

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
HP INC., DELL INC., DELL TECHNOLOGIES INC.,
ASUSTEK COMPUTER INC., ASUS GLOBAL PTE. LTD.,
Petitioners

v.

LITL LLC,
Patent Owner.

IPR2024-00454

U.S. Patent No. 9,003,315

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,003,315**

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1001	U.S. Patent No. 9,003,315 (“EX-1001”)
1002	File History of the ’315 patent
1003	Declaration of Dr. Henry Houh in Support of Petition (“Houh”)
1004	Dr. Henry Houh CV
1005	U.S. 90/014,958 Ex Parte Reexamination File History
1006	RESERVED
1007	RESERVED
1008	Joan Preppernau & Joyce Cox, <i>Step By Step Windows Vista</i> , Microsoft Press (Jan. 3, 2007) (“Preppernau”)
1009	U.S. Patent 5,847,698 (“Reavey”)
1010	RESERVED
1011	U.S. Patent Application Publication 2008/0062141 A1 (“Chandhri”)
1012	RESERVED
1013	RESERVED
1014	PCT WO 95/24007 (“Lane”)
1015	Declaration of June Munford
1016	Complaint, <i>LiTL LLC v. ASUSTeK Computer Inc.</i> , No. 23-cv-00122 (D. Del. Feb. 1, 2023)
1017	Complaint, <i>LiTL LLC v. Dell Techs. Inc.</i> , No. 23-cv-0121 (D. Del. Feb. 1, 2023)
1018	Complaint, <i>LiTL LLC v. HP Inc.</i> , No. 23-cv-00120 (D. Del. Feb. 1, 2023)
1019	Order Granting Microsoft Intervention, <i>LiTL LLC v. HP Inc.</i> , No. 23-cv-00120 (D. Del. Oct. 16, 2023)
1020	Scheduling Order, <i>LiTL LLC v. HP Inc.</i> , No. 23-120 (D. Del. Jan. 11, 2024), ECF No. 44

Exhibit	Reference
1021	Foley, James D., et al., <i>Computer Graphics Principles and Practice</i> , Second Edition in C (July 1997)
1022	RESERVED
1023	RESERVED
1024	Complaint, <i>LiTL LLC v. Lenovo (United States), Inc.</i> , No. 20-cv-00689 (D. Del. May 22, 2020)
1025	Stipulation of Dismissal, <i>LiTL LLC v. Lenovo (United States) Inc.</i> , No. 20-cv-00689 (D. Del. Feb. 3, 2023)
1026	RESERVED
1027	Fujitsu LifeBook T3000 Tablet PC review: Fujitsu LifeBook T3000 Tablet PC, available at https://www.cnet.com/reviews/fujitsu-lifebook-t3000-tablet-pc-review/
1028	HP Compaq Tablet PC TC1100 review: HP Compaq Tablet PC TC1100, available at https://www.cnet.com/reviews/hp-compaq-tablet-pc-tc1100-review/
1029	Acer TravelMate C110 review: Acer TravelMate C110, available at https://www.cnet.com/reviews/acer-travelmate-c110-review/
1030	OLPC XO-1 (One Laptop Per Child) review: OLPC XO-1 (One Laptop Per Child), available at https://www.cnet.com/reviews/olpc-xo-1-one-laptop-per-child-review/
1031	Microsoft Indemnity Request
1032	U.S. Patent 8,624,844 (“the ’844 Patent”)
1033	U.S. Patent 8,289,688 (“the ’688 Patent”)
1034	RESERVED
1035	RESERVED
1036	RESERVED
1037	RESERVED

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1038	RESERVED
1039	RESERVED
1040	RESERVED
1041	An Overview of HTML+

LISTING OF CHALLENGED CLAIMS

Reference	Claim limitation
Claim 1	
1[pre]	A customized user interface for a computer system with a plurality selectable I/O profiles configured to present computer operations to a user in a format configured to a selected I/O profile on a display component of the computer system, the user interface comprising:
1[a]	at least one processor;
1[b]	a map based graphical user interface, executing on the at least one processor operatively connected to a memory of the computer system, the map based graphical user interface, when executing, is configured to display information on the display component of the computer system, wherein the map based user interface is further configured to:
1[c]	display a plurality of views of a plurality of visual representations of computer content on the computer system, wherein the computer content includes at least one of selectable digital content, executable computer applications, configurable computer settings, selectable computer operations and passive digital content;
1[d]	display the plurality of visual representations of computer content rendered on the display component, wherein the plurality of visual representations of computer content include an association to a first home view of the plurality of views, the first home view including a display of the computer content, and wherein the each of the plurality of visual representations is responsive to focus and execution, wherein execution includes selecting the visual representation, and wherein the first home view is a first organizational view of at least one application and computer content displayed responsive to activation of the system; and
1[e]	an execution component, executing on the at least one processor, configured to:
1[f]	identify at least a first and a second computer system configuration based on sensor input indicating a position of the display component relative to a base component;
1[g]	select, responsive to the sensor input, a first home view from the plurality of views for the first computer system configuration, wherein the first home view is configured to organize a first set of the plurality of visual representations;

Reference	Claim limitation
1[h]	filter the first set of visual representations to present content that is optimized for viewing in the second system configuration at least in part by identifying content to filter, removing the identified content from the first set of visual representations, and generating a second set of visual representations based on the filtered first set of visual representations, wherein the second set of visual representations includes at least one different member than the first set of visual representations; and
1[i]	transition, automatically in response to the sensor input, the display component between at least the first home view of the plurality of views and a second default content view of the plurality of views, wherein the second default content view is configured to organize the second set of visual representations, wherein the second default content view is a second organizational view of at least one application and computer content, and wherein the sensor input indicates a transition to the second computer system configuration.
Claim 2	
2.	The user interface of claim 1, wherein the execution component is further configured to transition between the plurality of views in response to execution of at least one of a computer system operation, a visual representation, a computer system configuration, and a change in computer system configuration.
Claim 3	
3.	The user interface of claim 1, further comprising a plurality of modes of content for the computer content rendered on the computer display, wherein the plurality of modes of content comprise at least one of a web content mode, a channel content mode, a media content mode, an application content mode, a communication content mode, and a passive content mode.
Claim 4	
4.	The user interface of claim 3, wherein the plurality of views are configured to organize modes of content into different views.
Claim 5	
5.	The user interface of claim 3, wherein the web content mode is configured to display web based content for proximal viewing by a user on the display component of the computer system, wherein the channel content mode is configured to display web based content for non-proximal viewing by a user on the display component,

Reference	Claim limitation
	wherein the media content mode is configured to display media based content for non-proximal viewing by a user on the display component, wherein the application content mode is configured to display computer applications for use by a user on the display component, wherein the communication content mode is configured to display computer configuration operations for viewing by a user on the display component, and wherein the passive content mode is configured to display web based content for non-proximal viewing without user interaction on the display component.
Claim 7	
7.	The user interface of claim 3, wherein the plurality of views includes a screen saver view configured to organize selected content modes for passive viewing.
Claim 8	
8.	The user interface of claim 1, wherein the plurality of views includes the home view organizing a plurality of visual representations of digital content, wherein the first home view is displayed responsive to system activation, and wherein the first home view is displayed responsive to a computer system configuration.
Claim 9	
9.	The user interface of claim 8, wherein the computer system configuration comprises a physical positioning of the display component relative to a base of the computer system about a longitudinal axis of rotation.
Claim 10	
10.	The user interface of claim 8, further comprising a search tool displayed in the header display, wherein the search tool is configured to accept search terms entered by a user and in response to execution, causes the computer system to navigate to a view of a first visual representation of digital content, wherein the digital content includes a search engine, and the search engine presents results for the search terms.
Claim 11	
11.	The user interface of claim 1, further comprising a storage component configured to retain a previous view state.

