicate text 5022 and input text 5006." Koch, ¶[0380]-[0381]; FIGS. 5Z-5AA; *see also* Koch, ¶[0261]-[0262] (describing use of editing control application illustrated in FIGS. 5Z-5AA).<br><br>"In some embodiments, the device detects (1140) a plurality of gestures on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a series of finger strokes and taps that correspond to Chinese, Japanese, Korean, or other characters), and enters (1142) in the first text entry area and the second text entry area a character that corresponds to the plurality of gestures. Exemplary characters include alphabetic characters, numeric characters, symbols, punctuation characters, Arabic script characters, Cyrillic characters, Greek characters, emoji symbols, emoticon symbols, Asian characters such as sinographs, Japanese Kanji, katakana, or hiragana, etc., Devanagari characters, Perso-Arabic characters, Gurmukhi characters, and Hebrew characters. Drawing characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their finger only a small distance from where they are typing. For example, in FIGS. 5FF-5GG, one or more gestures 5128 corresponding to handwriting 5126 are detected in center area 5016-C. Character "Figure US20120113023A1-20120510-P00001" corresponding to handwriting 5126 is entered into input text 5006 and duplicate input text 5022." Koch, ¶[0386]-[0387]; FIGS. 5FF-5GG; *see also* Koch, ¶[0266] (describing use of handwriting application illustrated in FIGS. 5FF-5GG).<br><br>"In some embodiments, the device detects (1144) a plurality of gestures on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a series of finger strokes and taps that correspond to a simple drawing), and makes (1146) a drawing in accordance with the plurality of gestures. Drawing via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their finger only a small distance from where they are typing. For example, in FIGS. 5HH-5II, one or more gestures 5132 |

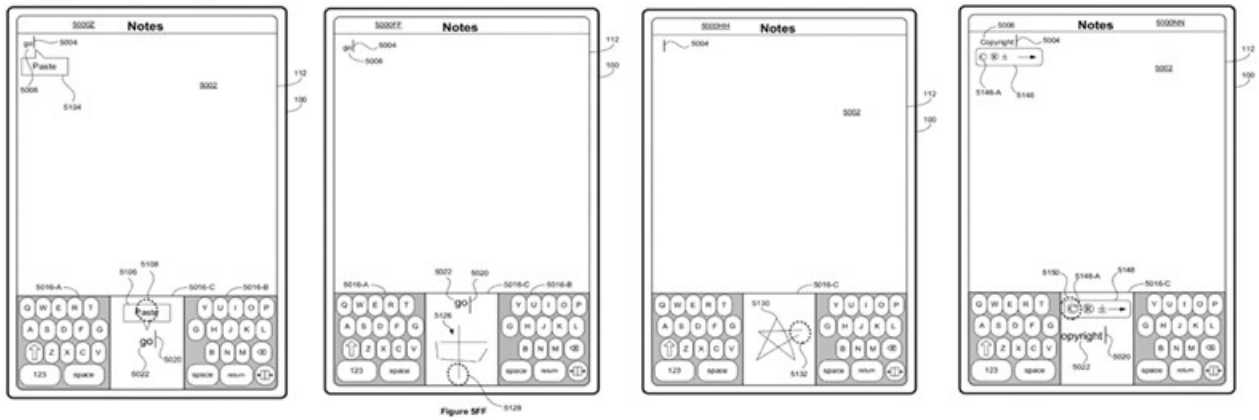
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| | corresponding to drawing 5130 are detected in center area 5016-C. Drawing 5133, corresponding to drawing 5130 is entered into input text 5006." Koch, ¶[0388]-[0389]; FIGS. 5HH-5II; *see also* Koch, ¶[0267] (describing use of drawing application illustrated in FIGS. 5HH-5II).<br><br>"In some embodiments, the device displays (1160) a plurality of unicode characters in the center portion of the integrated input area, detects (1162) a gesture on the touch-sensitive surface at a location that corresponds to a unicode character in the plurality of unicode characters (e.g., a tap gesture on the unicode character), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the unicode character, inputs and displays (1164) the unicode character in the first text entry area and the second text entry area on the display. Entering unicode characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time a unicode character is needed. For example, in FIGS. 5NN-5OO, unicode characters 5146, including unicode character 5146-A, are displayed in text entry area 5002. Duplicate unicode characters 5148 are displayed in center area 5016-C. Duplicate unicode character 5148-A is a duplicate of unicode character 5146-A. Gesture 5149 is detected on duplicate unicode character 5148-A. In response to detection of gesture 5149, unicode character 5146-A is entered into input text 5006 and displayed, and duplicate unicode character 5148-A is entered into duplicate input text 5022 and displayed." Koch, ¶[0394]-[0395]; FIGS. 5NN-5OO; *see also* Koch, ¶[0272]-[0273] (describing use of Unicode character application illustrated in FIGS. 5NN-5OO).<br><br>Additional exemplary citations include:<br><br>"For example, in FIG. 5V, text entry area 5002 and integrated input area 5016 are displayed on display 112. Integrated input area 5016 includes left split keyboard portion 5016-A, right split keyboard portion 5016-B, and center area 5016-C between left and right portions 5016-A and 5016-B. Center area 5016-C serves as a second text entry area, as duplicate cursor 5020 and duplicate input text 5022 are displayed in center area 5016-C. …. In FIG. 5W, in response to detection of gesture 5102 on 'T' key 5024, a character 't' is entered into input text 5006 and concurrently displayed. A character 't' is also entered into duplicate input text 5022 and concurrently displayed in center area 5016-C. Having a second text entry area in the center portion of the integrated input area that shows a portion of the text being entered in the first text entry area makes text input faster, |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | more efficient, and less stressful by reducing the amount of eye movement when a user is thumb typing with the split keyboard. ….” Koch, ¶[0370]-[0374], FIGS. 5V-5W; *see also* Koch, ¶[0259].<br><br>Koch, ¶[0377]-[0379] (describing “in FIG. 5X-5Y, duplicate cursor 5020 is stationary within center area 5016-C; when the position of duplicate 5020 relative to duplicate input text 5022 changes, duplicate input text 5022 is displayed as advancing or retreating relative to duplicate cursor 5020.”); FIG. 5X-5Y; *see also* Koch, ¶[0260].<br><br>Koch, ¶[0382]-[0383] (“In some embodiments, the device displays (1130) user-selectable input elements (e.g., radio buttons, check boxes, pick lists, time pickers, and/or date pickers) in the center portion of the integrated input area, detects (1132) a gesture on the touch-sensitive surface at a location that corresponds to a user-selectable input element in the center portion of the integrated input area, and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the user-selectable input element, selects (1134) the user-selectable input element. ….”); FIGS. 5BB-5CC; *see also* Koch, ¶[0263]-[0264].<br><br>Koch, ¶[0384]-[0385] (“In some embodiments, the device detects (1136) a gesture on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a tap gesture on an icon to activate a popup menu or a predefined multifinger gesture within the center portion), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the center portion of the integrated input area, displays (1138) a popup view. ….”); FIGS. 5DD-5EE; *see also* Koch, ¶[0265].<br><br>Koch, ¶[0390]-[0391] (“In some embodiments, the device displays (1148) a suggested word in the center portion of the integrated input area (e.g., a word automatically suggested to complete or correct a series of characters displayed in the first text entry area and the second text entry area), detects (1150) a gesture on the touch-sensitive surface at a location that corresponds to the suggested word, and executes (1152) a text editing command in accordance with the gesture on the touch-sensitive surface at the location that corresponds to the suggested word. ….”); FIGS. 5JJ-5KK; *see also* Koch, ¶[0268]-[0269].<br><br>“In some embodiments, the device displays (1154) a plurality of emoji characters in the center portion of the integrated input area, detects (1156) a gesture on the touch-sensitive surface at a location that corresponds to an emoji character in the plurality of emoji characters (e.g., a tap |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | gesture on the emoji character), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the emoji character, inputs and displays (1158) the emoji character in the first text entry area and the second text entry area on the display. Entering emoji characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an emoji character is needed. For example, in FIGS. 5LL-5MM, emoji characters 5140, including emoji character 5140-A, are displayed in text entry area 5002. Duplicate emoji characters 5142 are displayed in center area 5016-C. Duplicate emoji character 5142-A is a duplicate of emoji character 5140-A. Gesture 5144 is detected on duplicate emoji character 5142-A. In response to detection of gesture 5144, emoji character 5140-A is entered into input text 5006 and displayed, and duplicate emoji character 5142-A is entered into duplicate input text 5022 and displayed." Koch, ¶[0392]-[0393]; FIGS. 5LL-5MM; *see also* Koch, ¶[0270]-[0271].<br><br>Koch, ¶[0396]-[0397] ("In some embodiments, the device detects (1166) a gesture on the touch-sensitive surface at a location that corresponds to the second text entry area (e.g., a tap and drag gesture over text in the second text entry area), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the second text entry area, selects (1168) a range of text. …."); FIGS. 5PP-5QQ; *see also* Koch, ¶[0274]-[0275].<br><br>Koch, ¶[0398]-[0399] ("In some embodiments, the device detects (1170) a gesture on the touch-sensitive surface at a location that corresponds to one or more words in the second text entry area (e.g., a swipe or double-tap gesture on a word in the second text entry area), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the second text entry area, formats (1172) the one or more words. …."); FIGS. 5RR-5SS; *see also* Koch, ¶[0276]-[0277].<br><br>Koch, ¶[0400] (describing "input elements in the center portion of the integrated input area [being] user-configurable" and "The various features described above with respect to the center portion (e.g., character handwriting, drawing, selecting user selectable elements, text editing operations, etc.) may be selectively enabled by a user."); FIG. 5TT; *see also* Koch, ¶[0278].<br><br>"What is claimed is: 1. An electronic device, comprising: a display; a touch-sensitive surface; … and one or more programs … the one or more programs including instructions for: concurrently |

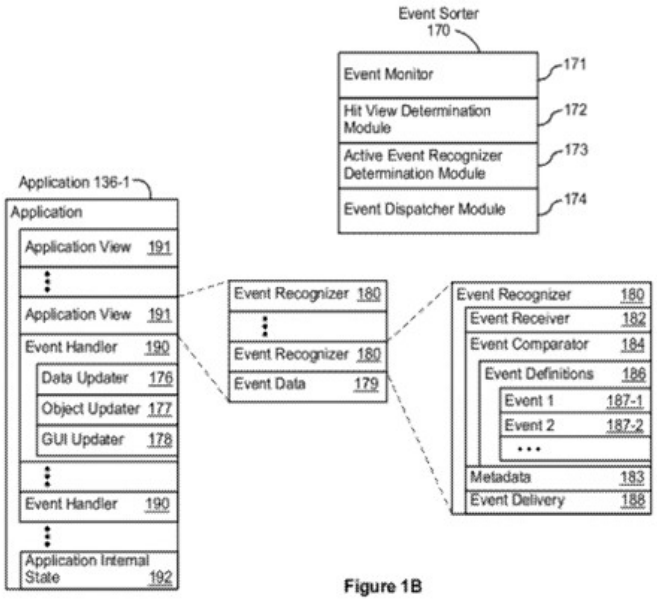
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| | displaying a first text entry area and an unsplit keyboard on the display; detecting a gesture on the touch-sensitive surface; and, in response to detecting the gesture on the touch-sensitive surface, replacing the unsplit keyboard with an integrated input area, the integrated input area including: a left portion with a left side of a split keyboard; a right portion with a right side of the split keyboard; and a center portion in between the left portion and the right portion." Koch, Claim 1.<br><br>"2. The device of claim 1, wherein the integrated input area includes a second text entry area." Koch, Claim 2.<br><br>"3. The device of claim 2, wherein: the first text entry area displays text at a first size; and the second text entry area displays a portion of the text in the first text entry area at a second size that is larger than the first size." Koch, Claim 3.<br><br>"4. The device of claim 2, including instructions for: while displaying the integrated input area, detecting a gesture at a location on the touch-sensitive surface that corresponds to a location of a character key in the split keyboard; and, in response to detecting the gesture at the location on the touch-sensitive surface that corresponds to the location of the character key in the split keyboard, inputting and concurrently displaying the corresponding character in the first text entry area and the second text entry area on the display." Koch, Claim 4. |
| **[1E]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen. | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen."<br><br>For example, Koch illustrates all of the "interface of said first application" (e.g., the exemplary Notes application), the "interface of said second application" (e.g., the center-area input application), and "the reduced interface corresponding to said keyboard" (e.g., the split keyboard) being "simultaneously displayed on said touchscreen," as illustrated in FIGS. 5A and 5C, below. |

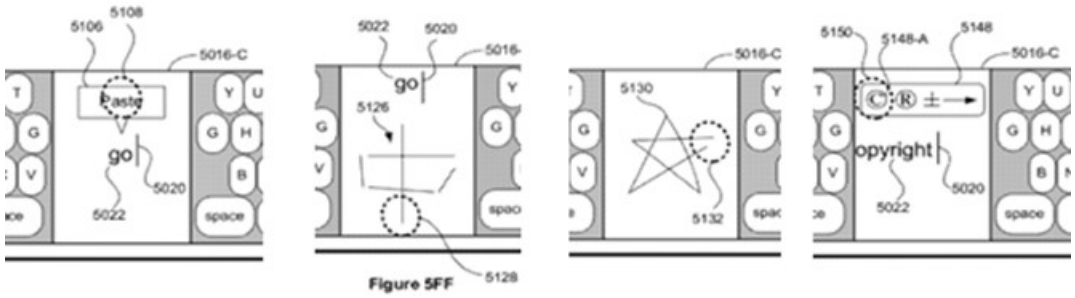
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| |  <br>Koch, Fig. 5C.<br>Koch further illustrates all of the "interface of said first application" (e.g., the exemplary Notes application), the "interface of said second application" (e.g., the center-area input application), and "the reduced interface corresponding to said keyboard" (e.g., the split keyboard) being "simultaneously displayed on said touchscreen," as illustrated in FIGS. 5Z, 5FF, 5HH, and 5NN, below. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Koch, Figs. 5Z, 5FF, 5HH, 5NN.<br>Additional examples of Koch illustrating all of the "interface of said first application" (e.g., the exemplary Notes application), the "interface of said second application" (e.g., the center-area input application), and "the reduced interface corresponding to said keyboard" (e.g., the split keyboard) being "simultaneously displayed on said touchscreen," appear in each of FIGS. 5V-5Y, 5BB-5EE, 5JJ-5MM, and 5PP-5TT. In addition to those figures, Samsung incorporates the discussion of those figures, as presented above in [1D]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[2]** The system of claim 1, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 2 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 2 are anticipated and/or obvious for the same reasons set out in claim 1. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>For example, in Koch, "[i]n some embodiments, event sorter 170 also includes a hit view determination module 172 and/or an active event recognizer determination module 173. Hit view determination module 172 provides software procedures for determining where a sub-event has taken place within one or more views, when touch sensitive display 112 displays more than one view. Views are made up of controls and other elements that a user can see on the display." Koch, ¶[0179]-[0180].<br><br>Koch further describes how its device processes and responds to an interaction with an interface, including an interaction with an interface of an application, causing the focus of the system to be given to the interacted application. *See* Koch [0181]-[0197]; Fig. 1B. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 1B<br><br>Koch, Fig. 1B.<br><br>Koch further describes various interactions with the interface of the second application (which is "any of said applications") cause the focus of the system to be given to the second application. For example, Koch illustrates "gesture 5108," "finger strokes 5128," "finger strokes 5132," and "[g]esture 5150" as interactions with the second application interface below. Koch, ¶[0261]-[0262], [0266]-[0267], [0272]-[0274], [0380]-[0381], [0387]-[0389], [0394]-[0397]. In each instance, the interactions are recognized by the system and cause certain operations to be performed, as discussed above in [1D]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 5FF<br>Koch, Figs. 5Z, 5FF, 5HH, 5NN.<br>A POSITA would recognize that a user would interact with an interface of an application (e.g., by touching a portion of the touch screen corresponding to the first application's GUI) in order to cause an action within or response by the application. A POSITA would further understand that such an interaction causes the focus of the system (e.g., the focus of the input method) to be given to the first application. Thus, Koch provides "wherein upon interacting with the interface of any of said applications," e.g., including the first application, "the focus of the system is given to the interacted application."<br>Additional exemplary disclosures of Koch:<br>"In some embodiments, the device detects (1126) a gesture on the touch-sensitive surface at a location that corresponds to a text editing control in the center portion of the integrated input area, and executes (1128) a text editing command in accordance with the gesture on the touch-sensitive surface at the location that corresponds to the text editing control. Editing the text via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an edit function is needed. For example, in FIG. 5Z-5AA, text editing control 5106 corresponding to a paste operation is displayed in center area 5016-C. Gesture 5108 on text editing control 5106 is detected in center area 516-C. In response to detection of gesture 5108, a paste operation is executed; text 'ahead' is pasted into duplicate text 5022 and input text 5006." Koch, ¶[0380]-[0381]; FIGS. 5Z-5AA; *see* |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | *also* Koch, ¶[0261]-[0262] (describing use of editing control application illustrated in FIGS. 5Z-5AA).<br><br>"In some embodiments, the device detects (1140) a plurality of gestures on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a series of finger strokes and taps that correspond to Chinese, Japanese, Korean, or other characters), and enters (1142) in the first text entry area and the second text entry area a character that corresponds to the plurality of gestures. Exemplary characters include alphabetic characters, numeric characters, symbols, punctuation characters, Arabic script characters, Cyrillic characters, Greek characters, emoji symbols, emoticon symbols, Asian characters such as sinographs, Japanese Kanji, katakana, or hiragana, etc., Devanagari characters, Perso-Arabic characters, Gurmukhi characters, and Hebrew characters. Drawing characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their finger only a small distance from where they are typing. For example, in FIGS. 5FF-5GG, one or more gestures 5128 corresponding to handwriting 5126 are detected in center area 5016-C. Character "Figure US20120113023A1-20120510-P00001" corresponding to handwriting 5126 is entered into input text 5006 and duplicate input text 5022." Koch, ¶[0386]-[0387]; FIGS. 5FF-5GG; *see also* Koch, ¶[0266] (describing use of handwriting application illustrated in FIGS. 5FF-5GG).<br><br>"In some embodiments, the device detects (1144) a plurality of gestures on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a series of finger strokes and taps that correspond to a simple drawing), and makes (1146) a drawing in accordance with the plurality of gestures. Drawing via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their finger only a small distance from where they are typing. For example, in FIGS. 5HH-5II, one or more gestures 5132 corresponding to drawing 5130 are detected in center area 5016-C. Drawing 5133, corresponding to drawing 5130 is entered into input text 5006." Koch, ¶[0388]-[0389]; FIGS. 5HH-5II; *see also* Koch, ¶[0267] (describing use of drawing application illustrated in FIGS. 5HH-5II).<br><br>"In some embodiments, the device displays (1160) a plurality of unicode characters in the center portion of the integrated input area, detects (1162) a gesture on the touch-sensitive surface at a location that corresponds to a unicode character in the plurality of unicode characters (e.g., a tap gesture on the unicode character), and, in response to detecting the gesture on the touch-sensitive |

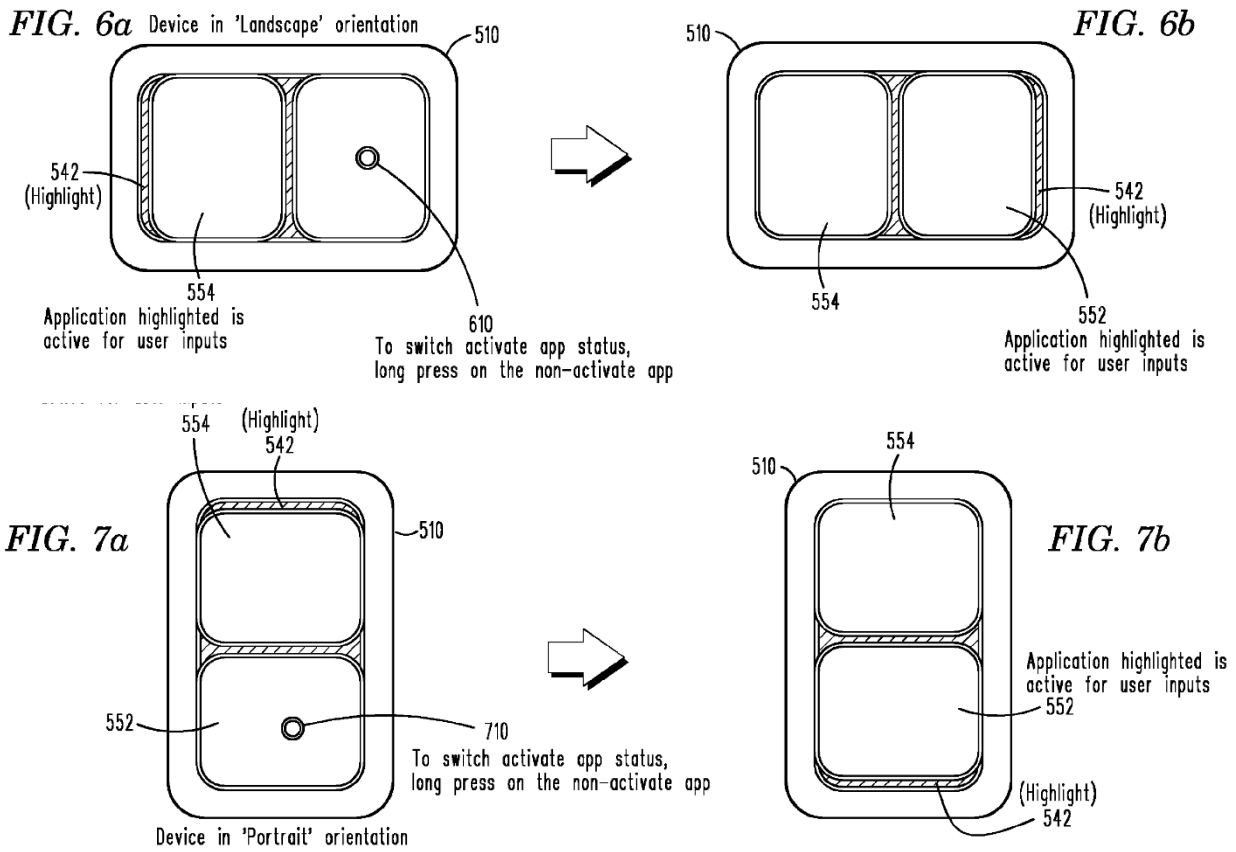
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| | surface at the location that corresponds to the unicode character, inputs and displays (1164) the unicode character in the first text entry area and the second text entry area on the display. Entering unicode characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time a unicode character is needed. For example, in FIGS. 5NN-5OO, unicode characters 5146, including unicode character 5146-A, are displayed in text entry area 5002. Duplicate unicode characters 5148 are displayed in center area 5016-C. Duplicate unicode character 5148-A is a duplicate of unicode character 5146-A. Gesture 5149 is detected on duplicate unicode character 5148-A. In response to detection of gesture 5149, unicode character 5146-A is entered into input text 5006 and displayed, and duplicate unicode character 5148-A is entered into duplicate input text 5022 and displayed." Koch, ¶[0394]-[0395]; FIGS. 5NN-5OO; *see also* Koch, ¶[0272]-[0273] (describing use of Unicode character application illustrated in FIGS. 5NN-5OO).<br><br>"For example, in FIG. 5V, text entry area 5002 and integrated input area 5016 are displayed on display 112. Integrated input area 5016 includes left split keyboard portion 5016-A, right split keyboard portion 5016-B, and center area 5016-C between left and right portions 5016-A and 5016-B. Center area 5016-C serves as a second text entry area, as duplicate cursor 5020 and duplicate input text 5022 are displayed in center area 5016-C. …. In FIG. 5W, in response to detection of gesture 5102 on 'T' key 5024, a character 't' is entered into input text 5006 and concurrently displayed. A character 't' is also entered into duplicate input text 5022 and concurrently displayed in center area 5016-C. Having a second text entry area in the center portion of the integrated input area that shows a portion of the text being entered in the first text entry area makes text input faster, more efficient, and less stressful by reducing the amount of eye movement when a user is thumb typing with the split keyboard. …." Koch, ¶[0370]-[0374], FIGS. 5V-5W; *see also* Koch, ¶[0259].<br><br>*See* Koch, ¶[0377]-[0379] (describing "in FIG. 5X-5Y, duplicate cursor 5020 is stationary within center area 5016-C; when the position of duplicate 5020 relative to duplicate input text 5022 changes, duplicate input text 5022 is displayed as advancing or retreating relative to duplicate cursor 5020."); FIG. 5X-5Y; *see also* Koch, ¶[0260].<br><br>*See* Koch, ¶[0382]-[0383] ("In some embodiments, the device displays (1130) user-selectable input elements (e.g., radio buttons, check boxes, pick lists, time pickers, and/or date pickers) in the center |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | portion of the integrated input area, detects (1132) a gesture on the touch-sensitive surface at a location that corresponds to a user-selectable input element in the center portion of the integrated input area, and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the user-selectable input element, selects (1134) the user-selectable input element. …."); FIGS. 5BB-5CC; *see also* Koch, ¶[0263]-[0264.<br><br>*See* Koch, ¶[0384]-[0385] ("In some embodiments, the device detects (1136) a gesture on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a tap gesture on an icon to activate a popup menu or a predefined multifinger gesture within the center portion), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the center portion of the integrated input area, displays (1138) a popup view. …."); FIGS. 5DD-5EE; *see also* Koch, ¶[0265].<br><br>*See* Koch, ¶[0390]-[0391] ("In some embodiments, the device displays (1148) a suggested word in the center portion of the integrated input area (e.g., a word automatically suggested to complete or correct a series of characters displayed in the first text entry area and the second text entry area), detects (1150) a gesture on the touch-sensitive surface at a location that corresponds to the suggested word, and executes (1152) a text editing command in accordance with the gesture on the touch-sensitive surface at the location that corresponds to the suggested word. …."); FIGS. 5JJ-5KK; *see also* Koch, ¶[0268]-[0269].<br><br>"In some embodiments, the device displays (1154) a plurality of emoji characters in the center portion of the integrated input area, detects (1156) a gesture on the touch-sensitive surface at a location that corresponds to an emoji character in the plurality of emoji characters (e.g., a tap gesture on the emoji character), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the emoji character, inputs and displays (1158) the emoji character in the first text entry area and the second text entry area on the display. Entering emoji characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an emoji character is needed. For example, in FIGS. 5LL-5MM, emoji characters 5140, including emoji character 5140-A, are displayed in text entry area 5002. Duplicate emoji characters 5142 are displayed in center area 5016-C. Duplicate emoji character 5142-A is a duplicate of emoji character |

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| | 5140-A. Gesture 5144 is detected on duplicate emoji character 5142-A. In response to detection of gesture 5144, emoji character 5140-A is entered into input text 5006 and displayed, and duplicate emoji character 5142-A is entered into duplicate input text 5022 and displayed." Koch, ¶[0392]-[0393]; FIGS. 5LL-5MM; *see also* Koch, ¶[0270]-[0271].<br><br>*See* Koch, ¶[0396]-[0397] ("In some embodiments, the device detects (1166) a gesture on the touch-sensitive surface at a location that corresponds to the second text entry area (e.g., a tap and drag gesture over text in the second text entry area), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the second text entry area, selects (1168) a range of text. …."); FIGS. 5PP-5QQ; *see also* Koch, ¶[0274]-[0275].<br><br>*See* Koch, ¶[0398]-[0399] ("In some embodiments, the device detects (1170) a gesture on the touch-sensitive surface at a location that corresponds to one or more words in the second text entry area (e.g., a swipe or double-tap gesture on a word in the second text entry area), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the second text entry area, formats (1172) the one or more words. …."); FIGS. 5RR-5SS; *see also* Koch, ¶[0276]-[0277].<br><br>*See* Koch, ¶[0400] (describing "input elements in the center portion of the integrated input area [being] user-configurable" and "The various features described above with respect to the center portion (e.g., character handwriting, drawing, selecting user selectable elements, text editing operations, etc.) may be selectively enabled by a user."); FIG. 5TT; *see also* Koch, ¶[0278].<br><br>To the extent Keyless argues that Koch does not disclose or render obvious "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application," it would have been obvious in view of Koch, POSITA's pre-existing knowledge, and/or the teachings of Koch combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000, and Lavallee discloses wherein upon interacting with the interface of any of several applications, the focus of the system is given to the interacted application.<br><br>For example, Sirpal-486 describes a "multi-screen user device and a universal clipboard application" with an "intuitive user interface" for copying information from one application on a screen of the device to be pasted into another application on another screen. Sirpal-486, Abstract. Sirpal-486 notes that a "substantial number of handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, ¶[0002]. *Sirpal* explains that the "small form factor of handheld computing devices requires a careful balancing act between the displayed graphics and the area provided for receiving inputs." Sirpal-486, ¶[0003].<br><br>Additional information about Sirpal-486's system for switching focus between applications appears in Sirpal-000, which Sirpal-486 incorporates by reference. For example, Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147.<br><br>  <br><br><br>Sirpal-000 at 147. |

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| | According to Sirpal-000, as illustrated above, "[i]n this model, the user has the device open to display dual screens. On each screen is displayed an application. The keyboard spans across both screens. As shown by the highlight around the entry field in the compose view on the left and the colored title bar, the user has placed focus in the composer on the left. Therefore typing on the keyboard will input in the field on the left. The user can tap the right screen to move the focus to that screen. If the user taps a field, that field will get the focus and the title bar will change to orange. The right screen will compress and the action bar will appear. The focus state and title in the left will return to the off state; however, the action bar will remain. This allows the user to tap back and forth to enter text in both screens in a seamless fashion." Sirpal-000 at 147.<br><br>As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." (Lavallee at Abstract.) Lavallee states that "FIGS. 6a-6b and 7a-7b illustrate switching the active running application, in accordance with various aspects of the present disclosure," as illustrated below. Lavallee, ¶[0010]. |

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| |  <br>"Referring now to FIGS. 6 a-b and 7 a-b, it can be seen that the active application displayed in the split screen mode can be changed or switched. The active application refers to the application of the maximized, running applications displayed in the split screen mode that is capable of accepting inputs, such as from a user providing inputs via the touch screen 520 of the device 510 or via peripherals, such as a keyboard, mouse, etc., that may be coupled to device 510. Once the two or more running applications are open and simultaneously displayed, one application is designated as |

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| | active to accept user inputs. Selection of one of the other running, inactive applications, such as by a long press inside the inactive application, will activate that application and cause it to be the active application. In FIG. 6 a, mobile device 510 is shown in landscape orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in portrait orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 610 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 6 b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed. Thus, switching active control of the two or more running applications from a previous running application as the active application to a new running application as the active application can be accomplished. It has been shown that this switching active control may be accomplished by selecting the new running application to be active via the touch screen. Moreover, the previous running application can be the active application that was designated as active upon creating the combined group representation. In the example of FIGS. 5 a-5 d, application 554 was the initial active application so designated upon forming the combined group icon 530." Lavallee, ¶[0051].<br><br>"In FIG. 7 a, mobile device 510 is shown in portrait orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in landscape orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 710 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 7 b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed." Lavallee, ¶[0052].<br><br>Lavallee discloses several use cases for its application-switching system, in which the focus is switched between applications by interacting with their respective interface(s). For example, "FIGS. 10 and 11, illustrate representative examples of running applications that have been maximized and displayed in their respective split screen mode viewing areas in the split screen |

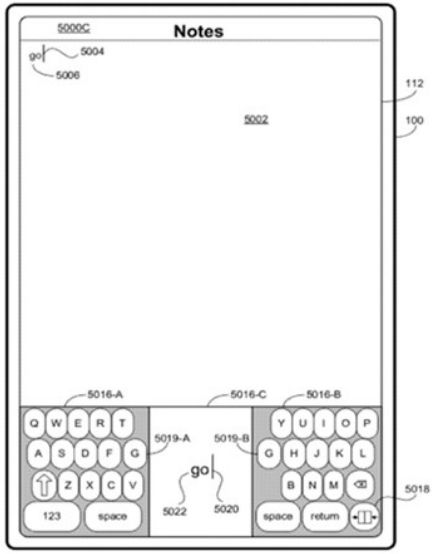
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | mode after the combined group representation in which they are represented has been selected. In FIG. 10, a user of an electronic device with a touch screen is composing an email. Two maximized and displayed running applications are shown: an email application in the left split screen mode viewing area and a web browser application in the right split screen mode viewing area. The split screen mode is used to get content for their email using the web browser. In FIG. 11, a user is playing a video game. Two maximized and displayed running applications are shown: a video game application in the left split screen mode viewing area and a strategy guide application in the right split screen mode viewing area. The split screen mode is used to read the strategy guide for the game while the user is actually playing the video game displayed in the left split screen mode viewing area." Lavallee, ¶[0057].<br><br>As another example, Lavallee describes "various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059]; *see also* Lavallee, ¶[0060]-[0065] *and* Figs. 12a-15d. For example, Lavallee describes "an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area," such that a user "is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body." Lavallee, ¶[0060]. "Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060]. "It is noted that in the "copy and paste" function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage." Lavallee, ¶[0062].<br><br>By way of further examples, Lavallee discloses: |

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| | • "an 'insert' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application" Lavallee, ¶[0061], Figs. 13a-13d;<br>• "an 'attach file' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments," suitable for applications that "include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc." Lavallee, ¶[0061], Figs. 14a-14d;<br>• "an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application." Lavallee, ¶[0061], Figs. 15a-15d.<br>Additional exemplary disclosures of Lavallee include:<br>• "Optionally, active control of the displayed running applications in the split screen mode may be switched at Block 1750 if desired. While the application on top of the combined group representation stack may initially be active and highlighted to signify its status as the active application, this active control can be changed at any time desired, by the user selecting another application of the displayed applications to be active." Lavallee, ¶[0069].<br>• "8. The method of claim 1, wherein one running application is active and capable of receiving user inputs via the touch screen, the method further comprising: switching active control of the two or more running applications from a previous running application as active application to another running application of the two or more running applications as the active application." Lavallee at claim 8. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | • "23. The device of claim 18, wherein one running application is active and capable of receiving user inputs via the touch screen and the processor and the memory are further configured to switch active control of the two or more running applications from a previous running application as the active application to another running application of the two or more running applications as the active application." Lavallee at claim 23.<br><br>A POSITA would have found it obvious to incorporate "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application," as claimed. Each of Sirpal-486 (including through incorporation of Sirpal-000), Sirpal-000, and Lavallee discloses wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Koch, as an obvious and intuitive way to allocate system resources and/or direct keyboard inputs to any of the first and second applications of Koch. One obvious combination of would yield a system in which the user could select (by a touch interaction) which of the first application or second application (e.g., center area input application) the user wants to receive the focus of the system. Interacting with the first application interface would direct system to focus the system's touch interface on the first application—meaning that touch inputs would be registered by the first application so the first application can process those inputs accordingly. The same would be true of interacting with the second application interface. The resulting system would ensure that the focus of the input system(s) is/are properly directed to an interacted application. If a user has touched a text entry area (e.g., 5002, in Koch Fig. 5C) in the first application (notes application), the system would understand to direct the focus of the keyboard toward entering text into that first application (so text may be typed into the text entry box). Whereas if the user has touched the center area input application interface, e.g., to make a drawing or perform any of the interactions described in [1D], then the system would understand to direct focus to the center area application to recognize the user's interactions with that application. A POSITA would have been motivated to make the modification for this additional reason.<br><br>Moreover, a POSITA would recognize the focus-switching features to be an advantageous and important (and perhaps even necessary) way to achieve the multi-application/multi-mode functionalities described in Koch. Interacting with one of several active applications to direct system focus to the interacted application was routine and conventional to a POSITA, as shown by |

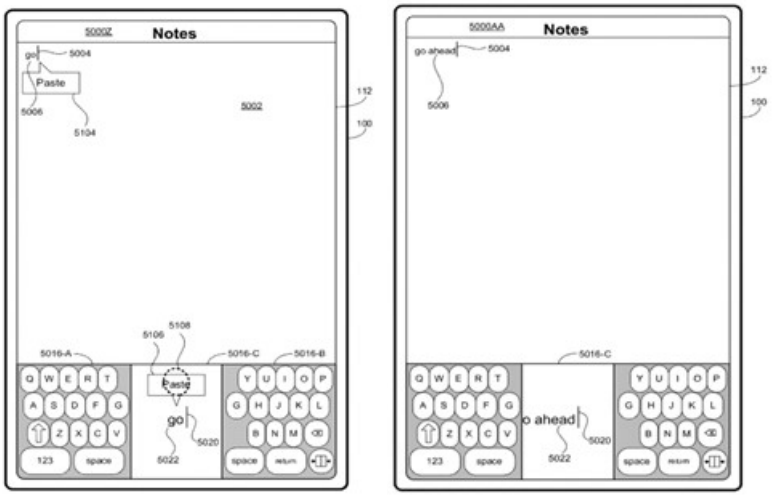
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-000 and Lavallee. Incorporating the feature into Koch's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Koch, represent nothing more than combining prior art elements according to known methods and techniques (allocating system resources to interacted application(s)) to a mobile electronic touch screen device to yield predictable results (directing system resources to an active/interacted application). |

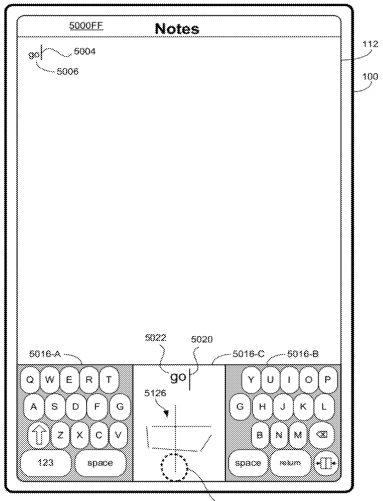
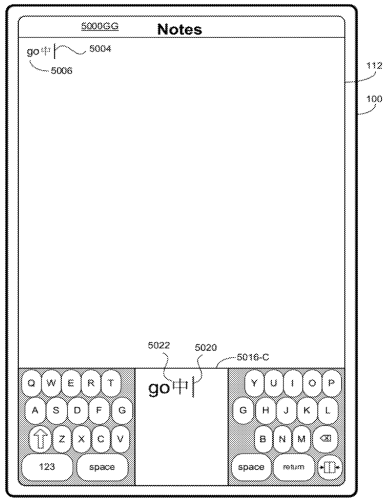
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[3]** The system of claim 1, wherein said keyboard is used with both of said applications. | Claim 3 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 3 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said keyboard is used with both of said applications."<br><br>For example, as discussed in [1B], the keyboard is used with the first application. In one embodiment, for example, Koch discloses a first application with "user interface (UI) 5000A," which "may be a user interface in an application (e.g., a notes application, a web browser application, etc.) on device 100" and "includes text entry area 5002." Koch, ¶[0231]. Koch further provides an "[u]nsplit soft keyboard 5008 … displayed on display 112." Koch, ¶[0232]. Koch's keyboard 5008 is an on-screen keyboard for entering text in the first application running within the device, as implemented via a "text input module 134." As Koch explains, "text input module 134" |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, browser 147, and any other application that needs text input)." Koch, ¶[0133]. Similarly, "center area 5016-C displays … duplicate input text 5022." Koch, ¶[0236]. A POSITA would understand that the text in each application is entered via the keyboard (or reduced keyboard) and the keyboard is used with both applications.<br>  <br><br>Koch, Fig. 5C.<br>Samsung incorporates [1D], *supra*, discussing gestures on the keyboard that are used to activate the center area application and, thus, are used with the center area application. Additionally, in Koch, a "keyboard unsplit key 5018" is used to un-split the keyboard and hide the second application. Koch, ¶[0238].<br>Additional exemplary citations include:<br>Koch, ¶[0154]-[0170] (describing exemplary embodiments wherein "[i]n conjunction" with "touch screen 112," applications are used to implement functionalities including telephone, contacts, videoconferencing, e-mail, instant messaging, SMS, "captur[ing] still images or video," |

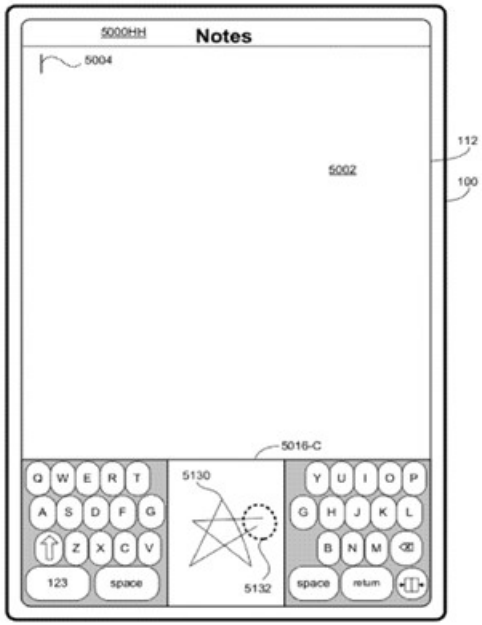
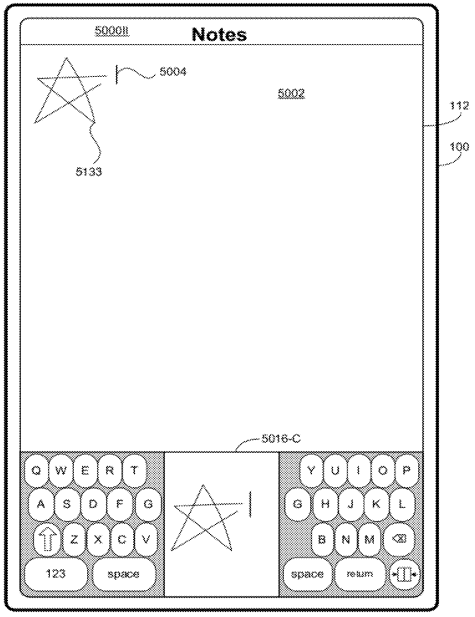
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "brows[ing] the Internet," calendars, various "mini-applications," "search module 151 [that] includes executable instructions to search for text, music, sound, image, video, and/or other files in memory," music playback, notes, maps, etc.). |

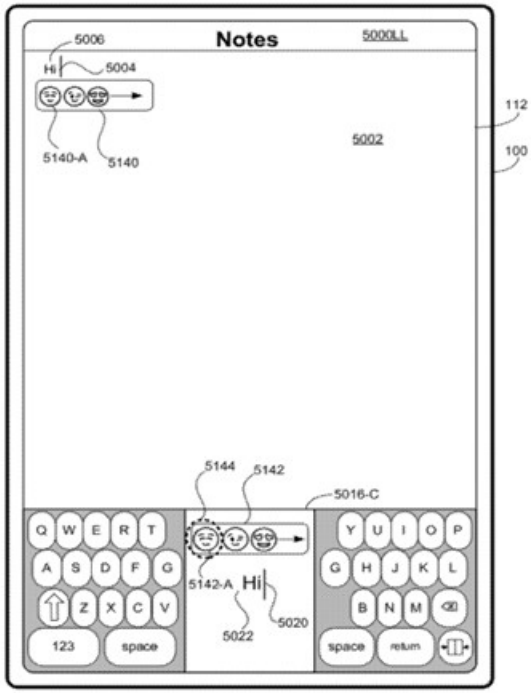
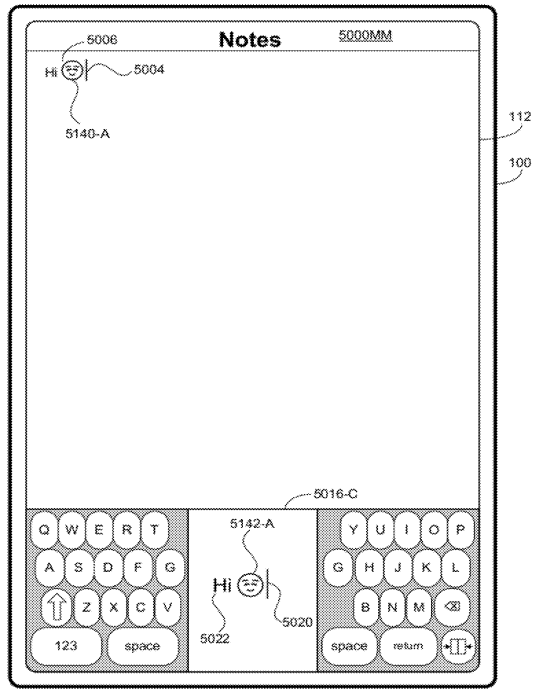
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[4]** The system of claim 1, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen. | Claim 4 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 4 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen."<br><br>For example, Koch discloses sharing information received from a second application with a first application while the interface of both applications are simultaneously displayed on the touchscreen. For example, illustrated in FIG. 5Z-5AA (below), an editing command received as input into the center area application is shared with the Notes application while both interfaces are displayed. Koch, ¶[0261]-[0262] ("In response to detection of gesture 5108 on duplicate editing control object 5106, the text pasting operation corresponding to editing control object 5104 is activated in UI 5000AA, as shown in FIG. 5AA. Text 'ahead' is pasted into input text 5006. The text pasting is mirrored in center area 5016-C, as duplicate text 5022 is updated to also include the pasted text 'ahead.'"). |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 5Z Figure 5AA<br>Koch, Figs. 5Z-5AA.<br>"For example, in FIG. 5Z, text editing control 5104, corresponding to text editing control 5106, is displayed in text entry area 5002. In some embodiments, the device detects (1126) a gesture on the touch-sensitive surface at a location that corresponds to a text editing control in the center portion of the integrated input area, and executes (1128) a text editing command in accordance with the gesture on the touch-sensitive surface at the location that corresponds to the text editing control. Editing the text via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an edit function is needed. For example, in FIG. 5Z-5AA, text editing control 5106 corresponding to a paste operation is displayed in center area 5016-C. Gesture 5108 on text editing control 5106 is detected in center area 516-C. In response to detection of gesture 5108, a paste operation is executed; text "ahead" is pasted into duplicate text 5022 and input text 5006." Koch, ¶[0380]-[0381]. |

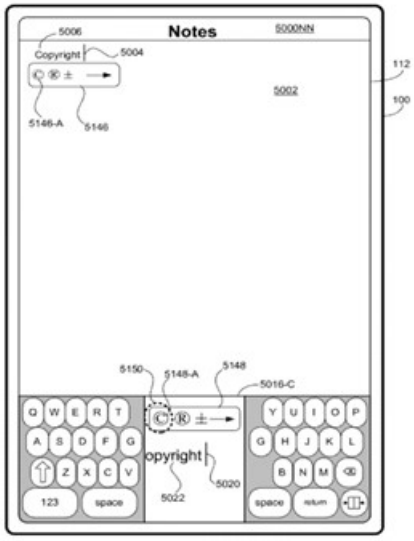
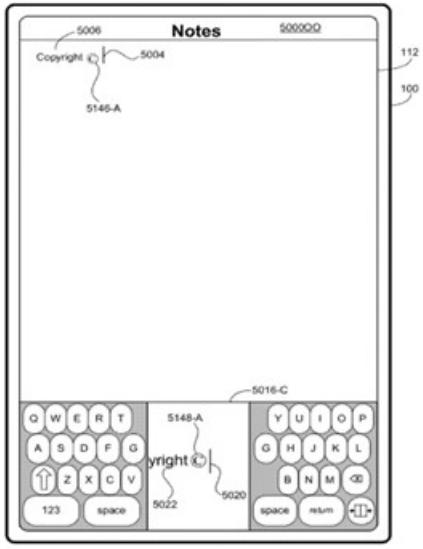
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As another example, illustrated in FIG. 5FF-5GG (below), handwriting received as input into the center area application is shared (as an output character) with the Notes application while both interfaces are displayed. Koch, ¶[0266] ("FIG. 5FF depicts UI 5000FF. UI 5000FF includes handwriting 5126 made using one or more finger strokes 5128 made within center area 5016-C. Handwriting 5126 is recognized to resemble a Chinese character, and one or more candidate characters (not shown) may be displayed in center area 5016-C. In response to selection of a candidate character, the selected candidate character is entered into input text 5006 in UI 5000GG, as shown in FIG. 5GG. In UI 5000GG, the character '中' is entered into input text 5006. In some embodiments, duplicate input text 5022 also shows the character '中' being entered.").   Figure 5FF   Figure 5GG Koch, Figs. 5FF-5GG. "In some embodiments, the device detects (1140) a plurality of gestures on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a series of finger strokes and taps that correspond to Chinese, Japanese, Korean, or other characters), and enters (1142) in the first text entry area and the second text entry area a character that corresponds |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | to the plurality of gestures. Exemplary characters include alphabetic characters, numeric characters, symbols, punctuation characters, Arabic script characters, Cyrillic characters, Greek characters, emoji symbols, emoticon symbols, Asian characters such as sinographs, Japanese Kanji, katakana, or hiragana, etc., Devanagari characters, Perso-Arabic characters, Gurmukhi characters, and Hebrew characters. Drawing characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their finger only a small distance from where they are typing. For example, in FIGS. 5FF-5GG, one or more gestures 5128 corresponding to handwriting 5126 are detected in center area 5016-C. Character '卄' corresponding to handwriting 5126 is entered into input text 5006 and duplicate input text 5022." Koch, ¶[0386]-[0387].<br><br>As another example, illustrated in FIG. 5HH-5II (below), a drawing image received as input into the center area application is shared with the Notes application while both interfaces are displayed. Koch, ¶[0267] ("FIG. 5HH depicts UI 5000HH. UI 5000HH includes cursor 5004 in text entry area 5002 and drawing 5130, made using one or more finger strokes 5132, in center area 5016-C. After completion of drawing 5130, drawing 5133 corresponding to drawing 5130 is entered into text entry area 5002 in UI 5000II, as shown in FIG. 5II."). |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 5HH<br>  <br>Figure 5II<br>Koch, Figs. 5HH-5II.<br>"In some embodiments, the device detects (1144) a plurality of gestures on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a series of finger strokes and taps that correspond to a simple drawing), and makes (1146) a drawing in accordance with the plurality of gestures. Drawing via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their finger only a small distance from where they are typing. For example, in FIGS. 5HH-5II, one or more gestures 5132 corresponding to drawing 5130 are detected in center area 5016-C. Drawing 5133, corresponding to drawing 5130 is entered into input text 5006." Koch, ¶[0388]-[0389].<br>As another example, illustrated in FIG. 5LL-5MM (below), an emoticon character received as input into the center area application is shared with the Notes application while both interfaces are |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | displayed. "FIG. 5LL depicts UI 5000LL. UI 5000LL includes input text 5006 and cursor 5004 displayed in text entry area 5002. One or more emoticons 5140 available for entry into input text 5006 are displayed. Duplicate emoticons 5142, corresponding to emoticons 5140, are displayed in center area 5016-C near duplicate input text 5022. Gesture 5144 (e.g., a tap gesture) is detected on duplicate emoticon 5142-A, which corresponds to emoticon 5140-A. In response to detection of gesture 5144 on duplicate emoticon 5142-A, emoticon 5140-A is entered into input text 5006 in UI 5000MM, as shown in FIG. 5MM. The changed text input 5006 is mirrored in center area 5016-C, as duplicate emoticon 5142-A is entered into duplicate input text 5022. In other embodiments (not shown), emoticons 5142 are displayed in center area 5016-C, without concurrently displaying emoticons 5140; in other words, the emoticons available for input are just displayed in the center area 5016-C."). Koch, ¶[0270]-[0271].<br>  <br><br>Figure 5LL<br>  <br><br>Figure 5MM |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Koch, Figs. 5LL-5MM.<br><br>"In some embodiments, the device displays (1154) a plurality of emoji characters in the center portion of the integrated input area, detects (1156) a gesture on the touch-sensitive surface at a location that corresponds to an emoji character in the plurality of emoji characters (e.g., a tap gesture on the emoji character), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the emoji character, inputs and displays (1158) the emoji character in the first text entry area and the second text entry area on the display. Entering emoji characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an emoji character is needed. For example, in FIGS. 5LL-5MM, emoji characters 5140, including emoji character 5140-A, are displayed in text entry area 5002. Duplicate emoji characters 5142 are displayed in center area 5016-C. Duplicate emoji character 5142-A is a duplicate of emoji character 5140-A. Gesture 5144 is detected on duplicate emoji character 5142-A. In response to detection of gesture 5144, emoji character 5140-A is entered into input text 5006 and displayed, and duplicate emoji character 5142-A is entered into duplicate input text 5022 and displayed." Koch, ¶[0392]-[0393].<br><br>As another example, Koch discloses that Unicode text character "©" received as input into the center area application is shared with the Notes application while both interfaces are displayed. "FIG. 5NN depicts UI 5000NN, which includes input text 5006 and cursor 5004 displayed in text entry area 5002. One or more Unicode characters 5146 available for entry into input text 5006 are displayed. Duplicate Unicode characters 5148, corresponding to Unicode characters 5146, are displayed in center area 5016-C near duplicate input text 5022. Gesture 5149 (e.g., a tap gesture) is detected on duplicate Unicode character 5148-A, which corresponds to Unicode character 5146-A. In response to detection of gesture 5149 on duplicate Unicode character 5148-A, Unicode character 5146-A is entered into input text 5006 in UI 5000OO, as shown in FIG. 5OO. The changed text input 5006 is mirrored in center area 5016-C, as duplicate input text 5022 also includes duplicate Unicode character 5148-A. In other embodiments (not shown), Unicode characters 5148 are displayed in center area 5016-C, without concurrently displaying Unicode characters 5146; in other |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | words, the Unicode characters available for input are just displayed in the center area 5016-C." Koch, ¶[0272]-[0273].<br>  <br><br>Figure 5NN<br>  <br><br>Figure 5OO<br>Koch, Figs. 5NN-5OO.<br>"In some embodiments, the device displays (1160) a plurality of unicode characters in the center portion of the integrated input area, detects (1162) a gesture on the touch-sensitive surface at a location that corresponds to a unicode character in the plurality of unicode characters (e.g., a tap gesture on the unicode character), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the unicode character, inputs and displays (1164) the unicode character in the first text entry area and the second text entry area on the display. Entering unicode characters via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time a unicode character is needed. For example, in FIGS. 5NN-5OO, unicode characters 5146, including unicode character 5146-A, are displayed in text entry area 5002. Duplicate unicode |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | characters 5148 are displayed in center area 5016-C. Duplicate unicode character 5148-A is a duplicate of unicode character 5146-A. Gesture 5149 is detected on duplicate unicode character 5148-A. In response to detection of gesture 5149, unicode character 5146-A is entered into input text 5006 and displayed, and duplicate unicode character 5148-A is entered into duplicate input text 5022 and displayed." Koch, ¶[0394]-[0395].<br><br>Additional exemplary citations include:<br><br>"FIG. 5BB depicts UI 5000BB. UI 5000BB includes form 5110 displayed in text entry area 5002. Form 5110 includes one or more text entry fields 5114 and one or more checkboxes 5112, each respective checkbox 5112 associated with an option in form 5110. For example, checkbox 5112-A in form 5110 is associated with the "Vegetarian" option. Duplicate checkboxes 5116 and the corresponding options mirror checkboxes 5112 and the corresponding options and are displayed in center area 5016-C. For example, duplicate checkbox 5116-A corresponds to checkbox 5112-A, duplicate checkbox 5116-B corresponds to checkbox 5112-B, and so on forth. In some embodiments, duplicate checkboxes 5116 and the corresponding options are displayed at larger sizes than their corresponding checkboxes 5112. Gesture 5118 (e.g., a tap gesture) is detected on duplicate checkbox 5116-A, which is unselected (i.e., not checked), as is checkbox 5112-A. In response to detection of gesture 5118 on duplicate checkbox 5116-A, checkbox 5112-A is selected in UI 5000CC, as shown in FIG. 5CC. Duplicate checkbox 5116-A is also selected, mirroring the selection of checkbox 5112-A." Koch, ¶[0263]-[0264]; Figs. 5BB-5CC; *see also* Koch, ¶[0382]-[0383].<br><br>"FIG. 5DD depicts UI 5000DD. UI 5000DD shows gesture 5120 detected in center area 5016-C, away from duplicate cursor 5020 and duplicate input text 5022. In some embodiments, gesture 5120 is a double tap gesture or a finger contact held in place. In response to detection of gesture 5120 in center area 5016-C, pop-up menu 5122 is displayed in UI 5000EE, as shown in FIG. 5EE. Duplicate menu 5124 is displayed in center area 5016-C. Selection of an option in duplicate menu 5124 has the same effect as selecting the corresponding option in pop-up menu 5122. In other embodiments (not shown), in response to detection of gesture 5120, menu 5124 is displayed in center area 5016-C, without concurrently displaying 5122; in other words, a pop-up menu is just displayed in the center area 5016-C." Koch, ¶[0265]; FIGS. 5DD-5EE. |

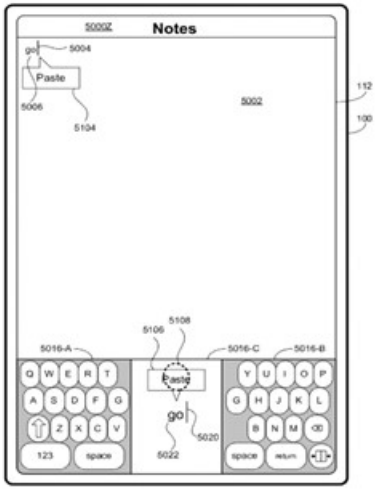
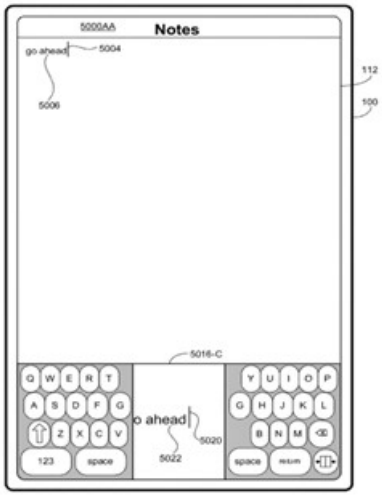
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "In some embodiments, the device detects (1136) a gesture on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a tap gesture on an icon to activate a popup menu or a predefined multifinger gesture within the center portion), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the center portion of the integrated input area, displays (1138) a popup view. Accessing a popup view (e.g., a window or menu in an application) via a gesture in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time a popup view is needed. For example, in FIGS. 5DD-5EE, gesture 5120 is detected in center area 5016-C. In response to detection of gesture 5120, popup menu 5124 is displayed. In some embodiments, popup menu 5122, corresponding to popup menu 5124, is displayed in text entry area 5002." Koch, ¶[0384]-[0385]; FIGS. 5DD-5EE.<br><br>"FIG. 5JJ depicts UI 5000JJ. UI 5000JJ includes input text 5006 and cursor 5004 displayed in text entry area 5002. Suggested word 5134 for input text 5006 is displayed. Duplicate suggested word 5136, corresponding to suggested word 5134, is displayed in center area 5016-C near duplicate input text 5022. Gesture 5138 (e.g., a tap gesture) is detected on X-icon 5137 (which corresponds to X-icon 5135 accompanying suggested word 5134) accompanying duplicate suggested word 5136. In response to detection of gesture 5138 on X-icon 5137, suggested word 5134 is rejected, and input text 506 remains as is in UI 5000KK, as shown in FIG. 5KK." Koch, ¶[0268]-[0269].<br><br>"In some embodiments, the device displays (1148) a suggested word in the center portion of the integrated input area (e.g., a word automatically suggested to complete or correct a series of characters displayed in the first text entry area and the second text entry area), detects (1150) a gesture on the touch-sensitive surface at a location that corresponds to the suggested word, and executes (1152) a text editing command in accordance with the gesture on the touch-sensitive surface at the location that corresponds to the suggested word. In some embodiments, tapping the suggested word accepts and inputs the suggested word. In some embodiments, tapping the suggested word (or an X icon) rejects and terminates display of the suggested word. Editing the text via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an edit |

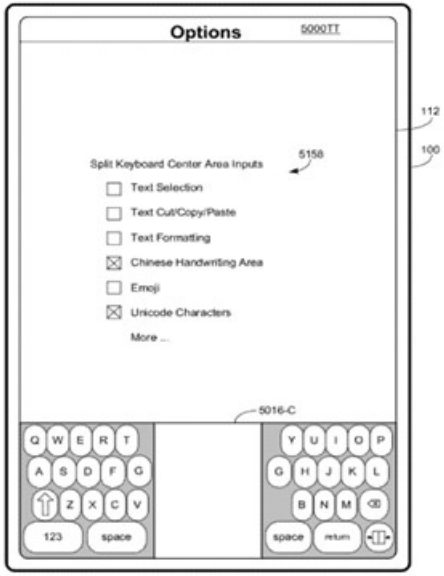
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | function is needed. For example, in FIGS. 5JJ-5KK, suggested word 5134 is displayed in text entry area 5002, and duplicate suggested word 5136, corresponding to suggested word 5134, is displayed in center area 5016-C. Suggested word 5136 is displayed with X icon 5137. Gesture 5138 is detected on X icon 5137 associated with suggested word 5136. In response to detection of gesture 5138, suggested word 5136 is rejected and display of suggested word 5136 and suggested word 5134 are terminated." Koch, ¶[0390]-[0391]; FIGS. 5JJ-5KK.<br><br>"FIG. 5PP depicts UI 5000PP, which includes input text 5006 and cursor 5004 displayed in text entry area 5002. Cursor 5004 and at least a portion of input text 5006 are mirrored in center area 5016-C as duplicate cursor 5020 and duplicate input text 5022, respectively. Gesture 5150 is detected in center area 5016-C. Gesture 5150 includes a finger contact moving from position 5150-A to position 5150-B, going over duplicate input text 5022. In response to detection of gesture 5150 over duplicate input text 5022, duplicate input text 5022 is displayed with shading 5154 (or other highlighting), indicating that duplicate input text 5022 is selected. The corresponding text in input text 5006 is displayed with shading 5152 (or other highlighting) as well. FIG. 5RR depicts UI 5000RR, which includes input text 5006 and cursor 5004 displayed in text entry area 5002. Cursor 5004 and input text 5006 is mirrored in center area 5016-C as duplicate cursor 5020 and duplicate input text 5022, respectively. Gesture 5156 (e.g., a double tap gesture, a triple tap gesture, or a tap and hold gesture) is detected in center area 5016-C on duplicate input text 5022. Gesture 5156 is associated with a text formatting operation (e.g., making text bold, underling text, italicizing text, etc.). In response to detection of gesture 5156 on duplicate input text 5022, the formatting of input text 5006 is changed in UI 5000SS, as shown in FIG. 5SS. Input text 5006 is changed to bold text. Duplicate input text 5022 is also changed to bold text to mirror the change in the formatting of input text 5006." Koch, ¶[0274]-[0277].<br><br>"In some embodiments, the device detects (1166) a gesture on the touch-sensitive surface at a location that corresponds to the second text entry area (e.g., a tap and drag gesture over text in the second text entry area), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the second text entry area, selects (1168) a range of text. Selecting text via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing. For example, in FIGS. 5PP-5QQ, gesture 5150 is detected over duplicate input text 5022 in center area 5016-C. Gesture 5150 includes a tap and drag gesture from position 5150-A to position 5150-B. In response to |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | gesture 5150, duplicate input text 5022 is selected, as indicated by highlighting 5154. In some embodiments, the device detects (1170) a gesture on the touch-sensitive surface at a location that corresponds to one or more words in the second text entry area (e.g., a swipe or double-tap gesture on a word in the second text entry area), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the second text entry area, formats (1172) the one or more words. Formatting text via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing. For example, in FIGS. 5RR-5SS, gesture 5156 is detected on word "gotten" in duplicate input text 5022, in center area 5016-C. In response to detection of gesture 5156, the word "gotten" in duplicate input text 5022 and the corresponding word in input text 5006 are formatted as bold text." Koch, ¶[0296]-[0399]. |

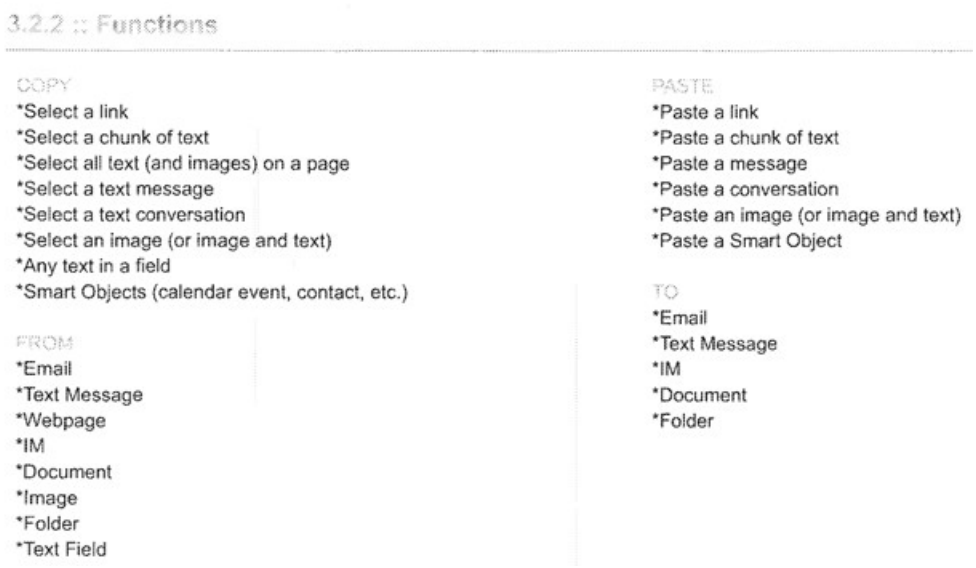
| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[5]** The system of claim 4, wherein said information includes at least one of, a text, an image, a video, a webpage and a URL. | Claim 5 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 5 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL."<br><br>For example, and as discussed above in [4], the "information" shared from Koch's center area input application to the first application includes Unicode text (which is "a text") or a drawing (which is "an image"). *See supra* claim [4]. Thus, Koch provides "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL," as required by the claim. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[6]** The system of claim 4, wherein said information is copied from one of said applications and pasted in the other application. | Claim 6 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 6 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information is copied from one of said applications and pasted in the other application."<br><br>For example, Koch discloses that "In some embodiments, the device detects (1126) a gesture on the touch-sensitive surface at a location that corresponds to a text editing control in the center portion of the integrated input area, and executes (1128) a text editing command in accordance with the gesture on the touch-sensitive surface at the location that corresponds to the text editing control. Editing the text via gestures in the center portion of the integrated input area has the advantage of requiring the user to move their thumb only a small distance from where they are typing (versus the alternative of reaching to the first text entry area (or a menu bar at the top of the display) each time an edit function is needed. For example, in FIG. 5Z-5AA, text editing control 5106 corresponding to a paste operation is displayed in center area 5016-C. Gesture 5108 on text editing control 5106 is detected in center area 516-C. In response to detection of gesture 5108, a paste operation is executed; text 'ahead' is pasted into duplicate text 5022 and input text 5006." Koch, ¶[0380]-[0381]; FIGS. 5Z-5AA; *see also* Koch, ¶[0261]-[0262] (describing use of editing control application illustrated in FIGS. 5Z-5AA). |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 5Z<br>  <br>Figure 5AA<br>Koch, Figs. 5Z-5AA.<br>Further, Koch describes the ability to configure options for the center area input application, including the options for "Text Cut/Copy/Paste," as illustrated in FIG. 5TT, below. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 5TT<br>Koch, Fig. 5TT.<br>To the extent Keyless argues that Koch does not disclose or render obvious "wherein said information is copied from one of said applications and pasted in the other application," it would have been obvious in view of Koch, POSITA's pre-existing knowledge, and/or the teachings of Koch combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000 and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | For example, each of Sirpal-486, Sirpal-000 and Lavallee discloses wherein said information is copied from one application and pasted in another application.<br><br>For example, Sirpal-486 states that "[m]ost single or dual-screen devices will allow a user to copy content from one location to another," and suggests that its "universal clipboard" offers improvements upon that known feature. Sirpal-486, ¶¶[0168]-[0169]. Sirpal-486 further incorporates by reference Sirpal-000, which provides additional detail and illustration of the functionality of "Copy & Paste Text, Links[,] and Universal Clipboard." Sirpal-000, 152-82.<br><br>As discussed above for claim [2], Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. *See also supra* claim [2]. Sirpal-000 further provides functionality of "Copy & Paste Text, Links and Universal Clipboard." (Sirpal-000 at 152-182.) As Sirpal-000 explains:<br><br>> In the current Android model, users can copy and paste the contents of a text message from one app to another via press and hold to get a copy paste menu. In the current Android model, users can copy and paste a URL from any application to another via press and hold to get a copy/paste menu. *In the current Android model, users select text in a text field via press and hold, which invokes a contextual menu allowing users to put the field in 'select' mode, touching and dragging a chunk of text, then press and hold again to take field out of 'select' mode, which then copies the selected text. *In the current Android model, users can copy/paste plain text via invoking a contextual menu, putting the device into 'select' mode, and touching and dragging a chunk of text, then press and hold to paste the text into another app. We want to normalize the methods of copy/paste in the dual screen model, as well as to allow more efficient copy via drag and drop, direct manipulation, and better cursor placement and text selection, all while still allowing for the retention of the current Android pattern of copy and paste via menus as additional methods of performing these functinos. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-000 at 153.<br><br>Sirpal-000 provides that any number of items may be copied from and pasted to any number of applications, as illustrated below:<br><br>  <br>3.2.2 :: Functions<br><br>COPY<br>*Select a link<br>*Select a chunk of text<br>*Select all text (and images) on a page<br>*Select a text message<br>*Select a text conversation<br>*Select an image (or image and text)<br>*Any text in a field<br>*Smart Objects (calendar event, contact, etc.)<br><br>FROM<br>*Email<br>*Text Message<br>*Webpage<br>*IM<br>*Document<br>*Image<br>*Folder<br>*Text Field<br><br>PASTE<br>*Paste a link<br>*Paste a chunk of text<br>*Paste a message<br>*Paste a conversation<br>*Paste an image (or image and text)<br>*Paste a Smart Object<br><br>TO<br>*Email<br>*Text Message<br>*IM<br>*Document<br>*Folder<br><br>Sirpal-000 at 154.<br><br>Sirpal-000 describes a "first class of items" that is copied/pasted in its entirety, and a "second class of items" that first requires a user to "place the cursor and make a selection of a piece of the item" to be copied. Sirpal-000 at 155. In operation, a user can either copy text to a clipboard (for pasting later) or copy text with a "two finger press and hold gesture, which puts the item in move mode, and allows the user to move/paste the item to any available drop zone," e.g., for "images, links, paragraphs of text, messages, etc." Sirpal-000 at 155. "For anything that has been copied, users have the option to either just paste the last copied item or to select an item from the Universal Clipboard to paste." Sirpal-000 at 155. Sirpal-000 illustrates many examples of copying text from one application to another, including copying a link from a web page for pasting into an email message Sirpal-000 at 158-164, text from a web page for pasting into an email (Sirpal-000 at 166- |

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| | 170), text and image from a web page for pasting into an email (Sirpal-000 at 172-175), and text from a field (e.g., in an email application) to another field (e.g., in a text message application) (Sirpal-000 at 177-182).<br><br>As another example, and as discussed above for claim [2], Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. *See also supra* claim [2]. Lavallee further describes providing "a share function [that] permits sharing of items between . . . two or more running applications [simultaneously] displayed." Lavallee, ¶[0058]. According to Lavallee, "[t]he copy and paste function may be accomplished by a drag-and-drop action," "an attach file function that provides for transmitting a file attachment of a first running application of the two or more running applications to a second running application of the two or more running applications," or "an insert function that provides for inserting one or more items displayed by a first running application into a second running application of the two or more running applications." Lavallee, ¶[0058].<br><br>Additional exemplary disclosures of Lavallee include:<br><br>"Referring now to FIGS. 12 a-d, 13 a-d, 14 a-d, and 15 a-d, various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059].<br><br>"In FIG. 12 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area. The user in this |

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| | example is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body. In FIG. 12 b, the user is able to select an item in the web browser application, in this example a car, as indicated by circle 1210; this selection may be accomplished by a user pressing on the picture of the car on the touch screen. Next, in FIG. 12 c, the user can drag the selected picture item from the web browser application displayed in the right split screen mode viewing area over to the left split screen mode viewing area, as indicated by the dashed box 1220 surrounding the selected picture item and the accompanying arrows in FIG. 12 c. Finally, in FIG. 12 d, the user released the picture item in the desired location of the email application displayed in the left split screen mode viewing area 1230. This release may be accomplished by the user removing his finger from the selected picture item when the picture is in the desired location. In this way, a user of an electronic device can easily drag and drop a selected item from a first running application to a second running application, both simultaneously maximized and displayed in large split screen mode viewing areas of the touch screen of the electronic device. Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060], Figs. 12a-12d.<br><br>"FIGS. 13 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "insert" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application. In FIG. 13 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: a presentation application, such as POWER POINT®, is displayed in the left split screen mode viewing area and a photo application is displayed in the right split screen mode viewing area. The user in this example is creating a presentation and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the photo application into the presentation application. This example of an insert share function allows a user to insert a picture from the photo application into the presentation application. In FIG. 13 b, the user presses on the desired picture in the right split screen mode |

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| | viewing area of the touch screen, as indicated by the circle 1310, to select the picture. Next, in FIG. 13 c, the user drags the selected picture into the presentation application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1320 surrounded the selected picture and the accompanying arrows in the drawing. The selected picture is dragged in to the presentation application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1330 in FIG. 13 d. The item in this application is a stored picture file, such as a file stored on the device, which can be inserted as shown." Lavallee, ¶[0061], Figs. 13a-13d.<br><br>"It is noted that in the 'copy and paste' function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage. In the 'insert' function illustrated in FIG. 13, a file type stored on device memory, such as a stored picture, contact, video, etc. for example, may be retrieved and inserted, or attached, as shown above." Lavallee, ¶[0062], Figs. 12a-13d.<br><br>"FIGS. 14 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "attach file" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments. Applications that might use the attach file function are varied and include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc. In FIG. 14 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an instant messaging (IM) application is displayed in the left split screen mode viewing area and a music application is displayed in the right split screen mode viewing area. The user in this example is chatting using an IM application and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop songs from the music application into the IM application. This example of an attach file share function allows a user to send a song attachment from the music application to the IM application. In FIG. 14 b, the user presses on a desired song in the right split screen mode viewing area of the touch screen, as indicated by the circle 1410, to select the song. Next, in FIG. 14 c, the user drags the selected song into the IM application in the |

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| | left split screen mode viewing area of the touch screen, as indicated by the dashed box 1420 surrounded the selected picture and the accompanying arrows in the drawing. The selected song is dragged in to the IM application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1430 in FIG. 14 d, into a conversation of the IM application to send to a friend." Lavallee, ¶[0062], Figs. 14a-14d.<br><br>"In FIG. 15 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application. In FIG. 15 b, the user presses on a desired contact in the right split screen mode viewing area of the touch screen, as indicated by the circle 1510, to select the contact. Next, in FIG. 15 c, the user drags the selected contact into the email application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1520 surrounded the selected contact and the accompanying arrows in the drawing. The selected contact is dragged in to the email application displayed in the left split screen mode viewing area of the touch screen and released in the desired location into the email body 1530 in FIG. 15 d, as shown." Lavallee, ¶[0065], Figs. 15a-15d.<br><br>A POSITA would have found it obvious to incorporate "wherein said information is copied from one of said applications and pasted in the other application," as claimed. For example, a POSITA would have found it obvious to implement well-known copy/paste functionality—in which text is copied and pasted from one application into another, e.g., via clipboard or drag/drop—as an additional or alternative mechanism to share information from the center area input application to the first application of Koch. As discussed above, each of Sirpal-486, Sirpal-000 and Lavallee discloses wherein said information is copied from one of said applications and pasted in the other application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Koch, as an obvious and intuitive way to transfer information (e.g., handwritten characters, typed characters, drawings) from the center area input application of Koch into the first application of Koch. A POSITA would have recognized the advantages of providing copy/paste functionality, at |

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| | least because it allows a user to decide where (e.g., in which field) information copied from the second application should be pasted/inserted into the first application. Copying and pasting information between applications was routine and conventional to a POSITA, as shown by Sirpal-486, Sirpal-000 and Lavallee. Incorporating the feature into Koch's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Koch, represent nothing more than combining prior art elements according to known methods and techniques (copying information from one application to be pasted into another, e.g., with a clipboard) to a mobile electronic touch screen device to yield predictable results (providing a user the ability control over when and where to copy/paste information from one application to another). |

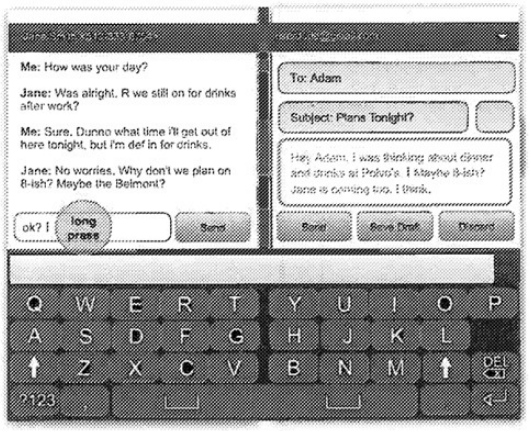
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[7]** The system of claim 1, wherein at least one of the applications is a messaging application. | Claim 7 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 7 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application."<br><br>For example, Koch discloses that its electronic device "typically supports a variety of applications, such as … an e-mail application, an instant messaging application." Koch, ¶[0107]. Further, Koch describes that its device supports "protocol for e-mail," "instant messaging," "and/or Short Message |

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| | Service (SMS), or any other suitable communication protocol." Koch, ¶[0114]. Koch describes the first application as "e.g., a notes application, a web browser application, etc." (Koch, ¶[0252]), and a POSITA would recognize that Koch's system would apply equally to the messaging applications that Koch also describes.<br><br>Additional exemplary citations include:<br><br>"In some embodiments, the functions may include image editing, drawing, presenting, word processing, website creating, disk authoring, spreadsheet making, game playing, telephoning, video conferencing, e-mailing, instant messaging, workout support, digital photographing, digital videoing, web browsing, digital music playing, and/or digital video playing." Koch, ¶[0008].<br><br>"Applications 136 may include the following modules (or sets of instructions), or a subset or a superset thereof: …. instant messaging (IM) module 141 …." Koch, ¶[0135].<br><br>"In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the instant messaging module 141 includes executable instructions to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages and to view received instant messages. In some embodiments, transmitted and/or received instant messages may include graphics, photos, audio files, video files and/or other attachments as are supported in a MMS and/or an Enhanced Messaging Service (EMS). As used herein, 'instant messaging' refers to both telephony-based messages (e.g., messages sent using SMS or MMS) and Internet-based messages (e.g., messages sent using XMPP, SIMPLE, or IMPS)." Koch, ¶[0158].<br><br>"In some embodiments, instant messaging module 141, rather than e-mail client module 140, is used to send a link to a particular online video." Koch, ¶[0170].<br><br>"FIG. 4A illustrates an exemplary user interface for a menu of applications on portable multifunction device 100 in accordance with some embodiments. Similar user interfaces may be implemented on device 300. In some embodiments, user interface 400 includes the following elements, or a subset or superset thereof: …. E-mail client 140, which may include an indicator 410 |

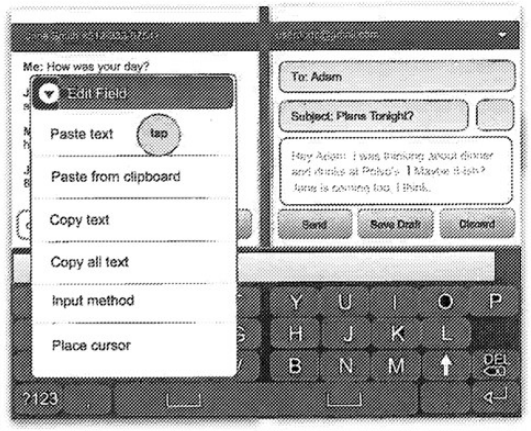
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | of the number of unread e-mails; …. And Icons for other applications, such as: IM 141 ….” Koch, ¶[0205].<br><br>To the extent Keyless argues that Koch does not disclose or render obvious “wherein at least one of the applications is a messaging application,” it would have been obvious in view of Koch, POSITA’s pre-existing knowledge (as confirmed, e.g., by reference to Sirpal-486, Sirpal-000, and/or Lavallee), and/or the teachings of Koch combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486, Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000, and Lavallee discloses wherein at least one of the applications is a messaging application, and it would have been obvious to provide the feature in view of one or more of the references.<br><br>For example, Sirpal-486 discloses a “multi-screen user device and a universal clipboard application.” Sirpal-486, Abstract. Sirpal describes that “handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands.” Sirpal-486, ¶[0002]. Sirpal-486 discloses that “applications 564” on the device “can include programs such as email clients, web browsers, texting applications, games, media players, office suites, etc.” *Id.*, ¶[0125]. Sirpal-486 further discloses:<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location (e.g., the application at which the content will be copied), select the area |

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| | where the text should be placed, access a copy/paste menu pop-up window, and then select the paste command. This copy/paste routine must be completed for each different piece of information to be copied, which requires substantial time and input from the user.<br>The device 100 allows a user to copy multiple contents to the universal clipboard application 708. From this universal clipboard application, a user can choose an item corresponding to already-copied content, and (while still providing inputs at the universal clipboard application 708) execute a paste command. By providing multiple screens where one screen displays the universal clipboard application and another screen displays an application, a user is enabled to easily and quickly copy and paste content between various different applications on different screens 104, 108 of the device 100. Moreover, the ability to quickly and easily copy and paste different information from one central location, the universal clipboard application 708, saves the user time and input. Thus, the device 100 operates very intuitively for the user.<br>Sirpal-486, ¶¶[0168]-[0169].<br>Sirpal-486 further incorporates by reference the entirety of U.S. Patent Application No. 61/389,000 (*Sirpal-000*), which provides additional information relating to Sirpal-486's messaging application. *See* Sirpal-486, ¶[0001].<br>Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. As one example, Sirpal-000 illustrates a text messaging application next to an email application: |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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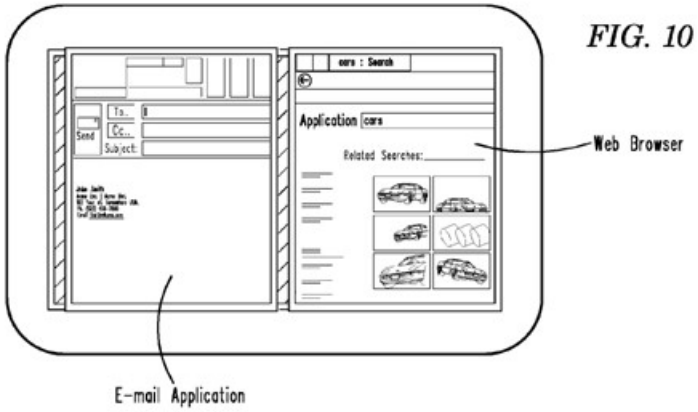
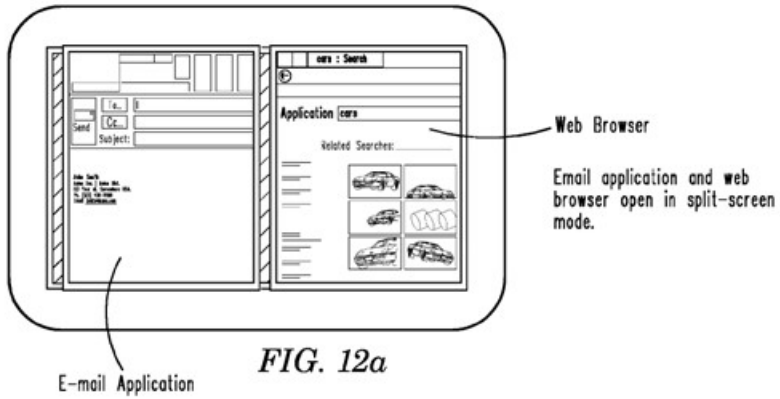

User presses and holds the text message compose field.




A menu is displayed with two options for pasting. 'Paste text' would paste the last copied item at the current cursor position. 'Paste from clipboard' displays the Universal Clipboard, from which the user could paste the just copied text, in addition to other items in the Clipboard. There is also an option for the user to place the cursor in a different position in the field. The user taps 'Paste Text'.

Sirpal-000 at 180-182. As Sirpal-000 explains, the text messaging application has a "text message compose field" into which text may be inserted. Sirpal-000 at 180. Thus, a POSITA would understand from Sirpal-000 that "at least one of [two] applications is a messaging application," as claimed.

As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee includes a "keyboard 120 for entering information such as composing email messages." Lavallee, ¶[0021]. Lavallee's device also is designed to send or receive data, including "email messages, short messaging service (SMS), instant messages, web content, and other electronic content." Lavallee, ¶[0022]. Accordingly, the device runs applications such as "communications applications such as Instant Messaging (IM), presentation and email applications, messaging applications . . . and the like." Lavallee, ¶[0028]. Lavallee provides several examples of

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| | a messaging application displayed simultaneously with another application, as illustrated, e.g., in Figs. 10, 12a-12d, 14a-14d, and 15a-15d, reproduced below.<br>  <br><br>*FIG. 10*<br>Lavallee, Fig. 10.<br>  <br><br>*FIG. 12a*<br>Lavallee, Fig. 12a. |

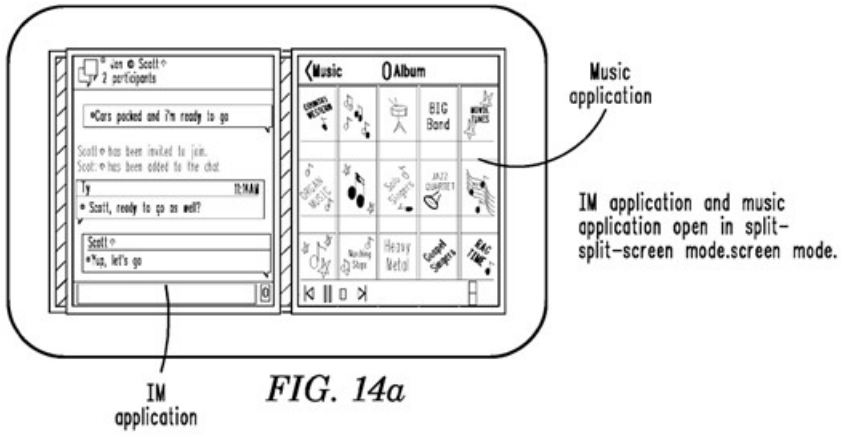



FIG. 14a

Lavallee, Fig. 14a.

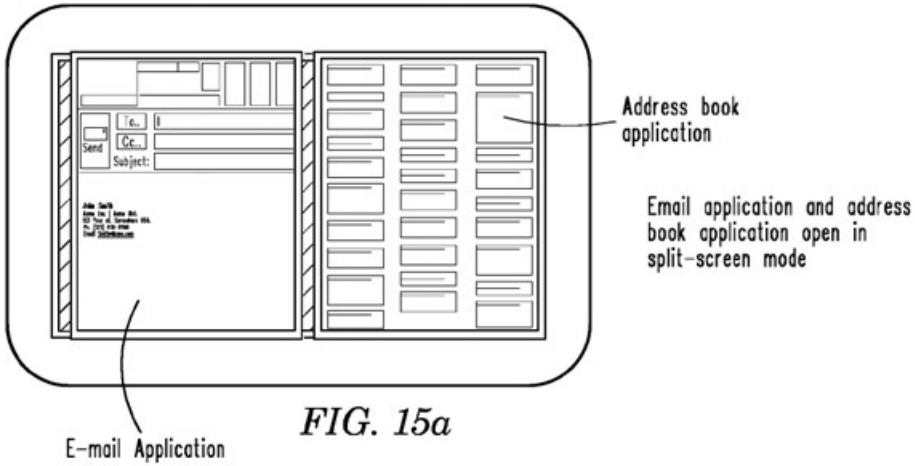



FIG. 15a

Lavallee, Fig. 15a.

The e-mail application and IM application illustrated in Lavallee both illustrate fields for text entry. Thus, a POSITA would understand from Lavallee that "at least one of [two] applications is a messaging application," as claimed.

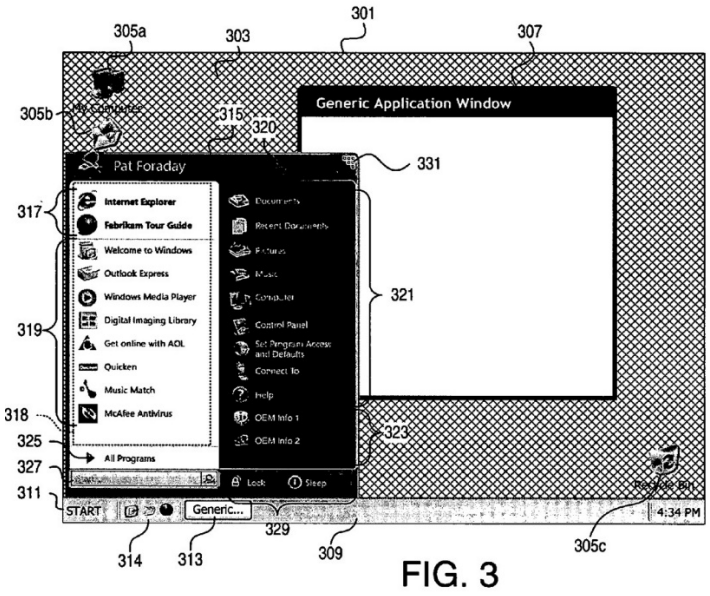
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Incorporating a messaging application (such as taught by Koch, Sirpal-486, Sirpal-000, and Lavallee) into Koch and using Koch's keyboard with the messaging application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Koch, represent nothing more than combining prior art elements according to known methods and techniques (providing keyboard input into a messaging application) to a mobile electronic touch screen device to yield predictable results (allowing a user to send text messages on a mobile device, enhancing a user's ability to input text into a messaging application, etc.). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[8]** The system of claim 1, wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application. | Claim 8 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 8 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application."<br><br>For example, Koch describes that its device includes search applications and search modules. For example, "[i]n some embodiments, the functions [of an electronic device] may include image editing, drawing, presenting, word processing, website creating, disk authoring, spreadsheet making, game playing, telephoning, video conferencing, e-mailing, instant messaging, workout support, digital photographing, digital videoing, web browsing, digital music playing, and/or digital |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | video playing. Executable instructions for performing these functions may be included in a non-transitory computer readable storage medium or other computer program product configured for execution by one or more processors." Koch, ¶[0008]. Further, Koch provides "[t]he device typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application." Koch, ¶[0107]. And "[a]pplications 136 may include the following modules (or sets of instructions), or a subset or superset thereof: … browser module 147; … search module 151 …." Koch, ¶[0135]. A POSITA would understand several of those applications to include search functionalities and, thus, to be a "search application." For example, it would be understood that search may be included in applications for at least web browsing, a telephone application, an e-mail application, an instant messaging application, a digital music player application, and a digital video player application.<br><br>Koch specifically describes search in connection with a web browser application. For example, Koch provides that "[i]n conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, and text input module 134, browser module 147 includes executable instructions to browse the Internet in accordance with user instructions, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages." Koch, ¶[0162].<br><br>Additionally, Koch also describes search in connection with applications involving "text, music, sound, image, video, and/or other files in memory 102 that match one or more search criteria (e.g., one or more user-specified search terms) in accordance with user instructions." Koch, ¶[0166].<br><br>Thus, for at least a foregoing reasons, Koch discloses that an application (e.g., a second application) may be a search application.<br><br>Further, as discussed above in claim [1D], Koch discloses a second application is "activated by interacting with a button of said keyboard assigned to activating [that] application." *See supra* claim [1D]. Thus, Koch provides for activating a second application by interacting with a button of |

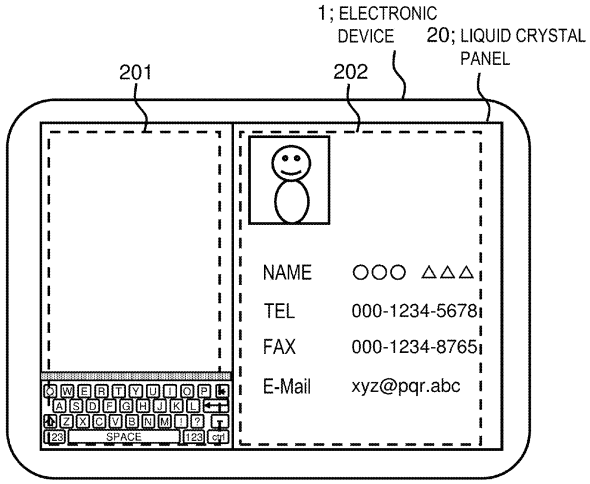
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | the keyboard assigned to activating that application by, e.g., pressing a key such as the keyboard split key that is used to activate the center area input application, as discussed in [1D].<br><br>To the extent Keyless argues that Koch does not disclose or render obvious this limitation, it would have been obvious in view of Koch, a POSITA's pre-existing knowledge, and/or the teachings of Koch combined with other references charted for this patent in these invalidity contentions, including Wang, Matthews, and Yabuki. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways. For example, Wang discloses that "the user can define one of the [device] keys as a search key for searching web pages … thereby quickly calling the search application … of the system." Wang, ¶[0029]. As another example, Matthews discloses to use a keyboard hot key—such as used in Koch to open the center area application—with a search application. As yet another example, Yabuki discloses reducing the size of the keyboard so that multiple applications can be displayed, including, e.g., a "search" application. And Koch itself provides that a mobile device can be used with and include various search functionalities as discussed above.<br><br>For example, Wang describes a "method for programming output value of a key." Wang, Title. Wang explains that its "method for programming output value of a key is applicable to an electronic device having at least a key." Wang, Abstract, ¶[0002]. Wang observes that "[a]long with the development of technologies, portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones." Wang, ¶[0004]. Wang further observes that "although some touch-type mobile phones or computers include shortcut keys that allow the user to speedily call specific applications, the functions of the shortcut keys cannot be changed by changing corresponding key values of the shortcut keys. For example, a key preset for a shutter button of camera cannot be changed into a return key." Wang, ¶[0007]. Wang purports to improve |

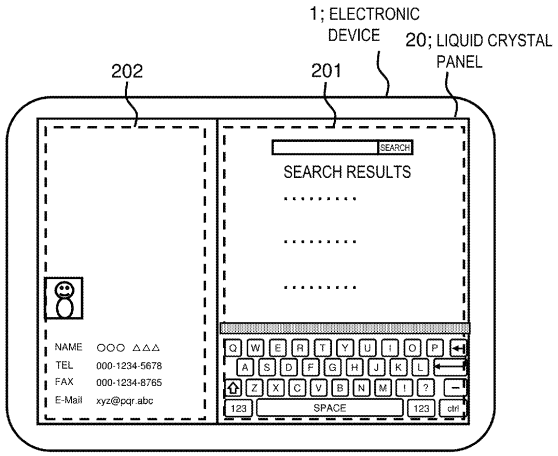
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| | known touch-type mobile phones or computers. *See id.*, ¶[0008]. In Wang, "[t]he method for programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key. The number of keys is not limited." *Id.*, ¶[0018]. Among other benefits, Wang discloses that its system "accelerates the input speed" by assigning a function to a key. *Id.*, ¶[0029]. Specifically, Wang discloses:<br>> [T]o accelerate the operation speed, the user can define one of the keys 12 as a search key for searching web pages or a camera key for starting camera, thereby quickly calling the search application or camera application of the system. In addition, since Android Supports quick launch application, by holding down one of the keys defined as a search key and pressing another key defined as a character key, the user can quickly call a corresponding application defined in the quick launch application.<br><br>Wang, ¶[0029]. Thus, Wang provides "wherein [an] application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>As another example, Matthews describes "methods and system for a search box and search capabilities in a graphical user interface of a program launch menu for an operating system." Matthews at 1:15-18. "According to an illustrative aspect of the invention, a program launch menu, such as a Start menu, displays a search text input box within the program launch menu displayed on a computer display device, which can be used to locate user-selectable items on a computer system. Various aspects of the invention may provide for a display of search results within the program launch menu, the search results identifying selectable items matching text input received from a user via the search text input box." Matthews at 3:26-34. In Matthews, a "user can type text into search box 327 to search for Start menu items. Upon entering text in search box 327, Start menu 315 automatically switches to a Search Results view 501, such as is illustrated in FIG. 5, displaying results that match text as it has been entered thus far by the user. That is, from search box 327, a user can perform a character by character search across the programs, user files, Internet links, and communications on his or her system. As the user enters text in the search box 327, the computer system searches for the entered text, as further described below." Matthews at 16:52-62. |

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| |  <br>FIG. 3<br>Matthews, Fig. 3.<br>Like Koch, which describes broad search functionality for text, media, and other files in a device's memory (Koch, ¶[0166]), Matthews likewise discloses that its search application "may use any built in or known search engine to perform searches on computer system 100. The search engine preferably searches the file system of the computer 110, as well as URLs and executables in the user's Path. The search service may also include search results from other data providers, such as web search results from a web search engine, photo results from a photo website such as Picasa, music results from a service such as MSN music, or any combination of these and/or other data providers. The search engine may index all searchable locations in order to expedite searching." (Matthews at 17:1-15.)<br>Matthews further describes that the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start |

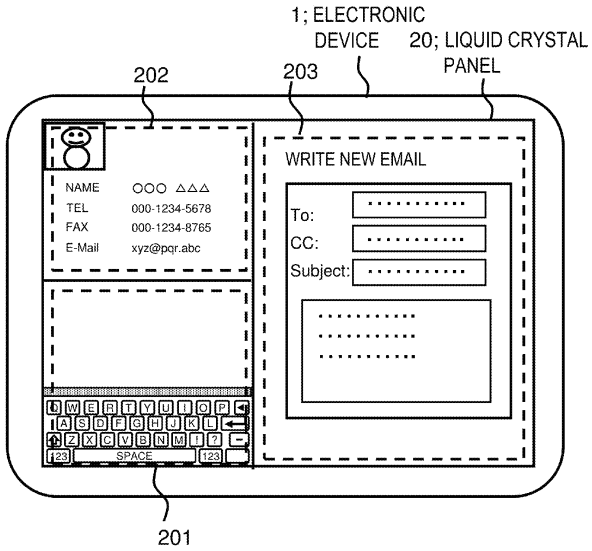
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| | typing text for which he or she would like to search for an item." Matthews at 18:31-39. "Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match. No mouse manipulation is necessary (although, certainly allowable if desired). By learning which searches produce desired results, users can learn many keyboard shortcuts to quickly launch desired items that are returned as the top match to the entered search string. Given the time and inclination, a user can learn keyboard shortcuts to launch most application programs and documents on his or her computer, without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:39-51. Thus, Matthews discloses the use of a "search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>Matthews discloses several benefits associated with providing a quick way to launch a search application, such as by using a keyboard key. For example, Matthews discloses that "[a]n operating system launch menu, such as a Start menu, provides various mechanisms for a user to quickly and efficiently locate and launch desired data items such as programs, data files, storage locations, and the like. A search box within the program launch menu may be used to quickly locate programs, documents, communications, and other data items." Matthews at Abstract. Further, Matthews' search application displays results "within the original confines of the program launch menu, thereby negating the need to open sub-menus on top of a large portion of the desktop displayed on the display device." *Id.*; *see also* Matthews at 3:54-62 ("The computer displays search results within a predefined area of the program launch menu, wherein the search results comprise selectable items matching text input received from the user via the search text input box, and automatically provides selection focus to a top search result. The computer launches the selectable item corresponding to the top search result when receiving predefined user input, e.g., <Enter>, while the top search result has the selection focus."). Matthews further discloses that a user may quickly use the equivalent of "keyboard shortcuts" to access desired results "without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." (Matthews at 18:42-51.) Thus, Matthews provides a quick and space-efficient search functionality.<br><br>As still another example, Yabuki relates to "an electronic device comprising a touch panel and a controlling method and program therefor." Yabuki, 1:10-13. Yabuki discloses that "a software |

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| | keyboard may interfere with the user's operation, depending on its size or position," particularly in the case of "a small device such a smartphone." Yabuki, 1:35-39. As Yabuki discloses:<br>> For instance, let's assume a case where a user is performing a more detailed search based on search results using a Web browser. At this time, if the area of the software keyboard is large, it may be difficult for the user to perform an input operation while browsing the search results.<br>> Further, for instance, let's assume a case where a user launches a Web browser and refers to information regarding the people registered in an address book in the middle of his input operation. In this case, the user first quits the Web browser currently running. Then, he launches the address book application. After confirming the information, the user quits the address book application. Then, after launching the Web browser again, the user has a software keyboard displayed to enter the information. As described, the user must perform a plurality of operations when he refers to information included in another application while using the software keyboard.<br>Yabuki, 1:40-56. Yabuki discloses "there is a need in the art to contribute to facilitating an operation independent from a software keyboard while the software keyboard is being used." Yabuki, 1:60-62. According to Yabuki, "the electronic device 1 relating to the present exemplary embodiment is able to display a second application such as an address book application while having a first application such as a Web browser displayed." Yabuki, 7:7-10.<br>For example, Figure 4 of Yabuki depicts a full-size keyboard used with a single application. Yabuki, 4:61-5:3, Fig. 4. Yabuki describes that the full-size keyboard may be moved and reduced in size, to make room for the interface of an application (or multiple applications) to be displayed on larger portions of the screen. Yabuki, 5:4-6:63. To further illustrate, Figure 7 of Yabuki, below, "is a drawing showing an example in which different applications are displayed in a plurality of display regions. In FIG. 7, the software keyboard is reduced and displayed in a first display region 201. Further, an address book application is displayed in the second display region 202 in FIG. 7." Yabuki, 7:11-16. |

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| |  <br>Yabuki, Fig. 7.<br>"The display region control unit 12 may switch the display modes of the first and second display regions. More concretely, according to a predetermined operation, the display region control unit 12 may enlarge the reduced first display region and reduce the second display region. Here, it is preferred that the predetermined operation that switches the display modes be a simple and easy operation such as a double tap operation." Yabuki, 7:17-24.<br>Yabuki further depicts Figure 8, which "is a drawing showing an example in which the display modes are switched. In FIG. 8, the display of the software keyboard is enlarged and displayed in the first display region 201. Further, the address book application is reduced and displayed in the second display region 202." Yabuki, 7:25-29. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 8.<br>According to Yabuki, even more applications may be displayed simultaneously while the keyboard is in its reduced size:<br>> The image signal generation unit 13 may have a third application displayed while displaying the images of two different applications. More concretely, when detecting a fourth operation in the second display region, the display region control unit 12 reduces and moves the second display region. It is preferred that the fourth operation be a simple and easy operation such as a double tap or flick operation. The image signal generation unit 13 displays the image of the third application in a region (a third region) made available by reducing the second display region. As described, the electronic device 1 relating to the present exemplary embodiment does not limit the number of applications displayed simultaneously.<br>Yabuki, 7:30-42. Further to that description, Yabuki depicts in Figure 9, below, "a drawing showing an example in which the image of the third application is displayed on the liquid crystal |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | panel 20. In FIG. 9, the software keyboard is displayed in the first display region 201. Further, the address book application is displayed in the second display region 202. Then, an email application is displayed in a third display region 203." Yabuki, 7:43-49. |




Yabuki, Fig. 9.

Thus, from the foregoing descriptions of Yabuki, a POSITA would recognize the benefits of reducing a keyboard so that multiple applications may simultaneously be displayed, including a search application (such as a web search application or an application for searching/displaying contact information). Moreover, a POSITA would recognize such features to be beneficial, as they solve problems and achieve advantages that Yabuki identified—e.g., allowing a user to perform input operations (in another application) while browsing search results or allowing a user to cross-reference between a web-browser and an address book simultaneously without closing one application or the other. *See* Yabuki, 1:40-56.

A POSITA considering the teachings of Koch in view of Wang, Matthews, and/or Yabuki would have found it obvious, for example, to implement Koch's center area input application with the

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| | search application described in Matthews. Koch indicates that its device can be used with any number of applications, including search applications, as discussed above. *See, e.g.*, Koch [0162], [0166]. Thus, a POSITA would recognize Wang's and/or Matthews' search application to be suitable for use with Koch. One obvious combination of Koch with Wang and/or Matthews would, for example, use Koch's keyboard with a first application including search functionality, e.g., an Internet browser application (*see* Koch Figs. 5UU-5ZZ, Koch, ¶[0162]-[0163]), an "address book or contact list" application (Koch, ¶[0154]), a telephone application (Koch, ¶[0155]), a videoconferencing application (Koch, ¶[0156]), an e-mail application (Koch, ¶[0157]), a messaging application (Koch, ¶[0158]), or media player application with a "search module … to search for text, music, sound, image, video, and/or other files in memory 102 that match one or more search criteria (e.g., one or more user-specified search terms) in accordance with user instructions" (Koch, ¶[0166]). In the obvious combination, Koch's center area application would be used, for example, to provide a search area to search for Internet content, addresses or contacts, text, music, sound, image, video, and/or other files to be used with and/or accessed by the first application. A POSITA would recognize such a configuration from Yabuki, for example. In any case, the search application, when activated, would obviously occupy the same area(s) as the center area application interface in the existing Koch system, and simultaneously display the corresponding reduced keyboard interface. In that way, the search application (e.g., Koch's preexisting search applications) could be used in parallel with another application (or applications) appearing on the top of the screen, without obstructing the interface of the other application. The combination would yield "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>A POSITA would recognize that the combination would achieve the various benefits described in Wang, Matthews, and Yabuki, including to "accelerate the operation speed" (Wang, ¶[0029]), to quickly find relevant information using the keyboard and without covering significant portions of the screen with the search application (Matthews at Abstract), and to be able to cross-reference between one search application (e.g., an Internet browser or address book) and another application simultaneously (such as an application that may require information about the information presented in the Internet browser or address book) (Yabuki, 1:40-56). A POSITA would further recognize that a combination would provide various result options as displayed suggestion candidates in the center area application, whereupon the user can select which result is desired, as |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | already provided by Koch. *See* Koch, ¶[0268]-[0269], [0390]-[0391], and FIGS. 5JJ-5KK (allowing user to select or decline suggested words); [0270]-[0271], [0392]-[0393], and FIGS. 5LL-5MM (allowing user to select from suggested emoticons); [0272]-[0273], [0394]-[0395], and FIGS. 5NN-5OO (allowing user to select from suggested Unicode text). Additionally or alternatively, a POSITA would recognized that such a combination would use the center area application as the interface for a search component of the first application, as Koch already discloses to use the center area as an interface for components of the first application. *See* Koch, ¶[0382]-[0383] ("In some embodiments, the device displays (1130) user-selectable input elements (e.g., radio buttons, check boxes, pick lists, time pickers, and/or date pickers) in the center portion of the integrated input area, detects (1132) a gesture on the touch-sensitive surface at a location that corresponds to a user-selectable input element in the center portion of the integrated input area, and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the user-selectable input element, selects (1134) the user-selectable input element. …."); FIGS. 5BB-5CC; Koch, ¶[0263]-[0264]; Koch, ¶[0384]-[0385] ("In some embodiments, the device detects (1136) a gesture on the touch-sensitive surface at a location that corresponds to the center portion of the integrated input area (e.g., a tap gesture on an icon to activate a popup menu or a predefined multifinger gesture within the center portion), and, in response to detecting the gesture on the touch-sensitive surface at the location that corresponds to the center portion of the integrated input area, displays (1138) a popup view. …."); FIGS. 5DD-5EE; Koch, ¶[0265].<br><br>Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for at least this reason.<br><br>Incorporating a search button and application (such as taught by Wang and Matthews) with Koch's center area application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Koch, represent nothing more than combining prior art elements according to known methods and techniques (providing search functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with information relating to searched files, contacts, text, media, etc.). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[9]** The system of claim 8, wherein said search application use at least one keyword typed through said keyboard. | Claim 9 depends from claim 8. Defendants incorporate all the prior art disclosures from claim 8 here, which anticipate and/or render claims 1 and 8 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 8 to show the additional limitations of claim 9 are anticipated and/or obvious for the same reasons set out in claims 1 and 8.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>For example, as discussed in [8], Koch describes using a search module with an Internet browser application (*see* Koch Figs. 5UU-5ZZ, Koch, ¶[0162]-[0163]), an "address book or contact list" application (Koch, ¶[0154]), a telephone application (Koch, ¶[0155]), a videoconferencing application (Koch, ¶[0156]), an e-mail application (Koch, ¶[0157]), a messaging application (Koch, ¶[0158]), or media player application with a "search module … to search for text, music, sound, image, video, and/or other files in memory 102 that match one or more search criteria (e.g., one or more user-specified search terms) in accordance with user instructions" (Koch, ¶[0166]). A POSITA would understand that "search criteria" and "search terms" include text, and that Koch describes to enter text using the soft (touchscreen) keyboard. *See* Koch, ¶[0133] ("text input module 134" "provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, browser 147, and any other application that needs text input)". Accordingly, a POSITA would have understood from Koch (or Koch as modified in [8]) to provide "wherein said search application use at least one keyword typed through said keyboard."<br><br>To the extent Keyless argues that Koch does not disclose or render obvious this limitation, it would have been obvious in view of Koch, a POSITA's pre-existing knowledge, and/or the teachings of Koch combined with the other references charted for this patent in these invalidity contentions, |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | including Wang and/or Matthews as discussed above for claim [8]. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Matthews discloses a "search for <foo>" in which "the computer system 100 may initiate a broader search for the user-entered text, e.g., by launching a full-text search or full-text search window," where "the user may be able to search the computer for <foo>, search the Internet for <foo>, and/or search some other computer or database for <foo>, regardless of where the text <foo> appears." Matthews at 19:2-8. Matthews further discloses that the system "may display any items first where the item's name begins with text matching the user-entered text, second where the item has a word other than its starting word that starts with text matching the user-entered text, and third where the item has any text matching the user-entered text." Matthews at 18:24-28. Matthews thus discloses "keyword search," wherein "said search application use at least one keyword typed through said keyboard."<br><br>A POSITA would have found it obvious to incorporate "wherein said search application use at least one keyword typed through said keyboard," as claimed. Matthews, for example, discloses to use a keyboard to input search keywords. A POSITA would have been motivated to combine such feature(s) with the disclosure of Koch, as an obvious and intuitive way to implement applications using Koch's "search module" (or Koch as modified in claim [8]). Typing a keyword through a keyboard was routine and conventional to a POSITA (as well as to a user of a device), as shown by Matthews. Furthermore, Koch already provides that the keyboard is used to enter text for "any … application that needs text input." Koch, ¶[0133]. Extending Koch's existing keyboard text entry functionality to accommodate entering a keyword into the search application (e.g., in the combination with Matthews) would be a straightforward, intuitive modification, requiring no more than ordinary skill. Incorporating the feature into Koch's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Koch, represent nothing more than combining prior art elements according to known methods and techniques (using a keyboard to type a keyword for search) to a search application to yield predictable results (search results to be used with or accessed by another application). |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[10]** The system of claim 1, wherein at least one of the applications is used for sharing at least one of text, pictures, or videos. | Claim 10 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 10 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos."<br><br>For example, and as discussed above for claims [4, 5], "information" shared from Koch's center area input application to the first application includes text and drawings (pictures). *See supra* claims [4, 5]. Thus, Koch provides "at least one of the applications is used for sharing at least one of text, pictures, or videos," as required by the claim.<br><br>Additionally, and as discussed above for claim [7], Koch alone and/or in combination with Sirpal-000 and/or Lavallee, and/or further in light of the knowledge of a POSITA (as confirmed, e.g., by reference to Sirpal-000 and/or Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application." A messaging application is an application "used for sharing at least one of text, pictures, or videos." Thus, for at least the same reasons, Koch alone and/or in combination with Sirpal-000 and/or Lavallee, and/or further in light of the knowledge of a POSITA (as confirmed, e.g., by reference to Sirpal-000 and/or |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos," as claimed. |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[11]** The system of claim 1, wherein said device is a mobile phone. | Claim 11 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 11 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said device is a mobile phone."<br><br>For example, Koch discloses that "[e]mbodiments of electronic devices, user interfaces for such devices, and associated processes for using such devices are described. In some embodiments, the device is a portable communications device, such as a mobile telephone, that also contains other functions, such as PDA and/or music player functions. Exemplary embodiments of portable multifunction devices include, without limitation, the iPhone®, iPod Touch®, and iPad® devices from Apple Inc. of Cupertino, Calif. Other portable electronic devices, such as laptops or tablet computers with touch-sensitive surfaces (e.g., touch screen displays and/or touch pads), may also be used." (Koch, ¶[0105].) Further, the "device typically supports a variety of applications, such as one or more of the following: … a telephone application." Koch, ¶[0107].<br><br>As illustrated below in FIGS. 1A and 3, Koch includes a "Telephone Module 139" within its memory for Applications. Koch, ¶[0135] ("Applications 136 may include the following modules (or sets of instructions), or a subset or superset thereof: … telephone module 138 …."). |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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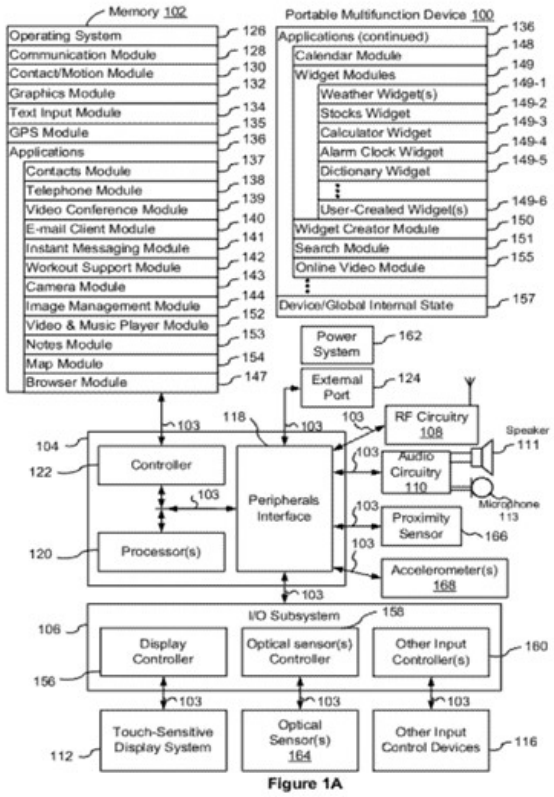



Figure 1A

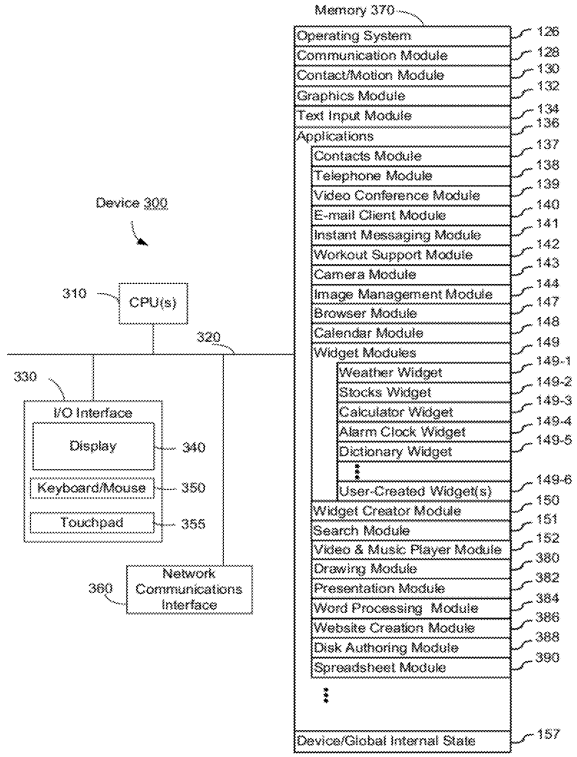
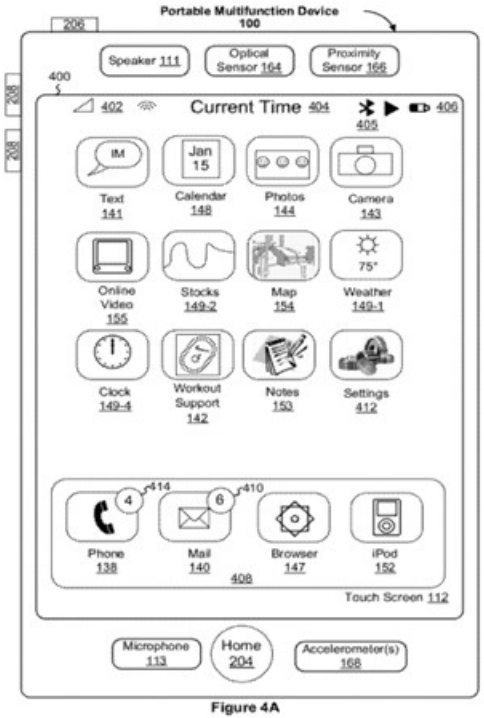



Figure 3

Koch at Figs. 1A, 3.

In addition, Koch illustrates "an exemplary user interface for a menu of applications on portable multifunction device 100 in accordance with some embodiments. Similar user interfaces may be implemented on device 300. In some embodiments, user interface 400 includes the following elements, or a subset or superset thereof: Signal strength indicator(s) 402 for wireless communication(s), such as cellular and Wi-Fi signals; … Tray 408 with icons for frequently used applications, such as: Phone 138, which may include an indicator 414 of the number of missed calls or voicemail messages …." Koch, ¶[0205]-[0227].

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Figure 4A<br><br>Koch at Fig. 4A.<br><br>Accordingly, Koch discloses "wherein said device is a mobile phone."<br><br>Additional exemplary citations include:<br><br>"RF (radio frequency) circuitry 108 receives and sends RF signals, also called electromagnetic signals. RF circuitry 108 converts electrical signals to/from electromagnetic signals and communicates with communications networks and other communications devices via the electromagnetic signals. RF circuitry 108 may include well-known circuitry for performing these functions, including but not limited to an antenna system, an RF transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a CODEC chipset, a |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | subscriber identity module (SIM) card, memory, and so forth. RF circuitry 108 may communicate with networks, such as the Internet, also referred to as the World Wide Web (WWW), an intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN), and other devices by wireless communication. The wireless communication may use any of a plurality of communications standards, protocols and technologies, including but not limited to Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a, IEEE 802.11b, IEEE 802.11g and/or IEEE 802.11n), voice over Internet Protocol (VoIP), Wi-MAX, a protocol for e-mail (e.g., Internet message access protocol (IMAP) and/or post office protocol (POP)), instant messaging (e.g., extensible messaging and presence protocol (XMPP), Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions (SIMPLE), Instant Messaging and Presence Service (IMPS)), and/or Short Message Service (SMS), or any other suitable communication protocol, including communication protocols not yet developed as of the filing date of this document." Koch, ¶[0114].<br><br>"Device 100 may also include one or more proximity sensors 166. FIG. 1A shows proximity sensor 166 coupled to peripherals interface 118. Alternately, proximity sensor 166 may be coupled to input controller 160 in I/O subsystem 106. In some embodiments, the proximity sensor turns off and disables touch screen 112 when the multifunction device is placed near the user's ear (e.g., when the user is making a phone call)." Koch, ¶[0124].<br><br>"In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, contacts module 137 may be used to manage an address book or contact list (e.g., stored in application internal state 192 of contacts module 137 in memory 102 or memory 370), including: adding name(s) to the address book; deleting name(s) from the address book; associating telephone number(s), e-mail address(es), physical address(es) or other information with a name; associating an image with a name; categorizing and sorting names; providing telephone numbers or e-mail addresses to initiate and/or facilitate communications by telephone 138, video conference 139, e-mail 140, or IM 141; and so forth." (Koch, ¶[0154].) |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | "In conjunction with RF circuitry 108, audio circuitry 110, speaker 111, microphone 113, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, telephone module 138 may be used to enter a sequence of characters corresponding to a telephone number, access one or more telephone numbers in address book 137, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation and disconnect or hang up when the conversation is completed. As noted above, the wireless communication may use any of a plurality of communications standards, protocols and technologies." Koch, ¶[0155]. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[12P]** A method comprising: | To the extent that the preamble is held to be limiting, Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses a "method comprising."<br><br>For example, Koch discloses "Device, Method, and Graphical User Interface for Manipulating Soft Keyboards." Koch, Title. Koch further discloses "A method includes, at an electronic device with a display and a touch-sensitive surface: concurrently displaying a first text entry area and an unsplit keyboard on the display; detecting a gesture on the touch-sensitive surface; and, in response to detecting the gesture on the touch-sensitive surface, replacing the unsplit keyboard with an integrated input area." Koch, Abstract.<br><br>Additional exemplary disclosures include:<br><br>"Accordingly, there is a need for electronic devices with faster, more efficient methods and interfaces for manipulating soft keyboards. Such methods and interfaces may complement or replace conventional methods for manipulating soft keyboards. Such methods and interfaces reduce the cognitive burden on a user and produce a more efficient human-machine interface. For battery- |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | operated devices, such methods and interfaces conserve power and increase the time between battery charges." Koch, ¶[0007].<br><br>"In accordance with some embodiments, a method is performed at an electronic device with a display and a touch-sensitive surface. The method includes: concurrently displaying a first text entry area and an unsplit keyboard on the display; detecting a gesture on the touch-sensitive surface; and, in response to detecting the gesture on the touch-sensitive surface, replacing the unsplit keyboard with an integrated input area. The integrated input area includes: a left portion with a left side of a split keyboard; a right portion with a right side of the split keyboard; and a center portion in between the left portion and the right portion." Koch, ¶[0009]. |
| **[12A]** assigning a first zone of a touch screen to an interface of a first application; | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "assigning a first zone of a touch screen to an interface of a first application."<br><br>As discussed *supra* claim [1C], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein a first zone of said touchscreen is assigned to an interface of said first application." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12B]** assigning a second zone of said touch screen to an on-screen keyboard; and | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "assigning a second zone of a touch screen to an on-screen keyboard."<br><br>As discussed *supra* claim [1C], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein . . . a |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | second zone of said touchscreen is assigned to said keyboard." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12C]** based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen and | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen."<br><br>As discussed *supra* claim [1D], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone." *See supra* claim [1D]. This limitation is disclosed for at least the same reasons. |
| **[12D]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen. | Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen."<br><br>As discussed *supra* claim [1E], Koch discloses this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [1E]. |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[13]** The method of claim 12, comprising using said keyboard with both of said applications. | Claim 13 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 13 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "using said keyboard with both of said applications."<br><br>As discussed *supra* claim [3], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said keyboard is used with both of said applications." *See supra* claim [3]. This limitation is disclosed for at least the same reasons. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[14]** The method of claim 12, wherein at least one of said applications is one of, a text messaging application and an image sharing application. | Claim 14 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 14 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein at least one of said applications is one of, a text messaging application and an image sharing application." |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | As discussed *supra* claim [7], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein at least one of the applications is a messaging application." *See supra* claim [7]. A "messaging application" is at least one of "a text messaging application and an image sharing application." Thus, this limitation is disclosed for at least the same reasons. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[15]** The method of claim 12, wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application. | Claim 15 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 15 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>As discussed *supra* claim [8], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application." *See supra* claim [8].<br><br>Further, and as discussed *supra* claim [1D], Koch discloses using a keyboard button (e.g., keyboard split key) to activate a second application (center area application). Thus, Koch (or, alternatively, Koch as modified in claim [8], *supra*) provides that the "search application [is] activated by |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>Thus, Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, provides "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application," as claimed. |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[16]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard. | Claim 16 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 16 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>As discussed *supra* claim [9], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein said search application use at least one keyword typed through said keyboard." *See supra* claim [9]. This feature is disclosed for at least the same reasons. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[17]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard after said search application is activated. | Claim 17 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 17 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated."<br><br>As discussed *supra* claim [9], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said search application use at least one keyword typed through said keyboard." *See supra* claim [9]. Claim 17 recites the same feature and further requires that the keyword be "typed through said keyboard after said search application is activated."<br><br>For example, in Koch, as well as Koch as modified in claim [8], *supra*, a user interacts with the "second application" after it has been activated and, thus, types in the keyword after the second application has been activated.<br><br>For example, as discussed above in claim [9], in Matthews, the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item. Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match." Matthews at 18:31-51. A POSITA would understand that for the search interface of Matthews to receive the entered text input or search input, the search interface must be active. Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Thus, Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, including as modified in claim [8], *supra*, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated," as claimed. |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[18]** The method of claim 12, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen. | Claim 18 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 18 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen."<br><br>As discussed *supra* claim [4], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen." *See supra* claim [4]. This feature is disclosed for at least the same reasons. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[19]** The method of claim 18, wherein said information includes at least one of a text, an image, a video, a webpage and a URL. | Claim 19 depends from claims 18 and 12. Defendants incorporate all the prior art disclosures from claims 18 and 12 here, which anticipate and/or render claims 18 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 18 and 12 to show the additional limitations of claim 19 are anticipated and/or obvious for the same reasons set out in claims 18 and 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said information includes at least one of a text, an image, a video, a webpage and a URL."<br><br>As discussed *supra* claim [5], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL." *See supra* claim [5]. This feature is disclosed for at least the same reasons. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[20]** The method of claim 12, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 20 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 20 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application." |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | As discussed *supra* claim [2], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application." *See supra* claim [2]. This feature is disclosed for at least the same reasons. |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[21]** The method of claim 12, wherein said touch screen is integrated within a mobile communication device. | Claim 21 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 21 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Koch, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said touch screen is integrated within a mobile communication device."<br><br>As discussed *supra* claim [11] and claim [1A], Koch discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, the "electronic device having a touchscreen" and "wherein said device is a mobile phone" *See supra* claims [1A, 11]. In addition, Koch includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, an application for sharing text, pictures, and/or videos with other users, as discussed *supra*, claims [7] and [10], making Koch a mobile communication device for this additional reason. |

# Appendix B3

**Exhibit B3**

**Invalidity of Asserted Claims of the '922 Patent**

**in view of the Samsung Galaxy Note 10.1**

The Samsung Galaxy Note 10.1 (GT-N8013) with TouchWiz UI, running Android 4.1 (Jelly Bean) ("Note 10.1"),[1] was publicly available and/or used in the United States, and was thus available to and known or used by others in the United States, at least as early as January 15, 2013, when the update to Android 4.1.2 was made publicly available, and as early as July 2012 and not later than and October 2012, when models designated GT-N8013ZWYXAR and GT-N8013ZWSXAR were first released (running Android 4.0 (Ice Cream Sandwich) with substantially the same functionality).[2] Thus, the Note 10.1 qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).[3]

The Note 10.1 is described in at least the following documents and other materials cited in this chart:

- Samsung Galaxy Note 10.1 Android Tablet User Manual, GT-N8013_UM_English_UEALGB_BH_080612_F3 (copyright 2012 Samsung Electronics America, Inc.) ("Note 10.1 Manual"). SAM-KEY_00987331.

[1] Unless stated otherwise, Note 10.1 refers to the Galaxy Note 10.1 products with Samsung's TouchWiz UI, running on Android 4.0 (Ice Cream Sandwich) or Android 4.1 (Jelly Bean), as specified herein. This chart depicts images of a Note 10.1 product running Android 4.1.2. Each of these products with Samsung's TouchWiz UI, running on Android 4.0 (Ice Cream Sandwich) or Android 4.1 (Jelly Bean), was publicly available and/or used, and were thus available to and known or used by others in the United States before any priority date that Keyless Licensing LLC (or "Keyless") is entitled to, if any, for the asserted '922 patent claims (*see infra*, n.2).

[2] On information and belief, the predecessor version—Android 4.0—included substantially the same functionality as relied on in this chart. As such, Samsung reserves the right to rely on Android version 4.0, including as originally implemented on Note 10.1 devices.

[3] Keyless Licensing LLC (or "Keyless") alleges that the asserted claims of the '922 patent are entitled to priority as early as February 17, 2013. However, as explained in the cover pleading, the asserted claims of the '922 patent are not entitled to Keyless's claimed priority date due to inadequate written description support. Assuming the claims are not invalid under Section 112 (*see, e.g.*, cover pleading), the earliest possible priority date for the asserted '922 patent claims is December 24, 2013. As a result, the '922 patent is subject to the AIA. The inclusion of any pre-AIA statutes is predicated on Keyless's interpretation of priority, which Defendants disagree with.

- Droid Life, *Samsung Relaunches the Galaxy Note 10.1 With Quad-core Processor and 2GB RAM, Arriving This Month*, Aug. 6, 2012, available at https://www.droid-life.com/2012/08/06/samsung-relaunches-the-galaxy-note-10-1-with-quad-core-processor-and-2gb-ram-arriving-this-month/ ("*Galaxy Note 10.1 Arriving This Month*"). SAM-KEY_00992920.
- Droid Life, *Samsung Galaxy Note 10.1 Launches Tomorrow in the U.S.*, Aug. 15, 2012, available at https://www.droid-life.com/2012/08/15/samsung-galaxy-note-10-1-launches-tomorrow-in-the-u-s/ ("*Galaxy Note 10.1 Launches Tomorrow*"). SAM-KEY_00992913.
- Android Wiki, *Android 4.0 Ice Cream Sandwich*, available at https://android.fandom.com/wiki/Android_4.0_Ice_Cream_Sandwich ("*Android 4.0 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993081.
- Android Wiki, *Android 4.1 Jelly Bean*, available at https://android.fandom.com/wiki/Android_4.1_Jelly_Bean ("*Android 4.1 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993086.
- Droid Life, *Jelly Bean 4.1.2 Update for Samsung Galaxy Note 10.1 Update is Here*, Jan. 15, 2013, available at https://www.droid-life.com/2013/01/15/jelly-bean-4-1-2-update-for-samsung-galaxy-note-10-1-update-is-here/ ("*Galaxy Note 10.1 Update is Here*"). SAM-KEY_00992901.
- XDA Forums, *Jelly Bean for US N8013 OTA downloading now*, Jan. 15, 2013, available at https://xdaforums.com/t/jelly-bean-for-us-n8013-ota-downloading-now.2100387/ ("*Jelly Bean for US N8013*"). SAM-KEY_00992944.
- YouTube, The Verge, *Samsung Galaxy Note 10.1 review*, Aug. 15, 2012, available at https://www.youtube.com/watch?v=sNkKc81Ug34 ("*Verge Note 10.1 Review*"). SAM-KEY_00992887.
- YouTube, DetroitBORG, *Samsung Galaxy Note 10.1 Tablet: Unboxing & Review*, Aug. 25, 2012, available at https://www.youtube.com/watch?v=BLylcKnHnlU ("*DetroitBORG Galaxy Note 10.1 Unboxing*"). SAM-KEY_00992886.
- Documents produced in this litigation, as cited herein, including but not limited to SAM-KEY_00993816-19..
- Physical products acquired in this litigation, including but not limited to, a Galaxy Note 10.1 with Samsung's TouchWiz UI running on Android Version 4.1.2 (Ice Cream Sandwich), Kernel version 3.0.31-813049 (installed Jan. 9, 2013), Build number JZO54K.N8013UEUCMA3, which was available from January 2013, as referenced herein (Note 10.1 Product.).
- Expected testimony and evidence regarding the development, design, and/or use of the Samsung products operating with TouchWiz, Android 4.0, and/or Android 4.1.
- Expected testimony and evidence regarding the sale, offer for sale, and public use of the Samsung products operating with TouchWiz, Android 4.0, and/or Android 4.1.

- Source code for a Note 10.1 as referenced herein and/or acquired.

Citations to the above-listed references are exemplary, and Samsung reserves the right to rely on additional passages, prior art, and information regarding the operation and functionality of the Note 10.1 obtained through fact, expert, and third-party discovery, which is ongoing.

The Note 10.1 qualifies as prior art to U.S. Patent No. 10,976,922 ("'922 patent") at least under AIA 35 U.S.C. §§ 102(a)(1).2 Samsung's TouchWiz with Android 4.0 release was available and/or used before the priority date to which the '922 patent claims are entitled, if any. *See supra* note 1. As one example, Samsung's TouchWiz with Android 4.0 release was available and/or used in the United States at least as early as July 2012 (*see, e.g.*, SAM-KEY_00993816-19) and August 2012 (*Galaxy Note 10.1 Arriving This Month*, *Galaxy Note 10.1 Launches Tomorrow*, *Verge Note 10.1 Review*, *DetroitBORG Galaxy Note 10.1 Unboxing*). As another example, Samsung's TouchWiz with Android 4.1.2 release was available and/or used in the United States at least as early as January 2013 (*see*, *e.g.*, *Galaxy Note 10.1 Update is Here*, *Jelly Bean for US N8013*, Note 10.1 Product (running software installed January 2013)).

The Note 10.1 anticipates or renders obvious alone, or with other references renders obvious one or more of the asserted claims of the '922 patent. To the extent Keyless contends that the Note 10.1 does not disclose one or more limitations of the asserted claims, it would have been obvious to modify the Note 10.1, or combine the Note 10.1 with the knowledge of a person of ordinary skill in the art ("POSITA") and/or with one or more of the following references, to render the claims at issue in the '922 patent invalid. The chart below illustrates how the asserted claims of the '922 patent are invalid in view of the Note 10.1 and/or additional secondary references listed below, including but not limited to the prior art identified in Defendant's Invalidity Contentions.

- Note 10.1 Manual. In addition to being evidence of the existence, availability, and design of the Note 10.1, the Note 10.1 Manual qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- *Verge Note 10.1 Review*. In addition to being evidence of the existence, availability, and design of the Note 10.1, *Verge Note 10.1 Review* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- *DetroitBORG Galaxy Note 10.1 Unboxing*. In addition to being evidence of the existence, availability, and design of the Note 10.1, *DetroitBORG Galaxy Note 10.1 Unboxing* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- YouTube, ChatonSamsung, *Samsung ChatON - Chat Your Way (Tutorial Video) [HD]*, Sept. 2, 2011, available at https://www.youtube.com/watch?v=KntTVDjRJjo ("*ChatON Tutorial*"). *ChatON Tutorial* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).

- About.com, *Samsung ChatON – IM App Review*, archive captured October 5, 2013, available at https://web.archive.org/web/20131005080603/http://voip.about.com:80/od/mobilevoip/fr/Samsung-Chaton-Im-App-Review.htm ("*About.com*"). *About.com* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- Gadgets360, *Samsung unveils ChatON 2.0 with multiple device syncing, new social features and more*, Dec. 27, 2012, available at https://www.gadgets360.com/apps/news/samsung-unveils-chaton-20-with-multiple-device-syncing-new-social-features-and-more-310412 ("*Gadgets360*"). *Gadgets360* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- Android Police, *Samsung's ChatON App Updated To v2.7.3 With Voice And Video Chat For GS4, Animated GIFs, And More*, June 11, 2013, available at https://www.androidpolice.com/2013/06/11/samsungs-chaton-app-updated-to-v2-7-3-with-voice-and-video-chat-for-gs4-animated-gifs-and-more/ ("*Android Police*"). *Android Police* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- Gadgeteer, *Samsung ChatON Takes Chatting on your Phone to the Next Level*, Sept. 25, 2012, available at https://the-gadgeteer.com/2012/09/25/samsung-chaton-takes-chatting-on-your-phone-to-the-next-level/ ("*Gadgeteer*"). *Gadgeteer* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- YouTube, Tim Schofield, *How to Install the ICS Messaging App on ANY Android Phone*, Jan. 17, 2012, https://www.youtube.com/watch?v=qNRwdAcG5G4 ("*ICS Messaging*"). *ICS Messaging* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- U.S. Patent Application Publication No. 2013/0187861A1 to Lavallee ("Lavallee"), filed on January 19, 2012, and published on July 25, 2013. Lavallee qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0110486A1 to Sirpal et al. ("Sirpal-486"), filed on September 28, 2011, and published on May 3, 2012. Sirpal-486 incorporates by reference U.S. patent application nos. 61/389,000, 61/389,117, 61/389,087, and 61/458,150, all of which are included as part of its disclosure, at least as of the date that Sirpal-486 was published. Samsung reserves the right to rely on the incorporated materials as part of Sirpal-486. Sirpal-486 further claims priority as early as October 1, 2010, through one or more provisional applications identified on its face. Sirpal-486 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Additionally, PCT Publication No. WO2012/044782 (filed on September 29, 2011, and published on April 5, 2012) ("Sirpal-782") and U.S. Patent No. 8,832,577 ("Sirpal-577") (filed September 28, 2011,

and issued on September 9, 2014) include equivalent disclosure to Sirpal-486 and qualify as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on any of Sirpal-782 or Sirpal-577 for their disclosures equivalent to Sirpal-486.

- U.S. Provisional Patent Application No. 61/389,000 to Sirpal et al. ("Sirpal-000"), was filed on October 1, 2010, and published at least by May 3, 2012, upon the publication of U.S. Patent Application No. 13/247,801 (as Sirpal-486), which claimed priority to and incorporated by reference Sirpal-000. Sirpal-000 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on Sirpal-000 on its own, in addition to relying on Sirpal-000 as an incorporated part of Sirpal-486.
- U.S. Patent Application Pub. No. 2013/0050102 A1 to Wang et al. ("Wang"), was filed November 28, 2011, and published February 28, 2013. Wang qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 7,340,686 to Matthews et al. ("Matthews"), was filed on March 22, 2005, and issued on March 4, 2008. Matthews qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).
- Samsung Galaxy Nexus (SCH-I515) ("Nexus") as discussed in Exhibit B5 to these Invalidity Contentions. Nexus running Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean) ("Nexus"), was publicly available and/or used in the United States, and was thus available to and known or used by others in the United States, at least as early as November 28, 2012, when updates to Android 4.2.2 were made publicly available, and as early as November 2011 and January 2012, when models designated SCH-I515MSAVZW and SCH-I515ZSAVZW were first released running Android 4.0 (Ice Cream Sandwich), as discussed in Exhibit B5. Thus, the Nexus qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- U.S. Patent Application Publication No. 2012/0113023 to Koch et al. ("Koch"), was filed on March 30, 2011, published on May 10, 2012, and claims priority to Provisional Application No. 61/410,862. Koch qualifies as prior art at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- PC Mag, *Enter the Phablet: A History of Phone-Tablet Hybrids*, Feb. 13, 2012, available at https://www.pcmag.com/news/enter-the-phablet-a-history-of-phone-tablet-hybrids ("*PC Mag*"). *PC Mag* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- NBC News, *Is Samsung's 'phablet' the shape of things to come?*, Apr. 5, 2012, available at https://www.nbcnews.com/id/wbna46963404 ("*NBC News*"). *NBC News* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).

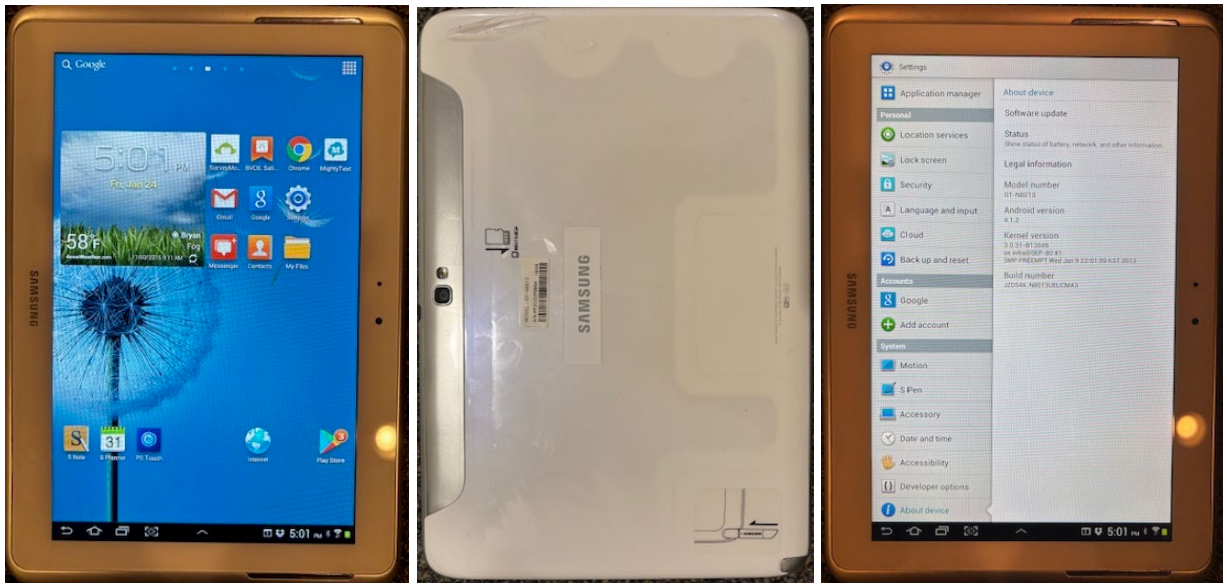
- Reuters, *Samsung dazzles phablet followers with more girth, size*, Sept. 26, 2013, available at https://www.reuters.com/article/technology/samsung-dazzles-phablet-followers-with-more-girth-size-idUSBRE98P0WA/ ("*Reuters*"). *Reuters* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- U.S. Patent No. 10,198,163 to Yabuki ("Yabuki"), was filed as Application No. 14/406,377 on December 8, 2014, and issued on February 5, 2019. Yabuki was filed as a national phase application of PCT Application No. PCT/JP2013/065733, which was filed on June 6, 2013, designated the United States, and claimed priority to Japanese Application No. 2012-130755 (filed on June 8, 2012). Yabuki qualifies as prior art at least under 35 U.S.C. § 102(a)(2). Yabuki's PCT Application claims priority to Japanese Application No. 2012-130755 (filed on June 8, 2012), designated the United States, and was published as WO2013/183722 on December 12, 2013, and thus the PCT publication also qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on WO2013/183722 as prior art for the same reasons described below for Yabuki.

With respect to any proposed modifications to the Note 10.1, such modification would have been obvious to try, an obvious combination of prior art elements according to known methods to yield predictable results, a simple substitution of one known element for another to obtain predictable results, a use of known techniques to improve a similar devices or method in the same way, an application of a known technique to a known device or method ready for improvement to yield predictable results, a variation of a known work in one field of endeavor for use in either the same field or a different one based on design incentives or other market forces with variations that are predictable to a person of ordinary skill in the art (POSITA), and/or obvious in view of teachings, suggestions, and motivations in the prior art that would have led a POSITA to modify or combine the prior art references.

The excerpts cited herein are exemplary. For any claim limitation, Samsung may rely on excerpts cited for any other limitation and/or additional excerpts not set forth fully herein to the extent necessary to provide further explanation for a reference's disclosure of a limitation. Where an excerpt refers to or discusses a figure or figure items, that figure and any additional descriptions of that figure should be understood to be incorporated by reference as if set forth fully herein. Samsung reserves the right to further supplement this chart.

To the extent that these Invalidity Contentions rely on or otherwise embody particular interpretations of terms or phrases in the asserted claims, Samsung is not proposing any such interpretations as proper interpretations or constructions of those terms or phrases. Various positions put forth in this document are predicated on Keyless's interpretation of its claims as evidenced by its Infringement Contentions. Those positions are not intended to and do not necessarily reflect Samsung's interpretation of the true and proper scope of the asserted claims. Samsung further incorporates by reference all reservations of rights set forth in the Invalidity Contentions, as if fully set forth herein.

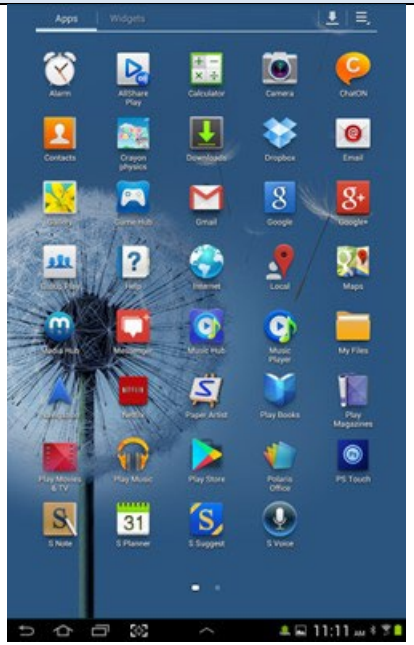
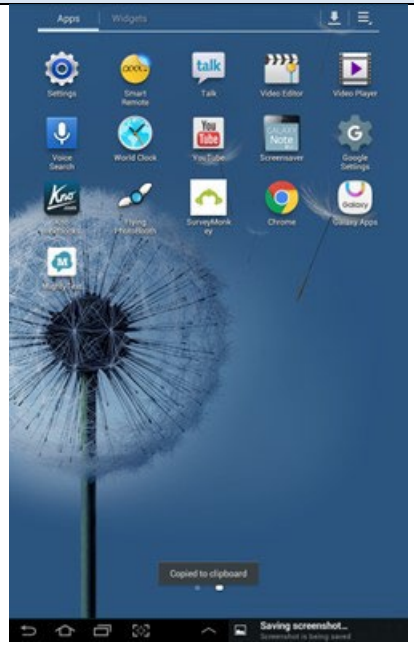
Defendants' arguments throughout these invalidity contentions are based on Keyless's apparent interpretation of the claims in its infringement contentions. Defendants do not agree that such interpretation is proper and reserve the right to argue that the mapped actions do not infringe any claims of the '922 patent. In the alternative, should the Court or factfinder construe and/or apply the claims in a manner consistent with Keyless's interpretations in its infringement contentions for the '922 patent, the claims are invalid for at least the reasons set forth herein.

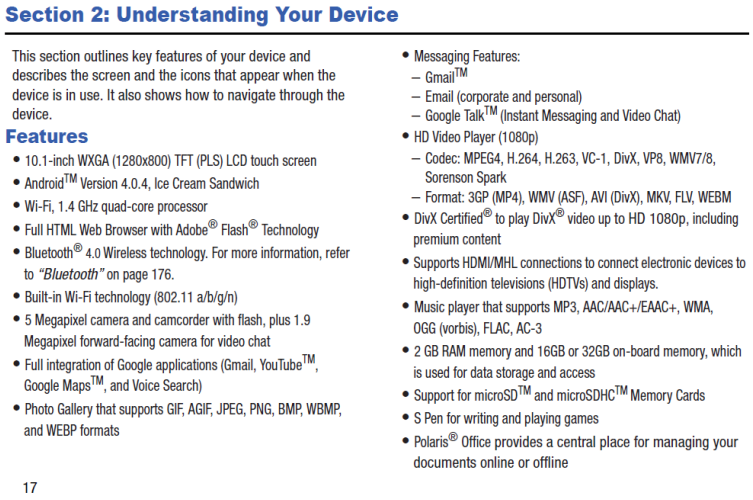
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[1P]** A system for using multiple applications on a screen of a device, comprising: | To the extent that the preamble is held to be limiting, Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes a "system for using multiple applications on a screen of a device."<br><br>For example, the Note 10.1 is a device with a screen for using multiple applications. For example, the Note 10.1 Product is depicted below.<br><br>  <br><br>Note 10.1 Product.[4] |

[4] Samsung reserves the right to rely on any Note 10.1 device, including the Note 10.1 Product shown here. On information and belief, such devices function substantially the same as disclosed in this chart. A copy of the source code for Note 10.1 has been made available in the Washington, DC office of Defendants' counsel. Defendants' reserve the right to rely on the Note 10.1 source code when demonstrating the functionality and supporting the invalidity theories described herein. The Note 10.1 Product identified here is Model GT-N8013, and bears Serial Number RF2CC0P966A. The Note 10.1 Product indicates that it is running Android 4.1.2, Kernel

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | The Note 10.1 Product includes a Home screen view, which provides icons that are used to open various software applications, as illustrated below:<br>  <br><br>Note 10.1 Product (recording of Home screen).<br><br>Additionally, an "Apps" icon "  " on the Note 10.1 Product Home screen (illustrated at the top-right corner in the figure above) may be used to access an Apps screen, below, which displays additional application icons. |

Version 3.0.31-813049 se.infra@SEP-80 #1 SMP PREEMPT Wed Jan 9 23:01:59 KST 2013, Build Number JZO54K.N8013UEUCMA3. Samsung's records indicate that the firmware was last updated on January 15, 2013.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Note 10.1 Product (recordings of Apps screen).<br>Additional exemplary citations include:<br>Note 10.1 Manual discloses that the Note 10.1 includes a "10.1-inch WXGA (1280x800) TFT (PLS) LCD touch screen," which is a screen of a device. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>**Section 2: Understanding Your Device**<br>This section outlines key features of your device and describes the screen and the icons that appear when the device is in use. It also shows how to navigate through the device.<br>**Features**<br>• 10.1-inch WXGA (1280x800) TFT (PLS) LCD touch screen<br>• Android™ Version 4.0.4, Ice Cream Sandwich<br>• Wi-Fi, 1.4 GHz quad-core processor<br>• Full HTML Web Browser with Adobe® Flash® Technology<br>• Bluetooth® 4.0 Wireless technology. For more information, refer to *"Bluetooth"* on page 176.<br>• Built-in Wi-Fi technology (802.11 a/b/g/n)<br>• 5 Megapixel camera and camcorder with flash, plus 1.9 Megapixel forward-facing camera for video chat<br>• Full integration of Google applications (Gmail, YouTube™, Google Maps™, and Voice Search)<br>• Photo Gallery that supports GIF, AGIF, JPEG, PNG, BMP, WBMP, and WEBP formats<br>• Messaging Features:<br>– Gmail™<br>– Email (corporate and personal)<br>– Google Talk™ (Instant Messaging and Video Chat)<br>• HD Video Player (1080p)<br>– Codec: MPEG4, H.264, H.263, VC-1, DivX, VP8, WMV7/8, Sorenson Spark<br>– Format: 3GP (MP4), WMV (ASF), AVI (DivX), MKV, FLV, WEBM<br>• DivX Certified® to play DivX® video up to HD 1080p, including premium content<br>• Supports HDMI/MHL connections to connect electronic devices to high-definition televisions (HDTVs) and displays.<br>• Music player that supports MP3, AAC/AAC+/EAAC+, WMA, OGG (vorbis), FLAC, AC-3<br>• 2 GB RAM memory and 16GB or 32GB on-board memory, which is used for data storage and access<br>• Support for microSD™ and microSDHC™ Memory Cards<br>• S Pen for writing and playing games<br>• Polaris® Office provides a central place for managing your documents online or offline<br>17<br>Note 10.1 Manual at 17.<br>Note 10.1 further discloses applications to be used on the screen of the device, including exemplary applications identified as "preloaded": |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|

3. Touch **Back** to return to the Home screen.

## Applications

The following is an alphabetical list of the applications that come preloaded on your device.

**Alarm**: Schedule alarms to remind you of appointments or events, or as a wake-up. For more information, refer to *"Alarm"* on page 147.

**AllShare Play™**: Share your on-device media content with other external devices using DLNA (Digital Living Network Alliance) and built-in AllShare Play technology. For more information, refer to *"AllShare Play"* on page 149.

**B&N Nook**: Use the Barnes & Noble Nook application to download books for reading right on your device. A shortcut to B&N Nook displays on a Home screen by default. For more information, refer to *"B&N Nook"* on page 151.

**Calculator**: The calculator provides the basic arithmetic functions to solve simple arithmetic problems and advanced operators to solve more complex problems. For more information, refer to *"Calculator"* on page 151.

**Camera**: Take photos or record videos. A shortcut to Camera displays on a Home screen by default. For more information, refer to *"Camera"* on page 119.

**ChatON**: A smart-messaging app that gives you a host of innovative ways to stay connected with all your friends and family, regardless of their device or platform. A shortcut to ChatON displays on a Home screen by default. For more information, refer to *"ChatON"* on page 82.

**Contacts**: Save and manage contact information for your friends and colleagues. For more information, refer to *"Contacts and Accounts"* on page 55.

**Crayon physics**: Crayon Physics Deluxe is a game that uses two-dimensional physics, including gravity, mass, kinetic energy, and transfer of momentum. For more information, refer to *"Crayon Physics"* on page 152.

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**Downloads**: Files, apps, and other items you download in Internet, Gmail, Email, or in other ways, are stored on your tablet's internal storage. Use the Downloads app to view, reopen, or delete what you have downloaded. For more information, refer to *"Downloads"* on page 153.

**Dropbox**: Provides access to your personal computer files directly from your device. Let's you take your photos, docs, and videos anywhere. A shortcut to Dropbox displays on a Home screen by default. For more information, refer to *"Dropbox"* on page 153.

**Email**: Send and receive email from your device. A shortcut to Email displays on a Home screen by default. For more information, refer to *"Email"* on page 70.

**Gallery**: View and manage photos stored on your device. For more information, refer to *"Gallery"* on page 155.

**Game Hub**: Access social and premium games. Join Game Hub to enjoy free games with your friends. For more information, refer to *"Game Hub"* on page 155.

**Gmail**: Send and receive email with Gmail, Google's web-based email. For more information, refer to *"Gmail"* on page 65.

**Google+**: Share updates and see what is going on around you with Google+. For more information, refer to *"Google+"* on page 155.

**Internet**: Access the Internet. A shortcut to Internet displays on the main Home screen by default. For more information, refer to *"Internet"* on page 83.

**Latitude**: Use Google Latitude to locate your friends on a map and share or hide your location. For more information, refer to *"Latitude"* on page 91.

**Maps**: Find locations and get directions with Google maps. A shortcut to Maps displays on the main Home screen by default. For more information, refer to *"Maps"* on page 93.

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| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|

**Media Hub**: Browse the latest movies and TV shows, then rent or purchase the media for viewing on your device. For more information, refer to *"Media Hub"* on page 156.

**Messenger**: With Google Messenger™, you can bring groups of friends together into a simple group conversation. For more information, refer to *"Messenger"* on page 156.

**Music Hub**: Allows you to purchase and download songs. For more information, refer to *"Music Hub"* on page 117.

**Music Player**: Play music and other audio files that you copy from your computer. For more information, refer to *"Viewing Your Music Library"* on page 111.

**My Files**: Find, view and manage files stored on an optional installed memory card. For more information, refer to *"My Files"* on page 157.

**Navigation**: Use Google Maps Navigation™ to search for locations, with turn-by-turn directions. For more information, refer to *"Navigation"* on page 96.

**Netflix**: Instantly watch TV shows and movies, streaming from Netflix. A shortcut to Netflix displays on a Home screen by default. For more information, refer to *"Netflix"* on page 158.

**Places**: Use Google Places™ and Google Maps to find places of interest and to add your own favorite places. For more information, refer to *"Places"* on page 98.

**Play Books**: Read eBooks from the web-based Google Play Books service. For more information, refer to *"Play Books"* on page 98.

**Play Movies**: Use the Play Movies app to view movies you rent from Google Play™ Movies or play any of your personal videos stored on your tablet. For more information, refer to *"Play Movies"* on page 159.

**Play Music**: Play music and other audio files that you copy from your computer with the Music app. For more information, refer to *"Play Music App"* on page 103.

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**Play Store**: Browse, download, and install Android applications. A shortcut to Play Store displays on the main Home screen by default. For more information, refer to *"Play Store"* on page 159.

**Polaris Office**: This application provides a central place for managing your documents online or offline. A shortcut to Polaris® Office displays on a Home screen by default. For more information, refer to *"Polaris Office"* on page 161.

**PS Touch**: Adobe® Photoshop® Touch lets you quickly combine images, apply professional effects, share the results with friends and family through social networking sites, and more. A shortcut to PS Touch displays on the main Home screen by default. For more information, refer to *"PS Touch"* on page 133.

**S Note**: Use S Note to create notes with productivity tools that turn handwriting into typed text and correct drawn shapes, lines, and formulas to make them perfect. A shortcut to S Note displays on the main Home screen by default. For more information, refer to *"S Note"* on page 162.

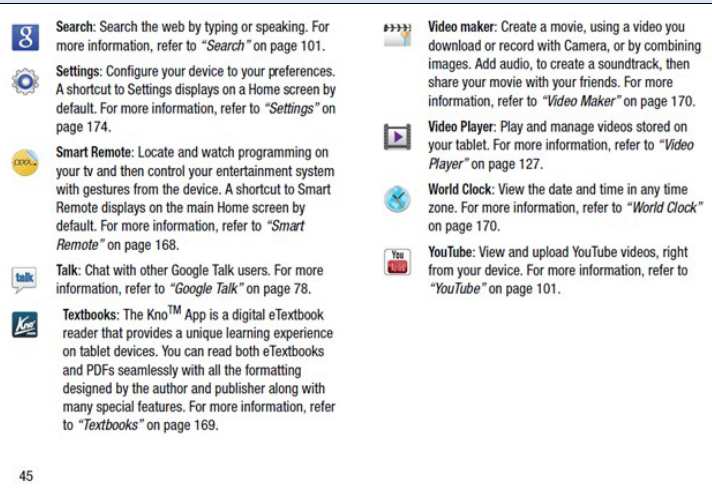
**S Planner**: Record events and appointments to manage your schedule. A shortcut to S Planner displays on the main Home screen by default. For more information, refer to *"S Planner"* on page 162.

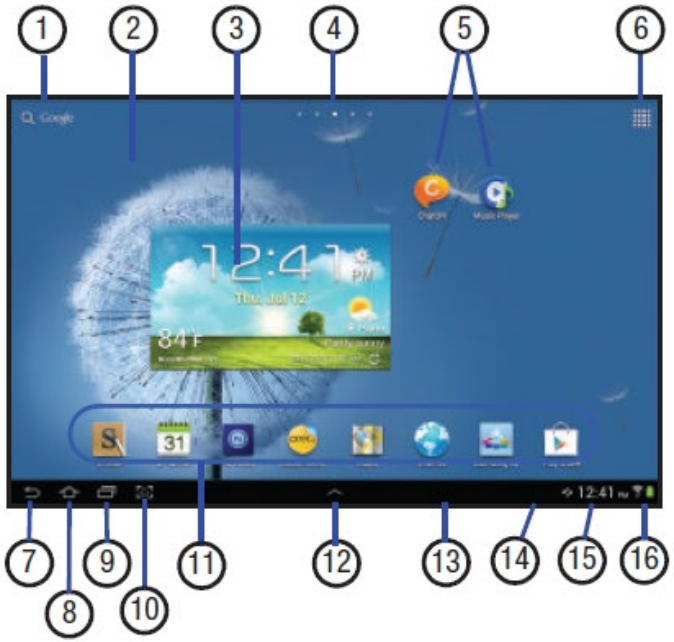
**S Suggest**: Recommends popular applications, when your device is connected to a Wi-Fi, that are guaranteed to be compatible with your device. For more information, refer to *"S Suggest"* on page 166.

**Samsung Apps**: Connect to Samsung Apps and make your smart device even smarter. Simply and easily download an abundance of applications to your device such as games, news, reference, social networking, navigation, and more. A shortcut to Samsung Apps displays on the main Home screen by default. For more information, refer to *"Samsung Apps"* on page 166.

**Screensaver**: When your tablet screen automatically times out, instead of a blank screen, enable the Galaxy Note 10.1 Screensaver, which is actually an action-packed video tour of all the fantastic features that you will find on your Galaxy Note. For more information, refer to *"Screensaver"* on page 167.

Understanding Your Device 44

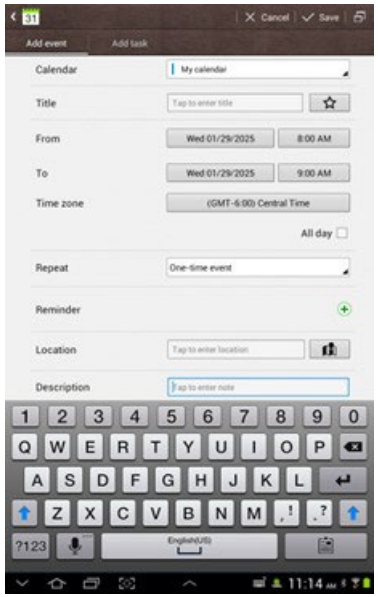
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>**Search:** Search the web by typing or speaking. For more information, refer to *"Search"* on page 101.<br>**Settings:** Configure your device to your preferences. A shortcut to Settings displays on a Home screen by default. For more information, refer to *"Settings"* on page 174.<br>**Smart Remote:** Locate and watch programming on your tv and then control your entertainment system with gestures from the device. A shortcut to Smart Remote displays on the main Home screen by default. For more information, refer to *"Smart Remote"* on page 168.<br>**Talk:** Chat with other Google Talk users. For more information, refer to *"Google Talk"* on page 78.<br>**Textbooks:** The Kno™ App is a digital eTextbook reader that provides a unique learning experience on tablet devices. You can read both eTextbooks and PDFs seamlessly with all the formatting designed by the author and publisher along with many special features. For more information, refer to *"Textbooks"* on page 169.<br>**Video maker:** Create a movie, using a video you download or record with Camera, or by combining images. Add audio, to create a soundtrack, then share your movie with your friends. For more information, refer to *"Video Maker"* on page 170.<br>**Video Player:** Play and manage videos stored on your tablet. For more information, refer to *"Video Player"* on page 127.<br>**World Clock:** View the date and time in any time zone. For more information, refer to *"World Clock"* on page 170.<br>**YouTube:** View and upload YouTube videos, right from your device. For more information, refer to *"YouTube"* on page 101.<br>45<br>Note 10.1 Manual at 41-45.<br>Applications may be accessed via icons displayed on the Home Screen of the Note 10.1, including as illustrated below (e.g., "5. App Shortcuts: Shortcuts to common applications"; "11: Quick Launch: This softkey can be set to launch several different applications."). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br><br>Note 10.1 Manual at 20-21.<br>Additionally, application icons are displayed on the Apps screen, which may be accessed via the "Apps" icon "  " labeled 6 in the figure above ("6. Apps: Display the Apps screen"). *Id.* at 20; *see also id.* at 40 ("The Apps screen holds all applications installed on your wireless device. Applications that you download and install from Google Play™ or from the web store are also added to a Home screen.").<br>Further, *Verge Note 10.1 Review* shows that the Note 10.1 included a system for using multiple applications on the screen of the device, as shown by the following video excerpts:<br>• 0:10. Home screen showing Quick Launch feature described above. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | • 1:30-1:35. Selection of Apps icon to open Apps screen.<br>• 1:35-2:07. Opening S Note application and demonstrating use of S Note application on the screen.<br>• 2:21-2:35. Opening S Planner application and demonstrating use of S Planner application on the screen.<br>• 3:55-4:10. Demonstrating use of S Note application and clipboard application on the screen.<br>Further, *DetroitBORG Galaxy Note 10.1 Unboxing* demonstrates that the Note 10.1 includes a system for using multiple applications on the screen of the device, as shown by the following video excerpts:<br>• 7:51. Home screen showing Quick Launch feature described above.<br>• 8:53-10:33. Selection of Apps icon to open the Apps screen; return to Home screen to show Quick Launch feature described above.<br>• 14:53-16:50. Opening S Note application and demonstrating use of S Note application on the screen.<br>• 16:54-17:33. Opening Internet application and demonstrating use of keyboard and handwriting pad with Internet application on the screen. |
| **[1A]** an electronic device having a touchscreen; | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "an electronic device having a touchscreen." |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | For example, the Note 10.1 Product is an electronic device that includes a touchscreen that responds to a user's touch inputs. Specifically, the Note 10.1 includes a "10.1-inch WXGA (1280x800) TFT (PLS) LCD touch screen."<br><br>**Section 2: Understanding Your Device**<br><br>This section outlines key features of your device and describes the screen and the icons that appear when the device is in use. It also shows how to navigate through the device.<br>**Features**<br>• 10.1-inch WXGA (1280x800) TFT (PLS) LCD touch screen<br>• Android™ Version 4.0.4, Ice Cream Sandwich<br>• Wi-Fi, 1.4 GHz quad-core processor<br>• Full HTML Web Browser with Adobe® Flash® Technology<br>• Bluetooth® 4.0 Wireless technology. For more information, refer to *"Bluetooth"* on page 176.<br>• Built-in Wi-Fi technology (802.11 a/b/g/n)<br>• 5 Megapixel camera and camcorder with flash, plus 1.9 Megapixel forward-facing camera for video chat<br>• Full integration of Google applications (Gmail, YouTube™, Google Maps™, and Voice Search)<br>• Photo Gallery that supports GIF, AGIF, JPEG, PNG, BMP, WBMP, and WEBP formats<br>• Messaging Features:<br>– Gmail™<br>– Email (corporate and personal)<br>– Google Talk™ (Instant Messaging and Video Chat)<br>• HD Video Player (1080p)<br>– Codec: MPEG4, H.264, H.263, VC-1, DivX, VP8, WMV7/8, Sorenson Spark<br>– Format: 3GP (MP4), WMV (ASF), AVI (DivX), MKV, FLV, WEBM<br>• DivX Certified® to play DivX® video up to HD 1080p, including premium content<br>• Supports HDMI/MHL connections to connect electronic devices to high-definition televisions (HDTVs) and displays.<br>• Music player that supports MP3, AAC/AAC+/EAAC+, WMA, OGG (vorbis), FLAC, AC-3<br>• 2 GB RAM memory and 16GB or 32GB on-board memory, which is used for data storage and access<br>• Support for microSD™ and microSDHC™ Memory Cards<br>• S Pen for writing and playing games<br>• Polaris® Office provides a central place for managing your documents online or offline<br>17<br><br>Note 10.1 Manual at 17.<br><br>Additionally, *Verge Note 10.1 Review* and *DetroitBORG Galaxy Note 10.1 Unboxing* both demonstrate a user providing touch interactions with the screen of the Note 10.1, as evidenced by the clips identified in [1P] above. |
| **[1B]** an on-screen keyboard for entering text in a first application running within said device | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "an on-screen keyboard for entering text in a first application running within said device."<br><br>For example, Note 10.1 discloses an on-screen keyboard, including as shown below. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating keyboard in use with S Note application).<br>Further, as illustrated below, the on-screen keyboard of the Note 10.1 is for entering text in various applications running within the device, including S Note (as illustrated above), as well as S Planner and Internet (illustrated below). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Note 10.1 Product (illustrating keyboard for entering text with S Planner (above (left)) and Internet (above (right)).<br>Additional exemplary citations include:<br>Note 10.1 Manual at 46-51, illustrated below, discloses a "virtual QWERTY keyboard," which "displays at the bottom of the screen." |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | |

## Section 3: Entering Text

This section describes how to enter words, letters, punctuation and numbers when you need to enter text.

### Samsung Keyboard

Your device uses a virtual QWERTY keyboard for text entry called the *Samsung keyboard*. Use the keyboard to enter letters, punctuation, numbers, and other characters into text entry fields or applications. Access the keyboard by touching any text entry field.

The keyboard displays at the bottom of the screen. By default, when you rotate the device, the screen orientation updates to display the keyboard at the bottom of the screen.




### Text Input Methods

Your device offers two text input methods.

- **Google voice typing**: You can use your voice to enter text using the Voice input feature. Your device recognizes your speech and enters text for you. For more information, refer to *"Using Speech Recognition"* on page 54.
- **Samsung keyboard**: The Samsung keyboard is also a virtual QWERTY keyboard that allows you to enter text by touching keys on the screen. The Samsung keyboard includes predictive text, which matches your key touches to common words so that you can select the word to enter it into your text.

### Changing the Input Method

When entering text, you can select the text input method.

1. Touch **Set up input methods** in the Status bar. The Set up input methods pop-up displays.
2. Touch an input method to activate it.
3. Touch to display that input method's settings.

For more information, refer to *"Keyboards and Input Methods"* on page 197.

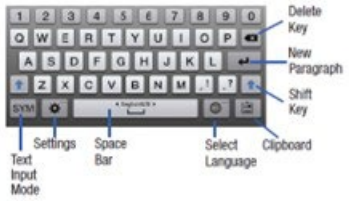


### Using the Samsung Keyboard

The Samsung keyboard is a custom virtual QWERTY keyboard, featuring predictive text. Input characters by touching the on-screen keys with your finger or use speech recognition.

As you enter characters, predictive text matches your key touches to common words and displays them. Select a word from the display to insert it into your text. For more information, refer to *"Using XT9 Predictive Text"* on page 49.

Your tablet also provides handwriting recognition to make the task of text entry that much easier.






### *Keyboard Types*

In addition to the default QWERTY keyboard, there are two other types of the Samsung keyboard: a ***Floating*** keyboard and a ***Split*** keyboard.

To change the keyboard type:

1. Use two fingers, such as your index finger and thumb, to make an inward pinch motion on the screen, where the keyboard is displayed.



A pop-up displays the three keyboard types.



2. Touch one of the keyboard types to display it.

The Split keyboard can be moved up and down and the Floating keyboard can be moved anywhere.

- Tap and hold with two fingers to move the Floating or Split keyboard.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|

### Configuring the Keyboard

To configure the Samsung keyboard to your preferences:

- Touch **Set up input methods** in the Status bar and then touch next to **Samsung keyboard** in the Set up input methods pop-up.

  – or –

  Touch **Settings** on the keyboard.

  The Samsung keyboard settings screen displays.

For more information, refer to *"Configuring the Samsung Keyboard"* on page 198.

### Entering Upper and Lower Case Letters

The default case is lower case (abc). Enter upper and lower case alphabet letters by touching the Shift key to toggle the case, before touching the letter key(s).

- Touch once to switch from abc to Abc mode.
- Touch twice to switch to ABC mode. When ABC mode is enabled, the Shift key background turns blue.

### Entering Symbols and Numbers

The number keys are displayed at the top of the keyboard and are always available.

To enter common symbols, touch SYM to switch to Symbols mode, then touch the corresponding key.

There are two pages of symbols. Touch 1/2 to switch to the next page.

Touch and hold a vowel key (A, E, I, O, U, or Y) or the C, N, or S key to open a small window where you can chose an accented vowel or other alternate letter. Slide to the letter until it is highlighted, and release.

Touch and hold the Period key ( . ) to open a small window with a set of common symbols.

### Other Keyboard Functions

Touch to select the language, if more than one language has been set. The current language displays on the space bar.

Touch and hold **Settings** and slide to to use the Handwriting feature. For more information, refer to *"Using the Handwriting Feature"* on page 52.

Touch to view the clipboard and manage saved text.



### Using XT9 Predictive Text

XT9 is a predictive text system that has next-letter prediction and regional error correction, which compensates for users pressing the wrong keys on QWERTY keyboards.

1. Touch **Set up input methods** in the Status bar.
   The Set up input methods pop-up displays.
2. Touch **Set up input methods**.
   The Language and input settings screen displays.
3. Touch next to Samsung keyboard to display Samsung keyboard settings.
4. Touch the Predictive text **OFF / ON** icon to turn Predictive text ON.
5. Touch the **Predictive text** field to modify XT9 associated settings. For more information, refer to *"Configuring the Samsung Keyboard"* on page 198.

**Note:** The XT9 option is available only when ABC mode has been selected.

6. Begin typing a word.
   A list of word options displays.




7. Touch to display more words.
   To add more words, see *"Adding Words To Your Word List"* on page 50.
8. Continue typing your message. XT9 mode can be used in portrait or landscape mode.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|

### Adding Words To Your Word List

To add more word options:

1. Touch **Set up input methods** in the Status bar.
   The Set up input methods pop-up displays.
2. Touch **Set up input methods**.
   The Language and input settings screen displays.
3. Touch next to Samsung keyboard to display Samsung keyboard settings.
4. Touch **Predictive text** → **My word list**.
5. Touch **Add word**.
6. Use the on-screen keyboard to enter the word.
7. Touch **Done**.

### Deleting Words From Your Word List

To delete words from your word list:

1. Navigate to My word list. For more information, refer to *"Adding Words To Your Word List"* on page 50.
2. Touch **Delete**.
3. Touch the existing words you want to delete or touch **Select all**, and then touch **Done**.
4. Touch **Delete**.

### *Editing Text*

You can edit the text you enter in text fields by cutting, copying, or pasting text. These operations can be performed within and across apps. However, some apps do not support editing some or all of the text displayed while others may offer their own way to select text.

### Editing Existing Text

To edit text that you have entered:

1. Touch the text at the point you want to edit.
   The **Cursor** displays at the point you touched.
2. Touch and drag the **Cursor** to a better position, if necessary.
3. Enter additional text or delete text by repeatedly touching the **Delete** key.

### Copying, Deleting, or Replacing Text

To select and copy, delete, or replace text:

1. Touch and hold the text or word you want to select.
   The selected text is highlighted with a tab at each end of the selection.
2. Touch and drag either tab to select more or less text.



**Tip:** Touch **Select all** in the Application bar to select all text in the field. Touch on another area of the screen or touch **Done** to deselect the text.

3. Depending on the action you want to take for the selected text, in the Application bar touch:
   - **Select all** to highlight all text in the field.
   - **Cut** to remove the selected text.
   - **Copy** to save the selected text to the clipboard.

   – or –

   Enter text by typing or speaking to replace the selection with what you type.

   – or –

   Touch the **Delete** key to delete the selected text.

### Pasting Text

To paste previously copied text:

1. Touch the text at the point you want to paste the copied text.
   The **Cursor** displays at the point you touched.
2. Touch the Cursor.
   A pop-up displays.
3. Touch **Paste** in the pop-up.

To paste text directly from the clipboard:

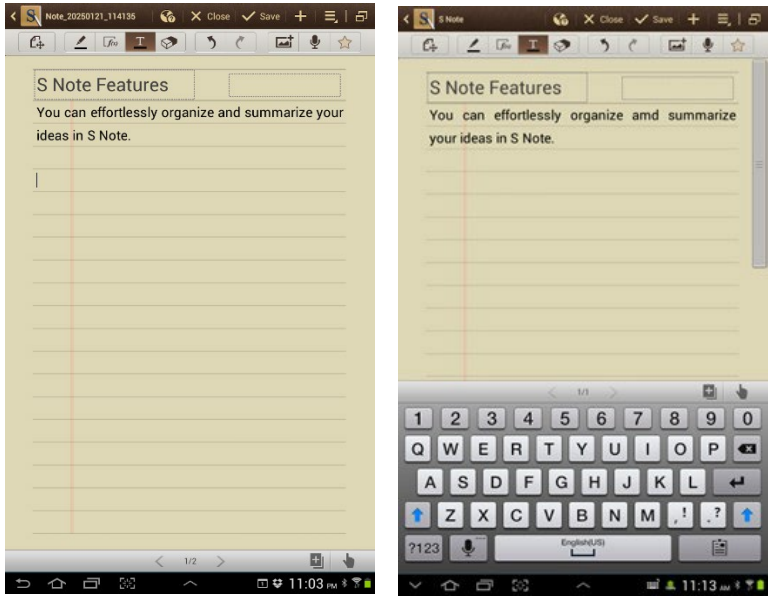
1. Touch the **Clipboard** key to display the text saved to the clipboard.
2. Touch a text block to paste that text where the **Cursor** is positioned.

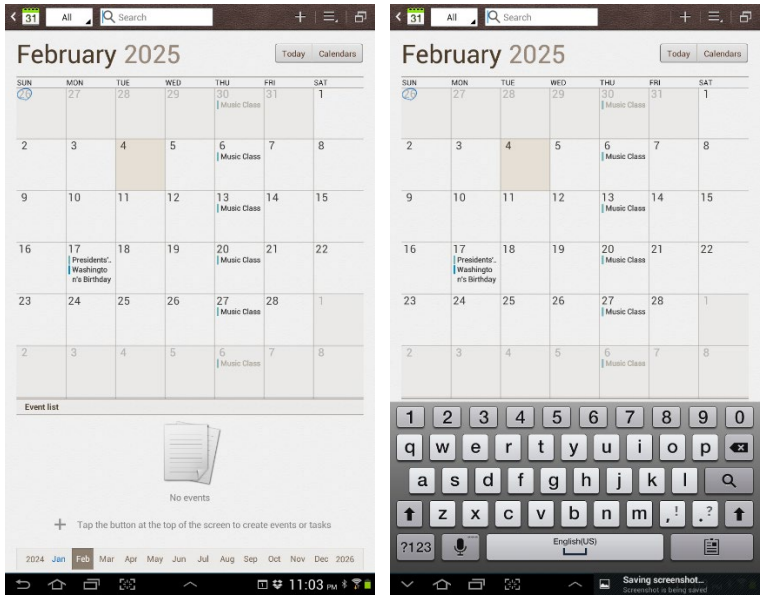
### *Closing the Keyboard*

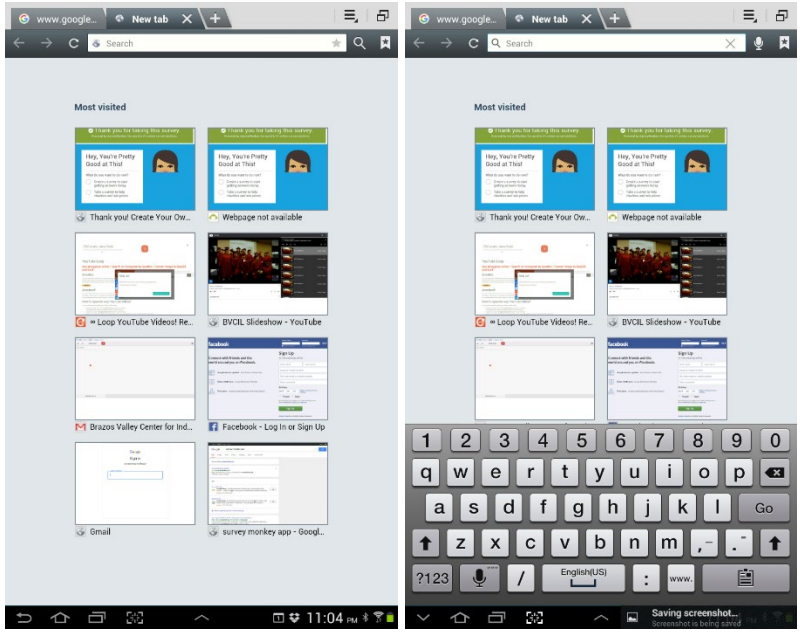
To close the keyboard:

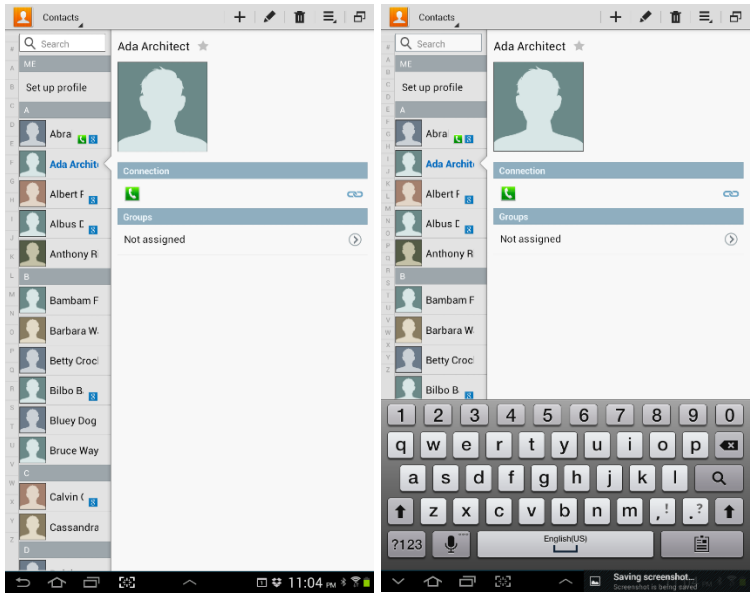
- Touch **Close Keyboard**.

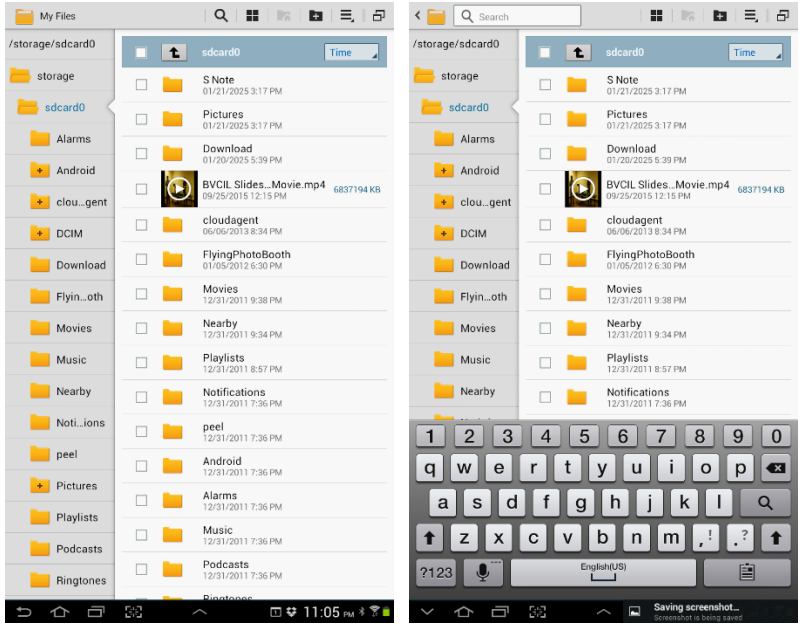
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Additionally, *Verge Note 10.1 Review* also shows the Note 10.1 using the keyboard with an application, as shown by the following video excerpts:<br>• 1:35-2:07. Opening S Note application and demonstrating use of S Note application on the screen<br>• 2:21-2:35. Opening S Planner application and demonstrating use of S Planner application on the screen<br>• 3:41-3:44. Demonstrating keyboard being used with a messaging app, with narrator stating "you can text and watch a video at the same time."<br>• 3:55-4:10. Demonstrating use of S Note application and clipboard application on the screen.<br>Additionally, *DetroitBORG Galaxy Note 10.1 Unboxing* also shows the Note 10.1 using the keyboard with an application, as shown by the following excerpts:<br>• 14:53-16:50. Opening S Note application and demonstrating use of S Note application on the screen.<br>• 16:54-17:33. Opening Internet application and demonstrating use of keyboard and handwriting pad with Internet application on the screen. |
| **[1C]** wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard; and | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard."<br>For example, as illustrated below, Note 10.1's S Note application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (S Note application) initially takes |

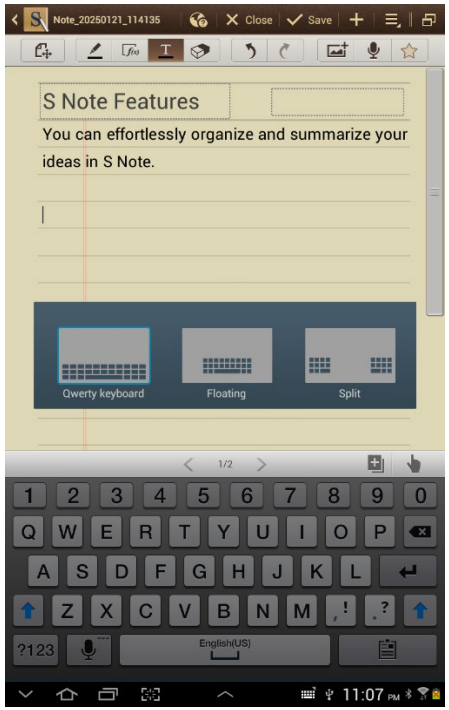
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | up the entire screen. Tapping the displayed page of S Note results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by ), which is not present when the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by ).<br>  <br>Note 10.1 Product (illustrating S Note application in full-screen view (left) and with keyboard (right)).<br>As another example, as illustrated below, Note 10.1's S Planner application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (S Planner application) initially takes up the entire screen. Tapping the "Search" box results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by ), which is not present when the |

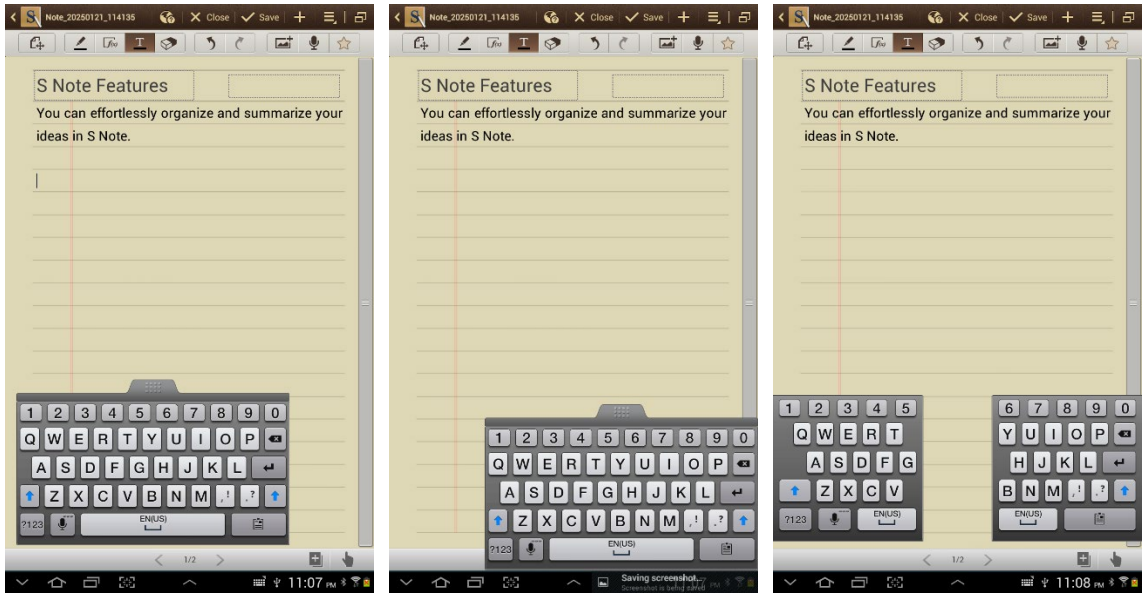
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ).   Note 10.1 Product (illustrating S Planner application in full-screen view (left) and with keyboard (right)).<br><br>As yet another example, as illustrated below, Note 10.1's Internet application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Internet application) initially takes up the entire screen. Tapping the "Search" bar results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by  ), which is not present when the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating Internet application in full-screen view (left) and with keyboard (right)).<br>As yet another example, as illustrated below, Note 10.1's Contacts application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Contacts application) initially takes up the entire screen. Tapping the "Search" box results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by  ), which is not present when the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating Contacts application in full-screen view (left) and with keyboard (right)).<br><br>As still another example, as illustrated below, Note 10.1's My Files application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (My Files application) initially takes up the entire screen. Tapping the "Search" box results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by  ), which is not present when the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating My Files application in full-screen view (left) and with keyboard (right)).<br>The zone for the keyboard is set by default but can be adjusted by making a gesture on the keyboard, which provides a user with the option to select "Qwerty Keyboard," "Floating," and "Split," as illustrated below. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating My Files application with options to adjust keyboard zone). Adjusting the zone for the keyboard may also adjust the zone for the interface of the "first" application, as illustrated below. If the keyboard zone is adjusted, then it may remain in this adjusted state until it is adjusted again. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating My Files application with keyboard in different configurations). |

Additional exemplary citations include:

Note 10.1 Manual at 46 ("The keyboard displays at the bottom of the screen. By default, when you rotate the device, the screen orientation updates to display the keyboard at the bottom of the screen.").

## Using the Samsung Keyboard

The Samsung keyboard is a custom virtual QWERTY keyboard, featuring predictive text. Input characters by touching the on-screen keys with your finger or use speech recognition.

As you enter characters, predictive text matches your key touches to common words and displays them. Select a word from the display to insert it into your text. For more information, refer to *"Using XT9 Predictive Text"* on page 49.

Your tablet also provides handwriting recognition to make the task of text entry that much easier.




47

### *Keyboard Types*

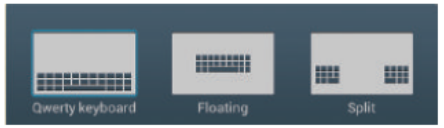
In addition to the default QWERTY keyboard, there are two other types of the Samsung keyboard: a ***Floating*** keyboard and a ***Split*** keyboard.

To change the keyboard type:

1. Use two fingers, such as your index finger and thumb, to make an inward pinch motion on the screen, where the keyboard is displayed.



A pop-up displays the three keyboard types.




2. Touch one of the keyboard types to display it.

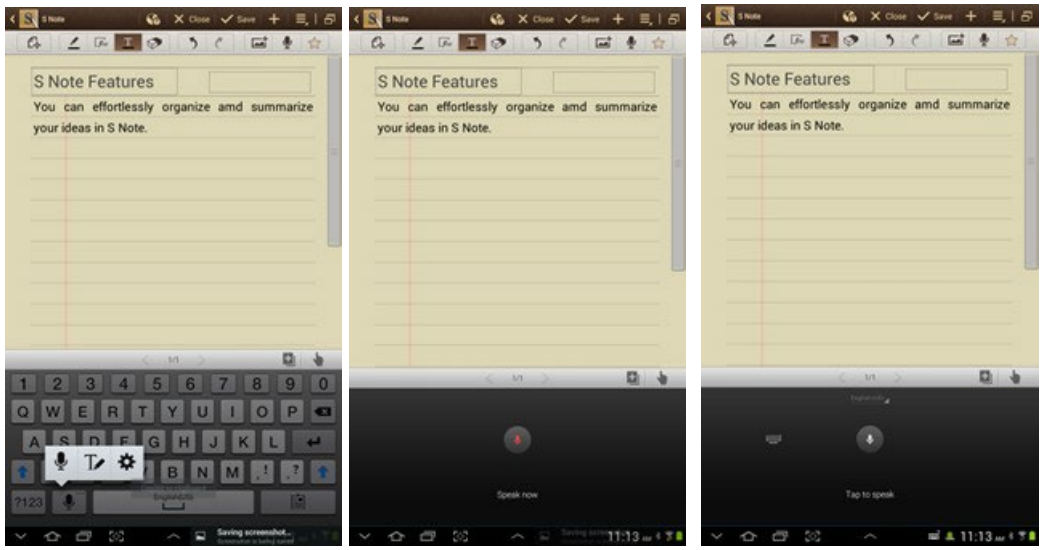
The Split keyboard can be moved up and down and the Floating keyboard can be moved anywhere.

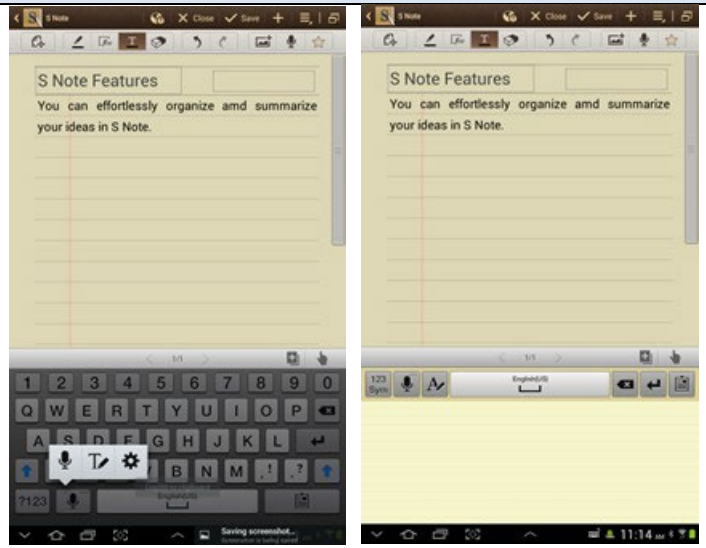
- Tap and hold with two fingers to move the Floating or Split keyboard.

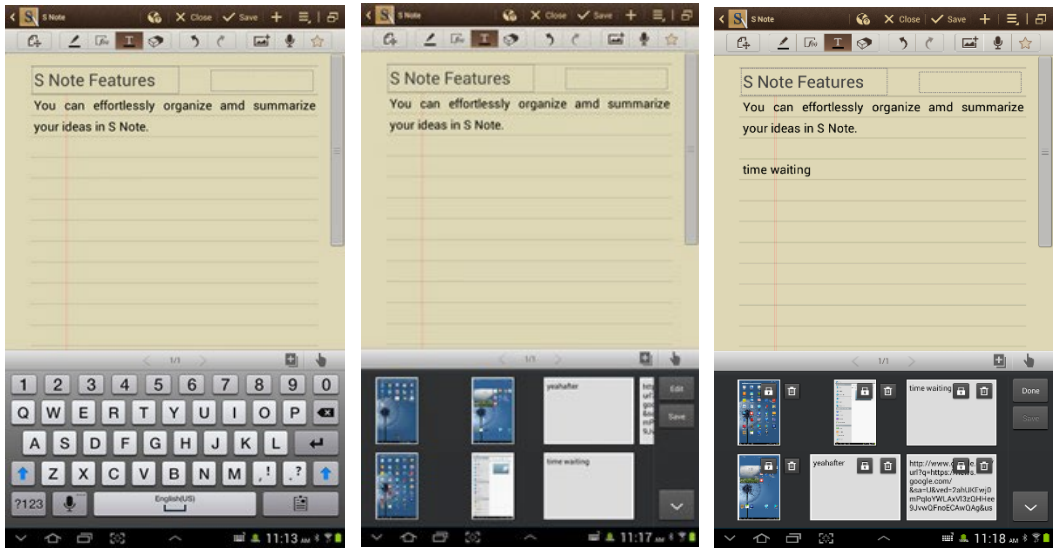
Note 10.1 Manual at 47.