Reference	Claim limitation
Claim 12	
12.	The user interface of claim 11, wherein the execution component is further configured to cause the computer system to transition to a previous view in response to execution of a navigation element by a user.
Claim 13	
13.	The user interface of claim 11, further comprising the navigation element displayed in the header display.
Claim 16	
16.	The user interface of claim 8, further comprising a nascent card displayed in the body of the first home view, wherein the nascent card is configured to permit generation of additional visual representations of digital content.
Claim 18	
18.	The user interface of claim 1, further comprising a quick access view, wherein the quick access view is configured to permit user generation of a mapping between digital content and a visual representation.
Claim 23	
23.	The user interface of claim 1, further comprising a storage component configured to retain a current computer system configuration state and a current view state.
Claim 24	
24.	The user interface of claim 23, wherein the execution component is further configured to transition the display component between the plurality of views, responsive to at least one of the current computer system configuration state and the current view state.
Claim 27	
27[pre]	A method for presenting a customized user interface for a computer system with a plurality selectable I/O profiles to a user, the method comprising:
27[a]	displaying a map based graphical user interface on a display component of the computer system, the act of displaying the map based user interface includes acts of:
27[b]	displaying a plurality of views of a plurality of visual representations of computer content on the display component, wherein the computer content includes at least one of selectable digital content, executable computer applications, configurable

Reference	Claim limitation
	computer settings, selectable computer operations and passive digital content; and
27[c]	displaying the plurality of visual representations of computer content rendered on the display component, wherein the plurality of visual representations of computer content include an association to a first home view of the plurality of views, the first home view including the computer content, and wherein the each of the plurality of visual representations is responsive to focus and execution, wherein execution includes selecting the visual representation, and wherein the first home view is a first organizational view of at least one application and computer content displayed responsive to activation of the system; identifying, by a processor, at least a first and a second computer system configuration based on sensor input indicating a position of the display component relative to a base component;
27[d]	selecting, by the processor, responsive to the sensor input, the first home view from the plurality of views for the first computer system configuration, wherein the first home view is configured to organize a first set of the plurality of visual representations;
27[e]	filtering, by the processor, the first set of visual representations to present content that is optimized for viewing in the second system configuration at least in part by identifying content to filter, removing the identified content from the first set of visual representations, and generating a second set of visual representations based on the filtered first set of visual representations, wherein the second set of visual representations includes at least one different member than the first set of visual representations; and
27[f]	executing, automatically by the processor, in response to sensor input a transition in the display component between at least the first home view of the plurality of views and a second default content view of the plurality of views, wherein the second default content view is configured to organize the second set of visual representations, wherein the second default content view is a second organizational view of at least one application and computer content, wherein the sensor input indicates a transition to the second computer system configuration.
Claim 28	

Reference	Claim limitation
28[pre]	A system for presenting a customized user interface for a portable computer with a plurality selectable I/O profiles, the system comprising:
28[a]	at least one processor operatively connected to a memory, the processor configured to execute a plurality of system components, the plurality of system components comprising:
28[b]	a first user interface component configured to display a plurality of views of a plurality of visual representations of computer content, wherein the computer content includes at least one of selectable digital content, executable computer applications, configurable computer settings, selectable computer operations and passive digital content;
28[c]	a second user interface component configured to display the plurality of visual representations of computer content on a computer display, wherein the plurality of visual representations of computer content include an association to a first home view of the plurality of views, the first home view including the computer content, and wherein the each of the plurality of visual representations is responsive to focus and execution, wherein execution includes selecting the visual representation, and wherein the first home view is a first organizational view of at least one application and computer content displayed responsive to activation of the system; and
28[d]	an execution component configured to:
28[e]	identify at least a first and a second computer system configuration based on sensor input indicating a position of the display component relative to a base component;
28[f]	select, responsive to sensor input, a first home view from the plurality of views for the first computer system configuration, wherein the first home view is configured to organize a first set of the plurality of visual representations;
28[g]	filter the first set of visual representations to present content that is optimized for viewing in the second system configuration at least in part by identifying content to filter, removing the identified content from the first set of visual representations, and generating a second set of visual representations based on the filtered first set of visual representations, wherein the second set of visual

Reference	Claim limitation
	representations includes at least one different member than the first set of visual representations;
28[h]	execute, automatically, in response to sensor input, a transition in the computer system display between at least the first home view of the plurality of views and a second default content view of the plurality of views, wherein the second default content view is a second organizational view of at least one application and computer content, wherein the second default content view is configured to organize the second set of visual representations, wherein the sensor input indicates a transition to the second computer system configuration.
Claim 53	
53.	The user interface of claim 1, wherein the map based graphical user interface is further configured to organize computer operations and computer content into the plurality of visual representations having consistent appearance, the consistent appearance of the plurality of visual representations including a header portion and a body portion of a display.
Claim 54	
54.	The user interface of claim 53, wherein the map based graphical user interface is further configured to organize at least some of the plurality of visual representations into displayed pages of at least one of the plurality of views of the map based user interface, wherein each display page is associated with a display limit for the visual representations.
Claim 55	
55.	The user interface of claim 1, wherein a display of at least some of the visual representations is configured to increase in display size responsive to focus, relative to an unfocused display.
Claim 56	
56.	The user interface of claim 55, wherein the display is further configured to render computer controls in a header portion in response to focus upon the header portion of the display.
Claim 57	
57.	The user interface of claim 8, wherein the plurality of views includes the second default content view organizing a plurality of visual representations of digital content, wherein the second default

Reference	Claim limitation
	content view is displayed responsive to system activation and responsive to the computer system configuration.

I. INTRODUCTION

Microsoft Corporation (“Microsoft”); HP Inc. (“HP”); Dell Inc. and Dell Technologies Inc. (collectively, “Dell”); and ASUSTeK Computer Inc. and ASUS Global Pte. Ltd. (collectively, “ASUS”) (collectively, “Petitioners”) request *inter partes* review (“IPR”) of claims 1-5, 7-13, 16, 18, 23, 24, 27, 28, and 53-57 (“Challenged Claims”) of U.S. Patent 9,003,315 (EX-1001). LiTL (“PO”) has never served Microsoft with a complaint alleging infringement of the ’315 patent. PO sued HP, Dell, and ASUSTek on February 1, 2023, alleging infringement of eight patents including the ’315 patent. EX-1016, 1017, 1018. PO explicitly identified Windows functionality as a basis for its infringement allegations, and so Microsoft intervened in those district court suits in October 2023. Petitioners have filed this Petition within four months of Microsoft’s intervention and before PO has filed any infringement contentions in district court, showing that all Challenged Claims of the ’315 patent are unpatentable as obvious.¹

¹ Petitioner submits the declaration of Henry Houh (Ex. 1003), an expert in the field of the ’315 patent. *See* Houh, ¶40 (summary of opinions); *see also id.*, ¶¶1-19 (background and qualifications), ¶23 (materials considered).

II. GROUNDS FOR STANDING

Petitioners certify the '315 patent is available for IPR and Petitioners are not barred or estopped from requesting IPR on the grounds herein. Petitioners file this Petition within one year of service on HP, Dell, and ASUS of PO's district court complaints (EX-1016, 1017, 1018). Microsoft has never been served with a complaint.

III. STATEMENT OF PRECISE RELIEF REQUESTED FOR EACH CLAIM CHALLENGED

Petitioners respectfully request review and cancellation under 35 U.S.C. §311 of the Challenged Claims in view of:

Prior Art
Reavey (U.S. Patent 5,847,698), filed on September 17, 1996, issued on December 8, 1998; prior art under at least 35 U.S.C. §102(b) ² (EX-1009)
Chandhri (U.S. Patent Application Publication No. 2008/0062141), filed on June 22, 2007, published on March 13, 2008; prior art under at least 35 U.S.C. §102(a), (e) (EX-1011)
Preppernau (Windows Vista Step by Step Manual, 2007 by Joan Preppernau, et al.); prior art under at least 35 U.S.C. §102(a) (EX-1008) ³

Ground (all under 35 U.S.C. §103)	Claims	References
1	1-5, 8-9, 23, 24, 27, 28, 53-55, 57	Reavey, Chandhri
2	7, 10-13, 16, 18, 56	Reavey, Chandhri, Preppernau

² All references to 35 U.S.C. §§102, 103 are to the pre-AIA statutory framework.

³ Preppernau was first publicly accessible as of January 9, 2007. EX-1015, ¶8.

IV. '315 PATENT OVERVIEW

At the time of the '315 patent, numerous computing devices existed on the market with a variety of display screens. Houh, ¶¶41-43. Thus, POSITAs understood the need to customize user interfaces based on the specific configuration of a computing device. *Id.*, ¶43.

A. Specification

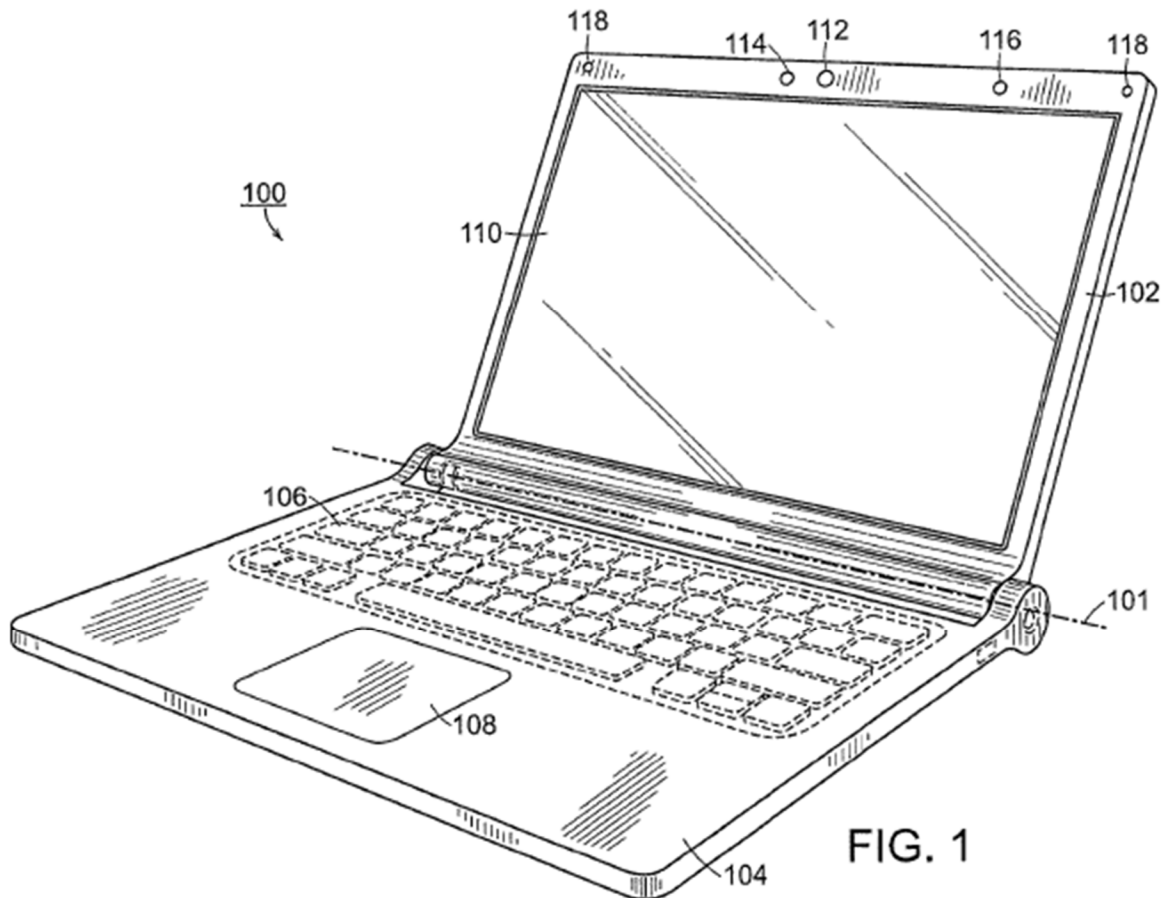
The '315 patent (“System and Method for Streamlining User Interaction with Electronic Content”) issued from U.S. Application No. 12/416,496, filed April 1, 2009. EX-1001, [21], [22], [54]; *see also* Houh, ¶¶44-47. That application is a continuation-in-part of each of the applications that led to U.S. Patent No. 8,624,844 (“’844 patent”) and 8,289,688 (“’688 patent”), both filed on July 10, 2008, and claims priority to a provisional application filed on April 1, 2008.⁴ *Id.*, [60], [63].

The '315 patent is directed to a computer that “permit[s] the user to transition the device from one configuration to another during its use” and includes “a graphical user interface [(‘GUI’)] that organizes interface elements into views of computer content for presentation to [the] user.” *Id.*, Abstract. The plurality of

⁴ The references in this Petition are all prior art assuming the April 1, 2008 priority date. Petitioner may further address priority if PO attempts to swear behind any reference in this Petition.

computer system configurations includes a laptop mode (e.g., Figure 1 below) where display component 102 is pivotably coupled to base 104 that includes keyboard 106.

Id., 6:25-42.



In laptop mode, the keyboard is accessible to the user. Other computer system configurations include an easel mode (Figure 4 below) and a frame mode (Figure 26 below). *Id.*, 11:20-23, 18:25-34, 23: 41-67, 24:1-17.

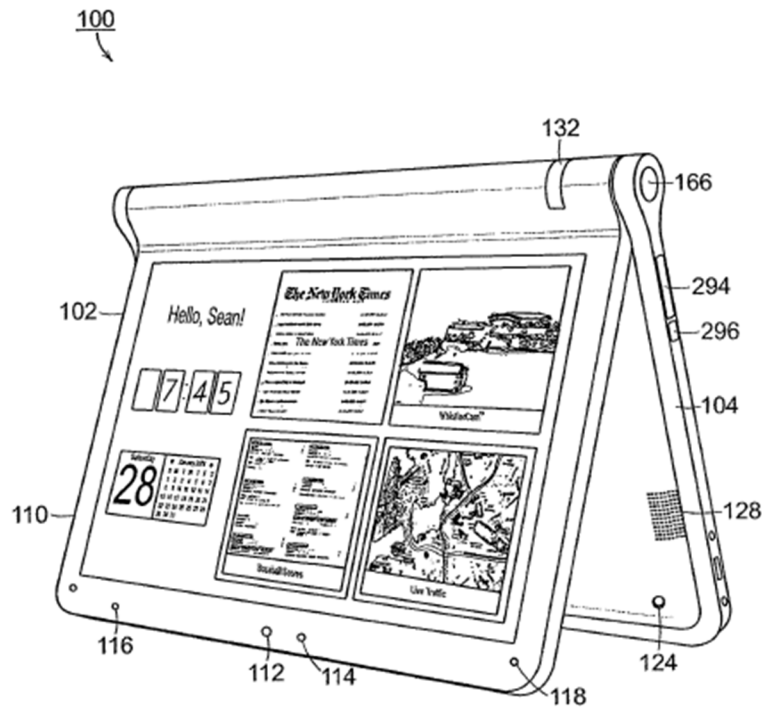


FIG. 4

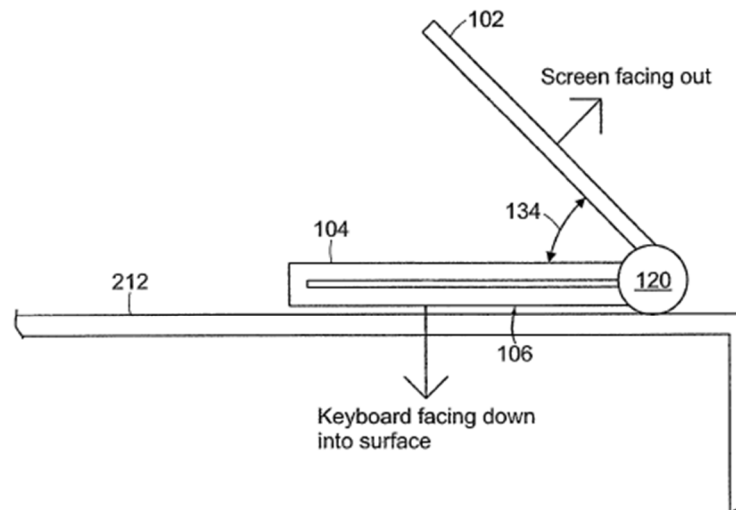


FIG. 26

In the easel and frame modes, the keyboard is “concealed and not easily accessible” to the user. *Id.*, 24:25-32. The ’315 patent describes various views including a “home view” and a “channel view,” and various content modes such as “media content mode” and “web content mode.” *Id.*, 3:23-4:55.

B. Prosecution History

Throughout prosecution, the pending claims recited “a plurality of views.” EX-1002, 141-150, 454-465, 553-564, 662-675, 775-789, 831-845. The Examiner consistently found that prior art reference “Miller,” a how-to guide for Windows Media Center, taught the “plurality of views.” EX-1002, 366-376, 489-493, 604-608, 712-716, and the applicant never argued otherwise, EX-1002, 466-471, 565-569, 676-680, 790-791, 847-848; *see also* Houh, ¶¶48-50. After repeated claim amendments to add new features, EX-1002, 454-465, 553-554, 662-663, 775-776, 831-832, the Examiner eventually allowed the claims based on the combination of effectively all of the recited features, EX-1002, 863-876.

C. Prior ’688 and ’844 Patent Office Proceedings

The ’315 patent has not been subject to any prior post-grant proceedings (IPR or ex parte reexamination (“EPR”)). PO did not assert the ’315 patent in any district court litigation until February 2023. *See also* Houh, ¶¶51-53.

PO sued Lenovo alleging infringement of the parent ’688 and ’844 patents in May 2020 (EX-1024), and Lenovo subsequently filed IPR petitions challenging

claims of both. *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00681 (“-681 IPR”), Paper 1 (March 18, 2021); *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00822 (“-822 IPR”), Paper 1 (May 4, 2021). Both petitions named only Lenovo entities as real parties-in-interest and asserted obviousness challenges based on references not relied upon in this Petition. -681 IPR, Paper 1, 3; -822 IPR, Paper 1, 3-4.

The Board denied institution for both IPRs. In the -681 IPR, the Board found Lenovo had failed to allege its grounds with sufficient particularity, and denied institution without reaching the merits of the unpatentability grounds. -681 IPR, Paper 8. In the -822 IPR, the Board construed the term “frame mode,” and denied institution because Lenovo’s references did not teach a “frame mode” under the Board’s construction. -822 IPR, Paper 6. Petitioners note that the ’315 Challenged Claims do not recite a “frame mode.”

V. DISCRETIONARY DENIAL WOULD BE INAPPROPRIATE HERE

A. Status of Co-Pending Litigation⁵

Both the ’844 and ’688 patents were the subject of a prior litigation in the District of Delaware against Lenovo, with the complaint filed on May 22, 2020. EX-

⁵ As discussed above, the prior litigation against Lenovo did not assert the ’315 patent. EX-1024.