Additionally, *Verge Note 10.1 Review* also shows the Note 10.1 with a first application in an upper portion of the touchscreen and the keyboard in a bottom portion, as shown by the following video excerpts:

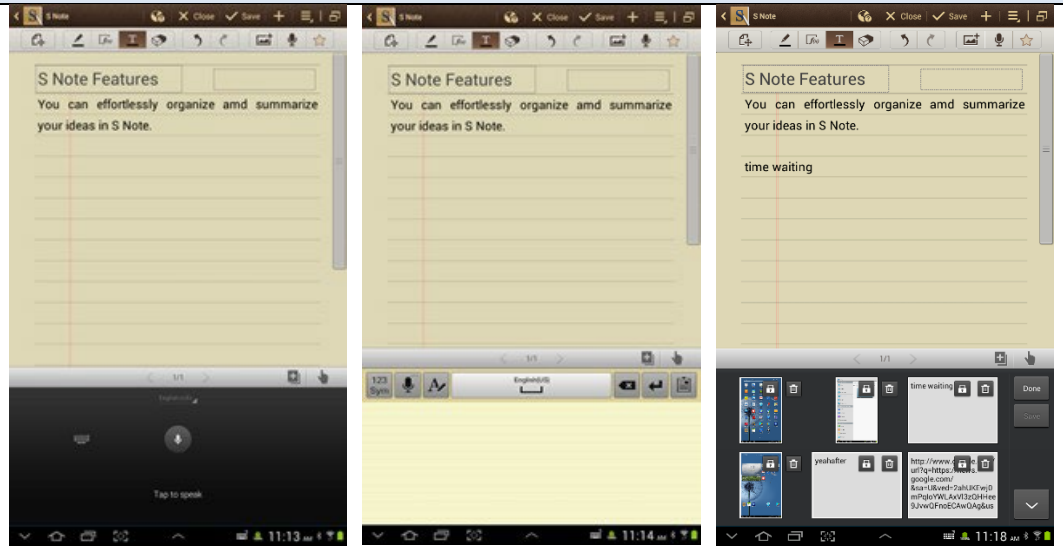
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | • 3:41-3:44. Demonstrating keyboard (bottom) being used with a messaging application (top), with narrator stating "you can text and watch a video at the same time."<br>• 3:59-4:05. Demonstrating keyboard (bottom) being used with S Planner application (top).<br>Additionally, *DetroitBORG Galaxy Note 10.1 Unboxing* also shows the Note 10.1 using the keyboard with an application, as shown by the following excerpts:<br>• 16:53-17:00. Demonstrating keyboard (bottom) being used with the Internet application (top).<br>• 20:29-20:42. Demonstrating keyboard (bottom) being used with a writing/drawing application (top). |
| **[1D]** wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone, and | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br>For example, as illustrated below (left), pressing the Settings button (  ) on the Note 10.1 keyboard allows the user to select between a voice input application, handwriting input application, and settings application (  ). Choosing the voice input application activates a voice input application and displays an interface for the voice input application on at least a portion of said second zone as shown below, center. Simultaneously, a "bottom key" (  ) is displayed below the voice input application interface. After a short delay, during which a user may (or may not) provide voice input, a keyboard icon key (  )also appears on at least a portion of said second zone, as illustrated below (right). Pressing the keyboard icon key causes the original keyboard to be |

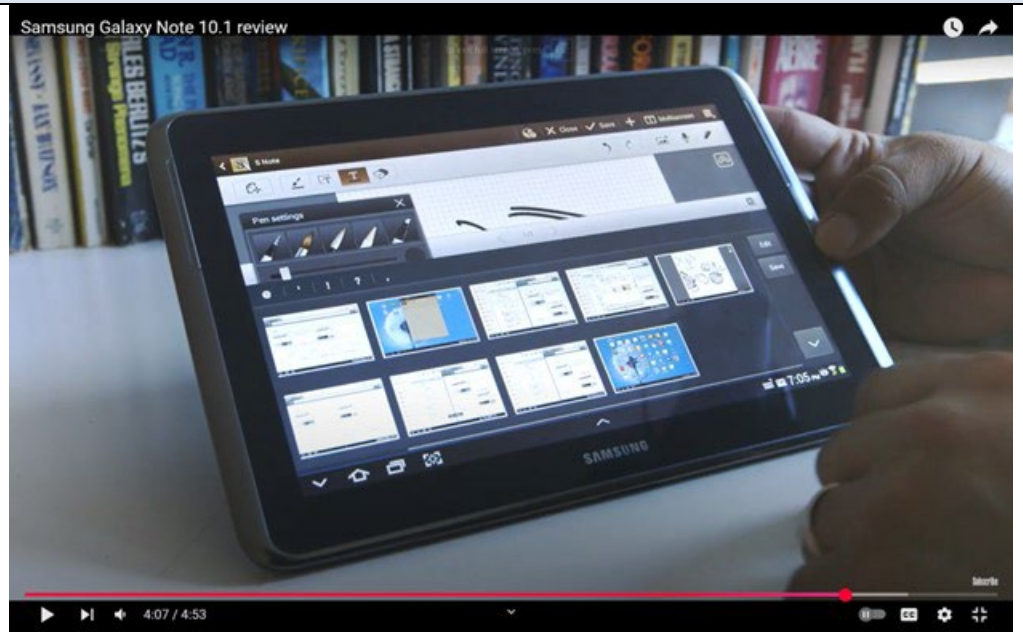
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | restored. The voice input application is a "second" application that is distinct from the "first" application (for example, the S Note, S Planner, Internet, Contacts, or My Files applications) and is distinct from the keyboard. The voice input application can receive audio voice inputs and generate text to output to the "first" application.<br>  <br><br>(Note 10.1 Product.)<br>Additionally, as illustrated below (left), pressing the Settings button on the Note 10.1 keyboard allows the user to select a button ( ) to activate a handwriting application. Selecting the handwriting input application button activates a handwriting application and displays an interface for the handwriting application, in place of the original keyboard, as shown below (right). Simultaneously, a reduced keyboard interface is displayed. The reduced keyboard interface includes a bottom key, symbol key, space bar, backspace button, and enter/return button, all of which correspond to keys on the original keyboard. |

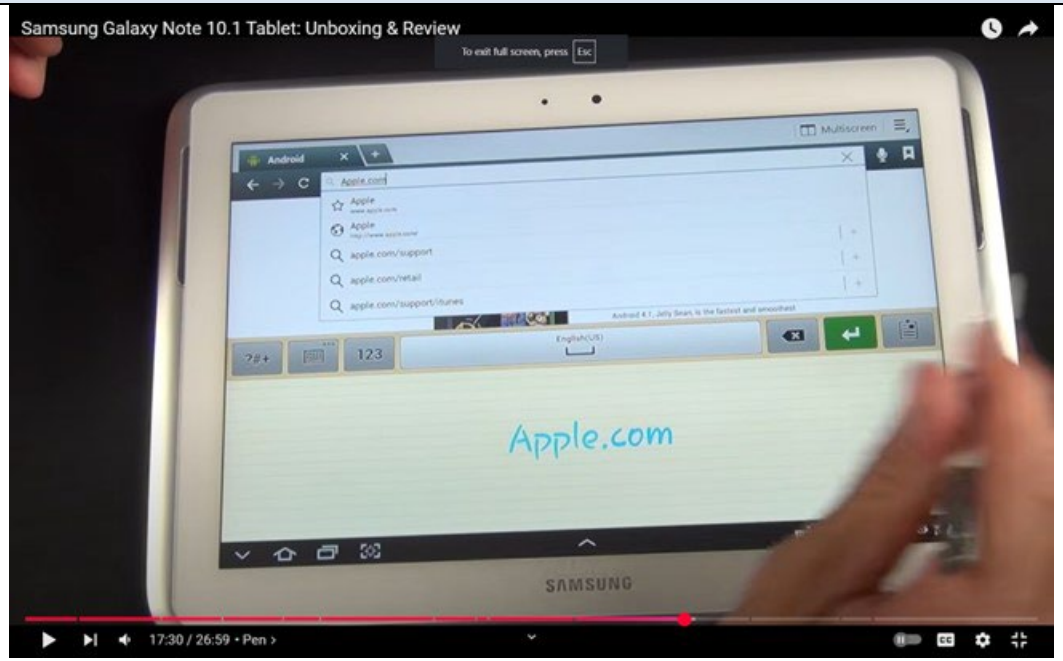
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product.<br>  <br>Note 10.1 Product (detail view of "reduced interface" displayed with handwriting application).<br>Additionally, as illustrated below (left), the Note 10.1 includes a clipboard application that can be launched by pressing the clipboard button (denoted by  ) on the keyboard. The clipboard application can be launched by pressing the clipboard key on the keyboard. The clipboard application is a "second" application that is distinct from the "first" application (for example, the S Note, S Planner, Internet, Contacts, or My Files application) and is distinct from the keyboard. The clipboard application can copy and paste images and text, for example, including when the keyboard is not displayed and is not in use. Images and text copied anywhere on the device, for example when taking a screenshot or copying all or part of a photo from the camera or image gallery, are copied into the clipboard. The clipboard application displays the data that is contained in the clipboard, and allows selecting items to paste them, including into the "first" application (the |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | S Note application in the example below). The clipboard application interface also includes a trash can icon ( ) that allows deleting items from the clipboard.<br>  <br><br>Note 10.1 Product (illustrating keyboard and clipboard application in use with S Note application).<br>When the clipboard application is running within the keyboard zone (above-center, above (right)), a reduced interface of the keyboard (which includes the bottom key, ) is shown and remains functional. In addition, the clipboard application interface displays a "trash" button ( ), which allows for deleting items to perform a delete function.<br>Additional exemplary citations include:<br>The Note 10.1 Manual discloses the use of the keyboard's Settings key to activate and display the Handwriting application, and the Clipboard key to activate and display the clipboard application. Note 10.1 Manual at 48. Further, the Note 10.1 Manual discloses using the handwriting application (*id.* at 52-53), voice input application (*id.* at 54), and clipboard application (*id.* at 50-51). |

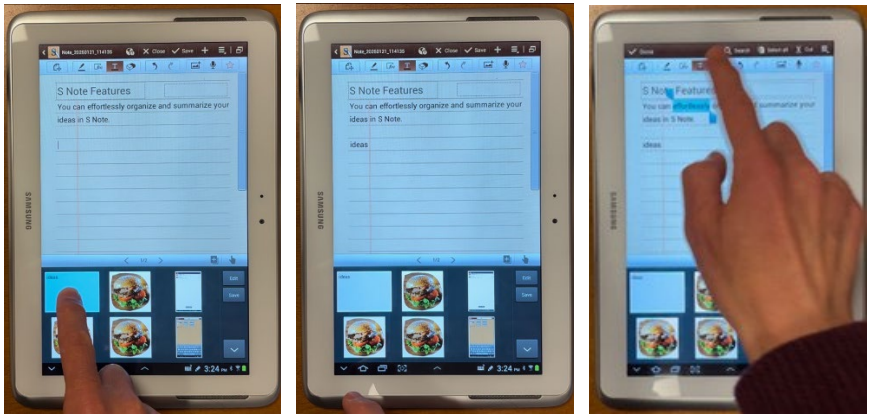
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Additionally, *Verge Note 10.1 Review* also shows that the Note 10.1 discloses the following video excerpts:<br>• 3:55-4:10. Demonstrating selection of clipboard button to display clipboard application and reduced keyboard interface, as described above.<br>Additionally, *DetroitBORG Galaxy Note 10.1 Unboxing* demonstrates that the Note 10.1 discloses the following video excerpts:<br>• 17:00-17:33. Opening Internet application and demonstrating activation of handwriting input application, and display of reduced keyboard interface, as described above. |
| **[1E]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen. | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen."<br>For example, Note 10.1 discloses that all of the "interface of said first application" (e.g., the S Note, S Planner, Internet, Contacts, or My Files application), the "interface of said second application" (e.g., the voice input application, handwriting input application, or clipboard), and "the reduced interface corresponding to said keyboard" being "simultaneously displayed on said touchscreen," as discussed in claim [1D] and as illustrated in the following images reproduced from [1D] above: |

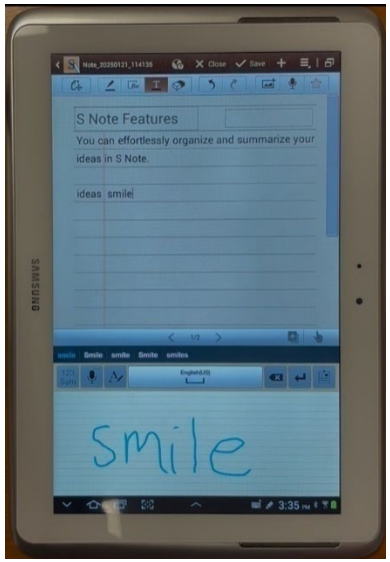
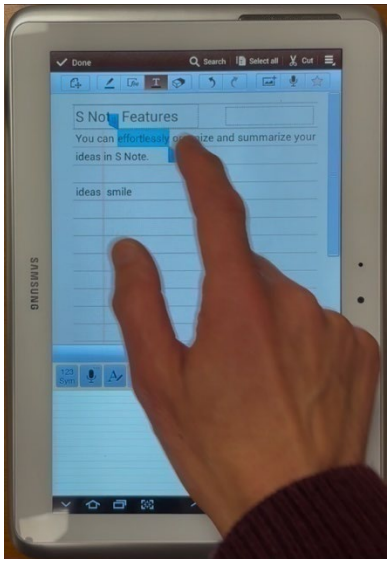
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating S Note application with voice input application (left), handwriting input application (center), and clipboard application (right)). *See supra* claim [1D].<br>Additional exemplary citations include:<br>Additionally, *Verge Note 10.1 Review* also shows that the Note 10.1 discloses, as shown at 4:07 (showing simultaneous display of the S Note application, clipboard application, and reduced keyboard interface). |

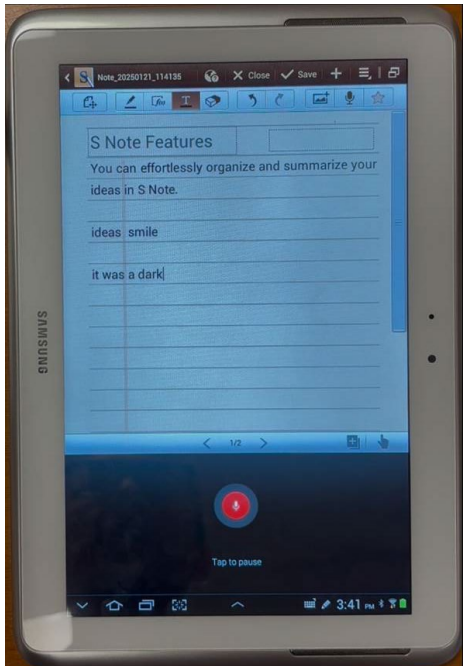
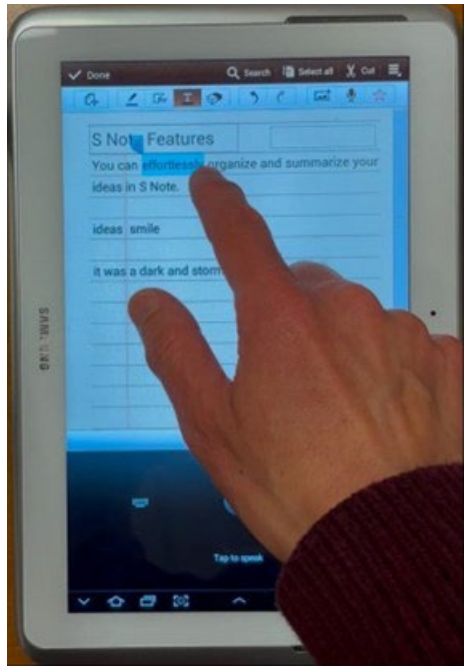
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>(*Verge Note 10.1 Review* at 4:07.)<br>Additionally, *DetroitBORG Galaxy Note 10.1 Unboxing* demonstrates that the Note 10.1 discloses, as shown at 17:30 (showing simultaneous display of the Internet application, handwriting input application, and keyboard interface). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>(*DetroitBORG Galaxy Note 10.1 Unboxing* at 17:30.) |

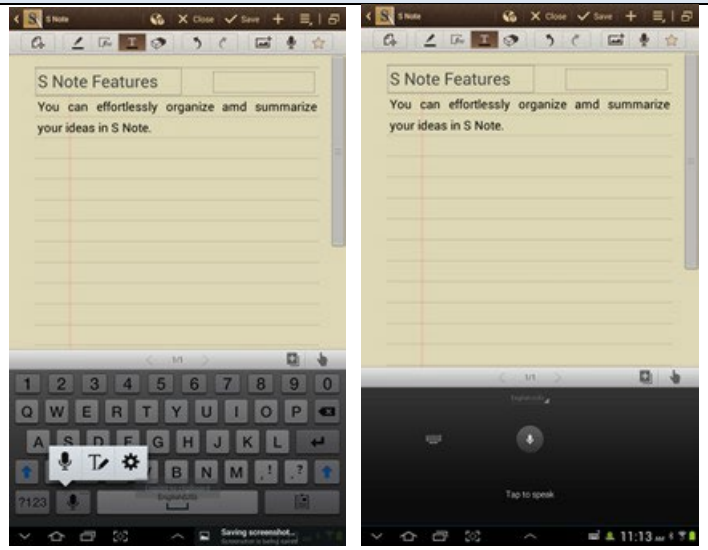
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[2]** The system of claim 1, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 2 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 2 are anticipated and/or obvious for the same reasons set out in claim 1. |

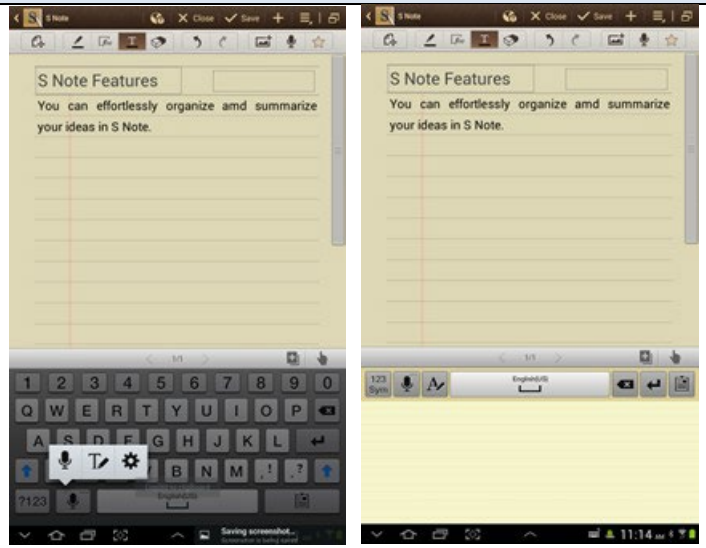
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>For example, in all the examples shown in connection with claim 1, interacting with the interface of the "first" application causes the focus of the system to be given to the "first" application, and interacting with the interface of the "second" application causes the focus to be given to the "second" application. The focus can shift back and forth between the applications.<br><br>Additionally, the clipboard application at the bottom of the screen is first interacted with, to select one of the items in the clipboard (the text "ideas"), as illustrated in the first figure below. Second, the selected item is highlighted after being selected (second figure below) and then inserted into the S Note application. Next, the focus of the system switches from the clipboard application to the S Note application, when the S Note application at the top of the screen is interacted with, to select the word "effortlessly" (as illustrated in the third figure below).<br><br>  <br><br><br>Note 10.1 Product (illustrating use of clipboard application with S Note application).<br><br>Additionally, the handwriting application at the bottom of the screen is interacted with, to input the handwritten word "smile," which appears in blue ink on the handwriting application. Next, the |

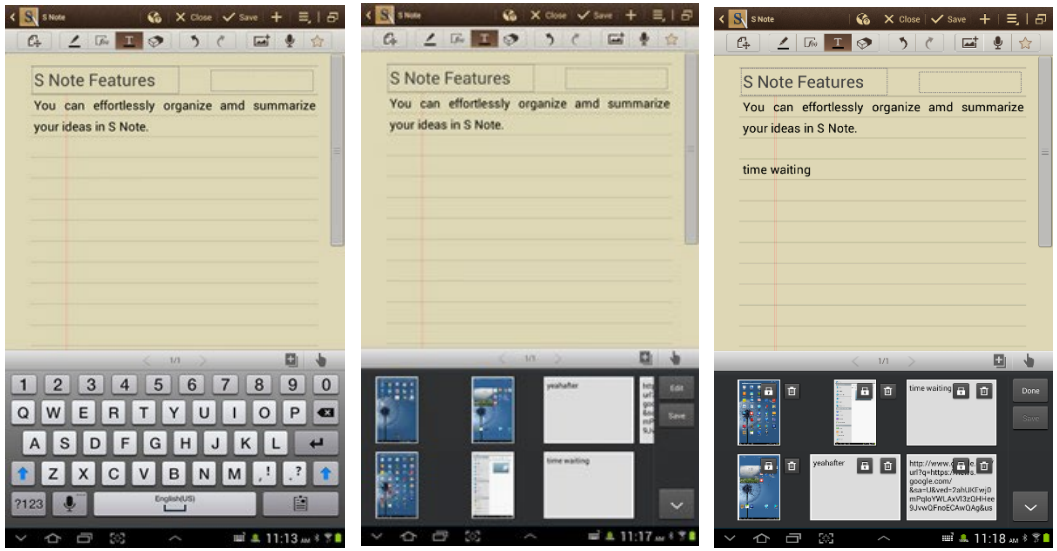
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | focus of the system switches from the handwriting application to the S Note application, when the S Note application at the top of the screen is interacted with, to select the word “effortlessly.”<br>  <br><br>  <br><br>Note 10.1 Product (illustrating use of handwriting application with S Note application).<br>Additionally, the voice input application at the bottom of the screen is interacted with, to input spoken words, which the voice input application indicates with an animated pulsating circle around the microphone icon. The voice input application also is interacted with by pressing the microphone icon to begin or stop voice input mode. Next, the focus of the system switches from the voice input application to the S Note application, when the S Note application at the top of the screen is interacted with, to select the word “effortlessly.” |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Note 10.1 Product.<br>Each of the foregoing examples uses the S Note application as the "first" application. The S Planner and Internet applications operate in substantially the same way as a first application relative to the examples of second applications outlined above. |

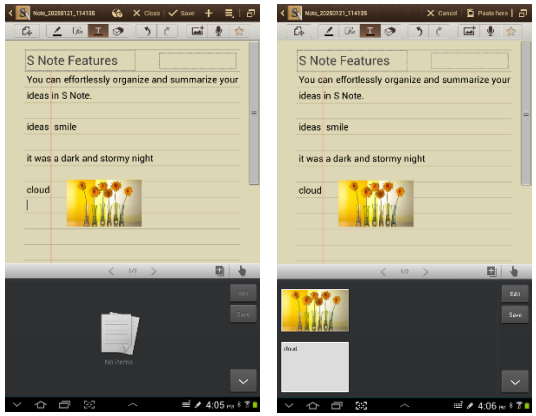
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[3]** The system of claim 1, wherein said keyboard is used with both of said applications. | Claim 3 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 3 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said keyboard is used with both of said applications."<br><br>As discussed above in [1B], the Note 10.1 discloses a keyboard is used for entering text in various applications running within the device, including S Note, S Planner, and Internet. Each is a "first" application.<br><br>After the keyboard is used to activate and display the "second" application (e.g., voice input, handwriting input, clipboard), the keyboard (through its "reduced interface") is also "used with" the second application.<br><br>For example, as illustrated below (left), the keyboard is "used with" the voice input application, because, for example, a keyboard key (Settings button  ) is used to access a voice input application key (  ), which activates the voice input application and displays the voice input application interface. Then, when the voice input application is running in the bottom part of the screen with the S Note application (in this example) in the top part of the screen, the reduced keyboard interface includes at least the "bottom key" and the "keyboard icon" key (below (right)). Those keys of the reduced keyboard are "used with" the second application because, for example, the "bottom key" minimizes the voice input application, while the "keyboard icon" key closes the voice input application and restores the full keyboard. |

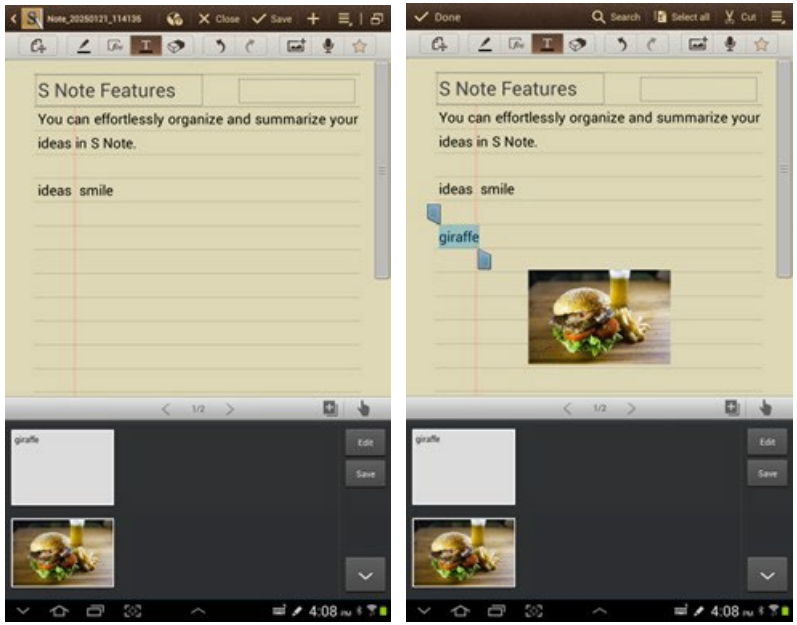
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating voice input application with S Note application).<br>Additionally, as illustrated below (left), the keyboard is "used with" the handwriting input application, because, for example, a keyboard key (Settings button  ) is used to access a handwriting input application key (  ), which activates the handwriting input application and displays the handwriting input application interface. Then, when the handwriting input application is running in the bottom portion of the screen with the S Note application (in this example) in the top portion, the reduced keyboard interface includes at least the "bottom key" (  ). (Illustrated below (right).) That key of the reduced keyboard is "used with" the second application because, for example, it minimizes the handwriting input application. |

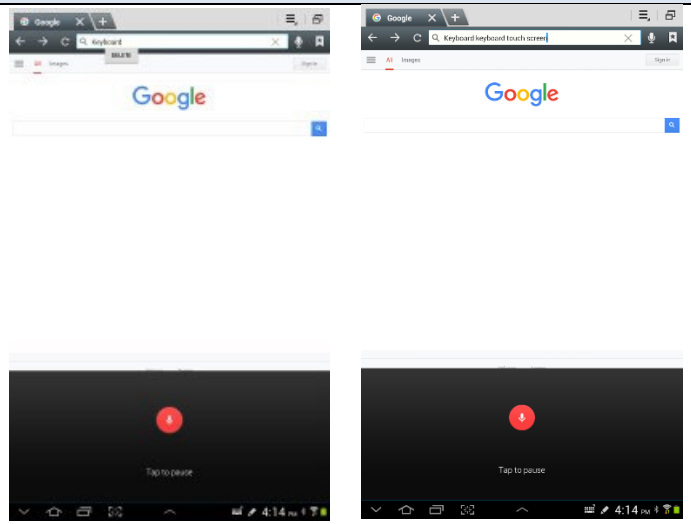
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating handwriting input application with S Note application).<br>Additionally, as illustrated below (left), the keyboard is "used with" the clipboard application, because, for example, a clipboard key ( ) is used to activate the clipboard application and display the clipboard application interface. Then, when the clipboard application is running in in the bottom part of the screen with the S Note application (in this example) in the top part of the screen, the reduced keyboard interface includes at least the "bottom key" ( ) and the "trash" button ( ) (below (right)). The bottom key of the reduced keyboard is "used with" the second application because, for example, it minimizes the clipboard application. And the "trash" button of the reduced keyboard is "used with" the second application because, for example, it deletes items from the clipboard. |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating keyboard and clipboard application in use with S Note application). |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[4]** The system of claim 1, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are | Claim 4 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 4 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein an information received from one of said applications is shared with at least the other application while said |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| simultaneously displayed on said touchscreen. | interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen."<br><br>For example, the examples discussed in connection with claim 1 include examples of information that is received from one of the applications and is shared with the other application while both applications are being displayed.<br><br>For example, the clipboard application receives information from the "first" application, for example from copying items from the "first" application to the clipboard. As illustrated below, the text "cloud" is copied from the S Note application to the clipboard and an image of flowers is copied from the S. Note application to the clipboard. In this example, an information (e.g., text and image) received from one of said applications (e.g., S Note) is shared with at least the other application (e.g., clipboard) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen.<br><br>  <br>Note 10.1 Product (illustrating clipboard application with S Note application).<br><br>Similarly, the "first" application receives information from the clipboard, for example when information is pasted from the clipboard to the first application. In the example below, an image of a hamburger from the clipboard is shared with (and pasted into) the S Note app, then the text "giraffe" is shared with (and pasted into) the S Note application from the clipboard application. In this example, an information (e.g., text and image) received from one of said applications (e.g., |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | clipboard) is shared with at least the other application (e.g., S Note) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen.<br>  <br><br>Note 10.1 Product (illustrating clipboard application with S Note application).<br>Additionally, the voice input application receives spoken words, and converts speech to text, then provides the text to the "first" application so that, for example, the "first" application receives the text that the user provided by speaking instead of typing. In the example shown below, the Internet ("first") application search bar at the top of the screen receives the words "keyboard" and then "keyboard touch screen" from the voice input ("second") application. In this example, an information (e.g., voice input) received from one of said applications (e.g., voice input application) is shared with at least the other application (e.g., Internet) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen. |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Note 10.1 Product (illustrating Internet application with voice input application).<br>Additionally, the handwriting input application receives handwritten characters, and converts handwriting to typed text, then provides the text to the "first" application so that, for example, the "first" application receives the text that the user provided by handwriting instead of typing. In the example shown below, the S Planner ("first") application search bar at the top of the screen receives the words "dinner" and then "dinner reservations" from the handwriting input ("second") application. In this example, an information (e.g., hand-drawn images corresponding to letters and words) received from one of said applications (e.g., handwriting application) is shared with at least the other application (e.g., S Planner) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen. |

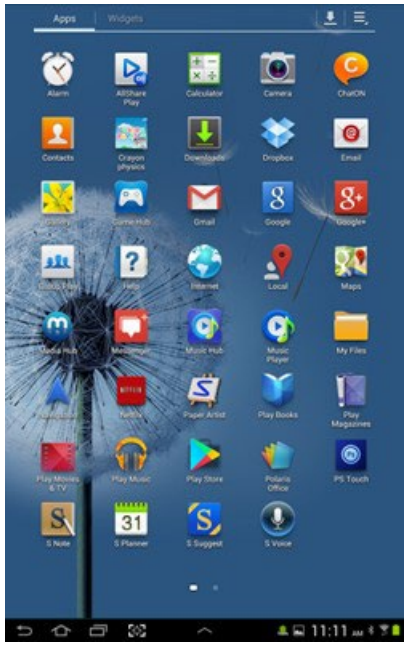
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |     Note 10.1 Product (illustrating handwriting input application with S Planner application). |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[5]** The system of claim 4, wherein said information includes at least one of, a text, an image, a video, a webpage and a URL. | Claim 5 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 5 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL."<br><br>All of the examples discussed in connection with claim 4 involve information that includes text or images. *See*, *e.g.*, claim [4]. |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[6]** The system of claim 4, wherein said information is copied from one of said applications and pasted in the other application. | Claim 6 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 6 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said information is copied from one of said applications and pasted in the other application."<br><br>The examples discussed in connection with claims 1 and 4 include examples of copying information that is copied from one ("first" or "second") application and pasted to the other ("second" or "first"), including the examples that discuss using the clipboard to copy information from one of the apps and pasting it into the other application. For example, an image and the text "giraffe" is copied from the clipboard and pasted into the Notes application. *See, e.g.*, [1A]-[1E] and [4]. |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[7]** The system of claim 1, wherein at least one of the applications is a messaging application. | Claim 7 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 |

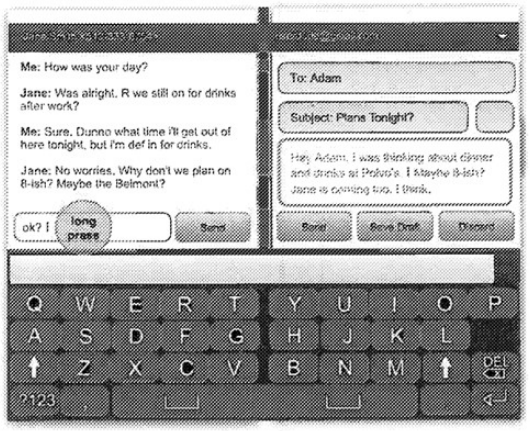
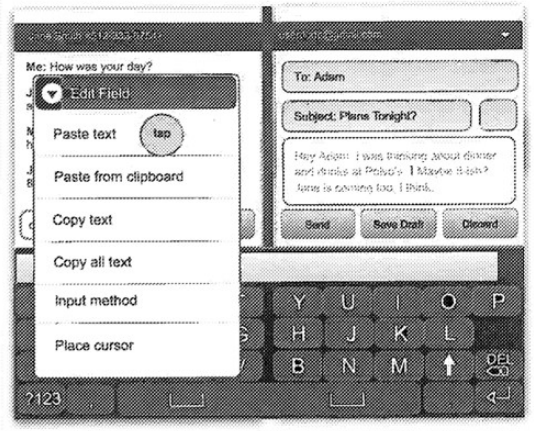
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | to show the additional limitations of claim 7 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein at least one of the applications is a messaging application."<br><br>Google Messenger was the default messaging application for Note 10.1, and an icon for the application (  ) appears on the Apps screen below. The Note 10.1 also includes an icon for the ChatON application (  ), which provided an interface for additional messaging services.<br><br>  <br><br><br>Note 10.1 Product (recordings of Apps screen). |

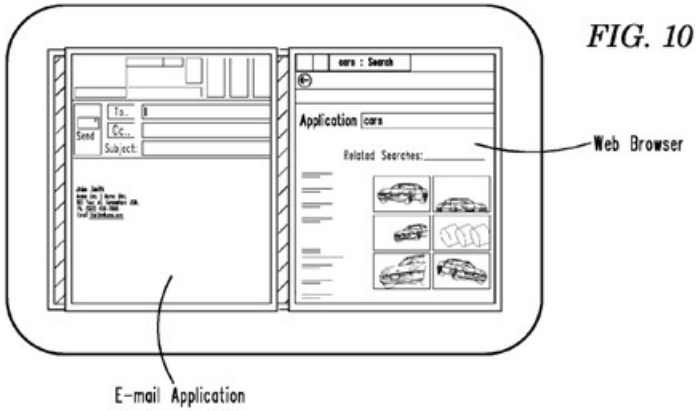
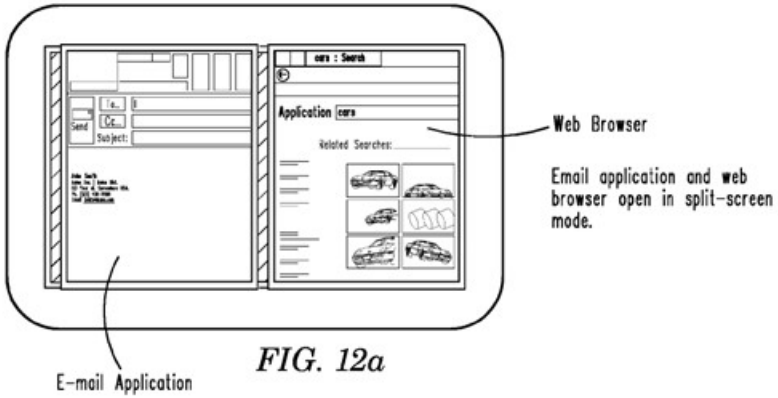
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Additional exemplary citations include:<br><br>The Note 10.1 Manual further identifies other types of messaging applications, including "Gmail," "Email," "Google Talk," "Google Messenger," and "ChatON." Note 10.1 Manual at 65-82. The Note 10.1 Manual describes Google Messenger and ChatON as follows:<br><br>**Messenger**<br>With Google Messenger, you can bring groups of friends together into a simple group conversation, putting everyone on the same page. When you get a new conversation in Messenger, Google+ sends an update to your device.<br>To get started, touch the Messenger icon on the home screen of the Google+ app or use the Messenger icon on your Applications screen.<br>1. From a Home screen, touch **Apps** → **Messenger**.<br>The Messenger screen displays.<br>2. Touch **Learn more** in the center of the screen and then touch a topic to learn more about using Google Messenger.<br><br>**ChatON**<br>A smart-messaging app that gives you a host of innovative ways to stay connected with all your friends and family, regardless of their device or platform. Use ChatON to send and receive instant messages from any device that has a mobile phone number.<br>1. From a Home screen, touch **Apps** → **ChatON**.<br>If you are launching this application for the first time, follow the on-screen instructions to complete the account setup.<br>2. Enter and send your message.<br><br>(Note 10.1 Manual at 82.)<br><br>On information and belief, Messenger+ and ChatON used the Note 10.1 keyboard system, at least inherently, because, for example, Messenger+ and ChatON required text input to perform their functions and the Note 10.1 keyboard system is the mechanism that the Note 10.1 uses to input text into applications. *See, e.g.,* Note 10.1 Manual at 46 ("Your device uses a virtual QWERTY keyboard for text entry called the *Samsung keyboard*. Use the keyboard to enter letters, punctuation, numbers, and other characters into text entry fields or applications. Access the keyboard by touching any text entry field."); *accord About.com* (describing ChatON as messaging application), *Gadgets360* (same), *Android Police* (same), *Gadgeteer* (same).<br><br>Additionally, *Verge Note 10.1 Review* shows the Note 10.1 using the keyboard with a messaging application. *Verge Note 10.1 Review* at 3:41-3:44 (narrator stating "you can text and watch a video at the same time"). |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | To the extent Keyless argues that Note 10.1 does not include "wherein at least one of the applications is a messaging application," even inherently, it would have been obvious in view of Note 10.1 alone, POSITA's pre-existing knowledge, and/or the features of Note 10.1 combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, as noted above, Note 10.1 was provided with Messenger+ (Google Messenger) and ChatON applications, and Messenger+ and ChatON applications required text input to perform their functions. The Note 10.1 keyboard is the mechanism that the Note 10.1 uses to input text into applications. *See* Note 10.1 Manual at 46 ("Your device uses a virtual QWERTY keyboard for text entry called the *Samsung keyboard*. Use the keyboard to enter letters, punctuation, numbers, and other characters into text entry fields or applications. Access the keyboard by touching any text entry field."). It would have been obvious for a POSITA to combine Note 10.1's keyboard with Note 10.1's messaging application (Google Messenger or ChatON). A POSITA considering Note 10.1's keyboard in view of Note 10.1's messaging applications would have found it obvious, for example, to implement Note 10.1's keyboard (including the use of a key to activate and display a "second application" as discussed above in claim 1) with the messaging application(s) on the Note 10.1. Note 10.1 indicates that its keyboard is "for text entry" and is used to "enter letters, punctuation, numbers, and other characters into text entry fields or applications," such as the Note 10.1's messaging applications. Note 10.1 Manual at 46. Further, the keyboard is to be accessed "by touching any text entry field," which would include any text entry field of the messaging application to receive input text for transmitting to an intended recipient. *Id.* Thus, a POSITA would recognize Note 10.1's messaging application(s) to be an application that receives text input and, therefore, suitable for use with Note 10.1's keyboard. One obvious combination of Note 10.1's keyboard with Note 10.1's messaging applications would, for example, use Note 10.1's |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | keyboard to enter text into the Note 10.1's messaging applications, as well as use the Note 10.1's keyboard to activate and display one or more of the second applications discussed above in [1D]. In this way, the advantages of the Note 10.1's system—including easy access to voice input, handwriting input, and clipboard applications through an action performed on the keyboard—would be implemented within the Note 10.1's messaging applications. Further evidence of obviousness comes from contemporaneous videos showing chat applications on Samsung/Android devices (of which Note 10.1 is one). *See ChatON Tutorial*; *ICS Messaging*. Because it was successfully implemented, it represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Accordingly, a POSITA would have found it obvious to provide "wherein at least one of the applications is a messaging application," as recited in claim 7 for at least this reason.<br><br>As another example, each of Sirpal-486, Sirpal-000, and Lavallee discloses wherein at least one of the applications is a messaging application, and it would have been obvious to provide the feature in view of one or more of the references.<br><br>For example, Sirpal-486 discloses a "multi-screen user device and a universal clipboard application." Sirpal-486, Abstract. Sirpal discloses that "handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, ¶[0002]. Sirpal-486 teaches that "applications 564" on the device "can include programs such as email clients, web browsers, texting applications, games, media players, office suites, etc." *Id.*, ¶[0125]. Sirpal-486 further discloses:<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location (e.g., the application at which the content will be copied), select the area where the text should be placed, access a copy/paste menu pop-up window, |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | and then select the paste command. This copy/paste routine must be completed for each different piece of information to be copied, which requires substantial time and input from the user.<br><br>The device 100 allows a user to copy multiple contents to the universal clipboard application 708. From this universal clipboard application, a user can choose an item corresponding to already-copied content, and (while still providing inputs at the universal clipboard application 708) execute a paste command. By providing multiple screens where one screen displays the universal clipboard application and another screen displays an application, a user is enabled to easily and quickly copy and paste content between various different applications on different screens 104, 108 of the device 100. Moreover, the ability to quickly and easily copy and paste different information from one central location, the universal clipboard application 708, saves the user time and input. Thus, the device 100 operates very intuitively for the user.<br><br>Sirpal-486, ¶¶[0168]-[0169].<br><br>Sirpal-486 further incorporates by reference the entirety of U.S. Patent Application No. 61/389,000 (*Sirpal-000*), which provides additional information relating to Sirpal-486's messaging application. *See* Sirpal-486, ¶[0001].<br><br>Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an application depending on focus." Sirpal-000 at 147. As one example, Sirpal-000 illustrates a text messaging application next to an email application: |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>User presses and holds the text message compose field.<br>  <br>A menu is displayed with two options for pasting. 'Paste text' would paste the last copied item at the current cursor position. 'Paste from clipboard' displays the Universal Clipboard, from which the user could paste the just copied text, in addition to other items in the Clipboard. There is also an option for the user to place the cursor in a different position in the field. The user taps 'Paste Text'.<br><br>Sirpal-000 at 180-182. As Sirpal-000 explains, the text messaging application has a "text message compose field" into which text may be inserted. Sirpal-000 at 180. Sirpal-000 further illustrates a keyboard and clipboard being used with the messaging application, as illustrated above. Thus, a POSITA would understand from Sirpal-000 (and Sirpal-486 through its incorporation of Sirpal-000) to provide a messaging application on a mobile device and to use the device's keyboard and clipboard with the messaging application.<br><br>As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee includes a "keyboard 120 for entering information such as composing email messages." Lavallee at [0021]. Lavallee's device also is designed to send or receive data, including "email messages, short messaging service (SMS), instant messages, web content, and other electronic content." Lavallee at [0022]. Accordingly, the device runs applications such as |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "communications applications such as Instant Messaging (IM), presentation and email applications, messaging applications . . . and the like." Lavallee at [0028]. Lavallee provides several examples of a messaging application displayed simultaneously with another application, as illustrated, e.g., in Figs. 10, 12a-12d, 14a-14d, and 15a-15d, reproduced below.<br>  <br>*FIG. 10*<br><br>Lavallee, Fig. 10.<br>  <br><br>*FIG. 12a*<br>Lavallee, Fig. 12a. |

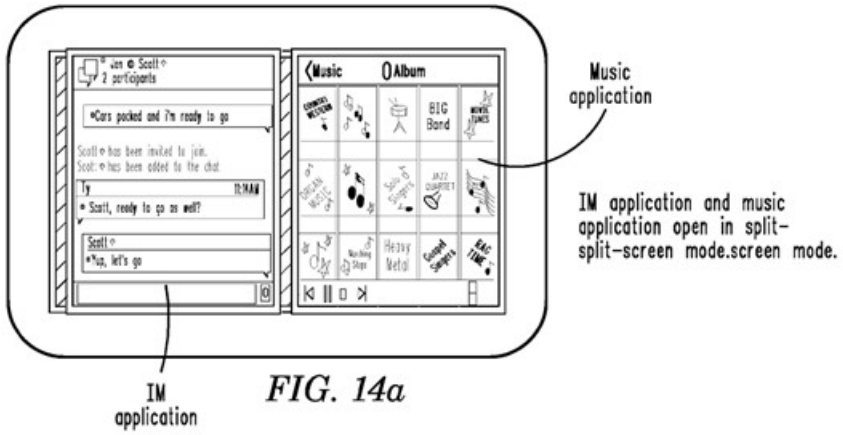



FIG. 14a

Lavallee, Fig. 14a.

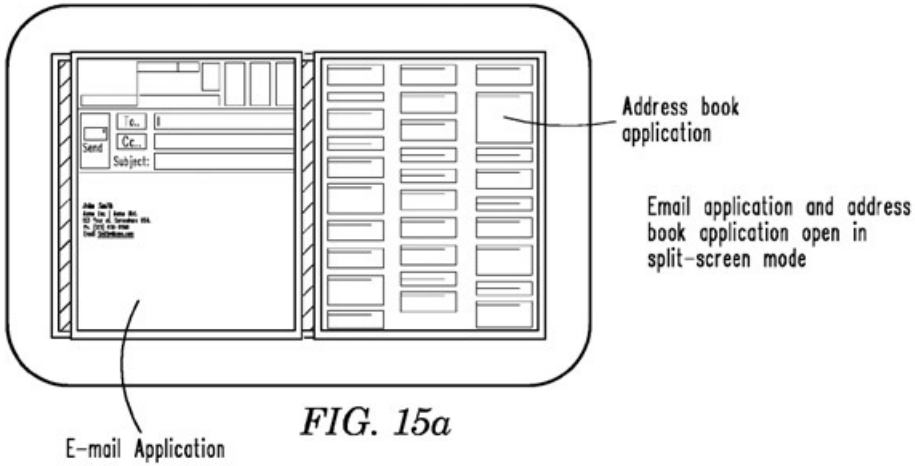


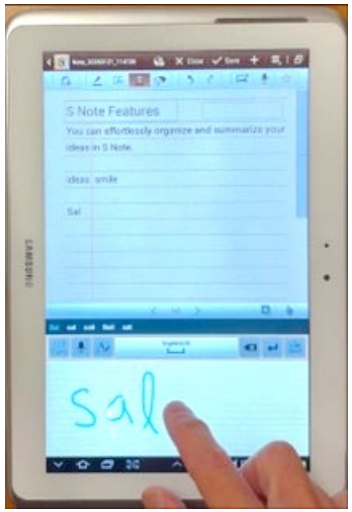
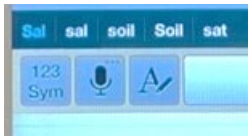

FIG. 15a

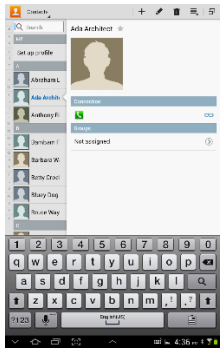
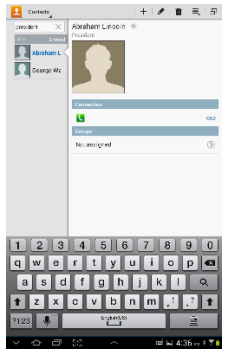
Lavallee, Fig. 15a.

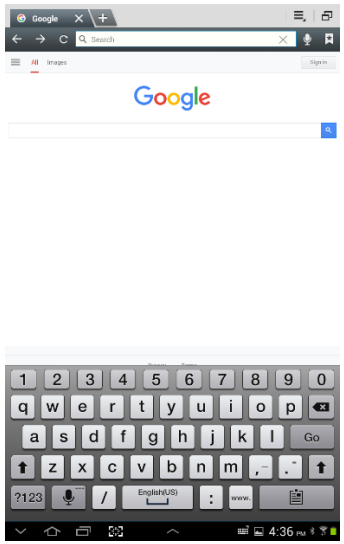
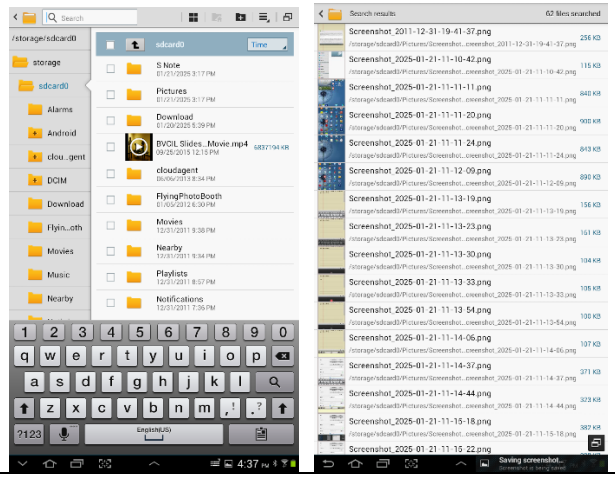
The e-mail application and IM application illustrated in Lavallee both illustrate fields for text entry. Thus, a POSITA would understand from Lavallee to provide a messaging application on a mobile device, and to use the device's keyboard with the messaging application. A POSITA further would

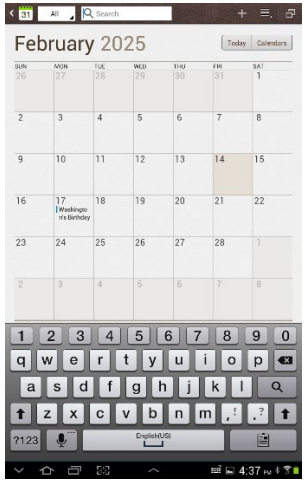
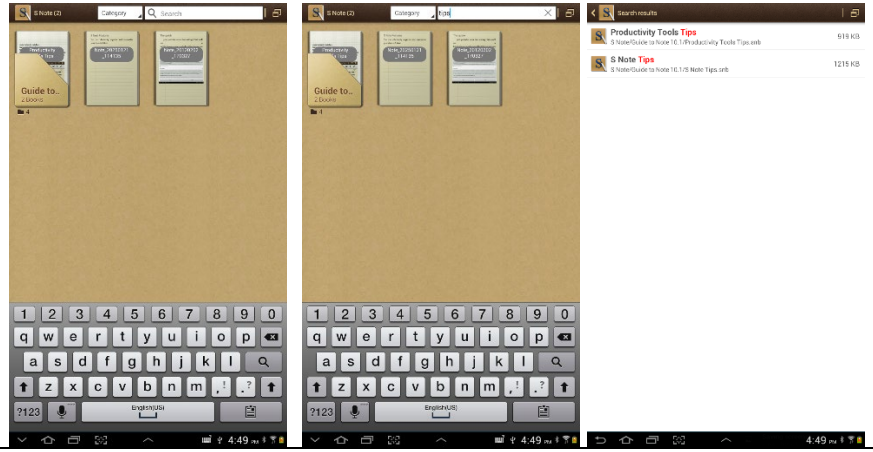
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | understand that in a system displaying two applications simultaneously—such as Note 10.1 (*see* [1E])—one such application may be a messaging application.<br><br>Incorporating a messaging application (such as taught by Note 10.1, Sirpal-486, Sirpal-000, and Lavallee) into Note 10.1 and using the Note 10.1's keyboard with the messaging application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Note 10.1, represent nothing more than combining prior art elements according to known methods and techniques (e.g., providing keyboard input into a messaging application) to a mobile electronic touch screen device to yield predictable results (e.g., allowing a user to send text messages on a mobile device, enhancing a user's ability to input text into a messaging application, etc.). |

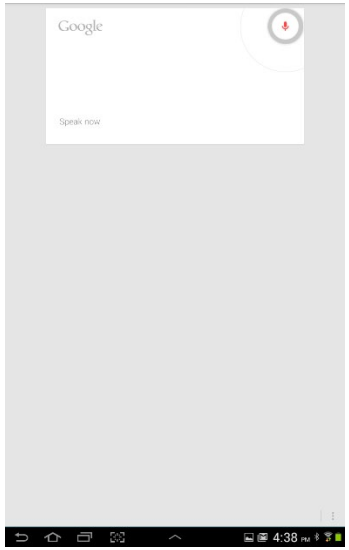
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[8]** The system of claim 1, wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application. | Claim 8 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 8 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application."<br><br>For example, as discussed in claim [1D], one "second application" in Note 10.1 is the handwriting input application, which is activated using a button of the keyboard assigned to activating the |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | handwriting input application. The handwriting input application includes search functionality as a "search application." When the user enters handwriting inputs, the handwriting application searches for potential matches to words in its database. For example, as illustrated below, a user has made inputs into the handwriting application, and the application has searched to identify potential matches "Sal," "sal," "soil," "Soil," and "sat."<br>  <br><br>  <br><br>Note 10.1 Product (illustrating handwriting application with search results, and detail view at right).<br>Additionally, the Note 10.1 product includes other applications with search functionality as "search applications.". For example, on the Home screen (below, left), a magnifying glass icon appears at the top of the screen (Google), which is used to open an application interface used to search Google. The search application interface appears below, at right. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |   <br>Note 10.1 Product (illustrating Home screen (left) and Google search application interface (right).<br>Additional applications including search functionalities as search applications include Contacts, Internet, My Files, S Planner, S Note, and Voice Search, as illustrated below.<br>   <br>Note 10.1 Product (illustrating Contacts application showing “Search” bar in upper left corner; search for keyword “president” in image above, right). |

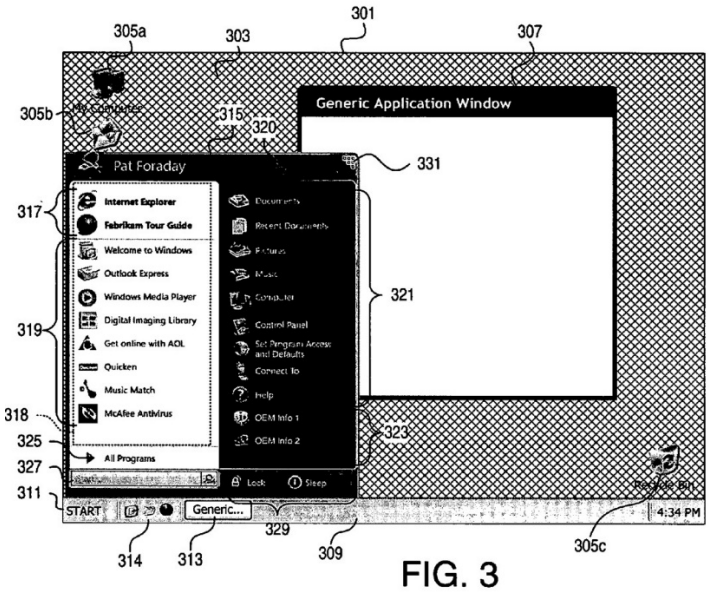
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Note 10.1 Product (illustrating Internet application showing “Search” bar at top).<br>  |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Note 10.1 Product (illustrating My Files application showing “Search” bar at top; search for keyword “screenshot” in image above, right).)<br>  <br><br>Note 10.1 Product (illustrating S Planner application showing “Search” bar at top; search for keyword “holiday” in image above, right).<br>  <br> |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Note 10.1 Product (illustrating S Note application showing "Search" bar at top; search for keyword "tips" in image above, center and right.)<br>  <br><br>Note 10.1 Product (illustrating Voice Search application showing "Search" bar at top).<br>Thus, for at least the foregoing reasons, Note 10.1 includes that an application (e.g., a second application) may be a search application.<br>Additionally, as discussed above in claim [1D], Note 10.1 discloses that a second application is "activated by interacting with a button of said keyboard assigned to activating [that] application." *See supra* claim [1D]. Thus, Note 10.1 provides for activating a second application by interacting with a button of the keyboard assigned to activating that application by, e.g., pressing a key (e.g., such as the Settings key that is used to activate the voice input and handwriting applications, or the Clipboard key that is used to activate the clipboard application), as discussed in claim [1D].<br>To the extent Keyless argues that Note 10.1 does not disclose or render obvious this limitation, , it would have been obvious in view of Note 10.1, a POSITA's pre-existing knowledge, and/or the teachings of Note 10.1 combined with other references charted for this patent in these invalidity |

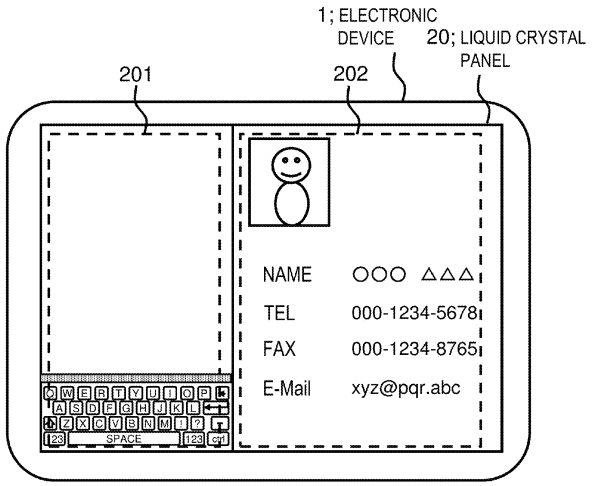
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | contentions, including one or more of Wang, Matthews, and Yabuki. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Wang discloses that "the user can define one of the [device] keys as a search key for searching web pages … thereby quickly calling the search application … of the system." Wang, ¶[0029]. As another example, Matthews discloses to use a keyboard hot key—such as used in Note 10.1 to open the handwriting input application, voice input application, and clipboard application—with a search application. As yet another example, Yabuki discloses reducing the size of the keyboard so that multiple applications can be displayed, including, e.g., a "search" application. And Note 10.1 itself provides that a mobile device can be used with and include various search functionalities as discussed above.<br><br>For example, Wang discloses a "method for programming output value of a key." Wang, Title. Wang explains that its "method for programming output value of a key is applicable to an electronic device having at least a key." Wang, Abstract, ¶[0002]. Wang observes that "[a]long with the development of technologies, portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones." Wang, ¶[0004]. Wang further observes that "although some touch-type mobile phones or computers include shortcut keys that allow the user to speedily call specific applications, the functions of the shortcut keys cannot be changed by changing corresponding key values of the shortcut keys. For example, a key preset for a shutter button of camera cannot be changed into a return key." Wang, ¶[0007]. Wang purports to improve known touch-type mobile phones or computers. *See id.*, ¶[0008]. In Wang, "[t]he method for programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key. The number of keys is not limited." *Id.*, ¶[0018]. Wang specifically |

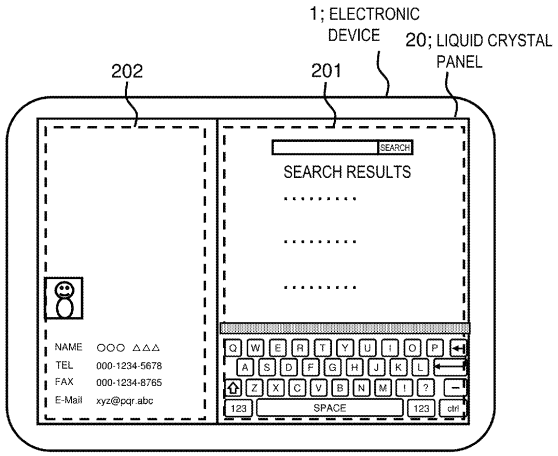
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | discloses that its system can be used with "Android," which is the same operating system used by Note 10.1. *Id.*, ¶[0018]. Among other benefits, Wang discloses that its system "accelerates the input speed" by assigning a function to a key. *Id.*, ¶[0029]. Specifically, Wang discloses:<br><br>> [T]o accelerate the operation speed, the user can define one of the keys 12 as a search key for searching web pages or a camera key for starting camera, thereby quickly calling the search application or camera application of the system. In addition, since Android Supports quick launch application, by holding down one of the keys defined as a search key and pressing another key defined as a character key, the user can quickly call a corresponding application defined in the quick launch application.<br><br>Wang, ¶[0029]. Thus, Wang provides "wherein [an] application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>As another example, Matthews discloses "methods and system for a search box and search capabilities in a graphical user interface of a program launch menu for an operating system." Matthews at 1:15-18. "According to an illustrative aspect of the invention, a program launch menu, such as a Start menu, displays a search text input box within the program launch menu displayed on a computer display device, which can be used to locate user-selectable items on a computer system. Various aspects of the invention may provide for a display of search results within the program launch menu, the search results identifying selectable items matching text input received from a user via the search text input box." Matthews at 3:26-34. In Matthews, a "user can type text into search box 327 to search for Start menu items. Upon entering text in search box 327, Start menu 315 automatically switches to a Search Results view 501, such as is illustrated in FIG. 5, displaying results that match text as it has been entered thus far by the user. That is, from search box 327, a user can perform a character by character search across the programs, user files, Internet links, and communications on his or her system. As the user enters text in the search box 327, the computer system searches for the entered text, as further described below." Matthews at 16:52-62. |

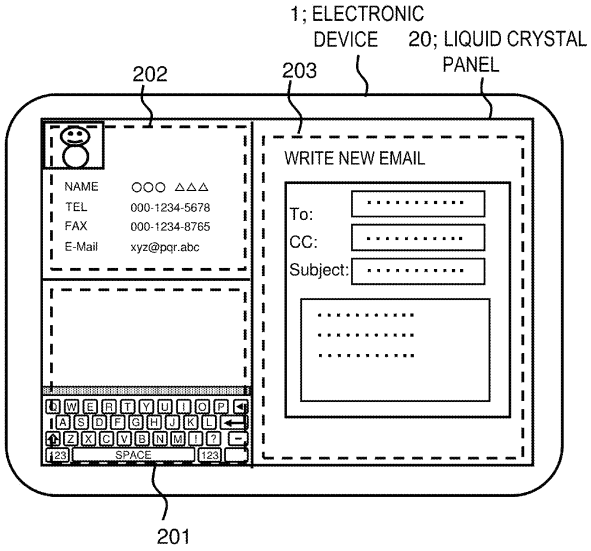
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 3<br>Matthews, Fig. 3.<br>Like Note 10.1, which includes many applications with search functionality, including to search data stored on the device or the Internet, Matthews likewise discloses that its search application "may use any built in or known search engine to perform searches on computer system 100. The search engine preferably searches the file system of the computer 110, as well as URLs and executables in the user's Path. The search service may also include search results from other data providers, such as web search results from a web search engine, photo results from a photo website such as Picasa, music results from a service such as MSN music, or any combination of these and/or other data providers. The search engine may index all searchable locations in order to expedite searching." Matthews at 17:1-15.<br>Matthews further discloses that the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | typing text for which he or she would like to search for an item." Matthews at 18:31-39. "Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match. No mouse manipulation is necessary (although, certainly allowable if desired). By learning which searches produce desired results, users can learn many keyboard shortcuts to quickly launch desired items that are returned as the top match to the entered search string. Given the time and inclination, a user can learn keyboard shortcuts to launch most application programs and documents on his or her computer, without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:39-51. Thus, Matthews discloses the use of a "search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>Matthews discloses several benefits associated with providing a quick way to launch a search application, such as by using a keyboard key. For example, Matthews discloses that "[a]n operating system launch menu, such as a Start menu, provides various mechanisms for a user to quickly and efficiently locate and launch desired data items such as programs, data files, storage locations, and the like. A search box within the program launch menu may be used to quickly locate programs, documents, communications, and other data items." Matthews at Abstract. Further, Matthews' search application displays results "within the original confines of the program launch menu, thereby negating the need to open sub-menus on top of a large portion of the desktop displayed on the display device." *Id.*; *see also* Matthews at 3:54-62 ("The computer displays search results within a predefined area of the program launch menu, wherein the search results comprise selectable items matching text input received from the user via the search text input box, and automatically provides selection focus to a top search result. The computer launches the selectable item corresponding to the top search result when receiving predefined user input, e.g., <Enter>, while the top search result has the selection focus."). Matthews further discloses that a user may quickly use the equivalent of "keyboard shortcuts" to access desired results "without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:42-51. Thus, Matthews provides a quick and space-efficient search functionality.<br><br>As still another example, Yabuki relates to "an electronic device comprising a touch panel and a controlling method and program therefor." Yabuki, 1:10-13. Yabuki discloses that "a software |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | keyboard may interfere with the user's operation, depending on its size or position," particularly in the case of "a small device such a smartphone." Yabuki, 1:35-39. As Yabuki discloses:<br><br>> For instance, let's assume a case where a user is performing a more detailed search based on search results using a Web browser. At this time, if the area of the software keyboard is large, it may be difficult for the user to perform an input operation while browsing the search results.<br><br>> Further, for instance, let's assume a case where a user launches a Web browser and refers to information regarding the people registered in an address book in the middle of his input operation. In this case, the user first quits the Web browser currently running. Then, he launches the address book application. After confirming the information, the user quits the address book application. Then, after launching the Web browser again, the user has a software keyboard displayed to enter the information. As described, the user must perform a plurality of operations when he refers to information included in another application while using the software keyboard.<br><br>Yabuki, 1:40-56. Yabuki discloses "there is a need in the art to contribute to facilitating an operation independent from a software keyboard while the software keyboard is being used." Yabuki, 1:60-62. According to Yabuki, "the electronic device 1 relating to the present exemplary embodiment is able to display a second application such as an address book application while having a first application such as a Web browser displayed." Yabuki, 7:7-10.<br><br>For example, Figure 4 of Yabuki depicts a full-size keyboard used with a single application. Yabuki, 4:61-5:3, Fig. 4. Yabuki discloses that the full-size keyboard may be moved and reduced in size, to make room for the interface of an application (or multiple applications) to be displayed on larger portions of the screen. Yabuki, 5:4-6:63. To further illustrate, Figure 7 of Yabuki, below, "is a drawing showing an example in which different applications are displayed in a plurality of display regions. In FIG. 7, the software keyboard is reduced and displayed in a first display region 201. Further, an address book application is displayed in the second display region 202 in FIG. 7." Yabuki, 7:11-16. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 7.<br>"The display region control unit 12 may switch the display modes of the first and second display regions. More concretely, according to a predetermined operation, the display region control unit 12 may enlarge the reduced first display region and reduce the second display region. Here, it is preferred that the predetermined operation that switches the display modes be a simple and easy operation such as a double tap operation." Yabuki, 7:17-24.<br>Yabuki further depicts Figure 8, which "is a drawing showing an example in which the display modes are switched. In FIG. 8, the display of the software keyboard is enlarged and displayed in the first display region 201. Further, the address book application is reduced and displayed in the second display region 202." Yabuki, 7:25-29. |

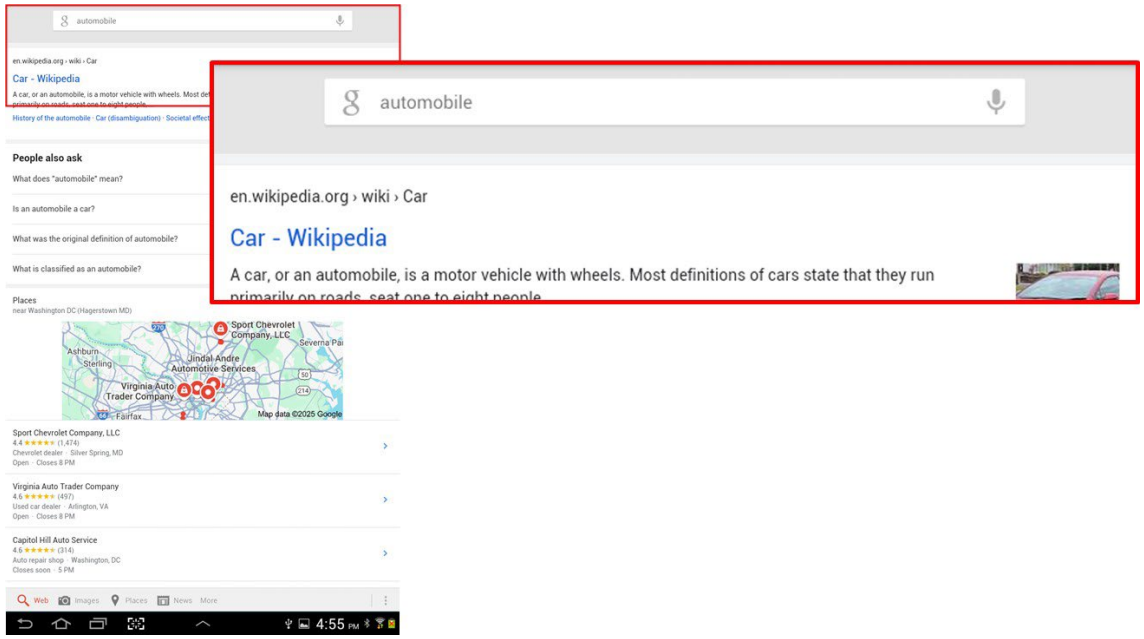
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 8.<br>According to Yabuki, even more applications may be displayed simultaneously while the keyboard is in its reduced size:<br>> The image signal generation unit 13 may have a third application displayed while displaying the images of two different applications. More concretely, when detecting a fourth operation in the second display region, the display region control unit 12 reduces and moves the second display region. It is preferred that the fourth operation be a simple and easy operation such as a double tap or flick operation. The image signal generation unit 13 displays the image of the third application in a region (a third region) made available by reducing the second display region. As described, the electronic device 1 relating to the present exemplary embodiment does not limit the number of applications displayed simultaneously.<br>Yabuki, 7:30-42. Further, Yabuki depicts in Figure 9, below, "a drawing showing an example in which the image of the third application is displayed on the liquid crystal panel 20. In FIG. 9, the software keyboard is displayed in the first display region 201. Further, the address book application |

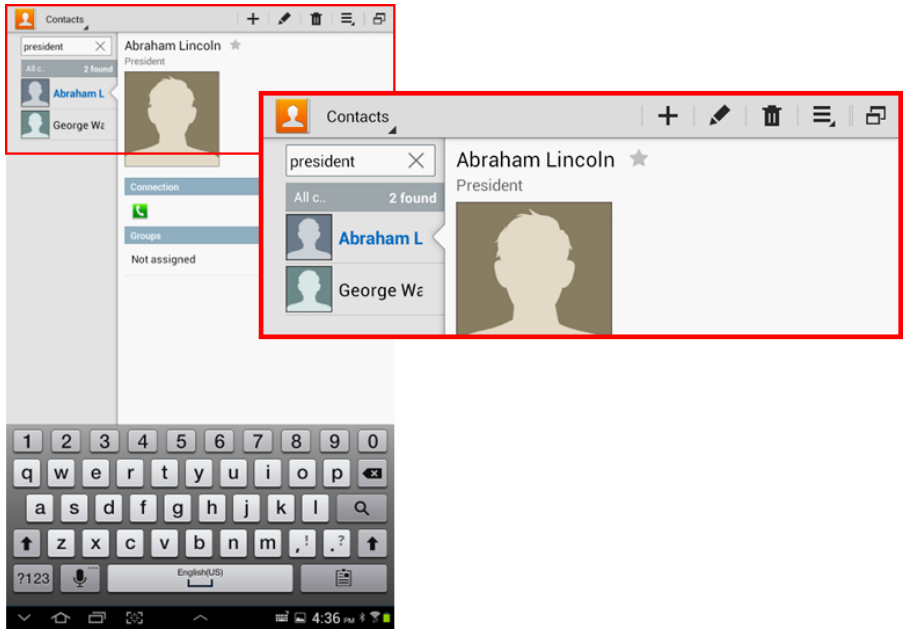
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | is displayed in the second display region 202. Then, an email application is displayed in a third display region 203." Yabuki, 7:43-49.<br>  <br><br>Yabuki, Fig. 9.<br>Thus, from the foregoing descriptions of Yabuki, a POSITA would recognize the benefits of reducing a keyboard so that multiple applications may simultaneously be displayed, including a search application (e.g., such as a web search application or an application for searching/displaying contact information). Moreover, a POSITA would recognize such features to be beneficial, as they solve problems and achieve advantages that Yabuki identified—e.g., allowing a user to perform input operations (in another application) while browsing search results or allowing a user to cross-reference between a web-browser and an address book simultaneously without closing one application or the other. *See* Yabuki, 1:40-56.<br>As noted above, Note 10.1 already provides several search applications, including Google search, Contacts, Internet, My Files, S Planner, S Note, and Voice Search. Thus, a POSITA would recognize Wang's implementation of a search application key and/or Matthews' implementation of |

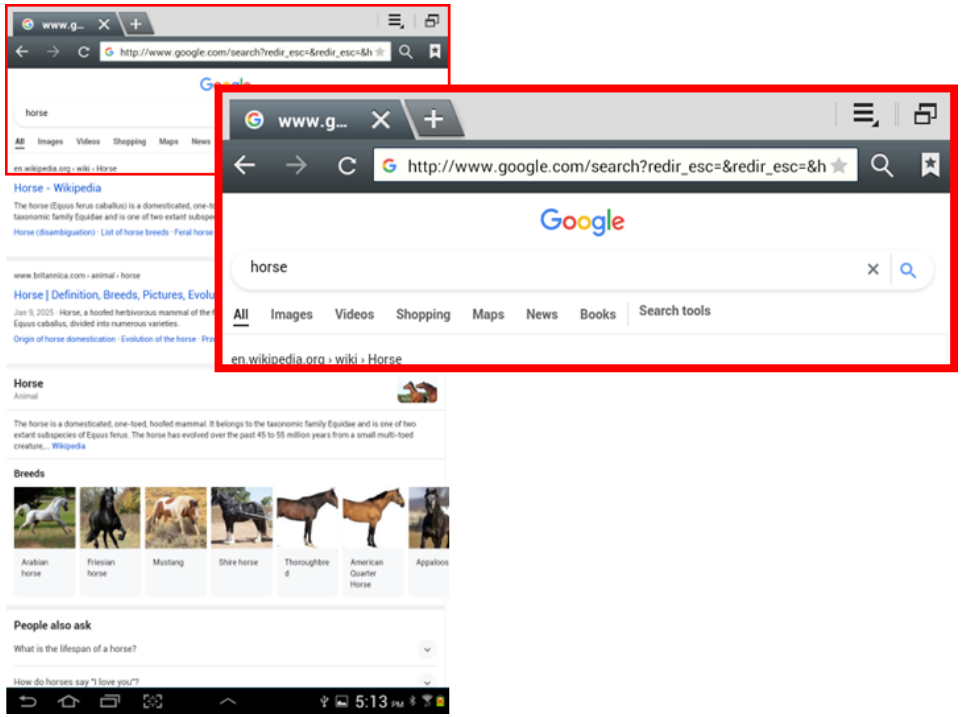
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | a search application would be suitable for use with Note 10.1. And a POSITA would recognize from Yabuki the benefits of simultaneously displaying multiple applications along with a reduced keyboard interface.<br><br>One obvious combination of Note 10.1 with Wang, Matthews, and/or Yabuki would, for example, implement the Settings key (on Note 10.1's keyboard) with an option to activate and display a search application (in addition to the existing options to activate and display the voice input or handwriting input applications). Another obvious combination would implement a dedicated search application key on Note 10.1's keyboard in a manner similar to the Note 10.1's clipboard key. A POSITA would recognize such a configuration from Yabuki, for example. In either case, the search application, when activated, would obviously occupy the same area(s) as the voice input, handwriting input, and/or clipboard applications in the existing Note 10.1 system, and simultaneously display the corresponding reduced keyboard interface. In that way, the search application (e.g., Note 10.1's preexisting Google search, Contacts, Internet, My Files, S Planner, S Note, and Voice Search applications) could be used in parallel with another application (or applications) appearing on the top of the screen, without obstructing the interface of the other application. The combination would yield "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>A POSITA would recognize that the combination would achieve the various benefits described in Wang, Matthews, and Yabuki, including to "accelerate the operation speed" (Wang, ¶[0029]), to quickly find relevant information using the keyboard and without covering significant portions of the screen with the search application (Matthews at Abstract) and to be able to cross-reference between one search application (e.g., an Internet browser or address book) and another application simultaneously (such as an application that may require information about the information presented in the Internet browser or address book) (Yabuki, Yabuki, 1:40-56). A POSITA would further recognize that such a combined implementation would provide various results options as displayed suggestion candidates in the second application, whereupon the user can select which result is desired, as already provided by Note 10.1 in the handwriting application as discussed above. Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for at least this reason. |

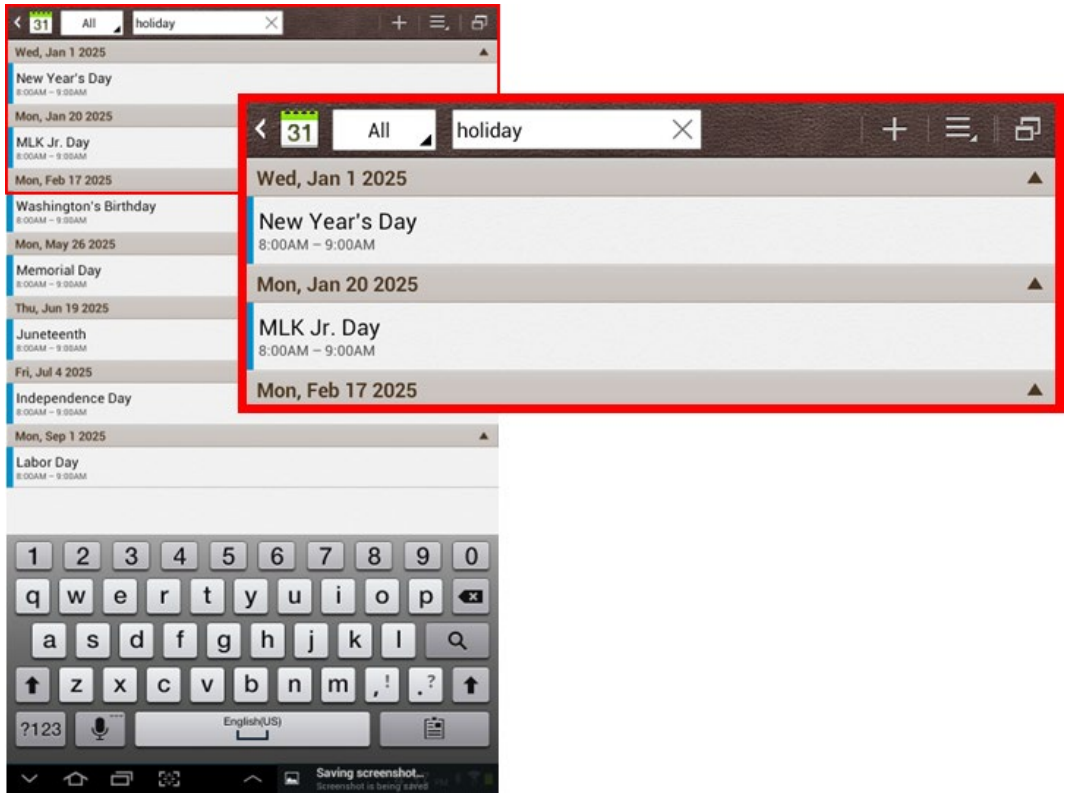
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Incorporating a search button (such as taught by Wang and Matthews) with Note 10.1's keyboard and existing search applications represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Note 10.1, represent nothing more than combining prior art elements according to known methods and techniques (providing search functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with information relating to searched files, contacts, text, media, etc.). |

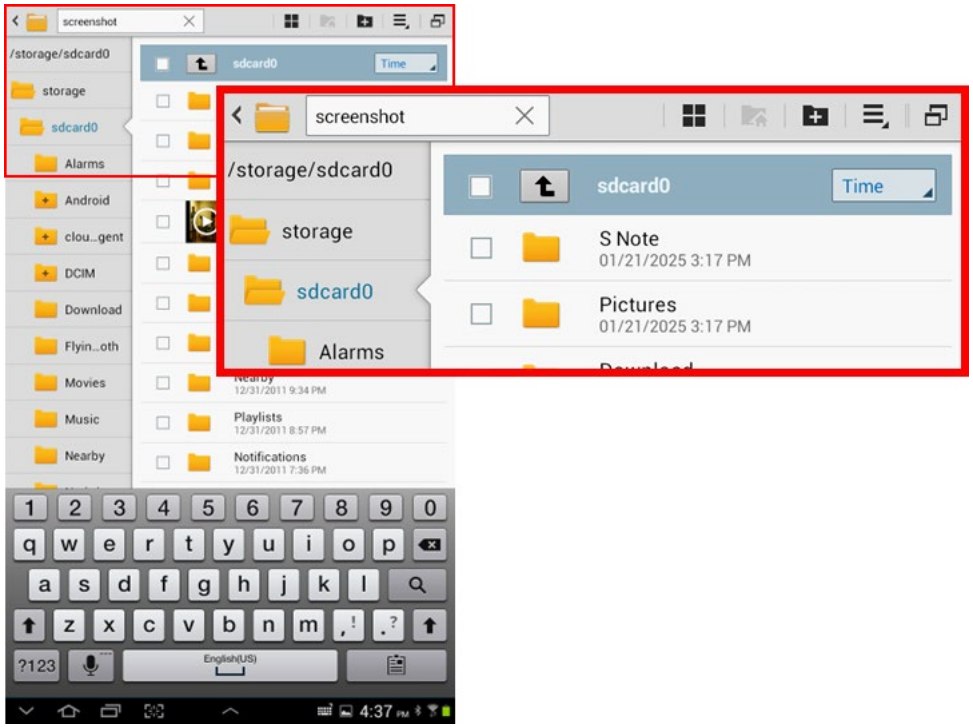
| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[9]** The system of claim 8, wherein said search application use at least one keyword typed through said keyboard. | Claim 9 depends from claim 8. Defendants incorporate all the prior art disclosures from claim 8 here, which anticipate and/or render claims 1 and 8 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 8 to show the additional limitations of claim 9 are anticipated and/or obvious for the same reasons set out in claims 1 and 8.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said search application use at least one keyword typed through said keyboard."<br><br>For example, in Note 10.1, several of the search applications discussed in claim [8] use at least one keyword typed through said keyboard. For example, Google search, Contacts, Internet, My Files, S Planner, and S Note are all depicted below with a keyword that has been entered into the search field via the keyboard. |

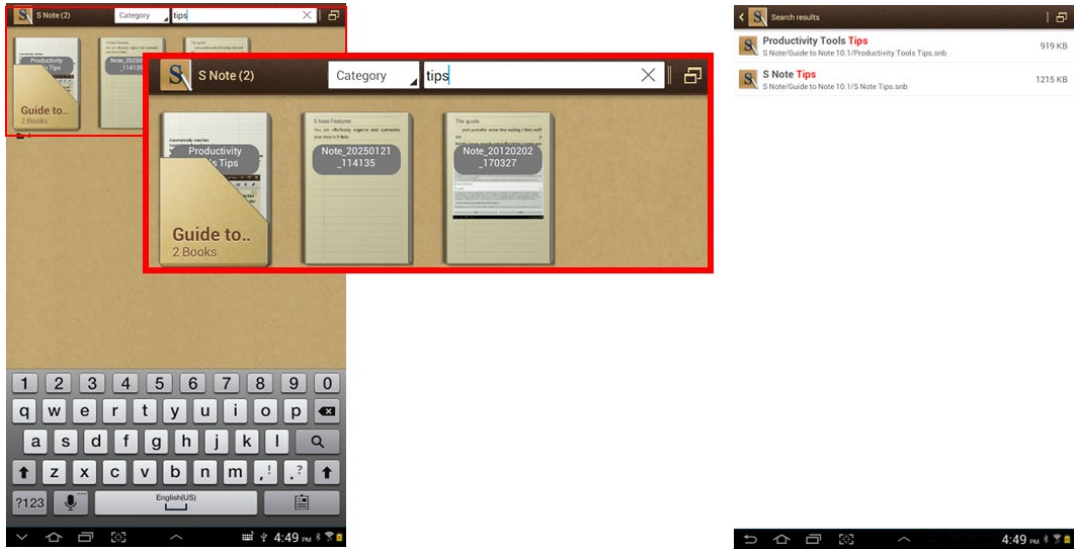
| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Note 10.1 Product (showing Internet application and callout of keyword "automobile" being searched). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Note 10.1 Product (showing Contacts application and callout of keyword "president" being searched, identifying entries labeled as "president."). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Note 10.1 Product (showing Internet application and callout of keyword “horse” being searched). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Note 10.1 Product (showing S Planner application and callout of keyword “holiday” being searched, identifying entries tagged as “holiday.”). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Note 10.1 Product (showing My Files application and callout of keyword “screenshot” being searched). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>(Note 10.1 Product (showing S Note application and callout of keyword "tips" being searched at left; identifying entries corresponding to "tips" at right.)<br><br>To the extent Keyless argues that Note 10.1 does not include or render obvious this limitation, it would have been obvious in view of Note 10.1, a POSITA's pre-existing knowledge, and/or the teachings of Note 10.1 combined with the other references charted for this patent in these invalidity contentions, including one or more of Wang and Matthews as discussed above for claim [8]. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Matthews discloses a "search for <foo>" in which "the computer system 100 may initiate a broader search for the user-entered text, e.g., by launching a full-text search or full-text |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | search window," where "the user may be able to search the computer for <foo>, search the Internet for <foo>, and/or search some other computer or database for <foo>, regardless of where the text <foo> appears." Matthews at 19:2-8. Matthews further discloses that the system "may display any items first where the item's name begins with text matching the user-entered text, second where the item has a word other than its starting word that starts with text matching the user-entered text, and third where the item has any text matching the user-entered text." Matthews at 18:24-28. Matthews thus discloses "keyword search," wherein "said search application use at least one keyword typed through said keyboard."<br><br>A POSITA would have found it obvious to incorporate "wherein said search application use at least one keyword typed through said keyboard," as claimed. Matthews, for example, discloses to use a keyboard to input search keywords. A POSITA would have been motivated to combine such feature(s) with the system of Note 10.1, as an obvious and intuitive way to implement the search applications of Note 10.1 (or search applications of Note 10.1 as modified in claim [8]). Typing a keyword through a keyboard was routine and conventional to a POSITA (as well as to a user of a device), as shown by Matthews. Furthermore, Note 10.1 already provides that the keyboard is used for text entry, and that the keyboard can be accessed by touching "any text entry field." Note 10.1 Manual at 46. Extending Note 10.1's existing keyboard text entry functionality to accommodate entering a keyword into the search application (e.g., in the combination discussed in claim [8]) would be a straightforward, intuitive modification, requiring no more than ordinary skill. Incorporating the feature into Note 10.1's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Note 10.1, represent nothing more than combining prior art elements according to known methods and techniques (e.g., using a keyboard to type a keyword for search) to a search application to yield predictable results (e.g., search results to be used with or accessed by another application). |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[10]** The system of claim 1, wherein at least one of the applications is used for sharing at least one of text, pictures, or videos. | Claim 10 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 10 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos."<br><br>For example, and as discussed above for claims [4, 5], "information" shared from Note 10.1's voice input application, handwriting input application, and clipboard application to the first application includes text and/or pictures. *See supra* claims [4, 5]. As another example, messaging applications are used for sharing text, pictures, or videos. *See supra* claim [7]. |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[11]** The system of claim 1, wherein said device is a mobile phone. | Claim 11 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 11 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>To the extent Keyless argues that Note 10.1 does not include or render obvious this limitation, it would have been obvious in view of Note 10.1, a POSITA's pre-existing knowledge, and/or the teachings of Note 10.1 combined with the other references charted for this patent in these invalidity contentions, including one or more of Nexus, Sirpal-486 (including its incorporation of Sirpal-000), Wang, and Koch. For example, a POSITA would find the combination obvious to try, due at least |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Nexus, Sirpal-486, Wang, and Koch all describe provide phone functionality to a mobile electronic device, such as the mobile electronic device of Note 10.1.<br><br>As discussed in Exhibit B5 to these Invalidity Contentions, Nexus is a mobile phone. Ex. B5 at [11]. Further, Nexus was implemented with Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean). Ex. B5 at 1. Note 10.1 likewise was implemented with Samsung's TouchWiz UI and, for example, Android 4.1 (Jelly Bean). Thus, a POSITA would have found it obvious to provide similar functionalities as Nexus when implementing a device such as Note 10.1, because, for example, the operating system and firmware of Note 10.1 could easily be adapted to provide the phone features that the same or similar operating systems and firmware(s) provided on Nexus.<br><br>Sirpal-486 also discloses an example of a mobile electronic device, such as Note 10.1, and also provides phone functionality. *See* Sirpal-486, ¶¶[0002] ("handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands"), [0071] (areas of a mobile electronic device "may be configured … for other types of specific inputs including controlling features of device 100, some non-limiting examples including … initiating/terminating of telephone calls"), [0075] (device may include buttons to control "initiation/termination of telephone calls"; "In a telephone application for instance and depending on the particular button a normal, medium, or long press can mean end call, increase in call volume, decrease in call volume, and toggle microphone mute."), [0092] ("an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations"), [0124] ("OS 516 can be any operating system and, at least in some embodiments, dedicated to mobile devices, including, but not limited to, Linux, ANDROID™, iPhone OS (iOS™), WINDOWS PHONE 7™, etc. The OS 516 is operable to provide functionality to the phone by executing one or |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | more operations, as described herein."), [0132] ("A task can be an application and a sub-task can be an application component that provides a window with which users can interact to do something, such as dial the phone …").<br><br>Wang also discloses an example of a mobile electronic device, such as Note 10.1, and also provides phone functionality. *See* Wang, ¶¶[0004] ("portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones."), [0018] ("The method for programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key.").<br><br>Koch also discloses an example of a mobile electronic device, such as Note 10.1, and also provides phone functionality. *See* Koch, ¶¶[0105] (mobile electronic device may be a "portable communications device, such as a mobile telephone, that also contains other functions, such as PDA and/or music player functions"), [0107] (mobile electronic device "typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application."), [0114] ("RF (radio frequency) circuitry 108" may be included to "receive[] and send[] RF signals," including to communicate via "a wireless network, such as a cellular telephone network," including on common mobile communications standards and protocols for mobile telephony, such as "Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), wideband code division multiple access (W-CDMA), code division multiple access (CDMA)"), [0135]-[0137] (applications include "telephone module"), [0154]-[0155] (mobile device may be used to initiate, conduct, and terminate telephone calls), [0205]-[0211] (mobile device home screen may be provided with an application icon for "Phone"), Fig. 1A |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | (illustrating "Telephone Module" (138) among "Applications" of a mobile electronic device), Fig. 4A (illustrating "Phone" application icon (138P).<br><br>Thus, each of Nexus, Sirpal-486, Wang, and Koch provide "wherein said device is a mobile phone," as claimed.<br><br>One obvious combination of Note 10.1 with Nexus, Sirpal-486, Wang, and Koch would, for example, incorporate telephone circuitry and a telephone application into the Note 10.1 in order to provide telephone functionality as provided by Nexus and/or as taught by each of Sirpal-486, Wang, and Koch, as discussed above. For example, it would have been obvious to incorporate "RF (radio frequency) circuitry" into the Note 10.1 in order for the Note 10.1 to communicate via telephone communications networks, as taught by Koch. *See* Koch, ¶[0114]. It further would have been obvious to implement the operating system and firmware code necessary to run a telephone application because, for example, Nexus implemented such features using the same or similar operating system and firmware code as Note 10.1. In that way, the Note 10.1 would be provided with desirable improvements, namely, the ability to conduct telephone calls. Indeed, by 2012 the art recognized that tablets with telephone functionality (so-called "phablets") were useful and desirable to consumers. *See PC Mag* ("Samsung's Galaxy Note has gotten the world talking about 'phablets.'"; "[T]he 'phablet'—that's part phone, part tablet—has already sold more than a million units worldwide."); *NBC News* ("Samsung Electronics has sold 5 million of the phone/tablet Galaxy Note, helping drive its booming handset profits in the quarter just ended. More than a freak hit, consumer and design experts believe the surprise success of the 'phablet' marks a deeper shift in the fast-paced world of mobile devices."); *Reuters* ("Phablets, a cross between a phone and a tablet, have been on a roll since late 2011 as tech-savvy consumers, particularly in Asia, devote more timebrowsing data-heavy Web pages and downloading media content."; noting that Samsung competitors have also been introducing tablet-phone hybrid devices). The combination would yield "wherein said device is a mobile phone," as claimed.<br><br>A POSITA would recognize that the combination would achieve various benefits, such as the ability to make and receive telephone calls. Accordingly, a POSITA would have found it obvious to provide "wherein said device is a mobile phone," as recited in claim 11 for at least these reasons.<br><br>Incorporating a telephone functionality (such as included in Nexus and/or as taught by Sirpal-486, Wang and Koch) with Note 10.1's keyboard and existing search applications represents nothing |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because, for example, it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Note 10.1, represent nothing more than combining prior art elements according to known methods and techniques (e.g., providing telephone functionality) to a mobile electronic touch screen device to yield predictable results (e.g., providing a user with the ability to make and receive telephone calls on a mobile electronic device). |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[12P]** A method comprising: | To the extent that the preamble is held to be limiting, Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes a "method comprising."<br>*See supra*, claim [1P]. |
| **[12A]** assigning a first zone of a touch screen to an interface of a first application; | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "assigning a first zone of a touch screen to an interface of a first application."<br>*See supra*, claim [1C]. |
| **[12B]** assigning a second zone of said touch screen to an on-screen keyboard; and | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Keyless's apparent interpretation of this limitation, includes "assigning a first zone of a touch screen to an interface of a first application."<br><br>*See supra*, claim [1C]. |
| **[12C]** based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen and | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen."<br><br>*See supra*, claim [1D]. |
| **[12D]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen. | Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen."<br><br>*See supra*, claim [1E]. |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[13]** The method of claim 12, comprising using said | Claim 13 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| keyboard with both of said applications. | to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 13 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "using said keyboard with both of said applications."<br><br>*See supra*, claim [3]. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[14]** The method of claim 12, wherein at least one of said applications is one of, a text messaging application and an image sharing application. | Claim 14 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 14 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein at least one of said applications is one of, a text messaging application and an image sharing application."<br><br>*See supra*, claim [7] and claim [10]. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[15]** The method of claim 12, wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application. | Claim 15 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 15 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>*See supra*, claim [8].<br><br>Further, and as discussed supra claim [1D] (which is incorporated by reference here), Note 10.1 discloses using a button or gesture on the keyboard to activate a second application (e.g., canvas/handwriting input application). Thus, Note 10.1 (or, alternatively, Note 10.1 as modified in [8]) provides that the "search application [is] activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application." |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[16]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard. | Claim 16 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 16 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard."<br><br>*See supra*, claim [9]. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[17]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard after said search application is activated. | Claim 17 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 17 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard after said search application is activated."<br><br>*See supra*, claim [9].<br><br>For example, in Note 10.1 (as well as Note 10.1 as modified in [9]), a user interacts with the "second application" after it has been activated and, thus, types in the keyword after the second application has been activated.<br><br>For example, as discussed above in claim [9] (incorporated here), in Matthews, the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item. Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match." Matthews at 18:31-51. A POSITA would understand that for the search interface of Matthews to receive the entered text input or search input, the search interface must be active. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs.<br><br>Thus, Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, including as modified in view of Matthews, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated," as claimed. |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[18]** The method of claim 12, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen. | Claim 18 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 18 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen."<br><br>*See supra*, claim [4]. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[19]** The method of claim 18, wherein said information includes at least one of a text, an image, a video, a webpage and a URL. | Claim 19 depends from claims 18 and 12. Defendants incorporate all the prior art disclosures from claims 18 and 12 here, which anticipate and/or render claims 18 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 18 and 12 to show the additional limitations of claim 19 are anticipated and/or obvious for the same reasons set out in claims 18 and 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said information includes at least one of a text, an image, a video, a webpage and a URL."<br><br>*See supra*, claim [5]. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[20]** The method of claim 12, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 20 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 20 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>*See supra*, claim [2]. |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[21]** The method of claim 12, wherein said touch screen is integrated within a mobile communication device. | Claim 21 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 21 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Note 10.1, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said touch screen is integrated within a mobile communication device."<br><br>Note 10.1 integrates a touch screen within a mobile communication device, e,g., a tablet with mobile communication capabilities (including access to the Internet (via Internet app), access to messaging capabilities (via Messenger and ChatON apps)). For example, all of the screen shots are from the Note 10.1 Product. .<br><br>Moreover, as discussed *supra* claim [11] and claim [1A], Note 10.1 includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, the "electronic device having a touchscreen" and "wherein said device is a mobile phone" *See supra* claims [1A, 11]. In addition, Note 10.1 includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, an application for sharing text, pictures, and/or videos with other users, as discussed *supra*, claims [7] and [10], making Note 10.1 a mobile communication device for this additional reason. |

# Appendix B4

**Exhibit B4**

**Invalidity of Asserted Claims of the '922 Patent**

**in view of the Samsung Galaxy Tab2 7.0**

The Samsung Galaxy Tab2 7.0 (GT-P3113) with TouchWiz UI, running Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean) ("Tab2 7.0"),[1] was publicly available and/or used in the United States, and was thus available to and known or used by others in the United States, at least as early as November 19, 2013, and August 14, 2013, when updates to Android 4.2.2 were made publicly available, and as early as April 2012, July 2012, January 2013, and November 2013, when models designated GT-P3113TSRXAR, GT-P3113TSSXAR, GT-P3113TSYXAR, GT-P3113ZWYXAR, GT-P3113GRSXAR, and GT-P3113GRYXAR, were first released with substantially the same functionality. Thus, the Tab2 7.0 qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).[2]

The Tab2 7.0 is described in at least the following documents and other materials cited in this chart:

- Samsung Galaxy Tab2 7.0 Android Tablet User Manual, GT-N8013_UM_English_UEALGB_BH_080612_F3 (copyright 2012 Samsung Electronics America, Inc.) ("Tab2 7.0 Manual"). SAM-KEY_00987180.
- Droid Life, *Samsung Unveils Galaxy Tab 2 Tablets for the U.S., 7-Inch at Just $239*, Apr. 12, 2012, available at https://www.droid-life.com/2012/04/12/samsung-unveils-galaxy-tab-2-tablets-for-the-u-s-7-inch-at-just-249/ ("*Samsung Unveils Tab2*"). SAM-KEY_00992896.

[1] Unless stated otherwise, Tab2 7.0 refers to Galaxy Tab2 7.0 products with Samsung's TouchWiz UI, running on Android 4.1 (Jelly Bean) or Android 4.2 (Jelly Bean), as specified herein. This chart depicts images of a Tab2 7.0 product running Android 4.2.2. Each of the Tab2 7.0 products with Samsung's TouchWiz UI, running on Android 4.1 (Jelly Bean) or Android 4.2 (Jelly Bean), was publicly available and/or used, and were thus available to and known or used by others in the United States before any priority date that Keyless Licensing LLC (or "Keyless") is entitled to, if any, for the asserted '922 patent claims (*see infra*, n.2).

[2] Keyless Licensing LLC (or "Keyless") alleges that the asserted claims of the '922 patent are entitled to priority as early as February 17, 2013. However, as explained in the cover pleading, the asserted claims of the '922 patent are not entitled to Keyless's claimed priority date due to inadequate written description support. Assuming the claims are not invalid under Section 112 (*see, e.g.*, cover pleading), the earliest possible priority date for the asserted '922 patent claims is December 24, 2013. As a result, the '922 patent is subject to the AIA. The inclusion of any pre-AIA statutes is predicated on Keyless's interpretation of priority, which Defendants disagree with.

- YouTube, H2TechVideos, *Galaxy Tab 2 7.0 for Beginners | H2TechVideos*, Dec. 24, 2012, available at https://www.youtube.com/watch?v=AKlFB9a04QM ("*Tab2 for Beginners*"). SAM-KEY_00992882.
- YouTube, SourceForge, *Verizon Samsung Galaxy Tab 2 7.0 Review Part 1*, Aug. 24, 2012, available at https://www.youtube.com/watch?v=W2sH7mvru40 ("*SourceForge Tab2 Review*"). SAM-KEY_00992891.
- PhoneArena, *Samsung Galaxy Tab 2 (7.0) Review*, Apr. 24, 2012, available at https://www.phonearena.com/reviews/Samsung-Galaxy-Tab-2-7.0-Review_id3018 ("*PhoneArena Tab2 Review*"). SAM-KEY_00992927.
- YouTube, PhoneArena, *Samsung Galaxy Tab 2 (7.0) Review*, Apr. 24, 2012, available at https://www.youtube.com/watch?v=Vx7NZa3jXao ("*PhoneArena Tab2 Video*"). SAM-KEY_00992888.
- YouTube, muwen360, *Samsung Galaxy Tab 2 7.0(GT-P3113) Official Android 4.2.2 Jellybean Update Review(United States)*, Sep. 5, 2013, available at https://www.youtube.com/watch?v=nvVtNCywQ1A ("*Jellybean Review*"). SAM-KEY_00992889.
- Android Wiki, *Android 4.0 Ice Cream Sandwich*, available at https://android.fandom.com/wiki/Android_4.0_Ice_Cream_Sandwich ("*Android 4.0 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993081.
- Android Wiki, *Android 4.1 Jelly Bean*, available at https://android.fandom.com/wiki/Android_4.1_Jelly_Bean ("*Android 4.1 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993086.
- Android Wiki, *Android 4.2 Jelly Bean*, available at https://android.fandom.com/wiki/Android_4.2_Jelly_Bean ("*Android 4.2 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993078.
- YouTube, mobileburn, *Samsung Galaxy Tab 7.0 Plus Android tablet review*, Nov. 17, 2011, available at https://www.youtube.com/watch?v=ftljZ9yGsiE ("*Mobileburn Review*"). SAM-KEY_00992890.
- YouTube, Jatin Tech Talks, *New Android 4.2.2 update for Samsung galaxy tab 2 7.0*, Sep. 19, 2013, available at https://www.youtube.com/watch?v=U07xuoeyTOQ ("*Android 4.2.2 Update*"). SAM-KEY_00992884.
- Documents produced in this litigation, as cited herein, including but not limited to SAM-KEY_00993816-19.
- Physical products acquired in this litigation, including but not limited to, a Galaxy Tab2 7.0 with Samsung's TouchWiz UI running on Android Version 4.1.2 (Ice Cream Sandwich), Kernel version 3.0.31-813049 (installed Jan. 9, 2013), Build number JZO54K.N8013UEUCMA3, which was available from January 2013, as referenced herein (Tab2 7.0 Product.).

- Expected testimony and evidence regarding the development, design, and/or use of the Samsung products operating with TouchWiz, Android 4.0, Android 4.1, and/or Android 4.2.
- Expected testimony and evidence regarding the sale, offer for sale, and public use of the Samsung products operating with TouchWiz, Android 4.0, Android 4.1, and/or Android 4.2.
- Source code for a Tab2 7.0 as referenced herein and/or acquired.

Citations to the above-listed references are exemplary, and Samsung reserves the right to rely on additional passages, prior art, and information regarding the operation and functionality of the Tab2 7.0 obtained through fact, expert, and third-party discovery, which is ongoing.

The Tab2 7.0 qualifies as prior art to U.S. Patent No. 10,976,922 ("'922 patent") at least under AIA 35 U.S.C. §§ 102(a)(1).2 Samsung's TouchWiz with Android 4.0 release was available and/or used before the priority date to which the '922 patent claims are entitled, if any. *See supra* note 1. As one example, Samsung's TouchWiz with Android 4.0 release was available and/or used in the United States at least as early as April 2012. *See, e.g.*, SAM-KEY_00993816-19; *Samsung Unveils Tab2*; *PhoneArena Tab2 Review*; *PhoneArena Tab2 Video*; *see also SourceForge Tab2 Review* (Tab2 7.0 in use by Aug. 24, 2012); *Tab2 for Beginners* (Tab2 7.0 in use by Dec. 24, 2012). As another example, Samsung's TouchWiz with Android 4.2.2 release was available and/or used in the United States at least as early as September 2013. *See*, *e.g.*, *Jellybean Review*; *Android 4.2.2 Update*.

The Tab2 7.0 anticipates or renders obvious alone, or with other references renders obvious one or more of the asserted claims of the '922 patent. To the extent Keyless contends that the Tab2 7.0 does not disclose one or more limitations of the asserted claims, it would have been obvious to modify the Tab2 7.0, or combine the Tab2 7.0 with the knowledge of a person of ordinary skill in the art ("POSITA") and/or with one or more of the following references, to render the claims at issue in the '922 patent invalid. The chart below illustrates how the asserted claims of the '922 patent are invalid in view of the Tab2 7.0 and/or additional secondary references listed below, including but not limited to the prior art identified in Defendant's Invalidity Contentions.

- Tab2 7.0 Manual. In addition to being evidence of the existence, availability, and design of the Tab2 7.0, the Tab2 7.0 Manual qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- YouTube, ChatonSamsung, *Samsung ChatON - Chat Your Way (Tutorial Video) [HD]*, Sept. 2, 2011, available at https://www.youtube.com/watch?v=KntTVDjRJjo ("*ChatON Tutorial*"). *ChatON Tutorial* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- About.com, *Samsung ChatON – IM App Review*, archive captured October 5, 2013, available at https://web.archive.org/web/20131005080603/http://voip.about.com:80/od/mobilevoip/fr/Samsung-Chaton-Im-App-Review.htm ("*About.com*"). *About.com* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).

- Gadgets360, *Samsung unveils ChatON 2.0 with multiple device syncing, new social features and more*, Dec. 27, 2012, available at https://www.gadgets360.com/apps/news/samsung-unveils-chaton-20-with-multiple-device-syncing-new-social-features-and-more-310412 ("*Gadgets360*"). *Gadgets360* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- Android Police, *Samsung's ChatON App Updated To v2.7.3 With Voice And Video Chat For GS4, Animated GIFs, And More*, June 11, 2013, available at https://www.androidpolice.com/2013/06/11/samsungs-chaton-app-updated-to-v2-7-3-with-voice-and-video-chat-for-gs4-animated-gifs-and-more/ ("*Android Police*"). *Android Police* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- Gadgeteer, *Samsung ChatON Takes Chatting on your Phone to the Next Level*, Sept. 25, 2012, available at https://the-gadgeteer.com/2012/09/25/samsung-chaton-takes-chatting-on-your-phone-to-the-next-level/ ("*Gadgeteer*"). *Gadgeteer* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- YouTube, Tim Schofield, *How to Install the ICS Messaging App on ANY Android Phone*, Jan. 17, 2012, https://www.youtube.com/watch?v=qNRwdAcG5G4 ("*ICS Messaging*"). *ICS Messaging* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- U.S. Patent Application Publication No. 2013/0187861A1 to Lavallee ("Lavallee"), filed on January 19, 2012, and published on July 25, 2013. Lavallee qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0110486A1 to Sirpal et al. ("Sirpal-486"), filed on September 28, 2011, and published on May 3, 2012. Sirpal-486 incorporates by reference U.S. patent application nos. 61/389,000, 61/389,117, 61/389,087, and 61/458,150, all of which are included as part of its disclosure, at least as of the date that Sirpal-486 was published. Samsung reserves the right to rely on the incorporated materials as part of Sirpal-486. Sirpal-486 further claims priority as early as October 1, 2010, through one or more provisional applications identified on its face. Sirpal-486 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Additionally, PCT Publication No. WO2012/044782 (filed on September 29, 2011, and published on April 5, 2012) ("Sirpal-782") and U.S. Patent No. 8,832,577 ("Sirpal-577") (filed September 28, 2011, and issued on September 9, 2014) include equivalent disclosure to Sirpal-486 and qualify as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on any of Sirpal-782 or Sirpal-577 for their disclosures equivalent to Sirpal-486.

- U.S. Provisional Patent Application No. 61/389,000 to Sirpal et al. ("Sirpal-000"), was filed on October 1, 2010, and published at least by May 3, 2012, upon the publication of U.S. Patent Application No. 13/247,801 (as Sirpal-486), which claimed priority to and incorporated by reference Sirpal-000. Sirpal-000 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on Sirpal-000 on its own, in addition to relying on Sirpal-000 as an incorporated part of Sirpal-486.
- U.S. Patent Application Pub. No. 2013/0050102 A1 to Wang et al. ("Wang"), was filed November 28, 2011, and published February 28, 2013. Wang qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 7,340,686 to Matthews et al. ("Matthews"), was filed on March 22, 2005, and issued on March 4, 2008. Matthews qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).
- Samsung Galaxy Nexus (SCH-I515) ("Nexus") as discussed in Exhibit B5 to these Invalidity Contentions. Nexus running Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean) ("Nexus"), was publicly available and/or used in the United States, and was thus available to and known or used by others in the United States, at least as early as November 28, 2012, when updates to Android 4.2.2 were made publicly available, and as early as November 2011 and January 2012, when models designated SCH-I515MSAVZW and SCH-I515ZSAVZW were first released running Android 4.0 (Ice Cream Sandwich), as discussed in Exhibit B5. Thus, the Nexus qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- U.S. Patent Application Publication No. 2012/0113023 to Koch et al. ("Koch"), was filed on March 30, 2011, published on May 10, 2012, and claims priority to Provisional Application No. 61/410,862. Koch qualifies as prior art at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- PC Mag, *Enter the Phablet: A History of Phone-Tablet Hybrids*, Feb. 13, 2012, available at https://www.pcmag.com/news/enter-the-phablet-a-history-of-phone-tablet-hybrids ("*PC Mag*"). *PC Mag* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- NBC News, *Is Samsung's 'phablet' the shape of things to come?*, Apr. 5, 2012, available at https://www.nbcnews.com/id/wbna46963404 ("*NBC News*"). *NBC News* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- Reuters, *Samsung dazzles phablet followers with more girth, size*, Sept. 26, 2013, available at https://www.reuters.com/article/technology/samsung-dazzles-phablet-followers-with-more-girth-size-

idUSBRE98P0WA/ ("*Reuters*"). *Reuters* was published on the Internet and qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).

- U.S. Patent No. 10,198,163 to Yabuki ("Yabuki"), was filed as Application No. 14/406,377 on December 8, 2014, and issued on February 5, 2019. Yabuki was filed as a national phase application of PCT Application No. PCT/JP2013/065733, which was filed on June 6, 2013, designated the United States, and claimed priority to Japanese Application No. 2012-130755 (filed on June 8, 2012). Yabuki qualifies as prior art at least under 35 U.S.C. § 102(a)(2). Yabuki's PCT Application claims priority to Japanese Application No. 2012-130755 (filed on June 8, 2012), designated the United States, and was published as WO2013/183722 on December 12, 2013, and thus the PCT publication also qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on WO2013/183722 as prior art for the same reasons described below for Yabuki.

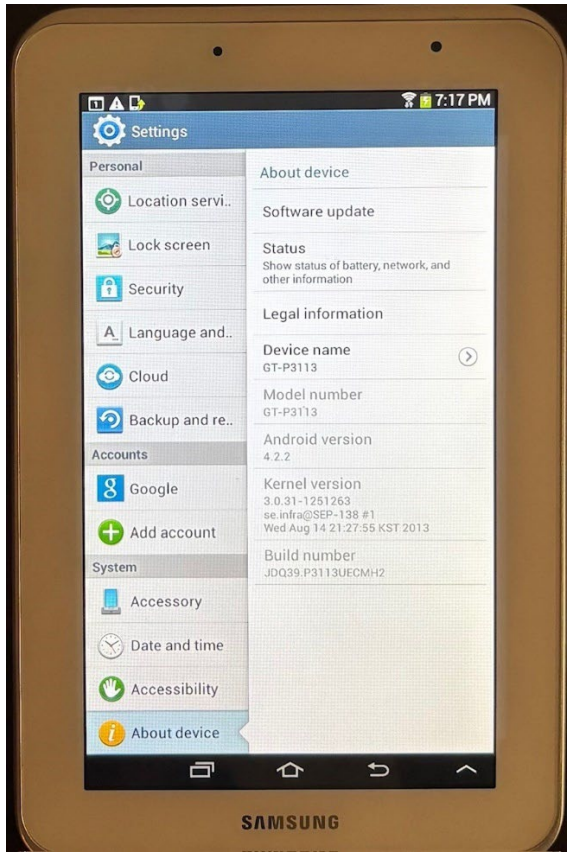
With respect to any proposed modifications to the Tab2 7.0, such modification would have been obvious to try, an obvious combination of prior art elements according to known methods to yield predictable results, a simple substitution of one known element for another to obtain predictable results, a use of known techniques to improve a similar devices or method in the same way, an application of a known technique to a known device or method ready for improvement to yield predictable results, a variation of a known work in one field of endeavor for use in either the same field or a different one based on design incentives or other market forces with variations that are predictable to a person of ordinary skill in the art (POSITA), and/or obvious in view of teachings, suggestions, and motivations in the prior art that would have led a POSITA to modify or combine the prior art references.

The excerpts cited herein are exemplary. For any claim limitation, Samsung may rely on excerpts cited for any other limitation and/or additional excerpts not set forth fully herein to the extent necessary to provide further explanation for a reference's disclosure of a limitation. Where an excerpt refers to or discusses a figure or figure items, that figure and any additional descriptions of that figure should be understood to be incorporated by reference as if set forth fully herein. Samsung reserves the right to further supplement this chart.

To the extent that these Invalidity Contentions rely on or otherwise embody particular interpretations of terms or phrases in the asserted claims, Samsung is not proposing any such interpretations as proper interpretations or constructions of those terms or phrases. Various positions put forth in this document are predicated on Keyless's interpretation of its claims as evidenced by its Infringement Contentions. Those positions are not intended to and do not necessarily reflect Samsung's interpretation of the true and proper scope of the asserted claims. Samsung further incorporates by reference all reservations of rights set forth in the Invalidity Contentions, as if fully set forth herein.

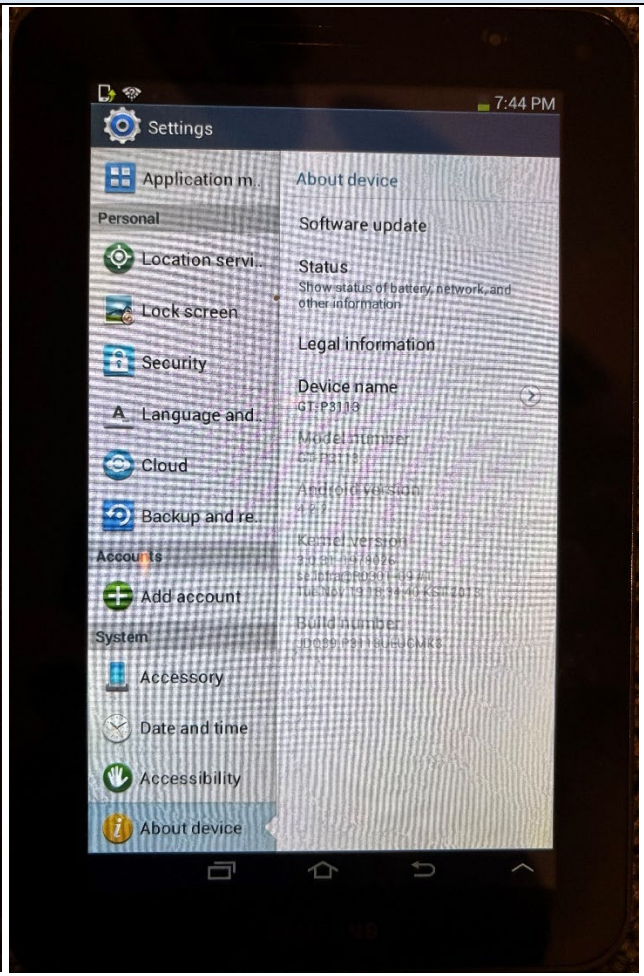
Defendants' arguments throughout these invalidity contentions are based on Keyless's apparent interpretation of the claims in its infringement contentions. Defendants do not agree that such interpretation is proper and reserve the right to argue that the mapped

actions do not infringe any claims of the ’922 patent. In the alternative, should the Court or factfinder construe and/or apply the claims in a manner consistent with Keyless’s interpretations in its infringement contentions for the ’922 patent, the claims are invalid for at least the reasons set forth herein.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[1P]** A system for using multiple applications on a screen of a device, comprising: | To the extent that the preamble is held to be limiting, Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes a "system for using multiple applications on a screen of a device."<br><br>For example, the Tab2 7.0 is a device with a screen for using multiple applications. For example, the Tab2 7.0 Product is depicted below.<br><br>  <br>  |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Tab2 7.0 Product (Ser. No. R32CA06MJYN).[3]<br>Another example of the Tab2 7.0 Product is depicted below. |

[3] Samsung reserves the right to rely on any Tab2 7.0 device, including the Tab2 7.0 Products shown here. On information and belief, such devices function substantially the same as disclosed in this chart. A copy of the source code for Tab2 7.0 has been made available in the Washington, DC office of Defendants' counsel. Defendants' and their experts reserve the right to rely on the Tab2 7.0 source code when demonstrating the functionality and supporting the invalidity theories described herein. The Tab2 7.0 Product identified here is a Tab2 7.0 Model GT-P3113, Serial Number R32CA06MJYN, running Android 4.2.2, Kernel Version 3.0.31 – 1251263 se.infra@SEP-138 #1 Wed Aug 14 21:27:55 KST 2013, Build Number JDQ39.P3113UECMH2. Samsung's records indicate that the firmware was last updated on August 26, 2013.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   Tab2 7.0 Product (Ser. No. R32C7042NBF).[4] |

[4] The Tab2 7.0 Product identified here is a Tab2 7.0 Model GT-P3113, Serial Number R32C7042NBF, running Android 4.2.2, Kernel Version 3.0.31 – 1978026 se.infra@R0301-09 #1 Tue Nov 19 18:34:40 KST 2013, Build Number JDQ39.P3113UEUCMK3. Samsung's records indicate that the firmware was last updated on December 11, 2013.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | The Tab2 7.0 includes a Home screen view, which provides icons that are used to open various software applications, as illustrated below:<br>  <br><br>Tab2 7.0 Product (recording of Home screen).<br><br>Additionally, an “Apps” icon “  ” on the Tab2 7.0 Home screen (illustrated at the bottom-right corner in the figure above) may be used to access an Apps screen, below, which displays additional application icons. |

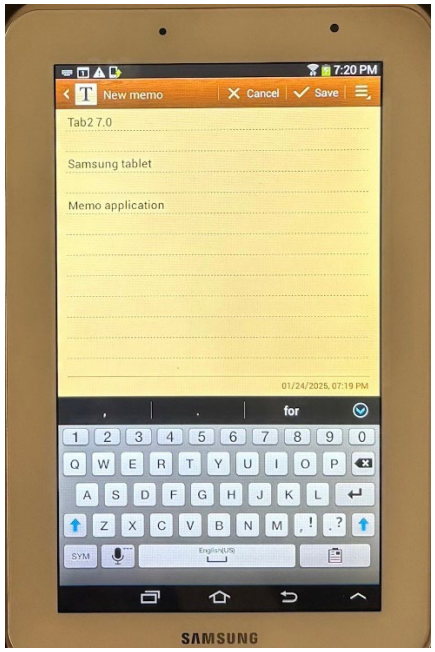
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Tab2 7.0 Product (recordings of Apps screen).<br>Additional exemplary citations include:<br>Tab2 7.0 Manual discloses that the Tab2 7.0 includes a "7.0-inch WSVGA (1024x600) TFT (PLS) LCD touch screen," which is a screen of a device. Tab2 7.0 Manual at 17.<br>Tab2 7.0 includes applications to be used on the screen of the device, including "Preloaded applications such as AllShare Play, Google Play Books, Google Play Store, Music Hub, Polaris Office, and Readers Hub." (Tab2 7.0 Manual at 17.) Tab2 7.0 Manual also discloses "various Internet and social networking applications available on your device such as Google and Voice Search, Google+, Internet, Local, Maps, Navigation, Google Play Books, Play Magazines, and |

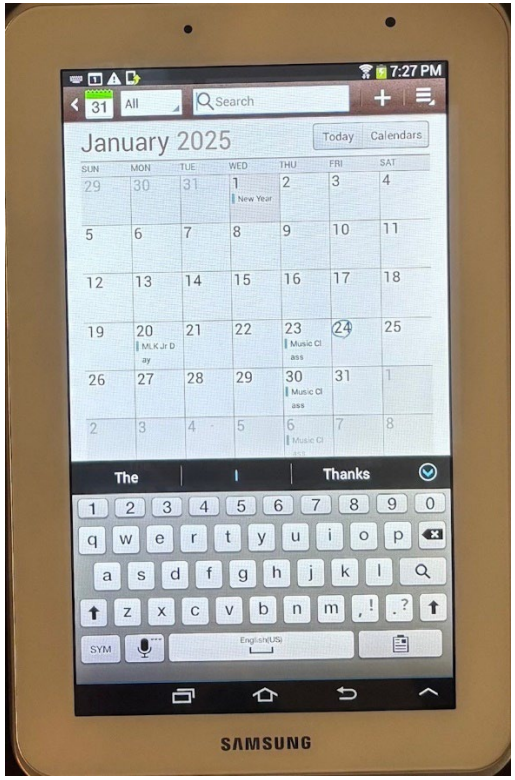
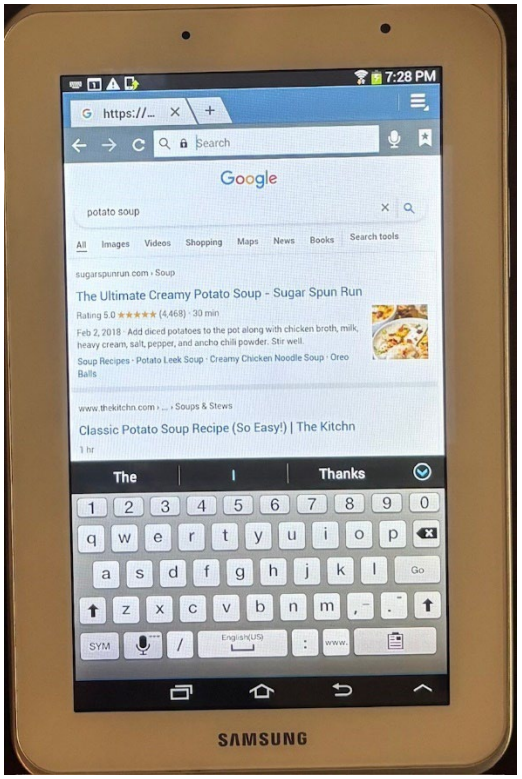
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | YouTube." (*Id.* at 54-61.) Other applications include Contacts (*id.* at 41-47), Gmail (*id.* at 48-49), Email (*id.* at 49-51), Google Talk ("Google's instant messaging and audio and video chat service") (*id.* at 52), Google Messenger (*id.* at 53), ChatON (*id.* at 53), Internet (*id.* at 55), Calendar[5] (*id.* at 97), and Memo (*id.* at 103-104) and other applications (*id.* at 93-111).<br><br>Applications may be accessed via icons displayed on the Home Screen of the Tab2 7.0, as illustrated below ("5. App Shortcuts: Shortcuts to common applications"; "11: Quick Launch: This softkey can be set to launch several different applications."). |

[5] Tab2 7.0 Manual refers to the "Calendar" application as "a powerful planner." Tab2 7.0 Manual at 97. The Tab2 7.0 Product includes an "S Planner" application. On information and belief, both Calendar and S Planner include substantially the same functionalities, for purposes of these contentions.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Tab2 7.0 Manual at 21-24.<br>Additionally, application icons are displayed on the Apps screen, which may be accessed via the "Apps" icon "  " labeled 12 in the figure above ("12. Apps: Display the Apps screen"). *Id.* at |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | 22; *see also id.* at 35 ("The Apps screen displays all applications installed on your wireless device."). |
| **[1A]** an electronic device having a touchscreen; | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "an electronic device having a touchscreen."<br><br>For example, the Tab2 7.0 Product is an electronic device that includes a touchscreen that responds to a user's touch inputs.<br><br>For example, the Tab2 7.0 includes a "7.0-inch WSVGA (1024x600) TFT (PLS) LCD touch screen," which is a screen of a device. Tab2 7.0 Manual at 17. |
| **[1B]** an on-screen keyboard for entering text in a first application running within said device | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "an on-screen keyboard for entering text in a first application running within said device."<br><br>For example, Tab2 7.0 discloses an on-screen keyboard, as shown below. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Tab2 7.0 Product (illustrating keyboard in use with Memo application).<br>Further, the on-screen keyboard of the Tab2 7.0 is for entering text in various applications running within the device, including Memo (as illustrated above), as well as S Planner and Internet (illustrated below). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Tab2 7.0 Product (illustrating keyboard for entering text with S Planner (above-left) and Internet (above-right).<br>Additional exemplary citations include:<br>Tab2 7.0 Manual at 36-39, disclosing the "virtual QWERTY keyboard," which "displays at the bottom of the screen." |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|

### *Application Information*

To view information about an App, such as the amount of storage it uses, force the App to stop, uninstall updates, and clear data:

1. From a Home screen, touch **Apps** ➔ **Settings** ➔ **Application manager**.
2. Touch the **All** tab, scroll through the apps list, and touch the app to open a screen with details about the App.

### *More Application Information*

For more information, refer to *"Applications and Widgets"* on page 93.

In that section, each application that is available on the Applications screen is listed and described. If the application is also described in another section of this user manual, then a cross reference to that particular section is provided. Various widgets are also described.

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### *Using the Samsung Keyboard*

The Samsung keyboard is a custom virtual QWERTY keyboard, featuring optional predictive text. Input characters by touching the on-screen keys with your finger or use speech recognition.

You can enable predictive text, to have the Samsung keyboard match your key touches to common words and displays them. Select a word from the display to insert it into your text.

### Configuring the Samsung Keyboard

You can configure the Samsung keyboard to your preferences.

- While entering text, touch .

For more information, refer to *"Configuring the Samsung Keyboard"* on page 130.

### Entering Upper and Lower Case Letters

The default case is lower case (abc). Enter upper and lower case alphabet letters by touching the Shift key to toggle the case, before touching the letter key(s).

- Touch once to switch from abc to Abc mode
- Touch and hold to switch to ABC mode

## Entering Text

Your device uses a virtual QWERTY keyboard for text entry. Use the keyboard to enter letters, punctuation, numbers, and other characters into text entry fields or applications. Access the keyboard by touching any text entry field.

You can also use voice input to speak your inputs.

The virtual QWERTY keyboard displays at the bottom of the screen. By default, when you rotate the device, the screen orientation updates to display the keyboard at the bottom of the screen.

### *Text Input Methods*

Your device offers two text input methods:

- Google voice typing and
- Samsung keyboard.

You can set a default text entry method in Settings. For more information, refer to *"Keyboards and Input Methods"* on page 129.

To choose a text input method while entering text:

1. Touch the top of the screen and swipe downward.
   The Quick Settings pop-up displays.
2. Touch **Choose input method**.

### Entering Symbols and Numbers

The number keys are displayed at the top of the keyboard and are always available.

To enter common symbols, touch SYM to switch to symbol mode, then touch the corresponding key.

There are two pages of symbols. Touch 1/2 to switch to the next page.

Touch and hold a vowel key (A, E, I, O, U, or Y) or the C, N, or S key to open a small window where you can chose an accented vowel or other alternate letter. Slide to the letter until it is highlighted, and release.

Touch and hold the Period key (.) to open a small window with a set of common symbols.

### Using Predictive Text

By using Predictive text, you can have next-letter prediction and regional error correction, which compensates for pressing the wrong keys on the QWERTY keyboard.

**Note:** Enable Predictive text in Samsung keyboard settings. For more information, refer to *"Configuring the Samsung Keyboard"* on page 130.

Understanding Your Device 37

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|

While entering characters, potential word matches display in the Predictive text area above the keyboard.

- Touch a word to insert it into your text.

Tip: Touch to display more words.

**Using Google Voice Typing from the Samsung Keyboard**

When you enable the Google voice typing setting, you can use your voice to enter text instead of the keyboard.

For more information about enabling Voice input, For more information, refer to *"Using Google Voice Typing"* on page 39.

***Editing Text***

You can edit the text you enter in text fields by cutting, copying, or pasting text. These operations can be performed within and across apps. However, some apps do not support editing some or all of the text displayed while others may offer their own way to select text.

**Editing Existing Text**

To edit text that you have entered:

1. Touch the text at the point you want to edit.
   The **Cursor** displays at the point you touched.



   Enter text by typing or speaking to replace the selection with what you type.

   – or –

   Touch the **Delete** key to delete the selected text.

**Pasting Text**

To paste previously copied text:

1. Touch the text at the point you want to paste the copied text.
   The **Cursor** displays at the point you touched.
2. Touch the Cursor.
   A pop-up displays.
3. Touch **Paste** in the pop-up.

To paste text directly from the clipboard:

1. Touch the **Clipboard** key to display the text saved to the clipboard.
2. Touch a text block to paste that text where the **Cursor** is positioned.

***Closing the Keyboard***

To close the keyboard:

- Touch .

2. Touch and drag the **Cursor** to a better position, if necessary.
3. Enter additional text or delete text by repeatedly touching the **Delete** key.

**Copying, Deleting, or Replacing Text**

To select and copy, delete, or replace text:

1. Touch and hold the text or word you want to select.
   The selected text is highlighted with a tab at each end of the selection.
2. Touch and drag either tab to select more or less text.

Tip: Touch **Select all** in the Application bar to select all text in the field. Touch on another area of the screen or touch **Done** to deselect the text.

3. Depending on the action you want to take for the selected text, in the Application bar touch:
   - **Select all** to highlight all text in the field.
   - **Cut** to remove the selected text.
   - **Copy** to save the selected text to the clipboard.

   – or –

**Using Google Voice Typing**

You can use your voice to enter text using the Google voice typing feature.

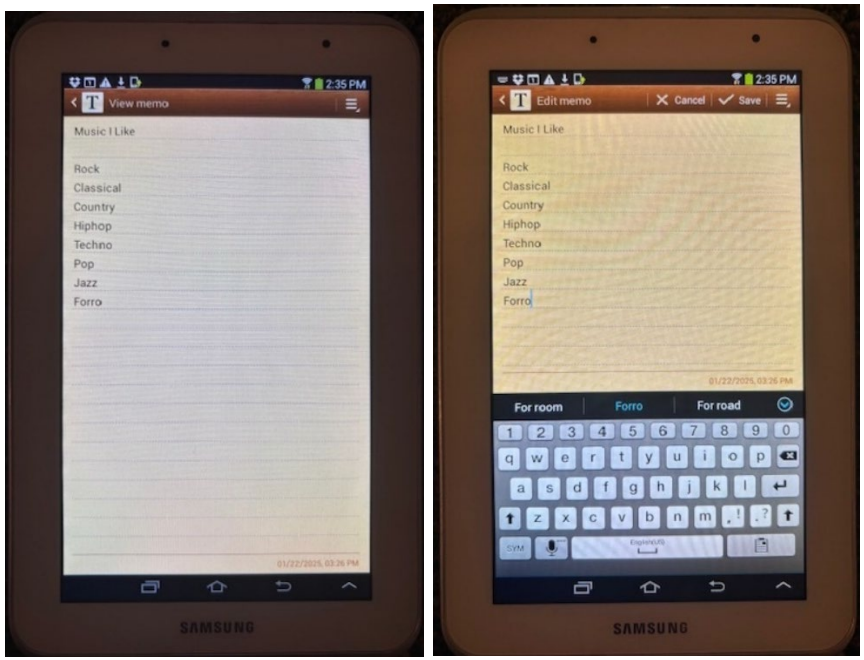
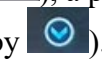
While entering text:

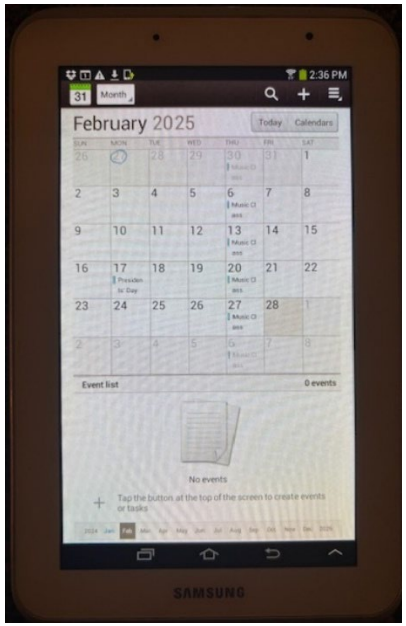
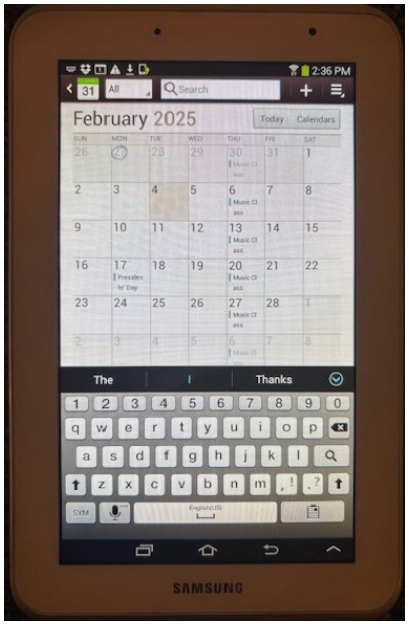
1. Touch the top of the screen and swipe downward.
   The Quick Settings pop-up displays.
2. Touch **Choose input method** ➔ **Google voice typing**.
   – or –
   Touch on the keyboard.
   For more information, refer to *"Keyboards and Input Methods"* on page 129.
3. At the **Speak now** prompt, speak clearly and distinctly into the microphone.
   The software converts your voice to text, which is displayed in the message.
4. Keep speaking to add more test.
5. Touch **Done** to display the Samsung keyboard.

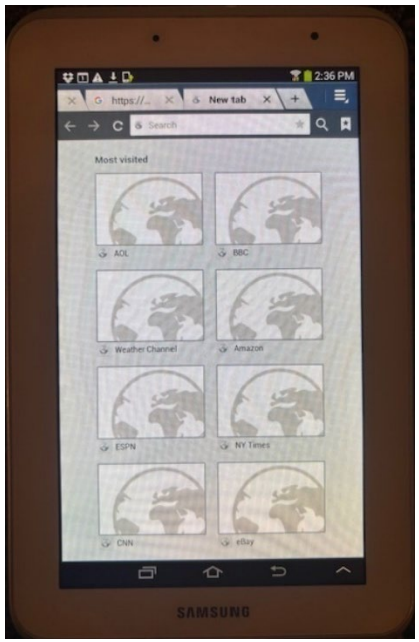
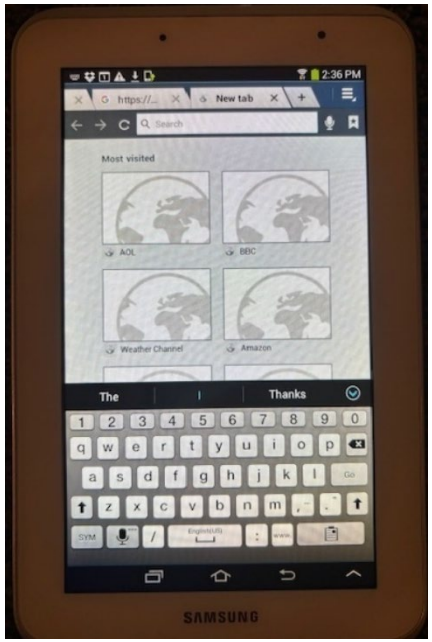


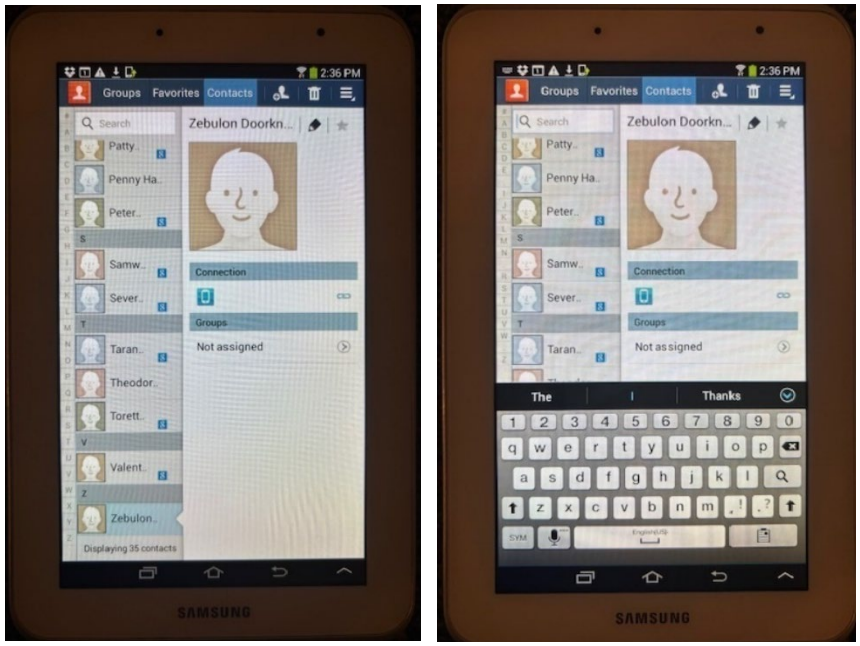
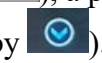
Tab2 7.0 at 36-39.

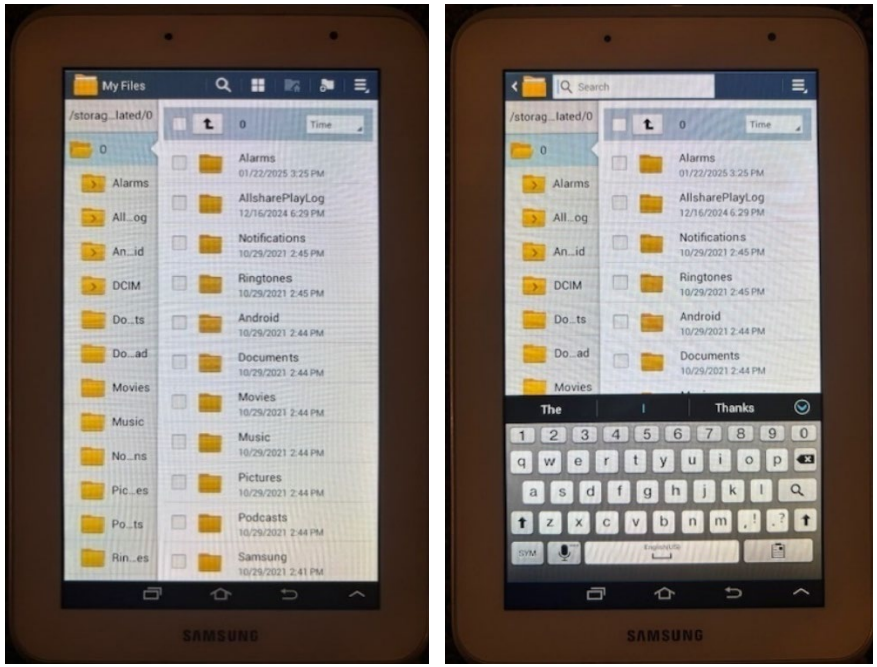
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | |
| **[1C]** wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard; and | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard.".<br><br>For example, as illustrated below, Tab2 7.0's Memo application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Memo application) initially takes up the entire screen. Tapping the displayed page of Memo results in a second zone being assigned to the keyboard. The keyboard includes, *inter alia*, a delete key (denoted by  ), a predictive text bar at the top of the keyboard, and a predictive text drop-down key (denoted by  ). The predictive text bar allows a user to select a suggested word to be entered into the first application. The predictive text drop-down key is used to expand the predictive text bar and display additional word suggestions. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Tab2 7.0 Product (illustrating Memo application in full-screen view (left) and with keyboard (right)).<br>As another example, as illustrated below, Tab2 7.0's S Planner application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (S Planner application) initially takes up the entire screen. Tapping the "Search" box results in a second zone being assigned to the keyboard. The keyboard includes, *inter alia*, a delete key (denoted by  ), a predictive text bar at the top of the keyboard, and a predictive text drop-down key (denoted by  ). The predictive text bar allows a user to select a suggested word to be entered into the first application. The predictive |

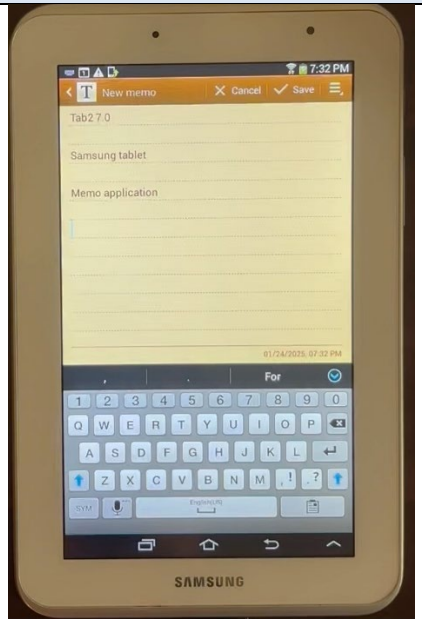
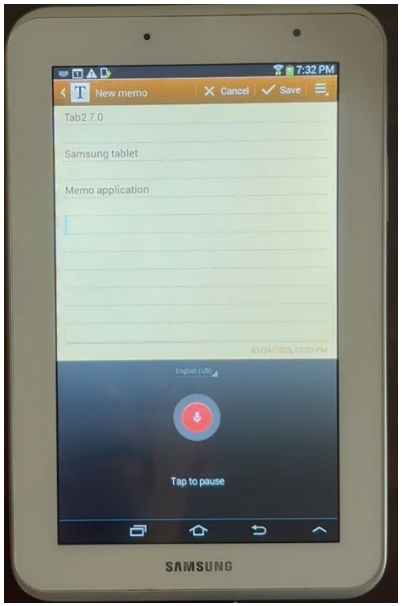
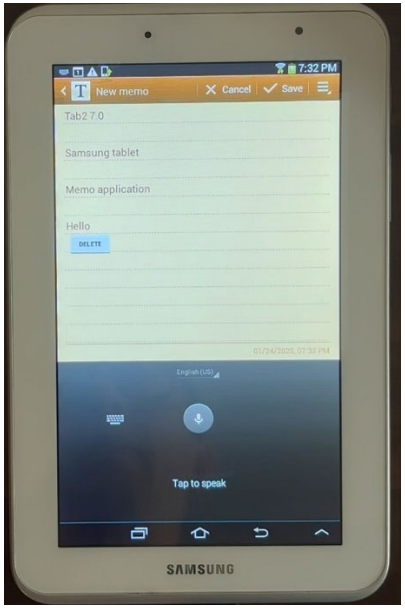
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | text drop-down key is used to expand the predictive text bar and display additional word suggestions.<br>  <br><br>  <br><br>Tab2 7.0 Product (illustrating S Planner application in full-screen view (left) and with keyboard (right)).<br>As yet another example, as illustrated below, Tab2 7.0's Internet application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Internet application) initially takes up the entire screen. Tapping the "Search" bar results in a second zone being assigned to the keyboard. The keyboard includes, *inter alia*, a delete key (denoted by  ), a predictive text bar at the top of the keyboard, and a predictive text drop-down key (denoted by  ). The predictive text bar allows a user to select a suggested word to be entered into the first application. The predictive |

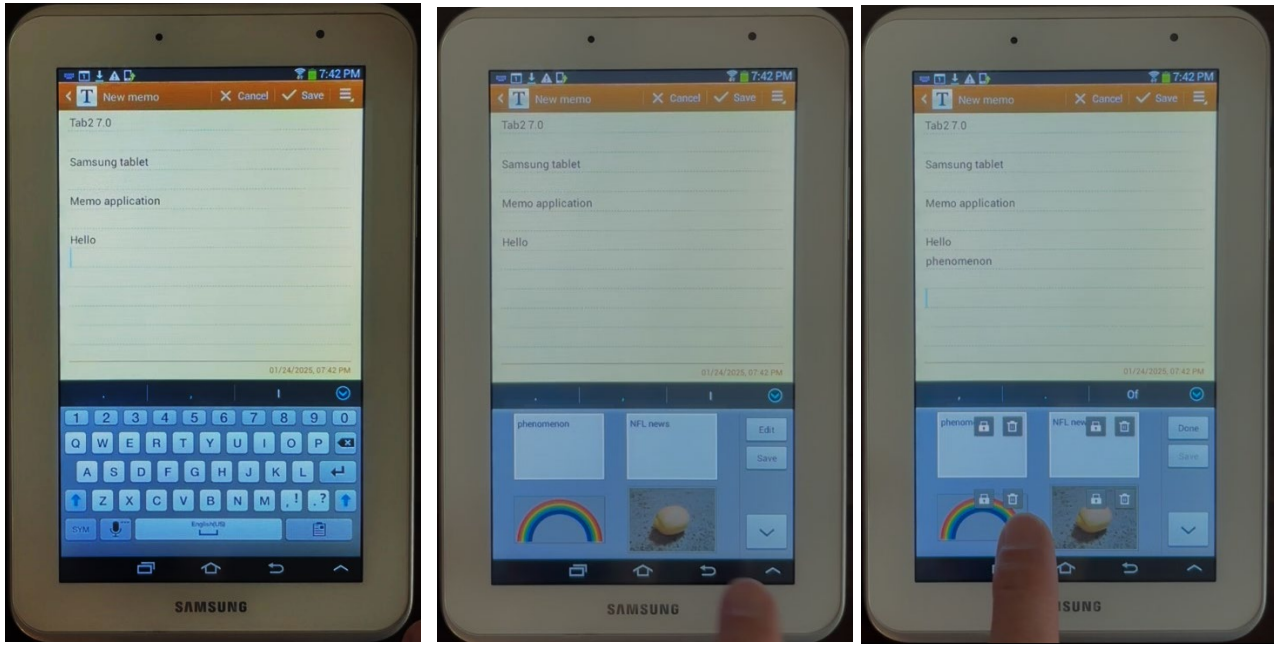
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | text drop-down key is used to expand the predictive text bar and display additional word suggestions.<br>  <br>  <br>Tab2 7.0 Product (illustrating Internet application in full-screen view (left) and with keyboard (right)).<br>As yet another example, as illustrated below, Tab2 7.0's Contacts application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Contacts application) initially takes up the entire screen. Tapping the "Search" box results in a second zone being assigned to the keyboard. The keyboard includes, *inter alia*, a delete key (denoted by  ), a predictive text bar at the top of the keyboard, and a predictive text drop-down key (denoted by  ). The predictive text bar allows a user to select a suggested word to be entered into the first application. The predictive |

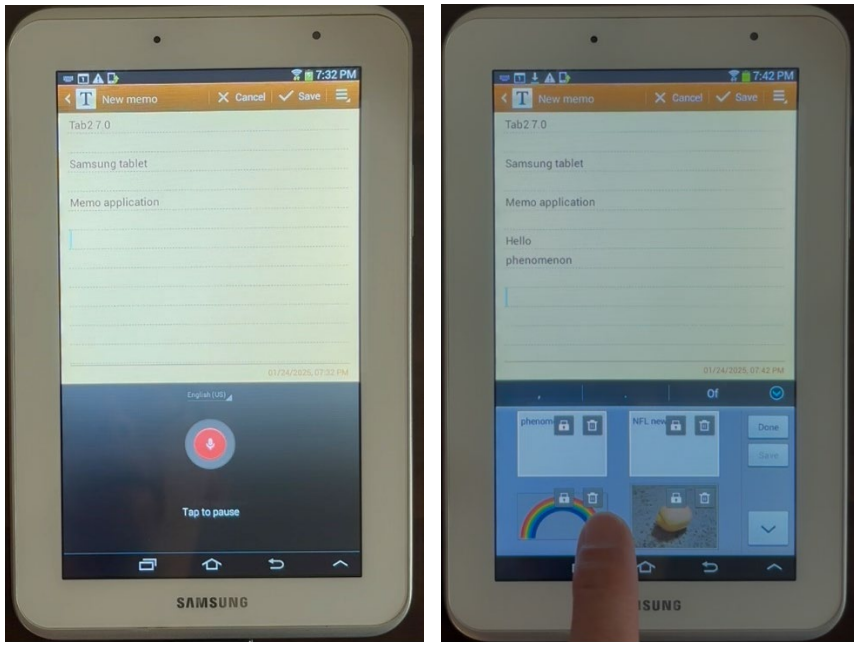
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | text drop-down key is used to expand the predictive text bar and display additional word suggestions.<br>  <br><br>Tab2 7.0 Product (illustrating Contacts application in full-screen view (left) and with keyboard (right)).<br>As still another example, as illustrated below, Tab2 7.0's My Files application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (My Files application) initially takes up the entire screen. Tapping the "Search" box results in a second zone being assigned to the keyboard. The keyboard includes, *inter alia*, a delete key (denoted by  ), a predictive text bar at the top of the keyboard, and a predictive text drop-down key (denoted by  ). The predictive text bar allows a user to select a suggested word to be entered into the first application. The predictive |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | text drop-down key is used to expand the predictive text bar and display additional word suggestions.<br>  <br><br>Tab2 7.0 Product (illustrating My Files application in full-screen view (left) and with keyboard (right)).<br>Additional exemplary citations include:<br>Tab2 7.0 Manual at 36 ("The virtual QWERTY keyboard displays at the bottom of the screen. By default, when you rotate the device, the screen orientation updates to display the keyboard at the bottom of the screen."). |
| **[1D]** wherein based on accomplishment of a | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone, and | Keyless's apparent interpretation of this limitation, includes "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br><br>For example, as illustrated below (left), pressing the voice input button (  ) on the Tab2 7.0's keyboard activates a voice input application and displays an interface for the voice input application on at least a portion of said second zone as shown below (center). After a short delay, during which a user may (or may not) provide voice input, a keyboard icon key () also appears on at least a portion of said second zone, as illustrated below (right). Pressing the keyboard icon key causes the original keyboard to be restored. The voice input application is a "second" application that is distinct from the "first" application (for example, the Memo, S Planner, Internet, Contacts, or My Files application) and is distinct from the keyboard. The voice input application can receive audio voice inputs and generate text to output to the "first" application. |

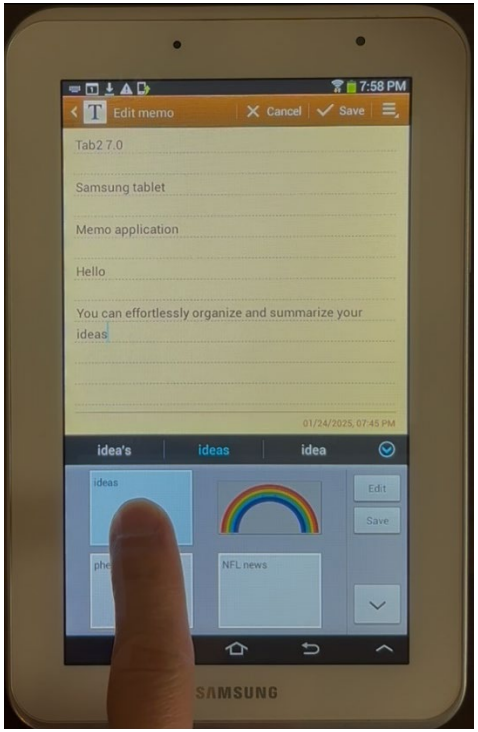
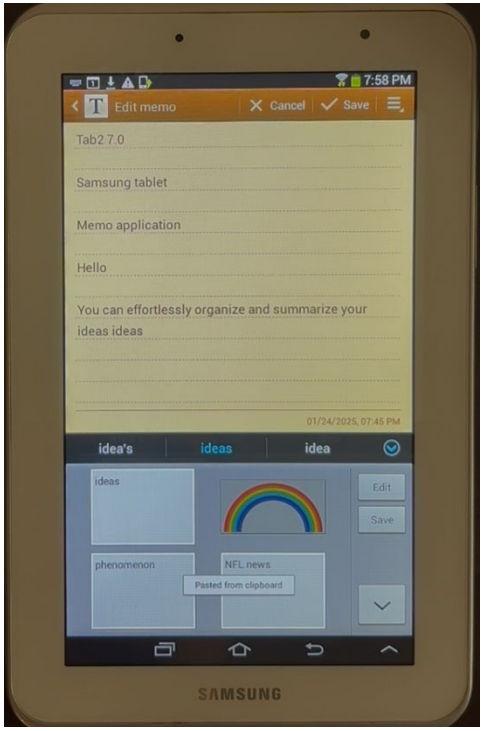
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |    Tab2 7.0 Product (illustrating Memo application with keyboard and voice input application).<br>Additionally, as illustrated below (left), the Tab2 7.0 includes a clipboard application that can be launched by pressing the clipboard button (denoted by  , positioned to the right of the Space Bar key) on the keyboard. The clipboard application can be launched by pressing the clipboard key on the keyboard. The clipboard application is a "second" application that is distinct from the "first" application (for example, the Memo, S Planner, Internet, Contacts, or My Files application) and is distinct from the keyboard. The clipboard application can copy and paste images and text, for example, including when the keyboard is not displayed and is not in use. Images and text copied anywhere on the device, for example when taking a screenshot or copying all or part of a photo from the camera or image gallery, are copied into the clipboard. As illustrated below (center), the clipboard application displays the data that is contained in the clipboard, and allows selecting items to paste them, including into the "first" application (the Memo application in the |

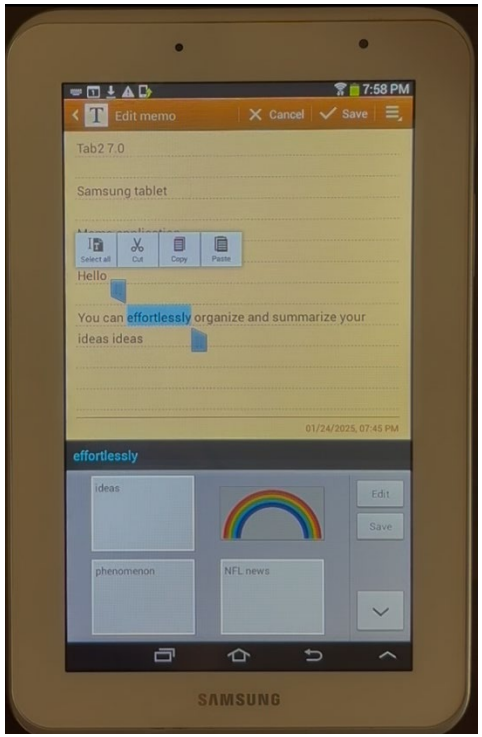
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | example below). The clipboard application interface also includes a trash can icon ( ), below (right), which allows deleting items from the clipboard.<br>  <br><br>Tab2 7.0 Product (illustrating keyboard (left) and clipboard (center, right) in use with Memo application).<br>When the clipboard application is running within the keyboard zone (above (center), above (right)), a reduced interface of the keyboard (which includes, for example, the bottom key, , predictive text bar, and predictive text drop-down key, ) is shown and remains functional. In addition, the clipboard application displays a "trash" button ( ), which corresponds to the delete key of the keyboard, which allows for deleting items to perform a delete function. |

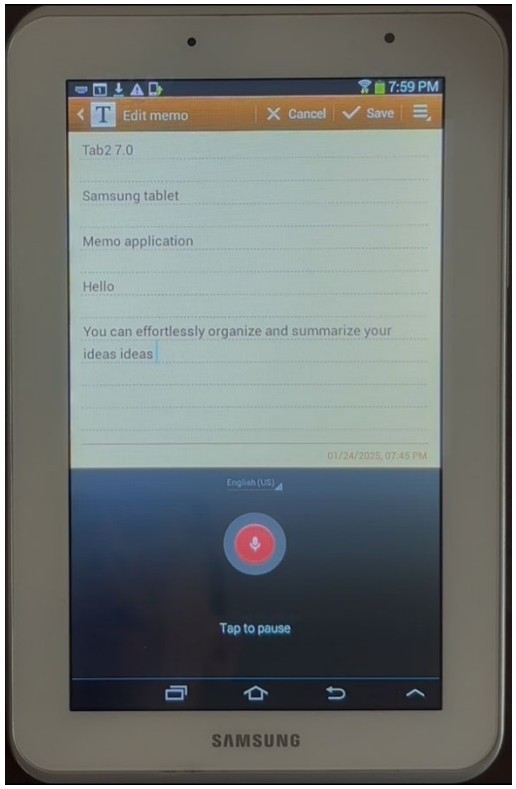
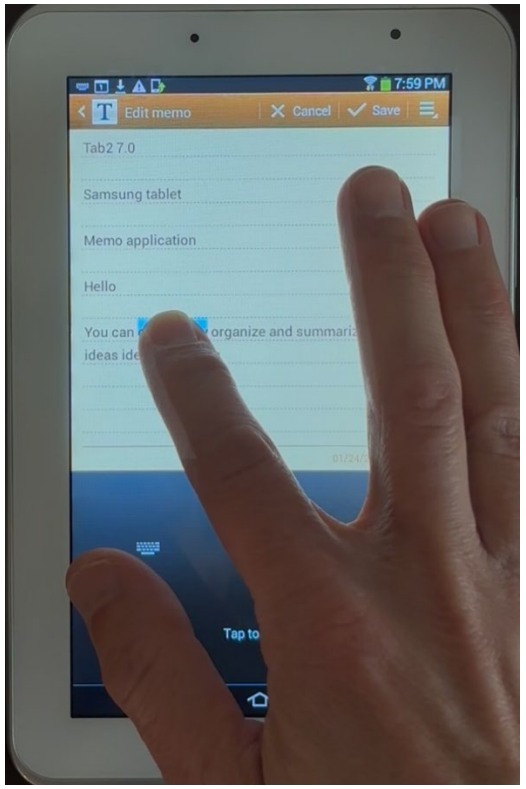
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[1E]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen. | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen."<br><br>For example, Tab2 7.0 discloses that all of the "interface of said first application" (e.g., the Memo, S Planner, Internet, Contacts, or My Files application), the "interface of said second application" (e.g., the voice input application or clipboard), and "the reduced interface corresponding to said keyboard" being "simultaneously displayed on said touchscreen," as discussed in claim [1D] and illustrated in the following images reproduced from [1D] above:<br><br>  <br>Tab2 7.0 Product (illustrating Memo application with voice input application (left) and clipboard application (right)); *See supra*, claim [1D]. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | |

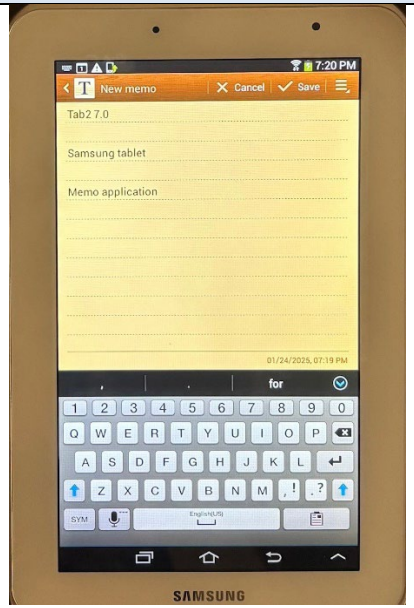
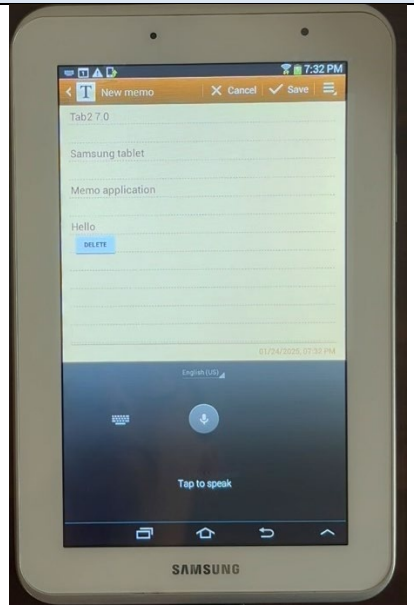
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[2]** The system of claim 1, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 2 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 2 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>For example, in all the examples shown in connection with claim 1, interacting with the interface of the "first" application causes the focus of the system to be given to the "first" application, and interacting with the interface of the "second" application causes the focus to be given to the "second" application. The focus can shift back and forth between the applications.<br><br>Additionally, the clipboard application at the bottom of the screen is first interacted with, to select one of the items in the clipboard (the text "ideas"), as illustrated below (left). The selected item is highlighted after being selected and then inserted into the Memo application, as illustrated below (center). |

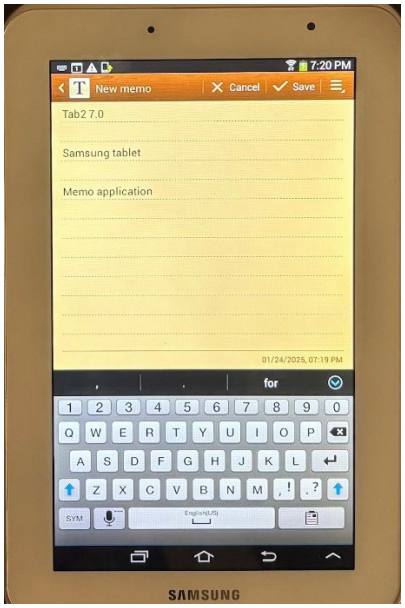
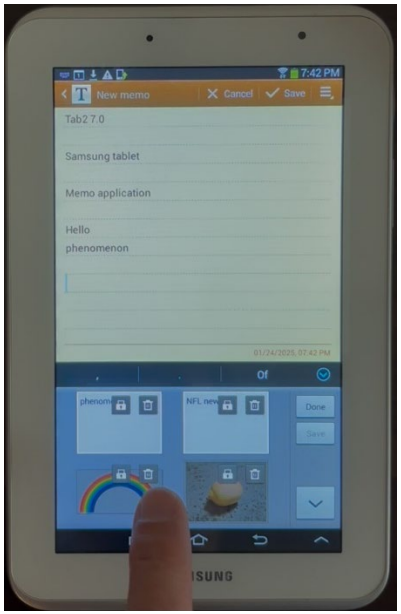
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Tab2 7.0 Product (Illustrating Memo application with clipboard application). Next, the focus of the system switches from the clipboard application to the Memo application, when the Memo application at the top of the screen is interacted with, to select the word “effortlessly,” as illustrated below. *See* Infringement Contentions Ex. B at 22. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Tab2 7.0 Product (illustrating Memo application with clipboard application).<br>Additionally, the voice input application at the bottom of the screen is interacted with, to input spoken words, which the voice input application indicates with an animated pulsating circle around the microphone icon (below, left). The voice input application also is interacted with by pressing the microphone icon to begin or stop voice input mode. Next, the focus of the system switches from the voice input application to the Memo application, when the Memo application at the top of the screen is interacted with, to select the word “effortlessly” (below, right). |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Tab2 7.0 Product (illustrating Memo application with voice input application).<br>Each of the foregoing examples uses the Memo application as the “first” application. The S Planner and Internet applications operate in the same way as a first application relative to the examples of a second application outlined above. |

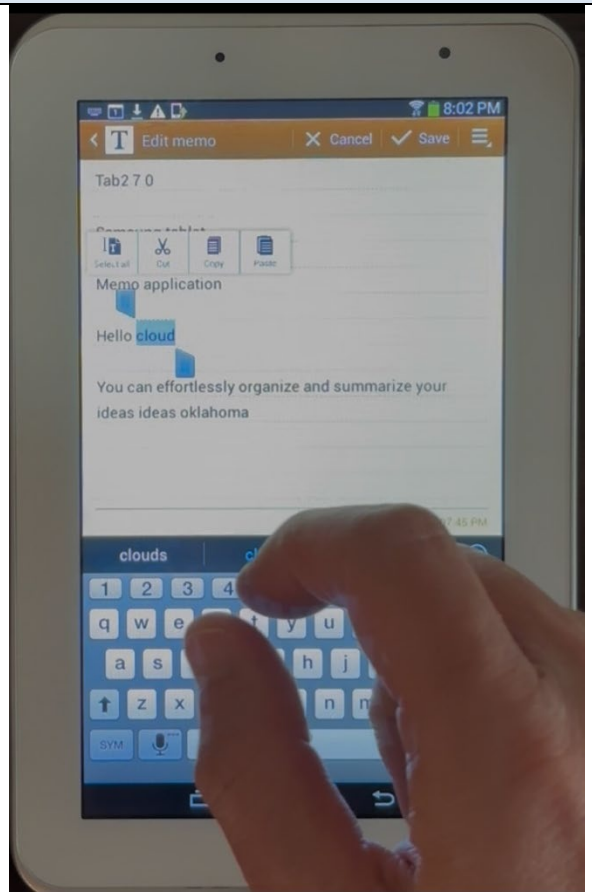
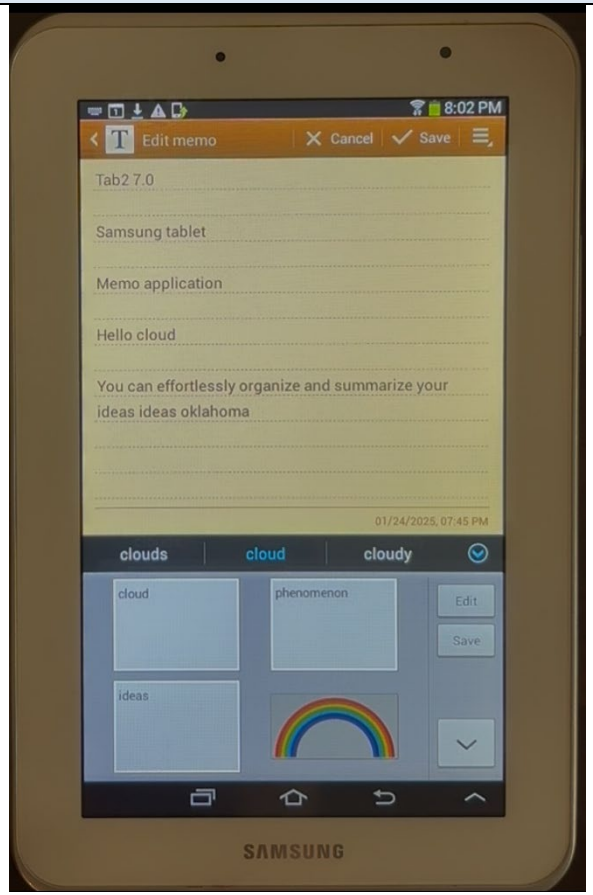
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[3]** The system of claim 1, wherein said keyboard is used with both of said applications. | Claim 3 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 3 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said keyboard is used with both of said applications."<br><br>As discussed above in claim [1B], the Tab2 7.0 discloses a keyboard is used for entering text in various applications running within the device, including Memo, S Planner, and Internet. Each is a "first" application. *See supra* claim [1B].<br><br>After the keyboard is used to activate and display the "second" application (e.g., voice input, clipboard), the keyboard (through its "reduced interface") is also "used with" the second application.<br><br>For example, as illustrated below (left), the keyboard is "used with" the voice input application, because a keyboard key (voice input button  ) activates the voice input application and displays the voice input application interface. Then, when the voice input application is running in parallel with the Memo application (in this example), the reduced keyboard interface includes at least the "keyboard icon" key (  , below (right)). Those keys of the reduced keyboard are "used with" the second application because, for example, the "keyboard icon" key closes the voice input application and restores the full keyboard. |

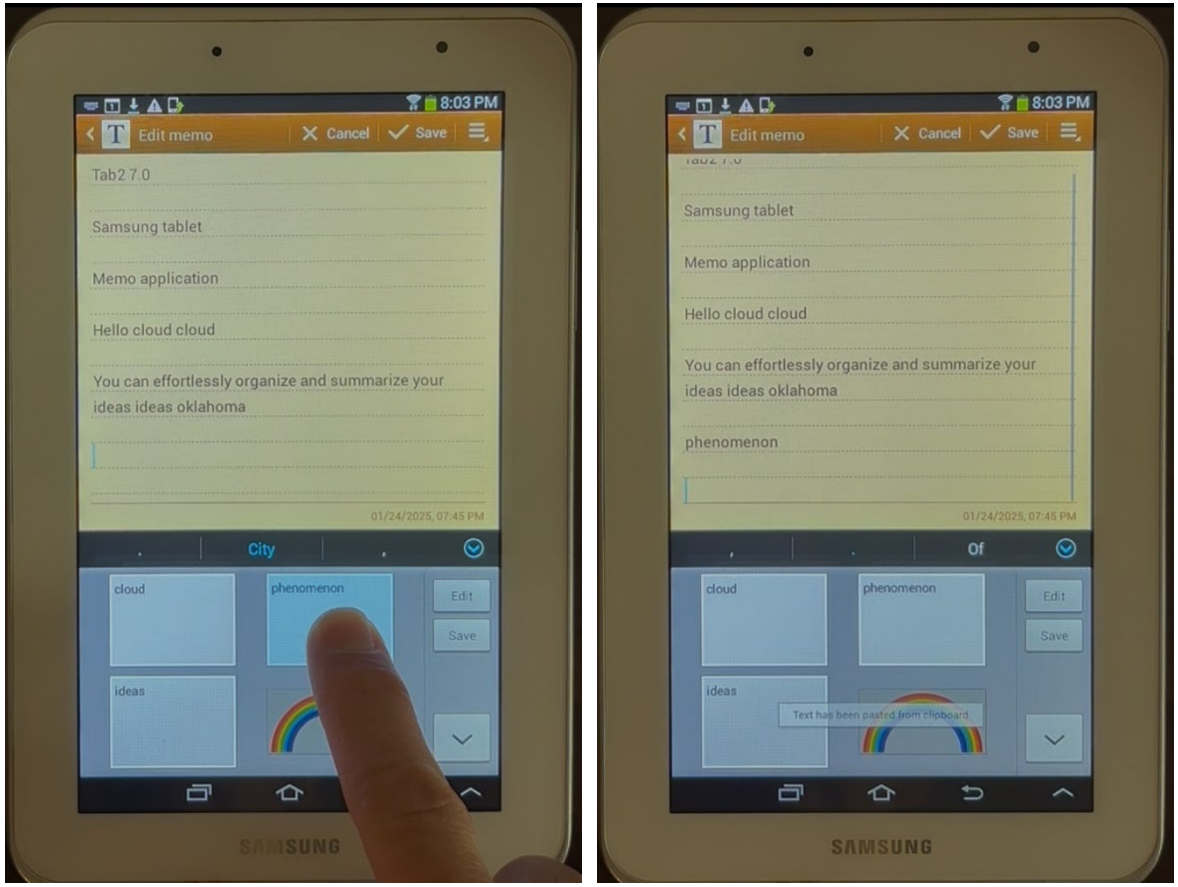
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Tab2 7.0 Product (illustrating Memo application with keyboard (left) and voice input application (right)).<br>Additionally, as illustrated below (left), the keyboard is "used with" the clipboard application, because, for example, a clipboard key (  ) is used to activate the clipboard application and display the clipboard application interface. Then, when the clipboard application is running in parallel with the first application (Memo application in this example), the reduced keyboard interface includes at least the "bottom key" (  ) and the "trash" button (  ). The bottom key of the reduced keyboard is "used with" the second application because, for example, it minimizes the clipboard application. And the "trash" button of the reduced keyboard is "used with" the second application because, for example, it deletes items from the clipboard. The predictive text bar (both in full keyboard view and in the reduced interface) is "used with" the first application because, for example, selecting a suggested word on the predictive text bar enters the word into the first application. |

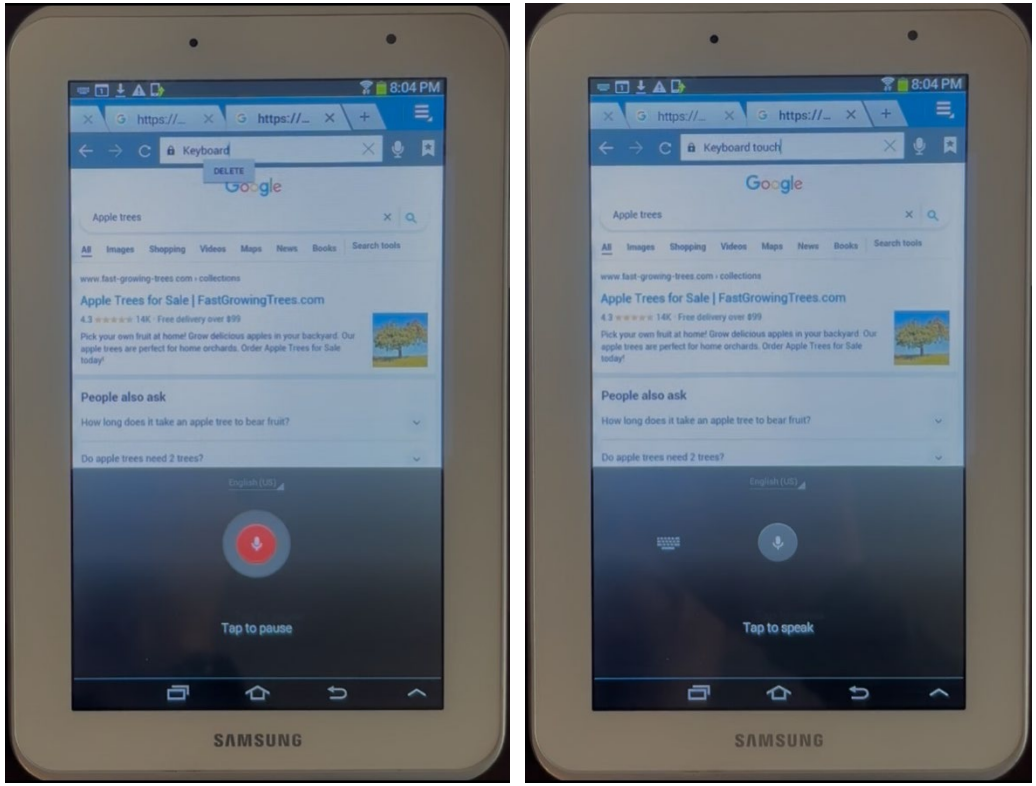
| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Tab2 7.0 Product (illustrating keyboard (left) and clipboard (right) in use with Memo application). |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[4]** The system of claim 1, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second | Claim 4 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 4 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| application are simultaneously displayed on said touchscreen. | Keyless's apparent interpretation of this limitation, further includes "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen."<br><br>For example, the examples discussed in connection with claim 1 include examples of information that is received from one of the applications and is shared with the other application while both applications are being displayed.<br><br>For example, the clipboard application receives information from the "first" application, for example from copying items from the "first" application to the clipboard. As illustrated below (left), the text "cloud" is copied from the Memo application. As illustrated below (right), the text "cloud" copied from the Memo application appears in the clipboard application. In this example, an information (e.g., text) received from one of said applications (Memo) is shared with at least the other application (clipboard) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen. |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>  <br>Tab2 7.0 Product (illustrating “cloud” being copied from Memo application into clipboard application).<br>Similarly, the “first” application receives information from the clipboard, for example when information is pasted from the clipboard to the first application. In the example below, the text “phenomenon” is shared with (and pasted into) the Memo application from the clipboard application. In this example, an information (e.g., text) received from one of said applications |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | (clipboard) is shared with at least the other application (Memo) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen.<br>  <br><br>Tab2 7.0 Product (illustrating pasting “phenomenon” from clipboard to Memo application).<br>As another example, the voice input application receives spoken words, and converts speech to text, then provides the text to the “first” application so that, for example, the “first” application receives |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | the text that the user provided by speaking instead of typing. In the example shown below, the Internet ("first") application search bar at the top of the screen receives the words "keyboard" and then "keyboard touch" from the voice input ("second") application. In this example, an information (e.g., voice input) received from one of said applications (voice input application) is shared with at least the other application (Internet) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen.<br>  <br>Tab2 7.0 Product (illustrating voice input application sharing information with Internet application). |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[5]** The system of claim 4, wherein said information includes at least one of, a text, an image, a video, a webpage and a URL. | Claim 5 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 5 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL."<br><br>All of the examples discussed in connection with claim 4 involve information that includes text. *See supra* claim [4]. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[6]** The system of claim 4, wherein said information is copied from one of said applications and pasted in the other application. | Claim 6 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 6 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said information is copied from one of said applications and pasted in the other application."<br><br>The examples discussed in connection with claims 1 and 4 include examples of copying information that is copied from one ("first" or "second") application and pasted to the other |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | ("second" or "first"), including the examples that discuss using the clipboard to copy information from one of the applications and pasting it into the other application. For example, the text "cloud" is copied from the Memo application into the clipboard, and the text "phenomenon" is copied from the clipboard and pasted into the Memo application. *See supra* claims [1A]-[1E] and [4]. |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[7]** The system of claim 1, wherein at least one of the applications is a messaging application. | Claim 7 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 7 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein at least one of the applications is a messaging application."<br><br>Messenger+ (Google Messenger) was the default messaging application for Tab2 7.0, and an icon for the application (  ) appears on the Apps screen below. The Tab2 7.0 also includes an icon for the ChatON application (  ), which provided an interface for additional messaging services. |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Tab2 7.0 Product (recordings of Apps screen).<br>Additional exemplary citations include:<br>The Tab2 7.0 Manual further identifies other types of messaging applications, including "Gmail," "Email," "Google Talk," "Google Messenger," and "ChatON." Tab2 7.0 Manual at 48-53. The Tab2 7.0 Manual discloses Google Messenger and ChatON as follows: |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|

**Messenger**

With Google Messenger, you can bring groups of friends together into a simple group conversation, putting everyone on the same page. When you get a new conversation in Messenger, Google+ sends an update to your device.

To get started, touch the Messenger icon on the home screen of the Google+ app or use the Messenger icon on your Applications screen.

1. From a Home screen, touch **Apps** → **Messenger**.
   The Messenger screen displays.
2. Touch **Next** or **PREVIOUS** to navigate through the Messenger screens.
3. Touch **Learn more** and then touch a topic to learn more about using Google Messenger.

**ChatON**

A smart-messaging app that gives you a host of innovative ways to stay connected with all your friends and family, regardless of their device or platform. Use ChatON to send and receive instant messages from any device that has a mobile phone number.

1. From a Home screen, touch **Apps** → **ChatON**.
   If you are launching this application for the first time, follow the on-screen instructions to complete the account setup.
2. Enter and send your message.

Tab2 7.0 Manual at 53.

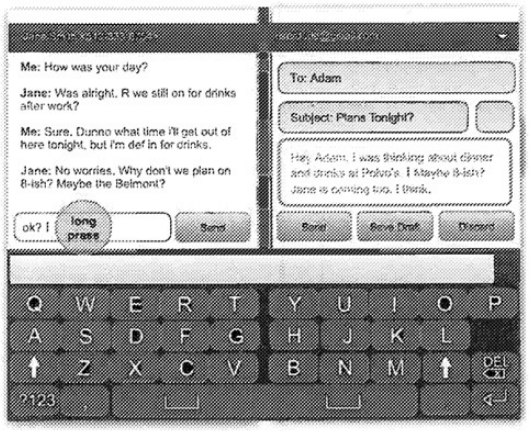
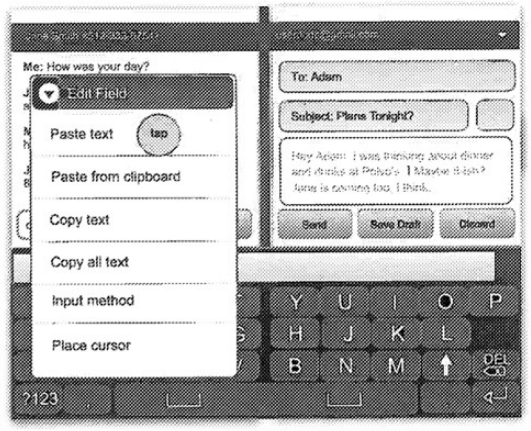
On information and belief, Messenger+ and ChatON used the Tab2 7.0 keyboard system, at least inherently, because, for example, Messenger+ and ChatON required text input to perform their functions and the Tab2 7.0 keyboard system is the mechanism that the Tab2 7.0 uses to input text into applications. *See*, *e.g.*, Tab2 7.0 Manual at 36 ("Your device uses a virtual QWERTY keyboard for text entry. Use the keyboard to enter letters, punctuation, numbers, and other characters into text entry fields or applications. Access the keyboard by touching any text entry field."); *accord About.com* (describing ChatON as messaging application), *Gadgets360* (same), *Android Police* (same), *Gadgeteer* (same).

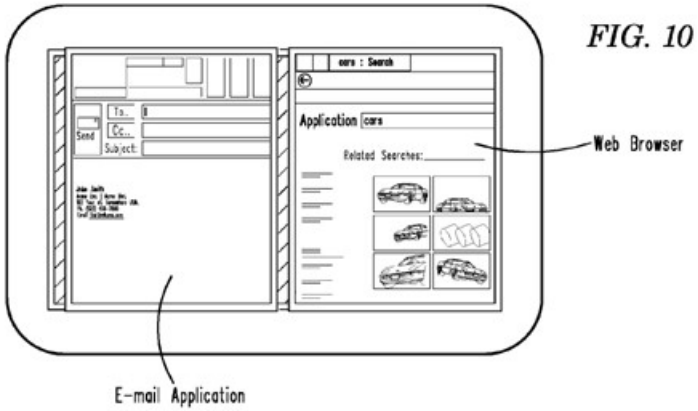
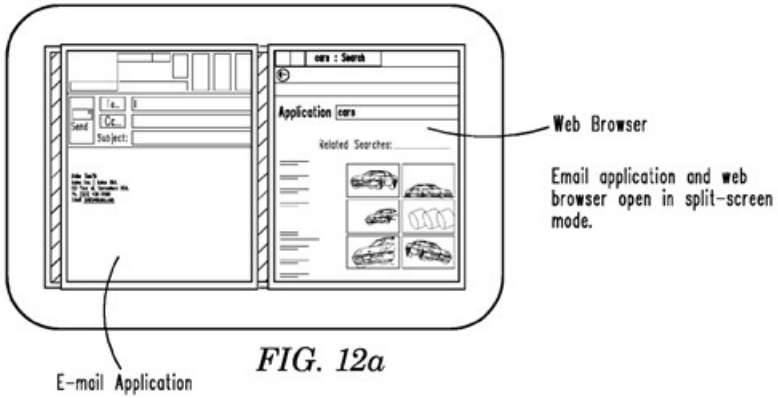
To the extent Keyless argues that Tab2 7.0 does not include "wherein at least one of the applications is a messaging application," even inherently, it would have been obvious in view of Tab2 7.0 alone, POSITA's pre-existing knowledge, and/or the features of Tab2 7.0 combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including through its incorporation of Sirpal-000), Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, as noted above, Tab2 7.0 was provided with Messenger+ and ChatON applications, and Messenger+ and ChatON applications required text input to perform their functions. The Tab2 7.0 keyboard is the mechanism that the Tab2 7.0 uses to input text into applications. *See* Tab2 7.0 Manual at 36 ("Your device uses a virtual QWERTY keyboard for text entry. Use the keyboard to enter letters, punctuation, numbers, and other characters into text entry fields or applications. Access the keyboard by touching any text entry field."). It would have been obvious for a POSITA to combine Tab2 7.0's keyboard with Tab2 7.0's messaging application (Google Messenger or ChatON). A POSITA considering Tab2 7.0's keyboard in view of Tab2 7.0's messaging applications would have found it obvious, for example, to implement Tab2 7.0's keyboard (including the use of a key to activate and display a "second application" as discussed above in claim 1) with the messaging application(s) on the Tab2 7.0. Tab2 7.0 indicates that its keyboard is "for text entry" and is used to "enter letters, punctuation, numbers, and other characters into text entry fields or applications," such as the Tab2 7.0's messaging applications. Tab2 7.0 Manual at 36. Further, the keyboard is to be accessed "by touching any text entry field," which would include any text entry field of the messaging application to receive input text for transmitting to an intended recipient. *Id.* Thus, a POSITA would recognize Tab2 7.0's messaging application(s) to be an application that receives text input and, therefore, suitable for use with Tab2 7.0's keyboard. One obvious combination of Tab2 7.0's keyboard with Tab2 7.0's messaging applications would, for example, use Tab2 7.0's keyboard to enter text into the Tab2 7.0's messaging applications, as well as use the Tab2 7.0's keyboard to activate and display one or more of the second applications discussed above in claim [1D]. In this way, the advantages of the Tab2 7.0's system—including easy access to voice input and clipboard applications through an action performed on the keyboard—would be implemented within the Tab2 7.0's messaging applications. Further evidence of obviousness comes from contemporaneous videos showing chat applications on Samsung/Android devices (of which Tab2 7.0 is one). *See ChatON Tutorial*; *ICS Messaging*. Because it was successfully implemented, it represents nothing more than the |

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| | application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Accordingly, a POSITA would have found it obvious to provide "wherein at least one of the applications is a messaging application," as recited in claim 7 for at least this reason.<br><br>As another example, each of Sirpal-486, Sirpal-000, and Lavallee discloses wherein at least one of the applications is a messaging application, and it would have been obvious to provide the feature in view of one or more of the references.<br><br>For example, Sirpal-486 discloses a "multi-screen user device and a universal clipboard application." Sirpal-486, Abstract. Sirpal discloses that "handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, ¶[0002]. Sirpal-486 discloses that "applications 564" on the device "can include programs such as email clients, web browsers, texting applications, games, media players, office suites, etc." *Id.*, ¶[0125]. Sirpal-486 further discloses:<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location (e.g., the application at which the content will be copied), select the area where the text should be placed, access a copy/paste menu pop-up window, and then select the paste command. This copy/paste routine must be completed for each different piece of information to be copied, which requires substantial time and input from the user.<br><br>> The device 100 allows a user to copy multiple contents to the universal clipboard application 708. From this universal clipboard application, a user can choose an item corresponding to already-copied content, and (while |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | still providing inputs at the universal clipboard application 708) execute a paste command. By providing multiple screens where one screen displays the universal clipboard application and another screen displays an application, a user is enabled to easily and quickly copy and paste content between various different applications on different screens 104, 108 of the device 100. Moreover, the ability to quickly and easily copy and paste different information from one central location, the universal clipboard application 708, saves the user time and input. Thus, the device 100 operates very intuitively for the user.<br><br>Sirpal-486, ¶¶[0168]-[0169].<br><br>Sirpal-486 further incorporates by reference the entirety of U.S. Patent Application No. 61/389,000 (*Sirpal-000*), which provides additional information relating to Sirpal-486's messaging application. *See* Sirpal-486, ¶[0001].<br><br>Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an application depending on focus." Sirpal-000 at 147. As one example, Sirpal-000 illustrates a text messaging application next to an email application: |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>User presses and holds the text message compose field.<br><br>  <br>A menu is displayed with two options for pasting. 'Paste text' would paste the last copied item at the current cursor position. 'Paste from clipboard' displays the Universal Clipboard, from which the user could paste the just copied text, in addition to other items in the Clipboard. There is also an option for the user to place the cursor in a different position in the field. The user taps 'Paste Text'.<br><br>Sirpal-000 at 180-182. As Sirpal-000 explains, the text messaging application has a "text message compose field" into which text may be inserted. Sirpal-000 at 180. Sirpal-000 further illustrates a keyboard and clipboard being used with the messaging application, as illustrated above. Thus, a POSITA would understand from Sirpal (including its incorporation of Sirpal-000) to provide a messaging application on a mobile device and to use the device's keyboard and clipboard with the messaging application.<br><br>As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee includes a "keyboard 120 for entering information such as composing email messages." Lavallee, ¶[0021]. Lavallee's device also is designed to send or receive data, including "email messages, short messaging service (SMS), instant messages, web content, and other electronic content." Lavallee, ¶[0022]. Accordingly, the device runs applications such as |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "communications applications such as Instant Messaging (IM), presentation and email applications, messaging applications . . . and the like." Lavallee, ¶[0028]. Lavallee provides several examples of a messaging application displayed simultaneously with another application, as illustrated, e.g., in Figs. 10, 12a-12d, 14a-14d, and 15a-15d, reproduced below.<br>  <br>*FIG. 10*<br><br>Lavallee, Fig. 10.<br>  <br><br>*FIG. 12a*<br>Lavallee, Fig. 12a. |

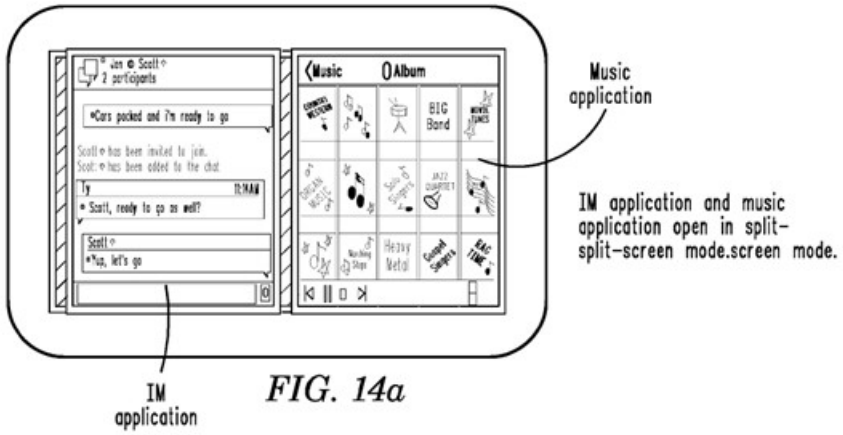



FIG. 14a

Lavallee, Fig. 14a.

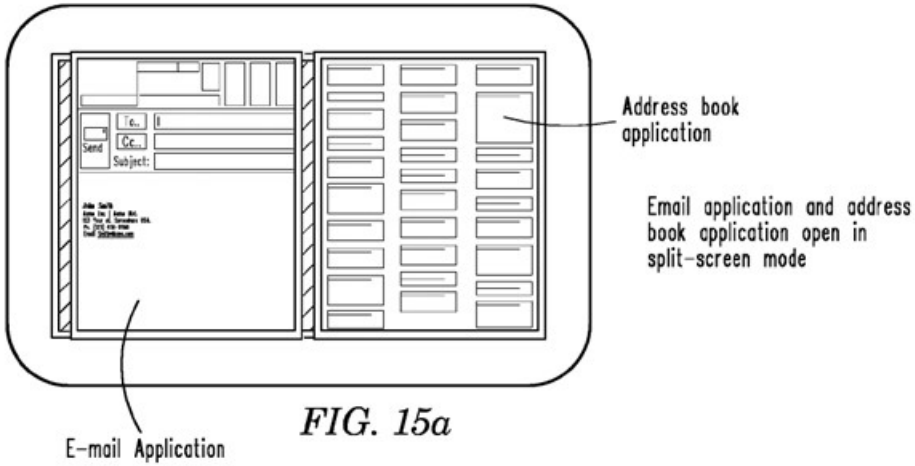



FIG. 15a

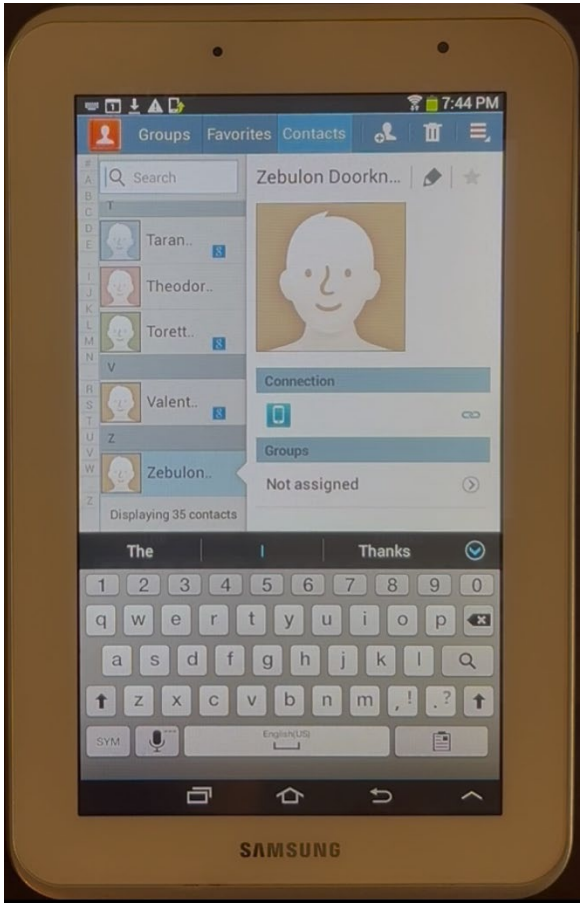
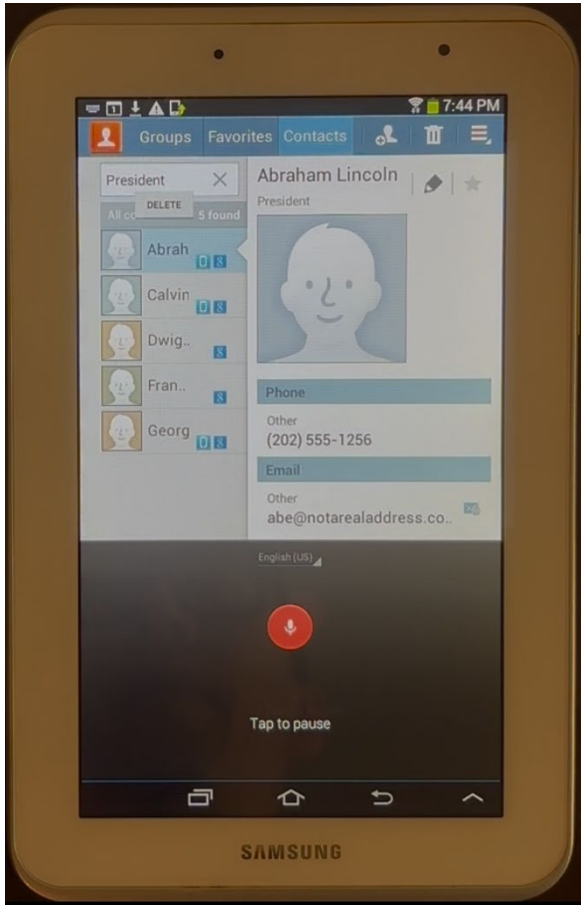
Lavallee, Fig. 15a.

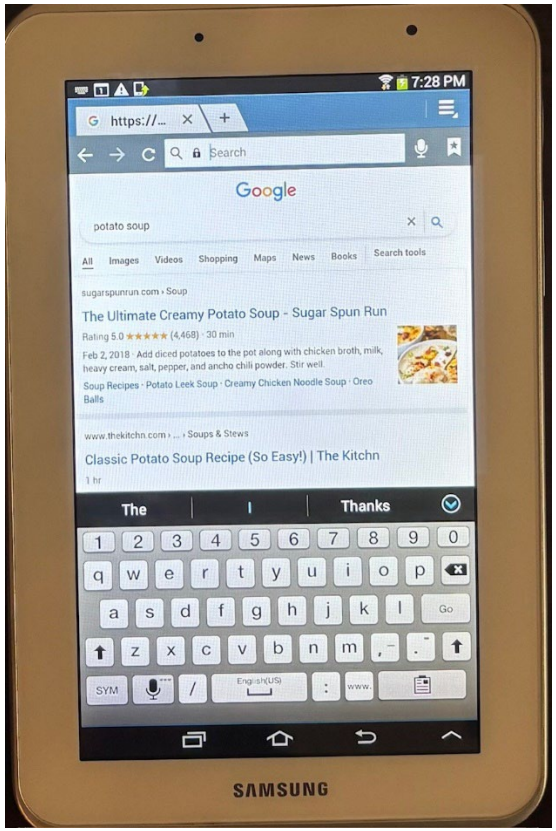
The e-mail application and IM application illustrated in Lavallee both illustrate fields for text entry. Thus, a POSITA would understand from Lavallee to provide a messaging application on a mobile device, and to use the device's keyboard with the messaging application. A POSITA further would

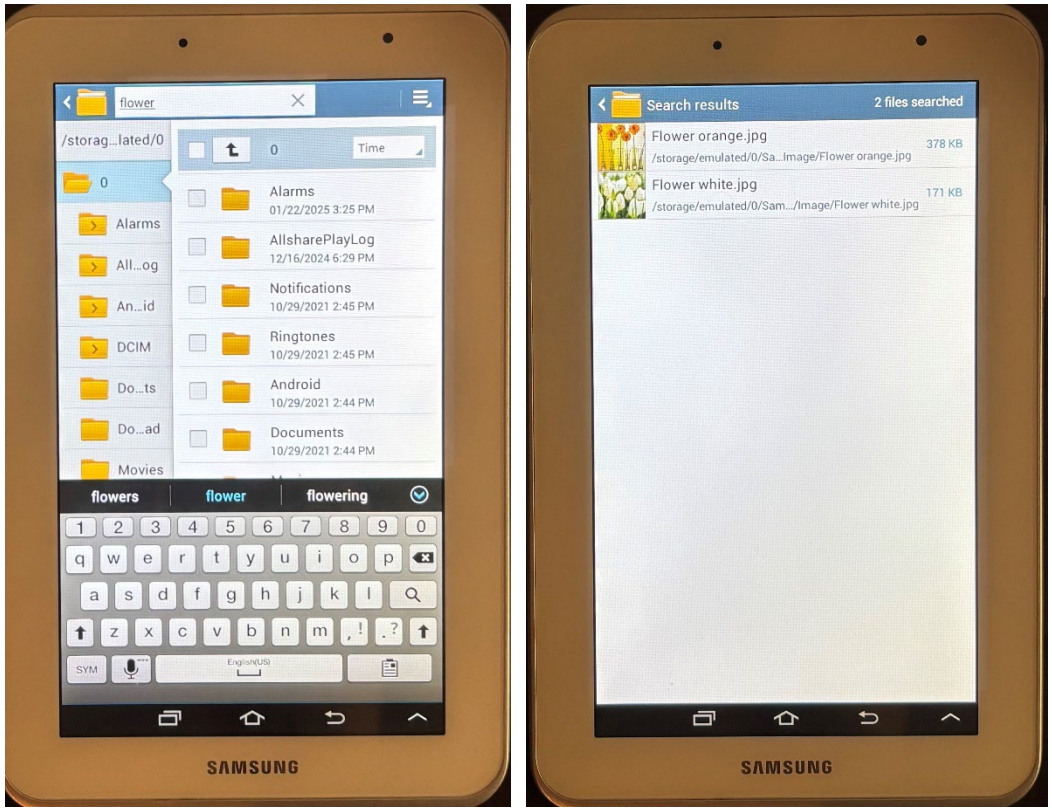
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | understand that in a system displaying two applications simultaneously—such as Tab2 7.0 (*see* [1E])—one such application may be a messaging application.<br><br>Incorporating a messaging application (such as taught by Tab2 7.0, Sirpal-486, Sirpal-000, and Lavallee) into Tab2 7.0 and using the Tab2 7.0's keyboard with the messaging application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Tab2 7.0, represent nothing more than combining prior art elements according to known methods and techniques (providing keyboard input into a messaging application) to a mobile electronic touch screen device to yield predictable results (allowing a user to send text messages on a mobile device, enhancing a user's ability to input text into a messaging application, etc.). |

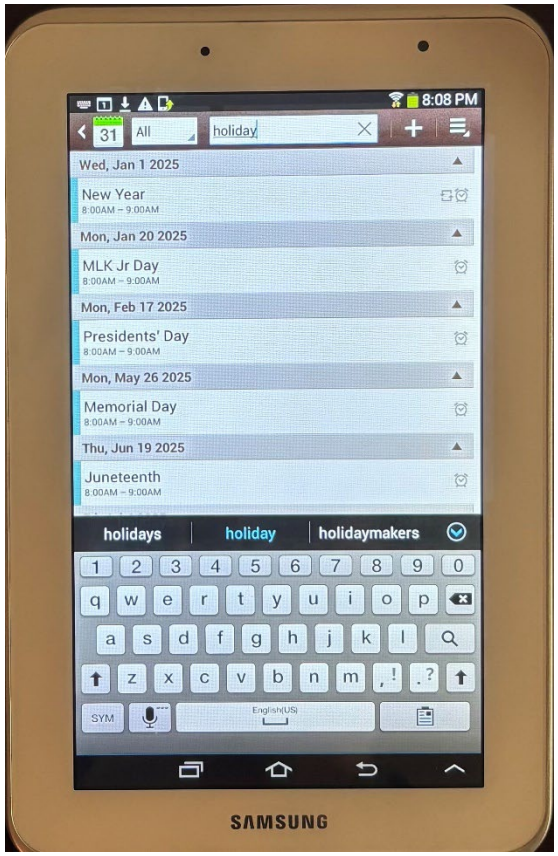
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[8]** The system of claim 1, wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application. | Claim 8 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 8 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application." |

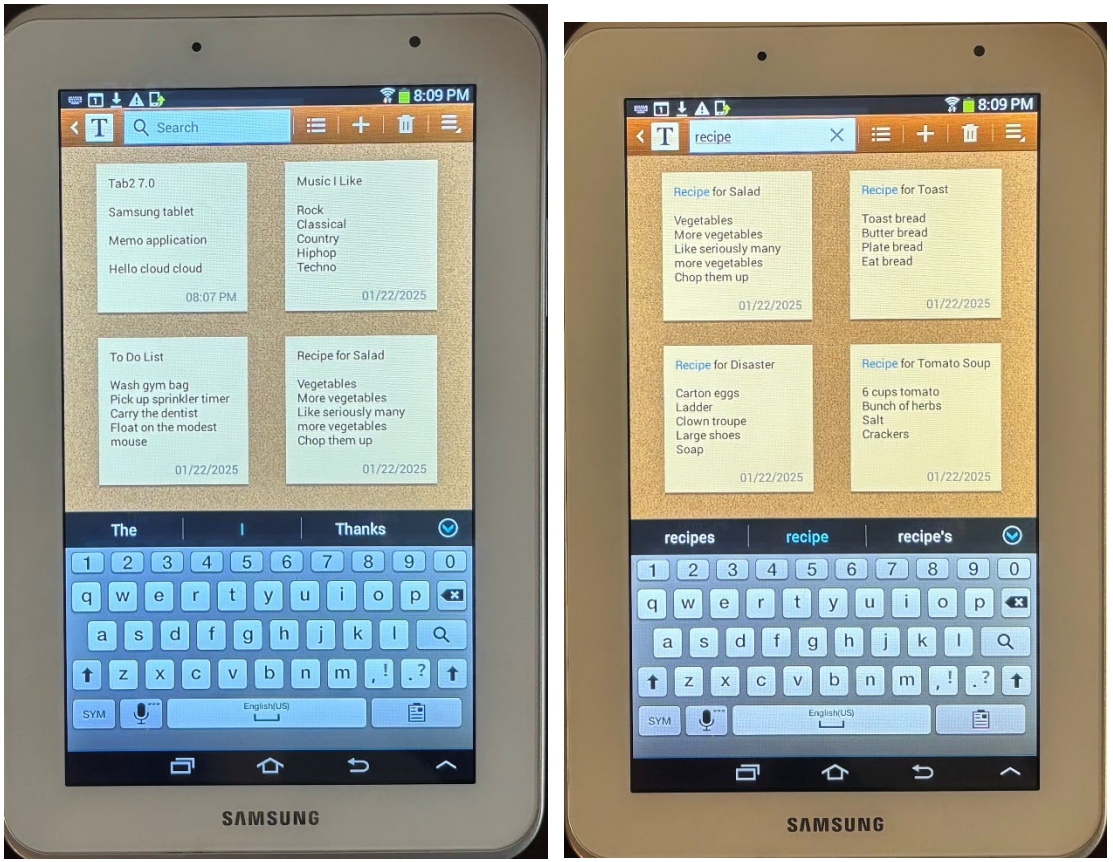
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | For example, the Tab2 7.0 includes applications with search functionality that are "search applications." For example, on the Apps screen (below), a "Google" icon is used to open an application interface used to search Google.<br>  <br><br>Tab2 7.0 Product (illustrating Home screen).<br>Additional applications including search functionalities as search applications include Contacts, Internet, My Files, S Planner, Memo, and Voice Search, as illustrated below. |

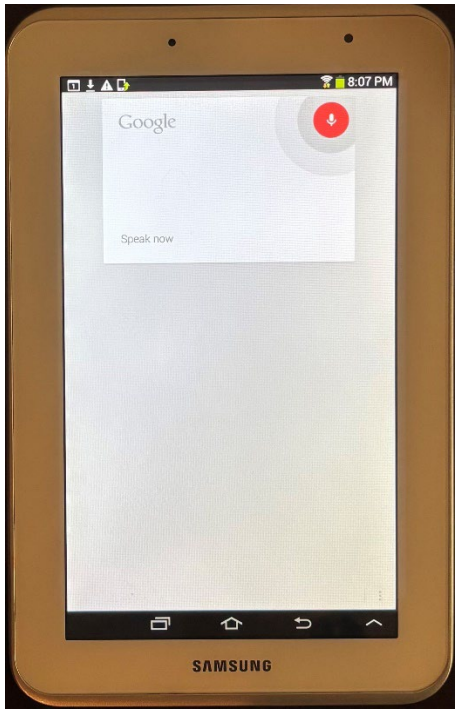
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |   <br>Tab2 7.0 Product (Contacts application showing “Search” bar in upper left corner; search for keyword “president” in image above (right)). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Tab2 7.0 Product (Internet application showing “Search” bar at top). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Tab2 7.0 Product (My Files application showing “Search” bar with “flower” entered at top; showing search results for keyword “flower” in image above, right). |

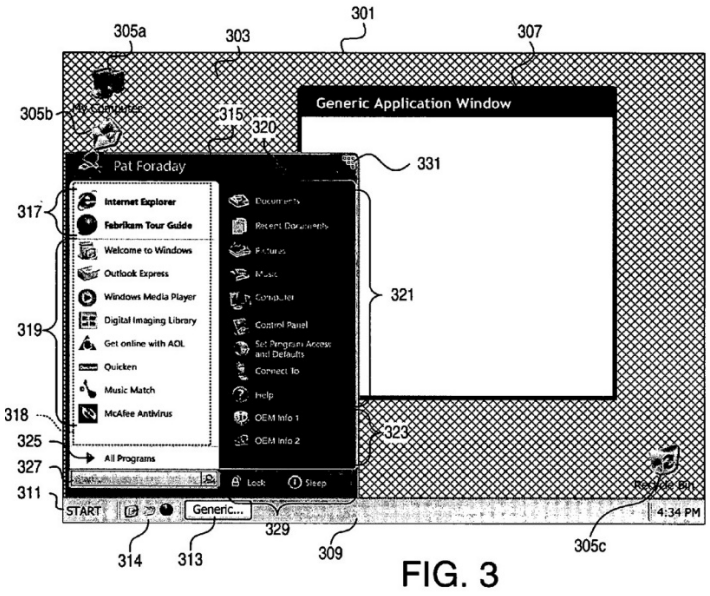
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Tab2 7.0 Product (S Planner application showing search in “Search” bar at top for keyword “holiday”). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Tab2 7.0 Product (Memo application showing “Search” bar at top (left); showing results of search for keyword “recipe” in image above (right)). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Tab2 7.0 Product (Voice Search application showing "Search" bar at top).<br>Thus, for at least the foregoing reasons, Tab2 7.0 includes that an application (e.g., a second application) may be a search application.<br>Additionally, as discussed above in claim [1D], Tab2 7.0 discloses that a second application is "activated by interacting with a button of said keyboard assigned to activating [that] application." *See supra* claim [1D]. Thus, Tab2 7.0 provides for activating a second application by interacting with a button of the keyboard assigned to activating that application by, e.g., pressing a key (e.g., such as the Settings key that is used to activate the voice input application or the Clipboard key that is used to activate the clipboard application), as discussed in claim [1D]. |

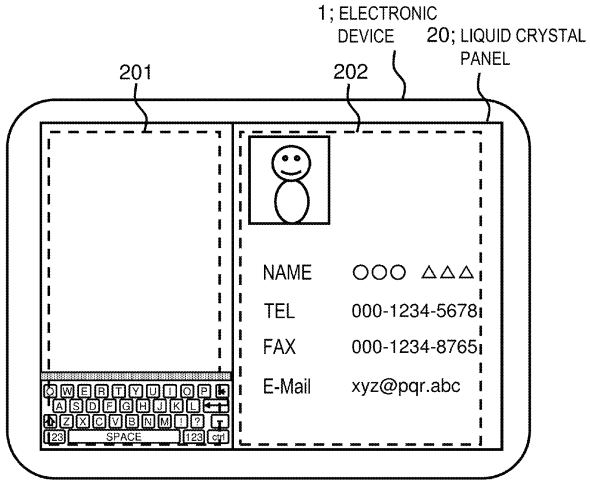
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | To the extent Keyless argues that Tab2 7.0 does not disclose or render obvious this limitation, it would have been obvious in view of Tab2 7.0, a POSITA's pre-existing knowledge, and/or the teachings of Tab2 7.0 combined with other references charted for this patent in these invalidity contentions, including one or more of Wang, Matthews, and Yabuki. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Wang discloses that "the user can define one of the [device] keys as a search key for searching web pages … thereby quickly calling the search application … of the system." Wang, ¶[0029]. As another example, Matthews discloses to use a keyboard hot key—such as used in Tab2 7.0 to open the voice input application and clipboard application—with a search application. As yet another example, Yabuki discloses reducing the size of the keyboard so that multiple applications can be displayed, including, e.g., a "search" application. And Tab2 7.0 itself provides that a mobile device can be used with and include various search functionalities as discussed above.<br><br>For example, Wang discloses a "method for programming output value of a key." Wang, Title. Wang explains that its "method for programming output value of a key is applicable to an electronic device having at least a key." Wang, Abstract, ¶[0002]. Wang observes that "[a]long with the development of technologies, portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones." Wang, ¶[0004]. Wang further observes that "although some touch-type mobile phones or computers include shortcut keys that allow the user to speedily call specific applications, the functions of the shortcut keys cannot be changed by changing corresponding key values of the shortcut keys. For example, a key preset for a shutter button of camera cannot be changed into a return key." Wang, ¶[0007]. Wang purports to improve known touch-type mobile phones or computers. *See id.*, ¶[0008]. In Wang, "[t]he method for |

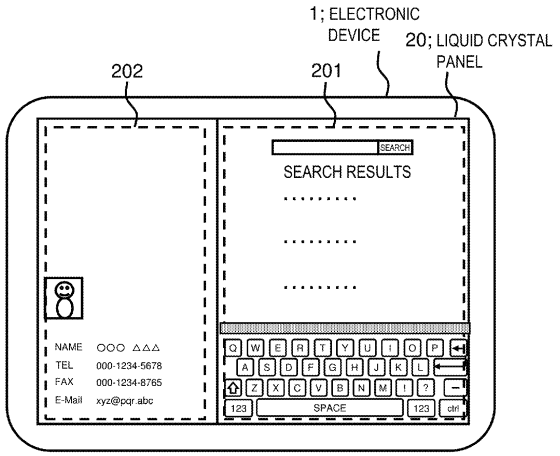
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key. The number of keys is not limited." *Id.*, ¶[0018]. Wang specifically discloses that its system can be used with "Android," which is the same operating system used by Tab2 7.0. *Id.*, ¶[0018]. Among other benefits, Wang discloses that its system "accelerates the input speed" by assigning a function to a key. *Id.*, ¶[0029]. Specifically, Wang discloses:<br><br>> [T]o accelerate the operation speed, the user can define one of the keys 12 as a search key for searching web pages or a camera key for starting camera, thereby quickly calling the search application or camera application of the system. In addition, since Android Supports quick launch application, by holding down one of the keys defined as a search key and pressing another key defined as a character key, the user can quickly call a corresponding application defined in the quick launch application.<br><br>Wang, ¶[0029]. Thus, Wang provides "wherein [an] application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>As another example, Matthews discloses "methods and system for a search box and search capabilities in a graphical user interface of a program launch menu for an operating system." Matthews at 1:15-18. "According to an illustrative aspect of the invention, a program launch menu, such as a Start menu, displays a search text input box within the program launch menu displayed on a computer display device, which can be used to locate user-selectable items on a computer system. Various aspects of the invention may provide for a display of search results within the program launch menu, the search results identifying selectable items matching text input received from a user via the search text input box." Matthews at 3:26-34. In Matthews, a "user can type text into search box 327 to search for Start menu items. Upon entering text in search box 327, Start menu 315 automatically switches to a Search Results view 501, such as is illustrated in FIG. 5, displaying results that match text as it has been entered thus far by the user. That is, from search box 327, a user can perform a character by character search across the programs, user files, Internet links, and communications on his or her system. As the user enters text in the search box 327, the computer system searches for the entered text, as further described below." Matthews at 16:52-62. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 3<br>Matthews, Fig. 3.<br>Like Tab2 7.0, which includes many applications with search functionality, including to search data stored on the device or the Internet, Matthews likewise discloses that its search application "may use any built in or known search engine to perform searches on computer system 100. The search engine preferably searches the file system of the computer 110, as well as URLs and executables in the user's Path. The search service may also include search results from other data providers, such as web search results from a web search engine, photo results from a photo website such as Picasa, music results from a service such as MSN music, or any combination of these and/or other data providers. The search engine may index all searchable locations in order to expedite searching." Matthews at 17:1-15.<br>Matthews further discloses that the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start |

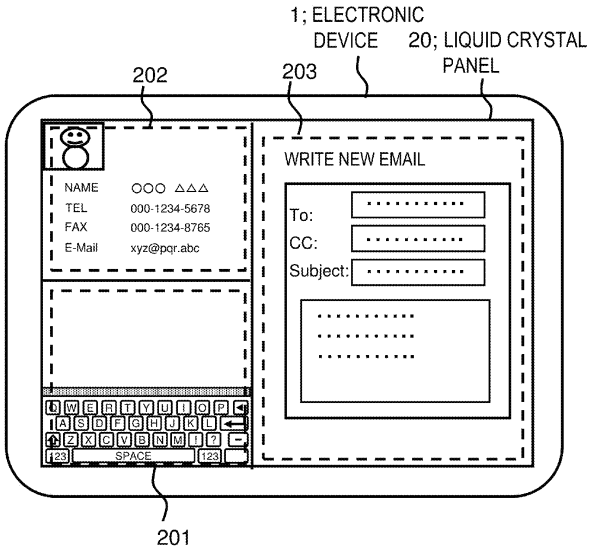
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | typing text for which he or she would like to search for an item." Matthews at 18:31-39. "Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match. No mouse manipulation is necessary (although, certainly allowable if desired). By learning which searches produce desired results, users can learn many keyboard shortcuts to quickly launch desired items that are returned as the top match to the entered search string. Given the time and inclination, a user can learn keyboard shortcuts to launch most application programs and documents on his or her computer, without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:39-51. Thus, Matthews discloses the use of a "search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>Matthews discloses several benefits associated with providing a quick way to launch a search application, such as by using a keyboard key. For example, Matthews discloses that "[a]n operating system launch menu, such as a Start menu, provides various mechanisms for a user to quickly and efficiently locate and launch desired data items such as programs, data files, storage locations, and the like. A search box within the program launch menu may be used to quickly locate programs, documents, communications, and other data items." Matthews at Abstract. Further, Matthews' search application displays results "within the original confines of the program launch menu, thereby negating the need to open sub-menus on top of a large portion of the desktop displayed on the display device." *Id.*; *see also* Matthews at 3:54-62 ("The computer displays search results within a predefined area of the program launch menu, wherein the search results comprise selectable items matching text input received from the user via the search text input box, and automatically provides selection focus to a top search result. The computer launches the selectable item corresponding to the top search result when receiving predefined user input, e.g., <Enter>, while the top search result has the selection focus."). Matthews further discloses that a user may quickly use the equivalent of "keyboard shortcuts" to access desired results "without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:42-51. Thus, Matthews provides a quick and space-efficient search functionality.<br><br>As still another example, Yabuki relates to "an electronic device comprising a touch panel and a controlling method and program therefor." Yabuki, 1:10-13. Yabuki discloses that "a software |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | keyboard may interfere with the user's operation, depending on its size or position," particularly in the case of "a small device such a smartphone." Yabuki, 1:35-39. As Yabuki discloses:<br><br>> For instance, let's assume a case where a user is performing a more detailed search based on search results using a Web browser. At this time, if the area of the software keyboard is large, it may be difficult for the user to perform an input operation while browsing the search results.<br><br>> Further, for instance, let's assume a case where a user launches a Web browser and refers to information regarding the people registered in an address book in the middle of his input operation. In this case, the user first quits the Web browser currently running. Then, he launches the address book application. After confirming the information, the user quits the address book application. Then, after launching the Web browser again, the user has a software keyboard displayed to enter the information. As described, the user must perform a plurality of operations when he refers to information included in another application while using the software keyboard.<br><br>Yabuki, 1:40-56. Yabuki discloses "there is a need in the art to contribute to facilitating an operation independent from a software keyboard while the software keyboard is being used." Yabuki, 1:60-62. According to Yabuki, "the electronic device 1 relating to the present exemplary embodiment is able to display a second application such as an address book application while having a first application such as a Web browser displayed." Yabuki, 7:7-10.<br><br>For example, Figure 4 of Yabuki depicts a full-size keyboard used with a single application. Yabuki, 4:61-5:3, Fig. 4. Yabuki discloses that the full-size keyboard may be moved and reduced in size, to make room for the interface of an application (or multiple applications) to be displayed on larger portions of the screen. Yabuki, 5:4-6:63. To further illustrate, Figure 7 of Yabuki, below, "is a drawing showing an example in which different applications are displayed in a plurality of display regions. In FIG. 7, the software keyboard is reduced and displayed in a first display region 201. Further, an address book application is displayed in the second display region 202 in FIG. 7." Yabuki, 7:11-16. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 7.<br>"The display region control unit 12 may switch the display modes of the first and second display regions. More concretely, according to a predetermined operation, the display region control unit 12 may enlarge the reduced first display region and reduce the second display region. Here, it is preferred that the predetermined operation that switches the display modes be a simple and easy operation such as a double tap operation." Yabuki, 7:17-24.<br>Yabuki further depicts Figure 8, which "is a drawing showing an example in which the display modes are switched. In FIG. 8, the display of the software keyboard is enlarged and displayed in the first display region 201. Further, the address book application is reduced and displayed in the second display region 202." Yabuki, 7:25-29. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 8.<br>According to Yabuki, even more applications may be displayed simultaneously while the keyboard is in its reduced size:<br>> The image signal generation unit 13 may have a third application displayed while displaying the images of two different applications. More concretely, when detecting a fourth operation in the second display region, the display region control unit 12 reduces and moves the second display region. It is preferred that the fourth operation be a simple and easy operation such as a double tap or flick operation. The image signal generation unit 13 displays the image of the third application in a region (a third region) made available by reducing the second display region. As described, the electronic device 1 relating to the present exemplary embodiment does not limit the number of applications displayed simultaneously.<br>Yabuki, 7:30-42. Further to that description, Yabuki depicts in Figure 9, below, "a drawing showing an example in which the image of the third application is displayed on the liquid crystal panel 20. In FIG. 9, the software keyboard is displayed in the first display region 201. Further, the |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | address book application is displayed in the second display region 202. Then, an email application is displayed in a third display region 203." Yabuki, 7:43-49. |




Yabuki, Fig. 9.