1024. That suit asserted infringement by Lenovo of six patents. *Id.* Of those, Lenovo requested indemnity from Microsoft only as to U.S. Patent No. 8,577,957 (the '957 patent). EX-1031. Microsoft filed an IPR petition challenging claims 1-36 of the '957 patent. *Microsoft Corp. v. LiTL LLC*, IPR2021-01011, Paper 1 (May 25, 2021). PO subsequently disclaimed all challenged claims of the '957 patent, and the Board denied institution because all challenged claims had been disclaimed. *Id.*, EX-2008, Papers 8-9. Lenovo did not request indemnity from Microsoft for any other patent involved in the litigation against Lenovo, and Microsoft had no involvement in the IPRs Lenovo filed against the other five patents (IPR2021-00681, -786, -800, -821, -822), including the IPR Lenovo filed challenging claims of the '888 patent.

PO and Lenovo ultimately stipulated to dismissal with prejudice of the litigation against Lenovo, which was ordered on February 3, 2023. EX-1025.

Two days prior to that dismissal (on February 1, 2023), PO sued HP, Dell, and ASUS in the District of Delaware, accusing those defendants of infringing eight patents, including the '315 patent. EX-1016, 1017, 1018. On October 13, 2023, Microsoft filed a complaint in intervention for each of those suits, seeking a declaratory judgment of non-infringement, and on October 16, 2023, the district court permitted Microsoft's intervention. EX-1019. The district court issued a scheduling order on January 11, 2024 setting due dates for preliminary infringement

contentions (April 1, 2024); preliminary invalidity contentions (May 1, 2024); Markman hearing (October 10, 2024); and four trial dates (January 20, 2026; February 17, 2026; March 16, 2026; April 20, 2026). EX-1020, 8, 13, 16.

B. *General Plastic*

The '315 patent has not been subject to a prior IPR. Thus, this Petition is not a serial petition challenging the same patent as a prior petition, and *General Plastic* is inapplicable. See *Bayerische Motoren Werke Aktiengesellschaft v. Paice LLC*, IPR2020-01299, Paper 10, 37-38 (Jan. 15, 2021) (determining that a petition was not a serial petition when the prior petition involved related patents but not the same patent).

C. *Fintiv*

Petitioners expect PO will not raise *Fintiv* here because the earliest trial date set by the district court is January 20, 2026 (EX-1020), well after the expected FWD deadline in this IPR (likely August 2025).

D. Section 325(d)

The Board should likewise not exercise its discretion under §325(d) to deny institution. *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, 17-18 (Dec. 15, 2017) (precedential); *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6, 9-11 (Feb. 13, 2020) (precedential). This Petition's grounds rely on three prior art references. Of those,

one (Reavey) was cited only in an IDS during original prosecution and never applied by the Examiner (EX-1002, 306, 423, 694, 768). The other two references (Chandhri and Preppernau) have never been before the Office as to the '315 patent.

Considering the first part of the *Advanced Bionics* framework (*Becton, Dickinson* factors (a), (b), and (d)), although one of the same references has been before the Office (in an IDS only), the same or substantially the same art or arguments were not previously presented to or considered by the Office. During prosecution, Reavey was listed in an IDS, but the Examiner did not apply Reavey in a rejection or consider Reavey in combination with any of the references on which this Petition relies. Neither Chandhri nor Preppernau was even cited during original prosecution, much less considered in combination with Reavey. Thus, substantially the same art or arguments were not previously before the Office.

Section 325(d) is inapplicable to the grounds raised in this Petition.

VI. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art (“POSITA”) would have had a bachelor’s degree in electrical engineering, computer engineering, computer science, or a similar field, plus two years of work experience in designing GUIs for computing devices. Houh, ¶¶20-22. More education could substitute for experience and vice versa. *Id.*

VII. CLAIM CONSTRUCTION

A. “plurality of views of a plurality of visual representations of computer content”

This term is recited in independent claims 1, 27, and 28, and has not been previously construed as to the '315 patent or the related '688 or '844 patents. Construction of a similar term was addressed in prior patent office proceedings involving U.S. Patent No. 9,880,715 and U.S. Patent No. 8,612,888. Although the '315 patent does not claim priority to either of those patents, the '315 patent claims priority to the same provisional application to which each of those patents also claims priority. EX-1033 ('688 patent), Cover (60); EX-1032 ('844 patent), Cover (60). In those prior proceedings, the Board construed the “plurality of views” limitation as “referring to a plurality of ways of organizing visual representations of computer content,” and the Board noted that this limitation does not encompass merely changing the display’s orientation. *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00786, Paper 6, 13-16 (May 4, 2021); *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00821, Paper 6, 4-9 (May 4, 2021). Because the Board denied institution, it did not further consider that construction based on a full trial record. *See id.* During the '715 EPR, the Examiner also clarified that the “plurality of views” limitation does not encompass merely changing to entirely different content. EX-1005, 1679-81.

This Petition shows that the Challenged Claims are unpatentable under the Board’s construction of “plurality of views,” as clarified during the ’715 EPR. *See also* Houh, ¶¶54-56.

B. Means-Plus-Function (“MPF”)⁶

No claim terms in the Challenged Claims use the term “means,” and there is a rebuttable presumption that the claim terms are not MPF. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). The presumption, however, is overcome for all “component” limitations in the Challenged Claims. *See* MPEP §2181 (“The following is a list of non-structural generic placeholders that may invoke 35 U.S.C. 112[, ¶6]: ... ‘component for.’”). Although Petitioners argue the Challenged Claims are unpatentable regardless of whether the claims are treated as MPF, to the extent the Board agrees the claims are MPF and require corresponding structure in the specification, Petitioners identify the specific portions of the specification that describe the corresponding structure for each such limitation below. *See also* Houh, ¶57.

1. “display component”

Limitation (Function Underlined)	Corresponding Structure
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⁶ Petitioners reserve the right to raise and address indefiniteness, enablement, and/or written description issues for the Challenged Claims in other proceedings.

Claim 1: “A customized user interface for a computer system with a plurality selectable I/O profiles configured to present computer operations to a user in a format configured to a selected I/O profile on a display component of the computer system”	A display screen. <i>See, e.g.</i> , ’315 Patent, Fig. 1, 6:28-30, 18:49-63, 19:4-5, Cl. 29 (“a display component including a display screen”).
Claim 27: “ <u>displaying a map based graphical user interface on a display component</u> ”	
Claim 28: “ <u>identify at least a first and a second computer system configuration based on sensor input indicating a position of the display component relative to a base component;</u> ”	

2. “execution component”

Limitation (Function Underlined)	Corresponding Structure
Claim 1: “an execution component , executing on the at least one processor, configured to... <u>identify...select...filter...[and] transition</u> ” as recited in 1[f]-[i]	a program (or programs) executing on a processor that can (i) identify a first and second configuration of the computer based on a sensor indicating relative position of display/base, (ii) select a home view for a first configuration, (iii) filter a set of visual representations optimized for viewing in the second configuration to create a second set of visual representations, and (iv) transition, based on the sensor to a second default content view that organizes the second set of visual representations. <i>See, e.g.</i> , ’315 Patent, 3:8-13, 6:5-9, 6:20-24, 9:20-29, 42:15-35, 64:46-65:5.
Claim 28: “an execution component configured to... <u>identify...select...filter...execute...</u> ” as recited in 28[e]-[h]	
Claim 2: “The user interface of claim 1, wherein the execution component is	a program (or programs) executing on a processor that can transition between

further configured to <u>transition...</u> ” as in recited in claim 2	the plurality of views in response to execution of a computer system operation, a visual representation, a computer system configuration, and a change in computer system configuration. <i>See, e.g.,</i> ’315 Patent, 3:8-13, 9:20-29, 11:6-19.
Claim 12: “The user interface of claim 11, wherein the execution component is further configured to <u>cause the computer system to transition...</u> ” as recited in claim 12	a program (or programs) executing on a processor, that can perform the steps in claim 1 and further can transition to a previous view based on the user executing a navigation element. <i>See, e.g.,</i> ’315 Patent, 4:58-62, 10:20-24.
Claim 24: “The user interface of claim 23, wherein the execution component is further configured to <u>transition...</u> ” as recited in claim 24	a program (or programs) executing on a processor that can perform the steps from claim 1 and transition between a plurality of views responsive to the system configuration and current view state. <i>See, e.g.,</i> ’315 Patent, 6:5-9, 8:48-54, 11:6-19.