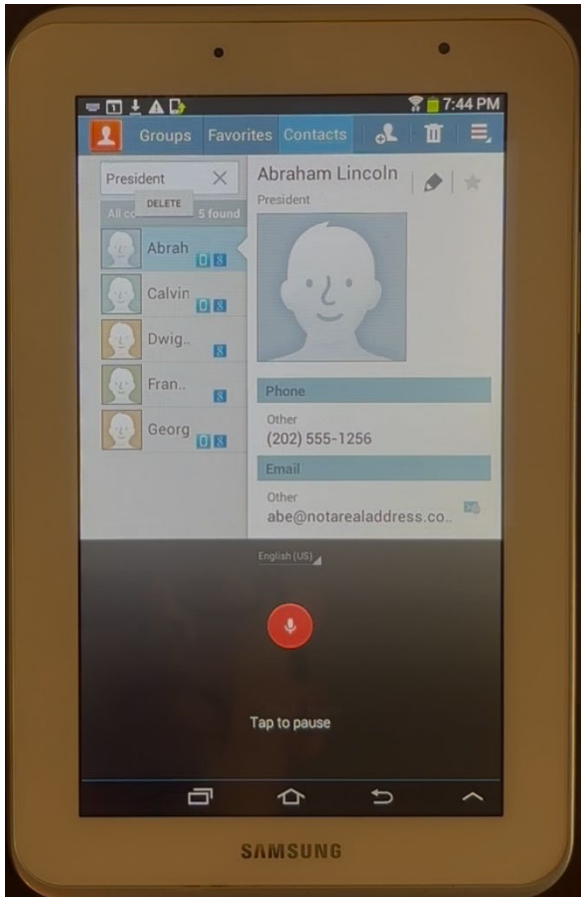
Thus, from the foregoing descriptions of Yabuki, a POSITA would recognize the benefits of reducing a keyboard so that multiple applications may simultaneously be displayed, including a search application (such as a web search application or an application for searching/displaying contact information). Moreover, a POSITA would recognize such features to be beneficial, as they solve problems and achieve advantages that Yabuki identified—e.g., allowing a user to perform input operations (in another application) while browsing search results or allowing a user to cross-reference between a web-browser and an address book simultaneously without closing one application or the other. *See* Yabuki, 1:40-56.

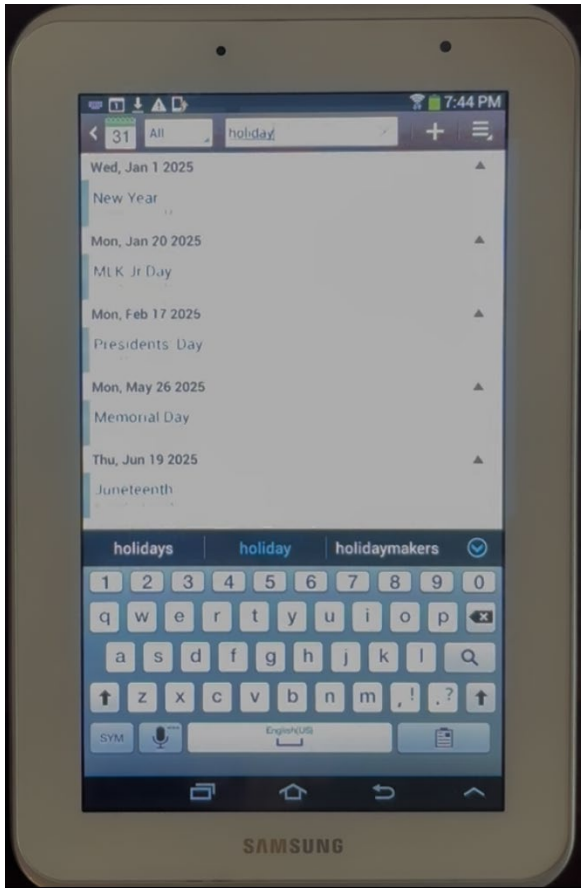
As noted above, Tab2 7.0 already provides several search applications, including Google search, Contacts, Internet, My Files, S Planner, Memo, and Voice Search. Thus, a POSITA would recognize Wang's implementation of a search application key and/or Matthews' implementation of

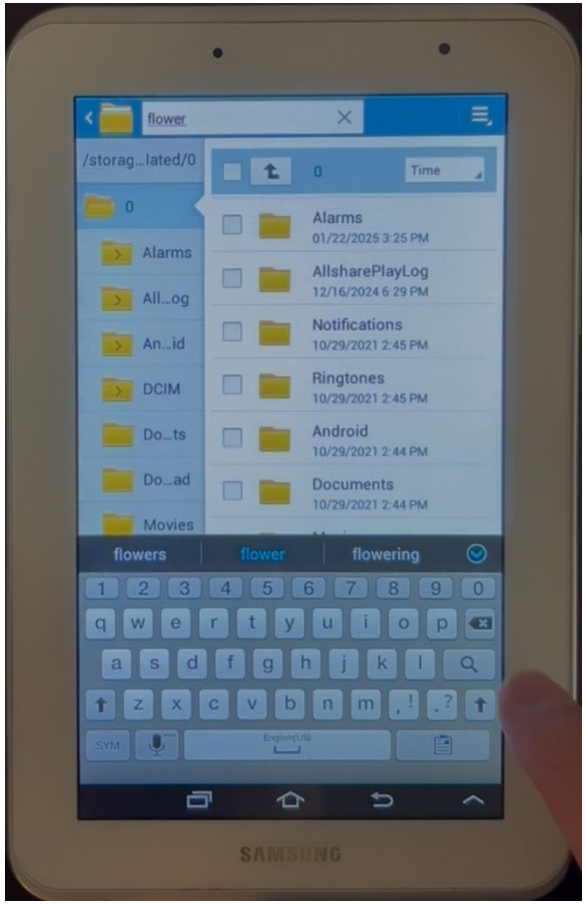
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | a search application would be suitable for use with Tab2 7.0. And a POSITA would recognize from Yabuki the benefits of simultaneously displaying multiple applications along with a reduced keyboard interface.<br><br>One obvious combination of Tab2 7.0 with Wang, Matthews, and/or Yabuki would, for example, implement the Settings key (on Tab2 7.0's keyboard) with an option to activate and display a search application (in addition to the existing options to activate and display the voice input application). Another obvious combination would implement a dedicated search application key on Tab2 7.0's keyboard in a manner similar to the Tab2 7.0's clipboard key. A POSITA would recognize such a configuration from Yabuki, for example. In either case, the search application, when activated, would obviously occupy the same area(s) as the voice input and/or clipboard applications in the existing Tab2 7.0 system, and simultaneously display the corresponding reduced keyboard interface. In that way, the search application (e.g., Tab2 7.0's preexisting Google search, Contacts, Internet, My Files, S Planner, Memo, and Voice Search applications) could be used in parallel with another application (or applications) appearing on the top of the screen, without obstructing the interface of the other application. The combination would yield "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>A POSITA would recognize that the combination would achieve the various benefits disclosed in Wang, Matthews, and Yabuki, including to "accelerate the operation speed" (Wang, ¶[0029]), to quickly find relevant information using the keyboard and without covering significant portions of the screen with the search application (Matthews at Abstract), and to be able to cross-reference between one search application (e.g., an Internet browser or address book) and another application simultaneously (such as an application that may require information about the information presented in the Internet browser or address book) (Yabuki, Yabuki, 1:40-56). A POSITA would further recognize that such a combined implementation would provide various results options as displayed suggestion candidates in the second application interface, whereupon the user can select which result is desired. Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for at least this reason.<br><br>Incorporating a search button (such as taught by Wang and Matthews) with Tab2 7.0's keyboard and existing search applications represents nothing more than the application of known operations |

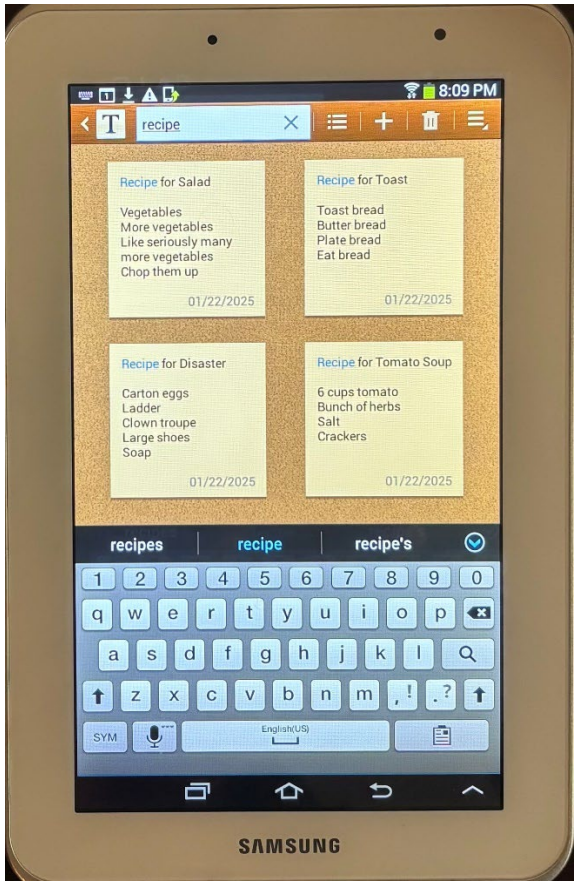
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Tab2 7.0, represent nothing more than combining prior art elements according to known methods and techniques (providing search functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with information relating to searched files, contacts, text, media, etc.). |

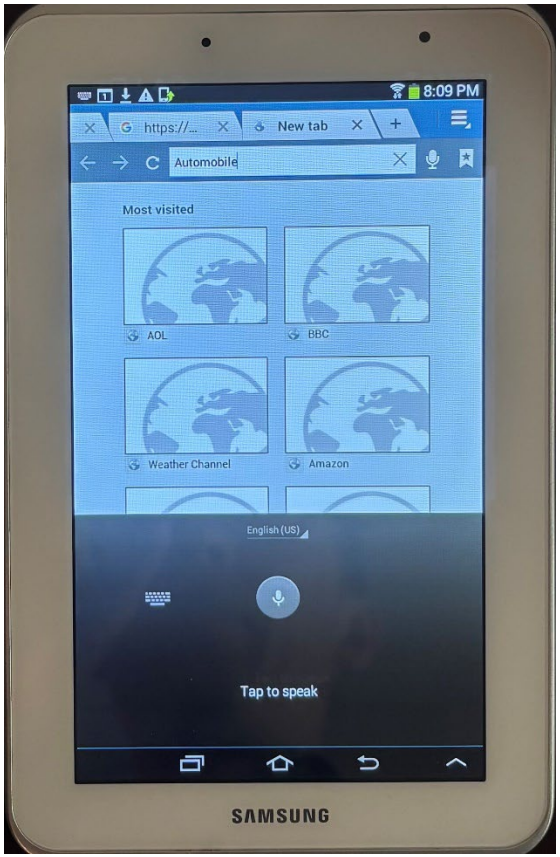
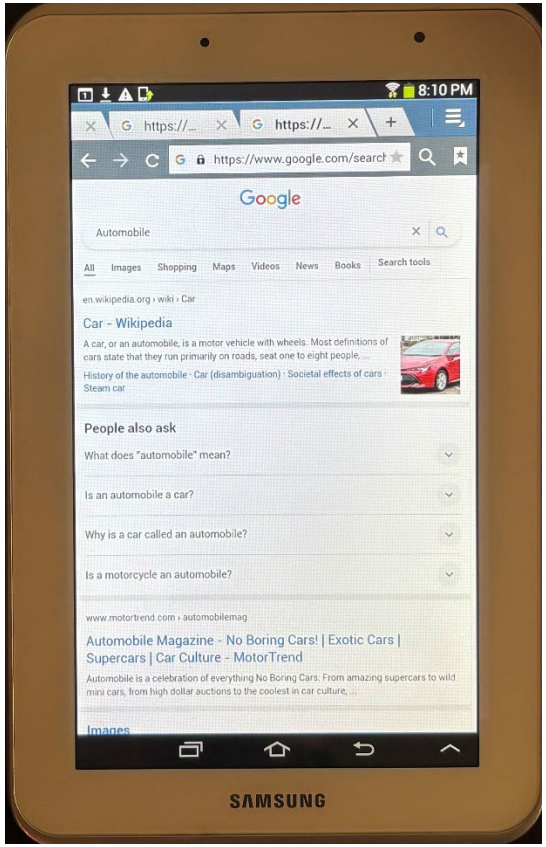
| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[9]** The system of claim 8, wherein said search application use at least one keyword typed through said keyboard. | Claim 9 depends from claim 8. Defendants incorporate all the prior art disclosures from claim 8 here, which anticipate and/or render claims 1 and 8 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 8 to show the additional limitations of claim 9 are anticipated and/or obvious for the same reasons set out in claims 1 and 8.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said search application use at least one keyword typed through said keyboard."<br><br>For example, in Tab2 7.0, several of the search applications discussed in claim [8] uses at least one keyword typed through said keyboard. *See supra*, claim [8]. For example, Contacts, S Planner, My Files, Memo, and Internet are all depicted below with a keyword that has been entered into the search field via the keyboard. |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Tab2 7.0 Product (llustrating Contacts application search for keyword “president”). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Tab2 7.0 Product (llustrating S Planner application search for keyword “holiday”). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Tab2 7.0 Product (showing My Files application search for keyword “flower” (left) and search results (right)). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Tab2 7.0 Product (showing Memo application search for keyword “recipe”). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>  <br>Tab2 7.0 Product (showing Internet application search for keyword “automobile” (left) and results (right)).<br>To the extent Keyless argues that Tab2 7.0 does not include or render obvious this limitation, it would have been obvious in view of Tab2 7.0, a POSITA’s pre-existing knowledge, and/or the teachings of Tab2 7.0 combined with the other references charted for this patent in these invalidity contentions, including one or more of Wang and Matthews as discussed above for claim [8]. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Matthews discloses a "search for <foo>" in which "the computer system 100 may initiate a broader search for the user-entered text, e.g., by launching a full-text search or full-text search window," where "the user may be able to search the computer for <foo>, search the Internet for <foo>, and/or search some other computer or database for <foo>, regardless of where the text <foo> appears." Matthews at 19:2-8. Matthews further discloses that the system "may display any items first where the item's name begins with text matching the user-entered text, second where the item has a word other than its starting word that starts with text matching the user-entered text, and third where the item has any text matching the user-entered text." (Matthews at 18:24-28.) Matthews thus discloses "keyword search," wherein "said search application use at least one keyword typed through said keyboard."<br><br>A POSITA would have found it obvious to incorporate "wherein said search application use at least one keyword typed through said keyboard," as claimed. Matthews, for example, discloses to use a keyboard to input search keywords. A POSITA would have been motivated to combine such feature(s) with the system of Tab2 7.0, as an obvious and intuitive way to implement the search applications of Tab2 7.0 (or search applications of Tab2 7.0 as modified in claim [8]). Typing a keyword through a keyboard was routine and conventional to a POSITA (as well as to a user of a device), as shown by Matthews. Furthermore, Tab2 7.0 already provides that the keyboard is used for text entry, and that the keyboard can be accessed by touching "any text entry field." Tab2 7.0 Manual at 46. Extending Tab2 7.0's existing keyboard text entry functionality to accommodate entering a keyword into the search application (e.g., in the combination discussed in claim [8]) would be a straightforward, intuitive modification, requiring no more than ordinary skill. Incorporating the feature into Tab2 7.0's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | existing technology in predictable ways. Such processes, when combined with Tab2 7.0, represent nothing more than combining prior art elements according to known methods and techniques (using a keyboard to type a keyword for search) to a search application to yield predictable results (search results to be used with or accessed by another application). |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[10]** The system of claim 1, wherein at least one of the applications is used for sharing at least one of text, pictures, or videos. | Claim 10 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 10 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos."<br><br>For example, and as discussed above for claims [4, 5], "information" shared from Tab2 7.0's voice input application and clipboard to the first application includes text and/or pictures. *See supra* claims [4, 5]. As another example, messaging applications are used for sharing text, pictures, or videos. *See supra* claim [7]. |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[11]** The system of claim 1, wherein said device is a mobile phone. | Claim 11 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 11 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>To the extent Keyless argues that Tab2 7.0 does not include or render obvious this limitation, it would have been obvious in view of Tab2 7.0, a POSITA's pre-existing knowledge, and/or the teachings of Tab2 7.0 combined with the other references charted for this patent in these invalidity contentions, including one or more of Nexus, Sirpal-486 (including its incorporation of Sirpal-000), Wang, and Koch. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Nexus, Sirpal-486, Wang, and Koch all disclose providing phone functionality to a mobile electronic device, such as the mobile electronic device of Tab2 7.0.<br><br>As discussed in Exhibit B5 to these Invalidity Contentions, Nexus is a mobile phone. Ex. B5, ¶[11]. Further, Nexus was implemented with Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean). Ex. B5 at 1. Tab2 7.0 likewise was implemented with Samsung's TouchWiz UI and, for example, Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean). Thus, a POSITA would have found it obvious to provide similar functionalities as Nexus when implementing a device such as Tab2 7.0, because, for example, the operating system and firmware of Tab2 7.0 could easily be adapted to provide the phone features that the same or similar operating systems and firmware(s) provided on Nexus.<br><br>Sirpal-486 also discloses an example of a mobile electronic device, such as Tab2 7.0, and also provides phone functionality. *See* Sirpal-486, ¶¶[0002] ("handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | display information to the user but also to receive inputs from user interface commands"), [0071] (areas of a mobile electronic device "may be configured … for other types of specific inputs including controlling features of device 100, some non-limiting examples including … initiating/terminating of telephone calls"), [0075] (device may include buttons to control "initiation/termination of telephone calls"; "In a telephone application for instance and depending on the particular button a normal, medium, or long press can mean end call, increase in call volume, decrease in call volume, and toggle microphone mute."), [0092] ("an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations"), [0124] ("OS 516 can be any operating system and, at least in some embodiments, dedicated to mobile devices, including, but not limited to, Linux, ANDROID™, iPhone OS (iOS™), WINDOWS PHONE 7™, etc. The OS 516 is operable to provide functionality to the phone by executing one or more operations, as described herein."), [0132] ("A task can be an application and a sub-task can be an application component that provides a window with which users can interact to do something, such as dial the phone …").<br><br>Wang also discloses an example of a mobile electronic device, such as Tab2 7.0, and also provides phone functionality. *See* Wang, ¶¶[0004] ("portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones."), [0018] ("The method for programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key.").<br><br>Koch also discloses an example of a mobile electronic device, such as Tab2 7.0, and also provides phone functionality. *See* Koch, ¶¶[0105] (mobile electronic device may be a "portable communications device, such as a mobile telephone, that also contains other functions, such as PDA and/or music player functions"), [0107] (mobile electronic device "typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | camera application, a web browsing application, a digital music player application, and/or a digital video player application."), [0114] ("RF (radio frequency) circuitry 108" may be included to "receive[] and send[] RF signals," including to communicate via "a wireless network, such as a cellular telephone network," including on common mobile communications standards and protocols for mobile telephony, such as "Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), wideband code division multiple access (W-CDMA), code division multiple access (CDMA)"), [0135]-[0137] (applications include "telephone module"), [0154]-[0155] (mobile device may be used to initiate, conduct, and terminate telephone calls), [0205]-[0211] (mobile device home screen may be provided with an application icon for "Phone"), Fig. 1A (illustrating "Telephone Module" (138) among "Applications" of a mobile electronic device), Fig. 4A (illustrating "Phone" application icon (138P).<br><br>Thus, each of Nexus, Sirpal-486, Wang, and Koch provide "wherein said device is a mobile phone," as claimed.<br><br>One obvious combination of Tab2 7.0 with Nexus, Sirpal-486, Wang, and Koch would, for example, incorporate telephone circuitry and a telephone application into the Tab2 7.0 in order to provide telephone functionality as provided by Nexus and/or as taught by each of Sirpal-486, Wang, and Koch, as discussed above. For example, it would have been obvious to incorporate "RF (radio frequency) circuitry" into the Tab2 7.0 in order for the Tab2 7.0 to communicate via telephone communications networks, as taught by Koch. *See* Koch, ¶[0114]. It further would have been obvious to implement the operating system and firmware code necessary to run a telephone application because, for example, Nexus implemented such features using the same or similar operating system and firmware code as Tab2 7.0. In that way, the Tab2 7.0 would be provided with desirable improvements, namely, the ability to conduct telephone calls. Indeed, by 2012 the art recognized that tablets with telephone functionality (so-called "phablets") were useful and desirable to consumers. *See PC Mag* ("Samsung's Galaxy Note has gotten the world talking about 'phablets.'"; "[T]he 'phablet'—that's part phone, part tablet—has already sold more than a million units worldwide."); *NBC News* ("Samsung Electronics has sold 5 million of the phone/tablet Galaxy Note, helping drive its booming handset profits in the quarter just ended. More than a freak hit, consumer and design experts believe the surprise success of the 'phablet' marks a deeper shift in the fast-paced world of mobile devices."); *Reuters* ("Phablets, a cross between a phone and a |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | tablet, have been on a roll since late 2011 as tech-savvy consumers, particularly in Asia, devote more timebrowsing data-heavy Web pages and downloading media content."; noting that Samsung competitors have also been introducing tablet-phone hybrid devices). The combination would yield "wherein said device is a mobile phone," as claimed.<br><br>A POSITA would recognize that the combination would achieve various benefits, such as the ability to make and receive telephone calls. Accordingly, a POSITA would have found it obvious to provide "wherein said device is a mobile phone," as recited in claim 11 for at least these reasons.<br><br>Incorporating a telephone functionality (such as included in Nexus and/or as taught by Sirpal-486, Wang and Koch) with Tab2 7.0's keyboard and existing search applications represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because, for example, it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Tab2 7.0, represent nothing more than combining prior art elements according to known methods and techniques (providing telephone functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with the ability to make and receive telephone calls on a mobile electronic device). |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[12P]** A method comprising: | To the extent that the preamble is held to be limiting, Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes a "method comprising."<br><br>*See supra* claim [1P]. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[12A]** assigning a first zone of a touch screen to an interface of a first application; | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "assigning a first zone of a touch screen to an interface of a first application."<br><br>*See supra* claim [1C]. |
| **[12B]** assigning a second zone of said touch screen to an on-screen keyboard; and | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "assigning a first zone of a touch screen to an interface of a first application."<br><br>*See supra* claim [1C]. |
| **[12C]** based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen and | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen."<br><br>*See supra*, claim [1D]. |
| **[12D]** wherein said interface of said first application, said interface of said second application, and the reduced | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said first |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| interface corresponding to said keyboard are simultaneously displayed on said touch screen. | application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen."<br><br>*See supra* claim [1E]. |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[13]** The method of claim 12, comprising using said keyboard with both of said applications. | Claim 13 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 13 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "using said keyboard with both of said applications."<br><br>*See supra* claim [3]. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[14]** The method of claim 12, wherein at least one of said applications is one of, a text messaging application and an image sharing application. | Claim 14 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 14 are anticipated and/or obvious for the same reasons set out in claim 12. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein at least one of said applications is one of, a text messaging application and an image sharing application."<br><br>*See supra*, claims [7] and [10]. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[15]** The method of claim 12, wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application. | Claim 15 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 15 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>*See supra*, claim [8].<br><br>Further, and as discussed *supra* claim [1D], Tab2 7.0 discloses using a button or gesture on the keyboard to activate a second application (canvas/handwriting input application). Thus, Tab2 7.0 (or, alternatively, Tab2 7.0 as modified in claim [8]) provides that the "search application [is] activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application." |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[16]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard. | Claim 16 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 16 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard."<br><br>*See supra*, claim [9]. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[17]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard after said search application is activated. | Claim 17 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 17 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard after said search application is activated."<br><br>*See supra*, claim [9].<br><br>For example, in Tab2 7.0 (as well as Tab2 7.0 as modified in claim [9]), a user interacts with the "second application" after it has been activated and, thus, types in the keyword after the second application has been activated. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | For example, as discussed above in claim [9], in Matthews, the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item. Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match." Matthews at 18:31-51. A POSITA would understand that for the search interface of Matthews to receive the entered text input or search input, the search interface must be active. Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs.<br><br>Thus, Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, including as modified in view of Matthews, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated," as claimed. |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[18]** The method of claim 12, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen. | Claim 18 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 18 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen." |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | *See supra*, claim [4]. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[19]** The method of claim 18, wherein said information includes at least one of a text, an image, a video, a webpage and a URL. | Claim 19 depends from claims 18 and 12. Defendants incorporate all the prior art disclosures from claims 18 and 12 here, which anticipate and/or render claims 18 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 18 and 12 to show the additional limitations of claim 19 are anticipated and/or obvious for the same reasons set out in claims 18 and 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said information includes at least one of a text, an image, a video, a webpage and a URL."<br><br>*See supra*, claim [5]. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[20]** The method of claim 12, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 20 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 20 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Keyless's apparent interpretation of this limitation, includes "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>*See supra*, claim [2]. |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[21]** The method of claim 12, wherein said touch screen is integrated within a mobile communication device. | Claim 21 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 21 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Tab2 7.0, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said touch screen is integrated within a mobile communication device."<br><br>For example, Tab2 7.0 integrates a touch screen within a mobile communication device, e.g., a tablet with communication capabilities (including access to the Internet (via Internet app), access to messaging capabilities (via Messenger and ChatON apps)). For example, all of the screen shots are from the Tab2 7.0 Product. As an additional example, the Tab2 7.0 is a tablet that is connected to mobile networks and is a mobile communication device.<br><br>Moreover, discussed *supra* claim [11] and claim [1A], Tab2 7.0 includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, the "electronic device having a touchscreen" and "wherein said device is a mobile phone" *See supra* claims [1A, 11]. A "mobile phone" is a "mobile communication device," such that this limitation is provided for at least the same reasons a mobile phone having a touchscreen is disclosed. In addition, Tab2 7.0 includes, alone or in combination with other references identified in |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, an application for sharing text, pictures, and/or videos with other users, as discussed *supra*, claims [7] and [10], making Tab2 7.0 a mobile communication device for this additional reason. *See supra* claims [1A], [7], [10], and [11]. |

# Appendix B5

**Exhibit B5**

**Invalidity of Asserted Claims of the '922 Patent**

**in view of the Samsung Galaxy Nexus**

The Samsung Galaxy Nexus (SCH-I5155) running Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean) ("Nexus"),[1] was publicly available and/or used in the United States, and was thus available to and known or used by others in the United States, at least as early as November 28, 2012, when updates to Android 4.2.2 were made publicly available, and as early as November 2011 and January 2012, when models designated SCH-I515MSAVZW and SCH-I515ZSAVZW were first released with substantially the same functionality. Thus, the Nexus qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).[2]

The Nexus is described in at least the following documents and other materials cited in this chart:

- Samsung Galaxy Nexus Android mobile technology platform 4.0 User's Guide, VZW_SCH-I515_English_UG_TE_120211_F4 (copyright 2011 Google Inc.) ("Nexus Manual"). SAM-KEY_00987580.
- Android Wiki, *Android 4.0 Ice Cream Sandwich*, available at https://android.fandom.com/wiki/Android_4.0_Ice_Cream_Sandwich ("*Android 4.0 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993081.

[1] Unless stated otherwise, Nexus refers to Galaxy Nexus products with Samsung's Nexus running on Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean) or Android 4.2 (Jelly Bean), as specified herein. This chart depicts images of a Nexus Product running Android 4.2.2. Each of the Nexus products running on Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean) or Android 4.2 (Jelly Bean), was publicly available and/or used, and were thus available to and known or used by others in the United States before any priority date that Keyless Licensing LLC (or "Keyless") is entitled to, if any, for the asserted '922 patent claims (*see infra*, n.2).

[2] Keyless Licensing LLC (or "Keyless") alleges that the asserted claims of the '922 patent are entitled to priority as early as February 17, 2013. However, as explained in the cover pleading, the asserted claims of the '922 patent are not entitled to Keyless's claimed priority date due to inadequate written description support. Assuming the claims are not invalid under Section 112 (*see, e.g.*, cover pleading), the earliest possible priority date for the asserted '922 patent claims is December 24, 2013. As a result, the '922 patent is subject to the AIA. The inclusion of any pre-AIA statutes is predicated on Keyless's interpretation of priority, which Defendants disagree with.

- Android Wiki, *Android 4.1 Jelly Bean*, available at https://android.fandom.com/wiki/Android_4.1_Jelly_Bean ("*Android 4.1 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993086.
- Android Wiki, *Android 4.2 Jelly Bean*, available at https://android.fandom.com/wiki/Android_4.2_Jelly_Bean ("*Android 4.2 Wiki*"), last accessed Jan. 27, 2025. SAM-KEY_00993078.
- Droid Life, *Download: Android 4.2.2 (JDQ39) for the Galaxy Nexus LTE on Verizon*, March 4, 2013, available at https://www.droid-life.com/2013/03/04/download-android-4-2-2-jdq39-for-the-galaxy-nexus-lte-on-verizon/ ("*Download Android 4.2.2*"). SAM-KEY_00992908.
- Droid Life, *Verizon Galaxy Nexus 4.2.2 (JDQ39) Update Hits Testers, New Radios Included*, March 2, 2013, available at https://www.droid-life.com/2013/03/02/verizon-galaxy-nexus-4-2-2-jdq39-update-hits-testers-new-radios-included/ ("*Android 4.2.2 Testers*"). SAM-KEY_00992904.
- Droid Life, *Verizon Finally Posts Galaxy Nexus LTE Changelog, It is Indeed JDQ39*, March 19, 2013, available at https://www.droid-life.com/2013/03/19/verizon-finally-posts-galaxy-nexus-lte-changelog-it-is-indeed-jdq39/ ("*Verizon Posts Changelog*"). SAM-KEY_00992892.
- YouTube, Droid Life, *First Look: Android 4.2.2 on the Verizon Galaxy Nexus LTE*, March 5, 2013, available at https://www.youtube.com/watch?v=JkjMTiDfLsE ("*First Look*"). SAM-KEY_00992881.
- Cult of Android, *Samsung Galaxy Nexus LTE Has Been Discontinued By Verizon*, Jan. 28, 2013, available at https://www.cultofandroid.com/21815/samsung-galaxy-nexus-lte-has-been-discontinued-by-verizon/ ("*Nexus Discontinued*"). SAM-KEY_00992664.
- Documents produced in this litigation, as cited herein, including but not limited to SAM-KEY_00993816-19.
- Physical products acquired in this litigation, including but not limited to, a Galaxy Nexus running on Android Version 4.2.2 (Ice Cream Sandwich), Baseband Version I515.10 V.FK01 / I515.FK02, Kernel version 3.0.21-g9f818de android-build@vpbs1.mtv.corp.google.com #1 (dated Wed Nov 28 11:20:29 PST 2012), Build number JDQ39, which was available from November 2012, as referenced herein (Nexus Product.).
- Expected testimony and evidence regarding the development, design, and/or use of the Samsung products operating with Android 4.0, Android 4.1, and/or Android 4.2.
- Expected testimony and evidence regarding the sale, offer for sale, and public use of the Samsung products operating with Android 4.0, Android 4.1, and/or Android 4.2.
- Source code for a Nexus as referenced herein and/or acquired.

Citations to the above-listed references are exemplary, and Samsung reserves the right to rely on additional passages, prior art, and information regarding the operation and functionality of the Nexus obtained through fact, expert, and third-party discovery, which is ongoing.

The Nexus qualifies as prior art to U.S. Patent No. 10,976,922 ("'922 patent") at least under AIA 35 U.S.C. §§ 102(a)(1). Samsung's Nexus with Android 4.0 release was available and/or used before the priority date to which the '922 patent claims are entitled, if any. *See supra* note 1. As one example, Samsung's Nexus with Android 4.0 release was available and/or used in the United States at least as early as November 2011 (*see, e.g.*, SAM-KEY_00993816-19). Moreover, the Nexus was discontinued by Verizon by January 2013. *See Nexus Discontinued*. As another example, Samsung's Nexus with Android 4.2.2 release was available and/or used in the United States at least as early as March 2013 (*see*, *e.g.*, *Download Android 4.2.2*, *Android 4.2.2 Testers*, *Verizon Posts Changelog*, *First Look*).

The Nexus anticipates or renders obvious alone, or with other references renders obvious one or more of the asserted claims of the '922 patent. To the extent Keyless contends that the Nexus does not disclose one or more limitations of the asserted claims, it would have been obvious to modify the Nexus, or combine the Nexus with the knowledge of a person of ordinary skill in the art ("POSITA") and/or with one or more of the following references, to render the claims at issue in the '922 patent invalid. The chart below illustrates how the asserted claims of the '922 patent are invalid in view of the Nexus and/or additional secondary references listed below, including but not limited to the prior art identified in Defendant's Invalidity Contentions.

- Nexus Manual. In addition to being evidence of the existence, availability, and design of the Nexus, the Nexus Manual qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).
- U.S. Patent Application Publication No. 2013/0187861A1 to Lavallee ("Lavallee"), filed on January 19, 2012, and published on July 25, 2013. Lavallee qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0110486A1 to Sirpal et al. ("Sirpal-486"), filed on September 28, 2011, and published on May 3, 2012. Sirpal-486 incorporates by reference U.S. patent application nos. 61/389,000, 61/389,117, 61/389,087, and 61/458,150, all of which are included as part of its disclosure, at least as of the date that Sirpal-486 was published. Samsung reserves the right to rely on the incorporated materials as part of Sirpal-486. Sirpal-486 further claims priority as early as October 1, 2010, through one or more provisional applications identified on its face. Sirpal-486 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Additionally, PCT Publication No. WO2012/044782 (filed on September 29, 2011, and published on April 5, 2012) ("Sirpal-782") and U.S. Patent No. 8,832,577 ("Sirpal-577") (filed September 28, 2011, and issued on September 9, 2014) include equivalent disclosure to Sirpal-486 and qualify as prior art at least under 35

U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on any of Sirpal-782 or Sirpal-577 for their disclosures equivalent to Sirpal-486.

- U.S. Provisional Patent Application No. 61/389,000 to Sirpal et al. ("Sirpal-000"), was filed on October 1, 2010, and published at least by May 3, 2012, upon the publication of U.S. Patent Application No. 13/247,801 (as Sirpal-486), which claimed priority to Sirpal-000. Sirpal-000 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on Sirpal-000 on its own, in addition to relying on Sirpal-000 as an incorporated part of Sirpal-486.
- U.S. Patent Application Pub. No. 2013/0050102 A1 to Wang et al. ("Wang"), was filed November 28, 2011, and published February 28, 2013. Wang qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 7,340,686 to Matthews et al. ("Matthews"), was filed on March 22, 2005, and issued on March 4, 2008. Matthews qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).
- U.S. Patent No. 10,198,163 to Yabuki ("Yabuki"), was filed as Application No. 14/406,377 on December 8, 2014, and issued on February 5, 2019. Yabuki was filed as a national phase application of PCT Application No. PCT/JP2013/065733, which was filed on June 6, 2013, designated the United States, and claimed priority to Japanese Application No. 2012-130755 (filed on June 8, 2012). Yabuki qualifies as prior art at least under 35 U.S.C. § 102(a)(2). Yabuki's PCT Application claims priority to Japanese Application No. 2012-130755 (filed on June 8, 2012), designated the United States, and was published as WO2013/183722 on December 12, 2013, and thus the PCT publication also qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on WO2013/183722 as prior art for the same reasons described below for Yabuki.

With respect to any proposed modifications to the Nexus, such modification would have been obvious to try, an obvious combination of prior art elements according to known methods to yield predictable results, a simple substitution of one known element for another to obtain predictable results, a use of known techniques to improve a similar devices or method in the same way, an application of a known technique to a known device or method ready for improvement to yield predictable results, a variation of a known work in one field of endeavor for use in either the same field or a different one based on design incentives or other market forces with variations that are predictable to a person of ordinary skill in the art (POSITA), and/or obvious in view of teachings, suggestions, and motivations in the prior art that would have led a POSITA to modify or combine the prior art references.

The excerpts cited herein are exemplary. For any claim limitation, Samsung may rely on excerpts cited for any other limitation and/or additional excerpts not set forth fully herein to the extent necessary to provide further explanation for a reference's disclosure

of a limitation. Where an excerpt refers to or discusses a figure or figure items, that figure and any additional descriptions of that figure should be understood to be incorporated by reference as if set forth fully herein. Samsung reserves the right to further supplement this chart.

To the extent that these Invalidity Contentions rely on or otherwise embody particular interpretations of terms or phrases in the asserted claims, Samsung is not proposing any such interpretations as proper interpretations or constructions of those terms or phrases. Various positions put forth in this document are predicated on Keyless's interpretation of its claims as evidenced by its Infringement Contentions. Those positions are not intended to and do not necessarily reflect Samsung's interpretation of the true and proper scope of the asserted claims. Samsung further incorporates by reference all reservations of rights set forth in the Invalidity Contentions, as if fully set forth herein.

Defendants' arguments throughout these invalidity contentions are based on Keyless's apparent interpretation of the claims in its infringement contentions. Defendants do not agree that such interpretation is proper and reserve the right to argue that the mapped actions do not infringe any claims of the '922 patent. In the alternative, should the Court or factfinder construe and/or apply the claims in a manner consistent with Keyless's interpretations in its infringement contentions for the '922 patent, the claims are invalid for at least the reasons set forth herein.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[1P]** A system for using multiple applications on a screen of a device, comprising: | To the extent that the preamble is held to be limiting, Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes a "system for using multiple applications on a screen of a device."<br><br>For example, the Nexus is a device with a screen for using multiple applications. For example, the Nexus Product is depicted below.<br>  <br>Nexus Product.[3] |

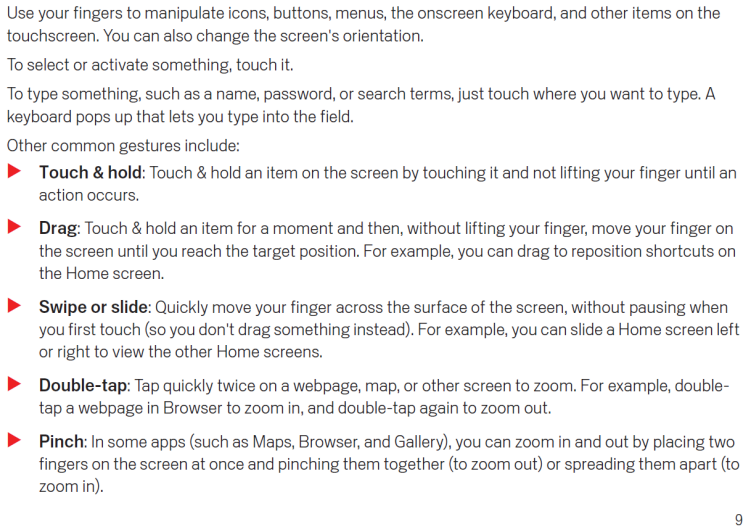
[3] Samsung reserves the right to rely on any Nexus device, including the Nexus Products shown here. On information and belief, such devices function substantially the same as disclosed in this chart. The Nexus Products identified here are Model SCH-I515. One identified Nexus Product bears Serial Number 256691432307471959 and IMEI / MEID Number 990001137203576. Another identified Nexus Product bears SKU Number SCHI515ZSV, FCC ID A3LSCHI515, and IMEI / MEID Number 990001138554399. Another identified Nexus Product bears Serial Number 256691408802365058 and IMEI / MEID Number 990000282416827. Each of the foregoing products indicates that it is running Android 4.2.2, Kernel Version 3.0.21-g9f818de android-build@vpbs1.mtv.corp.google.com #1 Wed Nov 28 11:20:29 PST 2012, Build Number JDQ39. On information and belief, the

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |    <br>Nexus Products (illustrating identifying markings placed behind battery).<br>The Nexus is a device for using multiple applications on a screen. For example, the Nexus includes a Home screen view, which provides icons that are used to open various software applications, as illustrated below:<br>  |

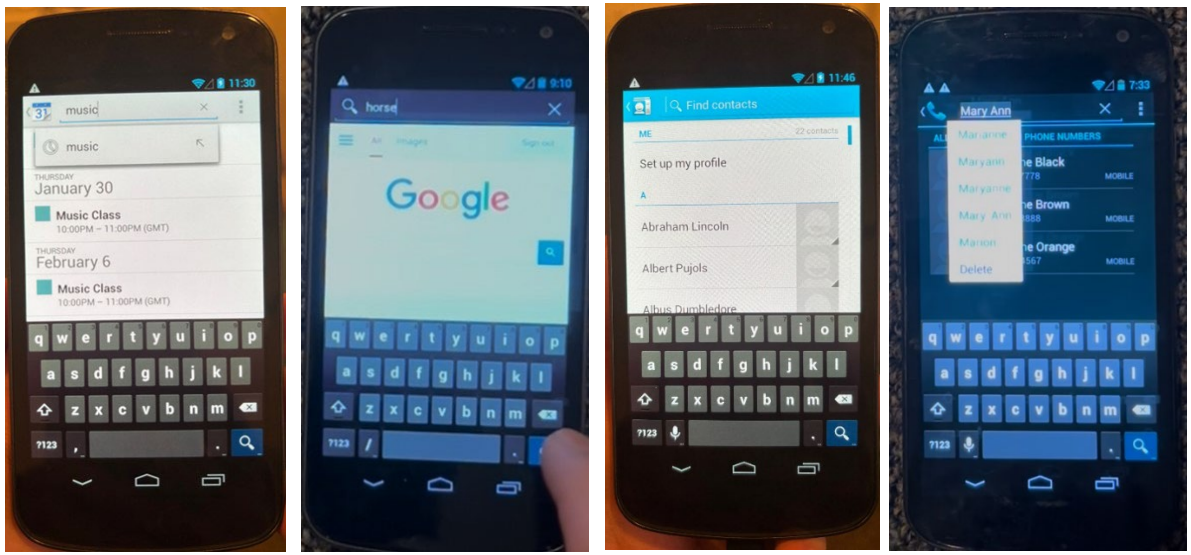
firmware on each exemplary product is the same firmware that was running on the product since before February 17, 2013, or at least before December 24, 2013.

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Nexus Product (recording of Home screen, showing application icons for Camera, Phone, People (contacts), Messages, and Browser).<br><br>Additionally, an "All Apps" icon "  " on the Nexus Home screen (illustrated at the bottom-center of the screen in the figure above) may be used to access an Apps screen or screens, below, which display additional application icons.<br><br>   <br><br>Nexus Product (recordings of Apps screen showing application icons for Browser, Calculator, Calendar, Camera, Clock, Currents, Downloads, Email, Gallery, Gmail, Google, Google+, Local, Maps, Messaging, Google Messenger, Movie Studio, My Verizon Mobile, Navigation, News & Weather, People, Phone, Play Books, Play Magazines, Play Movies & TV, Play Music, Play Store, Settings, Talk, Voice Search, VZ Backup Assistant, and YouTube).<br><br>Additional exemplary citations include: |

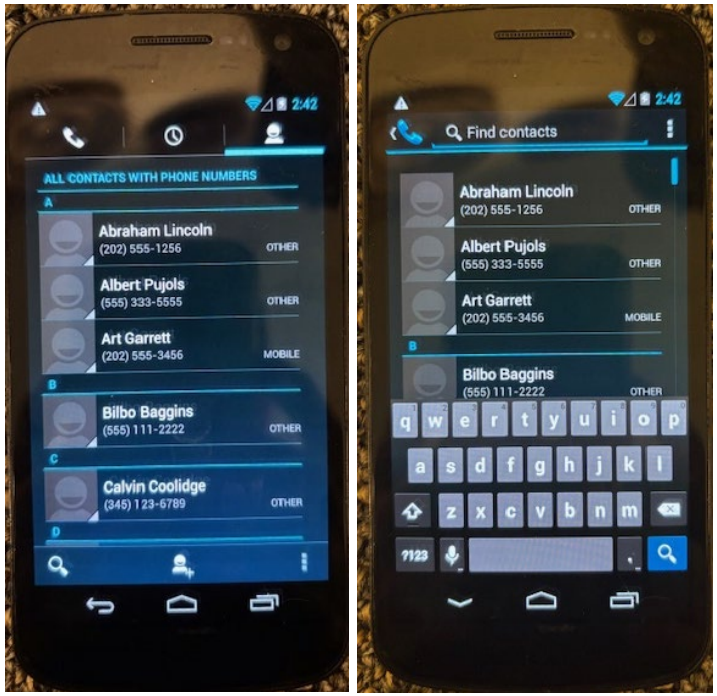
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Nexus Manual discloses to "Use your fingers to manipulate icons, buttons, menus, the onscreen keyboard, and other items on the touchscreen." Nexus Manual at 9.<br><br>Nexus Manual identifies applications on the Nexus, including Gmail, People, Calendar, and Camera. Nexus Manual at 25-30. |
| **[1A]** an electronic device having a touchscreen; | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "an electronic device having a touchscreen."<br><br>For example, the Nexus is an electronic device that includes a touchscreen that responds to a user's touch inputs.<br><br>Nexus Manual instructs users to "Use your fingers to manipulate icons, buttons, menus, the onscreen keyboard, and other items on the touchscreen. You can also change the screen's orientation. To select or activate something, touch it. To type something, such as a name, password, or search terms, just touch where you want to type. A keyboard pops up that lets you type into the field." Nexus Manual at 9. Nexus Manual further describes various touchscreen gestures that can be performed on the touchscreen: |

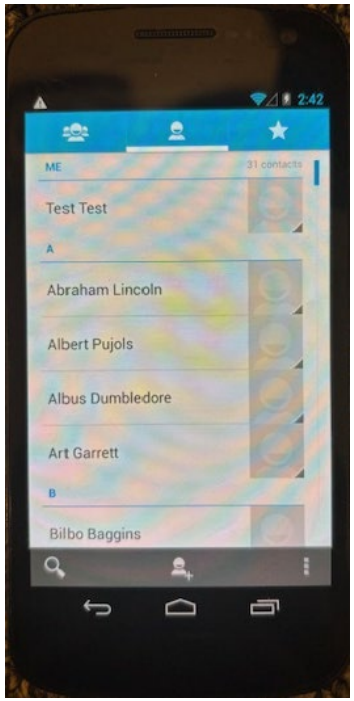
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | **Touch & type**<br>  <br>Use your fingers to manipulate icons, buttons, menus, the onscreen keyboard, and other items on the touchscreen. You can also change the screen's orientation.<br>To select or activate something, touch it.<br>To type something, such as a name, password, or search terms, just touch where you want to type. A keyboard pops up that lets you type into the field.<br>Other common gestures include:<br>▶ **Touch & hold**: Touch & hold an item on the screen by touching it and not lifting your finger until an action occurs.<br>▶ **Drag**: Touch & hold an item for a moment and then, without lifting your finger, move your finger on the screen until you reach the target position. For example, you can drag to reposition shortcuts on the Home screen.<br>▶ **Swipe or slide**: Quickly move your finger across the surface of the screen, without pausing when you first touch (so you don't drag something instead). For example, you can slide a Home screen left or right to view the other Home screens.<br>▶ **Double-tap**: Tap quickly twice on a webpage, map, or other screen to zoom. For example, double-tap a webpage in Browser to zoom in, and double-tap again to zoom out.<br>▶ **Pinch**: In some apps (such as Maps, Browser, and Gallery), you can zoom in and out by placing two fingers on the screen at once and pinching them together (to zoom out) or spreading them apart (to zoom in).<br>9<br>Nexus Manual at 9. |
| **[1B]** an on-screen keyboard for entering text in a first application running within said device | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "an on-screen keyboard for entering text in a first application running within said device."<br>For example, Nexus discloses an on-screen keyboard, as shown below. |

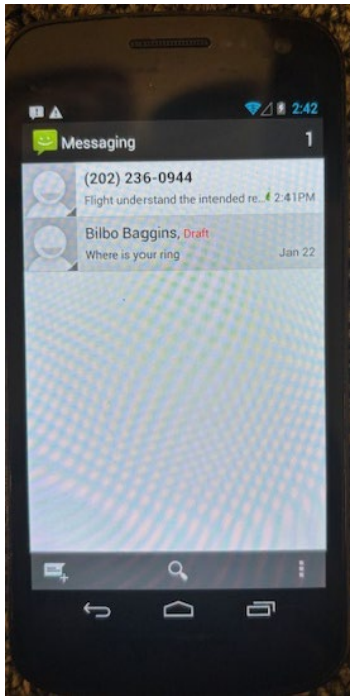
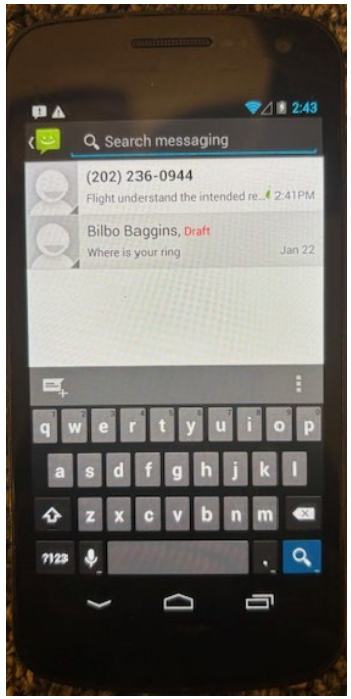
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Nexus Product (illustrating keyboard in use with Messages application).<br>Further, as illustrated below, the on-screen keyboard of the Nexus is for entering text in various applications running within the device, including Messages (as illustrated above), as well as Calendar, Internet, People (Contacts), and Phone as illustrated below. |

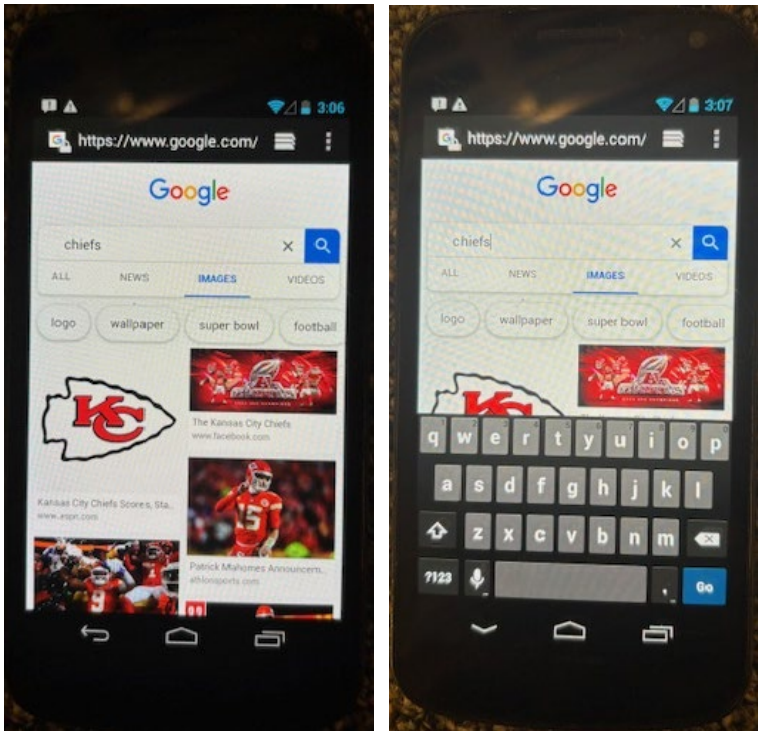
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Nexus Product (illustrating keyboard for entering text with Calendar, Internet, People, and Phone applications, respectively).<br>Additional exemplary citations include: |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Nexus Manual at 53. |
| **[1C]** wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard; and | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard."<br>For example, as illustrated below, the Nexus Phone application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Phone application) initially takes up the entire screen. Tapping the "Search" icon of Phone results in a second zone being assigned to the keyboard. The |

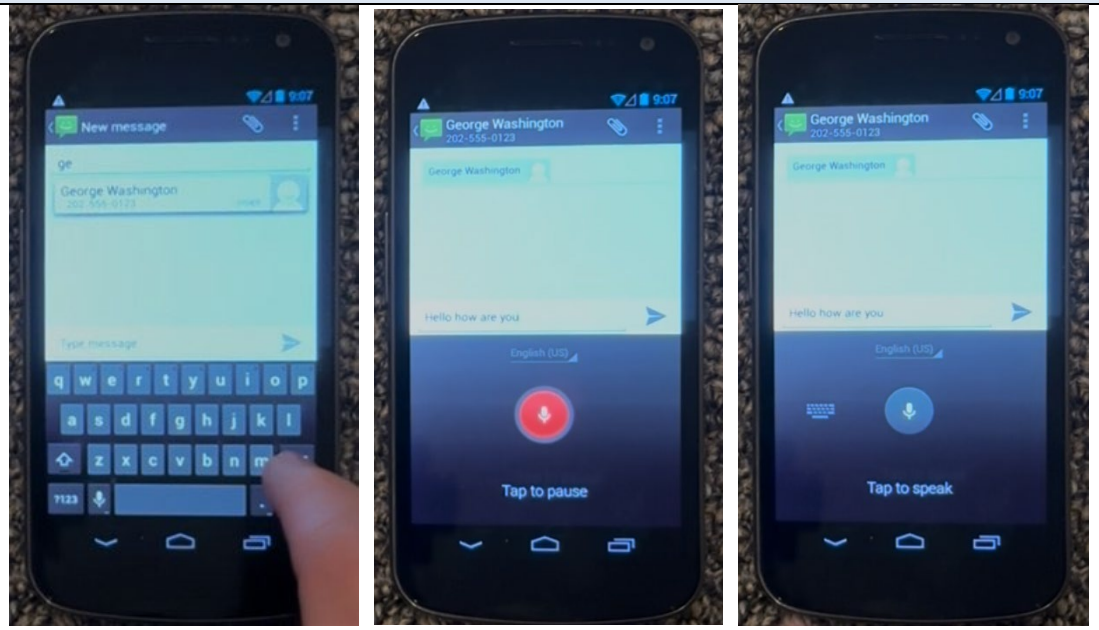
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | keyboard includes a bottom key (denoted by  ), which is not present when the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ).   Nexus Product (illustrating Phone application in full-screen view (left) and with keyboard (right)). As another example, as illustrated below, the Nexus People application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (People application) initially takes up the entire screen. Tapping the "Search" icon of People results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by  ), which is not present when |

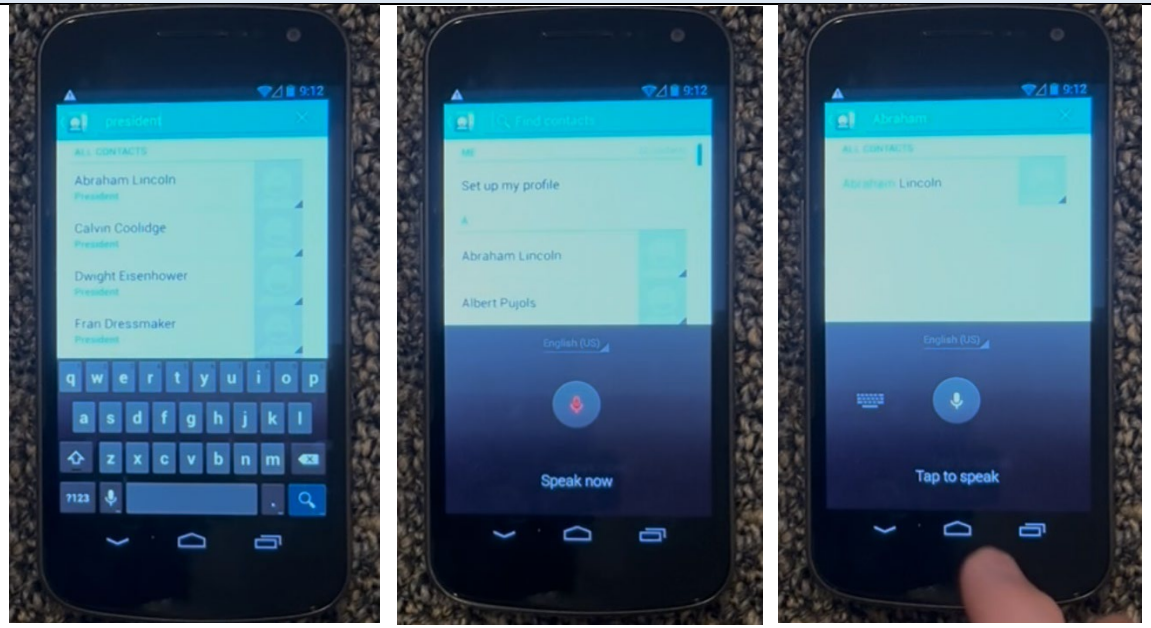
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ).   Nexus Product (illustrating People application in full-screen view (left) and with keyboard (right)). As another example, as illustrated below, the Nexus Messages application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Messages application) initially takes up the entire screen. Tapping the "Search" icon of Messages results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by  ), which is not |

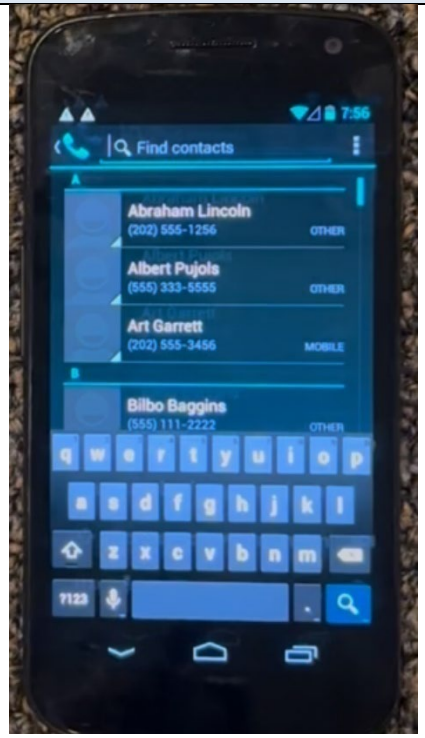
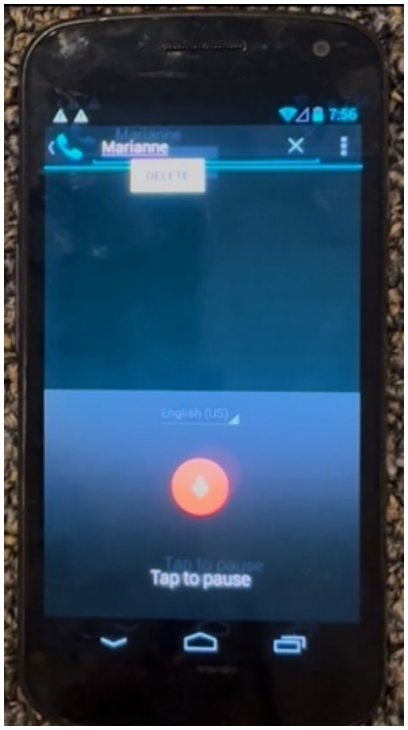
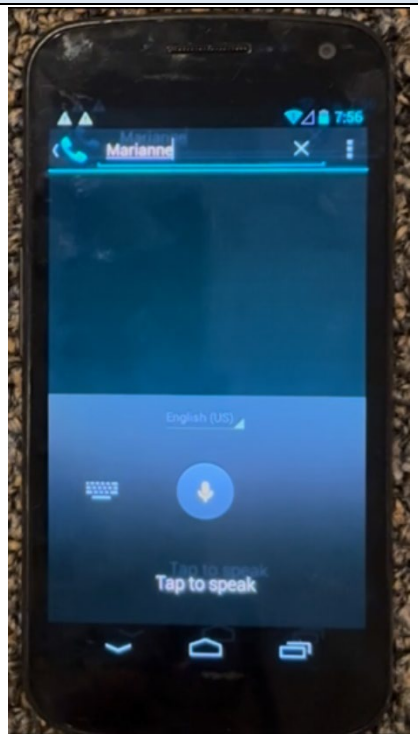
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | present when the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ).     Nexus Product (illustrating Messages application in full-screen view (left) and with keyboard (right)). As another example, as illustrated below, the Nexus Browser application can take up the entire touchscreen, or just the top portion of the touchscreen so that, for example, a keyboard can occupy the bottom portion of the touchscreen. A second zone of the touchscreen is assigned to the on-screen keyboard. In the example below, the "first" application (Browser application) initially takes up the entire screen. Tapping the "Search" icon of Browser results in a second zone being assigned to the keyboard. The keyboard includes a bottom key (denoted by  ), which is not present |

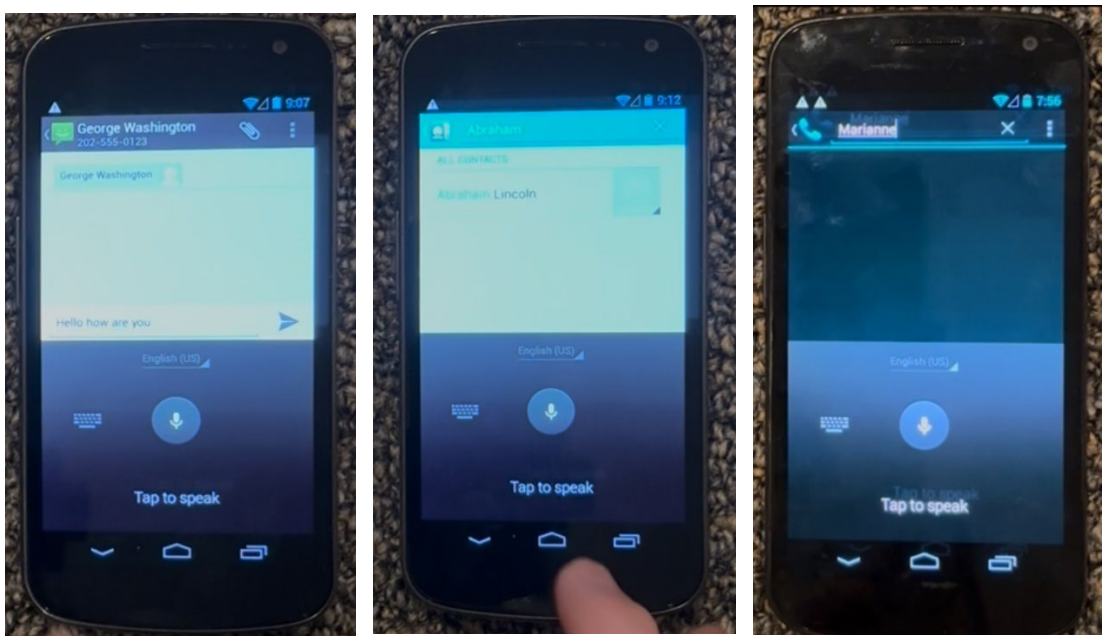
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | when the "first" application takes up the entire screen. The keyboard also includes a delete key (denoted by  ).<br>  <br><br>Nexus Product (illustrating Browser application in full-screen view (left) and with keyboard (right)). |
| **[1D]** wherein based on accomplishment of a condition under the control of said keyboard, the system | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone, and | displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br><br>For example, as illustrated below (left), pressing the microphone key (  ) on the Nexus's keyboard activates a voice input application and displays an interface for the voice input application on at least a portion of said second zone as shown below (center). Simultaneously, a "bottom key" (  ) is displayed below the voice input application interface. The "bottom key" is used with the keyboard to hide the keyboard. After a short delay, during which a user may (or may not) provide voice input, a keyboard icon key (  )also appears on at least a portion of said second zone, as illustrated below (right). Pressing the keyboard icon key causes the original keyboard to be restored. The voice input application is a "second" application that is distinct from the "first" application (for example, the Messages, People, or Phone application) and is distinct from the keyboard. The voice input application can receive audio voice inputs and generate text to output to the "first" application. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Nexus Product (illustrating use of voice input application to enter text "Hello how are you" within Messages application).<br>Similar functionality is provided with the keyboard when used with the People application, as illustrated below. As illustrated below (right), a "reduced interface" includes the "bottom key" ( ) and keyboard icon key ( ),as discussed above. |

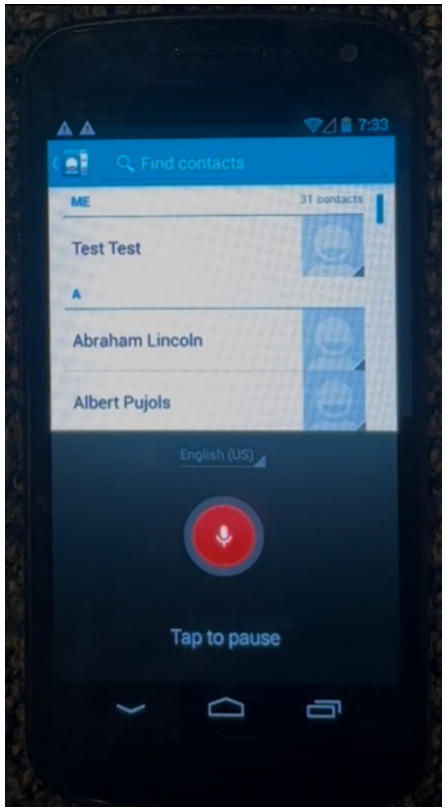
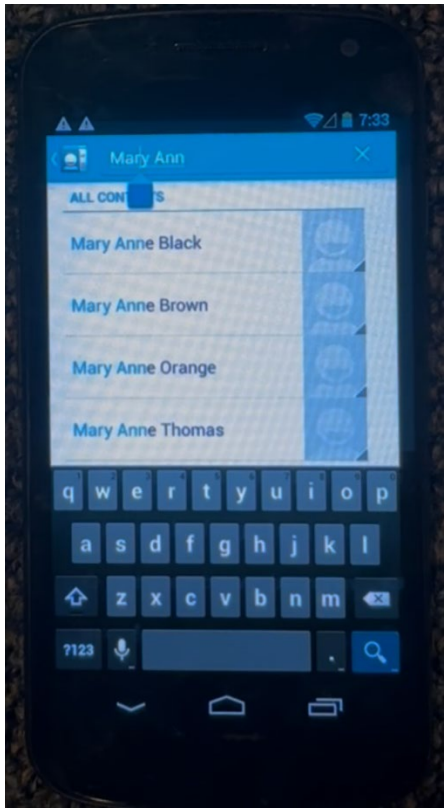
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Nexus Product (illustrating the use of voice application to search for "abraham" in People application).<br>Similar functionality also is provided with the keyboard when used with the Phone application, as illustrated below. As illustrated below (right), a "reduced interface" includes the "bottom key" ( ) and keyboard icon key ( ),as discussed above. |

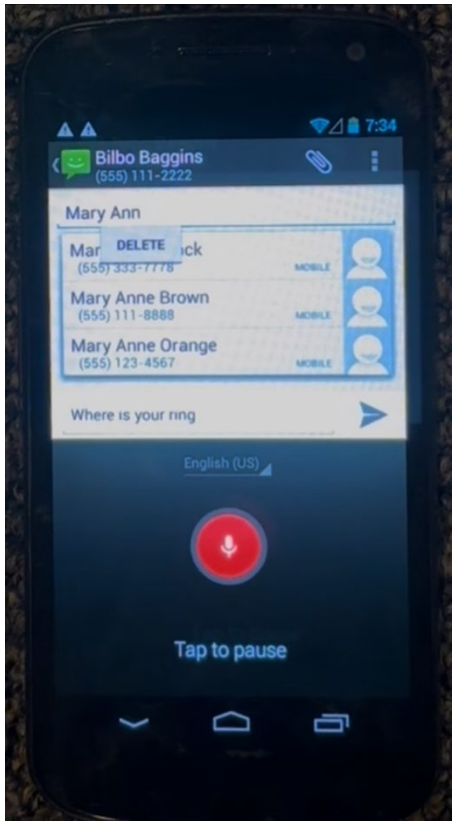
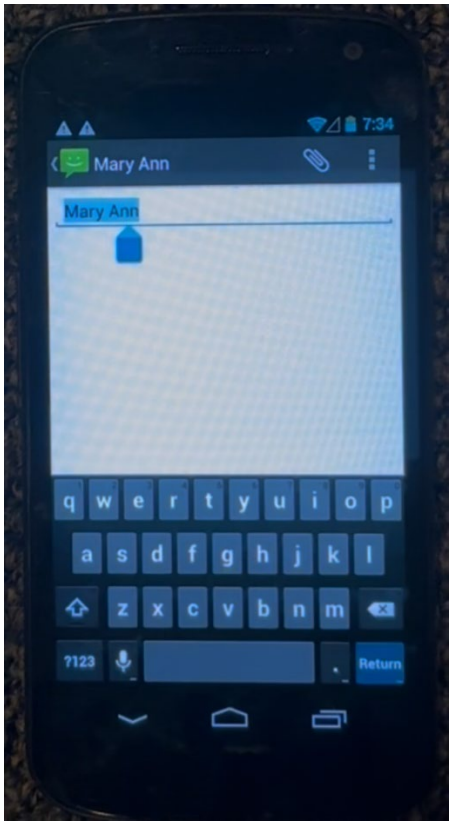
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |    <br>Nexus Product (illustrating the use of voice application to search for "Marianne" in Phone application). |
| **[1E]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen."<br><br>For example, Nexus discloses that all of the "interface of said first application" (e.g., the Messages, People, or Phone application), the "interface of said second application" (e.g., the voice input |

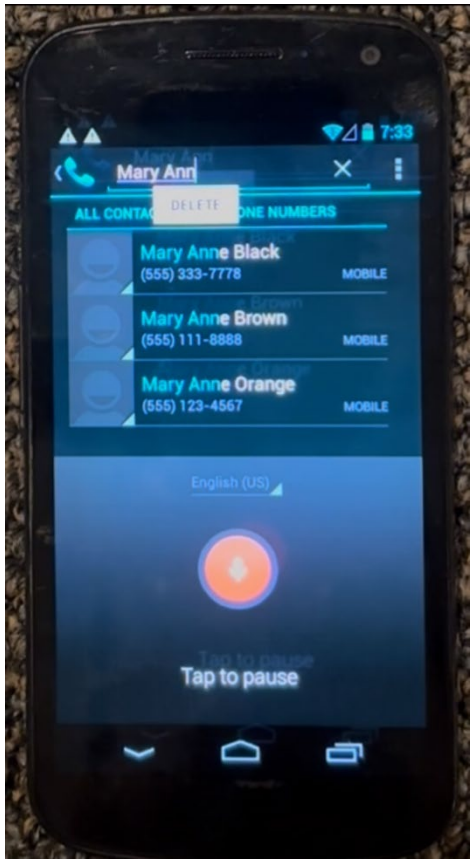
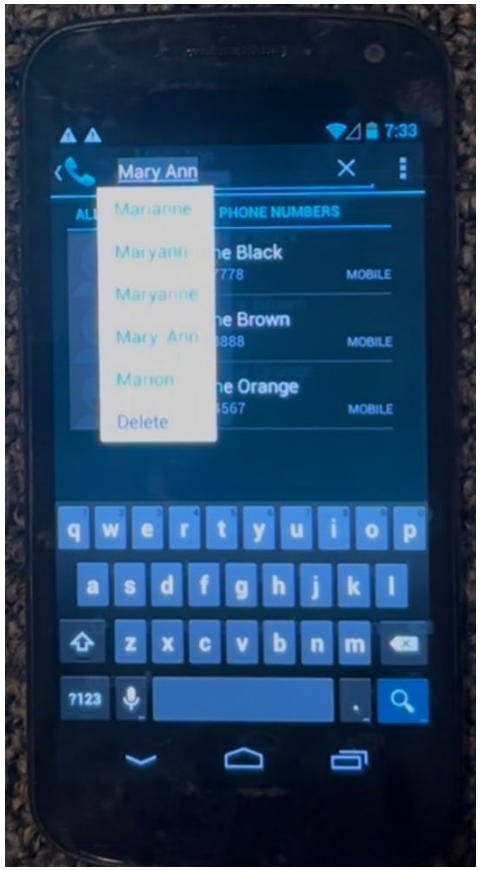
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| simultaneously displayed on said touchscreen. | application), and "the reduced interface corresponding to said keyboard" being "simultaneously displayed on said touchscreen," as discussed in claim [1D] and illustrated in the following images reproduced from [1D] above:<br>  <br><br>Nexus Product (illustrating Messages, People, and Phone applications, respectively); *See supra*, claim [1D]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[2]** The system of claim 1, wherein upon interacting with the interface of any of said | Claim 2 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 |

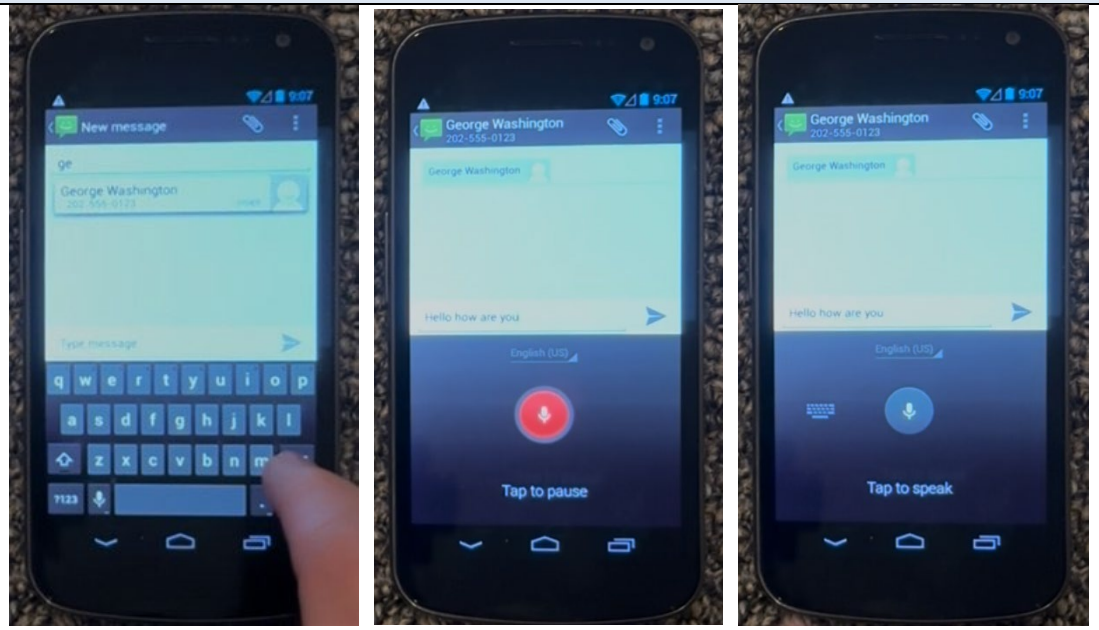
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| applications, the focus of the system is given to the interacted application. | to show the additional limitations of claim 2 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>For example, in all the examples shown in connection with claim 1, interacting with the interface of the "first" application causes the focus of the system to be given to the "first" application, and interacting with the interface of the "second" application causes the focus to be given to the "second" application. The focus can shift back and forth between the applications.<br><br>Additionally, the voice input application at the bottom of the screen is interacted with, to input spoken words, which the voice input application indicates with an animated pulsating circle around the microphone icon. The voice input application also is interacted with by pressing the microphone icon to begin or stop voice input mode. Next, the focus of the system switches from the voice input application to the People application, when the People application at the top of the screen is interacted with, to place a cursor on the word "Mary." |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>  <br>Nexus Product (illustrating voice input application and People application).<br>Additionally, the voice input application at the bottom of the screen is interacted with, to input spoken words, which the voice input application indicates with an animated pulsating circle around the microphone icon. The voice input application also is interacted with by pressing the microphone icon to begin or stop voice input mode. Next, the focus of the system switches from the voice input application to the Messages application, when the Messages application at the top of the screen is interacted with, to select the words “Mary Ann.” |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Nexus Product (illustrating Messages application and voice input application).<br>Additionally, the voice input application at the bottom of the screen is interacted with, to input spoken words, which the voice input application indicates with an animated pulsating circle around the microphone icon. The voice input application also is interacted with by pressing the microphone icon to begin or stop voice input mode. Next, the focus of the system switches from the voice input application to the Phone application, when the Phone application at the top of the screen is interacted with, to select the words “Mary Ann.” |

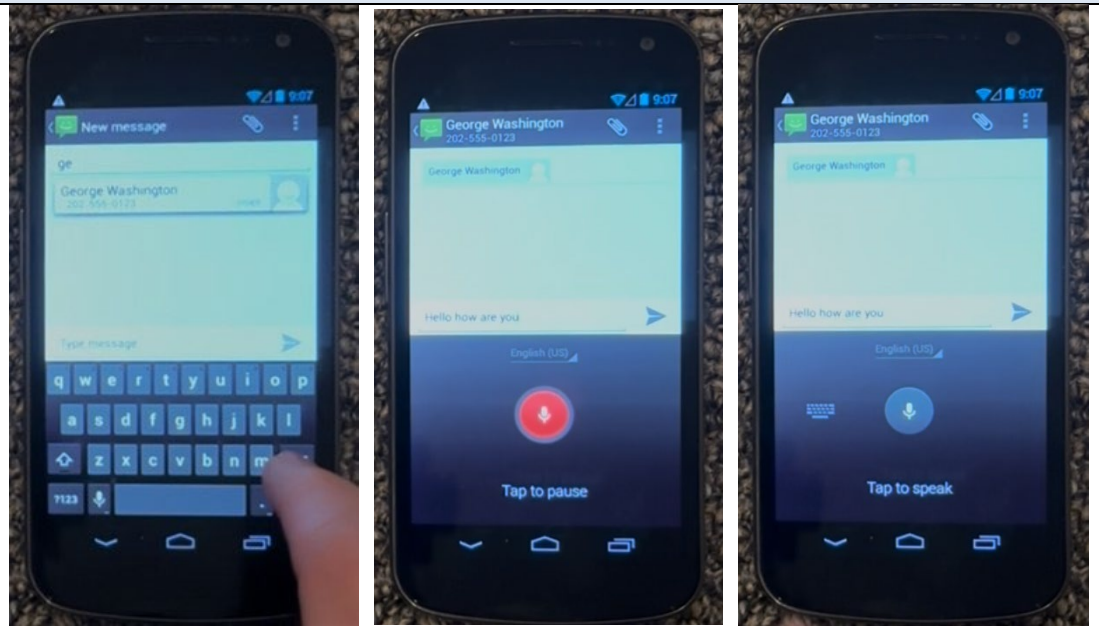
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |   <br>Nexus Product (illustrating Phone application and voice input application). |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[3]** The system of claim 1, wherein said keyboard is used with both of said applications. | Claim 3 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 3 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said keyboard is used with both of said applications."<br><br>As discussed above in claim [1B], the Nexus discloses a keyboard is used for entering text in various applications running within the device, including Messages, People, and Phone. Each is a "first" application. *See supra* claim [1B].<br><br>After the keyboard is used to activate and display the "second" application (e.g., voice input), the keyboard (through its "reduced interface") is also "used with" the second application.<br><br>For example, as illustrated below (left), the keyboard is "used with" the voice input application, because a keyboard key (microphone key  ) activates the voice input application and displays the voice input application interface. Then, when the voice input application is running in parallel with the Messages application (in this example), the reduced keyboard interface includes at least the "bottom key" (  ) and the "keyboard icon" key (  , below-right). Those keys of the reduced keyboard are "used with" the second application because, for example, the "bottom key" minimizes the voice input application, and the "keyboard icon" key closes the voice input application and restores the full keyboard. |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Nexus Product (illustrating use of voice input application to enter text "Hello how are you" within Messages application). |

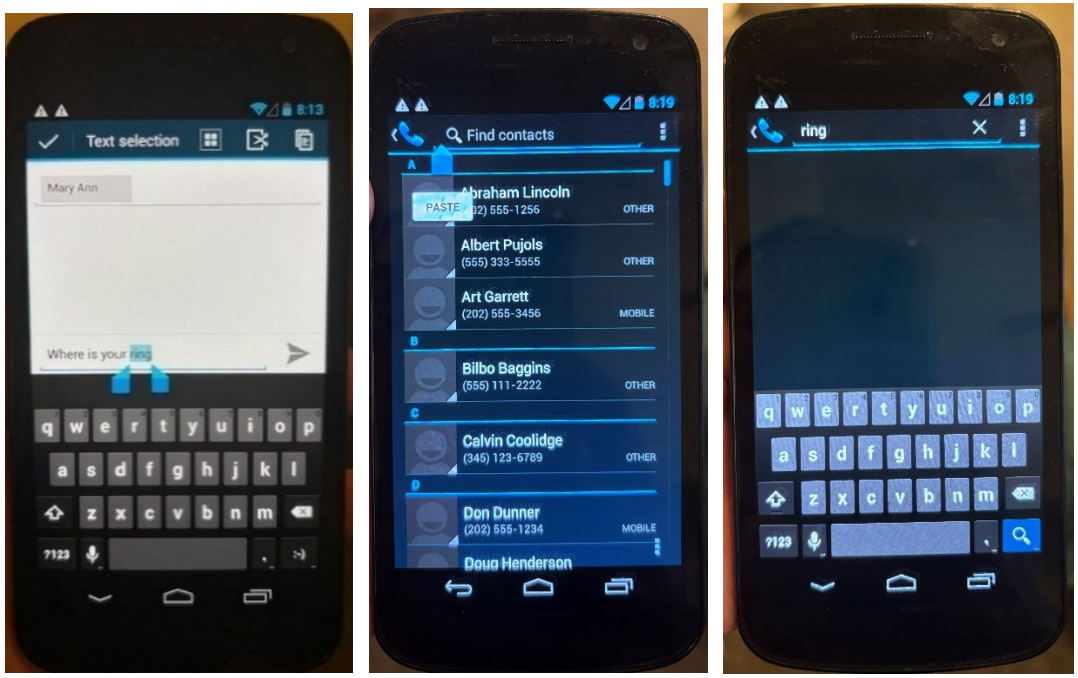
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[4]** The system of claim 1, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said | Claim 4 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 4 are anticipated and/or obvious for the same reasons set out in claim 1. |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| interface of said second application are simultaneously displayed on said touchscreen. | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen."<br><br>For example, the examples discussed in connection with claim 1 include examples of information that is received from one of the applications and is shared with the other application while both applications are being displayed.<br><br>As one example, the voice input application receives spoken words, and converts speech to text, then provides the text to the "first" application so that, for example, the "first" application receives the text that the user provided by speaking instead of typing. In the example shown below, the Messages ("first") application search bar at the top of the screen receives the words "Hello how are you" from the voice input ("second") application. |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Nexus Product (illustrating use of voice input application to enter text "Hello how are you" within Messages application).<br><br>In this example, an information (e.g., voice input) received from one of said applications (voice input application) is shared with at least the other application (Messages) while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen. Similar functionality is provided with respect to at least the Phone and People applications, as discussed above in claim [1D]. *See supra* claim [1D]. |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[5]** The system of claim 4, wherein said information includes at least one of, a text, an image, a video, a webpage and a URL. | Claim 5 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 5 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL."<br><br>All of the examples discussed in connection with claim 4 involve information that includes text. *See supra*, *claim* [4]. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[6]** The system of claim 4, wherein said information is copied from one of said applications and pasted in the other application. | Claim 6 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 6 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information is copied from one of said applications and pasted in the other application."<br><br>For example, Nexus includes copy and paste functionality, which can be used to copy information in the form of text. Copied information can then be pasted into another application. For example, as |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | illustrated below (left), the text "ring" is selected within the Messages application. An option to copy the selected information appears at the top of the screen, designated by the copy icon ( ) at the top-right corner. Next, as illustrated below (center) a long-press action in the Phone application provides an option to "PASTE." Selecting PASTE causes the copied text to be pasted into the Phone application, as illustrated below (right).   Nexus Product (illustrating copying text from Messages application and pasting text into Phone application). To the extent Keyless argues that Nexus does not include or render obvious "wherein said information is copied from one of said applications and pasted in the other application," it would have been obvious in view of Nexus, POSITA's pre-existing knowledge, and/or the teachings of Nexus combined with the other references charted for this patent in these invalidity contentions, |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000 and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000 and Lavallee discloses wherein said information is copied from one application and pasted in another application.<br><br>For example, Sirpal-486 states that "[m]ost single or dual-screen devices will allow a user to copy content from one location to another," and suggests that its "universal clipboard" offers improvements upon that known feature. Sirpal-486, ¶¶[0168]-[0169]. Sirpal-486 further incorporates by reference Sirpal-000, which provides additional detail and illustration of the functionality of "Copy & Paste Text, Links[,] and Universal Clipboard." Sirpal-000, 152-82.<br><br>Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an application depending on focus." Sirpal-000 at 147. *See also supra* claim [2]. Sirpal-000 further provides functionality of "Copy & Paste Text, Links and Universal Clipboard." Sirpal-000 at 152-182. As Sirpal-000 explains:<br><br>> In the current Android model, users can copy and paste the contents of a text message from one app to another via press and hold to get a copy paste menu. In the current Android model, users can copy and paste a URL from any application to another via press and hold to get a copy/paste menu. *In the current Android model, users select text in a text field via press and hold, which invokes a contextual menu allowing users to put the field in 'select' mode, touching and dragging a chunk of text, then press and hold again to take field out of 'select' mode, which then copies the selected text. *In the current Android model, users can copy/paste plain text via invoking a contextual menu, putting the device into 'select' mode, and touching and dragging a chunk of text, then press and hold to paste the text into another |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | app. We want to normalize the methods of copy/paste in the dual screen model, as well as to allow more efficient copy via drag and drop, direct manipulation, and better cursor placement and text selection, all while still allowing for the retention of the current Android pattern of copy and paste via menus as additional methods of performing these functinos.<br><br>Sirpal-000 at 153.<br><br>Sirpal-000 provides that any number of items may be copied from and pasted to any number of applications, as illustrated below:<br><br>  <br>3.2.2 :: Functions<br>COPY<br>*Select a link<br>*Select a chunk of text<br>*Select all text (and images) on a page<br>*Select a text message<br>*Select a text conversation<br>*Select an image (or image and text)<br>*Any text in a field<br>*Smart Objects (calendar event, contact, etc.)<br>FROM<br>*Email<br>*Text Message<br>*Webpage<br>*IM<br>*Document<br>*Image<br>*Folder<br>*Text Field<br>PASTE<br>*Paste a link<br>*Paste a chunk of text<br>*Paste a message<br>*Paste a conversation<br>*Paste an image (or image and text)<br>*Paste a Smart Object<br>TO<br>*Email<br>*Text Message<br>*IM<br>*Document<br>*Folder<br><br>Sirpal-000 at 154.<br><br>Sirpal-000 describes a “first class of items” that is copied/pasted in its entirety, and a “second class of items” that first requires a user to “place the cursor and make a selection of a piece of the item” to be copied. Sirpal-000 at 155. In operation, a user can either copy text to a clipboard (for pasting later) or copy text with a “two finger press and hold gesture, which puts the item in move mode, |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | and allows the user to move/paste the item to any available drop zone," e.g., for "images, links, paragraphs of text, messages, etc." Sirpal-000 at 155. "For anything that has been copied, users have the option to either just paste the last copied item or to select an item from the Universal Clipboard to paste." Sirpal-000 at 155. Sirpal-000 illustrates many examples of copying text from one application to another, including copying a link from a web page for pasting into an email message (Sirpal-000 at 158-164), text from a web page for pasting into an email (Sirpal-000 at 166-170), text and image from a web page for pasting into an email (Sirpal-000 at 172-175), and text from a field (e.g., in an email application) to another field (e.g., in a text message application) Sirpal-000 at 177-182.<br><br>Sirpal-486 (including through incorporation of Sirpal-000) and Nexus also share similarities in the ways they share information from one application to another. Nexus shares text information using copy and paste as discussed above. And Sirpal-486 further discusses sharing information through copy/paste functionality. Sirpal-486, ¶¶[0160]-[0169]. As Sirpal-486 explains, the ability to copy and paste between applications is common to both "single [and] dual-screen devices":<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location (e.g., the application at which the content will be copied), select the area where the text should be placed, access a copy/paste menu pop-up window, and then select the paste command.<br><br>Sirpal-486, ¶[0168]. Sirpal-486 suggests an improvement over other copy/paste functionalities by using a "universal clipboard" from which "a user can choose an item corresponding to already-copied content, and … execute a paste command." *Id.*, ¶[0169]. According to Sirpal-486, its clipboard may be configured to store copied content from "a plurality of different applications (e.g., word-processing applications, email applications, web-browsing applications, spreadsheet applications, media player applications, data sharing applications, file-navigation applications, operating systems, etc.)," and including content "in the form of text content, hyperlinks (e.g., text |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | representations of a URL or pointer), images, file path names, contact information, and/or video content (e.g., the image and/or audio portions thereof)." *Id.*, ¶[0162].<br><br>As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. *See also supra* claim [2]. Lavallee further describes providing "a share function [that] permits sharing of items between . . . two or more running applications [simultaneously] displayed." Lavallee, ¶[0058]. According to Lavallee, "[t]he copy and paste function may be accomplished by a drag-and-drop action," "an attach file function that provides for transmitting a file attachment of a first running application of the two or more running applications to a second running application of the two or more running applications," or "an insert function that provides for inserting one or more items displayed by a first running application into a second running application of the two or more running applications." Lavallee, ¶[0058].)<br><br>Additional exemplary disclosures of Lavallee include:<br><br>"Referring now to FIGS. 12 a-d, 13 a-d, 14 a-d, and 15 a-d, various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059].<br><br>"In FIG. 12 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area. The user in this example is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body. In FIG. 12 b, the user is able to select an item in the web browser application, in this example a car, as indicated by circle 1210; this selection may be accomplished by a user pressing on the picture of the car on the touch screen. Next, in FIG. 12 c, the user can drag the selected picture item from the web browser application displayed in the right split screen mode viewing area over to the left split screen mode viewing area, as indicated by the dashed box 1220 surrounding the selected picture item and the accompanying arrows in FIG. 12 c. Finally, in FIG. 12 d, the user released the picture item in the desired location of the email application displayed in the left split screen mode viewing area 1230. This release may be accomplished by the user removing his finger from the selected picture item when the picture is in the desired location. In this way, a user of an electronic device can easily drag and drop a selected item from a first running application to a second running application, both simultaneously maximized and displayed in large split screen mode viewing areas of the touch screen of the electronic device. Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060], Figs. 12a-12d.<br><br>"FIGS. 13 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "insert" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application. In FIG. 13 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: a presentation application, such as POWER POINT®, is displayed in the left split screen mode viewing area and a photo application is displayed in the right split screen mode viewing area. The user in this example is creating a presentation and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the photo application into the presentation application. This example of an insert share function allows a user to insert a picture from the photo application into the presentation application. In FIG. 13 b, the user presses on the desired picture in the right split screen mode viewing area of the touch screen, as indicated by the circle 1310, to select the picture. Next, in FIG. 13 c, the user drags the selected picture into the presentation application in the left split screen |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | mode viewing area of the touch screen, as indicated by the dashed box 1320 surrounded the selected picture and the accompanying arrows in the drawing. The selected picture is dragged in to the presentation application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1330 in FIG. 13 d. The item in this application is a stored picture file, such as a file stored on the device, which can be inserted as shown." Lavallee, ¶[0061], Figs. 13a-13d.<br><br>"It is noted that in the 'copy and paste' function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage. In the 'insert' function illustrated in FIG. 13, a file type stored on device memory, such as a stored picture, contact, video, etc. for example, may be retrieved and inserted, or attached, as shown above." Lavallee, ¶[0062], Figs. 12a-13d.<br><br>"FIGS. 14 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "attach file" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments. Applications that might use the attach file function are varied and include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc. In FIG. 14 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an instant messaging (IM) application is displayed in the left split screen mode viewing area and a music application is displayed in the right split screen mode viewing area. The user in this example is chatting using an IM application and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop songs from the music application into the IM application. This example of an attach file share function allows a user to send a song attachment from the music application to the IM application. In FIG. 14 b, the user presses on a desired song in the right split screen mode viewing area of the touch screen, as indicated by the circle 1410, to select the song. Next, in FIG. 14 c, the user drags the selected song into the IM application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1420 surrounded the selected picture and the accompanying arrows in the drawing. The selected song is |

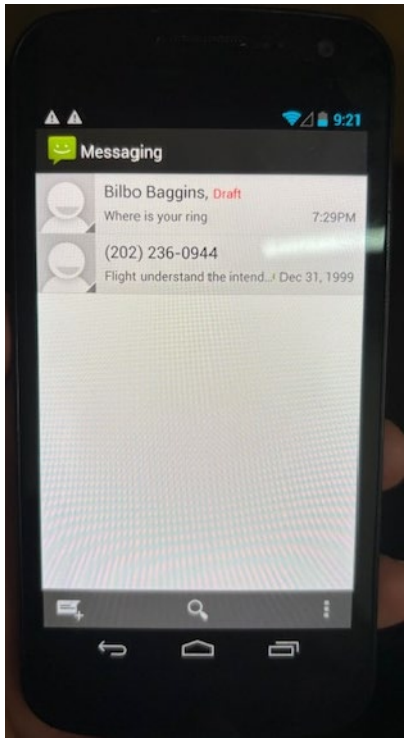
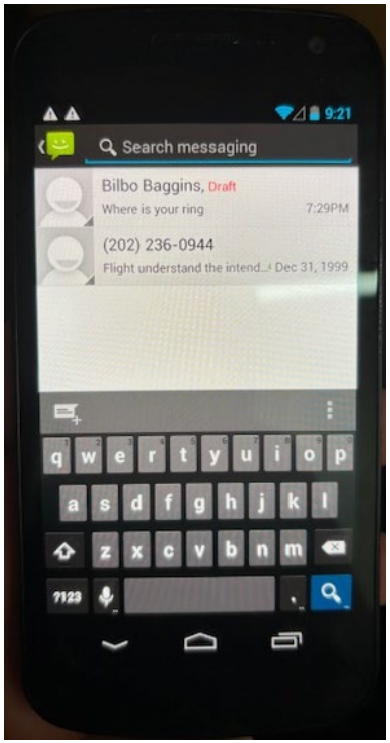
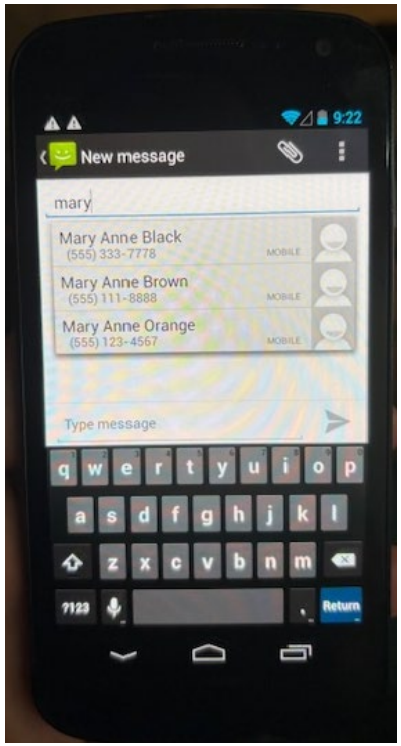
| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | dragged in to the IM application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1430 in FIG. 14 d, into a conversation of the IM application to send to a friend." Lavallee, ¶[0062], Figs. 14a-14d.<br><br>"In FIG. 15 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application. In FIG. 15 b, the user presses on a desired contact in the right split screen mode viewing area of the touch screen, as indicated by the circle 1510, to select the contact. Next, in FIG. 15 c, the user drags the selected contact into the email application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1520 surrounded the selected contact and the accompanying arrows in the drawing. The selected contact is dragged in to the email application displayed in the left split screen mode viewing area of the touch screen and released in the desired location into the email body 1530 in FIG. 15 d, as shown." Lavallee, ¶[0065], Figs. 15a-15d.<br><br>A POSITA would have found it obvious to incorporate "wherein said information is copied from one of said applications and pasted in the other application," as claimed. For example, a POSITA would have found it obvious to implement well-known copy/paste functionality—in which text is copied and pasted from one application into another, e.g., via clipboard or drag/drop—as an additional or alternative mechanism to share information from the voice input application to the first application of Nexus. One obvious combination would provide Nexus's voice input application with the added capability to initially display transcribed text within the voice input application. As modified, the voice input application would allow a user to first see the transcribed text and then decide if he or she wishes to copy all or part of the transcribed text to be pasted into the first application. As discussed above, each of Nexus, Sirpal-486, Sirpal-000 and Lavallee discloses wherein said information is copied from one of said applications and pasted in the other application. A POSITA would have been motivated to combine such feature(s) with of Nexus, as an obvious and intuitive way to transfer information (e.g., transcribed text) from the voice input input |

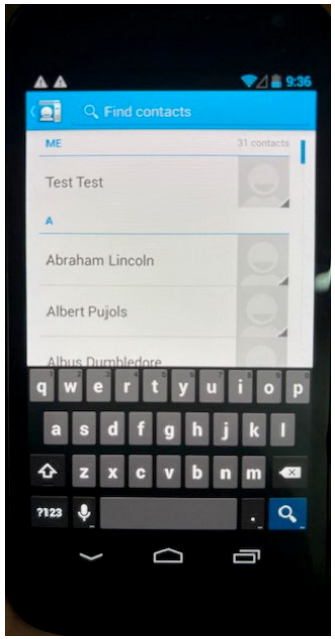
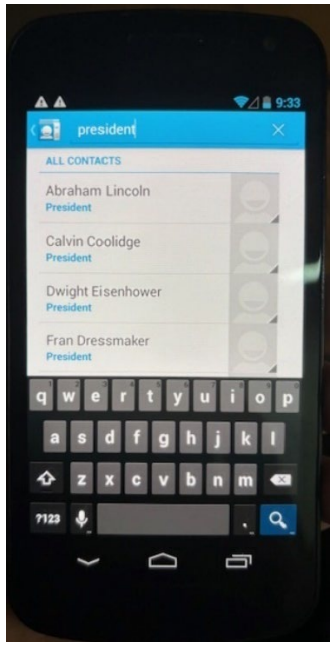
| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application of Nexus into the first application of Nexus. A POSITA would have recognized the advantages of providing copy/paste functionality, at least because it allows a user to decide where (e.g., in which field) information copied from the second application should be pasted/inserted into the first application. The added feature also would be desirable because it would allow a user to make a visual check to ensure that transcribed text is accurate before pasting the text into the first application. Copying and pasting information between applications was routine and conventional to a POSITA, as shown by Nexus, Sirpal-486, Sirpal-000 and Lavallee. Incorporating the feature into Nexus's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Nexus, represent nothing more than combining prior art elements according to known methods and techniques (copying information from one application to be pasted into another, e.g., with a clipboard) to a mobile electronic touch screen device to yield predictable results (providing a user the ability control over when and where to copy/paste information from one application to another). |

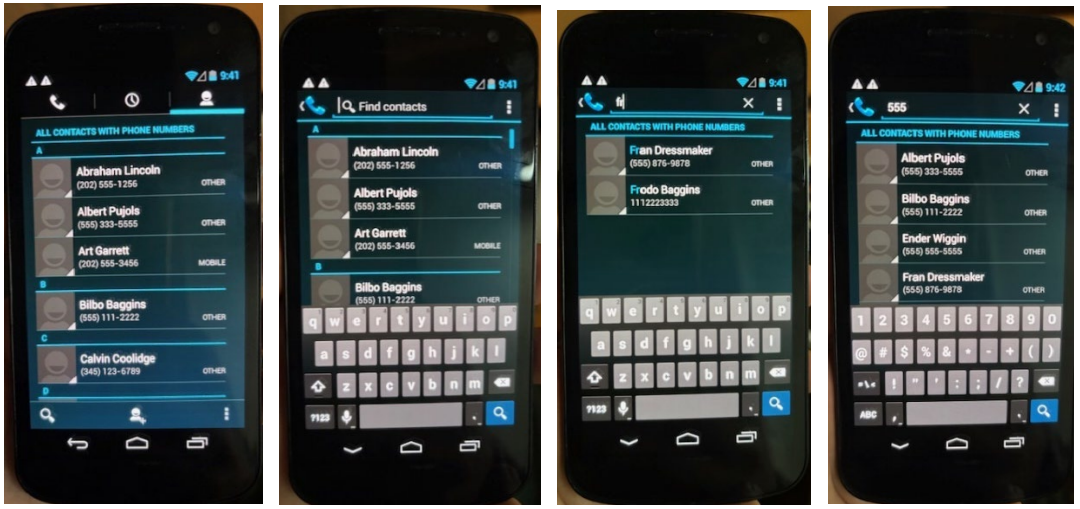
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[7]** The system of claim 1, wherein at least one of the applications is a messaging application. | Claim 7 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 7 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application." |

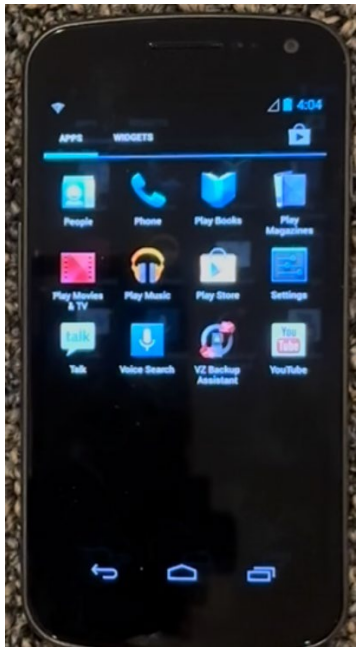
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As illustrated in claim 1, the discussion of which is incorporated here, Nexus includes a Messages application, which is a messaging application. Thus, Nexus includes "wherein at least one of the applications is a messaging application." *See supra* claim 1. |

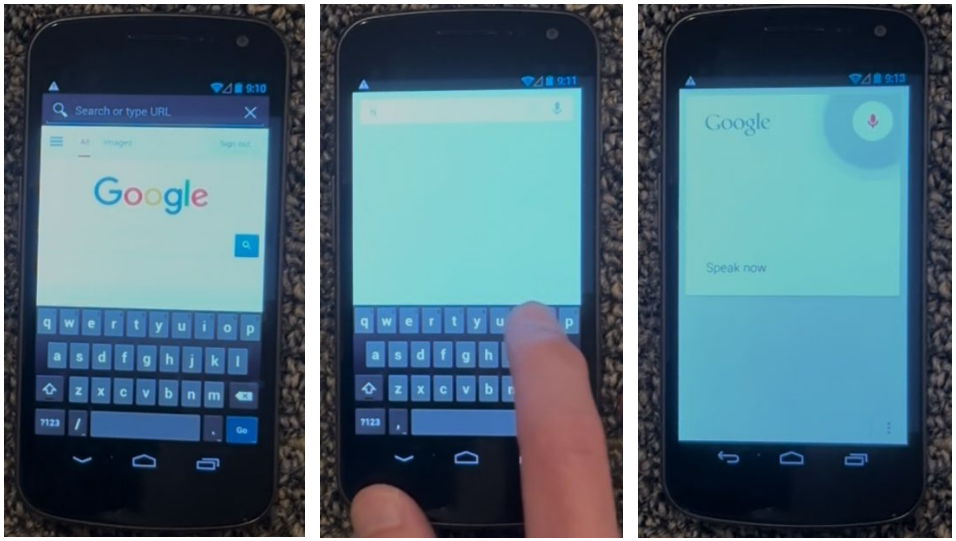
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[8]** The system of claim 1, wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application. | Claim 8 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 8 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further includes "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application."<br><br>For example, the Nexus includes applications with search functionality that are "search applications." For example, each of the Messages, People, and Phone applications include search functionalities as search applications.<br><br>For example, the Nexus Messages application provides a magnifying glass icon at the bottom of the interface (below-left). Selecting the magnifying glass icon allows the user to "Search messaging" (below-center) to find messages containing desired text or keywords. As another example, when the user selects the recipient field (below-right), he or she may search within the Messages application for contacts matching a searched word or keyword. In the example shown, the user has searched for users with the keyword "mary." |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>  <br>  <br>Nexus Product (illustrating search for keyword “mary” in Messages application).<br>As another example, the People application provides the ability to “Find contacts” (as illustrated below (left)). By entering a keyword, such as “president” (as illustrated below (right)), a user can search for results (i.e., people or contacts) matching the keyword. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |   <br>Nexus Product (illustrating search for keyword “president” in Contacts application).<br>As yet another example, the Phone application displays a magnifying glass icon in the lower left corner of the interface (see first image below). Selecting the magnifying glass opens a “Find contacts” field at the top of the interface (see second image below). Within the “Find contacts” field, a user may search for text or keywords, such as “fr” (third image) or “555” (fourth image), and the Phone application will search for matching items. |

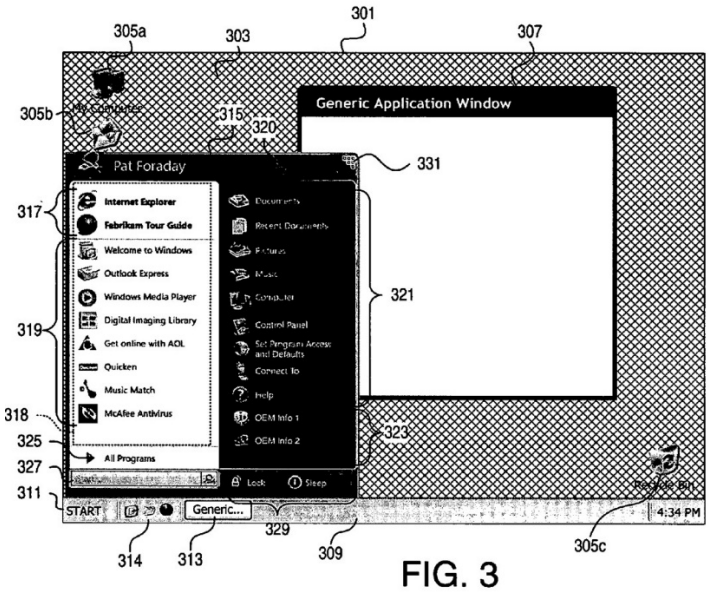
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Nexus Product (illustrating search for keywords “fr” and “555” in Phone application).<br>As still another example, Nexus provides Browser, Google, and Voice Search applications, which may be accessed via the All Apps screen below. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |   Nexus Product (Home screen). Each of the Browser, Google, and Voice Search applications include search functionalities as a search application, as illustrated below. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Nexus Product (illustrating search functionalities of Browser, Google, and Voice Search applications, respectively).<br><br>Thus, for at least the foregoing reasons, Nexus includes that an application may be a search application.<br><br>Additionally, as discussed above in claim [1D], Nexus discloses that a second application is "activated by interacting with a button of said keyboard assigned to activating [that] application." *See supra* claim [1D]. Thus, Nexus provides for activating a second application by interacting with a button of the keyboard assigned to activating that application by, e.g., pressing a key (e.g., such as the microphone key that is used to activate the voice input application), as discussed in claim [1D].<br><br>To the extent Keyless argues that Nexus does not disclose or render obvious this limitation, it would have been obvious in view of Nexus, a POSITA's pre-existing knowledge, and/or the teachings of Nexus combined with other references charted for this patent in these invalidity contentions, including one or more of Wang, Matthews, and Yabuki. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably |

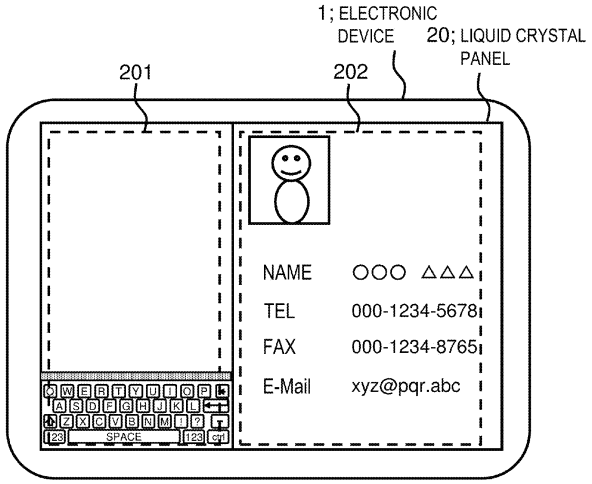
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Wang discloses that "the user can define one of the [device] keys as a search key for searching web pages … thereby quickly calling the search application … of the system." Wang, ¶[0029]. As another example, Matthews discloses to use a keyboard hot key—such as used in Nexus to open the voice input application—with a search application. As yet another example, Yabuki discloses reducing the size of the keyboard so that multiple applications can be displayed, including, e.g., a "search" application. And Nexus itself provides that a mobile device can be used with and include various search functionalities as discussed above.<br><br>For example, Wang discloses a "method for programming output value of a key." Wang, Title. Wang explains that its "method for programming output value of a key is applicable to an electronic device having at least a key." Wang, Abstract, ¶[0002]. Wang observes that "[a]long with the development of technologies, portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones." Wang, ¶[0004]. Wang further observes that "although some touch-type mobile phones or computers include shortcut keys that allow the user to speedily call specific applications, the functions of the shortcut keys cannot be changed by changing corresponding key values of the shortcut keys. For example, a key preset for a shutter button of camera cannot be changed into a return key." Wang, ¶[0007]. Wang purports to improve known touch-type mobile phones or computers. *See id.*, ¶[0008]. In Wang, "[t]he method for programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key. The number of keys is not limited." *Id.*, ¶[0018]. Wang specifically discloses that its system can be used with "Android," which is the same operating system used by Nexus. *Id.*, ¶[0018]. Among other benefits, Wang discloses that its system "accelerates the input speed" by assigning a function to a key. *Id.*, ¶[0029]. Specifically, Wang discloses: |

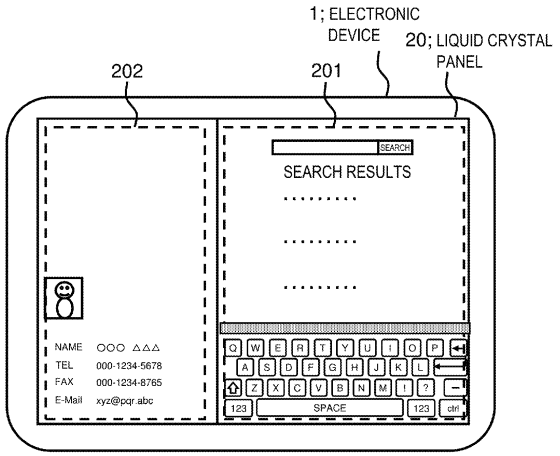
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | > [T]o accelerate the operation speed, the user can define one of the keys 12 as a search key for searching web pages or a camera key for starting camera, thereby quickly calling the search application or camera application of the system. In addition, since Android Supports quick launch application, by holding down one of the keys defined as a search key and pressing another key defined as a character key, the user can quickly call a corresponding application defined in the quick launch application.<br><br>Wang, ¶[0029]. Thus, Wang provides "wherein [an] application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>As another example, Matthews discloses "methods and system for a search box and search capabilities in a graphical user interface of a program launch menu for an operating system." Matthews at 1:15-18. "According to an illustrative aspect of the invention, a program launch menu, such as a Start menu, displays a search text input box within the program launch menu displayed on a computer display device, which can be used to locate user-selectable items on a computer system. Various aspects of the invention may provide for a display of search results within the program launch menu, the search results identifying selectable items matching text input received from a user via the search text input box." Matthews at 3:26-34. In Matthews, a "user can type text into search box 327 to search for Start menu items. Upon entering text in search box 327, Start menu 315 automatically switches to a Search Results view 501, such as is illustrated in FIG. 5, displaying results that match text as it has been entered thus far by the user. That is, from search box 327, a user can perform a character by character search across the programs, user files, Internet links, and communications on his or her system. As the user enters text in the search box 327, the computer system searches for the entered text, as further described below." Matthews at 16:52-62. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 3<br>Matthews, Fig. 3.<br>Like Nexus, which includes many applications with search functionality, including to search data stored on the device or the Internet, Matthews likewise discloses that its search application "may use any built in or known search engine to perform searches on computer system 100. The search engine preferably searches the file system of the computer 110, as well as URLs and executables in the user's Path. The search service may also include search results from other data providers, such as web search results from a web search engine, photo results from a photo website such as Picasa, music results from a service such as MSN music, or any combination of these and/or other data providers. The search engine may index all searchable locations in order to expedite searching." Matthews at 17:1-15.<br>Matthews further discloses that the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start |

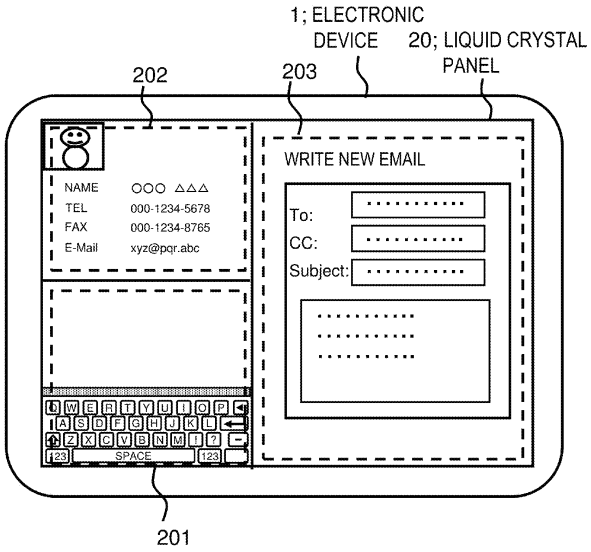
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | typing text for which he or she would like to search for an item." Matthews at 18:31-39. "Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match. No mouse manipulation is necessary (although, certainly allowable if desired). By learning which searches produce desired results, users can learn many keyboard shortcuts to quickly launch desired items that are returned as the top match to the entered search string. Given the time and inclination, a user can learn keyboard shortcuts to launch most application programs and documents on his or her computer, without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:39-51. Thus, Matthews discloses the use of a "search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>Matthews discloses several benefits associated with providing a quick way to launch a search application, such as by using a keyboard key. For example, Matthews discloses that "[a]n operating system launch menu, such as a Start menu, provides various mechanisms for a user to quickly and efficiently locate and launch desired data items such as programs, data files, storage locations, and the like. A search box within the program launch menu may be used to quickly locate programs, documents, communications, and other data items." Matthews at Abstract. Further, Matthews' search application displays results "within the original confines of the program launch menu, thereby negating the need to open sub-menus on top of a large portion of the desktop displayed on the display device." *Id.*; *see also* Matthews at 3:54-62 ("The computer displays search results within a predefined area of the program launch menu, wherein the search results comprise selectable items matching text input received from the user via the search text input box, and automatically provides selection focus to a top search result. The computer launches the selectable item corresponding to the top search result when receiving predefined user input, e.g., <Enter>, while the top search result has the selection focus."). Matthews further discloses that a user may quickly use the equivalent of "keyboard shortcuts" to access desired results "without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:42-51. Thus, Matthews provides a quick and space-efficient search functionality.<br><br>As still another example, Yabuki relates to "an electronic device comprising a touch panel and a controlling method and program therefor." Yabuki, 1:10-13. Yabuki discloses that "a software |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | keyboard may interfere with the user's operation, depending on its size or position," particularly in the case of "a small device such a smartphone." Yabuki, 1:35-39. As Yabuki discloses:<br><br>> For instance, let's assume a case where a user is performing a more detailed search based on search results using a Web browser. At this time, if the area of the software keyboard is large, it may be difficult for the user to perform an input operation while browsing the search results.<br><br>> Further, for instance, let's assume a case where a user launches a Web browser and refers to information regarding the people registered in an address book in the middle of his input operation. In this case, the user first quits the Web browser currently running. Then, he launches the address book application. After confirming the information, the user quits the address book application. Then, after launching the Web browser again, the user has a software keyboard displayed to enter the information. As described, the user must perform a plurality of operations when he refers to information included in another application while using the software keyboard.<br><br>Yabuki, 1:40-56. Yabuki discloses "there is a need in the art to contribute to facilitating an operation independent from a software keyboard while the software keyboard is being used." Yabuki, 1:60-62. According to Yabuki, "the electronic device 1 relating to the present exemplary embodiment is able to display a second application such as an address book application while having a first application such as a Web browser displayed." Yabuki, 7:7-10.<br><br>For example, Figure 4 of Yabuki depicts a full-size keyboard used with a single application. Yabuki, 4:61-5:3, Fig. 4. Yabuki discloses that the full-size keyboard may be moved and reduced in size, to make room for the interface of an application (or multiple applications) to be displayed on larger portions of the screen. Yabuki, 5:4-6:63. To further illustrate, Figure 7 of Yabuki, below, "is a drawing showing an example in which different applications are displayed in a plurality of display regions. In FIG. 7, the software keyboard is reduced and displayed in a first display region 201. Further, an address book application is displayed in the second display region 202 in FIG. 7." Yabuki, 7:11-16. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 7.<br>"The display region control unit 12 may switch the display modes of the first and second display regions. More concretely, according to a predetermined operation, the display region control unit 12 may enlarge the reduced first display region and reduce the second display region. Here, it is preferred that the predetermined operation that switches the display modes be a simple and easy operation such as a double tap operation." Yabuki, 7:17-24.<br>Yabuki further depicts Figure 8, which "is a drawing showing an example in which the display modes are switched. In FIG. 8, the display of the software keyboard is enlarged and displayed in the first display region 201. Further, the address book application is reduced and displayed in the second display region 202." Yabuki, 7:25-29. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 8.<br>According to Yabuki, even more applications may be displayed simultaneously while the keyboard is in its reduced size:<br>> The image signal generation unit 13 may have a third application displayed while displaying the images of two different applications. More concretely, when detecting a fourth operation in the second display region, the display region control unit 12 reduces and moves the second display region. It is preferred that the fourth operation be a simple and easy operation such as a double tap or flick operation. The image signal generation unit 13 displays the image of the third application in a region (a third region) made available by reducing the second display region. As described, the electronic device 1 relating to the present exemplary embodiment does not limit the number of applications displayed simultaneously.<br>Yabuki, 7:30-42. Further to that description, Yabuki depicts in Figure 9, below, "a drawing showing an example in which the image of the third application is displayed on the liquid crystal panel 20. In FIG. 9, the software keyboard is displayed in the first display region 201. Further, the |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | address book application is displayed in the second display region 202. Then, an email application is displayed in a third display region 203." Yabuki, 7:43-49. |




Yabuki, Fig. 9.

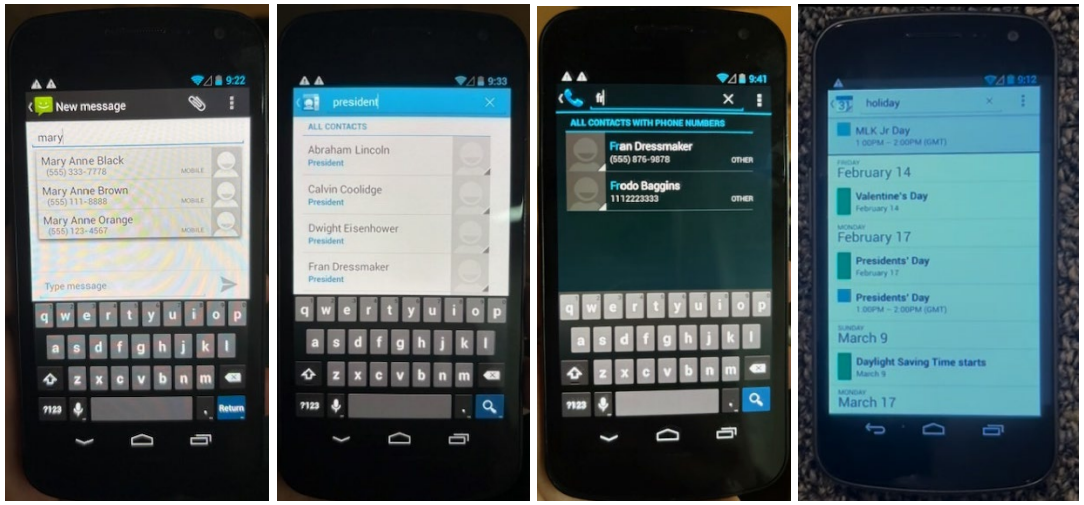
Thus, from the foregoing descriptions of Yabuki, a POSITA would recognize the benefits of reducing a keyboard so that multiple applications may simultaneously be displayed, including a search application (such as a web search application or an application for searching/displaying contact information). Moreover, a POSITA would recognize such features to be beneficial, as they solve problems and achieve advantages that Yabuki identified—e.g., allowing a user to perform input operations (in another application) while browsing search results or allowing a user to cross-reference between a web-browser and an address book simultaneously without closing one application or the other. *See* Yabuki, 1:40-56.

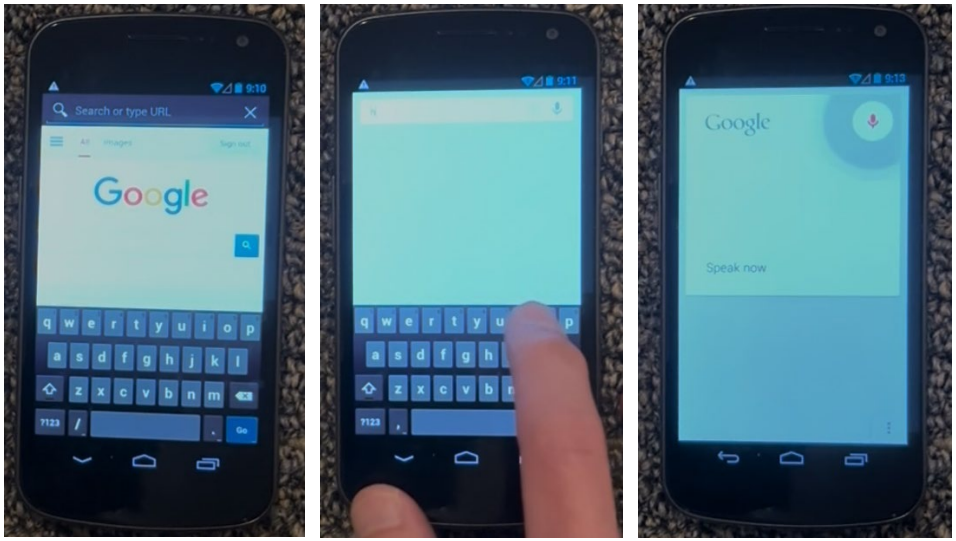
As noted above, Nexus already provides several search applications, including Messages, Phone, People, Browser, Calendar, Google, and Voice Search. Thus, a POSITA would recognize Wang's implementation of a search application key and/or Matthews' implementation of a search

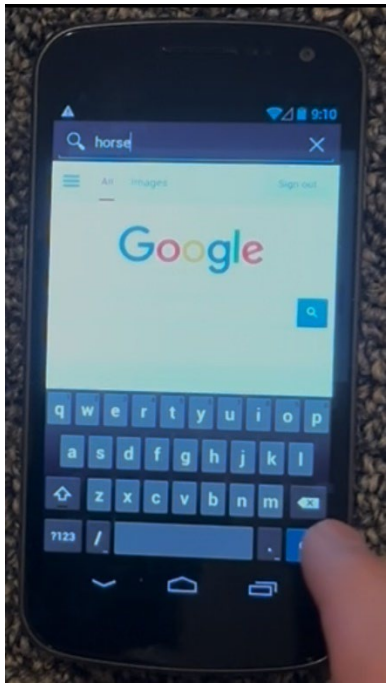
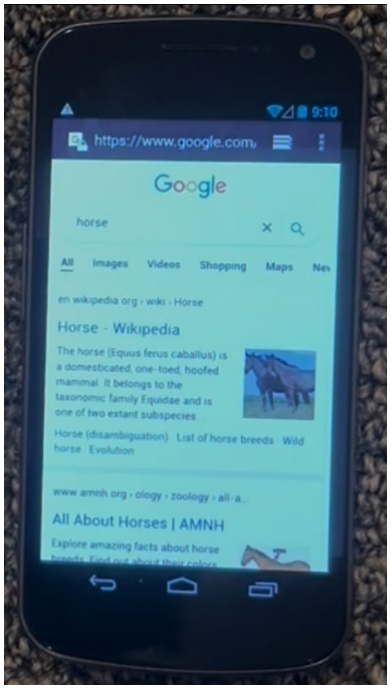
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application key would be suitable for use with Nexus. And a POSITA would recognize from Yabuki the benefits of simultaneously displaying multiple applications along with a reduced keyboard interface.<br><br>One obvious combination of Nexus with Wang, Matthews, and/or Yabuki would, for example, implement the voice input key (on Nexus's keyboard) with an option to activate and display a search application on the second zone, such as the Voice Search application already included in Nexus. Another obvious combination would implement a dedicated search application key on Nexus's keyboard in a manner similar to the Nexus's voice input key. For example, in one obvious combination, a dedicated "People" key would be provided to allow a user to search for contacts in part of the screen (e.g., in the second zone) while another application is active in the first zone. A POSITA would recognize such a configuration from Yabuki, for example. In any case, the search application, when activated, would obviously occupy the same area(s) as the voice input application in the existing Nexus system, and simultaneously display the corresponding reduced keyboard interface. In that way, the search application (e.g., Nexus's preexisting Voice Search, Google, People, etc.) could be used in parallel with another application (or applications) appearing on the top of the screen, without obstructing the interface of the other application. The combination would yield "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>A POSITA would recognize that the combination would achieve the various benefits described in Wang, Matthews, and Yabuki, including to "accelerate the operation speed" (Wang, ¶[0029]), to quickly find relevant information using the keyboard and without covering significant portions of the screen with the search application (Matthews at Abstract), and to be able to cross-reference between one search application (e.g., an Internet browser or address book) and another application simultaneously (such as an application that may require information about the information presented in the Internet browser or address book) (Yabuki, Yabuki, 1:40-56). A POSITA would further recognize that such a combined implementation would provide various results options as displayed suggestion candidates in the second area of the screen, whereupon the user can select which result is desired. Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for at least this reason. |

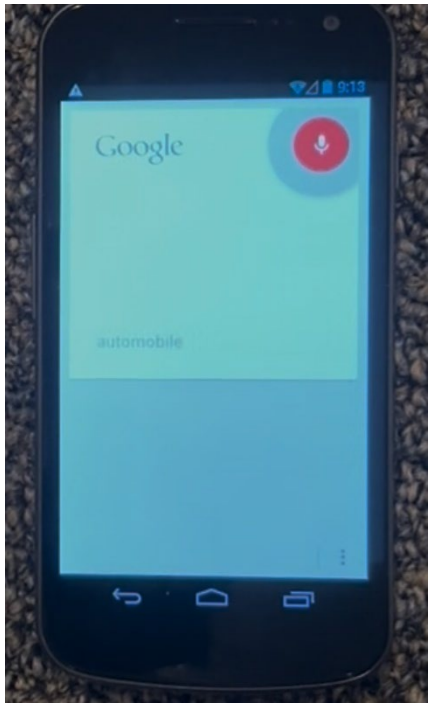
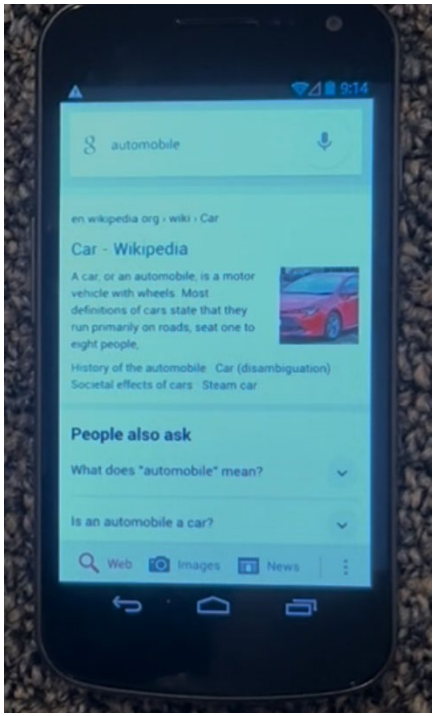
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Incorporating a search button and application (such as taught by Wang and Matthews) with Nexus's keyboard and existing search applications represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Nexus, represent nothing more than combining prior art elements according to known methods and techniques (providing search functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with information relating to searched files, contacts, text, media, etc.). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[9]** The system of claim 8, wherein said search application use at least one keyword typed through said keyboard. | Claim 9 depends from claim 8. Defendants incorporate all the prior art disclosures from claim 8 here, which anticipate and/or render claims 1 and 8 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 8 to show the additional limitations of claim 9 are anticipated and/or obvious for the same reasons set out in claims 1 and 8.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>For example, in Nexus, several of the search applications discussed in claim [8] uses at least one keyword typed through said keyboard. For example, Messages, People, Phone, and Calendar applications are all depicted below with a keyword that has been entered into the search field via the keyboard. *See supra* claim 8. |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Nexus Product (showing Messages application searching for keyword "mary," People application searching for keyword "president," Phone application searching for keyword "fr," and Calendar application searching for keyword "holiday."<br><br>In addition, each of the Browser, Google, and Voice Search applications is configured to receive input of text/voice to search, as illustrated below. In each instance, the text/voice input may take the form of a keyword. |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Nexus Product (illustrating search functionalities of Browser, Google, and Voice Search applications, respectively).<br>For example, using the Browser application, a user may input the keyword “horse” (illustrated below, left) and return search results for the keyword “horse” from the Internet (illustrated below, right). |

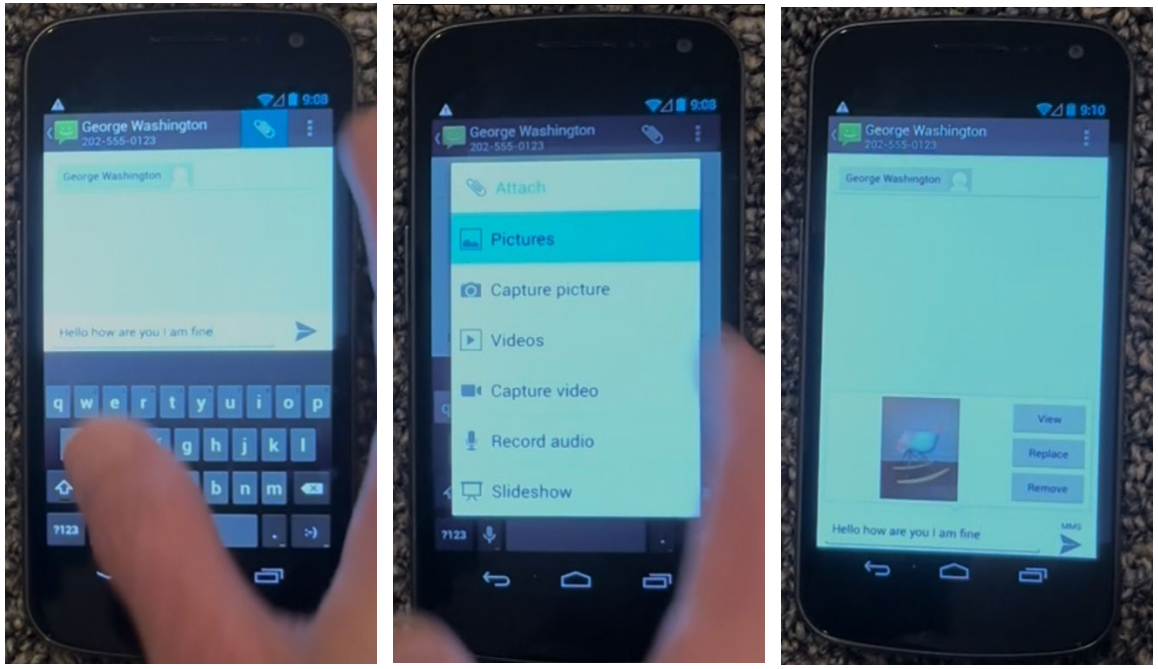
| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |   <br>Nexus Product (illustrating keyword search for “horse” using Browser application).<br>As another example, using the Voice Search application, a user may input the keyword “automobile” (below, left) and return Internet search results for the keyword “automobile” (below, right). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |   <br>Nexus Product (showing Voice Search application searching for keyword "automobile").<br>To the extent Keyless argues that Nexus does not include or render obvious this limitation, it would have been obvious in view of Nexus, a POSITA's pre-existing knowledge, and/or the teachings of Nexus combined with the other references charted for this patent in these invalidity contentions, including one or more of Wang, Matthews, and Yabuki as discussed above for claim [8]. *See supra*, claim 8. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Matthews discloses a "search for <foo>" in which "the computer system 100 may initiate a broader search for the user-entered text, e.g., by launching a full-text search or full-text search window," where "the user may be able to search the computer for <foo>, search the Internet for <foo>, and/or search some other computer or database for <foo>, regardless of where the text <foo> appears." Matthews at 19:2-8. Matthews further discloses that the system "may display any items first where the item's name begins with text matching the user-entered text, second where the item has a word other than its starting word that starts with text matching the user-entered text, and third where the item has any text matching the user-entered text." Matthews at 18:24-28. Matthews thus discloses "keyword search," wherein "said search application use at least one keyword typed through said keyboard."<br><br>A POSITA would have found it obvious to incorporate "wherein said search application use at least one keyword typed through said keyboard," as claimed. Matthews, for example, discloses to use a keyboard to input search keywords. A POSITA would have been motivated to combine such feature(s) with the system of Nexus, as an obvious and intuitive way to implement the search applications of Nexus (or search applications of Nexus as modified in claim [8]). Typing a keyword through a keyboard was routine and conventional to a POSITA (as well as to a user of a device), as shown by Matthews. Furthermore, Nexus already provides that the keyboard is used for text entry, and that the keyboard can be accessed by touching "any text entry field." Nexus Manual at 46. Extending Nexus's existing keyboard text entry functionality to accommodate entering a keyword into the search application (e.g., in the combination discussed in claim [8]) would be a straightforward, intuitive modification, requiring no more than ordinary skill. Incorporating the feature into Nexus's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Nexus, represent nothing more than combining prior art elements according to known methods and techniques (using a keyboard to type a keyword for search) to a search application to yield predictable results (search results to be used with or accessed by another application). |

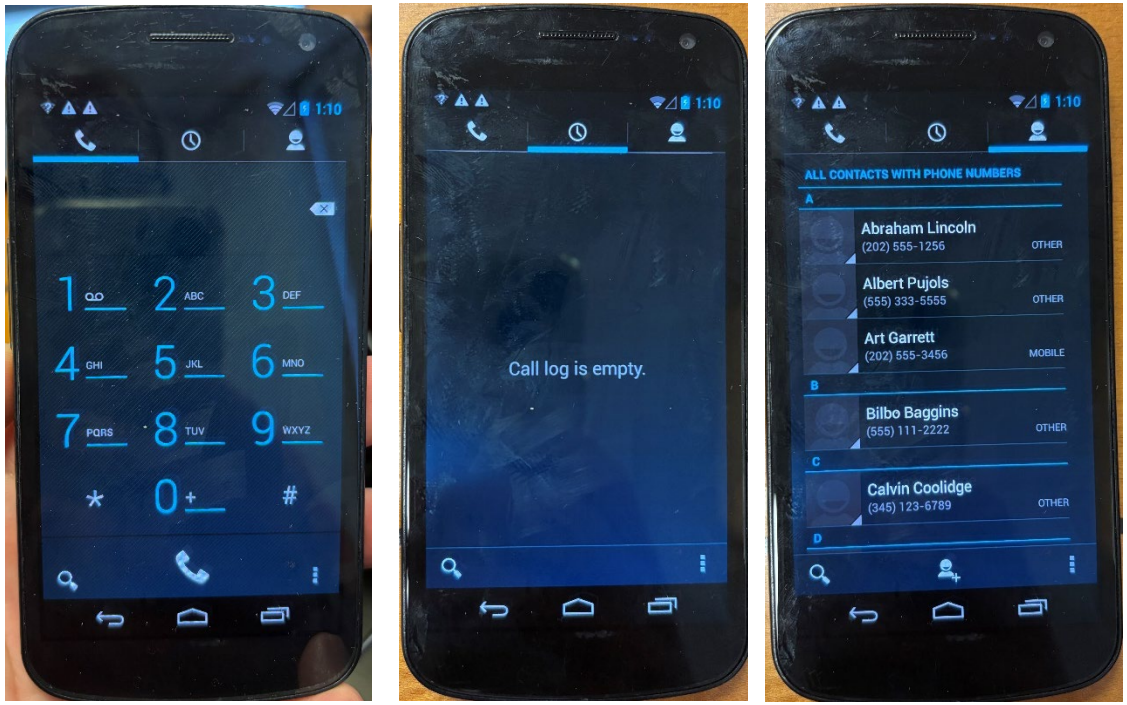
| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[10]** The system of claim 1, wherein at least one of the applications is used for sharing at least one of text, pictures, or videos. | Claim 10 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 10 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos."<br><br>For example, and as discussed above for claims [4, 5], "information" shared from Nexus's voice input application to the first application includes text. *See supra* claims [4, 5]. As another example, Nexus's messaging applications are used for sharing text, pictures, or videos. *See supra*, claim [7]. In addition to the text messaging capabilities of the Messages application discussed in claim [7], the Messages application further includes the ability to attach (and thus share) pictures or videos. As illustrated below (left) the user may select an paperclip icon (  ) at the top of the Messages application interface. Selecting that icon will open an "Attach" menu, which includes options such as "Pictures," "Capture picture," "Videos," and "Capture video," as illustrated below (center). The options for "Pictures" and "Capture picture" allow a user to attach a picture to be shared with a recipient. The options for "Videos" and "Capture video" allow a user to attach a video to be shared with a recipient. As illustrated below (right), the user has selected the "Pictures" option and selected a picture of a rocking chair to be attached to the message. |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Nexus Product (illustrating Messages application with clipboard application). |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[11]** The system of claim 1, wherein said device is a mobile phone. | Claim 11 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 11 are anticipated and/or obvious for the same reasons set out in claim 1. |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | The Nexus is a mobile phone. For example, it includes a Phone application icon (  ) on the Home screen.<br>  <br><br>Nexus (Home screen).<br>Furthermore, selecting the Phone application icon opens a Phone application, which has an interface with a dial pad to enter a phone number and initiate a phone call (below-left), an interface |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | for a call log with a log of recent calls (below-center), and an interface to search for contacts that the user may wish to call (below-right).<br>  <br>Nexus (Phone application). |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[12P]** A method comprising: | To the extent that the preamble is held to be limiting, Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes a "method comprising."<br><br>*See supra*, claim [1P]. |
| **[12A]** assigning a first zone of a touch screen to an interface of a first application; | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "assigning a first zone of a touch screen to an interface of a first application."<br><br>*See supra*, claim [1C]. |
| **[12B]** assigning a second zone of said touch screen to an on-screen keyboard; and | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "assigning a first zone of a touch screen to an interface of a first application."<br><br>*See supra*, claim [1C]. |
| **[12C]** based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen."<br><br>*See supra*, claim [1D]. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| of said second zone of said touch screen and | |
| **[12D]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen. | Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen."<br>*See supra*, claim [1E]. |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[13]** The method of claim 12, comprising using said keyboard with both of said applications. | Claim 13 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 13 are anticipated and/or obvious for the same reasons set out in claim 12.<br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "using said keyboard with both of said applications."<br>*See supra*, claim [3]. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[14]** The method of claim 12, wherein at least one of said applications is one of, a text messaging application and an image sharing application. | Claim 14 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 14 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein at least one of said applications is one of, a text messaging application and an image sharing application."<br><br>*See supra*, claims [7] and [10]. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[15]** The method of claim 12, wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application. | Claim 15 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 15 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>*See supra*, claim [8]. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Further, and as discussed *supra* claim [1D], Nexus discloses using a button or gesture on the keyboard to activate a second application (canvas/handwriting input application). Thus, Nexus (or, alternatively, Nexus as modified in claim [8]) provides that the "search application [is] activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application." |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[16]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard. | Claim 16 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 16 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard."<br><br>*See supra*, claim [9]. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[17]** The method of claim 15, wherein said search application use at least one keyword typed through said | Claim 17 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| keyboard after said search application is activated. | and evidence set out for claims 15 and 12 to show the additional limitations of claim 17 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard after said search application is activated."<br><br>*See supra*, claim [9].<br><br>For example, in Nexus (as well as Nexus as modified in claim [9]), a user interacts with the "second application" after it has been activated and, thus, types in the keyword after the second application has been activated.<br><br>For example, as discussed above in claim [9], in Matthews, the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item. Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match." Matthews at 18:31-51. A POSITA would understand that for the search interface of Matthews to receive the entered text input or search input, the search interface must be active. Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs.<br><br>Thus, Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, including as modified (*see supra*, claims [8] and [9]), and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated," as claimed. |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[18]** The method of claim 12, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen. | Claim 18 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 18 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen."<br><br>*See supra*, claim [4]. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[19]** The method of claim 18, wherein said information includes at least one of a text, an image, a video, a webpage and a URL. | Claim 19 depends from claims 18 and 12. Defendants incorporate all the prior art disclosures from claims 18 and 12 here, which anticipate and/or render claims 18 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 18 and 12 to show the additional limitations of claim 19 are anticipated and/or obvious for the same reasons set out in claims 18 and 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said information includes at least one of a text, an image, a video, a webpage and a URL."<br><br>*See supra*, claim [5]. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[20]** The method of claim 12, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 20 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 20 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>*See supra*, claim [2]. |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[21]** The method of claim 12, wherein said touch screen is integrated within a mobile communication device. | Claim 21 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 21 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Nexus, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said touch screen is integrated within a mobile communication device."<br><br>For example, Nexus integrates a touch screen within a mobile communication device, e.g., a mobile phone, as discussed *supra*, claim [11]. *See supra*, claim [11]. |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Moreover, discussed *supra* claim [11] and claim [1A], Nexus includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, the "electronic device having a touchscreen" and "wherein said device is a mobile phone" *See supra* claims [1A, 11]. A "mobile phone" is an example of a "mobile communication device," such that this limitation is provided for at least the same reasons a mobile phone having a touchscreen is disclosed. In addition, Nexus's Messages application is for sharing text, pictures, and/or videos with other users, as discussed *supra*, claims [7] and [10], making Nexus a mobile communication device for this additional reason. *See supra*, claims [1A], [7], [10], and [11]. |

# Appendix B6

**Exhibit B6**

**Invalidity of Asserted Claims of the '922 Patent**

**in view of Zhuang**

Taiwanese Patent Application Publication No. TW2012484489A1 to Zhuang ("Zhuang"), published on December 1, 2012, qualifies as prior art to U.S. Patent No. 10,976,922 ("'922 patent") at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2), as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (b).[1] Zhuang anticipates or, alone or with other references, renders obvious one or more of asserted claims 1-21 of the '922 patent. To the extent Keyless contends Zhuang does not disclose one or more limitations of the claims, it would have been obvious to combine Zhuang with the knowledge of a person of ordinary skill in the art ("POSITA") and/or with one or more of the following references to render the claims at issue in the '922 patent invalid. The chart below illustrates how the asserted claims of the '922 patent are invalid in view of Zhuang and/or additional secondary references listed below, including but not limited to the prior art identified in Defendant's Invalidity Contentions.

- U.S. Patent Application Publication No. 2012/0113023 to Koch et al. ("Koch"), was filed on March 30, 2011, published on May 10, 2012, and claims priority to Provisional Application No. 61/410,862. Koch qualifies as prior art at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent Application Publication No. 2013/0187861A1 to Lavallee ("Lavallee"), filed on January 19, 2012, and published on July 25, 2013. Lavallee qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0110486A1 to Sirpal et al. ("Sirpal-486"), filed on September 28, 2011, and published on May 3, 2012. Sirpal-486 further claims priority as early as October 1, 2010, through one or more provisional applications identified on its face. Sirpal-486 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Additionally, PCT Publication No. WO2012/044782 (filed on September 29, 2011, and published on April 5, 2012) ("Sirpal-782") and U.S. Patent No. 8,832,577 ("Sirpal-577") (filed September 28, 2011, and issued on September 9, 2014) include equivalent disclosure to Sirpal-486 and qualify as prior art

[1] Keyless Licensing LLC (or "Keyless") alleges that the asserted claims of the '922 patent are entitled to priority as early as February 17, 2013. However, as explained in the cover pleading, the asserted claims of the '922 patent are not entitled to Keyless's claimed priority date due to inadequate written description support. Assuming the claims are not invalid under Section 112 (*see, e.g.*, cover pleading), the earliest possible priority date for the asserted '922 patent claims is December 24, 2013. As a result, the '922 patent is subject to the AIA. The inclusion of any pre-AIA statutes is predicated on Keyless's interpretation of priority, which Defendants disagree with.

at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on any of Sirpal-782 or Sirpal-577 for their disclosures equivalent to Sirpal-486.

- U.S. Provisional Patent Application No. 61/389,000 to Sirpal et al. ("Sirpal-000"), was filed on October 1, 2010, and published at least by May 3, 2012, upon the publication of U.S. Patent Application No. 13/247,801 (as Sirpal-486), which claimed priority to and incorporated by reference Sirpal-000. Sirpal-000 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent Application Pub. No. 2013/0050102 A1 to Wang et al. ("Wang"), was filed November 28, 2011, and published February 28, 2013. Wang qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 7,340,686 to Matthews et al. ("Matthews"), was filed on March 22, 2005, and issued on March 4, 2008. Matthews qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).
- U.S. Patent No. 10,198,163 to Yabuki ("Yabuki"), was filed as Application No. 14/406,377 on December 8, 2014, and issued on February 5, 2019. Yabuki was filed as a national phase application of PCT Application No. PCT/JP2013/065733, which was filed on June 6, 2013, designated the United States, and claimed priority to Japanese Application No. 2012-130755 (filed on June 8, 2012). Yabuki qualifies as prior art at least under 35 U.S.C. § 102(a)(2). Yabuki's PCT Application claims priority to Japanese Application No. 2012-130755 (filed on June 8, 2012), designated the United States, and was published as WO2013/183722 on December 12, 2013, and thus the PCT publication also qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on WO2013/183722 as prior art for the same reasons described below for Yabuki.
- Samsung Galaxy Nexus (SCH-I515) ("Nexus") as discussed in Exhibit B5 to these Invalidity Contentions. Nexus running Android 4.0 (Ice Cream Sandwich), Android 4.1 (Jelly Bean), and Android 4.2 (Jelly Bean) ("Nexus"), was publicly available and/or used in the United States, and was thus available to and known or used by others in the United States, at least as early as November 28, 2012, when updates to Android 4.2.2 were made publicly available, and as early as November 2011 and January 2012, when models designated SCH-I515MSAVZW and SCH-I515ZSAVZW were first released running Android 4.0 (Ice Cream Sandwich), as discussed in Exhibit B5. Thus, the Nexus qualifies as prior art under AIA 35 U.S.C. § 102(a)(1), as well as pre-AIA 35 U.S.C. § 102(a).

With respect to the proposed modifications to Zhuang, such modification would have been obvious to try, an obvious combination of prior art elements according to known methods to yield predictable results, a simple substitution of one known element for another to obtain predictable results, a use of known techniques to improve a similar device or method in the same way, an

application of a known technique to a known device or method ready for improvement to yield predictable results, a variation of a known work in one field of endeavor for use in either the same field or a different one based on design incentives or other market forces with variations that are predictable to a POSITA, and/or obvious in view of teachings, suggestions, and motivations in the prior art that would have led a POSITA to modify or combine the prior art references.

To the extent any of the art describes different embodiments of its inventions, a POSITA would have found it obvious to combine Zhuang's teachings regarding these embodiments. A POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the embodiments, and would have a reasonable expectation of success in doing so, at least because the embodiments use known variations of existing technology to solve routine and well understood problems in predictable ways. A POSITA would have recognized that Zhuang's embodiments describe related advancements for mobile devices, and a POSITA would have been motivated to combine elements of the embodiments to achieve Zhuang's goals.

The excerpts cited herein are exemplary. For any claim limitation, Samsung may rely on excerpts cited for any other limitation and/or additional excerpts not set forth fully herein to the extent necessary to provide further explanation for a reference's disclosure of a limitation. Where an excerpt refers to or discusses a figure or figure items, that figure and any additional descriptions of that figure should be understood to be incorporated by reference as if set forth fully herein. Samsung reserves the right to further supplement this chart.

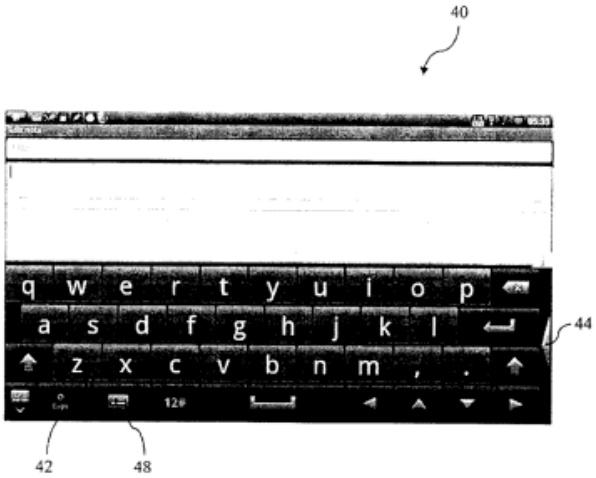
To the extent that these Invalidity Contentions rely on or otherwise embody particular interpretations of terms or phrases in the asserted claims, Samsung is not proposing any such interpretations as proper interpretations or constructions of those terms or phrases. Various positions put forth in this document are predicated on Keyless's interpretation of its claims as evidenced by its Infringement Contentions. Those positions are not intended to and do not necessarily reflect Samsung's interpretation of the true and proper scope of the asserted claims. Samsung further incorporates by reference all reservations of rights set forth in the Invalidity Contentions, as if fully set forth herein.

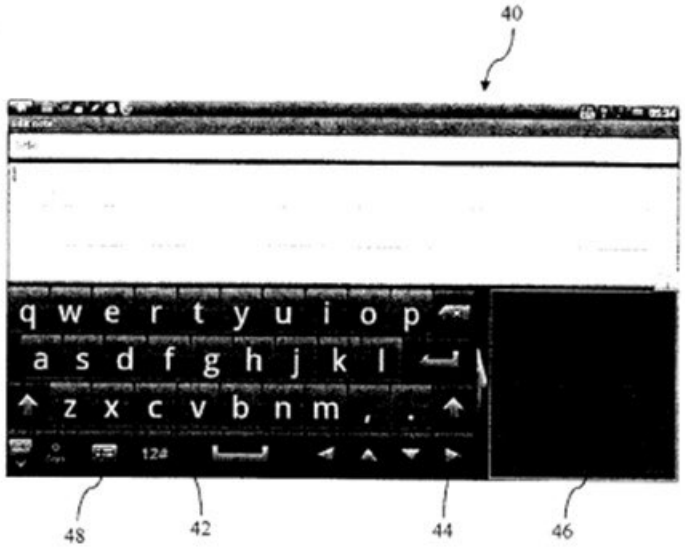
Defendants' arguments throughout these Invalidity Contentions are based on Keyless's apparent interpretation of the claims in its infringement contentions. Defendants do not agree that such interpretation is proper and reserve the right to argue that the mapped actions do not infringe any claims of the '922 patent. In the alternative, should the Court or factfinder construe and/or apply the claims in a manner consistent with Keyless's interpretations in its infringement contentions for the '922 patent, the claims are invalid for at least the reasons set forth herein.

In some instances, the referenced prior art includes priority applications, including prior provisional applications, that provide adequate §112 support for the claim(s) in the referenced prior art. *See, e.g.*, Sirpal-486. In those instances, the consistent disclosures in

those earlier applications, including prior provisional applications, are incorporated herein by reference. As such, those earlier disclosures apply equally in terms of their application to the elements of the asserted claims, and thus provide even earlier dates in terms of prior art, state of the art, and the knowledge base of those of ordinary skill in the art. *See Dynamic Drinkware LLC v. National Graphics Inc*., 800 F.3d 1375 (Fed. Cir. 2015).

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[1P]** A system for using multiple applications on a screen of a device, comprising: | To the extent that the preamble is held to be limiting, Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses a "system for using multiple applications on a screen of a device."<br><br>For example, Zhuang discloses a "smart device software keyboard operating method." Zhuang, Abstract. As Zhuang notes, "[g]iven developments in science and technology, and in order to respond to people's various needs, various functions are continually being added to smart devices to meet such needs. Smart device displays have, in recent years, gone beyond merely having display functionality, and displays with touch control panels now also have data input functions such that people no longer need to input data through an external input device of a smart device, reducing the number of peripheral devices a smart device requires." Zhuang, ¶[0002]. Zhuang describes using a "word processing system" (which is an application) on the screen of the device:<br><br>> In Figures 1 and 2, when a smart device (not shown) is operated in an operating system, such as a word processing system, a display 40 of the smart device displays a software keyboard 42 for the user to edit text (step S20). In Figure 2, the keys of the software keyboard 42 are configured as English character keys corresponding to physical keys, enabling the user to enter English characters and edit English text.<br><br>Zhuang, ¶[0024]. Zhuang's Figure 2, illustrating the use of the keyboard with an application (e.g., "word processing system [application]") is reproduced below. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 2<br>Zhuang, Fig. 2. Thus, Zhuang discloses a system for "using …. applications on a screen of a device."<br><br>Zhuang also notes that "most designs of software keyboards displayed on the displays of smart devices use key configurations similar to those of physical keyboards" and "[i]f the smart device provides a handwriting input function, a handwriting input interface is displayed on the display and used for inputting by handwriting." Zhuang, ¶[0003]. Zhaung discloses that its invention "enables the user to quickly enter text in different languages, and the software keyboard and handwriting input interface are displayed on the display simultaneously such that the user can use two different input interfaces at the same time, providing the user with a more convenient input interface and input method." Zhuang, ¶[0005]. The target of Zhuang's input methods (keyboard and handwriting interface) is one application (Zhuang's "word processing system," illustrated at the top of the screen in the figure below) and the handwriting interface is the interface of a handwriting input application, i.e., a second application (46 on the screen illustrated below). |

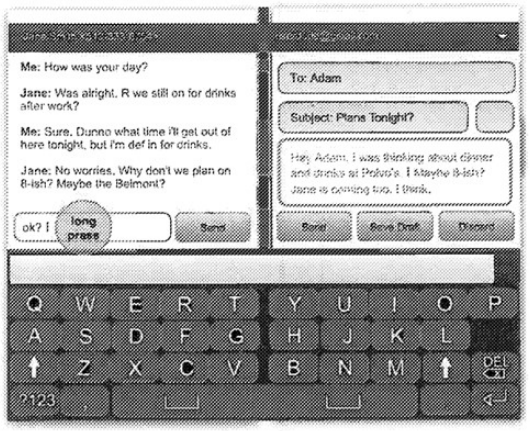
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>FIG. 3<br><br>Zhuang, Fig. 3. Thus, Zhuang discloses using "multiple applications on the screen of the device." Zhuang further illustrates using multiple applications on the screen of the device in Figures 4, 6, and 7. Moreover, as detailed below in claim [1B] ("first application") and [1D] ("second application"), Zhuang's system is for using at least a first application and a second (handwriting input) application whose interface appears on the area previously occupied by the full-size keyboard.<br><br>To the extent Keyless argues that Zhuang does not disclose or render obvious "using multiple applications on a screen of a device," it would have been obvious in view of Zhuang, POSITA's pre-existing knowledge, and/or the teachings of Zhuang combined with the other references charted for this patent in these invalidity contentions, including Koch, Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Koch, Sirpal-486, Sirpal-000, and Lavallee discloses a system for using multiple applications on a screen of a device.<br><br>For example, Koch "relates generally to electronic devices with touch-sensitive surfaces, including but not limited to electronic devices with touch-sensitive surfaces that control a soft keyboard on a display." Koch, ¶[0003]. Koch discloses that such a "device has a touch-sensitive display (also known as a 'touch screen' or 'touch screen display')." Koch, ¶[0008]. Further, Koch describes that a graphical user interface (GUI) on the display may be manipulated to cause the device to perform certain functions:<br><br>> In some embodiments, the device has a graphical user interface (GUI), one or more processors, memory and one or more modules, programs or sets of instructions stored in the memory for performing multiple functions. In some embodiments, the user interacts with the GUI primarily through finger contacts and gestures on the touch-sensitive surface. In some embodiments, the functions may include image editing, drawing, presenting, word processing, website creating, disk authoring, spreadsheet making, game playing, telephoning, video conferencing, e-mailing, instant messaging, workout support, digital photographing, digital videoing, web browsing, digital music playing, and/or digital video playing. Executable instructions for performing these functions may be included in a non-transitory computer readable storage medium or other computer program product configured for execution by one or more processors<br><br>Koch, ¶[0008]. Koch further discloses that the foregoing functions are implemented by applications: |

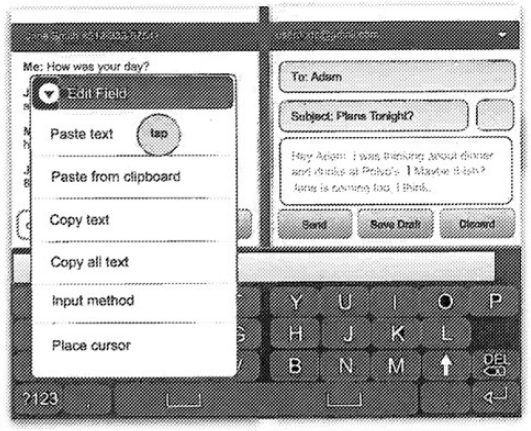
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | > The device typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application.<br><br>> The various applications that may be executed on the device may use at least one common physical user-interface device, such as the touch-sensitive surface. One or more functions of the touch-sensitive surface as well as corresponding information displayed on the device may be adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch-sensitive surface) of the device may support the variety of applications with user interfaces that are intuitive and transparent to the user.<br><br>Koch, ¶[0107]; *see also* Koch ¶¶[0135]-[0153] (listing applications), [0205]-[0227] (describing interface for a menu of applications), Fig. 4A (illustrating interface for a menu of applications). Koch's device includes means to "indicat[e] which applications, if any, are currently active" and "what applications, views or other information occupy various regions of touch screen display 112." Koch, ¶[0112]. Further, Koch describes simultaneously using a "user interface in an [first] application (e.g., a notes application, a web browser application, etc.)" and a "center area 5016-C" appearing between two halves of a keyboard, which is a second application, as discussed in claim [1B] of Exhibit B2 to these Invalidity Contentions, which is incorporated by reference here. Thus, Koch discloses "a system for using multiple applications on a screen of a device." |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As another example, Sirpal-486 describes a "multi-screen user device and a universal clipboard application" with an "intuitive user interface" for copying information from one application on a screen of the device to be pasted into another application on another screen. Sirpal-486, Abstract. Sirpal-486 notes that a "substantial number of handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, ¶[0002]. Sirpal-486 explains that the "small form factor of handheld computing devices requires a careful balancing act between the displayed graphics and the area provided for receiving inputs." Sirpal-486, ¶[0003]. Sirpal-486 discloses that a mobile device's "applications 564 can be any higher level software that executes particular functionality for the user." Sirpal-486, ¶[0125]. "Applications 564 can include programs such as email clients, web browsers, texting applications, games, media players, office suites, etc." *Id.* Sirpal-486 further discloses that the mobile device may have "word-processing applications, email applications, web-browsing applications, spreadsheet applications, media player applications, data sharing applications, file-navigation applications, operating systems, etc." Sirpal-486, ¶[0162]. Sirpal-486 also discloses that its device "can be a communications device, such as a cellular telephone or other smart device," and that the device can accordingly have "a telephone application." Sirpal-486, ¶¶[0068], [0075]. Thus, Sirpal-486 discloses "a system for using multiple applications on a screen of a device."<br><br>Sirpal-486 further incorporates by reference the entirety of Sirpal-000, which provides additional information relating to Sirpal-486's applications, including, e.g., Sirpal-486's messaging application. *See* Sirpal-486, ¶[0001].<br><br>Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. As one example, Sirpal-000 illustrates using an Email application on the screen of the device. Sirpal-000 at 120-123. As another example, Sirpal-000 illustrates using a Contacts application on the screen of the device. Sirpal-000 at 124-127. As another example, Sirpal-000 illustrates using a Calendar application on the screen of the device. Sirpal-000 at 135-137. As another example, Sirpal-000 illustrates using an Internet Browser application on the screen of the device. Sirpal-000 at 141-142. In yet another example, Sirpal-000 illustrates a text messaging application next to an email application, as shown below: |

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User presses and holds the text message compose field.



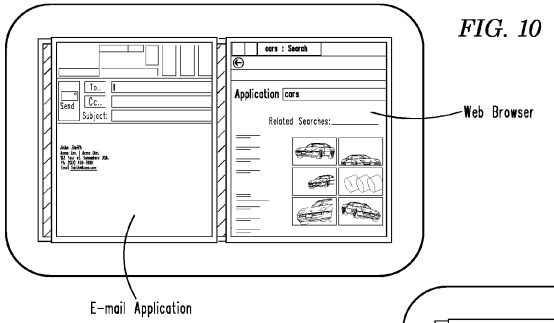
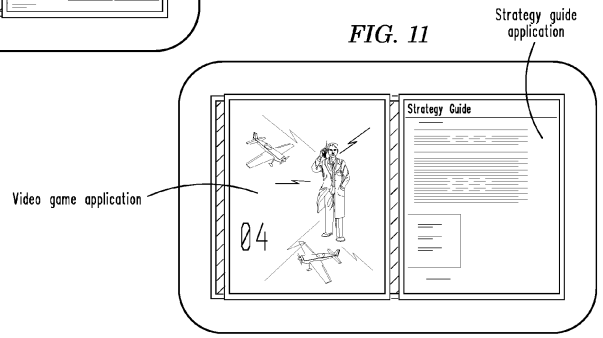

A menu is displayed with two options for pasting. 'Paste text' would paste the last copied item at the current cursor position. 'Paste from clipboard' displays the Universal Clipboard, from which the user could paste the just copied text, in addition to other items in the Clipboard. There is also an option for the user to place the cursor in a different position in the field. The user taps 'Paste Text'.

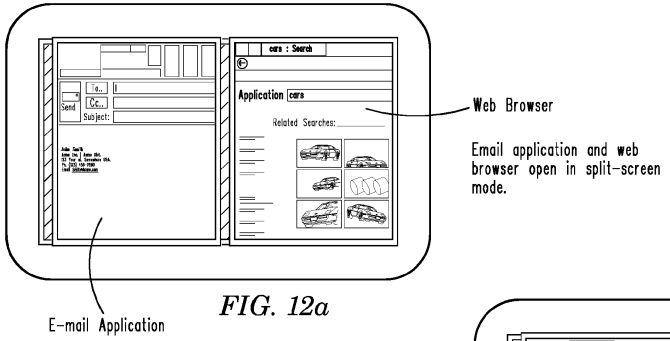
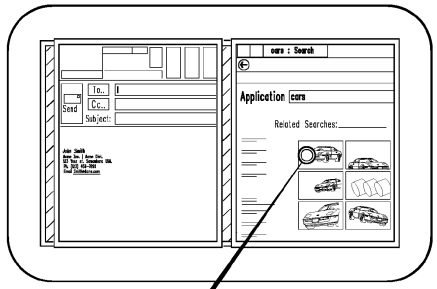
Sirpal-000 at 180-182. As Sirpal-000 explains, the text messaging application has a "text message compose field" into which text may be inserted. Sirpal-000 at 180. Thus, a POSITA would understand Sirpal-000 to disclose a "system for using multiple applications on a screen of a device."

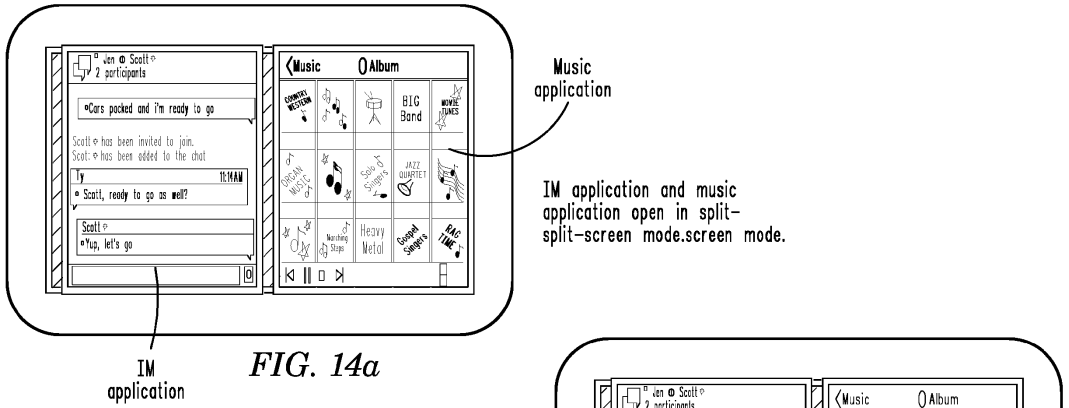
As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee discloses several examples of an electronic device:

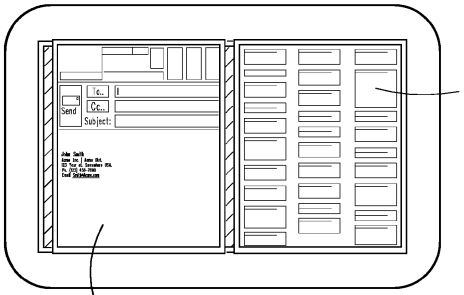
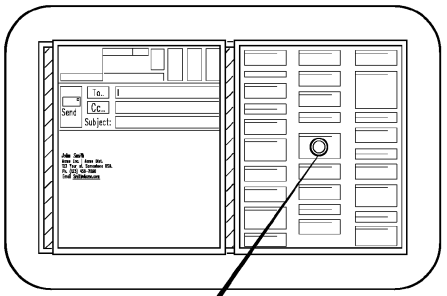
> Examples of such electronic devices include mobile phones, cellular phones, smart phones, personal digital assistants (PDAs), digital cameras, wireless organizers, wirelessly enabled notebook computers, tablet computing devices, handheld electronic gaming devices, digital photograph albums, and the like. Electronic device 100 has a touch screen 110 for

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| | displaying information, and may also have a keyboard 120 for entering information such as composing email messages, and a pointing device 130 such as a trackball, track wheel, touchpad, and the like, for navigating through items on screen 110. Navigation keys 140 and 150 may be used for navigating content. In some examples, display 110 is a touch screen and the plurality of keys and/or keyboard are soft keys or icons displayed on display 110 and actuated by a human finger or a stylus.<br><br>Lavallee, ¶[0021]. As Lavallee notes, the electronic device may run applications such as "personal information management application; communications applications such as Instant Messaging (IM), presentation and email applications; messaging applications; video game applications; web browser applications; photo applications; address applications; music applications; and the like." Lavallee, ¶[0028]. The applications "may be running on an electronic device hav[ing] a touch screen with a viewable area." Lavallee, ¶[0043].<br><br>Lavallee specifically illustrates its device using multiple applications on the screen simultaneously. For example, "FIGS. 10 and 11, illustrate representative examples of running applications that have been maximized and displayed in their respective split screen mode viewing areas in the split screen mode after the combined group representation in which they are represented has been selected. In FIG. 10, a user of an electronic device with a touch screen is composing an email. Two maximized and displayed running applications are shown: an email application in the left split screen mode viewing area and a web browser application in the right split screen mode viewing area. The split screen mode is used to get content for their email using the web browser. In FIG. 11, a user is playing a video game. Two maximized and displayed running applications are shown: a video game application in the left split screen mode viewing area and a strategy guide application in the right split screen mode viewing area. The split screen mode is used to read the strategy guide for the game while the user is actually playing the video game displayed in the left split screen mode viewing area." Lavallee, ¶[0057]. |

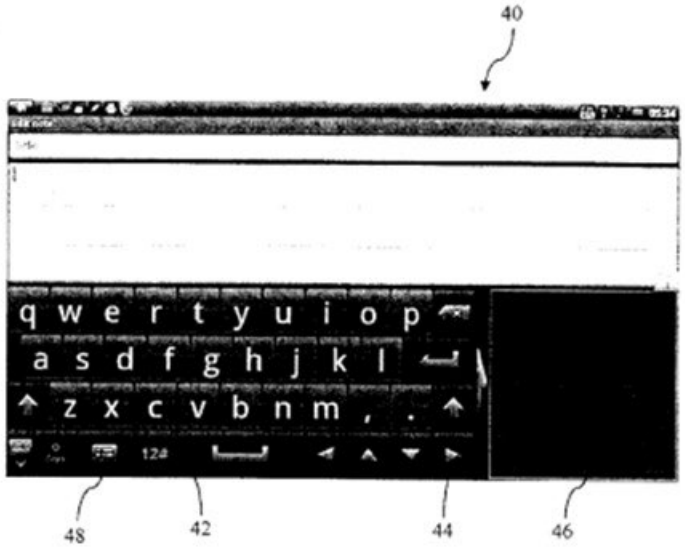
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>*FIG. 10*<br>  <br>*FIG. 11*<br>Lavallee, Figs. 10-11.<br>Lavallee further illustrates using an "E-mail Application" and a "Web Browser" application simultaneously on the device's screen, as illustrated below in Figs. 12a-12b. Lavallee, ¶¶[0060]. |

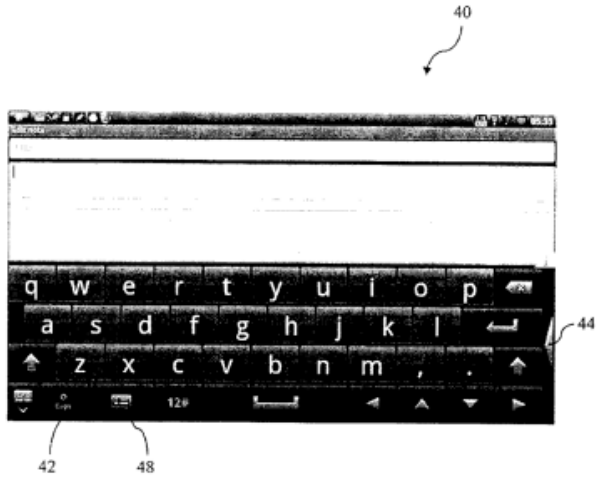
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| |  <br>*FIG. 12a*<br>  <br>*FIG. 12b*<br>Lavallee, Figs. 12a-12b.<br>Lavallee also illustrates using an "IM [Instant Messaging] Application" and a "Music Application" simultaneously on the device's screen, as illustrated below in Figs. 14a-14b. Lavallee, ¶¶[0063]. |

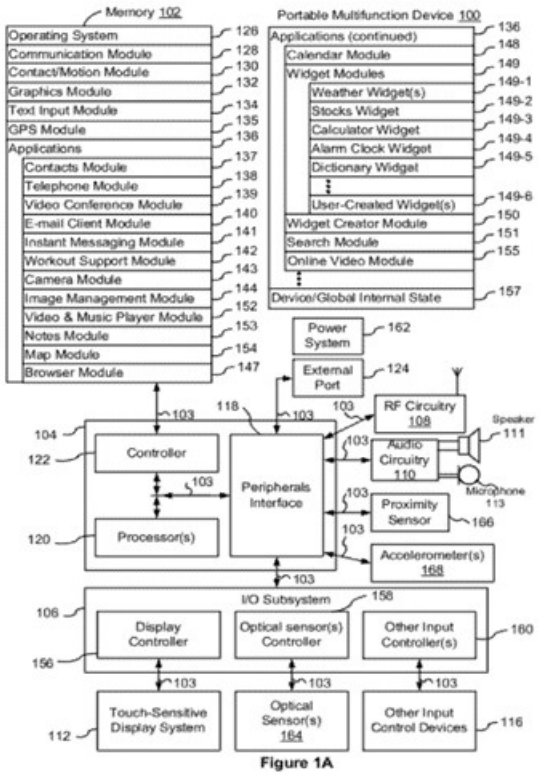
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>*FIG. 14a*<br>*FIG. 14b*<br>Lavallee, Figs. 14a-14b.<br>Lavallee also illustrates using an "E-Mail Application" and an "Address book application" simultaneously on the device's screen, as illustrated below in Figs. 15a-15b. Lavallee, ¶¶[0065]. |

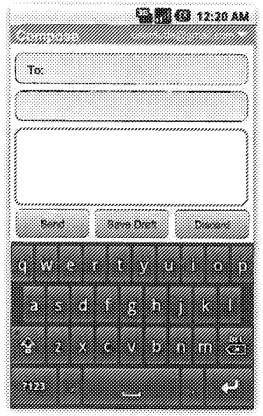
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>*FIG. 15a*<br>  <br>*FIG. 15b*<br>Lavallee, Figs. 15a-15b.<br>A POSITA would have found it obvious to incorporate a "system for using multiple applications on a screen of a device," as claimed. The feature would have been obvious over Zhuang alone, because it was well understood that the very purpose of a "smart device" with a touch screen, such as Zhuang's, was "for using multiple applications on a screen of a device." In addition, each of Koch, Sirpal-486, Sirpal-000, and Lavallee teaches a system for using multiple applications on a screen of a device. A POSITA would have been motivated to combine such feature(s) with the disclosure of Zhuang, as an obvious and intuitive implementation of Zhuang's smart device, and the combination would yield a "system for using multiple applications on a screen of a device." Moreover, a POSITA would recognize the feature of using applications on the screen of the device to be an advantageous and important (and perhaps even necessary) way to make Zhuang useful and for the input systems disclosed by Zhuang to have something to input *to*. Using multiple applications on the screen of a device was routine and conventional to a POSITA, as shown by Koch, Sirpal-486, |

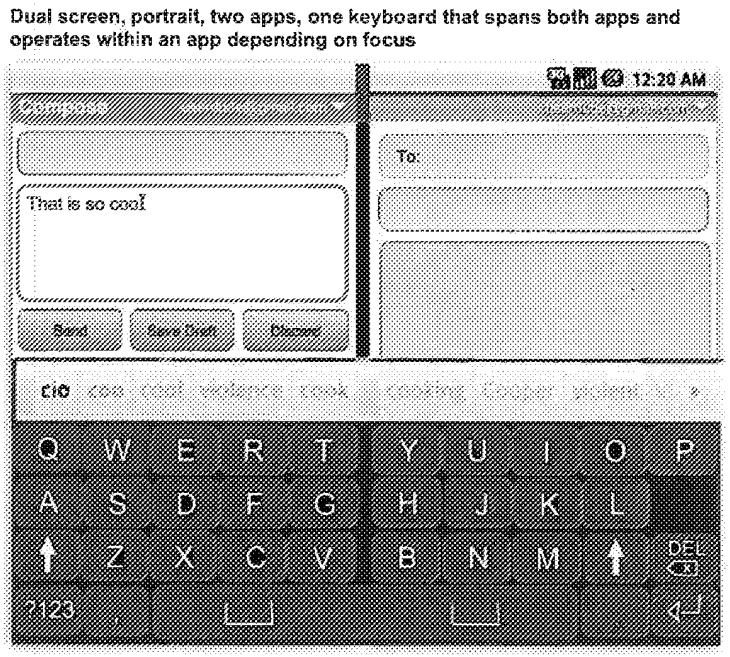
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-000, and Lavallee. Incorporating the feature into Zhuang's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Zhuang, represent nothing more than combining prior art elements according to known methods and techniques (allocating system resources to interacted application(s)) to a mobile electronic touch screen device to yield predictable results (directing system resources to an active/interacted application). |
| **[1A]** an electronic device having a touchscreen; | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an electronic device having a touchscreen."<br><br>For example, Zhuang "relates to a smart device operating method, … a smart device software keyboard operating method, a computer-readable recording medium, and a computer program product," all of which necessarily are implemented on an "electronic device." Zhuang, ¶[0001]. Zhuang further discloses that it relates to devices with "touch control panels." Zhuang, ¶¶[0002]-[0003]. And Zhuang's "smart device has a touch control panel display." Zhuang, ¶[0006]. The touch panel display is illustrated, for example, in Figure 3. Zhuang, ¶[0026] ("display 40 having a touch control panel"). |

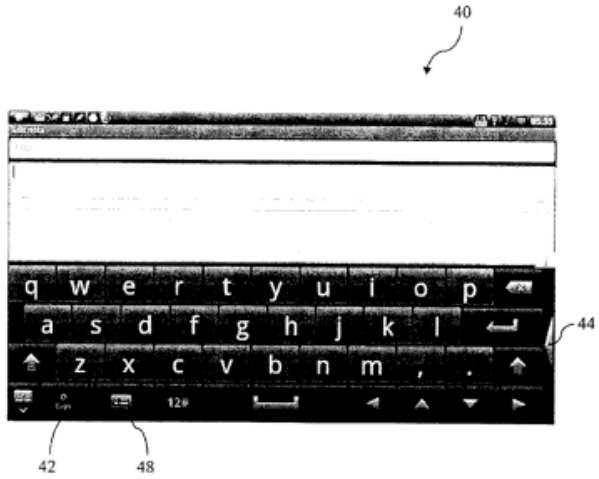
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 3<br><br>Zhuang, Fig. 3. Zhuang's "touch control panel" is a touchscreen. Therefore, Zhuang discloses "an electronic device having a touchscreen." |
| **[1B]** an on-screen keyboard for entering text in a first application running within said device | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an on-screen keyboard for entering text in a first application running within said device."<br><br>For example, Zhuang provides "smart device software keyboard operating method." Zhuang, Abstract. "The software keyboard uses a letter/number mode [and] the software keyboard is used for inputting letters and numbers by keystroke." Zhuang, ¶[0022]. As described in Zhuang and |

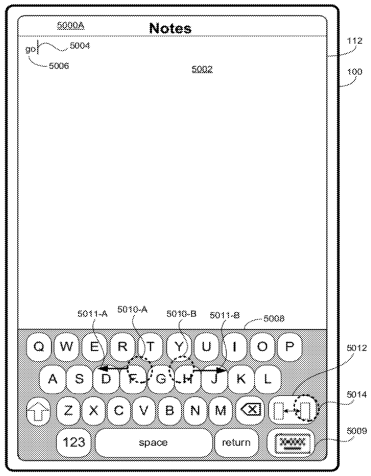
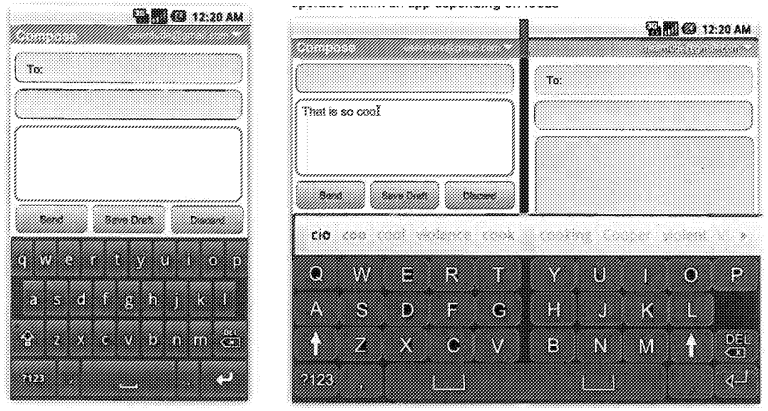
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | illustrated in Figure 2 below, the on-screen keyboard is used for entering text in a "word processing system" (i.e., word-processing application) running within the device. Zhuang, ¶[0024].<br>  <br><br>FIG. 2<br>Zhuang, Fig. 2. Thus, Zhuang discloses "an on-screen keyboard for entering text in a first application running within said device."<br>Moreover, in the obvious combination of Zhuang with one or more of Koch, Sirpal-486, Sirpal-000, and Lavallee (discussed above in 1[PRE]), Zhuang's device would be used with any of the applications described in the secondary applications, and Zhuang's input method would be used to input text into any of those applications. Thus, the combination would yield an "on-screen keyboard for entering text in a first application running within said device."<br>For example, in one embodiment of Koch, a first application has "user interface (UI) 5000A," which "may be a user interface in an application (e.g., a notes application, a web browser application, etc.) on device 100" and "includes text entry area 5002." Koch, ¶[0231]. Koch further provides an "[u]nsplit soft keyboard 5008 … displayed on display 112." Koch, ¶[0232]. Koch's keyboard 5008 is an on-screen keyboard for entering text in the first application running within the device, as implemented via a "text input module 134." As Koch explains, "text input module 134" |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, browser 147, and any other application that needs text input)." Koch, ¶[0133].<br><br>In Figure 1A, below, Koch illustrates a "block diagram illustrating portable multifunction device 100 with touch-sensitive displays 112 in accordance with some embodiments." Koch, ¶[0109]. As illustrated, "the software components stored in memory 102 include … text input module (or set of instructions) 134." Koch, ¶[0126]. "Text input module 134" "provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, browser 147, and any other application that needs text input)." Koch, ¶[0133].<br><br>  <br>Figure 1A |

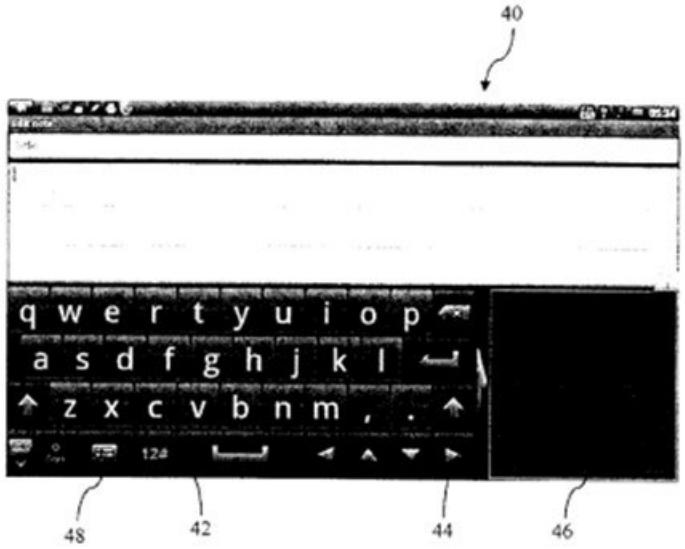
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Koch at Fig. 1A.<br><br>Koch also describes exemplary embodiments wherein "[i]n conjunction" with "touch screen 112," and "text input module 134," applications are used to implement functionalities including telephone, contacts, videoconferencing, e-mail, instant messaging, SMS, "captur[ing] still images or video," "brows[ing] the Internet," calendars, various "mini-applications," "search module 151 [that] includes executable instructions to search for text, music, sound, image, video, and/or other files in memory," music playback, notes, maps, etc.). Koch, ¶¶[0154]-[0170]. Thus, in Koch, the keyboard is used for entering text into applications.<br><br>As another example, Sirpal-000 (which is also incorporated by Sirpal-486) discloses that an on-screen keyboard is used for entering text into applications including "Email" and "SMS," because its keyboard can be adapted to fit the context of each of those applications. Sirpal-000 at 146. Sirpal-000 further illustrates that an on-screen keyboard can be used to enter text into a "field" of an application, which is depicted as an email application:<br><br>  <br><br>In this model, the user has tapped a field, which has invoked the keyboard. This is the standard Android keyboard today.<br><br>Sirpal-000 at 146. Sirpal-000 further discloses that a user may select which application field will receive text input by touching that field. *Id.* ("[T]he user has placed focus in the composer on the left. Therefore typing on the keyboard will input in the field on the left.") |

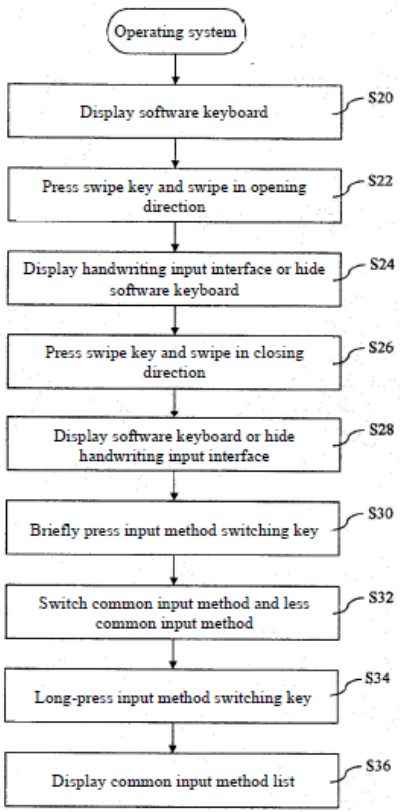
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>*Id.*; *see also id.* at 148 (depicting use of keyboard to enter text into applications in different orientations). Thus, in Sirpal-000 (and Sirpal-486 by incorporation), the keyboard is used for entering text into applications.<br>As another example, Lavallee discloses that a device's "keyboard 120 [is] for entering information such as composing email messages." Lavallee, ¶[0021]. Thus, in Lavallee, the keyboard is used for entering text into applications. |
| **[1C]** wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein a first zone of said |

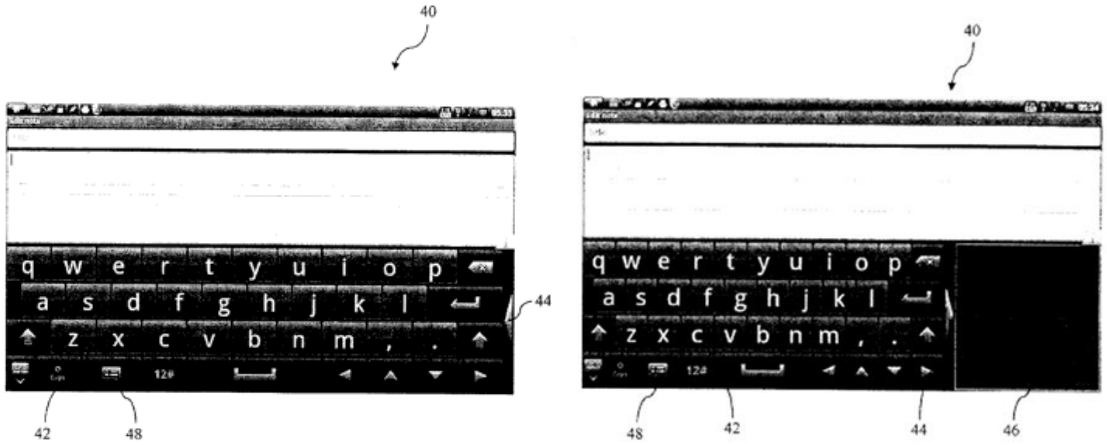
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| of said touchscreen is assigned to said keyboard; and | touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard."<br><br>For example, as discussed and illustrated above in claim [1B], Zhuang's "first application" (e.g., "word processing system") appears in a "first zone" (e.g., upper portion) of the touchscreen of Figure 2, while Zhuang's keyboard appears in a "second zone" (e.g., lower portion).<br><br>  <br><br>FIG. 2<br><br>Zhuang, Fig. 2.<br><br>In addition, each of Koch and Sirpal-000 (as well as Sirpal-486, by incorporation) depicts the same arrangement of components; therefore, the feature would have been obvious based on the combination as well. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 5A<br>Koch, Fig. 5A.<br>  <br>Sirpal-000 at 147. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[1D]** wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone, and | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br><br>For example, Zhuang discloses that "[t]he software keyboard 42 has a swipe key 44. When the user wants to use the handwriting input interface to input text, the user presses the location of the swipe key 44 of the software keyboard 42 on the display 40 and swipes on the display 40 in an opening direction (from right to left in Figure 2). The user presses and swipes the swipe key 44 on the display 40 having a touch control panel, causing the display 40 to generate an opening signal and transmit same to the smart device (step S22)." Zhuang, ¶[0025]. "In accordance with the opening signal, the smart device displays the software keyboard 42 and the handwriting input interface 46 side by side on the display 40; Figure 3 is a schematic diagram of the present invention showing the display displaying, side by side, the software keyboard for English characters and the handwriting input interface. Thus the user can use keystroke input and handwriting input simultaneously to edit text on the display 40 having a touch control panel." Zhuang, ¶[0026], Fig. 3. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 3<br>Zhuang, Fig. 3.<br>In Zhuang, "press[ing] and swip[ing] the swipe key 44 on the display 40 having a touch control panel" is "accomplishment of a condition under the control of said keyboard." *See* Zhuang, ¶[0025]. Based on accomplishment of that condition, "the smart device displays the software keyboard 42 and the handwriting input interface 46 side by side on the display 40." *See* Zhuang, ¶[0026]. Zhuang's handwriting input application is "a second application," and the handwriting input interface 46 is "an interface of the second application." Further, as illustrated in Figure 3, a "reduced interface corresponding to said keyboard" and the handwriting input interface 46 are both displayed on the same zone "second zone" where the original keyboard first appeared (compare with Fig. 2). Accordingly, Zhuang discloses "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an |

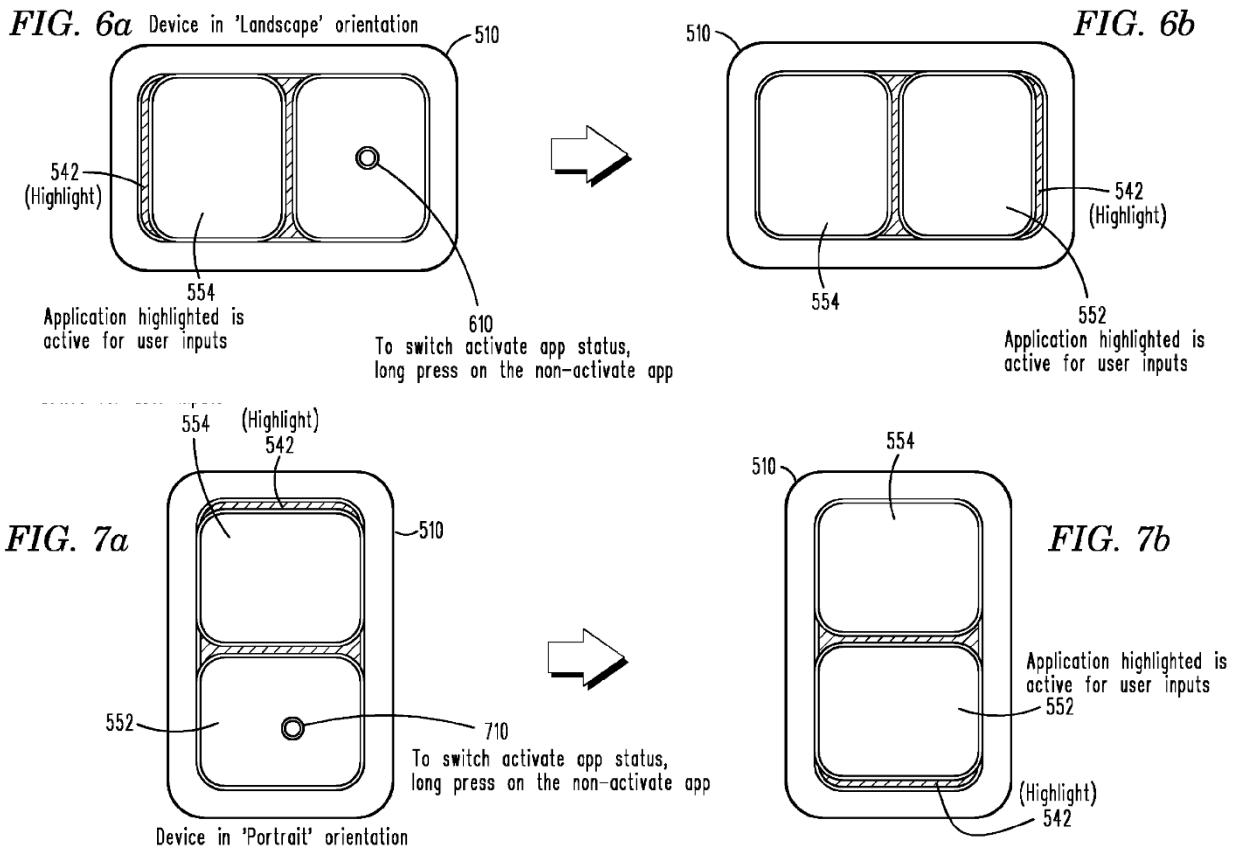
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br><br>Additional exemplary citations include:<br><br>  <br><br><br>Zhuang, Fig. 1 (illustrating steps of Zhuang's method). |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[1E]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen. | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen."<br><br>For example, Zhuang illustrates all of the "interface of said first application" (e.g., the exemplary word processing system), the "interface of said second application" (e.g., the handwriting input application), and "the reduced interface corresponding to said keyboard" (e.g., the reduced-size keyboard) being "simultaneously displayed on said touchscreen," as illustrated in the comparison between Fig. 2 and Fig. 3 below.<br><br>  <br><br>FIG. 2 FIG. 3<br><br>Zhuang, Figs. 2-3. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[2]** The system of claim 1, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 2 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 2 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>For example, in the example shown in connection with claim 1, interacting with the interface of the "first" application causes the focus of the system to be given to the "first" application, and interacting with the interface of the "second" application causes the focus to be given to the "second" application. The focus can shift back and forth between the applications.<br><br>A POSITA would recognize that a user would interact with an interface of an application (e.g., by touching a portion of the touch screen corresponding to the first application's GUI) in order to cause an action within or response by the application. A POSITA would further understand that such an interaction causes the focus of the system (e.g., the focus of the input method) to be given to the first application. Thus, Zhuang provides "wherein upon interacting with the interface of any of said applications," e.g., including the first application, "the focus of the system is given to the interacted application."<br><br>To the extent Keyless argues that Zhuang does not disclose or render obvious "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application," it would have been obvious in view of Zhuang, POSITA's pre-existing knowledge, and/or the teachings of Zhuang combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Sirpal-486, Sirpal-000 and Lavallee teach wherein upon interacting with the interface of any of several applications, the focus of the system is given to the interacted application.<br><br>For example, Sirpal-486 describes a "multi-screen user device and a universal clipboard application" with an "intuitive user interface" for copying information from one application on a screen of the device to be pasted into another application on another screen. Sirpal-486, Abstract. Sirpal-486 notes that a "substantial number of handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, ¶[0002]. *Sirpal* explains that the "small form factor of handheld computing devices requires a careful balancing act between the displayed graphics and the area provided for receiving inputs." Sirpal-486, ¶[0003].<br><br>Additional information about Sirpal-486's system for switching focus between applications appears in Sirpal-000, which Sirpal-486 incorporates by reference. For example, Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147.<br><br>  |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-000 at 147.<br><br>According to Sirpal-000, as illustrated above, "[i]n this model, the user has the device open to display dual screens. On each screen is displayed an application. The keyboard spans across both screens. As shown by the highlight around the entry field in the compose view on the left and the colored title bar, the user has placed focus in the composer on the left. Therefore typing on the keyboard will input in the field on the left. The user can tap the right screen to move the focus to that screen. If the user taps a field, that field will get the focus and the title bar will change to orange. The right screen will compress and the action bar will appear. The focus state and title in the left will return to the off state; however, the action bar will remain. This allows the user to tap back and forth to enter text in both screens in a seamless fashion." Sirpal-000 at 147.<br><br>As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee states that "FIGS. 6a-6b and 7a-7b illustrate switching the active running application, in accordance with various aspects of the present disclosure," as illustrated below. Lavallee, ¶[0010]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>"Referring now to FIGS. 6 a-b and 7 a-b, it can be seen that the active application displayed in the split screen mode can be changed or switched. The active application refers to the application of the maximized, running applications displayed in the split screen mode that is capable of accepting inputs, such as from a user providing inputs via the touch screen 520 of the device 510 or via peripherals, such as a keyboard, mouse, etc., that may be coupled to device 510. Once the two or more running applications are open and simultaneously displayed, one application is designated as |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | active to accept user inputs. Selection of one of the other running, inactive applications, such as by a long press inside the inactive application, will activate that application and cause it to be the active application. In FIG. 6 a, mobile device 510 is shown in landscape orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in portrait orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 610 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 6 b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed. Thus, switching active control of the two or more running applications from a previous running application as the active application to a new running application as the active application can be accomplished. It has been shown that this switching active control may be accomplished by selecting the new running application to be active via the touch screen. Moreover, the previous running application can be the active application that was designated as active upon creating the combined group representation. In the example of FIGS. 5 a-5 d, application 554 was the initial active application so designated upon forming the combined group icon 530." Lavallee, ¶[0051].<br><br>"In FIG. 7 a, mobile device 510 is shown in portrait orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in landscape orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 710 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 7 b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed." Lavallee, ¶[0052].<br><br>Lavallee discloses several use cases for its application-switching system, in which the focus is switched between applications by interacting with their respective interface(s). For example, "FIGS. 10 and 11, illustrate representative examples of running applications that have been maximized and displayed in their respective split screen mode viewing areas in the split screen |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | mode after the combined group representation in which they are represented has been selected. In FIG. 10, a user of an electronic device with a touch screen is composing an email. Two maximized and displayed running applications are shown: an email application in the left split screen mode viewing area and a web browser application in the right split screen mode viewing area. The split screen mode is used to get content for their email using the web browser. In FIG. 11, a user is playing a video game. Two maximized and displayed running applications are shown: a video game application in the left split screen mode viewing area and a strategy guide application in the right split screen mode viewing area. The split screen mode is used to read the strategy guide for the game while the user is actually playing the video game displayed in the left split screen mode viewing area." Lavallee, ¶[0057].<br><br>As another example, Lavallee describes "various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059]; *see also* Lavallee, ¶[0060]-[0065] *and* Figs. 12a-15d. For example, Lavallee describes "an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area," such that a user "is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body." Lavallee, ¶[0060]. "Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060]. "It is noted that in the "copy and paste" function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage." Lavallee, ¶[0062].<br><br>By way of further examples, Lavallee discloses: |

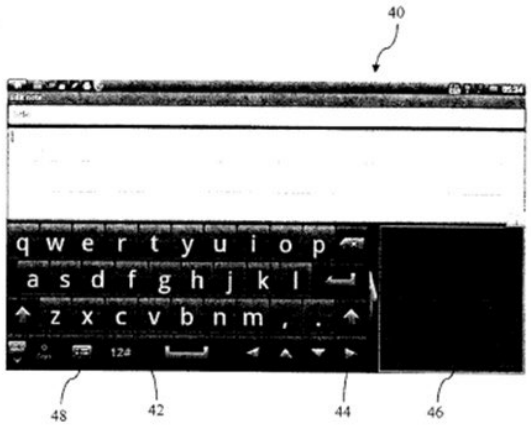
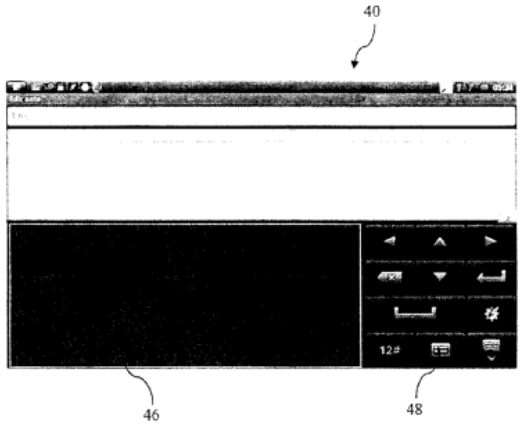
| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | • "an 'insert' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application" (Lavallee, ¶[0061], Figs. 13a-13d);<br>• "an 'attach file' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments," suitable for applications that "include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc." Lavallee, ¶[0061], Figs. 14a-14d);<br>• "an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application." Lavallee, ¶[0061], Figs. 15a-15d).<br>Additional exemplary disclosures of Lavallee include:<br>• "Optionally, active control of the displayed running applications in the split screen mode may be switched at Block 1750 if desired. While the application on top of the combined group representation stack may initially be active and highlighted to signify its status as the active application, this active control can be changed at any time desired, by the user selecting another application of the displayed applications to be active." Lavallee, ¶[0069].<br>• "8. The method of claim 1, wherein one running application is active and capable of receiving user inputs via the touch screen, the method further comprising: switching active control of the two or more running applications from a previous running application as active application to another running application of the two or more running applications as the active application." Lavallee at claim 8. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | • "23. The device of claim 18, wherein one running application is active and capable of receiving user inputs via the touch screen and the processor and the memory are further configured to switch active control of the two or more running applications from a previous running application as the active application to another running application of the two or more running applications as the active application." Lavallee at claim 23.<br><br>A POSITA would have found it obvious to incorporate "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application," as claimed. Each of Sirpal-486, Sirpal-000 and Lavallee teaches wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Zhuang, as an obvious and intuitive way to allocate system resources and/or direct keyboard inputs to any of the first and second applications of Zhuang. Moreover, a POSITA would recognize the focus-switching features to be an advantageous and important (and perhaps even necessary) way to achieve the multi-application/multi-mode functionalities described in Zhuang. Interacting with one of several active applications to direct system focus to the interacted application was routine and conventional to a POSITA, as shown by Sirpal-486, Sirpal-000, and Lavallee. Incorporating the feature into Zhuang's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Zhuang, represent nothing more than combining prior art elements according to known methods and techniques (allocating system resources to interacted application(s)) to a mobile electronic touch screen device to yield predictable results (directing system resources to an active/interacted application). |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[3]** The system of claim 1, wherein said keyboard is used with both of said applications. | Claim 3 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 3 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said keyboard is used with both of said applications."<br><br>For example, as discussed in claim [1B], the keyboard is used with the first application.<br><br>As another example, as discussed in claim [1D], gestures on the keyboard swipe key (44) are used to activate the handwriting input application and, thus, are used with the handwriting input application. Additionally, in Zhuang, the swipe key (44) also is used to close the handwriting input application and, accordingly, is "used with" the handwriting application for that additional reason. Zhuang, ¶[0030]. |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[4]** The system of claim 1, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are | Claim 4 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 4 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein an information received from one of said applications is shared with at least the other application while said |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| simultaneously displayed on said touchscreen. | interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen."<br><br>For example, Zhuang discloses sharing information received from a second application with a first application while the interface of both applications are simultaneously displayed on the touchscreen. For example, Zhuang discloses:<br><br>> The software keyboard uses a letter/number mode and the handwriting input interface uses a Chinese mode. Therefore, the software keyboard is used for inputting letters and numbers by keystroke and the handwriting input interface is used for inputting Chinese characters by handwriting. Thus it is convenient for the user to quickly input characters and numbers in different input interfaces in accordance with different usage habits. The software keyboard and handwriting input interface can be displayed on the display at the same time, and each can also be quickly opened or hidden, depending entirely on the needs of the user.<br><br>Zhuang, ¶[0022]. "Thus, the user can use keystroke input and handwriting input simultaneously to edit text on the display 40 having a touch control panel." Zhuang, ¶[0026], ¶[0029] (same); *see also* ¶[0027] (describing Figure 4, and noting that "the user then performs text editing by handwriting input on the display 40 having a touch control panel. The user may set the handwriting input interface 46 to have the function of recognizing multiple types of characters or the function of recognizing a specified single type of character"). Information received by the handwriting input application (i.e., gestures indicating characters) is shared with the first application (e.g., word processing system) while both applications are simultaneously displayed on the touchscreen as illustrated below in Figures 3 and 4. |