3. “storage component”

Limitation (Function Underlined)	Corresponding Structure
Claim 11: “The user interface of claim 1, further comprising a storage component configured to <u>retain...</u> ” as recited in claim 11	A local or remote storage device configured to retain previous view states. <i>See, e.g.,</i> ’315 Patent, 4:56-58, 5:66-6:5, 10:18-20, 11:3-6, 16:26-35, 16:59-62, 21:27-28.
Claim 23: “The user interface of claim 1, further comprising a storage component configured to <u>retain...</u> ” as recited in claim 23	

4. “first user interface component” / “second user interface component”

Limitation (Function Underlined)	Corresponding Structure
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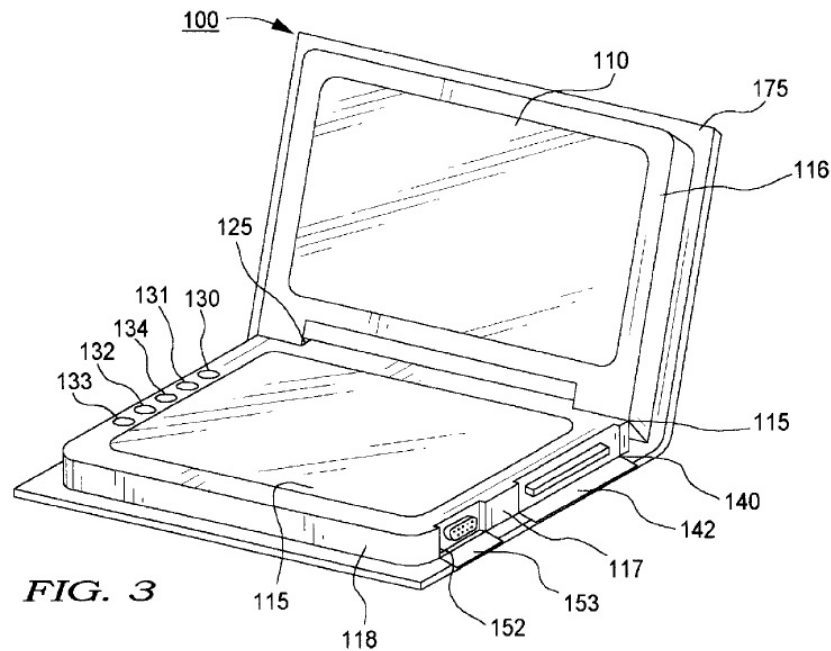
Claim 28: “a first user interface component configured to <u>display...</u> ” as recited in 28[b];/ “a second user interface component configured to <u>display...</u> ” as recited in 28[c]	A software interface component configured to display a plurality of visual representations of computer content that have an association with a home view based on selecting a visual representation. <i>See, e.g.,</i> ’315 Patent, 9:5-24, 9:53-10:2, 10:24-41, 10:50-11:6.
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VIII. DETAILED EXPLANATION OF GROUNDS

A. Ground 1: Obviousness over Reavey and Chandhri (Claims 1-5, 8-9, 23-24, 27-28, 53-55, 57)

1. Reavey

Reavey (EX-1009) discloses an electronic book device 100 that can be used in multiple physical configurations. Reavey, 1:11-15; *see also* Houh, ¶¶58-62. The device 100 includes two screens, first panel screen 110 and second panel screen 115, connected by hinge 125. *Id.*, 5:32-35. Either screen can be provided as a touchscreen. *Id.*, 5:46-48. Device 100 includes other user input/output devices, including navigation keys 130-133 and “assistant key 134.” *Id.*, 5:39-42.



Reavey, Fig. 3.

Reavey's device 100 can be used in three modes. In Mode 1, device 100 is held with screens 110/115 arranged vertically and held side-by-side, like a book. Reavey, 7:35-39.

In Mode 2, screens 110/115 are arranged horizontally and in an over-under fashion, lying flat on a surface. Reavey, 7:42-44, 7:51-53, 7:61-62, Fig. 2. Screens 110/115 “act as one screen, with the text and graphics scrolling downward from one to the other.” *Id.*, 7:42-44.

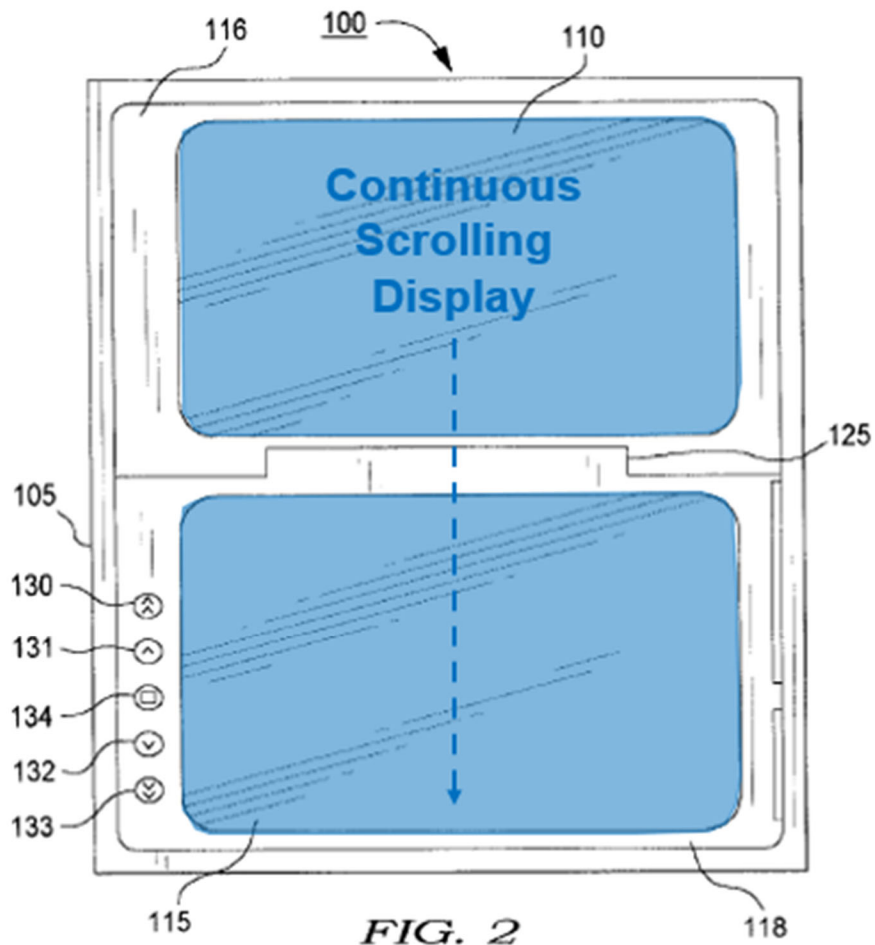
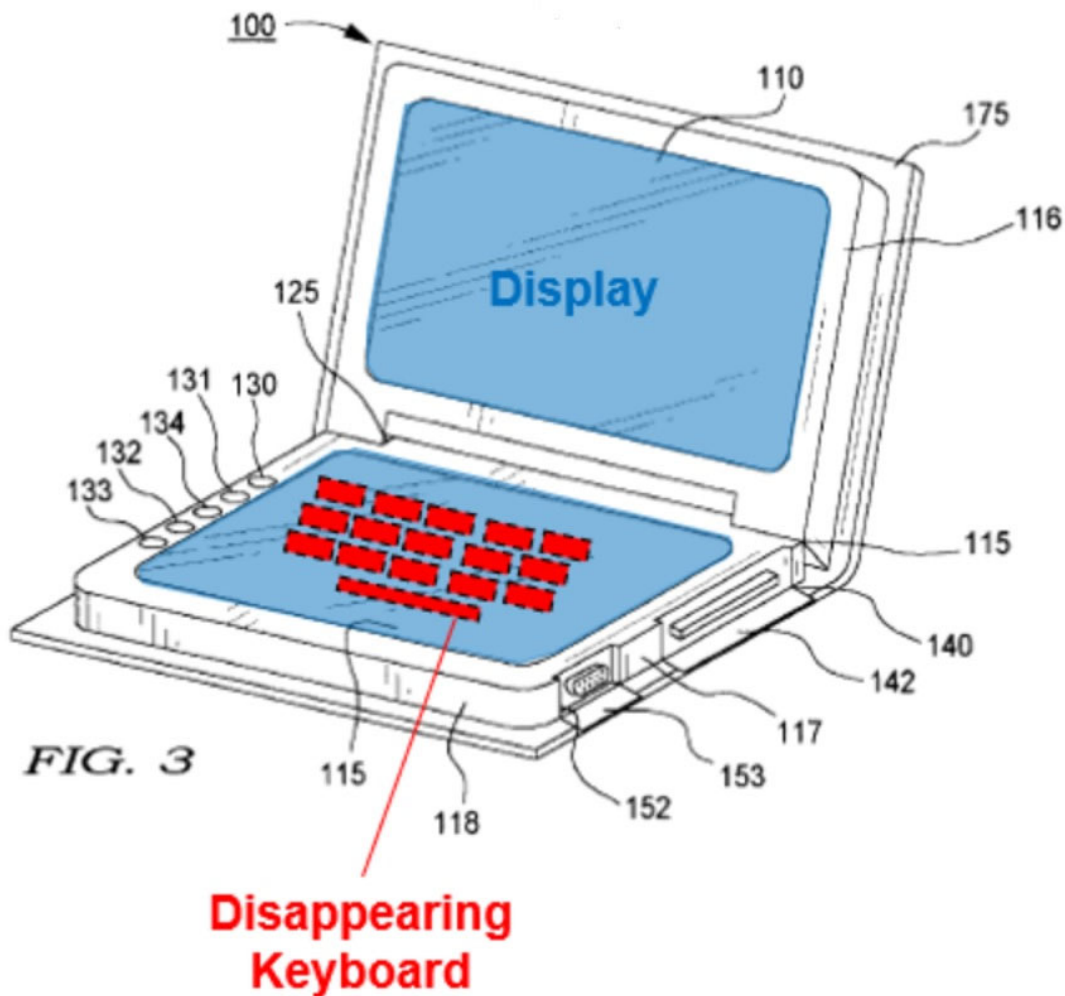


FIG. 2

Reavey, Fig. 2 (annotated).

In Mode 3, screens 110/115 are arranged horizontally and in an over-under fashion, with the screens only partially open with respect to one another, such as at 120°. Reavey, 7:39-42, 7:53-58, Fig. 3. The “top horizontal screen [110] behave[s] as a normal display screen and the bottom horizontal screen [115] behave[s] as a touchscreen keyboard.” *Id.*, 7:39-42.



Id., Fig. 3 (annotated).

Device 100 changes between these modes “automatically when electronic book device 100 is opened.” *Id.*, 7:45-46. When opened, Reavey’s device determines a proper mode of operation in the process of Figure 9:

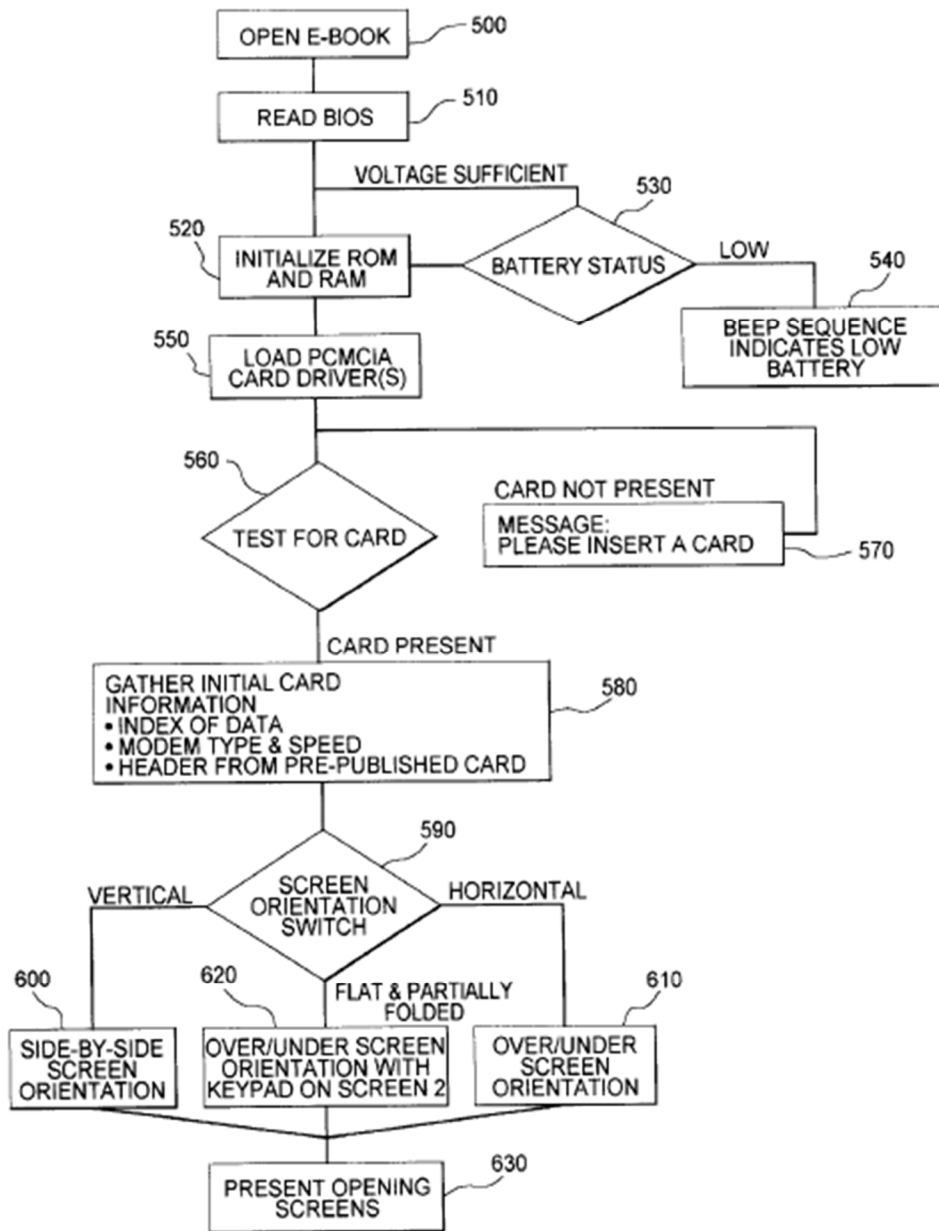


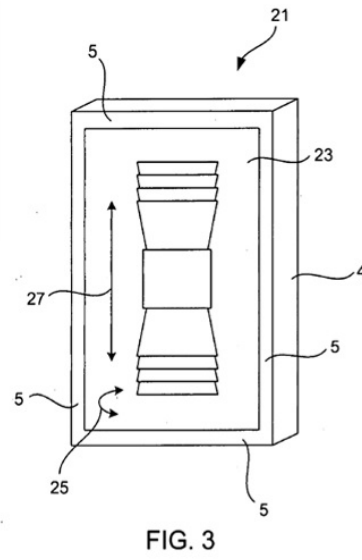
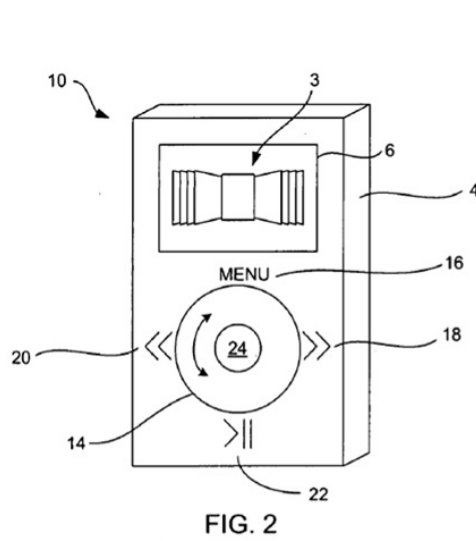
FIG. 9

Id., Fig. 9. This “[s]creen orientation processing” determines whether Reavey’s device should be operated in “mode 1...mode 2...or mode 3” and then displays the appropriate, respectively-associated screens to a user. *Id.*, 8:42-9:6.

2. Chandhri

Chandhri (EX-1011) relates to an electronic device with image-based browsing and addresses “improved methods for browsing through content.” Chandhri, Abstract, ¶¶0004, ¶0052; *see also* Houh, ¶¶63-68. The “image based browser function provides a graphical user interface that allows a user to navigate through and/or select images rather than textual menu items contained in a conventional menu list (e.g., vertical menu).” Chandhri, ¶0053. Although Chandhri discloses examples of browsing through media like music and photos, Chandhri’s GUI interface is also applicable more generally to “media files, address files, data book files, document files, applications, modes, etc.” *Id.*, ¶0054. Although the GUI interface may be applied to a media player, it can also be applied to other types of electronic devices, such as “a computer (e.g., personal computer).” *Id.*, ¶0057.

Chandhri further discloses a tile-based browser that the user navigates with a “scrolling type action.” Chandhri, ¶¶0059-0060. Where the screen is horizontally-oriented, the user scrolls through the tiles side-to-side (*id.*, Fig. 2), and where the screen is vertically-oriented, the user scrolls through the tiles up-and-down (*id.*, Fig. 3).



Id., Figs. 2, 3.