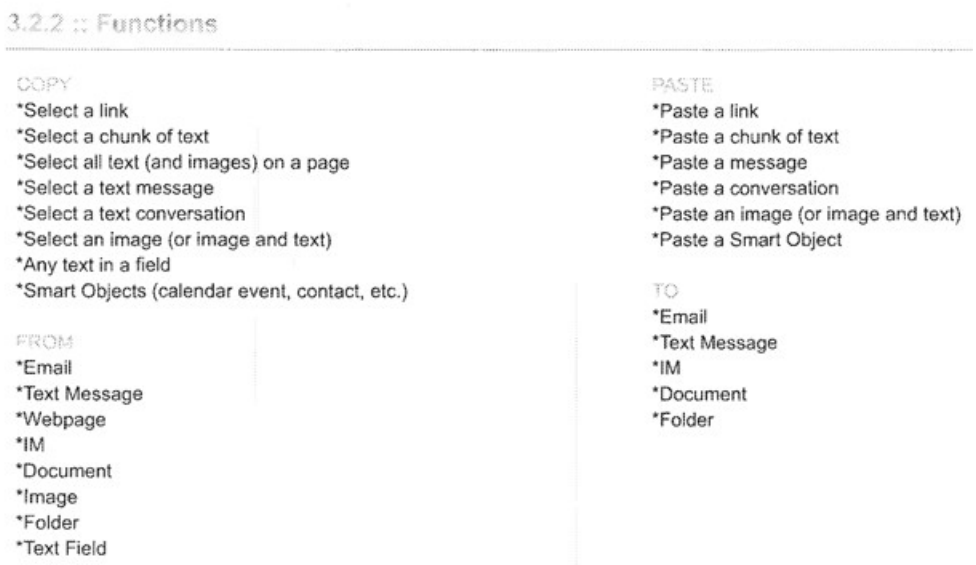
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 3<br>  <br>FIG. 4<br>Zhuang, Figs. 3-4. Using the handwriting input application area (46) above, a user may draw a character to enter into the relevant application. *See* Zhuang, ¶¶[0021] ("If the user, when using keystroke input, encounters a character they do not know how to input using keystrokes, they can use the handwriting input interface to input it by means of handwriting."), [0022] ("the handwriting input interface is used for inputting Chinese characters by handwriting"), [0027] ("At the position of the handwriting input interface 46 in Figures 3 and 4, the user then performs text editing by handwriting input on the display 40 having a touch control panel. The user may set the handwriting input interface 46 to have the function of recognizing multiple types of characters or the function of recognizing a specified single type of character"). |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[5]** The system of claim 4, wherein said information | Claim 5 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| includes at least one of, a text, an image, a video, a webpage and a URL. | the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 5 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL."<br><br>For example, and as discussed above in claim [4], the "information" shared from Zhuang's handwriting input application to the first application includes characters drawn by the user, which are "a text" or a drawing (which is "an image"). *See supra* claim [4]. Thus, Zhuang provides "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL," as required by the claim. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[6]** The system of claim 4, wherein said information is copied from one of said applications and pasted in the other application. | Claim 6 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 6 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information is copied from one of said applications and pasted in the other application."<br><br>To the extent Keyless argues that Zhuang does not disclose or render obvious "wherein said information is copied from one of said applications and pasted in the other application," it would have been obvious in view of Zhuang, POSITA's pre-existing knowledge, and/or the teachings of |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Zhuang combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000 and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000 and Lavallee teaches wherein said information is copied from one application and pasted in another application.<br><br>For example, Sirpal-486 states that "[m]ost single or dual-screen devices will allow a user to copy content from one location to another," and suggests that its "universal clipboard" offers improvements upon that known feature. Sirpal-486, ¶¶[0168]-[0169]. Sirpal-486 further incorporates by reference Sirpal-000, which provides additional detail and illustration of the functionality of "Copy & Paste Text, Links[,] and Universal Clipboard." Sirpal-000, 152-82.<br><br>As discussed above for claim [2], Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. *See also supra* claim [2]. Sirpal-000 further provides functionality of "Copy & Paste Text, Links and Universal Clipboard." Sirpal-000 at 152-182. As Sirpal-000 explains:<br><br>> In the current Android model, users can copy and paste the contents of a text message from one app to another via press and hold to get a copy paste menu. In the current Android model, users can copy and paste a URL from any application to another via press and hold to get a copy/paste menu. *In the current Android model, users select text in a text field via press and hold, which invokes a contextual menu allowing users to put the field in 'select' mode, touching and dragging a chunk of text, then press and hold again to take field out of 'select' mode, which then copies the selected text. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | *In the current Android model, users can copy/paste plain text via invoking a contextual menu, putting the device into 'select' mode, and touching and dragging a chunk of text, then press and hold to paste the text into another app. We want to normalize the methods of copy/paste in the dual screen model, as well as to allow more efficient copy via drag and drop, direct manipulation, and better cursor placement and text selection, all while still allowing for the retention of the current Android pattern of copy and paste via menus as additional methods of performing these functinos.<br><br>Sirpal-000 at 153.<br><br>Sirpal-000 provides that any number of items may be copied from and pasted to any number of applications, as illustrated below:<br><br>  <br><br>Sirpal-000 at 154. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-000 describes a "first class of items" that is copied/pasted in its entirety, and a "second class of items" that first requires a user to "place the cursor and make a selection of a piece of the item" to be copied. Sirpal-000 at 155. In operation, a user can either copy text to a clipboard (for pasting later) or copy text with a "two finger press and hold gesture, which puts the item in move mode, and allows the user to move/paste the item to any available drop zone," e.g., for "images, links, paragraphs of text, messages, etc." Sirpal-000 at 155. "For anything that has been copied, users have the option to either just paste the last copied item or to select an item from the Universal Clipboard to paste." Sirpal-000 at 155. Sirpal-000 illustrates many examples of copying text from one application to another, including copying a link from a web page for pasting into an email message (Sirpal-000 at 158-164), text from a web page for pasting into an email (Sirpal-000 at 166-170), text and image from a web page for pasting into an email (Sirpal-000 at 172-175), and text from a field (e.g., in an email application) to another field (e.g., in a text message application) (Sirpal-000 at 177-182).<br><br>As another example, and as discussed above for claim [2], Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. *See also supra* claim [2]. Lavallee further describes providing "a share function [that] permits sharing of items between . . . two or more running applications [simultaneously] displayed." Lavallee, ¶[0058]. According to Lavallee, "[t]he copy and paste function may be accomplished by a drag-and-drop action," "an attach file function that provides for transmitting a file attachment of a first running application of the two or more running applications to a second running application of the two or more running applications," or "an insert function that provides for inserting one or more items displayed by a first running application into a second running application of the two or more running applications." Lavallee, ¶[0058].<br><br>Additional exemplary disclosures of Lavallee include:<br><br>"Referring now to FIGS. 12 a-d, 13 a-d, 14 a-d, and 15 a-d, various examples of a share function of the share function relationship between two or more running applications resulting from creation of |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059].<br><br>"In FIG. 12 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area. The user in this example is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body. In FIG. 12 b, the user is able to select an item in the web browser application, in this example a car, as indicated by circle 1210; this selection may be accomplished by a user pressing on the picture of the car on the touch screen. Next, in FIG. 12 c, the user can drag the selected picture item from the web browser application displayed in the right split screen mode viewing area over to the left split screen mode viewing area, as indicated by the dashed box 1220 surrounding the selected picture item and the accompanying arrows in FIG. 12 c. Finally, in FIG. 12 d, the user released the picture item in the desired location of the email application displayed in the left split screen mode viewing area 1230. This release may be accomplished by the user removing his finger from the selected picture item when the picture is in the desired location. In this way, a user of an electronic device can easily drag and drop a selected item from a first running application to a second running application, both simultaneously maximized and displayed in large split screen mode viewing areas of the touch screen of the electronic device. Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060], Figs. 12a-12d.<br><br>"FIGS. 13 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "insert" function that allows items such as pictures, photos, songs, video, locations, |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | contacts, calendar events, etc. to be inserted from a first running application to a second running application. In FIG. 13 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: a presentation application, such as POWER POINT®, is displayed in the left split screen mode viewing area and a photo application is displayed in the right split screen mode viewing area. The user in this example is creating a presentation and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the photo application into the presentation application. This example of an insert share function allows a user to insert a picture from the photo application into the presentation application. In FIG. 13 b, the user presses on the desired picture in the right split screen mode viewing area of the touch screen, as indicated by the circle 1310, to select the picture. Next, in FIG. 13 c, the user drags the selected picture into the presentation application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1320 surrounded the selected picture and the accompanying arrows in the drawing. The selected picture is dragged in to the presentation application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1330 in FIG. 13 d. The item in this application is a stored picture file, such as a file stored on the device, which can be inserted as shown." Lavallee, ¶[0061], Figs. 13a-13d.<br><br>"It is noted that in the 'copy and paste' function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage. In the 'insert' function illustrated in FIG. 13, a file type stored on device memory, such as a stored picture, contact, video, etc. for example, may be retrieved and inserted, or attached, as shown above." Lavallee, ¶[0062], Figs. 12a-13d.<br><br>"FIGS. 14 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "attach file" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments. Applications that might use the attach file function are varied and include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc. In FIG. 14 a, following |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an instant messaging (IM) application is displayed in the left split screen mode viewing area and a music application is displayed in the right split screen mode viewing area. The user in this example is chatting using an IM application and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop songs from the music application into the IM application. This example of an attach file share function allows a user to send a song attachment from the music application to the IM application. In FIG. 14 b, the user presses on a desired song in the right split screen mode viewing area of the touch screen, as indicated by the circle 1410, to select the song. Next, in FIG. 14 c, the user drags the selected song into the IM application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1420 surrounded the selected picture and the accompanying arrows in the drawing. The selected song is dragged in to the IM application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1430 in FIG. 14 d, into a conversation of the IM application to send to a friend." Lavallee, ¶[0062], Figs. 14a-14d.<br><br>"In FIG. 15 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application. In FIG. 15 b, the user presses on a desired contact in the right split screen mode viewing area of the touch screen, as indicated by the circle 1510, to select the contact. Next, in FIG. 15 c, the user drags the selected contact into the email application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1520 surrounded the selected contact and the accompanying arrows in the drawing. The selected contact is dragged in to the email application displayed in the left split screen mode viewing area of the touch screen and released in the desired location into the email body 1530 in FIG. 15 d, as shown." Lavallee, ¶[0065], Figs. 15a-15d. |

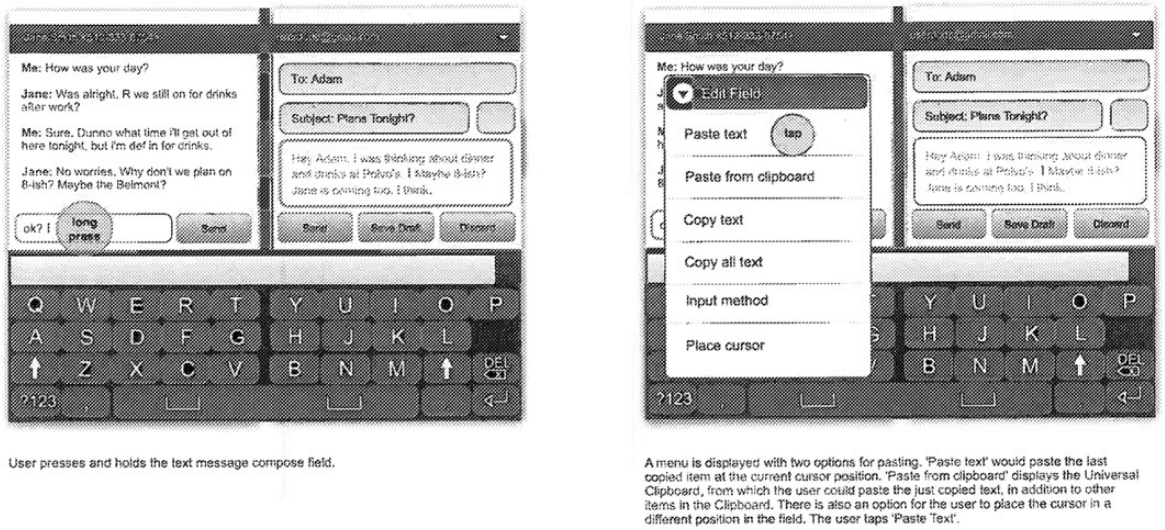
| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | A POSITA would have found it obvious to incorporate "wherein said information is copied from one of said applications and pasted in the other application," as claimed. For example, a POSITA would have found it obvious to implement well-known copy/paste functionality—in which text is copied and pasted from one application into another, e.g., via clipboard or drag/drop—as an additional or alternative mechanism to share information from the handwriting input application to the first application of Zhuang. As discussed above, each of Sirpal-486, Sirpal-000 and Lavallee teaches wherein said information is copied from one of said applications and pasted in the other application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Zhuang, as an obvious and intuitive way to transfer information (e.g., handwritten characters) from the handwriting input application of Zhuang into the first application of Zhuang. A POSITA would have recognized the advantages of providing copy/paste functionality, at least because it allows a user to decide where (e.g., in which field) information copied from the second application should be pasted/inserted into the first application. Copying and pasting information between applications was routine and conventional to a POSITA, as shown by Sirpal-486, Sirpal-000 and Lavallee. Incorporating the feature into Zhuang's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Zhuang, represent nothing more than combining prior art elements according to known methods and techniques (copying information from one application to be pasted into another, e.g., with a clipboard) to a mobile electronic touch screen device to yield predictable results (providing a user the ability control over when and where to copy/paste information from one application to another). |

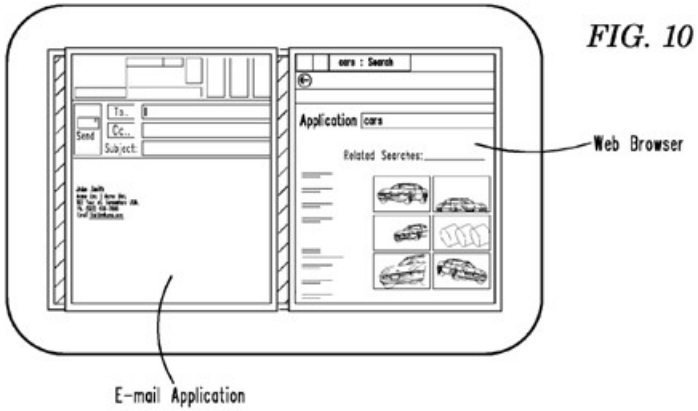
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[7]** The system of claim 1, wherein at least one of the | Claim 7 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| applications is a messaging application. | to show the additional limitations of claim 7 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application."<br><br>For example, Zhuang discloses that it "relates to a smart device operating method," and addresses "tablet computers, and other smart devices," which are devices known to use messaging applications. Zhuang, ¶¶[0001], [0003]. At a minimum, it would have been obvious for Zhuang's device to include a messaging application, because message applications were understood to be commonplace for "smart device[s]."<br><br>To the extent Keyless argues that Zhuang does not disclose or render obvious "wherein at least one of the applications is a messaging application," it would have been obvious in view of Zhuang, POSITA's pre-existing knowledge (as confirmed, e.g., by reference to Koch, Sirpal-486, Sirpal-000, and/or Lavallee), and/or the teachings of Zhuang combined with the other references charted for this patent in these invalidity contentions, including Koch, Sirpal-486, Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Koch, Sirpal-486, Sirpal-000, and Lavallee teaches wherein at least one of the applications is a messaging application, and it would have been obvious to provide the feature in view of one or more of the references.<br><br>For example, Koch discloses that its electronic device "typically supports a variety of applications, such as … an e-mail application, an instant messaging application." Koch, ¶[0107]. Further, Koch describes that its device supports "protocol for e-mail," "instant messaging," "and/or Short Message |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Service (SMS), or any other suitable communication protocol." Koch, ¶[0114]. Koch describes the first application as "e.g., a notes application, a web browser application, etc." Koch, ¶[0252]), and a POSITA would recognize that Koch's applications, including its messaging applications, would be suitable to implement with the device/system of Zhuang.<br><br>Additional exemplary citations include:<br><br>"In some embodiments, the functions may include image editing, drawing, presenting, word processing, website creating, disk authoring, spreadsheet making, game playing, telephoning, video conferencing, e-mailing, instant messaging, workout support, digital photographing, digital videoing, web browsing, digital music playing, and/or digital video playing." Koch, ¶[0008].<br><br>"Applications 136 may include the following modules (or sets of instructions), or a subset or a superset thereof: …. instant messaging (IM) module 141 …." Koch, ¶[0135].<br><br>"In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the instant messaging module 141 includes executable instructions to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages and to view received instant messages. In some embodiments, transmitted and/or received instant messages may include graphics, photos, audio files, video files and/or other attachments as are supported in a MMS and/or an Enhanced Messaging Service (EMS). As used herein, 'instant messaging' refers to both telephony-based messages (e.g., messages sent using SMS or MMS) and Internet-based messages (e.g., messages sent using XMPP, SIMPLE, or IMPS)." Koch, ¶[0158].<br><br>"In some embodiments, instant messaging module 141, rather than e-mail client module 140, is used to send a link to a particular online video." Koch, ¶[0170].<br><br>"FIG. 4A illustrates an exemplary user interface for a menu of applications on portable multifunction device 100 in accordance with some embodiments. Similar user interfaces may be implemented on device 300. In some embodiments, user interface 400 includes the following elements, or a subset or superset thereof: …. E-mail client 140, which may include an indicator 410 |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | of the number of unread e-mails; …. And Icons for other applications, such as: IM 141 ….” Koch, ¶[0205].<br><br>As another example, Sirpal-486 discloses a “multi-screen user device and a universal clipboard application.” Sirpal-486, Abstract. Sirpal describes that “handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands.” Sirpal-486, ¶[0002]. Sirpal-486 teaches that “applications 564” on the device “can include programs such as email clients, web browsers, texting applications, games, media players, office suites, etc.” *Id.*, ¶[0125]. Sirpal-486 further teaches:<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location (e.g., the application at which the content will be copied), select the area where the text should be placed, access a copy/paste menu pop-up window, and then select the paste command. This copy/paste routine must be completed for each different piece of information to be copied, which requires substantial time and input from the user.<br><br>> The device 100 allows a user to copy multiple contents to the universal clipboard application 708. From this universal clipboard application, a user can choose an item corresponding to already-copied content, and (while still providing inputs at the universal clipboard application 708) execute a paste command. By providing multiple screens where one screen displays the universal clipboard application and another screen displays an application, a user is enabled to easily and quickly copy and paste content between various different applications on different screens 104, 108 of the device 100. Moreover, the ability to quickly and easily copy and paste different information from one central location, the universal clipboard |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application 708, saves the user time and input. Thus, the device 100 operates very intuitively for the user.<br><br>Sirpal-486, ¶¶[0168]-[0169].<br><br>Sirpal-486 further incorporates by reference the entirety of U.S. Patent Application No. 61/389,000 (Sirpal-000), which provides additional information relating to Sirpal-486's messaging application. *See* Sirpal-486, ¶[0001].<br><br>Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. As one example, Sirpal-000 illustrates a text messaging application next to an email application:<br><br>  <br><br>User presses and holds the text message compose field.<br><br>A menu is displayed with two options for pasting. 'Paste text' would paste the last copied item at the current cursor position. 'Paste from clipboard' displays the Universal Clipboard, from which the user could paste the just copied text, in addition to other items in the Clipboard. There is also an option for the user to place the cursor in a different position in the field. The user taps 'Paste Text'.<br><br>Sirpal-000 at 180-182. As Sirpal-000 explains, the text messaging application has a "text message compose field" into which text may be inserted. Sirpal-000 at 180. Thus, a POSITA would understand from Sirpal-000 that "at least one of [two] applications is a messaging application," as claimed. |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee includes a "keyboard 120 for entering information such as composing email messages." Lavallee, ¶[0021]. Lavallee's device also is designed to send or receive data, including "email messages, short messaging service (SMS), instant messages, web content, and other electronic content." Lavallee, ¶[0022]. Accordingly, the device runs applications such as "communications applications such as Instant Messaging (IM), presentation and email applications, messaging applications . . . and the like." Lavallee, ¶[0028]. Lavallee provides several examples of a messaging application displayed simultaneously with another application, as illustrated, e.g., in Figs. 10, 12a-12d, 14a-14d, and 15a-15d, reproduced below.<br>  <br>*FIG. 10*<br><br>Lavallee, Fig. 10. |

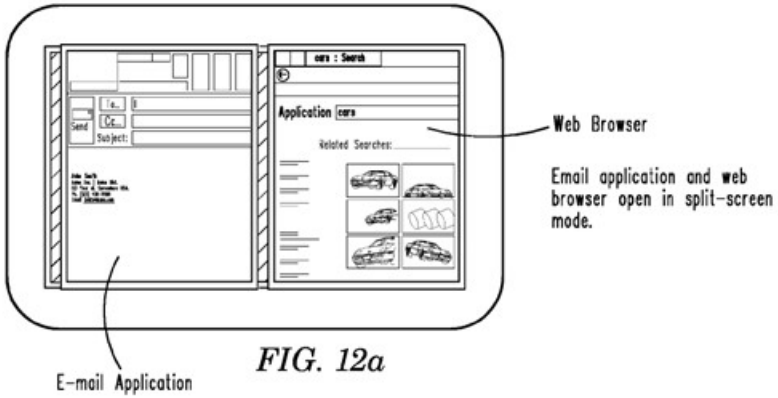



FIG. 12a

Lavallee, Fig. 12a.

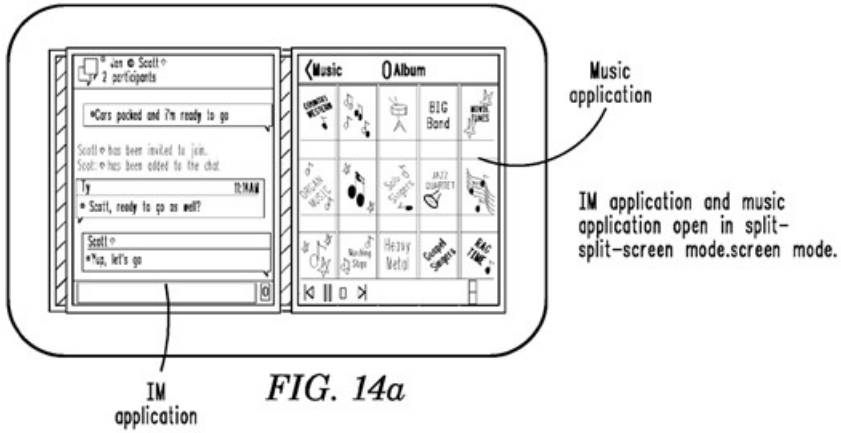
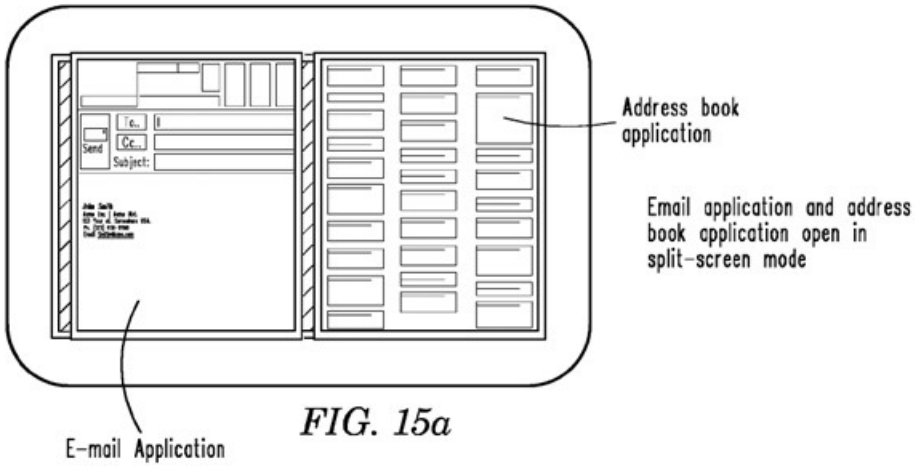



FIG. 14a

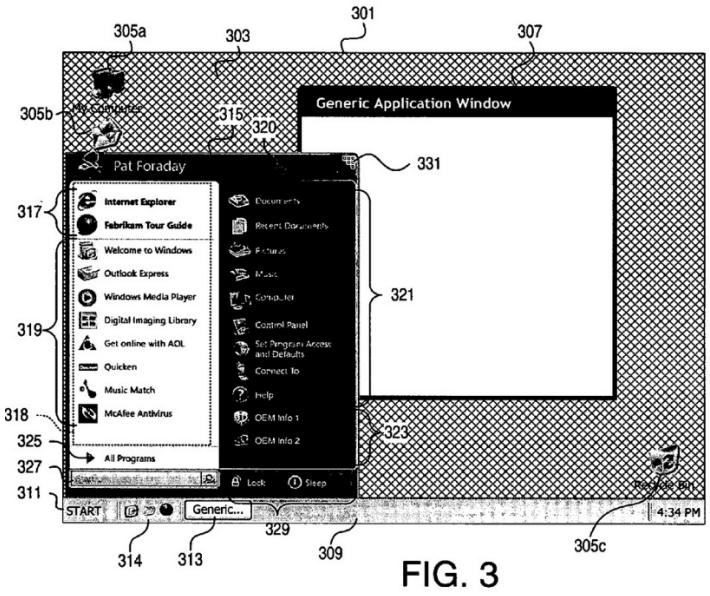
Lavallee, Fig. 14a.

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>*FIG. 15a*<br>Lavallee, Fig. 15a.<br>The e-mail application and IM application illustrated in Lavallee both illustrate fields for text entry. Thus, a POSITA would understand from Lavallee that "at least one of [two] applications is a messaging application," as claimed.<br>Incorporating a messaging application (such as taught by Koch, Sirpal-486, Sirpal-000, and Lavallee) into Zhuang and using Zhuang's keyboard with the messaging application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Zhuang, represent nothing more than combining prior art elements according to known methods and techniques (providing keyboard input into a messaging application on a smart device) to a mobile electronic touch screen device to yield predictable results (allowing a user to send text messages on a mobile device, enhancing a user's ability to input text into a messaging application, etc.). |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[8]** The system of claim 1, wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application. | Claim 8 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 8 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application."<br><br>As discussed above in claim [1D], Zhuang discloses a second application is "activated by interacting with a button of said keyboard assigned to activating [that] application." *See supra* claim [1D]. Thus, Zhuang provides for activating a second application by interacting with a button of the keyboard assigned to activating that application by, e.g., pressing a key such as the keyboard split key that is used to activate the center area input application, as discussed in claim [1D].<br><br>To the extent Keyless argues that Zhuang does not disclose or render obvious this limitation, it would have been obvious in view of Zhuang, a POSITA's pre-existing knowledge, and/or the teachings of Zhuang combined with other references charted for this patent in these invalidity contentions, including Wang, Matthews, and Yabuki. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways. For example, Wang discloses that "the user can define one of the [device] keys as a search key for searching web pages … thereby quickly calling the search application … of the system." Wang, ¶[0029]. As another example, Matthews teaches to use |

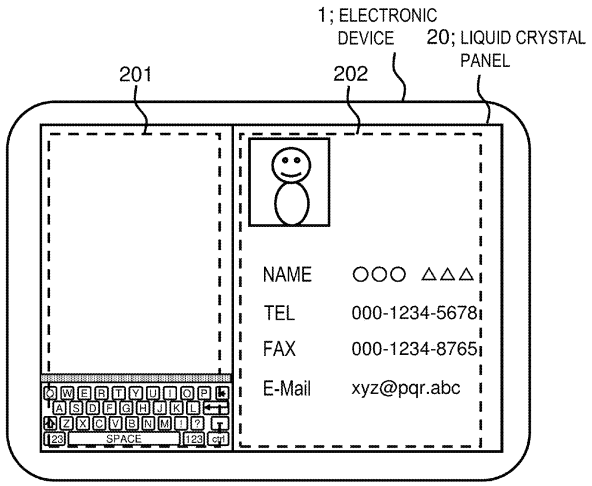
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | a keyboard hot key—similar to the swipe key (44) as used in Zhuang to open the handwriting input application—with a search application. As yet another example, Yabuki discloses reducing the size of the keyboard so that multiple applications can be displayed, including, e.g., a "search" application.<br><br>For example, Wang describes a "method for programming output value of a key." Wang, Title. Wang explains that its "method for programming output value of a key is applicable to an electronic device having at least a key." Wang, Abstract, ¶[0002]. Wang observes that "[a]long with the development of technologies, portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones." Wang, ¶[0004]. Wang further observes that "although some touch-type mobile phones or computers include shortcut keys that allow the user to speedily call specific applications, the functions of the shortcut keys cannot be changed by changing corresponding key values of the shortcut keys. For example, a key preset for a shutter button of camera cannot be changed into a return key." Wang, ¶[0007]. Wang purports to improve known touch-type mobile phones or computers. *See id.*, ¶[0008]. In Wang, "[t]he method for programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key. The number of keys is not limited." *Id.*, ¶[0018]. Among other benefits, Wang discloses that its system "accelerates the input speed" by assigning a function to a key. *Id.*, ¶[0029]. Specifically, Wang discloses:<br><br>> [T]o accelerate the operation speed, the user can define one of the keys 12 as a search key for searching web pages or a camera key for starting camera, thereby quickly calling the search application or camera application of the system. In addition, since Android Supports quick launch application, by holding down one of the keys defined as a search key and pressing another key defined as a character key, the user can quickly call a corresponding application defined in the quick launch application. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Wang, ¶[0029]. Thus, Wang provides "wherein [an] application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>As another example, Matthews describes "methods and system for a search box and search capabilities in a graphical user interface of a program launch menu for an operating system." Matthews at 1:15-18. "According to an illustrative aspect of the invention, a program launch menu, such as a Start menu, displays a search text input box within the program launch menu displayed on a computer display device, which can be used to locate user-selectable items on a computer system. Various aspects of the invention may provide for a display of search results within the program launch menu, the search results identifying selectable items matching text input received from a user via the search text input box." Matthews at 3:26-34. In Matthews, a "user can type text into search box 327 to search for Start menu items. Upon entering text in search box 327, Start menu 315 automatically switches to a Search Results view 501, such as is illustrated in FIG. 5, displaying results that match text as it has been entered thus far by the user. That is, from search box 327, a user can perform a character by character search across the programs, user files, Internet links, and communications on his or her system. As the user enters text in the search box 327, the computer system searches for the entered text, as further described below." Matthews at 16:52-62. |

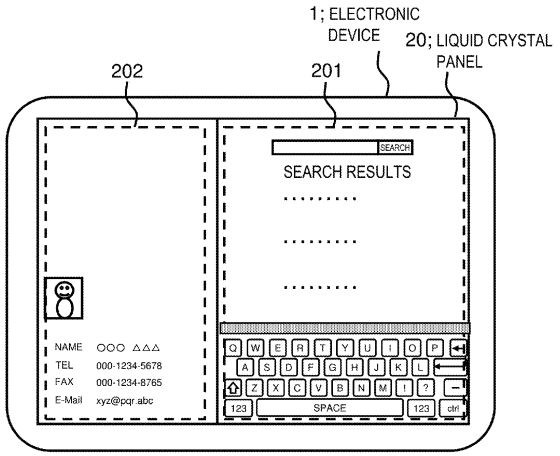
| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 3<br>Matthews, Fig. 3.<br>Matthews teaches that its search application "may use any built in or known search engine to perform searches on computer system **100**. The search engine preferably searches the file system of the computer **110**, as well as URLs and executables in the user's Path. The search service may also include search results from other data providers, such as web search results from a web search engine, photo results from a photo website such as Picasa, music results from a service such as MSN music, or any combination of these and/or other data providers. The search engine may index all searchable locations in order to expedite searching." Matthews at 17:1-15.<br>Matthews further describes that the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item." Matthews at 18:31-39. "Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Word(R) brand word processor, if installed and if it is the top match. No mouse manipulation is necessary (although, certainly allowable if desired). By learning which searches produce desired results, users can learn many keyboard shortcuts to quickly launch desired items that are returned as the top match to the entered search string. Given the time and inclination, a user can learn keyboard shortcuts to launch most application programs and documents on his or her computer, without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:39-51. Thus, Matthews teaches the use of a "search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>Matthews teaches several benefits associated with providing a quick way to launch a search application, such as by using a keyboard key. For example, Matthews discloses that "[a]n operating system launch menu, such as a Start menu, provides various mechanisms for a user to quickly and efficiently locate and launch desired data items such as programs, data files, storage locations, and the like. A search box within the program launch menu may be used to quickly locate programs, documents, communications, and other data items." Matthews at Abstract. Further, Matthews' search application displays results "within the original confines of the program launch menu, thereby negating the need to open sub-menus on top of a large portion of the desktop displayed on the display device." *Id.*; *see also* Matthews at 3:54-62 ("The computer displays search results within a predefined area of the program launch menu, wherein the search results comprise selectable items matching text input received from the user via the search text input box, and automatically provides selection focus to a top search result. The computer launches the selectable item corresponding to the top search result when receiving predefined user input, e.g., <Enter>, while the top search result has the selection focus."). Matthews further discloses that a user may quickly use the equivalent of "keyboard shortcuts" to access desired results "without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:42-51. Thus, Matthews provides a quick and space-efficient search functionality.<br><br>As still another example, Yabuki relates to "an electronic device comprising a touch panel and a controlling method and program therefor." Yabuki, 1:10-13. Yabuki discloses that "a software keyboard may interfere with the user's operation, depending on its size or position," particularly in the case of "a small device such a smartphone." Yabuki, 1:35-39. As Yabuki discloses: |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | For instance, let's assume a case where a user is performing a more detailed search based on search results using a Web browser. At this time, if the area of the software keyboard is large, it may be difficult for the user to perform an input operation while browsing the search results.<br><br>Further, for instance, let's assume a case where a user launches a Web browser and refers to information regarding the people registered in an address book in the middle of his input operation. In this case, the user first quits the Web browser currently running. Then, he launches the address book application. After confirming the information, the user quits the address book application. Then, after launching the Web browser again, the user has a software keyboard displayed to enter the information. As described, the user must perform a plurality of operations when he refers to information included in another application while using the software keyboard.<br><br>Yabuki, 1:40-56. Yabuki discloses "there is a need in the art to contribute to facilitating an operation independent from a software keyboard while the software keyboard is being used." Yabuki, 1:60-62. According to Yabuki, "the electronic device 1 relating to the present exemplary embodiment is able to display a second application such as an address book application while having a first application such as a Web browser displayed." Yabuki, 7:7-10.<br><br>For example, Figure 4 of Yabuki depicts a full-size keyboard used with a single application. Yabuki, 4:61-5:3, Fig. 4. Yabuki describes that the full-size keyboard may be moved and reduced in size, to make room for the interface of an application (or multiple applications) to be displayed on larger portions of the screen. Yabuki, 5:4-6:63. To further illustrate, Figure 7 of Yabuki, below, "is a drawing showing an example in which different applications are displayed in a plurality of display regions. In FIG. 7, the software keyboard is reduced and displayed in a first display region 201. Further, an address book application is displayed in the second display region 202 in FIG. 7." Yabuki, 7:11-16. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Yabuki, Fig. 7.<br>"The display region control unit 12 may switch the display modes of the first and second display regions. More concretely, according to a predetermined operation, the display region control unit 12 may enlarge the reduced first display region and reduce the second display region. Here, it is preferred that the predetermined operation that switches the display modes be a simple and easy operation such as a double tap operation." Yabuki, 7:17-24.<br>Yabuki further depicts Figure 8, which "is a drawing showing an example in which the display modes are switched. In FIG. 8, the display of the software keyboard is enlarged and displayed in the first display region 201. Further, the address book application is reduced and displayed in the second display region 202." Yabuki, 7:25-29. |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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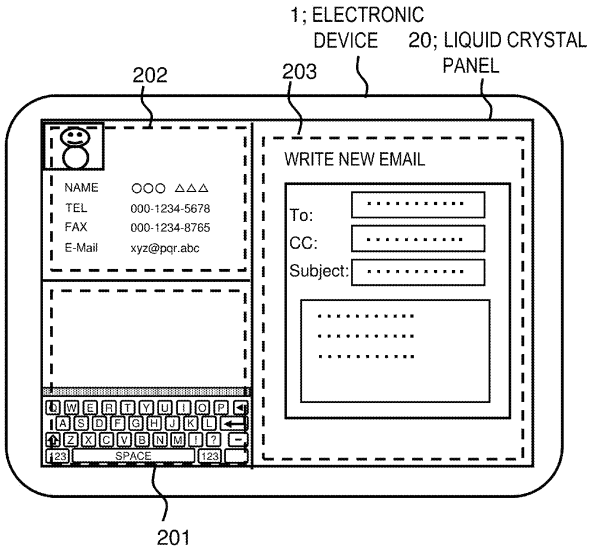

Yabuki, Fig. 8.

According to Yabuki, even more applications may be displayed simultaneously while the keyboard is in its reduced size:

> The image signal generation unit 13 may have a third application displayed while displaying the images of two different applications. More concretely, when detecting a fourth operation in the second display region, the display region control unit 12 reduces and moves the second display region. It is preferred that the fourth operation be a simple and easy operation such as a double tap or flick operation. The image signal generation unit 13 displays the image of the third application in a region (a third region) made available by reducing the second display region. As described, the electronic device 1 relating to the present exemplary embodiment does not limit the number of applications displayed simultaneously.

Yabuki, 7:30-42. Further to that description, Yabuki depicts in Figure 9, below, "a drawing showing an example in which the image of the third application is displayed on the liquid crystal panel 20. In FIG. 9, the software keyboard is displayed in the first display region 201. Further, the

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | address book application is displayed in the second display region 202. Then, an email application is displayed in a third display region 203." Yabuki, 7:43-49. |




Yabuki, Fig. 9.

Thus, from the foregoing descriptions of Yabuki, a POSITA would recognize the benefits of reducing a keyboard so that multiple applications may simultaneously be displayed, including a search application (such as a web search application or an application for searching/displaying contact information). Moreover, a POSITA would recognize such features to be beneficial, as they solve problems and achieve advantages that Yabuki identified—e.g., allowing a user to perform input operations (in another application) while browsing search results or allowing a user to cross-reference between a web-browser and an address book simultaneously without closing one application or the other. *See* Yabuki, 1:40-56.

A POSITA considering the teachings of Zhuang in view of Wang, Matthews, and/or Yabuki would have found it obvious, for example, to replace Zhuang's handwriting input application with the search application described in Wang or Matthews. A POSITA would recognize Wang's and/or

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Matthews' search application to be suitable for use with Zhuang, because Zhuang is a smart device and a POSITA would understand that a smart device typically has search functionalities. One obvious combination of Zhuang with Wang and/or Matthews would, for example, use Zhuang's keyboard with a first application, and use Zhuang's keyboard swipe key 44 to open a search interface. In the obvious combination, Zhuang's search application would be used, for example, to provide a search area to search for Internet content, addresses or contacts, text, music, sound, image, video, and/or other files to be used with and/or accessed by the first application. A POSITA would recognize such a configuration from Yabuki, for example. In any case, the search application, when activated, would obviously occupy the same area(s) as the handwriting input application interface in the existing Zhuang system, and simultaneously display the corresponding reduced keyboard interface. In that way, the search application could be used in parallel with another application (or applications) appearing on the top of the screen, without obstructing the interface of the other application. The combination would yield "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>A POSITA would recognize that the combination would achieve the various benefits described in Wang, Matthews, and Yabuki, including to "accelerate the operation speed" (Wang, ¶[0029]), to quickly find relevant information using the keyboard and without covering significant portions of the screen with the search application (Matthews at Abstract), and to be able to cross-reference between one search application (e.g., an Internet browser or address book) and another application simultaneously (such as an application that may require information about the information presented in the Internet browser or address book) (Yabuki, 1:40-56). A POSITA would further recognize that such a combination would provide various result options as displayed suggestion candidates in the search application display area, whereupon the user can select which result is desired. Additionally or alternatively, a POSITA would recognized that such a combination would use the search application interface as the interface for a search component of the first application.<br><br>Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for at least this reason.<br><br>Incorporating a search button and application (such as taught by Wang and Matthews) with Zhuang's handwriting input application area represents nothing more than the application of known |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Zhuang, represent nothing more than combining prior art elements according to known methods and techniques (providing search functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with information relating to searched files, contacts, text, media, etc.). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[9]** The system of claim 8, wherein said search application use at least one keyword typed through said keyboard. | Claim 9 depends from claim 8. Defendants incorporate all the prior art disclosures from claim 8 here, which anticipate and/or render claims 1 and 8 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 8 to show the additional limitations of claim 9 are anticipated and/or obvious for the same reasons set out in claims 1 and 8.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>For example, in the combination discussed in claim [8], Zhuang (as modified) includes a search application. A POSITA would understand that a search application depends on receiving input search terms or keywords, and that Zhuang describes to enter text using the soft (touchscreen) keyboard (*see* [1B] above). Accordingly, a POSITA would have understood from Zhuang (or Zhuang as modified in claim [8]) to provide "wherein said search application use at least one keyword typed through said keyboard."<br><br>To the extent Keyless argues that Zhuang does not disclose or render obvious this limitation, it would have been obvious in view of Zhuang, a POSITA's pre-existing knowledge, and/or the teachings of Zhuang combined with the other references charted for this patent in these invalidity |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | contentions, including Wang and/or Matthews as discussed above for claim [8]. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Matthews discloses a "search for <foo>" in which "the computer system 100 may initiate a broader search for the user-entered text, e.g., by launching a full-text search or full-text search window," where "the user may be able to search the computer for <foo>, search the Internet for <foo>, and/or search some other computer or database for <foo>, regardless of where the text <foo> appears." Matthews at 19:2-8. Matthews further teaches that the system "may display any items first where the item's name begins with text matching the user-entered text, second where the item has a word other than its starting word that starts with text matching the user-entered text, and third where the item has any text matching the user-entered text." Matthews at 18:24-28. Matthews thus discloses "keyword search," wherein "said search application use at least one keyword typed through said keyboard."<br><br>A POSITA would have found it obvious to incorporate "wherein said search application use at least one keyword typed through said keyboard," as claimed. Matthews, for example, teaches to use a keyboard to input search keywords. A POSITA would have been motivated to combine such feature(s) with the disclosure of Zhuang, as an obvious and intuitive way to implement search applications in Zhuang as modified in claim [8]. Typing a keyword through a keyboard was routine and conventional to a POSITA (as well as to a user of a device), as shown by Matthews. Furthermore, Zhuang already provides that the keyboard is used to enter text into an application. *See* [1B]. Extending Zhuang's existing keyboard text entry functionality to accommodate entering a keyword into the search application (e.g., in the combination with Matthews) would be a straightforward, intuitive modification, requiring no more than ordinary skill. Incorporating the feature into Zhuang's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Zhuang, represent nothing more than combining prior art elements according to known methods and techniques (using a keyboard to type a keyword for search) to a search application to yield predictable results (search results to be used with or accessed by another application). |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[10]** The system of claim 1, wherein at least one of the applications is used for sharing at least one of text, pictures, or videos. | Claim 10 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 10 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos."<br><br>For example, and as discussed above for claims [4, 5], "information" shared from Zhuang's handwriting input application to the first application includes text and drawings (i.e., hand-drawn characters). *See supra* claims [4, 5]. Thus, Zhuang provides "at least one of the applications is used for sharing at least one of text, pictures, or videos," as required by the claim.<br><br>Additionally, and as discussed above for claim [7], Zhuang alone and/or in combination with Sirpal-486, Sirpal-000 and/or Lavallee, and/or further in light of the knowledge of a POSITA (as confirmed, e.g., by reference to Sirpal-000 and/or Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application." A messaging application is an application "used for sharing at least one of text, pictures, or videos." Thus, for at least the same reasons, Zhuang alone and/or in combination with Sirpal-486, Sirpal-000 and/or Lavallee, and/or further in light of the knowledge of a POSITA (as |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | confirmed, e.g., by reference to Sirpal-486, Sirpal-000 and/or Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos," as claimed. |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[11]** The system of claim 1, wherein said device is a mobile phone. | Claim 11 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 11 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said device is a mobile phone."<br><br>For example, Zhuang discloses that it "relates to a smart device operating method," and addresses "tablet computers, and other smart devices," which are devices known to be mobile phones. Zhuang, ¶¶[0001], [0003]. At a minimum, it would have been obvious for Zhuang's device to include phone functionality, because phone functionality was understood to be commonplace for "smart device[s]."<br><br>To the extent Keyless argues that Zhuang does not include or render obvious this limitation, it would have been obvious in view of Zhuang, a POSITA's pre-existing knowledge, and/or the teachings of Zhuang combined with the other references charted for this patent in these invalidity contentions, including one or more of Nexus, Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000, Wang, and Koch. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Nexus, Sirpal-486, Sirpal-000, Wang, and Koch all describe providing phone functionality to a mobile electronic device, such as the mobile electronic device of Zhuang.<br><br>As discussed in Exhibit B5 to these Invalidity Contentions, Nexus is a mobile phone. Ex. B5, ¶[11]. A POSITA would have found it obvious to provide similar functionalities as Nexus when implementing Zhuang, because Nexus is an example of the "smart device" that Zhuang describes.<br><br>Sirpal-486 also describes an example of a "smart device," such as Zhuang describes, and also provides phone functionality. *See* Sirpal-486, ¶¶[0002] ("handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands"), [0071] (areas of a mobile electronic device "may be configured … for other types of specific inputs including controlling features of device 100, some non-limiting examples including … initiating/terminating of telephone calls"), [0075] (device may include buttons to control "initiation/termination of telephone calls"; "In a telephone application for instance and depending on the particular button a normal, medium, or long press can mean end call, increase in call volume, decrease in call volume, and toggle microphone mute."), [0092] ("an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations"), [0124] ("OS 516 can be any operating system and, at least in some embodiments, dedicated to mobile devices, including, but not limited to, Linux, ANDROID™, iPhone OS (iOS™), WINDOWS PHONE 7™, etc. The OS 516 is operable to provide functionality to the phone by executing one or more operations, as described herein."), [0132] ("A task can be an application and a sub-task can be an application component that provides a window with which users can interact to do something, such as dial the phone …").<br><br>Wang also describes an example of the "smart device" that Zhuang describes, and also provides phone functionality. *See* Wang, ¶¶[0004] ("portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones."), [0018] ("The method for |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key.").<br><br>Koch also describes an example of the "smart device" that Zhuang describes, and also provides phone functionality. *See* Koch, ¶¶[0105] (mobile electronic device may be a "portable communications device, such as a mobile telephone, that also contains other functions, such as PDA and/or music player functions"), [0107] (mobile electronic device "typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application."), [0114] ("RF (radio frequency) circuitry 108" may be included to "receive[] and send[] RF signals," including to communicate via "a wireless network, such as a cellular telephone network," including on common mobile communications standards and protocols for mobile telephony, such as "Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), wideband code division multiple access (W-CDMA), code division multiple access (CDMA)"), [0135]-[0137] (applications include "telephone module"), [0154]-[0155] (mobile device may be used to initiate, conduct, and terminate telephone calls), [0205]-[0211] (mobile device home screen may be provided with an application icon for "Phone"), Fig. 1A (illustrating "Telephone Module" (138) among "Applications" of a mobile electronic device), Fig. 4A (illustrating "Phone" application icon (138P).<br><br>Thus, each of Nexus, Sirpal-486, Wang, and Koch provide "wherein said device is a mobile phone," as claimed.<br><br>One obvious combination of Zhuang with Nexus, Sirpal-486, Wang, and Koch would, for example, incorporate telephone circuitry and a telephone application into Zhuang in order to provide telephone functionality as taught by each of Sirpal-486, Wang, and Koch, as discussed above. For example, it would have been obvious to incorporate "RF (radio frequency) circuitry" into Zhuang |

| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | in order for Zhuang to communicate via telephone communications networks, as Koch discloses for a smart device to do. *See* Koch, ¶[0114]. In that way, Zhuang would be provided with desirable improvements, namely, the ability to conduct telephone calls. The combination would yield "wherein said device is a mobile phone," as claimed.<br><br>A POSITA would recognize that the combination would achieve various benefits, such as the ability to make and receive telephone calls. Accordingly, a POSITA would have found it obvious to provide "wherein said device is a mobile phone," as recited in claim 11 for at least this reason.<br><br>Incorporating a telephone functionality (such as taught by Nexus, Sirpal-486, Wang and Koch) with Zhuang's "smart device" and keyboard represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Zhuang, represent nothing more than combining prior art elements according to known methods and techniques (providing telephone functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with the ability to make and receive telephone calls on a mobile electronic device). |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[12P]** A method comprising: | To the extent that the preamble is held to be limiting, Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes a "method comprising."<br><br>For example, Zhuang discloses a "smart device software keyboard method." Zhuang, Title. Further, Zhuang discloses "[p]rovided is a smart device software keyboard operating method, the steps thereof being: pressing a swipe key of the software keyboard on a touch control panel display to |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | swipe in an opening direction to generate an opening signal; the smart device, in accordance with the opening signal, changing from displaying only the software keyboard on the touch control panel display to displaying the software keyboard and a handwriting input interface side by side, or changing from displaying the software keyboard and the handwriting input interface side by side to displaying only the handwriting input interface; pressing the swipe key and swiping in a closing direction on the touch control panel display to generate a closing signal; and the smart device, in accordance with the closing signal, changing from displaying only the handwriting input interface on the touch control panel display to displaying the software keyboard and the handwriting input interface side by side, or changing from displaying the software keyboard and the handwriting input interface side by side to displaying only the software keyboard." Zhuang, Abstract; *see also* Zhuang, ¶¶[0006]-[0020] (describing steps of the method). Additionally, Zhuang discloses that "[t]he present invention relates to a smart device operating method, and relates in particular to a smart device software keyboard operating method." Zhuang, ¶[0001]. |
| **[12A]** assigning a first zone of a touch screen to an interface of a first application; | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "assigning a first zone of a touch screen to an interface of a first application."<br><br>As discussed *supra* claim [1C], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein a first zone of said touchscreen is assigned to an interface of said first application." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12B]** assigning a second zone of said touch screen to an on-screen keyboard; and | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "assigning a second zone of said touch screen to an on-screen keyboard." |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As discussed *supra* claim [1C], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein . . . a second zone of said touchscreen is assigned to said keyboard." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12C]** based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen and | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen."<br><br>As discussed *supra* claim [1D], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone." *See supra* claim [1D]. This limitation is disclosed for at least the same reasons. |
| **[12D]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen. | Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen."<br><br>As discussed *supra* claim [1E], Zhuang discloses this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [1E]. |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[13]** The method of claim 12, comprising using said keyboard with both of said applications. | Claim 13 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 13 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "using said keyboard with both of said applications."<br><br>As discussed *supra* claim [3], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said keyboard is used with both of said applications." *See supra* claim [3]. This limitation is disclosed for at least the same reasons. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[14]** The method of claim 12, wherein at least one of said applications is one of, a text | Claim 14 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| messaging application and an image sharing application. | 12 to show the additional limitations of claim 14 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein at least one of said applications is one of, a text messaging application and an image sharing application."<br><br>As discussed *supra* claim [7], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein at least one of the applications is a messaging application." *See supra* claim [7]. A "messaging application" is at least one of "a text messaging application and an image sharing application." Thus, this limitation is disclosed for at least the same reasons. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[15]** The method of claim 12, wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application. | Claim 15 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 15 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application." |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As discussed *supra* claim [8], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application." *See supra* claim [8].<br><br>Further, and as discussed *supra* claim [1D], Zhuang discloses using a button or gesture on the keyboard to activate a second application (handwriting input application). Thus, Zhuang (or, alternatively, Zhuang as modified in claim [8]) provides that the "search application [is] activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application." |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[16]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard. | Claim 16 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 16 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard."<br><br>As discussed *supra* claim [9], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein said search application use at least one keyword typed through said keyboard." *See supra* claim [9]. This feature is disclosed for at least the same reasons. |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[17]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard after said search application is activated. | Claim 17 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 17 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said search application use at least one keyword typed through said keyboard after said search application is activated."<br><br>As discussed *supra* claim [9], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said search application use at least one keyword typed through said keyboard." *See supra* claim [9]. Claim 17 recites the same feature and further requires that the keyword be "typed through said keyboard after said search application is activated."<br><br>For example, in Zhuang (as well as Zhuang as modified in claim [9]), a user interacts with the "second application" after it has been activated and, thus, types in the keyword after the second application has been activated.<br><br>For example, as discussed above in claim [9], in Matthews, the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item. Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match." Matthews at 18:31-51. A POSITA would understand that for the search interface of Matthews to receive the |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | entered text input or search input, the search interface must be active. Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs.<br><br>Thus, Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, including as modified (*see supra*, claims [8] and [9]), and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated," as claimed. |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[18]** The method of claim 12, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen. | Claim 18 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 18 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen."<br><br>As discussed *supra* claim [4], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein an information received from one of said applications is shared with at least the other application while said |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen." *See supra* claim [4]. This feature is disclosed for at least the same reasons. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[19]** The method of claim 18, wherein said information includes at least one of a text, an image, a video, a webpage and a URL. | Claim 19 depends from claims 18 and 12. Defendants incorporate all the prior art disclosures from claims 18 and 12 here, which anticipate and/or render claims 18 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 18 and 12 to show the additional limitations of claim 19 are anticipated and/or obvious for the same reasons set out in claims 18 and 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said information includes at least one of a text, an image, a video, a webpage and a URL."<br><br>As discussed *supra* claim [5], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL." *See supra* claim [5]. This feature is disclosed for at least the same reasons. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[20]** The method of claim 12, wherein upon interacting with the interface of any of said | Claim 20 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| applications, the focus of the system is given to the interacted application. | 12 to show the additional limitations of claim 20 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>As discussed *supra* claim [2], Zhuang discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application." *See supra* claim [2]. This feature is disclosed for at least the same reasons. |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[21]** The method of claim 12, wherein said touch screen is integrated within a mobile communication device. | Claim 21 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 21 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Zhuang, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, includes "wherein said touch screen is integrated within a mobile communication device."<br><br>As discussed *supra* claim [11] and claim [1A], Zhuang includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, the "electronic device having a touchscreen" and "wherein said device is a mobile phone" *See supra* |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | claims [1A, 11]. In addition, Zhuang includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, an application for sharing text, pictures, and/or videos with other users, as discussed *supra*, claims [7] and [10], making Zhuang a mobile communication device for this additional reason. |

# Appendix B7

**Exhibit B7**

**Invalidity of Asserted Claims of the ’922 Patent**

**in view of Paek**

U.S. Patent No. 9,547,375 to Paek et al. (“Paek”), filed on June 17, 2013, and issued on January 17, 2017, qualifies as prior art to U.S. Patent No. 10,976,922 (“’922 patent”) at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2), as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).[1] Paek anticipates or, alone or with other references, renders obvious one or more of asserted claims 1-21 of the ’922 patent. To the extent Keyless contends Paek does not disclose one or more limitations of the claims, it would have been obvious to combine Paek with the knowledge of a person of ordinary skill in the art (“POSITA”) and/or with one or more of the following references to render the claims at issue in the ’922 patent invalid. The chart below illustrates how the asserted claims of the ’922 patent are invalid in view of Paek and/or additional secondary references listed below, including but not limited to the prior art identified in Defendant’s Invalidity Contentions.

- U.S. Patent Application Publication No. 2013/0187861A1 to Lavallee (“Lavallee”), filed on January 19, 2012, and published on July 25, 2013. Lavallee qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e).
- U.S. Patent Application Publication No. 2012/0110486A1 to Sirpal et al. (“Sirpal-486”), filed on September 28, 2011, and published on May 3, 2012. Sirpal-486 further claims priority as early as October 1, 2010, through one or more provisional applications identified on its face. Sirpal-486 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Additionally, PCT Publication No. WO2012/044782 (filed on September 29, 2011, and published on April 5, 2012) (“Sirpal-782”) and U.S. Patent No. 8,832,577 (“Sirpal-577”) (filed September 28, 2011, and issued on September 9, 2014) include equivalent disclosure to Sirpal-486 and qualify as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. §§ 102(a) and/or (e). Samsung reserves the right to rely on any of Sirpal-782 or Sirpal-577 for their disclosures equivalent to Sirpal-486.
- U.S. Provisional Patent Application No. 61/389,000 to Sirpal et al. (“Sirpal-000”), was filed on October 1, 2010, and published at least by May 3, 2012, upon the publication of U.S. Patent Application No. 13/247,801 (as Sirpal-486), which

[1] Keyless Licensing LLC (or “Keyless”) alleges that the asserted claims of the ’922 patent are entitled to priority as early as February 17, 2013. However, as explained in the cover pleading, the asserted claims of the ’922 patent are not entitled to Keyless’s claimed priority date due to inadequate written description support. Assuming the claims are not invalid under Section 112 (*see, e.g.*, cover pleading), the earliest possible priority date for the asserted ’922 patent claims is December 24, 2013. As a result, the ’922 patent is subject to the AIA. The inclusion of any pre-AIA statutes is predicated on Keyless’s interpretation of priority, which Defendants disagree with.

claimed priority to and incorporated by reference Sirpal-000. Sirpal-000 qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).

- U.S. Patent Application Publication No. 2012/0113023 to Koch et al. ("Koch"), was filed on March 30, 2011, published on May 10, 2012, and claims priority to Provisional Application No. 61/410,862. Koch qualifies as prior art at least under AIA 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent Application Pub. No. 2013/0050102 A1 to Wang et al. ("Wang"), was filed November 28, 2011, and published February 28, 2013. Wang qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e).
- U.S. Patent No. 7,340,686 to Matthews et al. ("Matthews"), was filed on March 22, 2005, and issued on March 4, 2008. Matthews qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a), (b) and/or (e).
- U.S. Patent No. 10,198,163 to Yabuki ("Yabuki"), was filed as Application No. 14/406,377 on December 8, 2014, and issued on February 5, 2019. Yabuki was filed as a national phase application of PCT Application No. PCT/JP2013/065733, which was filed on June 6, 2013, designated the United States, and claimed priority to Japanese Application No. 2012-130755 (filed on June 8, 2012). Yabuki qualifies as prior art at least under 35 U.S.C. § 102(a)(2). Yabuki's PCT Application claims priority to Japanese Application No. 2012-130755 (filed on June 8, 2012), designated the United States, and was published as WO2013/183722 on December 12, 2013, and thus the PCT publication also qualifies as prior art at least under 35 U.S.C. §§ 102(a)(1) and/or 102(a)(2) as well as pre-AIA 35 U.S.C. 102(a) and/or (e). Samsung reserves the right to rely on WO2013/183722 as prior art for the same reasons described below for Yabuki.

With respect to the proposed modifications to Paek, such modification would have been obvious to try, an obvious combination of prior art elements according to known methods to yield predictable results, a simple substitution of one known element for another to obtain predictable results, a use of known techniques to improve a similar device or method in the same way, an application of a known technique to a known device or method ready for improvement to yield predictable results, a variation of a known work in one field of endeavor for use in either the same field or a different one based on design incentives or other market forces with variations that are predictable to a POSITA, and/or obvious in view of teachings, suggestions, and motivations in the prior art that would have led a POSITA to modify or combine the prior art references.

To the extent any of the art describes different embodiments of its inventions, a POSITA would have found it obvious to combine Paek's teachings regarding these embodiments. A POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the embodiments, and would have a reasonable

expectation of success in doing so, at least because the embodiments use known variations of existing technology to solve routine and well understood problems in predictable ways. A POSITA would have recognized that Paek's embodiments describe related advancements for mobile devices, and a POSITA would have been motivated to combine elements of the embodiments to achieve Paek's goals.

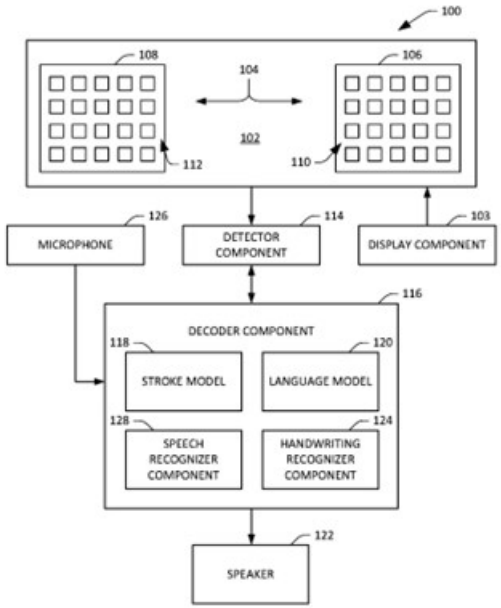
The excerpts cited herein are exemplary. For any claim limitation, Samsung may rely on excerpts cited for any other limitation and/or additional excerpts not set forth fully herein to the extent necessary to provide further explanation for a reference's disclosure of a limitation. Where an excerpt refers to or discusses a figure or figure items, that figure and any additional descriptions of that figure should be understood to be incorporated by reference as if set forth fully herein. Samsung reserves the right to further supplement this chart.

To the extent that these Invalidity Contentions rely on or otherwise embody particular interpretations of terms or phrases in the asserted claims, Samsung is not proposing any such interpretations as proper interpretations or constructions of those terms or phrases. Various positions put forth in this document are predicated on Keyless's interpretation of its claims as evidenced by its Infringement Contentions. Those positions are not intended to and do not necessarily reflect Samsung's interpretation of the true and proper scope of the asserted claims. Samsung further incorporates by reference all reservations of rights set forth in the Invalidity Contentions, as if fully set forth herein.

Defendants' arguments throughout these Invalidity Contentions are based on Keyless's apparent interpretation of the claims in its infringement contentions. Defendants do not agree that such interpretation is proper and reserve the right to argue that the mapped actions do not infringe any claims of the '922 patent. In the alternative, should the Court or factfinder construe and/or apply the claims in a manner consistent with Keyless's interpretations in its infringement contentions for the '922 patent, the claims are invalid for at least the reasons set forth herein.

In some instances, the referenced prior art includes priority applications, including prior provisional applications, that provide adequate §112 support for the claim(s) in the referenced prior art. *See, e.g.*, Sirpal-486. In those instances, the consistent disclosures in those earlier applications, including prior provisional applications, are incorporated herein by reference. As such, those earlier disclosures apply equally in terms of their application to the elements of the asserted claims, and thus provide even earlier dates in terms of prior art, state of the art, and the knowledge base of those of ordinary skill in the art. *See Dynamic Drinkware LLC v. National Graphics Inc*., 800 F.3d 1375 (Fed. Cir. 2015).

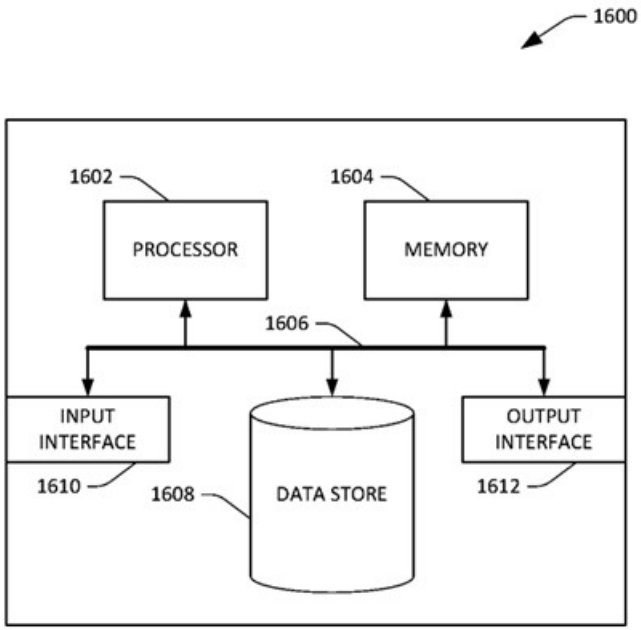
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[1P]** A system for using multiple applications on a screen of a device, comprising: | To the extent that the preamble is held to be limiting, Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses a "system for using multiple applications on a screen of a device."<br><br>For example, Paek discloses a "split virtual keyboard on a mobile computing device." Paek, Title. Paek notes that "[m]obile computing devices have been configured to display soft keyboards, where a user can enter text by selecting buttons on a soft keyboard," meaning that the device's screen can both display a keyboard and receive keyboard inputs via touch on the screen. Paek, 1:21-13. Referring to Figure 1, Paek depicts "a functional block diagram of an exemplary system 100 that facilitates generation of text through utilization of a split virtual keyboard is illustrated. The system 100 may be comprised by a mobile computing device, such as a tablet (slate) computing device. In another exemplary embodiment, the system 100 may be comprised by a mobile telephone with a relatively large display screen (sometimes referred to as a phablet). It is thus to be understood that the system 100 may be comprised by any suitable computing device with a screen diagonal of length between approximately four inches and approximately fifteen inches (such that a user can grip the computing device with two hands and interact with a first portion and a second portion of a split virtual keyboard, one with each hand)." Paek, 2:19-33. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| |  <br>Paek, Fig. 1.<br>Paek further discloses that the "system 100 comprises a touch-sensitive display 102":<br>The system 100 comprises a touch-sensitive display 102. A display component 103 causes a split virtual keyboard 104 to be displayed on the touch-sensitive display 102, wherein the split virtual keyboard 104 includes a first portion 106 and a second portion 108, which are split from one another. In an example, the first portion 106 may be separated from the second portion 108 by at least one inch on the touch-sensitive display 102. As will be shown in greater detail herein, the first portion 106 can be positioned on the touch-sensitive display 102 to facilitate receipt of input from a thumb of a first-hand of a user when the user is gripping/holding a mobile computing device that comprises the touch-sensitive display 102. Similarly, the second portion 108 of the split virtual keyboard 104 can be positioned on the touch-sensitive display 102 to facilitate receipt of input |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | from a thumb of a second hand of the user when the user is gripping/holding the mobile computing device. While the first portion 106 of the split virtual keyboard 104 is shown as being positioned on a right-hand side of the touch-sensitive display 102 and the second portion 108 of the split virtual keyboard 104 is shown as being positioned on a left-hand side of the touch-sensitive display 102, it is to be understood that the positions of the first portion 106 and the second portion 108 can be reversed. For example, the first portion 106 of the split virtual keyboard 104 can be positioned on the touch-sensitive display 102 to facilitate receipt of input from a dominant hand of the user (whichever hand that is), while the second portion 108 of the split virtual keyboard 104 can be positioned on the touch-sensitive display 102 to facilitate receipt of input from a thumb of a non-dominant hand of the user.<br><br>Paek, 4:34-64.<br><br>Paek discloses that its system, which includes a screen (as noted above), is used with multiple applications. For example, Paek discloses using "a text messaging application," "an e-mail or word processing application," and an Internet "browser." Paek, 2:30-49; *see also* Paek, 15:8-16 ("such layout may be particularly well-suited for a text messaging application or an e-mail application"), 15:33-38 ("the layout of the split virtual keyboard 104 can change depending upon an application being executed by the tablet computing device 300. For instance, a first layout can be used for an e-mail application, and a second layout can be used for a word processing application."). Paek also discloses a contacts application and a phone application, through its disclosure that, "[f]or instance, the user may desire to search for a contact in a list of contacts. The user can employ a continuous sequence of strokes to search for the name of the contact. For instance, after selecting a plurality of keys through a sequence of strokes over the first portion 106 of the split virtual keyboard 104, the computing device can audibly output a name that is being searched for that corresponds to the plurality of strokes. Thereafter, the user can cause an action to be undertaken with respect to the selected contact. For instance, the user can indicate a desire to e-mail the contact, place a call to the contact, etc." Paek, 10:48-62. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Paek further discloses that its system is for using multiple applications as follows:<br><br>> In still yet another example, at least one of the first portion 106 or the second portion 108 of the split virtual keyboard 104 can be employed in connection with launching applications, presenting menus, and/or selecting files. For example, the detector component 114 can detect an input gesture on the touch-sensitive display 102 that is associated with launching applications, presenting menus, and/or selecting files. Such input gesture can be performed over the first portion 106 or the second portion 108 of the split virtual keyboard 104. In another example, the gesture can be performed on the touch-sensitive display 102 when the split virtual keyboard 104 is not displayed thereon. Responsive to the detector component 114 detecting the gesture, the display component 103 can cause a list of applications, selectable menu options, and/or files to be displayed on the touch-sensitive display 102. Additionally, the display component 103 can cause at least the first portion 106 of the split virtual keyboard 104 to be displayed (if not already displayed) on the touch-sensitive display 102. The first portion 106 of the split virtual keyboard 104 can be employed, for instance, to set forth text that can be employed in connection with searching for and/or selecting an application, menu option, and/or file.<br><br>Paek, 11:1-23.<br><br>Paek further describes a "high-level illustration of an exemplary computing device 1600 that can be used in accordance with the systems and methodologies disclosed." Paek, 19:39-42.<br><br>> For instance, the computing device 1600 may be used in a system that supports text generation by way of a continuous sequence of strokes over a portion of a split virtual keyboard. By way of another example, the computing device 1600 can be used in a system that supports display of a split virtual keyboard on a tablet computing device. The computing device 1600 includes at least one processor 1602 that executes instructions that are stored in a memory 1604. The instructions may be, for instance, |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | instructions for implementing functionality described as being carried out by one or more components discussed above or instructions for implementing one or more of the methods described above. The processor 1602 may access the memory 1604 by way of a system bus 1606. In addition to storing executable instructions, the memory 1604 may also store keyboard layouts, imagery, etc.<br><br>The computing device 1600 additionally includes a data store 1608 that is accessible by the processor 1602 by way of the system bus 1606. The data store 1608 may include executable instructions, keyboard layouts, etc. The computing device 1600 also includes an input interface 1610 that allows external devices to communicate with the computing device 1600. For instance, the input interface 1610 may be used to receive instructions from an external computer device, from a user, etc. The computing device 1600 also includes an output interface 1612 that interfaces the computing device 1600 with one or more external devices. For example, the computing device 1600 may display text, images, etc. by way of the output interface 1612.<br><br>It is contemplated that the external devices that communicate with the computing device 1600 via the input interface 1610 and the output interface 1612 can be included in an environment that provides substantially any type of user interface with which a user can interact. Examples of user interface types include graphical user interfaces, natural user interfaces, and so forth. For instance, a graphical user interface may accept input from a user employing input device(s) such as a keyboard, mouse, remote control, or the like and provide output on an output device such as a display. Further, a natural user interface may enable a user to interact with the computing device 1600 in a manner free from constraints imposed by input device such as keyboards, mice, remote controls, and the like. Rather, a natural user interface can rely on speech recognition, touch and stylus recognition, gesture recognition both on screen and adjacent to the screen, |

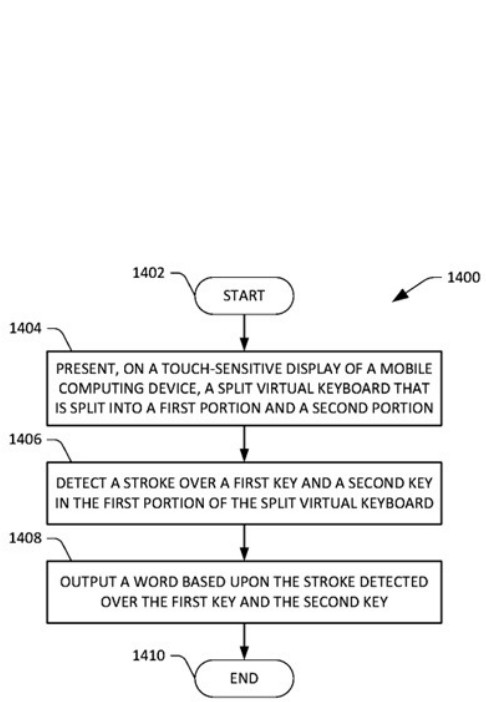
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | air gestures, head and eye tracking, voice and speech, vision, touch, gestures, machine intelligence, and so forth.<br><br>Paek, 19:42-20:22.<br><br>  <br><br><br>Paek, Fig. 16.<br><br>Additional exemplary citations include:<br><br>"For instance, a user may indicate a desire to search over contents of a particular application or data repository." Paek, 10:48-50.<br><br>With reference now to FIG. 15, an exemplary methodology 1500 for outputting a word to an application executing on a tablet computing device is illustrated. The methodology 1500 starts at 1502, and at 1504 a split virtual keyboard is displayed on a touch-sensitive display of a tablet |

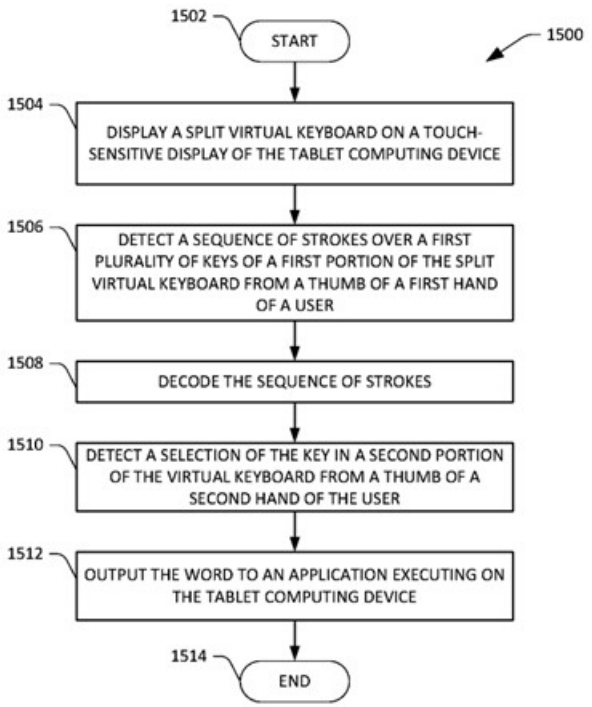
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | computing device. As indicated above, the split virtual keyboard includes a first portion and a second portion, wherein the first portion is displayed at a first location to facilitate receipt of input from a thumb of a first hand of a user who is gripping the tablet computing device. The second portion is displayed at a second location to facilitate receipt of input from a thumb of a second hand of the user who is gripping the tablet computing device. The first portion can include a plurality of keys that are representative of a respective plurality of characters (each character key is representative of a respective plurality of characters). The second portion can include a key that represents an "Enter" key, a "Spacebar" key, a punctuation key, or the like.<br><br>At 1506, a sequence of strokes over the first plurality of keys from the thumb of the first hand of the user is detected. At 1508, responsive to detecting a sequence of strokes over keys in the first portion of the split virtual keyboard, a word is identified based upon the sequence of strokes. At 1510, a selection of a key in the second portion of the split virtual keyboard is detected. For instance, it can be ascertained that the "Enter" key in the second portion of the split virtual keyboard has been selected by the thumb of the second hand of the user. At 1012, responsive to the selection of the key in the second portion of the split virtual keyboard being detected, the word that has been identified is output to an application executing on the tablet computing device.<br><br>Paek, 19:8-38.<br><br>Moreover, as detailed below in claim [1B] ("first application") and [1D] ("second application"), Paek's system is for using at least a first application and a second application. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[1A]** an electronic device having a touchscreen; | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an electronic device having a touchscreen."<br><br>For example, the Paek's "device" discussed in claim [1P] is an electronic device and has a touchscreen.<br><br>As another example, Paek discloses a "split virtual keyboard on a mobile computing device," which is an electronic device. Paek, Title. Paek notes that "[m]obile computing devices have been configured to display soft keyboards, where a user can enter text by selecting buttons on a soft keyboard," meaning that the device's screen can both display a keyboard and receive keyboard inputs via touch on the screen. Paek, 1:21-13. In Figure 16 (discussed in claim [1P]), Paek discloses that "the computing device 1600 may be used in a system that supports text generation by way of a continuous sequence of strokes over a portion of a split virtual keyboard." 19:42-45. Such a device is an electronic device, and such a screen is a "touchscreen."<br><br>Paek further discloses "various technologies pertaining to a split virtual keyboard that can be employed in connection with a touch-sensitive display screen, such as a display screen on a tablet (slate) computing device or other suitable device with a diagonal screen length of between about four inches and about fifteen inches. The split virtual keyboard comprises a first portion and a second portion, wherein the first portion is split from the second portion. The first portion of the split virtual keyboard can be positioned on the touch-sensitive display screen to facilitate receipt of input from a thumb of a first hand of a user gripping the tablet computing device, while the second portion of the split virtual keyboard can be positioned on the touch-sensitive display screen to facilitate receipt of input from a thumb of a second hand of the user gripping the tablet computing device." Paek, 1:52-67.<br><br>Paek also discloses:<br><br>> The system 100 comprises a touch-sensitive display 102. A display component 103 causes a split virtual keyboard 104 to be displayed on the touch-sensitive display 102, wherein the split virtual keyboard 104 includes a first portion 106 and a second portion 108, which are split from one |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | another. In an example, the first portion 106 may be separated from the second portion 108 by at least one inch on the touch-sensitive display 102. As will be shown in greater detail herein, the first portion 106 can be positioned on the touch-sensitive display 102 to facilitate receipt of input from a thumb of a first-hand of a user when the user is gripping/holding a mobile computing device that comprises the touch-sensitive display 102. Similarly, the second portion 108 of the split virtual keyboard 104 can be positioned on the touch-sensitive display 102 to facilitate receipt of input from a thumb of a second hand of the user when the user is gripping/holding the mobile computing device. While the first portion 106 of the split virtual keyboard 104 is shown as being positioned on a right-hand side of the touch-sensitive display 102 and the second portion 108 of the split virtual keyboard 104 is shown as being positioned on a left-hand side of the touch-sensitive display 102, it is to be understood that the positions of the first portion 106 and the second portion 108 can be reversed. For example, the first portion 106 of the split virtual keyboard 104 can be positioned on the touch-sensitive display 102 to facilitate receipt of input from a dominant hand of the user (whichever hand that is), while the second portion 108 of the split virtual keyboard 104 can be positioned on the touch-sensitive display 102 to facilitate receipt of input from a thumb of a non-dominant hand of the user.<br><br>Paek, 4:34-64.<br><br>Thus, Paek discloses "an electronic device having a touchscreen."<br><br>Additional exemplary citations include:<br><br>Paek includes substantial discussion of a "virtual keyboard" and/or a "touch-sensitive display," including, e.g., the discussions below. Each such discussion is evidence that Paek discloses "an electronic device having a touchscreen." |

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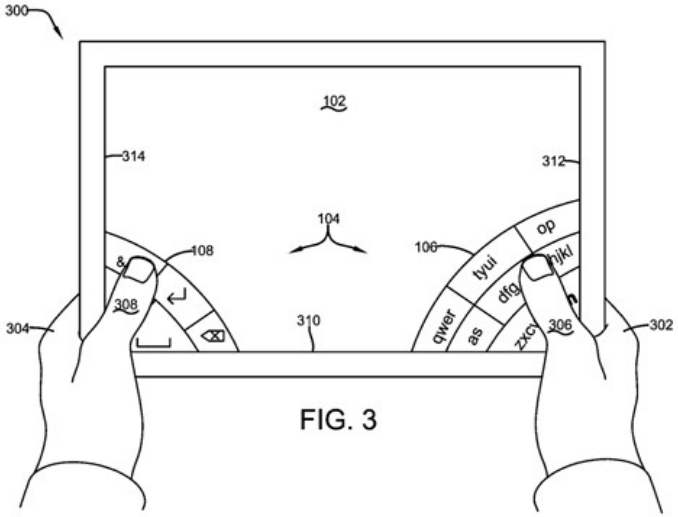

Paek, Figs. 14-15.

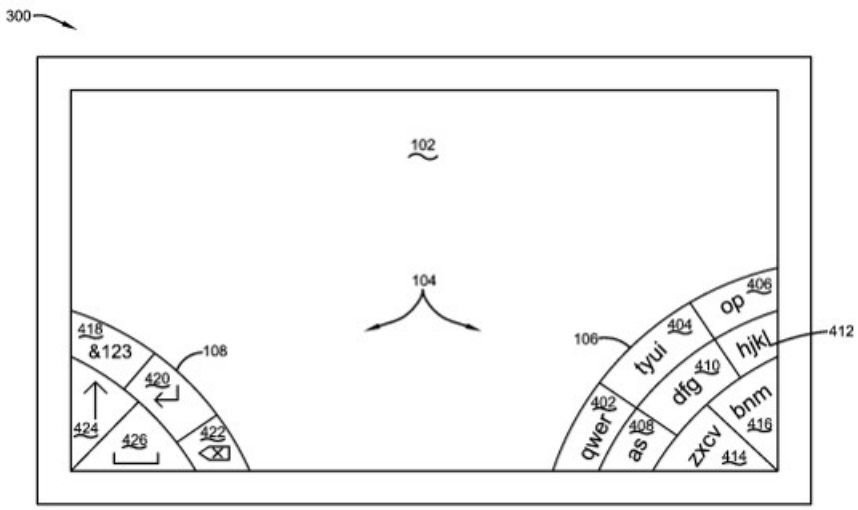
As indicated above, the virtual keyboard 104 is "split" in that the two portions 106 and 108 are visually distinct from one another, in that the first portion 106 is recognizable by the user as being configured to receive input from the first hand of the user and the second portion 108 is recognizable by the user as being configured to receive input from the second hand of the user. Accordingly, the first portion 106 and the second portion 108 can be separate by a visual boundary or space that graphically distinguishes the first portion 106 from the second portion 108. Further, it is to be understood that the first portion 106 and the second portion 108 can be displayed on

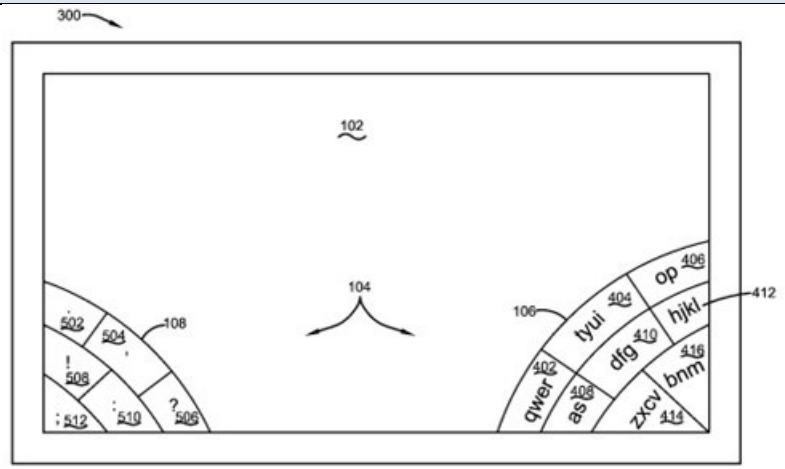
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | separate portions of a display; for example, the touch-sensitive display 102 may comprise two displays: a first display and a second "pullable" display that effectively extends the display. In such an example, the first portion 106 can be displayed on the first display and the second portion can be displayed on the second "pullable" display. Similarly, the display 102 can comprise two displays that can be folded, similar to a book. The first portion 106 can be displayed on a first display, and the second portion 108 can be displayed on a second display.<br><br>Paek, 5:7-18.<br><br>"In connection with performing such decoding, the decoder component 116 can comprise a stroke model 118 that is trained using labeled words and corresponding traces set forth over touch-sensitive input panels by users." Paek, 7:4-7.<br><br>In an exemplary embodiment, the user can cause a full keyboard to be displayed on the touch-sensitive display 102, such that conventional techniques may be employed to press discrete keys to enter the desired text. In another example, the decoder component 116 may include a handwriting recognizer component 124 that can recognize handwritten letters set forth by the user over a portion of the touch-sensitive display 102. In an example, the user may desire to set forth the sequence of characters "whoooooaah." Such sequence of characters may not be included in a dictionary used to decode traces by the stroke model 118 and/or the language model 120. To allow the user to set forth such sequence of characters without having to use a full keyboard or to look directly at the split virtual keyboard 104, the system 100 can support handwriting recognition, wherein the user can cause at least a portion of the split virtual keyboard 104 to act as a canvas for setting forth handwritten scripts (e.g., words, punctuations, symbols, characters, etc.). For instance, through selection of a key in the second plurality of keys 112, a particular gesture, a voice command, or the like, the first plurality of keys 110 can be replaced with a canvas upon which the |

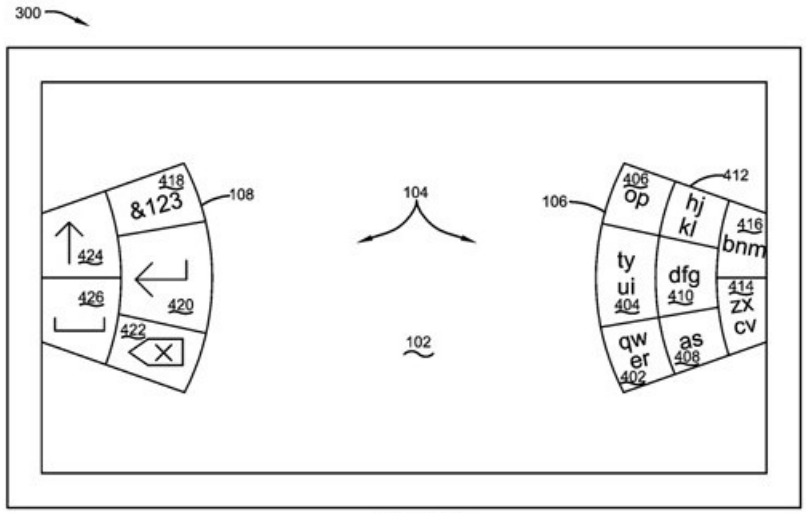
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| | user can set forth handwritten characters with the thumb of her first hand. The user may then trace characters over the first portion 106 of the split virtual keyboard 104, and the handwriting recognizer component 124 can recognize characters being handwritten by the user. Therefore, the user can first can write the letter "w" over the first portion 106 of the split virtual keyboard 104, and then may set forth a gesture indicating that the character has been completed. The user may thereafter handwrite the letter "h," which again can be recognized by the handwriting recognizer component 124. This process can continue until the user has set forth the desired sequence of characters. Thereafter, the user, through a voice command, gesture, depression of a button in the second portion 108 of the split virtual keyboard 104, or the like, can cause the split virtual keyboard 104 to return to a default state, where text entry via strokes is supported. Other modes are also contemplated, such as a mode that supports discrete tapping of keys, if such modes are desired by the user.<br><br>Paek, 8:54-9:28.<br><br>Additionally, to facilitate development of muscle memory with respect to particular sequences of strokes that are repeated by the user, different portions of the first portion 106 and/or the second portion 108 of the split virtual keyboard 104 may be provided with different textures relative to other portions of the split virtual keyboard 104. For instance, as shown, keys in the first plurality of keys 110 and keys in the second plurality of keys 112 may be separated by respective boundaries. The touch-sensitive display 102 can be configured to output haptic feedback as a digit of the user transitions over boundaries between keys in the first portion 106 and/or the second portion 108. Specifically, for instance, as a digit of the user crosses a boundary between keys in the first plurality of keys 110 when setting forth a sequence of strokes, an electrostatic signal can be output by the touch-sensitive display 102, such that the user perceives increased friction as the thumb crosses such boundary (e.g., the feedback is |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | localized). In other examples, keys in the first plurality of keys 110 may be associated with haptic feedback, such that from the perception of the user, it feels as if different keys have different textures. Thus, by feel, the user can differentiate between keys in the first plurality of keys 110 and keys in the second plurality of keys 112. That is, a first key may feel to the user as being smoother than a second key.<br><br>Paek, 10:18-41.<br><br>It is also to be understood that text generation via a sequence of strokes over keys in the first portion 106 of the split virtual keyboard 104 can be used in connection with performing a global search over a data store or collection of data stores associated with a computing device that comprises the system 100. For instance, a user may indicate a desire to search over contents of a particular application or data repository. Thereafter, the user can employ a continuous sequence of strokes, as described above, to generate text that is desirably used as a query. For instance, the user may desire to search for a contact in a list of contacts. The user can employ a continuous sequence of strokes to search for the name of the contact. For instance, after selecting a plurality of keys through a sequence of strokes over the first portion 106 of the split virtual keyboard 104, the computing device can audibly output a name that is being searched for that corresponds to the plurality of strokes. Thereafter, the user can cause an action to be undertaken with respect to the selected contact. For instance, the user can indicate a desire to e-mail the contact, place a call to the contact, etc. It is to be understood that the above is an example of a query that can be performed through utilization of text generation via a continuous sequence of strokes, and the type of global search that can be performed using aspects associated with FIG. 1 is not limited by such example. |

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| | Paek, 10:43-67.<br><br>"Now referring to FIG. 3, an exemplary tablet computing device 300 is shown. The tablet computing device 300 includes the touch-sensitive display 102, which displays the split virtual keyboard 104 (e.g., including the first portion 106 that is split from the second portion 108)." Paek, 12:17-21; Fig. 3.<br><br>  <br><br>FIG. 3<br><br>Paek, Fig. 3.<br><br>"Now referring to FIG. 4, the tablet computing device 300 is illustrated, wherein the split virtual keyboard 104 is displayed on the touch-sensitive display 102 and has an exemplary layout. As shown, the first portion 106 of the split virtual keyboard 104 can comprise a plurality of character keys 402-416, wherein each key in the character keys 402-416 is representative of a respective plurality of characters." Paek, 13:21-28. |

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| |  <br>FIG. 4<br><br>Paek, Fig. 4.<br><br>"Now referring to FIG. 5, the tablet computing device 300 is illustrated, wherein the split virtual keyboard 104 is shown with another exemplary layout. As shown in FIG. 5, the first portion 106 includes the plurality of character keys 402-416, wherein each character key is representative of a respective plurality of characters. In the exemplary layout shown here, the second portion 108 of the split virtual keyboard 104 includes a plurality of keys 502-512 that are respectively representative of a plurality of punctuation marks." Paek, 14:1-9. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 5<br><br>Paek, Fig. 5.<br><br>"With reference now to FIG. 6, the tablet computing device 300 is shown as displaying another exemplary layout of the split virtual keyboard 104. In the exemplary layout shown in FIG. 6, the first portion 106 includes the keys 402-416, and the second portion 108 of the split virtual keyboard 104 includes the keys 418-422." Paek, 14:20-25. |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>FIG. 6<br><br>Paek, Fig. 6.<br><br>"Now referring to FIG. 7, the tablet computing device 300 is shown, wherein the tablet computing device 300 displays yet another exemplary layout of the split virtual keyboard 104. In the exemplary layout of FIG. 7, the first portion 106 includes the first plurality of keys 402-416. The first portion 106 is also shown as including the keys 420-426, which were illustrated as being included in the second portion 108 in the exemplary layout shown in FIG. 4. The first portion 106 is also shown as including a key 702, which can cause characters represented by keys 402-416 to be displayed in another language. For example, selection of the key 702 by the thumb 306 of the first hand 302 of the user can cause a character shown in the first portion 106 to change from English to Japanese, from Japanese to Chinese, etc. The second portion 108 of the split virtual keyboard 104 includes a plurality of key 704-722 that are representative of respective numbers. That is, the second portion 108 includes keys of a numeric keyboard. Thus, the user may employ her thumb 306 of the first hand 302 to set forth words by way of a continuous sequence of strokes, change modes |

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| | of the keys in the first portion 106, etc., and may use the thumb 308 of her second hand 304 to select appropriate numbers." Paek, 14:46-67. |

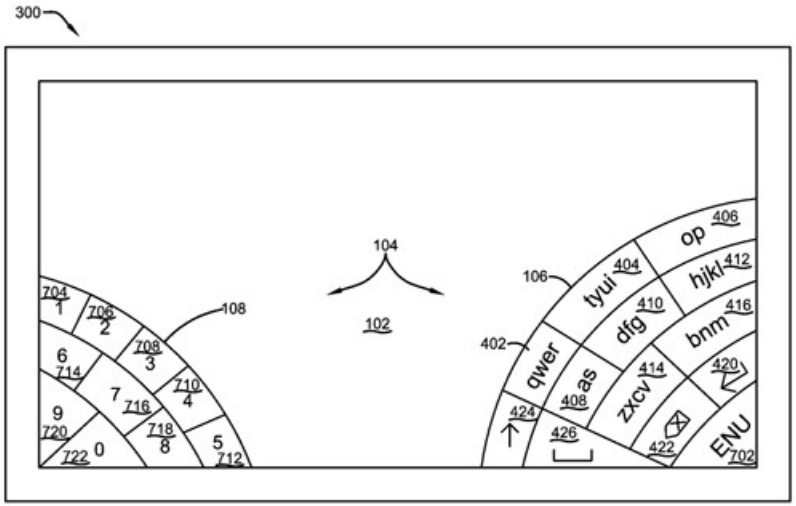



FIG. 7

Paek, Fig. 7.

"With reference now to FIG. 8, the tablet computing device 300 is again illustrated, wherein another exemplary layout of the split virtual keyboard 104 is displayed on the touchsensitive display 102. In the exemplary layout shown in FIG. 8, the first portion 106 includes keys as shown in the exemplary layout of FIG. 7. The second portion 108 includes a plurality of keys that are representative of a respective plurality of emoticons. For instance, such layout may be particularly well-suited for a text messaging application or an e-mail application, where users frequently submit emoticons with transferred text. Thus, in an example, a user may set forth a word or phrase by way of a continuous sequence of strokes over keys in the split virtual keyboard 104, and may then

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | include an emoticon with such words by selecting an appropriate key from the keys 802-812 through employment of the thumb 308 of her second hand 304." Paek, 15:1-16. |

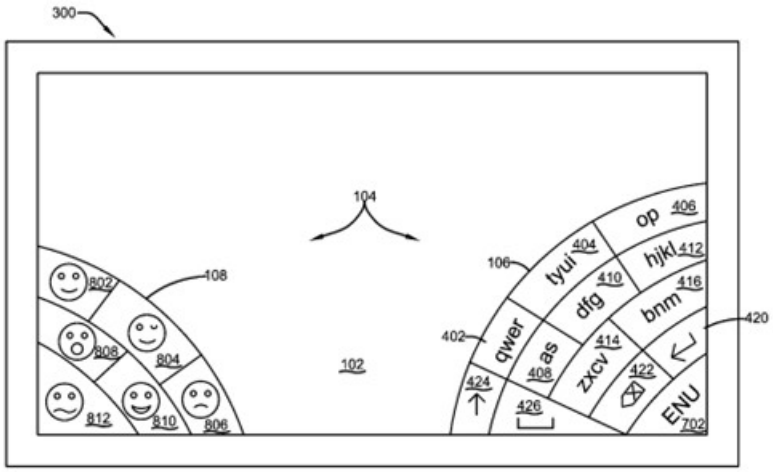
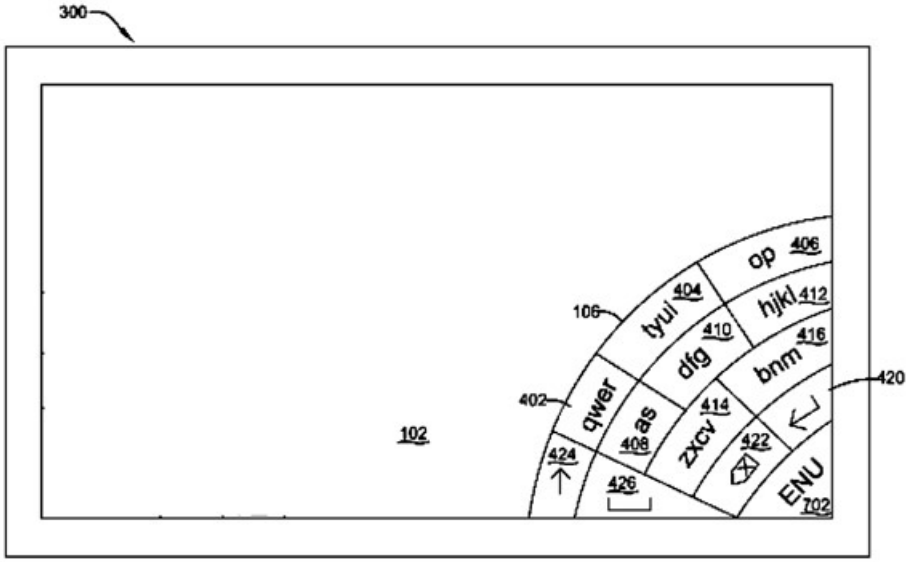


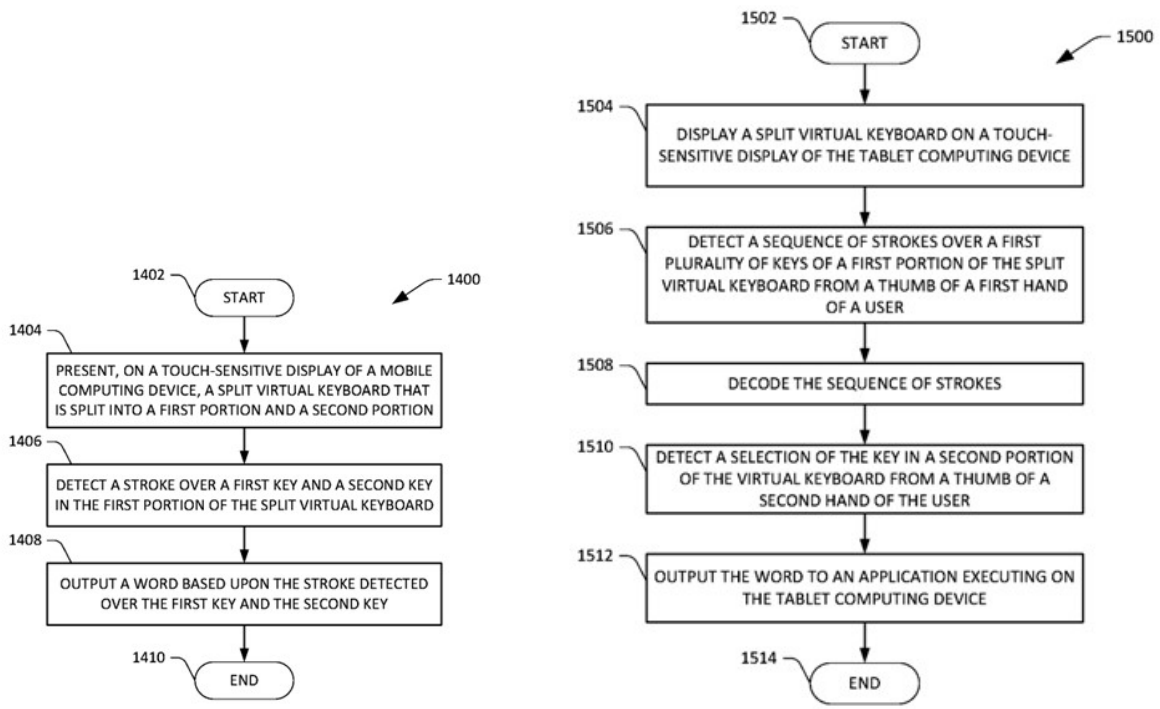

FIG. 8

Paek, Fig. 8.

"Now referring to FIG. 9, the tablet computing device 300 is illustrated, wherein only the first portion 106 is displayed on the display screen 102 of the tablet computing device. As shown, an outer boundary of the first portion 106 intersects a bottom edge and a right-side edge of the display screen 102, causing a relatively large amount of display real-estate to remain to depict application data, selectable icons, a desktop environment, etc. Accordingly, using the layout shown in FIG. 9, the user can generate text via a continuous sequence of strokes over keys in the first portion 106 while viewing content displayed on a remainder of the display screen 102. Moreover, due to the relatively small size of the first portion 106, a mobile telephone, mobile media device, or phablet computing device can have the first portion 106 displayed thereon, wherein such first portion 106 has similar or identical size across computing device. Thus, for instance, a user may develop muscle memory when generating text via a continuous sequence of strokes over keys in the first portion 106 when using such first portion 106 on a mobile telephone. The user can then utilize such

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| | muscle memory to generate text via a continuous sequence of strokes over keys in the first portion 106 when displayed on the tablet computing device 300. It is further to be understood that the first portion 106 can be moved and docked at a location on the display screen 102 as desired by the user." Paek, 15:39-64.<br>  <br><br>FIG. 9<br>Paek, Fig. 9. |
| **[1B]** an on-screen keyboard for entering text in a first application running within said device | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "an on-screen keyboard for entering text in a first application running within said device." |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | For example, Paek describes "a split virtual keyboard that is displayed on a tablet (slate) computing device. The split virtual keyboard includes a first portion and a second portion, the first portion being separated from the second portion. The first portion includes a plurality of character keys that are representative at least one respective character. The tablet computing device is configured to support text generation by way of a continuous sequence of strokes over the plurality of character keys in the first portion of the split virtual keyboard." Paek, Abstract. Thus, Paek discloses an "on-screen keyboard for entering text." Moreover, Paek discloses a process that includes "detect[ing] a sequence of strokes over a first plurality of keys of a first portion of the split virtual keyboard from a thumb of a first hand of a user" and, after decoding the strokes, "output[ting] the word to an application executing on the tablet computing device." Paek, Fig. 15; *see also* Fig. 14 ("output a word [to an application] based upon the stroke detected over the first key and the second key" of a "split virtual keyboard"). |

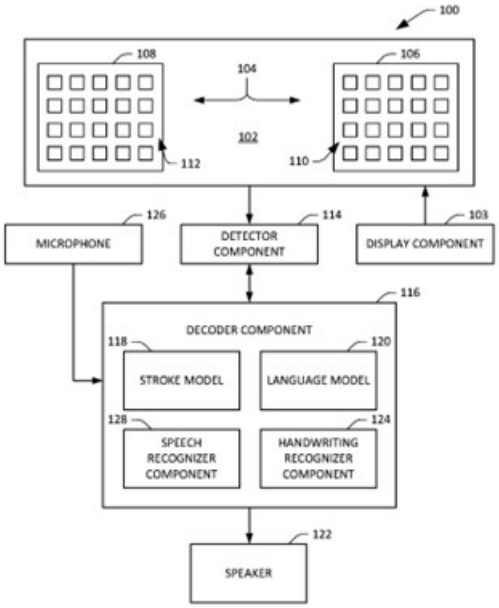
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| |  <br>Paek, Figs. 14-15. *See also* Paek, 19:28-38 ("At 1508, responsive to detecting a sequence of strokes over keys in the first portion of the split virtual keyboard, a word is identified based upon the sequence of strokes. At 1510, a selection of a key in the second portion of the split virtual keyboard is detected. For instance, it can be ascertained that the 'Enter' key in the second portion of the split virtual keyboard has been selected by the thumb of the second hand of the user. At 1012, responsive to the selection of the key in the second portion of the split virtual keyboard being detected, the word that has been identified is output to an application executing on the tablet computing device.").<br><br>Additional exemplary disclosures include: |

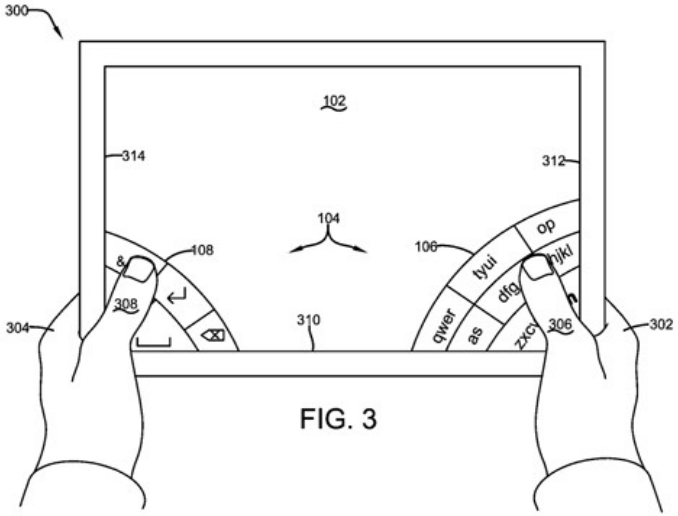
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | "The second portion of the split virtual keyboard can include at least one key that can be used in connection with setting forth input to an application. For example, at least one key in the second portion of the virtual keyboard can cause, when selected, character keys in the first portion of the split virtual keyboard to change from lowercase to uppercase or uppercase to lowercase. In another example, at least one key in the second portion of the split virtual keyboard can represent an "Enter" key, a "Backspace" key, etc. In still yet another example, one or more keys in the second portion of the split virtual keyboard can represent at least one punctuation mark. Thus, the user may employ the thumb of her dominant hand to set forth words by way of a continuous trace while using the thumb of her non-dominant hand to cause a word to be output to an application, to add punctuation in correspondence with a word, etc. In other embodiments, however, both the first portion and the second portion of the split virtual keyboard can include keys that are representative of respective characters, and text can be generated via continuous traces performed by a thumb of both the first hand of the user and the second hand of the user, respectively (analogously as to how one types using both a left-hand and a right-hand)." Paek, 2:39-61.<br><br>"The first portion 106 of the split virtual keyboard 104 comprises a first plurality of keys 110. In an example, the first plurality of keys 110 may comprise character keys, wherein each character key is representative of at least one respective character (e.g., letter). In another embodiment, at least one character key in the character keys can be representative of multiple letters. In still yet another exemplary embodiment, each character key in the character keys can be representative of a respective plurality of characters. For instance, the first plurality of keys 110 can comprise eight or nine character keys, wherein each character key is representative of a respective plurality of characters, and wherein the character keys are representative of an entirety of an alphabet (e.g., the English alphabet). The first plurality of keys 110 may also comprise numerical keys, a key representative of an 'Enter' key, a key representative of a 'Spacebar' key, a 'mode' key that causes a mode of at least the first portion 106 of the split virtual keyboard to alter when selected (e.g., characters can change from lowercase to uppercase and vice versa), and the like." Paek, 5:19-38.<br><br>"The second portion 108 of the split virtual keyboard 104 can comprise a second plurality of keys 112. The second plurality of keys 112 may include keys that are particularly well-suited in connection with decoding words set forth by the user through employment of the first plurality of keys 110. For example, the second plurality of keys 112 may include an 'Enter' key, a 'Spacebar' |

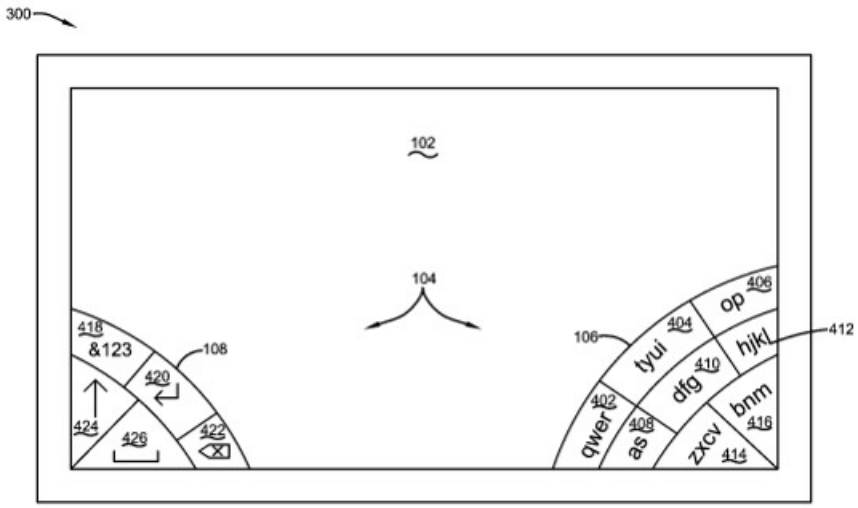
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| | key, etc., wherein such keys can be used to identify initiation and/or completion of a continuous sequence of strokes set forth by the user over the first portion 106 of the split virtual keyboard 104. Thus, for example, the user may desire to generate the word 'hello' by way of a continuous sequence of strokes. The user can use the thumb of her first hand to set forth a sequence of strokes over keys in the first plurality of keys 110 (e.g., transitioning such thumb from a key that represents the character 'h' to a key that represents the character 'e' to a key that represents the character 'l' to a key that represents the character 'o'). The user can subsequently use the thumb of her second hand to select an 'Enter' key from the second plurality of keys 112, thus indicating the completion of input for the word. In another example, at least one key in the second plurality of keys 112 can be a punctuation key, such that the key represents a period, comma, colon, semi-colon, question mark, exclamation point, etc. In still yet another example, keys in the second plurality of keys 112 may be numerical keys, emoticons, etc." Paek, 5:39-64.<br><br>"In another example, the stroke model 118 can be refined based upon shapes of traces set forth by the user over keys in the first portion 106 of the split virtual keyboard 104. Similarly, a dictionary utilized by the stroke model 118 and/or the language model 120 can be updated based upon words frequently employed by the user of the computing device that comprises the system 100 and/or an application being executed. For instance, if the user desires to set forth a name of a person that is not included in a dictionary of the stroke model 118, the user can inform the decoder component 116 of the name, such that sequences of strokes corresponding to such name can be recognized and decoded by the decoder component 116. In another example, a dictionary can be customized based upon an application being executed. For instance, words/sequences of characters set forth by the user when employing a text messaging application may be different from words/sequences of characters set forth by the user when employing an e-mail or word processing application. Similarly, keys and/or arrangement of keys in the first portion 106 and the second portion 108 of the split virtual keyboard 104 may be dependent upon an application being executed by the computing device that comprises the system 100. For example, if the computing device is executing a browser, and the split virtual keyboard 104 is being employed in connection with generating a URL for provision to the browser, the first plurality of keys 110 may include character keys, while the second plurality of keys 112 may include a '.com' key. In another example, if the computing device is executing a text messaging application, keys in the first plurality of keys 110 may be |

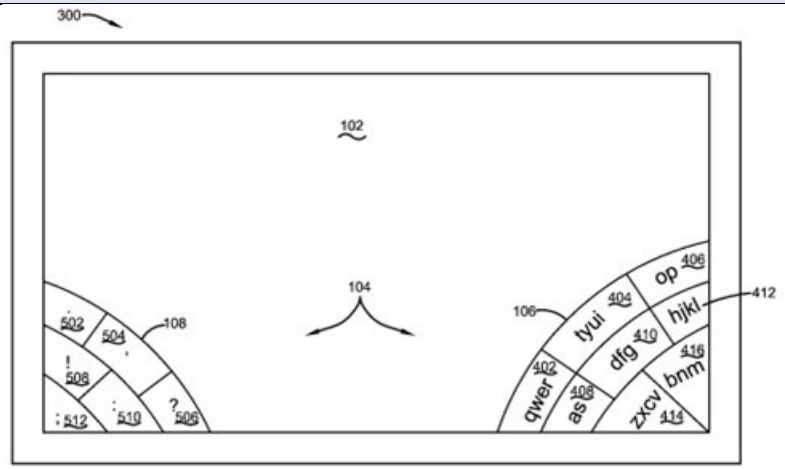
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| | character keys, while keys in the second plurality of keys 112 may represent emoticons." Paek, 8:17-49.<br><br>"It is also to be understood that text generation via a sequence of strokes over keys in the first portion 106 of the split virtual keyboard 104 can be used in connection with performing a global search over a data store or collection of data stores associated with a computing device that comprises the system 100. For instance, a user may indicate a desire to search over contents of a particular application or data repository. Thereafter, the user can employ a continuous sequence of strokes, as described above, to generate text that is desirably used as a query. For instance, the user may desire to search for a contact in a list of contacts. The user can employ a continuous sequence of strokes to search for the name of the contact. For instance, after selecting a plurality of keys through a sequence of strokes over the first portion 106 of the split virtual keyboard 104, the computing device can audibly output a name that is being searched for that corresponds to the plurality of strokes. Thereafter, the user can cause an action to be undertaken with respect to the selected contact. For instance, the user can indicate a desire to e-mail the contact, place a call to the contact, etc. It is to be understood that the above is an example of a query that can be performed through utilization of text generation via a continuous sequence of strokes, and the type of global search that can be performed using aspects associated with FIG. 1 is not limited by such example." Paek, 10:43-67.<br><br>"In still yet another example, at least one of the first portion 106 or the second portion 108 of the split virtual keyboard 104 can be employed in connection with launching applications, presenting menus, and/or selecting files. For example, the detector component 114 can detect an input gesture on the touch-sensitive display 102 that is associated with launching applications, presenting menus, and/or selecting files. Such input gesture can be performed over the first portion 106 or the second portion 108 of the split virtual keyboard 104. In another example, the gesture can be performed on the touch-sensitive display 102 when the split virtual keyboard 104 is not displayed thereon. Responsive to the detector component 114 detecting the gesture, the display component 103 can cause a list of applications, selectable menu options, and/or files to be displayed on the touch-sensitive display 102. Additionally, the display component 103 can cause at least the first portion 106 of the split virtual keyboard 104 to be displayed (if not already displayed) on the touch-sensitive display 102. The first portion 106 of the split virtual keyboard 104 can be employed, for |

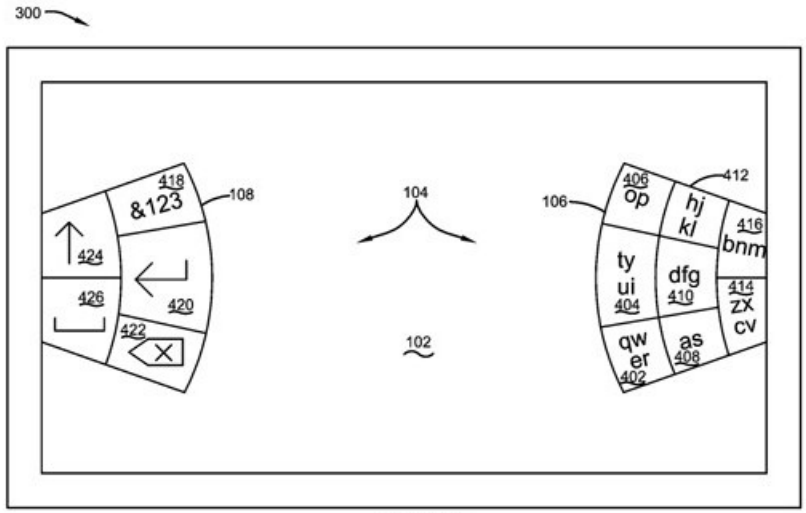
| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | instance, to set forth text that can be employed in connection with searching for and/or selecting an application, menu option, and/or file." Paek, 11:1-23.<br><br>"The key 420 in the second portion 108, when selected by the thumb 308 of the second hand 304 of the user, can cause text entered by way of the plurality of keys 402-416 to be finalized/output to an application. Therefore, in an example, after the user has generated the word 'hello' using the thumb 306 of her first hand 302, the user may then select the key 420 with the thumb 308 of her second hand 304, which causes the word 'hello' to be output." Paek, 13:43-51.<br><br>The Figure 8 "layout may be particularly well-suited for a text messaging application or an e-mail application, where users frequently submit emoticons with transferred text. Thus, in an example, a user may set forth a word or phrase by way of a continuous sequence of strokes over keys in the split virtual keyboard 104, and may then include an emoticon with such words by selecting an appropriate key from the keys 802-812 through employment of the thumb 308 of her second hand 304." Paek, Fig. 15:8-16.<br><br>"In addition, it is to be understood that layout of the split virtual keyboard 104 can change depending upon an application being executed by the tablet computing device 300. For instance, a first layout can be used for an e-mail application, and a second layout can be used for a word processing application." Paek, 15:33-38. |
| **[1C]** wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard; and | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein a first zone of said touchscreen is assigned to an interface of said first application and a second zone of said touchscreen is assigned to said keyboard."<br><br>For example, as discussed and illustrated above in claim [1B], Paek's keyboard appears in a zone (a "second zone") corresponding to elements 108 and 106 as illustrated in Fig. 1 below. "The system 100 comprises a touch-sensitive display 102. A display component 103 causes a split virtual keyboard 104 to be displayed on the touch-sensitive display 102, wherein the split virtual keyboard 104 includes a first portion 106 and a second portion 108, which are split from one another. In an |

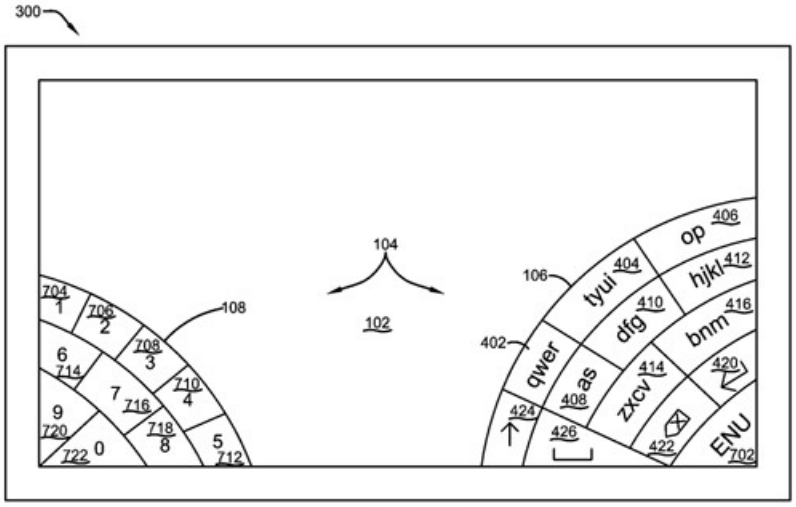
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| | example, the first portion 106 may be separated from the second portion 108 by at least one inch on the touch-sensitive display 102." Paek, 4:34-64.<br>  <br><br>Paek, Fig. 1. As was well understood in the art, the remaining portions of Paek's touchscreen display are available to display an interface for one or more applications. Paek's discussion reflects that understanding, as Paek describes an embodiment wherein the keyboard occupies only a "first portion 106" of a screen, thereby "causing relatively large amount of display real-estate to remain to depict application data, selectable icons, a desktop environment, etc.," meaning that "the user can generate text via a continuous sequence of keystrokes over keys in the first portion 106 while viewing content displayed on a remainder of the display screen 102." Paek, 15:39-50. By extension of Paek's disclosure, and as a matter of background knowledge (based, e.g., on the prior art discussed in all of Exhibits B1-B7 of these Invalidity Contentions) POSITA would understand that any displayed application interface(s)—including any "interface of [a] first application"—would necessarily appear on the portions of the touchscreen display not occupied by the keyboard. Those |

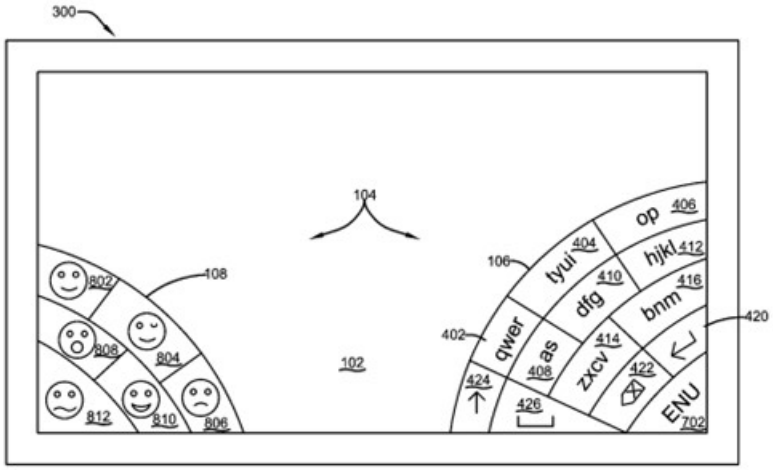
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| | portions constitute a "first zone" to which the application interface is assigned, at least under Keyless's interpretation.<br><br>Paek includes many examples illustrating its touchscreen device, with a "second zone" (corresponding to elements 106 and/or 108) assigned to a keyboard and the remaining portions of the screen encompassing the "first zone" assigned to an interface of an application, as shown below. Each figure is discussed in claim [1A].<br><br>  <br><br>FIG. 3<br><br>Paek, Fig. 3. |

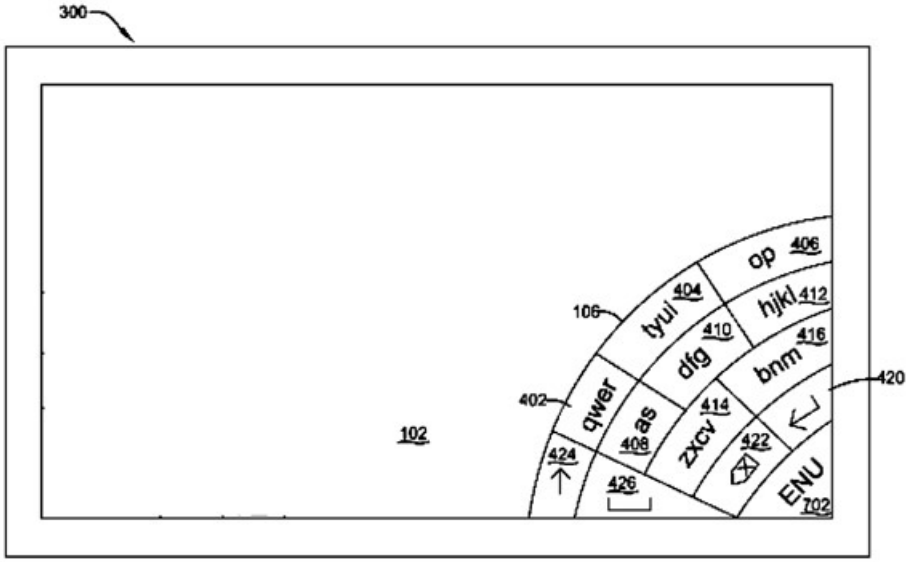
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| |  <br>FIG. 4<br>Paek, Fig. 4. |

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| |  <br>FIG. 5<br>Paek, Fig. 5. |

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| |  <br>FIG. 6<br>Paek, Fig. 6. |

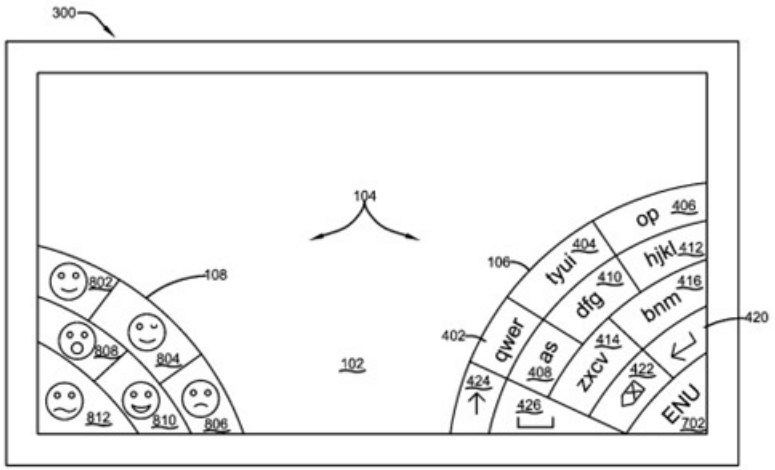
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| |  <br>FIG. 7<br><br>Paek, Fig. 7. |

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| |  <br>FIG. 8<br><br>Paek, Fig. 8. |

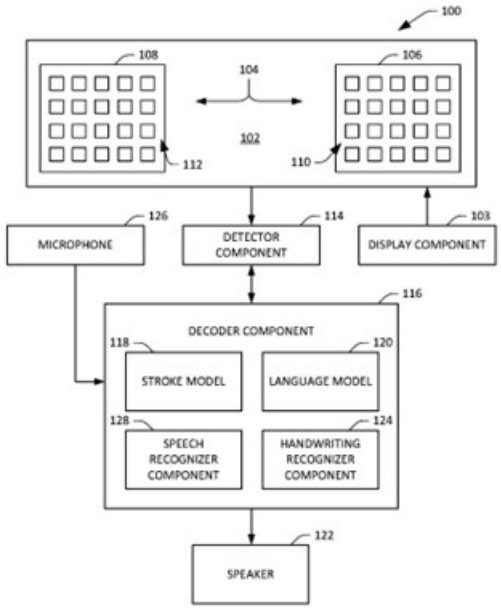
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| |  <br>FIG. 9<br><br>Paek, Fig. 9.<br><br>Furthermore, the "first application" may be any of the various applications discussed in claim [1P], including, e.g., "a text messaging application," "an e-mail or word processing application," or an Internet "browser." Paek, 2:30-49, 15:8-16, 15:33-38. Other applications also are a "first application," including a contacts/address book application ("list of contacts") and an application to "place a call to the contact." Paek, 10:48-62. In each instance, the "first zone" (e.g., the areas outside of the keyboard) are assigned to the (first) application. |
| **[1D]** wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone, and | displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone."<br><br>For example, Paek discloses that a condition under the control of its keyboard may be used to launch an application. For example, in Paek:<br><br>> [A]t least one of the first portion 106 or the second portion 108 of the split virtual keyboard 104 can be employed in connection with launching applications, presenting menus, and/or selecting files. For example, the detector component 114 can detect an input gesture on the touch-sensitive display 102 that is associated with launching applications, presenting menus, and/or selecting files. Such input gesture can be performed over the first portion 106 or the second portion 108 of the split virtual keyboard 104. In another example, the gesture can be performed on the touch-sensitive display 102 when the split virtual keyboard 104 is not displayed thereon. Responsive to the detector component 114 detecting the gesture, the display component 103 can cause a list of applications, selectable menu options, and/or files to be displayed on the touch-sensitive display 102. Additionally, the display component 103 can cause at least the first portion 106 of the split virtual keyboard 104 to be displayed (if not already displayed) on the touch-sensitive display 102. The first portion 106 of the split virtual keyboard 104 can be employed, for instance, to set forth text that can be employed in connection with searching for and/or selecting an application, menu option, and/or file.<br><br>Paek, 11:1-23; *see also* claim 13 ("responsive to detecting the input gesture, displaying a selectable application, file, or menu option on the touch-sensitive display, wherein the word [recited in claim 12] is employed in connection with searching for or selecting the selectable application, file, or menu option").<br><br>In particular, Paek discloses that an action under the control of its keyboard may launch a canvas application or handwriting recognition application, and that the launched application interface appears on at least a portion of the second zone formerly occupied by the keyboard. Paek, 8:50- |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | 9:28. For example, Paek includes "a handwriting recognizer component 124 that can recognize handwritten letters set forth by the user over a portion of the touch-sensitive display 102." Paek, 8:58-61. "To allow the user to set forth [a] sequence of characters without having to use a full keyboard or to look directly at the split virtual keyboard 104, the system 100 can support handwriting recognition, wherein the user can cause at least a portion of the split virtual keyboard 104 to act as a canvas for setting forth handwritten scripts (e.g., words, punctuations, symbols, characters, etc.)." Paek, 8:65-9:5. More specifically, "through selection of a key in the second plurality of keys 112, a particular gesture, a voice command, or the like, the first plurality of keys 110 can be replaced with a canvas upon which the user can set forth handwritten characters with the thumb of her first hand. The user may then trace characters over the first portion 106 of the split virtual keyboard 104, and the handwriting recognizer component 124 can recognize characters being handwritten by the user." Paek, 9:5-9. After handwriting recognition is complete, "the user, through a voice command, gesture, depression of a button in the second portion 108 of the split virtual keyboard 104, or the like, can cause the split virtual keyboard 104 to return to a default state, where text entry via strokes is supported." Paek, 9:21-25; *see also* claim 2 ("receiving input that indicates a desire to set forth handwritten scripts; responsive to receiving the input, receiving a stroke that is representative of a handwritten character; and decoding the stroke to identify the handwritten character").<br><br>In Paek, the "selection of a key in the second plurality of keys 112 [or] a particular gesture" is a condition under the control of said keyboard. *See* Paek, 9:5-9. Based on accomplishment of that condition, "the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone," because the canvas/handwriting recognition application appears in place of the "first plurality of keys 110" (e.g., the portion labeled 106 on the split keyboard (104) depicted in Fig. 1 and because remaining keyboard portion (108) is a reduced interface corresponding to the keyboard. *See id.* As discussed above in claim [1C], the first plurality of keys 110 on split keyboard portion 106 occupied at least a portion of the "second zone" (i.e., the zone occupied by the full-sized split keyboard). Accordingly, for at least these reasons, Paek discloses "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone." |

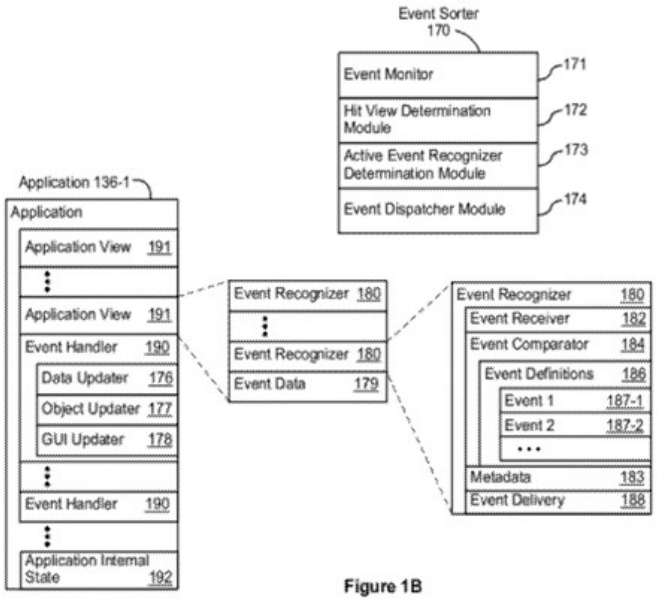
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| | In addition to its canvas/handwriting input application, Paek discloses other applications that may be caused to occupy at least a portion of the zone that would otherwise be occupied by a full-sized keyboard (e.g., a "second zone"). For example, "selection of at least one key in the second plurality of keys 112 can cause a format of a word generated by setting forth strokes over keys in the first plurality of keys 110 to alter. In an example, selection of the at least one key in the second plurality of keys 112 can cause the word to be italicized, displayed in bold, underlined, etc. Further, selection of the at least one key in the second plurality of keys can cause quotation marks to be placed around the word, can cause a first letter of the word to be capitalized, can cause all letters of the word to be capitalized, can cause font of the word to be altered, etc." Paek, 6:21-31. As another example, portions of the second zone otherwise occupied by a full-sized split keyboard may be occupied by an emoticon-entry application. Specifically, "keys in the second plurality of keys 112 may be numerical keys, emoticons, etc." Paek, 5:62-64; *see also id.* 8:45-49 ("if the computing device is executing a text messaging application, keys in the first plurality of keys 110 may be character keys, while keys in the second plurality of keys 112 may represent emoticons"), 15:1-16 ("second portion 108 includes a plurality of keys that are representative of a respective plurality of emoticons"), Fig. 8.<br>  <br><br>FIG. 8 |

| Claim 1 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Paek, Fig. 8. |
| **[1E]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen. | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touchscreen."<br><br>For example, as illustrated in Figure 1 (below), "the split virtual keyboard 104 includes a first portion 106 and a second portion 108, which are split from one another. In an example, the first portion 106 may be separated from the second portion 108 by at least one inch on the touch-sensitive display 102." Paek, 4:37-41. When using the "second application" (canvas/handwriting input application, discussed above in claim [1D]), "the first plurality of keys 110 [i.e., in portion 106] can be replaced with a canvas upon which the user can set forth handwritten characters with the thumb of her first hand." Paek, 9:5-9. In this configuration, the canvas ("second application"), the remaining portion of the keyboard (108), and the first application (*see* [1B]) are all simultaneously displayed. Therefore, the limitation is met. |

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| |  <br>Paek, Fig. 1. |

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| **[2]** The system of claim 1, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 2 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 2 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein upon interacting with |

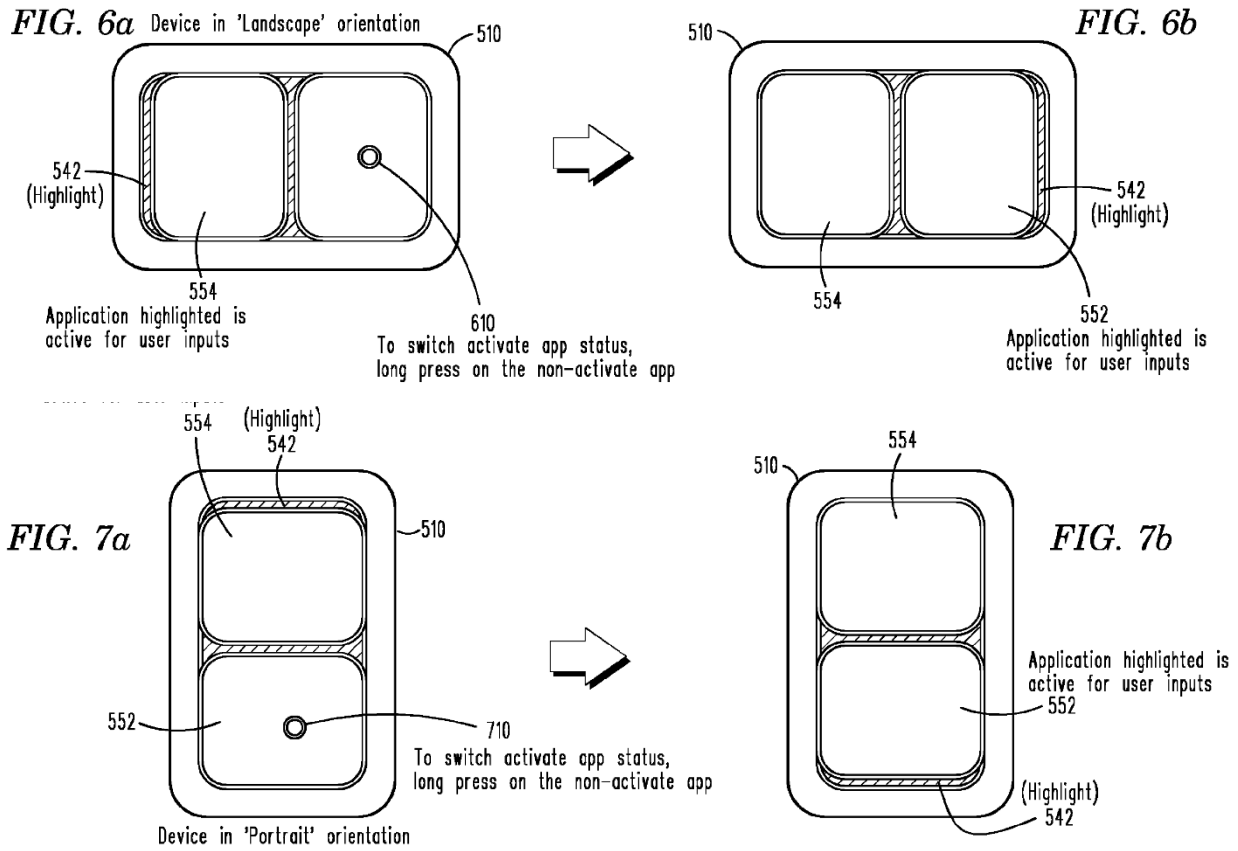
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| | the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>For example, in all of the examples shown in connection with claim 1, interacting with the interface of the "first" application causes the focus of the system to be given to the "first" application, and interacting with the interface of the "second" application causes the focus to be given to the "second" application. The focus can shift back and forth between the applications.<br><br>A POSITA understood that one fundamental design attribute of a touchscreen mobile device (and indeed, the strong expectation of the user of a touchscreen) is that the focus of the system—at least but not limited to the focus of the touchscreen input system—is directed to the element(s) that the user interacts with or touches. That principle holds true for applications.<br><br>Koch, for example, reflects the art's understanding of how a touchscreen device is designed to process touch interactions and determine which element (e.g., application) was interacted with and how the element should respond. For example, in Koch, "[i]n some embodiments, event sorter 170 also includes a hit view determination module 172 and/or an active event recognizer determination module 173. Hit view determination module 172 provides software procedures for determining where a sub-event has taken place within one or more views, when touch sensitive display 112 displays more than one view. Views are made up of controls and other elements that a user can see on the display." Koch at [0179]-[0180]. Koch further describes how its device processes and responds to an interaction with an interface, including an interaction with an interface of an application, causes the focus of the system to be given to the interacted application. *See* Koch [0181]-[0197]; Fig. 1B. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>Figure 1B<br><br>Koch, Fig. 1B. Given a POSITA's background understanding, as reflected by Koch, the POSITA would recognize that a user would interact with an interface of an application (e.g., by touching a portion of the touch screen corresponding to the first application's GUI) in order to cause an action within or response by the application. A POSITA would further understand that such an interaction causes the focus of the system (e.g., the focus of the input method) to be given to the first application. Thus, a POSITA would understand (in view of disclosures such as Koch) that Paek's system provides "wherein upon interacting with the interface of any of said applications," e.g., including the first application, "the focus of the system is given to the interacted application."<br><br>Further exemplary disclosures of Koch with regard to Claim 2 are set forth in Exhibit B2 to these Invalidity Contentions. Those disclosures are incorporated here.<br><br>To the extent Keyless argues that Paek does not disclose or render obvious "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | interacted application," it would have been obvious in view of Paek, POSITA's pre-existing knowledge, and/or the teachings of Paek combined with the other references charted for this patent in these invalidity contentions, including Koch, Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Koch, Sirpal-486, Sirpal-000, and Lavallee discloses wherein upon interacting with the interface of any of several applications, the focus of the system is given to the interacted application.<br><br>For example, as discussed above, Koch discloses the design and operation of a system for handling touch inputs on the screen of a device, such that the device provides "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application." Koch is discussed above as background knowledge of a POSITA of such a feature. If, however, Paek alone is not considered to anticipate or render obvious claim 2, then the feature would have been obvious over Paek in view of Koch. Paek discloses using multiple applications on the screen of a device (as discussed in Claim 1), and Koch details one of a limited number of art-recognized options to implement such a feature, i.e., such that the focus of the system is given to an interacted application upon an interaction with the interface of that application.<br><br>As another example, Sirpal-486 describes a "multi-screen user device and a universal clipboard application" with an "intuitive user interface" for copying information from one application on a screen of the device to be pasted into another application on another screen. Sirpal-486, Abstract. Sirpal-486 notes that a "substantial number of handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands." Sirpal-486, |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | ¶[0002]. *Sirpal* explains that the "small form factor of handheld computing devices requires a careful balancing act between the displayed graphics and the area provided for receiving inputs." Sirpal-486, ¶[0003].<br><br>Additional information about Sirpal-486's system for switching focus between applications appears in Sirpal-000, which Sirpal-486 incorporates by reference. For example, Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147.<br><br>  <br><br><br>Sirpal-000 at 147.<br><br>According to Sirpal-000, as illustrated above, "[i]n this model, the user has the device open to display dual screens. On each screen is displayed an application. The keyboard spans across both screens. As shown by the highlight around the entry field in the compose view on the left and the colored title bar, the user has placed focus in the composer on the left. Therefore typing on the keyboard will input in the field on the left. The user can tap the right screen to move the focus to that screen. If the user taps a field, that field will get the focus and the title bar will change to orange. The right screen will compress and the action bar will appear. The focus state and title in the left will return to the off state; however, the action bar will remain. This allows the user to tap back and forth to enter text in both screens in a seamless fashion." Sirpal-000 at 147. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee states that "FIGS. 6a-6b and 7a-7b illustrate switching the active running application, in accordance with various aspects of the present disclosure," as illustrated below. Lavallee, ¶[0010]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| |  <br>"Referring now to FIGS. 6 a-b and 7 a-b, it can be seen that the active application displayed in the split screen mode can be changed or switched. The active application refers to the application of the maximized, running applications displayed in the split screen mode that is capable of accepting inputs, such as from a user providing inputs via the touch screen 520 of the device 510 or via peripherals, such as a keyboard, mouse, etc., that may be coupled to device 510. Once the two or more running applications are open and simultaneously displayed, one application is designated as |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | active to accept user inputs. Selection of one of the other running, inactive applications, such as by a long press inside the inactive application, will activate that application and cause it to be the active application. In FIG. 6 a, mobile device 510 is shown in landscape orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in portrait orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 610 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 6b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed. Thus, switching active control of the two or more running applications from a previous running application as the active application to a new running application as the active application can be accomplished. It has been shown that this switching active control may be accomplished by selecting the new running application to be active via the touch screen. Moreover, the previous running application can be the active application that was designated as active upon creating the combined group representation. In the example of FIGS. 5 a-5 d, application 554 was the initial active application so designated upon forming the combined group icon 530." Lavallee, ¶[0051].<br><br>"In FIG. 7 a, mobile device 510 is shown in portrait orientation and applications 552 and 554 are displayed in their respective split screen mode viewing areas in landscape orientation. Application 554 is still active, as indicated by the highlighted portion 542 surrounding the graphical frame that defines its split screen mode viewing area. In order to switch from application 554 to application 552 as the active, running application displayed in the split screen mode, a user may make a long press 710 on the non-active application 552, as shown in the drawing. This selection has the effect, shown in FIG. 7 b, of making application 552 the active, running application; highlighted portion 542 now surrounds the split screen mode viewing area in which application 552 is displayed." Lavallee, ¶[0052].<br><br>Lavallee discloses several use cases for its application-switching system, in which the focus is switched between applications by interacting with their respective interface(s). For example, "FIGS. 10 and 11, illustrate representative examples of running applications that have been |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | maximized and displayed in their respective split screen mode viewing areas in the split screen mode after the combined group representation in which they are represented has been selected. In FIG. 10, a user of an electronic device with a touch screen is composing an email. Two maximized and displayed running applications are shown: an email application in the left split screen mode viewing area and a web browser application in the right split screen mode viewing area. The split screen mode is used to get content for their email using the web browser. In FIG. 11, a user is playing a video game. Two maximized and displayed running applications are shown: a video game application in the left split screen mode viewing area and a strategy guide application in the right split screen mode viewing area. The split screen mode is used to read the strategy guide for the game while the user is actually playing the video game displayed in the left split screen mode viewing area." Lavallee, ¶[0057].<br><br>As another example, Lavallee describes "various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059]; *see also* Lavallee, ¶[0060]-[0065] *and* Figs. 12a-15d. For example, Lavallee describes "an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area," such that a user "is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body." Lavallee, ¶[0060]. "Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060]. "It is noted that in the "copy and paste" function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage." Lavallee, ¶[0062]. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | By way of further examples, Lavallee discloses:<br><br>• "an 'insert' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application" Lavallee, ¶[0061], Figs. 13a-13d;<br><br>• "an 'attach file' function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments," suitable for applications that "include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc." Lavallee, ¶[0061], Figs. 14a-14d;<br><br>• "an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application." Lavallee, ¶[0061], Figs. 15a-15d.<br><br>Additional exemplary disclosures of Lavallee include:<br><br>• "Optionally, active control of the displayed running applications in the split screen mode may be switched at Block 1750 if desired. While the application on top of the combined group representation stack may initially be active and highlighted to signify its status as the active application, this active control can be changed at any time desired, by the user selecting another application of the displayed applications to be active." Lavallee, ¶[0069].<br><br>• "8. The method of claim 1, wherein one running application is active and capable of receiving user inputs via the touch screen, the method further comprising: switching active control of the two or more running applications from a previous running application as |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | active application to another running application of the two or more running applications as the active application." Lavallee at claim 8.<br><br>• "23. The device of claim 18, wherein one running application is active and capable of receiving user inputs via the touch screen and the processor and the memory are further configured to switch active control of the two or more running applications from a previous running application as the active application to another running application of the two or more running applications as the active application." Lavallee at claim 23.<br><br>A POSITA would have found it obvious to incorporate "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application," as claimed. Each of Koch, Sirpal-486 (including through incorporation of Sirpal-000), Sirpal-000, and Lavallee discloses wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Paek, as an obvious and intuitive way to allocate system resources and/or direct keyboard inputs to any of the first and second applications of Paek. One obvious combination of would yield a system in which the user could select (by a touch interaction) which of the first application or second application (e.g., handwriting input application) the user wants to receive the focus of the system. Interacting with the first application interface would direct system to focus the system's touch interface on the first application—meaning that touch inputs would be registered by the first application so the first application can process those inputs accordingly. The same would be true of interacting with the second application interface. The resulting system would ensure that the focus of the input system(s) is/are properly directed to an interacted application. If a user has touched the first application, the system would understand to direct the focus of the touch screen toward that first application and/or direct the focus of the keyboard toward entering text into that first application (so text may be typed into the text entry box). Whereas if the user has touched the handwriting input application interface, e.g., to make a hand-drawn character or word, then the system would understand to direct focus to the handwriting input application to recognize the user's interactions with that application. A POSITA would have been motivated to make the modification for this additional reason. |

| Claim 2 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Moreover, a POSITA would recognize the focus-switching features to be an advantageous and important (and perhaps even necessary) way to achieve the multi-application/multi-mode functionalities described in Paek. Interacting with one of several active applications to direct system focus to the interacted application was routine and conventional to a POSITA, as shown by Sirpal-000 and Lavallee. Incorporating the feature into Paek's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Paek, represent nothing more than combining prior art elements according to known methods and techniques (allocating system resources to interacted application(s)) to a mobile electronic touch screen device to yield predictable results (directing system resources to an active/interacted application). |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[3]** The system of claim 1, wherein said keyboard is used with both of said applications. | Claim 3 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 3 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said keyboard is used with both of said applications."<br><br>For example, as discussed in claim [1B], the keyboard is used with the first application.<br><br>In addition, as discussed in claim [1D], the keyboard is used to activate the canvas/handwriting input application and, thus, is used with the canvas/handwriting input application. Additionally, in |

| Claim 3 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Paek, the keyboard is used to close the canvas/handwriting input application, e.g., to "cause the split virtual keyboard 104 to return to a default state, where text entry via strokes is supported." Paek, 9:21-25. The keyboard is used with the canvas/handwriting input application for this additional reason. |

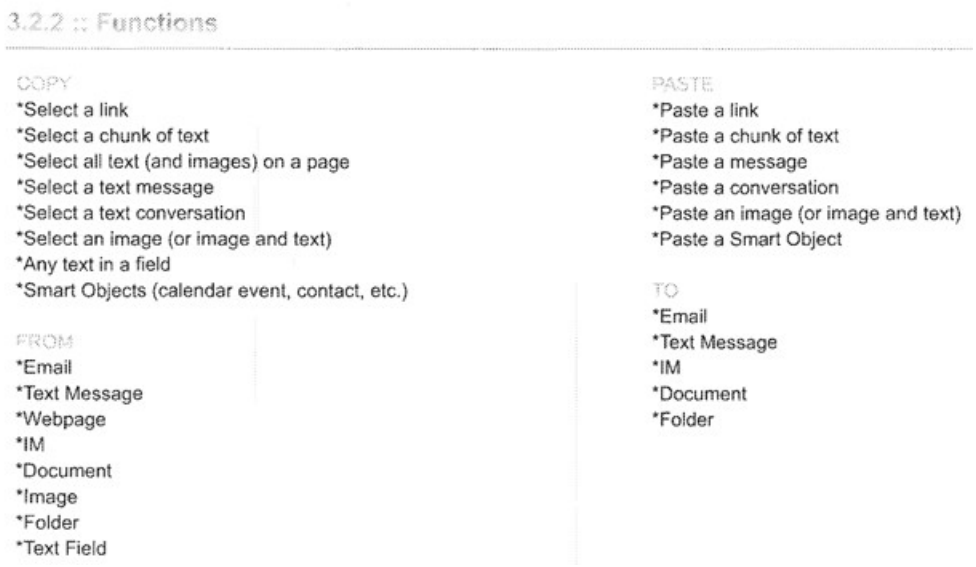
| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[4]** The system of claim 1, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen. | Claim 4 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 4 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen."<br><br>For example, Paek discloses sharing information received from a second application with a first application while the interface of both applications are simultaneously displayed on the touchscreen. For example, as discussed above in claim [1E], when the canvas/handwriting application occupies a portion of the "second zone," the remaining portion of the keyboard (108) and the first application (*see* [1B]) are still displayed. With the GUI interfaces so configured, the "user may then trace characters over the first portion 106 of the split virtual keyboard 104, and the handwriting recognizer component 124 can recognize characters being handwritten by the user. Therefore, the user can first can write the letter 'w' over the first portion 106 of the split virtual keyboard 104, and then may set forth a gesture indicating that the character has been completed. The user may thereafter handwrite the letter 'h,' which again can be recognized by the handwriting recognizer component 124. This process can continue until the user has set forth the desired |

| Claim 4 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | sequence of characters." Paek, 9:10-21. Thus, the user's handwriting gestures are "an information received from one of said applications" (namely, the canvas/handwriting input application). Moreover, because the canvas/handwriting application is designed as alternative to the keyboard for text entry (*see* Paek, 8:50-9:28), the text output of the canvas/handwriting application is sent to the first application in the same way as text output from the keyboard, which is discussed above in claim [1B]. *See supra* claim [1B].<br><br>Accordingly, Paek provides "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen." |

| Claim 5 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[5]** The system of claim 4, wherein said information includes at least one of, a text, an image, a video, a webpage and a URL. | Claim 5 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 5 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL."<br><br>For example, and as discussed above in claim [4], the "information" shared from Paek's canvas/handwriting input application to the first application includes handwritten text, which is text and/or an image. *See supra* claim [4]. Thus, Paek provides "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL," as required by the claim. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[6]** The system of claim 4, wherein said information is copied from one of said applications and pasted in the other application. | Claim 6 depends from claim 4. Defendants incorporate all the prior art disclosures from claim 4 here, which anticipate and/or render claims 1 and 4 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 4 to show the additional limitations of claim 6 are anticipated and/or obvious for the same reasons set out in claims 1 and 4.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said information is copied from one of said applications and pasted in the other application."<br><br>For example, Paek discloses that the user may provide an indication when a handwritten gesture has been completed in the canvas/handwriting input application, and thus is ready to be transmitted to the other (first) application. *See* Paek, 9:10-21 (user "may set forth a gesture indicating that the character has been completed").<br><br>To the extent Keyless argues that Paek does not disclose or render obvious "wherein said information is copied from one of said applications and pasted in the other application," it would have been obvious in view of Paek, POSITA's pre-existing knowledge, and/or the teachings of Paek combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486 (including its incorporation of Sirpal-000), Sirpal-000 and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000 and Lavallee discloses wherein said information is copied from one application and pasted in another application. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | For example, Sirpal-486 states that "[m]ost single or dual-screen devices will allow a user to copy content from one location to another," and suggests that its "universal clipboard" offers improvements upon that known feature. Sirpal-486, ¶¶[0168]-[0169]. Sirpal-486 further incorporates by reference Sirpal-000, which provides additional detail and illustration of the functionality of "Copy & Paste Text, Links[,] and Universal Clipboard." Sirpal-000, 152-82.<br><br>As discussed above for claim [2], Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. *See also supra* claim [2]. Sirpal-000 further provides functionality of "Copy & Paste Text, Links and Universal Clipboard." Sirpal-000 at 152-182. As Sirpal-000 explains:<br><br>> In the current Android model, users can copy and paste the contents of a text message from one app to another via press and hold to get a copy paste menu. In the current Android model, users can copy and paste a URL from any application to another via press and hold to get a copy/paste menu. *In the current Android model, users select text in a text field via press and hold, which invokes a contextual menu allowing users to put the field in 'select' mode, touching and dragging a chunk of text, then press and hold again to take field out of 'select' mode, which then copies the selected text. *In the current Android model, users can copy/paste plain text via invoking a contextual menu, putting the device into 'select' mode, and touching and dragging a chunk of text, then press and hold to paste the text into another app. We want to normalize the methods of copy/paste in the dual screen model, as well as to allow more efficient copy via drag and drop, direct manipulation, and better cursor placement and text selection, all while still allowing for the retention of the current Android pattern of copy and paste via menus as additional methods of performing these functinos.<br><br>Sirpal-000 at 153. |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Sirpal-000 provides that any number of items may be copied from and pasted to any number of applications, as illustrated below:<br>  <br>3.2.2 :: Functions<br>COPY<br>*Select a link<br>*Select a chunk of text<br>*Select all text (and images) on a page<br>*Select a text message<br>*Select a text conversation<br>*Select an image (or image and text)<br>*Any text in a field<br>*Smart Objects (calendar event, contact, etc.)<br>FROM<br>*Email<br>*Text Message<br>*Webpage<br>*IM<br>*Document<br>*Image<br>*Folder<br>*Text Field<br>PASTE<br>*Paste a link<br>*Paste a chunk of text<br>*Paste a message<br>*Paste a conversation<br>*Paste an image (or image and text)<br>*Paste a Smart Object<br>TO<br>*Email<br>*Text Message<br>*IM<br>*Document<br>*Folder<br>Sirpal-000 at 154.<br><br>Sirpal-000 describes a "first class of items" that is copied/pasted in its entirety, and a "second class of items" that first requires a user to "place the cursor and make a selection of a piece of the item" to be copied. Sirpal-000 at 155. In operation, a user can either copy text to a clipboard (for pasting later) or copy text with a "two finger press and hold gesture, which puts the item in move mode, and allows the user to move/paste the item to any available drop zone," e.g., for "images, links, paragraphs of text, messages, etc." Sirpal-000 at 155. "For anything that has been copied, users have the option to either just paste the last copied item or to select an item from the Universal Clipboard to paste." Sirpal-000 at 155. Sirpal-000 illustrates many examples of copying text from one application to another, including copying a link from a web page for pasting into an email message (Sirpal-000 at 158-164), text from a web page for pasting into an email (Sirpal-000 at 166- |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | 170), text and image from a web page for pasting into an email (Sirpal-000 at 172-175), and text from a field (e.g., in an email application) to another field (e.g., in a text message application) Sirpal-000 at 177-182.<br><br>As another example, and as discussed above for claim [2], Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. *See also supra* claim [2]. Lavallee further describes providing "a share function [that] permits sharing of items between . . . two or more running applications [simultaneously] displayed." Lavallee, ¶[0058]. According to Lavallee, "[t]he copy and paste function may be accomplished by a drag-and-drop action," "an attach file function that provides for transmitting a file attachment of a first running application of the two or more running applications to a second running application of the two or more running applications," or "an insert function that provides for inserting one or more items displayed by a first running application into a second running application of the two or more running applications." Lavallee, ¶[0058].<br><br>Additional exemplary disclosures of Lavallee include:<br><br>"Referring now to FIGS. 12 a-d, 13 a-d, 14 a-d, and 15 a-d, various examples of a share function of the share function relationship between two or more running applications resulting from creation of a combined group representation representative of the two or more running applications are illustrated. It has been discussed that when running applications are grouped in the combined group representation, they can have a special relationship, such as a share function relationship, which allows copy and pasting, or transferring items from one "window" or split screen mode viewing area to the other using drag and drop. The share function relationship also allows for an attach file function, as well as an insert function as shown below." Lavallee, ¶[0059].<br><br>"In FIG. 12 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | shown: an email application is displayed in the left split screen mode viewing area and a web browser application is displayed in the right split screen mode viewing area. The user in this example is composing an email and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the web browser into the email body. This example of a "copy and paste" share function allows a user to copy and paste a picture from the web browser to the email body. In FIG. 12 b, the user is able to select an item in the web browser application, in this example a car, as indicated by circle 1210; this selection may be accomplished by a user pressing on the picture of the car on the touch screen. Next, in FIG. 12 c, the user can drag the selected picture item from the web browser application displayed in the right split screen mode viewing area over to the left split screen mode viewing area, as indicated by the dashed box 1220 surrounding the selected picture item and the accompanying arrows in FIG. 12 c. Finally, in FIG. 12 d, the user released the picture item in the desired location of the email application displayed in the left split screen mode viewing area 1230. This release may be accomplished by the user removing his finger from the selected picture item when the picture is in the desired location. In this way, a user of an electronic device can easily drag and drop a selected item from a first running application to a second running application, both simultaneously maximized and displayed in large split screen mode viewing areas of the touch screen of the electronic device. Examples of other items that may be transferred using a copy and paste function include text content, links, as well as the picture or photo in this example." Lavallee, ¶[0060], Figs. 12a-12d.<br><br>"FIGS. 13 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "insert" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be inserted from a first running application to a second running application. In FIG. 13 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: a presentation application, such as POWER POINT®, is displayed in the left split screen mode viewing area and a photo application is displayed in the right split screen mode viewing area. The user in this example is creating a presentation and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop pictures from the photo application into the presentation application. This example of an insert share |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | function allows a user to insert a picture from the photo application into the presentation application. In FIG. 13 b, the user presses on the desired picture in the right split screen mode viewing area of the touch screen, as indicated by the circle 1310, to select the picture. Next, in FIG. 13 c, the user drags the selected picture into the presentation application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1320 surrounded the selected picture and the accompanying arrows in the drawing. The selected picture is dragged in to the presentation application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1330 in FIG. 13 d. The item in this application is a stored picture file, such as a file stored on the device, which can be inserted as shown." Lavallee, ¶[0061], Figs. 13a-13d.<br><br>"It is noted that in the 'copy and paste' function of FIG. 12, information available from open applications, though not necessarily stored, may be quickly copied and pasted in various applications, without the need to retrieve the copied and pasted information from storage. In the 'insert' function illustrated in FIG. 13, a file type stored on device memory, such as a stored picture, contact, video, etc. for example, may be retrieved and inserted, or attached, as shown above." Lavallee, ¶[0062], Figs. 12a-13d.<br><br>"FIGS. 14 a-d illustrate that the share function between two or more running applications maximized and simultaneously displayed in split screen mode viewing areas of the touch screen may be an "attach file" function that allows items such as pictures, photos, songs, video, locations, contacts, calendar events, etc. to be transferred from one maximized and displayed running application to another as attachments. Applications that might use the attach file function are varied and include applications such as email, instant messaging, BLACKBERRY® messenger (BBM), short message service (SMS), multimedia messaging service (MMS), etc. In FIG. 14 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an instant messaging (IM) application is displayed in the left split screen mode viewing area and a music application is displayed in the right split screen mode viewing area. The user in this example is chatting using an IM application and is able to use the share function existing between these two running applications while in the split screen mode to drag and drop songs from the music application into the IM application. This example of an attach file share function allows a user to send a song attachment |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | from the music application to the IM application. In FIG. 14 b, the user presses on a desired song in the right split screen mode viewing area of the touch screen, as indicated by the circle 1410, to select the song. Next, in FIG. 14 c, the user drags the selected song into the IM application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1420 surrounded the selected picture and the accompanying arrows in the drawing. The selected song is dragged in to the IM application displayed in the left split screen mode viewing area of the touch screen and released in the desired location 1430 in FIG. 14 d, into a conversation of the IM application to send to a friend." Lavallee, ¶[0062], Figs. 14a-14d.<br><br>"In FIG. 15 a, following selection of a combined group representation two maximized and displayed running applications represented in the selected combined group representation are shown: an email application is displayed in the left split screen mode viewing area and an address book application is displayed in the right split screen mode viewing area. The user in this example is composing an email and uses the split screen mode to drag and drop contacts from the address book application into the body of an email in the email application. This example of an attach file share function allows a user to attach a contact from the address book application to the body of an email in the email application. In FIG. 15 b, the user presses on a desired contact in the right split screen mode viewing area of the touch screen, as indicated by the circle 1510, to select the contact. Next, in FIG. 15 c, the user drags the selected contact into the email application in the left split screen mode viewing area of the touch screen, as indicated by the dashed box 1520 surrounded the selected contact and the accompanying arrows in the drawing. The selected contact is dragged in to the email application displayed in the left split screen mode viewing area of the touch screen and released in the desired location into the email body 1530 in FIG. 15 d, as shown." Lavallee, ¶[0065], Figs. 15a-15d.<br><br>A POSITA would have found it obvious to incorporate "wherein said information is copied from one of said applications and pasted in the other application," as claimed. For example, a POSITA would have found it obvious to implement well-known copy/paste functionality—in which text is copied and pasted from one application into another, e.g., via clipboard or drag/drop—as an additional or alternative mechanism to share information from the handwriting input application to the first application of Paek. As discussed above, each of Sirpal-486, Sirpal-000 and Lavallee discloses wherein said information is copied from one of said applications and pasted in the other |

| Claim 6 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | application. A POSITA would have been motivated to combine such feature(s) with the disclosure of Paek, as an obvious and intuitive way to transfer information (e.g., handwritten characters) from the handwriting input application of Paek into the first application of Paek. A POSITA would have recognized the advantages of providing copy/paste functionality, at least because it allows a user to decide where (e.g., in which field) information copied from the second application should be pasted/inserted into the first application. Copying and pasting information between applications was routine and conventional to a POSITA, as shown by Sirpal-486, Sirpal-000 and Lavallee. Incorporating the feature into Paek's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Paek, represent nothing more than combining prior art elements according to known methods and techniques (copying information from one application to be pasted into another, e.g., with a clipboard) to a mobile electronic touch screen device to yield predictable results (providing a user the ability control over when and where to copy/paste information from one application to another). |

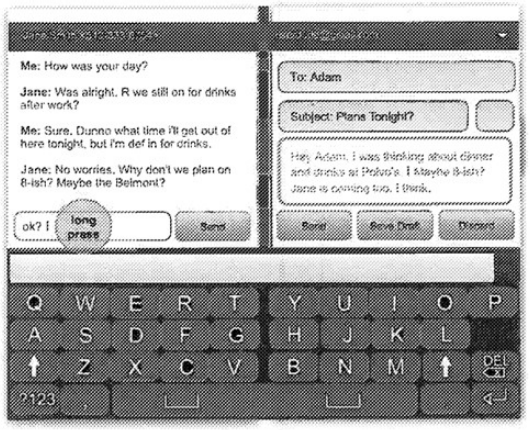
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[7]** The system of claim 1, wherein at least one of the applications is a messaging application. | Claim 7 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 7 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application."<br><br>For example, Koch discloses that its electronic device's keyboard is adapted for use with a text messaging application:<br><br>> For instance, if the user desires to set forth a name of a person that is not included in a dictionary of the stroke model 118, the user can inform the decoder component 116 of the name, such that sequences of strokes corresponding to such name can be recognized and decoded by the decoder component 116. In another example, a dictionary can be customized based upon an application being executed. For instance, words/sequences of characters set forth by the user when employing a text messaging application may be different from words/sequences of characters set forth by the user when employing an e-mail or word processing application. Similarly, keys and/or arrangement of keys in the first portion 106 and the second portion 108 of the split virtual keyboard 104 may be dependent upon an application being executed by the computing device that comprises the system 100. For example, if the computing device is executing a browser, and the split virtual keyboard 104 is being employed in connection with generating a URL for provision to the browser, the first plurality of keys 110 may include character keys, while the second plurality of keys 112 may include a ".com" key. In another example, if the computing device is executing a text messaging application, keys in the first plurality of keys 110 may be character keys, while keys in the second plurality of keys 112 may represent emoticons.<br><br>Paek, 8:25-49.<br><br>Paek further discloses that its layout disclosed in Figure 8 "may be particularly well-suited for a text messaging application or an e-mail application, where users frequently submit emoticons with transferred text." Paek, 15:1-16; *see also id.*, 17:65-67 ("In yet another example, a marking menu |

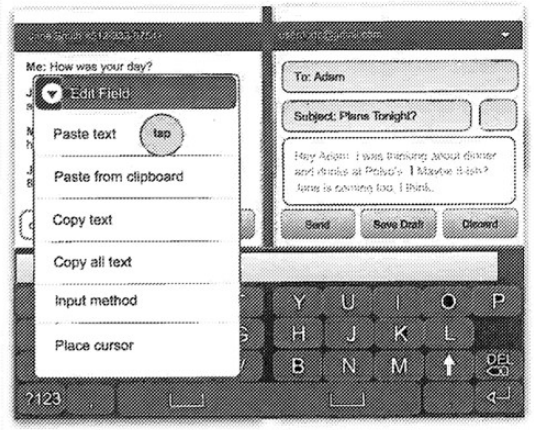
| Claim 7 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | can be employed to select a particular content (e.g., text message, email message, social network message, …).”).<br><br>To the extent Keyless argues that Paek does not disclose or render obvious “wherein at least one of the applications is a messaging application,” it would have been obvious in view of Paek, POSITA’s pre-existing knowledge (as confirmed, e.g., by reference to Sirpal-486, Sirpal-000, and/or Lavallee), and/or the teachings of Paek combined with the other references charted for this patent in these invalidity contentions, including Sirpal-486, Sirpal-000, and/or Lavallee. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, each of Sirpal-486, Sirpal-000, and Lavallee discloses wherein at least one of the applications is a messaging application, and it would have been obvious to provide the feature in view of one or more of the references.<br><br>For example, Sirpal-486 discloses a “multi-screen user device and a universal clipboard application.” Sirpal-486, Abstract. Sirpal describes that “handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands.” Sirpal-486, ¶[0002]. Sirpal-486 discloses that “applications 564” on the device “can include programs such as email clients, web browsers, texting applications, games, media players, office suites, etc.” *Id.*, ¶[0125]. Sirpal-486 further discloses:<br><br>> Most single or dual-screen devices will allow a user to copy content from one location to another by first selecting an image or text, then accessing a copy/paste menu pop-up window, then selecting the copy command, at which point the device stores the information to a virtual clipboard. To paste the copied content, the user must navigate to the destination location |

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| | (e.g., the application at which the content will be copied), select the area where the text should be placed, access a copy/paste menu pop-up window, and then select the paste command. This copy/paste routine must be completed for each different piece of information to be copied, which requires substantial time and input from the user.<br><br>The device 100 allows a user to copy multiple contents to the universal clipboard application 708. From this universal clipboard application, a user can choose an item corresponding to already-copied content, and (while still providing inputs at the universal clipboard application 708) execute a paste command. By providing multiple screens where one screen displays the universal clipboard application and another screen displays an application, a user is enabled to easily and quickly copy and paste content between various different applications on different screens 104, 108 of the device 100. Moreover, the ability to quickly and easily copy and paste different information from one central location, the universal clipboard application 708, saves the user time and input. Thus, the device 100 operates very intuitively for the user.<br><br>Sirpal-486, ¶¶[0168]-[0169].<br><br>Sirpal-486 further incorporates by reference the entirety of U.S. Patent Application No. 61/389,000 (*Sirpal-000*), which provides additional information relating to Sirpal-486's messaging application. *See* Sirpal-486, ¶[0001].<br><br>Sirpal-000 discloses a mobile device system with a "[d]ual screen, portrait, two apps, one keyboard that spans both apps and operates within an app depending on focus." Sirpal-000 at 147. As one example, Sirpal-000 illustrates a text messaging application next to an email application: |

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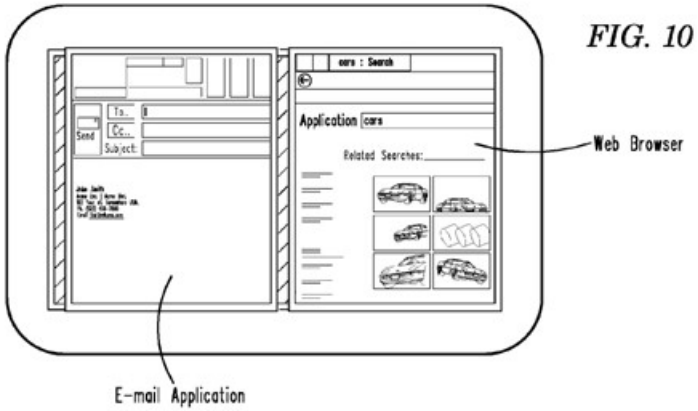
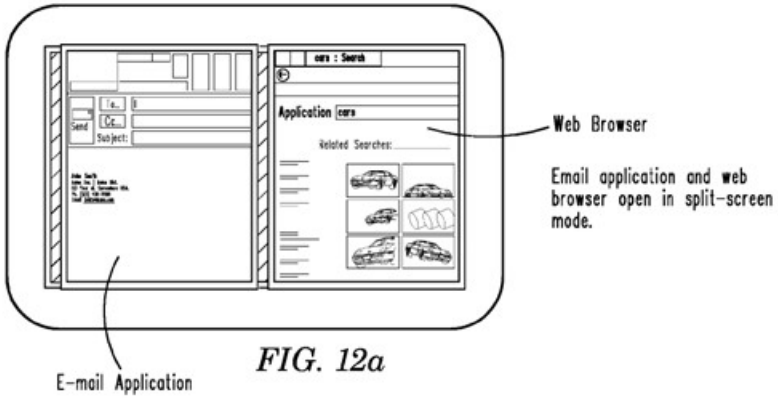

User presses and holds the text message compose field.




A menu is displayed with two options for pasting. 'Paste text' would paste the last copied item at the current cursor position. 'Paste from clipboard' displays the Universal Clipboard, from which the user could paste the just copied text, in addition to other items in the Clipboard. There is also an option for the user to place the cursor in a different position in the field. The user taps 'Paste Text'.

Sirpal-000 at 180-182. As Sirpal-000 explains, the text messaging application has a "text message compose field" into which text may be inserted. Sirpal-000 at 180. Thus, a POSITA would understand from Sirpal-000 that "at least one of [two] applications is a messaging application," as claimed.

As another example, Lavallee "provides for a touch screen electronic device to display two or more running application simultaneously in a side-by-side layout in a split screen mode of the device. Two or more applications that are running on an operating system of the device can be easily displayed simultaneously in the split screen mode while maintaining one of the displayed applications as active so that the user can provide user inputs to the active application." Lavallee at Abstract. Lavallee includes a "keyboard 120 for entering information such as composing email messages." Lavallee, ¶[0021]. Lavallee's device also is designed to send or receive data, including "email messages, short messaging service (SMS), instant messages, web content, and other electronic content." Lavallee, ¶[0022]. Accordingly, the device runs applications such as "communications applications such as Instant Messaging (IM), presentation and email applications, messaging applications . . . and the like." Lavallee, ¶[0028]. Lavallee provides several examples of

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| | a messaging application displayed simultaneously with another application, as illustrated, e.g., in Figs. 10, 12a-12d, 14a-14d, and 15a-15d, reproduced below.<br>  <br><br>*FIG. 10*<br>Lavallee, Fig. 10.<br>  <br><br>*FIG. 12a*<br>Lavallee, Fig. 12a. |

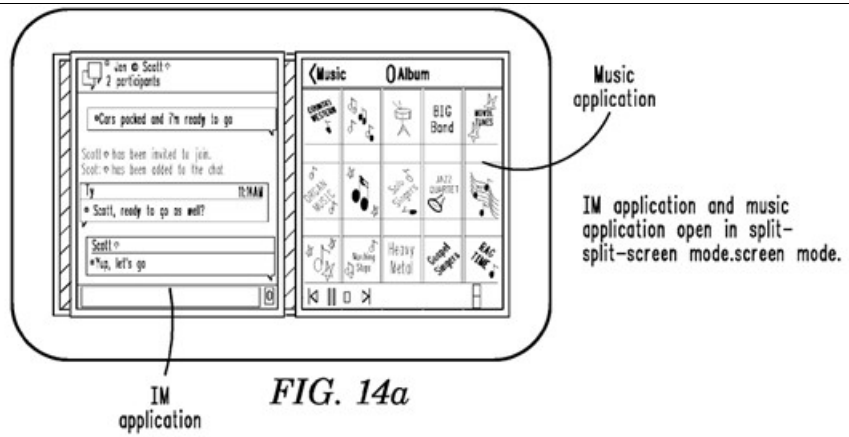



FIG. 14a

Lavallee, Fig. 14a.

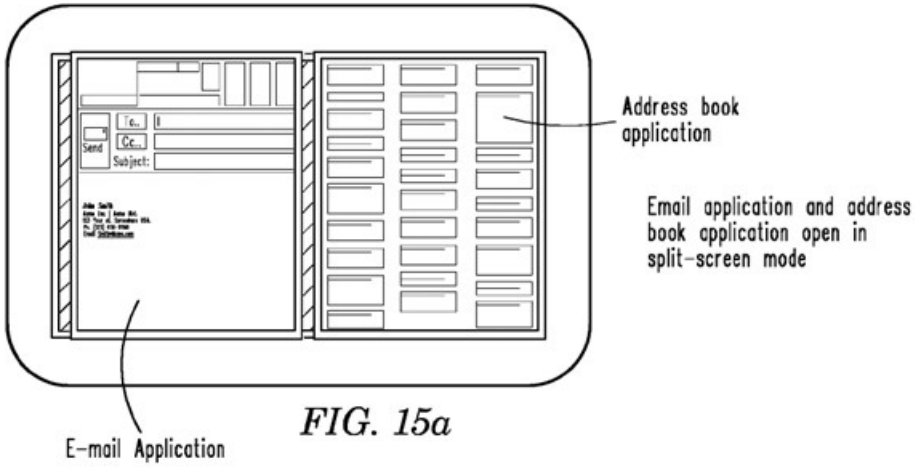



FIG. 15a

Lavallee, Fig. 15a.

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| | The e-mail application and IM application illustrated in Lavallee both illustrate fields for text entry. Thus, a POSITA would understand from Lavallee that "at least one of [two] applications is a messaging application," as claimed.<br><br>Incorporating a messaging application (such as taught by Paek, Sirpal-486, Sirpal-000, and Lavallee) into Paek and using Paek's keyboard with the messaging application represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Paek, represent nothing more than combining prior art elements according to known methods and techniques (providing keyboard input into a messaging application) to a mobile electronic touch screen device to yield predictable results (allowing a user to send text messages on a mobile device, enhancing a user's ability to input text into a messaging application, etc.). |

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| **[8]** The system of claim 1, wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application. | Claim 8 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 to show the additional limitations of claim 8 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application." |

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| | For example, Paek discloses using keystrokes on the keyboard to initiate a search:<br><br>> It is also to be understood that text generation via a sequence of strokes over keys in the first portion 106 of the split virtual keyboard 104 can be used in connection with performing a global search over a data store or collection of data stores associated with a computing device that comprises the system 100. For instance, a user may indicate a desire to search over contents of a particular application or data repository. Thereafter, the user can employ a continuous sequence of strokes, as described above, to generate text that is desirably used as a query. For instance, the user may desire to search for a contact in a list of contacts. The user can employ a continuous sequence of strokes to search for the name of the contact. For instance, after selecting a plurality of keys through a sequence of strokes over the first portion 106 of the split virtual keyboard 104, the computing device can audibly output a name that is being searched for that corresponds to the plurality of strokes. Thereafter, the user can cause an action to be undertaken with respect to the selected contact. For instance, the user can indicate a desire to e-mail the contact, place a call to the contact, etc. It is to be understood that the above is an example of a query that can be performed through utilization of text generation via a continuous sequence of strokes, and the type of global search that can be performed using aspects associated with FIG. 1 is not limited by such example.<br><br>Paek, 10:43-67.<br><br>Paek further describes that the "first portion 106 of the split virtual keyboard 104 can be employed, for instance, to set forth text that can be employed in connection with searching for and/or selecting an application, menu option, and/or file." Paek, 11:19-23; *see also id.* at Claim 13 ("responsive to detecting the input gesture, displaying a selectable application, file, or menu option on the touch- |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | sensitive display, wherein the word is employed in connection with searching for or selecting the selectable application, file, or menu option"). |
| | To the extent Keyless argues that Paek does not disclose or render obvious this limitation, it would have been obvious in view of Paek, a POSITA's pre-existing knowledge, and/or the teachings of Paek combined with other references charted for this patent in these invalidity contentions, including Wang, Matthews, and Yabuki. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways. For example, Wang discloses that "the user can define one of the [device] keys as a search key for searching web pages … thereby quickly calling the search application … of the system." Wang, ¶[0029]. As another example, Matthews discloses to use a keyboard hot key—such as used in Paek to open the handwriting input application—with a search application. As yet another example, Yabuki discloses reducing the size of the keyboard so that multiple applications can be displayed, including, e.g., a "search" application. And Paek itself provides that a mobile device can be used with and include various search functionalities as discussed above. |
| | For example, Wang describes a "method for programming output value of a key." Wang, Title. Wang explains that its "method for programming output value of a key is applicable to an electronic device having at least a key." Wang, Abstract, ¶[0002]. Wang observes that "[a]long with the development of technologies, portable electronic devices have advanced from mobile phones and notebook computers to Smart phones, personal digital assistants, ebook readers, subnotes, tablet computers and so on. In addition to being compact in size, the portable devices are gradually equipped with virtual keyboards instead of physical ones." Wang, ¶[0004]. Wang further observes that "although some touch-type mobile phones or computers include shortcut keys that allow the user to speedily call specific applications, the functions of the shortcut keys cannot be changed by changing corresponding key values of the shortcut keys. For example, a key preset for a shutter |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | button of camera cannot be changed into a return key." Wang, ¶[0007]. Wang purports to improve known touch-type mobile phones or computers. *See id.*, ¶[0008]. In Wang, "[t]he method for programming output value of a key is applicable to an electronic device having at least a key. The electronic device can be such as a tablet personal computer or a mobile phone, and the key can be a physical key or a virtual key. The number of keys is not limited." *Id.*, ¶[0018]. Among other benefits, Wang discloses that its system "accelerates the input speed" by assigning a function to a key. *Id.*, ¶[0029]. Specifically, Wang discloses:<br><br>> [T]o accelerate the operation speed, the user can define one of the keys 12 as a search key for searching web pages or a camera key for starting camera, thereby quickly calling the search application or camera application of the system. In addition, since Android Supports quick launch application, by holding down one of the keys defined as a search key and pressing another key defined as a character key, the user can quickly call a corresponding application defined in the quick launch application.<br><br>Wang, ¶[0029]. Thus, Wang provides "wherein [an] application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>As another example, Matthews describes "methods and system for a search box and search capabilities in a graphical user interface of a program launch menu for an operating system." Matthews at 1:15-18. "According to an illustrative aspect of the invention, a program launch menu, such as a Start menu, displays a search text input box within the program launch menu displayed on a computer display device, which can be used to locate user-selectable items on a computer system. Various aspects of the invention may provide for a display of search results within the program launch menu, the search results identifying selectable items matching text input received from a user via the search text input box." Matthews at 3:26-34. In Matthews, a "user can type text into search box 327 to search for Start menu items. Upon entering text in search box 327, Start menu 315 automatically switches to a Search Results view 501, such as is illustrated in FIG. 5, displaying results that match text as it has been entered thus far by the user. That is, from search box 327, a user can perform a character by character search across the programs, user files, Internet links, and |

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| | communications on his or her system. As the user enters text in the search box 327, the computer system searches for the entered text, as further described below." Matthews at 16:52-62. |

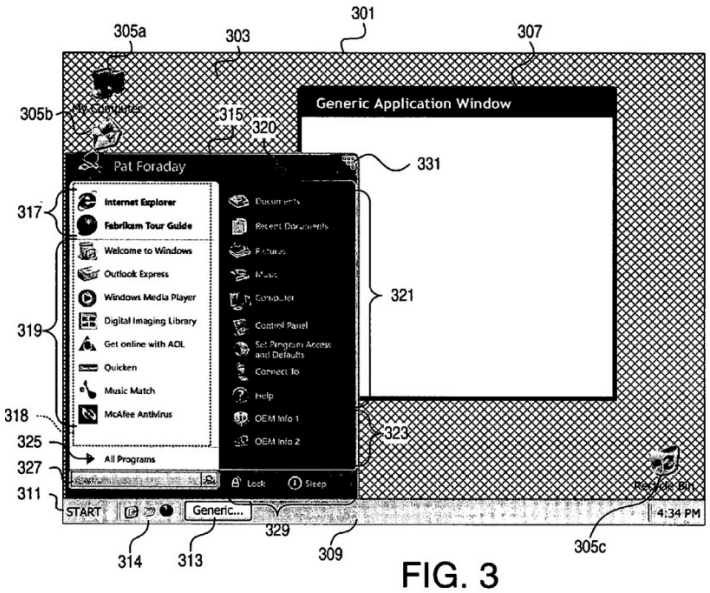


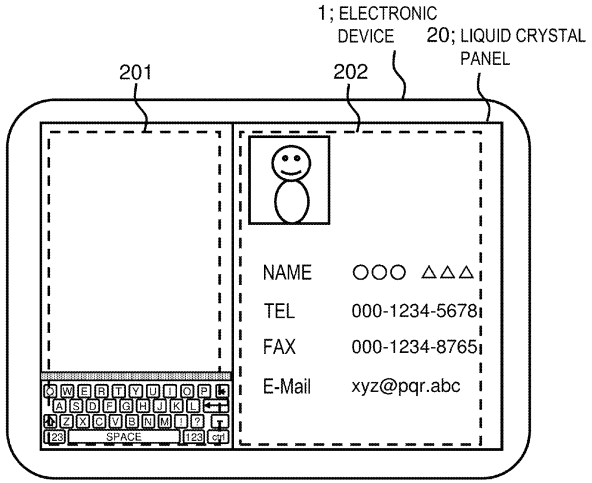
FIG. 3

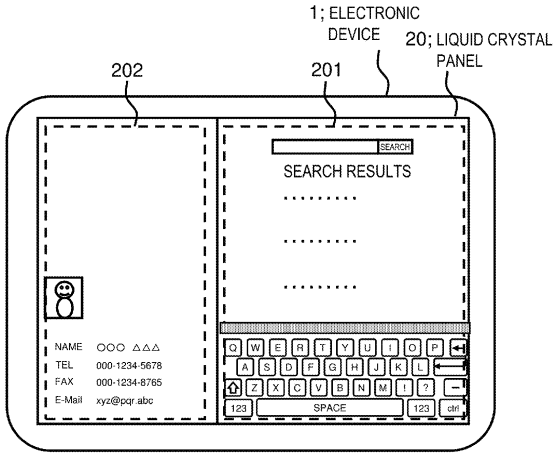
Matthews, Fig. 3.

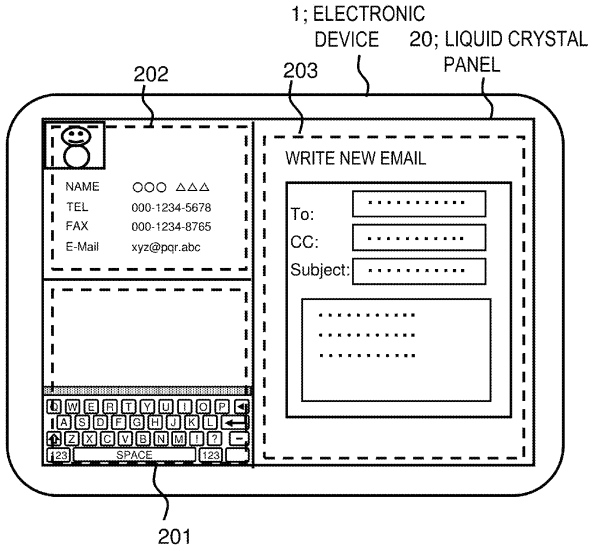
Like Paek, which broadly describes search functionality for a selectable application, file, or menu option in Paek's device (Paek, Claim 13), Matthews likewise discloses that its search application "may use any built in or known search engine to perform searches on computer system 100. The search engine preferably searches the file system of the computer 110, as well as URLs and executables in the user's Path. The search service may also include search results from other data providers, such as web search results from a web search engine, photo results from a photo website such as Picasa, music results from a service such as MSN music, or any combination of these and/or other data providers. The search engine may index all searchable locations in order to expedite searching." Matthews at 17:1-15.

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| | Matthews further describes that the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item." Matthews at 18:31-39. "Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match. No mouse manipulation is necessary (although, certainly allowable if desired). By learning which searches produce desired results, users can learn many keyboard shortcuts to quickly launch desired items that are returned as the top match to the entered search string. Given the time and inclination, a user can learn keyboard shortcuts to launch most application programs and documents on his or her computer, without being required to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:39-51. Thus, Matthews discloses the use of a "search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>Matthews discloses several benefits associated with providing a quick way to launch a search application, such as by using a keyboard key. For example, Matthews discloses that "[a]n operating system launch menu, such as a Start menu, provides various mechanisms for a user to quickly and efficiently locate and launch desired data items such as programs, data files, storage locations, and the like. A search box within the program launch menu may be used to quickly locate programs, documents, communications, and other data items." Matthews at Abstract. Further, Matthews' search application displays results "within the original confines of the program launch menu, thereby negating the need to open sub-menus on top of a large portion of the desktop displayed on the display device." *Id.*; *see also* Matthews at 3:54-62 ("The computer displays search results within a predefined area of the program launch menu, wherein the search results comprise selectable items matching text input received from the user via the search text input box, and automatically provides selection focus to a top search result. The computer launches the selectable item corresponding to the top search result when receiving predefined user input, e.g., <Enter>, while the top search result has the selection focus."). Matthews further discloses that a user may quickly use the equivalent of "keyboard shortcuts" to access desired results "without being required |

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| | to previously manually link or set up a keyboard shortcut as corresponding to a specific file." Matthews at 18:42-51. Thus, Matthews provides a quick and space-efficient search functionality.<br><br>As still another example, Yabuki relates to "an electronic device comprising a touch panel and a controlling method and program therefor." Yabuki, 1:10-13. Yabuki discloses that "a software keyboard may interfere with the user's operation, depending on its size or position," particularly in the case of "a small device such a smartphone." Yabuki, 1:35-39. As Yabuki discloses:<br><br>> For instance, let's assume a case where a user is performing a more detailed search based on search results using a Web browser. At this time, if the area of the software keyboard is large, it may be difficult for the user to perform an input operation while browsing the search results.<br><br>> Further, for instance, let's assume a case where a user launches a Web browser and refers to information regarding the people registered in an address book in the middle of his input operation. In this case, the user first quits the Web browser currently running. Then, he launches the address book application. After confirming the information, the user quits the address book application. Then, after launching the Web browser again, the user has a software keyboard displayed to enter the information. As described, the user must perform a plurality of operations when he refers to information included in another application while using the software keyboard.<br><br>Yabuki, 1:40-56. Yabuki discloses "there is a need in the art to contribute to facilitating an operation independent from a software keyboard while the software keyboard is being used." Yabuki, 1:60-62. According to Yabuki, "the electronic device 1 relating to the present exemplary embodiment is able to display a second application such as an address book application while having a first application such as a Web browser displayed." Yabuki, 7:7-10.<br><br>For example, Figure 4 of Yabuki depicts a full-size keyboard used with a single application. Yabuki, 4:61-5:3, Fig. 4. Yabuki describes that the full-size keyboard may be moved and reduced |

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| | in size, to make room for the interface of an application (or multiple applications) to be displayed on larger portions of the screen. Yabuki, 5:4-6:63. To further illustrate, Figure 7 of Yabuki, below, "is a drawing showing an example in which different applications are displayed in a plurality of display regions. In FIG. 7, the software keyboard is reduced and displayed in a first display region 201. Further, an address book application is displayed in the second display region 202 in FIG. 7." Yabuki, 7:11-16.<br><br>  <br><br><br>Yabuki, Fig. 7.<br><br>"The display region control unit 12 may switch the display modes of the first and second display regions. More concretely, according to a predetermined operation, the display region control unit 12 may enlarge the reduced first display region and reduce the second display region. Here, it is preferred that the predetermined operation that switches the display modes be a simple and easy operation such as a double tap operation." Yabuki, 7:17-24.<br><br>Yabuki further depicts Figure 8, which "is a drawing showing an example in which the display modes are switched. In FIG. 8, the display of the software keyboard is enlarged and displayed in the |

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| | first display region 201. Further, the address book application is reduced and displayed in the second display region 202." Yabuki, 7:25-29.<br>  <br><br>Yabuki, Fig. 8.<br>According to Yabuki, even more applications may be displayed simultaneously while the keyboard is in its reduced size:<br>> The image signal generation unit 13 may have a third application displayed while displaying the images of two different applications. More concretely, when detecting a fourth operation in the second display region, the display region control unit 12 reduces and moves the second display region. It is preferred that the fourth operation be a simple and easy operation such as a double tap or flick operation. The image signal generation unit 13 displays the image of the third application in a region (a third region) made available by reducing the second display region. As described, the electronic device 1 |

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| | relating to the present exemplary embodiment does not limit the number of applications displayed simultaneously.<br><br>Yabuki, 7:30-42. Further to that description, Yabuki depicts in Figure 9, below, "a drawing showing an example in which the image of the third application is displayed on the liquid crystal panel 20. In FIG. 9, the software keyboard is displayed in the first display region 201. Further, the address book application is displayed in the second display region 202. Then, an email application is displayed in a third display region 203." Yabuki, 7:43-49.<br><br>  <br><br>Yabuki, Fig. 9.<br><br>Thus, from the foregoing descriptions of Yabuki, a POSITA would recognize the benefits of reducing a keyboard so that multiple applications may simultaneously be displayed, including a search application (such as a web search application or an application for searching/displaying contact information). Moreover, a POSITA would recognize such features to be beneficial, as they solve problems and achieve advantages that Yabuki identified—e.g., allowing a user to perform |

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| | input operations (in another application) while browsing search results or allowing a user to cross-reference between a web-browser and an address book simultaneously without closing one application or the other. *See* Yabuki, 1:40-56.<br><br>A POSITA considering the teachings of Paek in view of Wang, Matthews, and/or Yabuki would have found it obvious, for example, to implement Paek's handwriting input application with the search application described in Matthews. Paek indicates that its device can be used to perform a search, as discussed above. Thus, a POSITA would recognize Wang's and/or Matthews' search application to be suitable for use with Paek. One obvious combination of Paek with Wang and/or Matthews would, for example, use Paek's keyboard with a first application including search functionality, e.g., searching Paek's system for a "selectable application, file, or menu option" (Paek, Claim 13), when using an Internet browser (Paek, 8:40-45), when "performing a global search over a data store or collection of data stores associated with a computing device that comprises the system 100" (Paek, 10:43-48), when "search[ing] over contents of a particular application or data repository" (Paek, 10:48-50), or when "search[ing] for a contact in a list of contacts" (Paek, 10:52-67). In the obvious combination, Paek's handwriting application would be supplemented or replaced, for example, to provide a search area to search for Internet content or information stored within Paek's system (e.g., contacts or files to be used with and/or accessed by the first application).<br><br>A POSITA would recognize such a configuration from Yabuki, for example. In any case, the search application, when activated, would obviously occupy the same area(s) as the handwriting application interface in the existing Paek system, and simultaneously display the corresponding reduced keyboard interface. In that way, the search application (e.g., Paek's preexisting search applications) could be used in parallel with another application (or applications) appearing on the top of the screen, without obstructing the interface of the other application. The combination would yield "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application," as claimed.<br><br>A POSITA would recognize that the combination would achieve the various benefits described in Wang, Matthews, and Yabuki, including to "accelerate the operation speed" (Wang, ¶[0029]), to quickly find relevant information using the keyboard and without covering significant portions of |

| Claim 8 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | the screen with the search application (Matthews at Abstract), and to be able to cross-reference between one search application (e.g., an Internet browser or address book) and another application simultaneously (such as an application that may require information about the information presented in the Internet browser or address book) (Yabuki, Yabuki, 1:40-56). A POSITA would further recognize that a combination would provide various result options as displayed suggestion candidates in the second application interface, whereupon the user can select which result is desired. Additionally or alternatively, a POSITA would recognized that such a combination would use the canvas/handwriting input application (or at least use that portion of the second zone) as the interface for a search component of the first application, as Paek already discloses to use the center area as an interface for components of the first application (i.e., for handwriting input into the first application).<br><br>Accordingly, a POSITA would have found it obvious to provide "wherein said second application is a search application," as recited in claim 8 for at least this reason.<br><br>Incorporating a search button and application (such as taught by Wang and Matthews) with Paek's canvas/handwriting input application (and/or as an alternative to Paek's canvas/handwriting input application, activated and displayed in substantially the same way as that application) represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such features, when combined with Paek, represent nothing more than combining prior art elements according to known methods and techniques (providing search functionality) to a mobile electronic touch screen device to yield predictable results (providing a user with information relating to searched files, contacts, text, media, etc.). |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[9]** The system of claim 8, wherein said search application use at least one keyword typed through said keyboard. | Claim 9 depends from claim 8. Defendants incorporate all the prior art disclosures from claim 8 here, which anticipate and/or render claims 1 and 8 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 1 and 8 to show the additional limitations of claim 9 are anticipated and/or obvious for the same reasons set out in claims 1 and 8.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>To the extent Keyless argues that Paek does not disclose or render obvious this limitation, it would have been obvious in view of Paek, a POSITA's pre-existing knowledge, and/or the teachings of Paek combined with the other references charted for this patent in these invalidity contentions, including Wang and/or Matthews as discussed above for claim [8]. For example, a POSITA would find the combination obvious to try, due at least to the similarity of the technical teachings of the art. As another example, a POSITA would find that the teachings could be predictably interchanged by, for example, simple substitution, at least because of the predictability of the art and the known interchangeability of the various elements. As another example, a POSITA would be motivated to combine the references, and would have a reasonable expectation of success in doing so, at least because the references use known variations of existing technology to solve routine and well understood problems in predictable ways.<br><br>For example, Matthews discloses a "search for <foo>" in which "the computer system 100 may initiate a broader search for the user-entered text, e.g., by launching a full-text search or full-text search window," where "the user may be able to search the computer for <foo>, search the Internet for <foo>, and/or search some other computer or database for <foo>, regardless of where the text <foo> appears." Matthews at 19:2-8. Matthews further discloses that the system "may display any items first where the item's name begins with text matching the user-entered text, second where the item has a word other than its starting word that starts with text matching the user-entered text, and third where the item has any text matching the user-entered text." Matthews at 18:24-28. Matthews |

| Claim 9 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | thus discloses "keyword search," wherein "said search application use at least one keyword typed through said keyboard."<br><br>A POSITA would have found it obvious to incorporate "wherein said search application use at least one keyword typed through said keyboard," as claimed. Matthews, for example, discloses to use a keyboard to input search keywords. A POSITA would have been motivated to combine such feature(s) with the disclosure of Paek, as an obvious and intuitive way to implement applications using Paek's "search module" (or Paek as modified in claim [8]). Typing a keyword through a keyboard was routine and conventional to a POSITA (as well as to a user of a device), as shown by Matthews. Furthermore, Paek already provides that the keyboard is used to enter text for "any … application that needs text input." Paek at [0133]. Extending Paek's existing keyboard text entry functionality to accommodate entering a keyword into the search application (e.g., in the combination with Matthews) would be a straightforward, intuitive modification, requiring no more than ordinary skill. Incorporating the feature into Paek's design, shown above, represents nothing more than the application of known operations performing according to their known functions to achieve predictable and expected results, and there would have been a reasonable expectation of success in doing so at least because it would have involved nothing more than the routine combination of existing technology in predictable ways. Such processes, when combined with Paek, represent nothing more than combining prior art elements according to known methods and techniques (using a keyboard to type a keyword for search) to a search application to yield predictable results (search results to be used with or accessed by another application). |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[10]** The system of claim 1, wherein at least one of the applications is used for | Claim 10 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 |

| Claim 10 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| sharing at least one of text, pictures, or videos. | to show the additional limitations of claim 10 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos."<br><br>For example, and as discussed above for claims [4, 5], "information" shared from Paek's canvas/handwriting input application to the first application includes text and/or drawings in the form of handwritten characters or words. *See supra* claims [4, 5]. Thus, Paek provides "at least one of the applications is used for sharing at least one of text, pictures, or videos," as required by the claim.<br><br>Additionally, and as discussed above for claim [7], Paek alone and/or in combination with Sirpal-486 (including through incorporation of Sirpal-000), Sirpal-000 and/or Lavallee, and/or further in light of the knowledge of a POSITA (as confirmed, e.g., by reference to Sirpal-486, Sirpal-000 and/or Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is a messaging application." A messaging application is an application "used for sharing at least one of text, pictures, or videos." Thus, for at least the same reasons, Paek alone and/or as modified in claim [7], and/or further in light of the knowledge of a POSITA (as confirmed, e.g., by reference to Sirpal-486, Sirpal-000 and/or Lavallee) and Keyless's apparent interpretation of this limitation, further discloses "wherein at least one of the applications is used for sharing at least one of text, pictures, or videos," as claimed. |

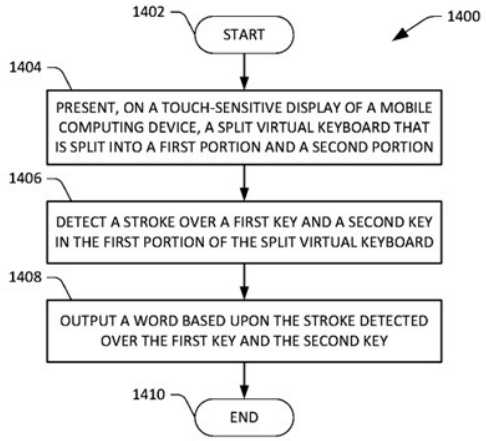
| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[11]** The system of claim 1, wherein said device is a mobile phone. | Claim 11 depends from claim 1. Defendants incorporate all the prior art disclosures from claim 1 here, which anticipate and/or render claim 1 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 1 |

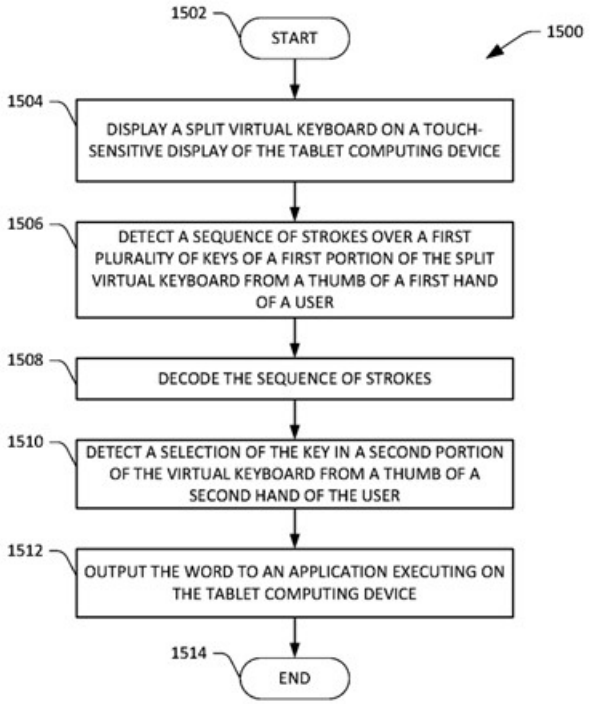
| Claim 11 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | to show the additional limitations of claim 11 are anticipated and/or obvious for the same reasons set out in claim 1.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, further discloses "wherein said device is a mobile phone."<br><br>For example, Paek discloses that "the system 100 may be comprised by a mobile telephone with a relatively large display screen (sometimes referred to as a phablet)." Paek, 4:24-26.<br><br>Additional exemplary citations include:<br><br>Paek discloses in reference to a "conventional" device that "on an exemplary soft keyboard displayed on a mobile telephone, ten separate keys may exist on a single row of keys." Paek, 1:39-41.<br><br>"Moreover, due to the relatively small size of the first portion 106, a mobile telephone, mobile media device, or phablet computing device can have the first portion 106 displayed thereon, wherein such first portion 106 has similar or identical size across computing device. Thus, for instance, a user may develop muscle memory when generating text via a continuous sequence of strokes over keys in the first portion 106 when using such first portion 106 on a mobile telephone. The user can then utilize such muscle memory to generate text via a continuous sequence of strokes over keys in the first portion 106 when displayed on the tablet computing device 300. It is further to be understood that the first portion 106 can be moved and docked at a location on the display screen 102 as desired by the user." Paek, 15:51-64. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[12P]** A method comprising: | To the extent that the preamble is held to be limiting, Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses a "method comprising."<br><br>For example, Paek discloses "FIGS. 14-15 illustrate exemplary methodologies relating to use of a split virtual keyboard on a touch-sensitive display of a tablet computing device. While the methodologies are shown and described as being a series of acts that are performed in a sequence, it is to be understood and appreciated that the methodologies are not limited by the order of the sequence. For example, some acts can occur in a different order than what is described herein. In addition, an act can occur concurrently with another act. Further, in some instances, not all acts may be required to implement a methodology described herein. Moreover, the acts described herein may be computer-executable instructions that can be implemented by one or more processors and/or stored on a computer-readable medium or media. The computer-executable instructions can include a routine, a sub-routine, programs, a thread of execution, and/or the like. Still further, results of acts of the methodologies can be stored in a computer-readable medium, displayed on a display device, and/or the like." Paek, 18:4-22. |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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Paek, Figs. 14-15; *see also id.*, 18:23-38.

In addition, Paek discloses that Figure 16 depicts "a high-level illustration of an exemplary computing device 1600 that can be used in accordance with the systems and the methodologies disclosed herein." Paek, 19:39-42; *see also id.* at 19:42-20:28 (further describing the device of Fig. 16).

Further, Paek recites patent claims directed to a "method performed by a mobile computing device." *See* Paek, 21:20-22:45.

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[12A]** assigning a first zone of a touch screen to an interface of a first application; | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "assigning a first zone of a touch screen to an interface of a first application."<br><br>As discussed *supra* claim [1C], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein a first zone of said touchscreen is assigned to an interface of said first application." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12B]** assigning a second zone of said touch screen to an on-screen keyboard; and | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "assigning a second zone of said touch screen to an on-screen keyboard."<br><br>As discussed *supra* claim [1C], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein . . . a second zone of said touchscreen is assigned to said keyboard." *See supra* claim [1C]. This limitation is disclosed for at least the same reasons. |
| **[12C]** based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "based on accomplishment of a condition under the control of said keyboard, activating a second application and displaying an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone of said touch screen."<br><br>As discussed *supra* claim [1D], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of |

| Claim 12 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| keyboard on at least a portion of said second zone of said touch screen and | the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein based on accomplishment of a condition under the control of said keyboard, the system activates a second application and displays an interface of the second application and a reduced interface corresponding to said keyboard on at least a portion of said second zone." *See supra* claim [1D]. This limitation is disclosed for at least the same reasons. |
| **[12D]** wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen. | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said first application, said interface of said second application, and the reduced interface corresponding to said keyboard are simultaneously displayed on said touch screen."<br><br>As discussed *supra* claim [1E], Paek discloses this feature, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation. *See supra* claim [1E]. |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[13]** The method of claim 12, comprising using said keyboard with both of said applications. | Claim 13 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 13 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "using said keyboard with both of said applications." |

| Claim 13 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | As discussed *supra* claim [3], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said keyboard is used with both of said applications." *See supra* claim [3]. This limitation is disclosed for at least the same reasons. |

| Claim 14 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| **[14]** The method of claim 12, wherein at least one of said applications is one of, a text messaging application and an image sharing application. | Claim 14 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 14 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein at least one of said applications is one of, a text messaging application and an image sharing application."<br><br>As discussed *supra* claim [7], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein at least one of the applications is a messaging application." *See supra* claim [7]. A "messaging application" is at least one of "a text messaging application and an image sharing application." Thus, this limitation is disclosed for at least the same reasons. |

| Claim 15 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[15]** The method of claim 12, wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application. | Claim 15 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 15 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>As discussed *supra* claim [8], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said second application is a search application activated by interacting with a button of said keyboard assigned to activating said search application." *See supra* claim [8].<br><br>Further, and as discussed *supra* claim [1D], Paek discloses using a button or gesture on the keyboard to activate a second application (canvas/handwriting input application). Thus, Paek (or, alternatively, Paek as modified in claim [8]) provides that the "search application [is] activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application."<br><br>Thus, Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, provides "wherein said interface of said second application is displayed on the touch screen by using a search application activated by providing a predefined interaction with a button of said keyboard that is related to activating said search application," as claimed. |

| Claim 16 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[16]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard. | Claim 16 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 16 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard."<br><br>As discussed *supra* claim [9], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein said search application use at least one keyword typed through said keyboard." *See supra* claim [9]. This feature is disclosed for at least the same reasons. |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[17]** The method of claim 15, wherein said search application use at least one keyword typed through said keyboard after said search application is activated. | Claim 17 depends from claims 15 and 12. Defendants incorporate all the prior art disclosures from claims 15 and 12 here, which anticipate and/or render claims 15 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 15 and 12 to show the additional limitations of claim 17 are anticipated and/or obvious for the same reasons set out in claims 15 and 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and |

| Claim 17 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| | Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated."<br><br>As discussed *supra* claim [9], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, "wherein said search application use at least one keyword typed through said keyboard." *See supra* claim [9]. Claim 17 recites the same feature and further requires that the keyword be "typed through said keyboard after said search application is activated."<br><br>For example, in Paek (as well as Paek as modified in claim [9]), a user interacts with the "second application" after it has been activated and, thus, types in the keyword after the second application has been activated.<br><br>For example, as discussed above in claim [9], in Matthews, the Start menu search box may be launched by pressing a keyboard key, i.e., "when the user presses the <Windows> key (not shown), the operating system displays the Start menu, and the search box 327 has input focus by default" so "[t]he user can immediately start typing text for which he or she would like to search for an item. Thus, if the user types <Windows>, w, o, <Enters, the operating system will launch the Microsoft(R) Word(R) brand word processor, if installed and if it is the top match." Matthews at 18:31-51. A POSITA would understand that for the search interface of Matthews to receive the entered text input or search input, the search interface must be active. Alternatively, a POSITA would have found it obvious for the search interface to be active, so the interface would be able to receive inputs.<br><br>Thus, Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, including as modified (*see supra* claims [8] and [9]), and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said search application use at least one keyword typed through said keyboard after said search application is activated," as claimed. |

| Claim 18 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[18]** The method of claim 12, wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen. | Claim 18 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 18 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touch screen."<br><br>As discussed *supra* claim [4], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein an information received from one of said applications is shared with at least the other application while said interface of said first application and said interface of said second application are simultaneously displayed on said touchscreen." *See supra* claim [4]. This feature is disclosed for at least the same reasons. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[19]** The method of claim 18, wherein said information includes at least one of a text, an image, a video, a webpage and a URL. | Claim 19 depends from claims 18 and 12. Defendants incorporate all the prior art disclosures from claims 18 and 12 here, which anticipate and/or render claims 18 and 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claims 18 and 12 to show the additional limitations of claim 19 are anticipated and/or obvious for the same reasons set out in claims 18 and 12. |

| Claim 19 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said information includes at least one of a text, an image, a video, a webpage and a URL."<br><br>As discussed *supra* claim [5], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein said information includes at least one of, a text, an image, a video, a webpage and a URL." *See supra* claim [5]. This feature is disclosed for at least the same reasons. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[20]** The method of claim 12, wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application. | Claim 20 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 20 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application."<br><br>As discussed *supra* claim [2], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation, "wherein upon interacting with the interface of any of said applications, the focus of the system is given to the interacted application." *See supra* claim [2]. This feature is disclosed for at least the same reasons. |

| Claim 20 | Exemplary Disclosures (Express and/or Inherent) and Citations |
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| | |

| Claim 21 | Exemplary Disclosures (Express and/or Inherent) and Citations |
|---|---|
| **[21]** The method of claim 12, wherein said touch screen is integrated within a mobile communication device. | Claim 21 depends from claim 12. Defendants incorporate all the prior art disclosures from claim 12 here, which anticipate and/or render claim 12 obvious as set out above. Defendants reserve the right to rely on any of the prior art disclosures and obviousness rationale and evidence set out for claim 12 to show the additional limitations of claim 21 are anticipated and/or obvious for the same reasons set out in claim 12.<br><br>Paek, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of this limitation, discloses "wherein said touch screen is integrated within a mobile communication device."<br><br>As discussed *supra* claim [11] and claim [1A], Paek discloses, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, the "electronic device having a touchscreen" and "wherein said device is a mobile phone" *See supra* claims [1A, 11]. In addition, Paek includes, alone or in combination with other references identified in this chart or elsewhere in Defendants' invalidity contentions, and/or further in light of the knowledge of a POSITA and Keyless's apparent interpretation of the limitation, an application for sharing text, pictures, and/or videos with other users, as discussed *supra*, claims [7] and [10], making Paek a mobile communication device for this additional reason. |