Chandhri's tiles can be arranged in various manners, including spatially separated (Chandhri, Fig. 5), layered (*id.*, Fig. 6), layered with the subsequent tiles in full view (*id.*, Fig. 7), and virtual rolodex (*id.*, Fig. 8):

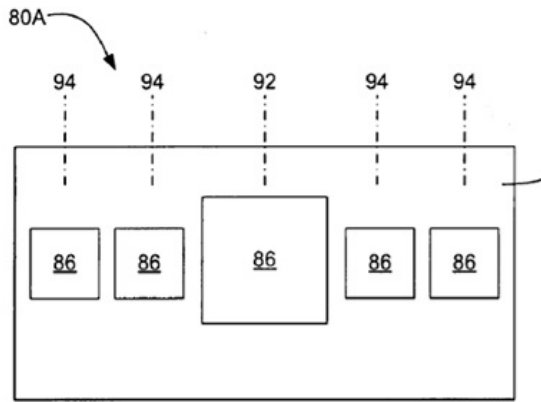


FIG. 5

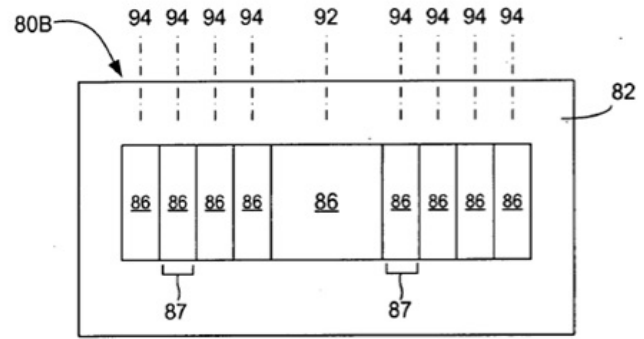


FIG. 6

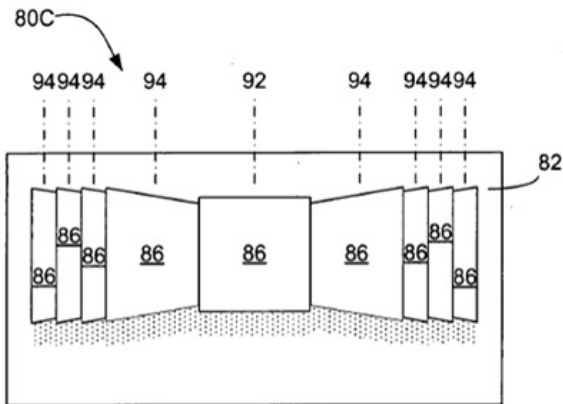


FIG. 7

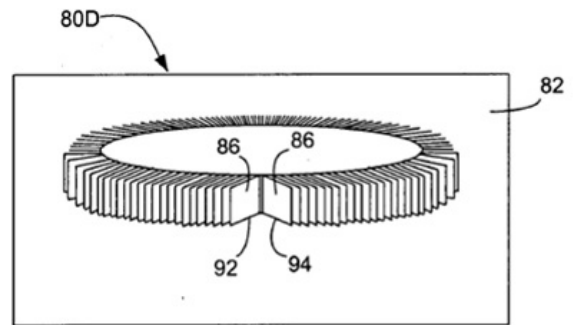


FIG. 8

Chandhri's tiles can be used to scroll through different types of content, including photos (Chandhri, Fig. 15), applications (*id.*, Fig. 13), and modes of the device (*id.*, Fig. 16):

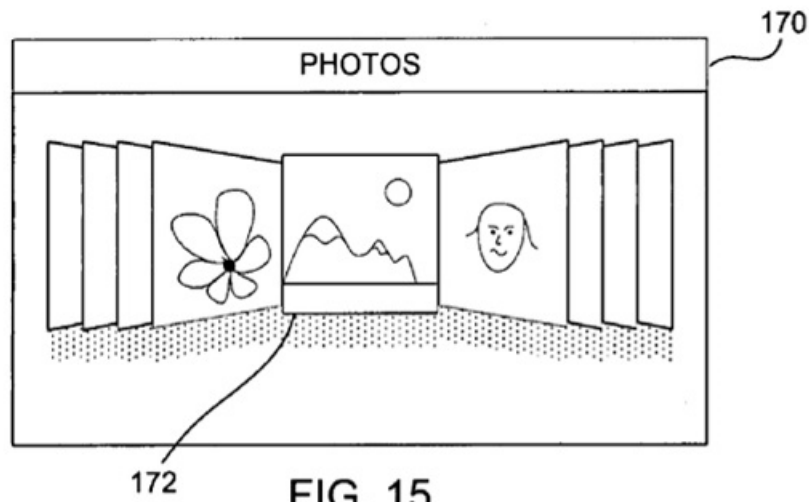


FIG. 15

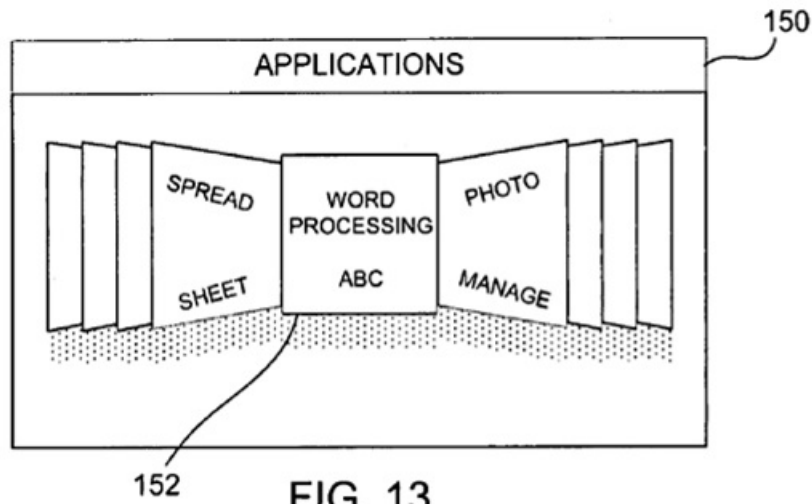


FIG. 13

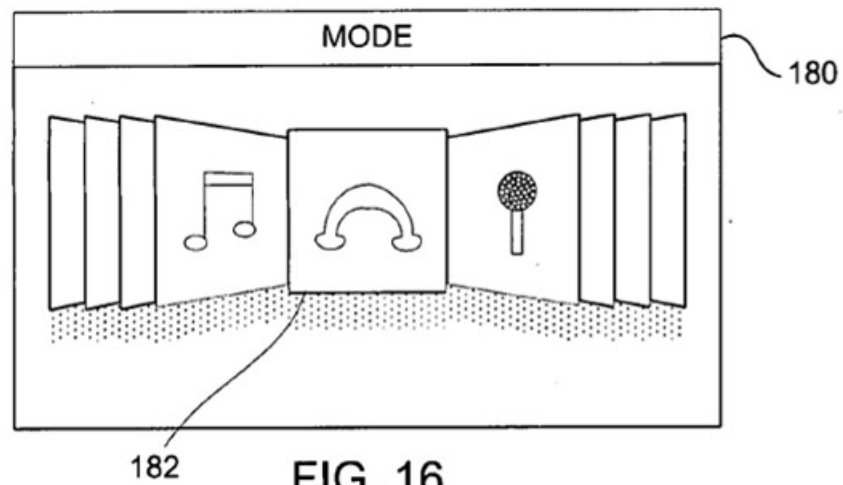
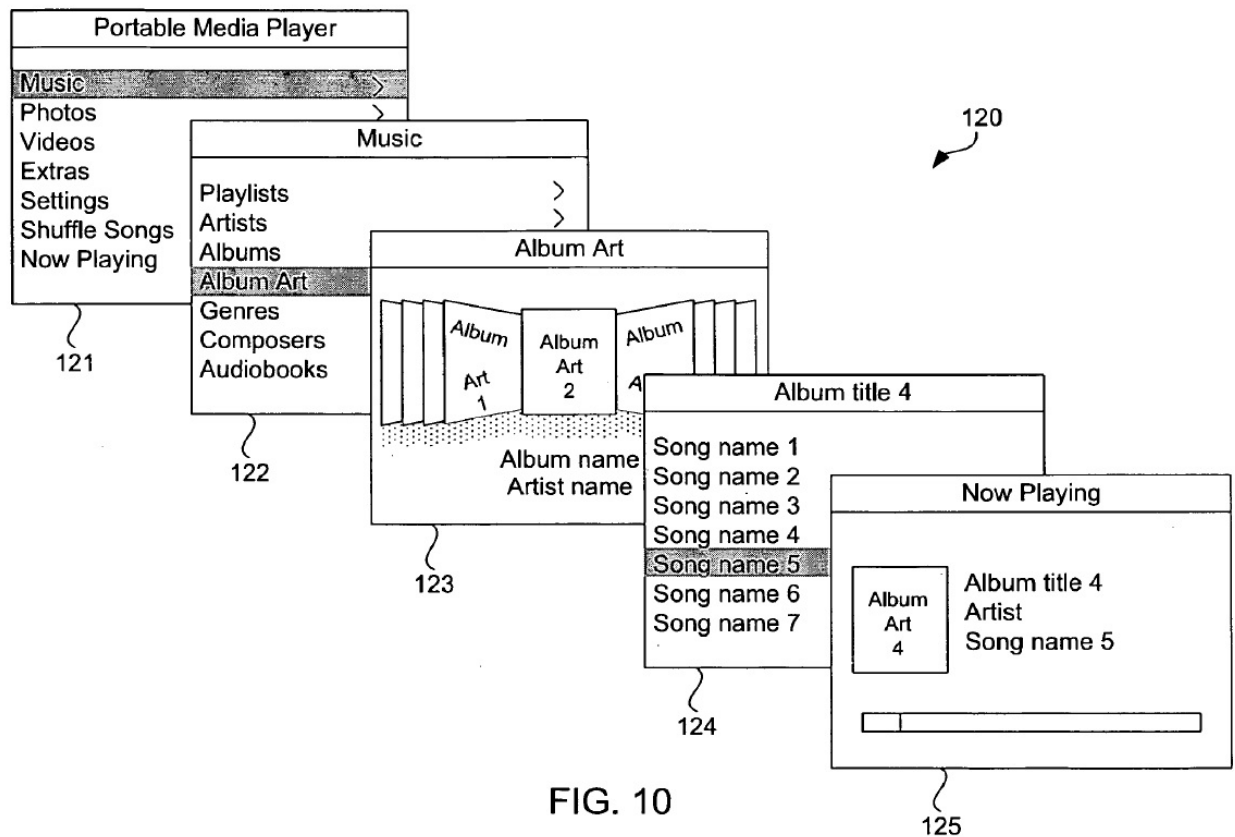


FIG. 16

Chandhri's image-based browser can use a menu hierarchy. Chandhri, ¶0134,

Fig. 10:



Chandhri's device can switch between a traditional menu GUI and an image-based browser GUI based on physical positioning of the device, such as a change from vertical to horizontal orientation. *Id.*, ¶0059, ¶0224-0225, ¶0229, Fig. 34:

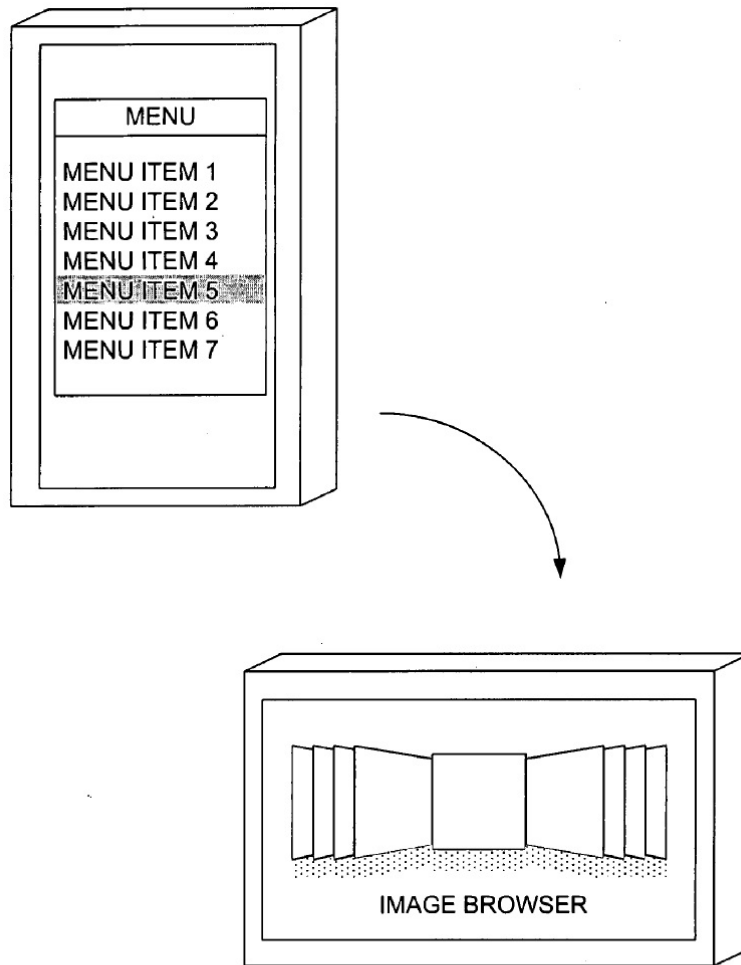


FIG. 34

3. Motivation to Combine

A POSITA would have been motivated to combine Reavey's device with the GUI disclosures of Chandhri. Houh, ¶¶76-84.

Reavey teaches a user manipulates its device into different physical configurations, including a laptop configuration (Mode 3) and a flat configuration (Mode 2). Reavey, 1:11-15, 7:24-62, Figs. 2-3. In the flat configuration (Mode 2),

there are two screens 110/115 available for the display of content. *Id.*, 7:42-44, 7:51-53, 7:61-62, Fig. 2. In the laptop configuration (Mode 3), there is only one screen 110 available for display of content, while the other screen 115 displays a touch-sensitive keyboard. *Id.*, 7:39-42, 7:53-58, Fig. 3.

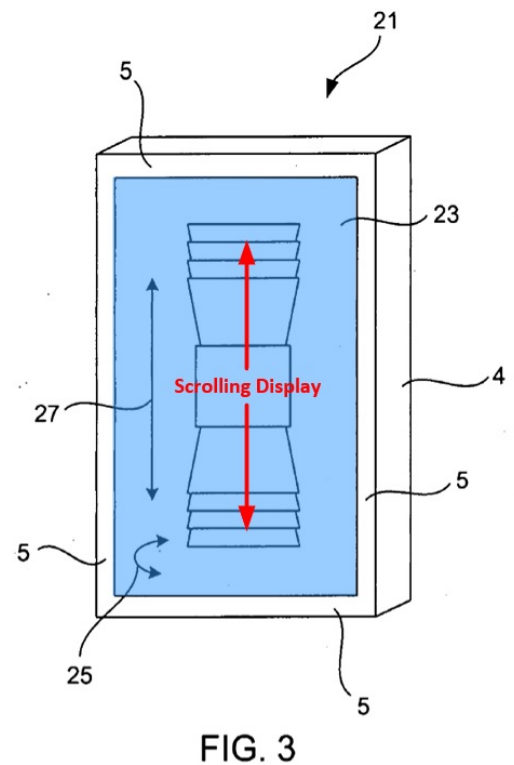
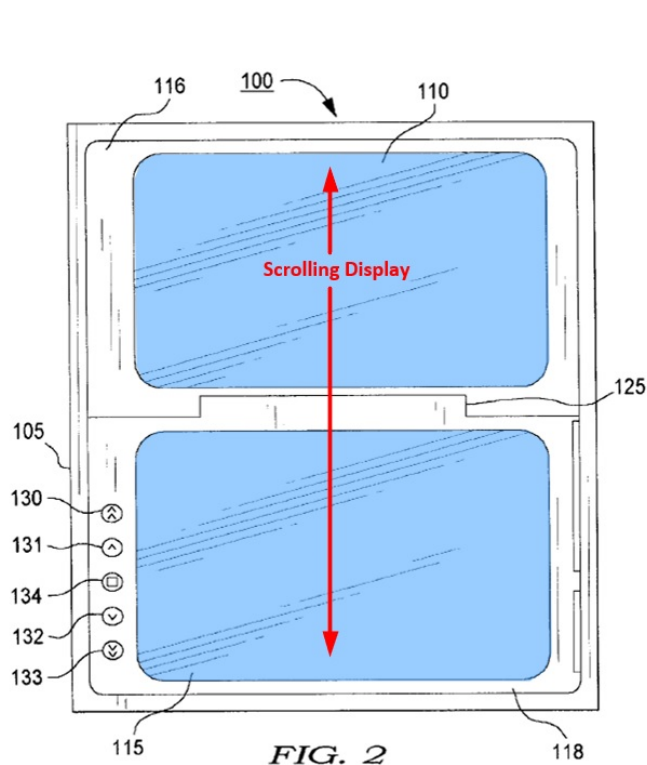
A POSITA would have recognized that the organization of the GUI in Reavey's device changes when the user manipulates the device from the laptop configuration (Mode 3) to the flat configuration (Mode 2). Houh, ¶¶76-77. Namely, in the laptop configuration, Reavey's device has a single horizontally-oriented display, whereas in the flat configuration, Reavey's device has a more vertically-oriented display with twice as much screen area. Reavey, 7:24-62, Figs. 2-3. Furthermore, Reavey teaches that in the laptop configuration, a keyboard is available for manipulation of the GUI, while in the flat configuration no keyboard is available and the content in the GUI is manipulated by scrolling up-and-down across the two screens. *Id.* A change to the organization of the GUI would have been required because of (1) the change in available screen space, (2) the change in the aspect ratio of the screen space, and/or (3) the change in the input/output devices available for manipulating the GUI. Houh, ¶¶76-77.

Although a POSITA would have recognized a change to the organization of the GUI occurs between the laptop configuration (Mode 3) and flat configuration (Mode 2), Reavey itself does not explicitly disclose how the GUI should be

organized. For at least three reasons, a POSITA would have been motivated to combine Chandhri's beneficial GUI organizations with Reavey's device. Houh, ¶78

First, Chandhri discloses a type of GUI organization beneficial for use with the non-standard scrolling-based interface when Reavey's device is in the flat configuration (Mode 2). Houh, ¶79. When Reavey's device is "fully opened all the way, the keyboard will disappear" (Reavey, 7:61-62) and a scrolling-based interface is used (*id.*, 7:42-44). A POSITA would have recognized that Reavey's device in the flat configuration required a GUI organization with at least the following features: (1) it must be manipulable with a touchscreen and/or buttons; (2) it must be manipulable even though a keyboard is not available; and (3) it must allow vertical scrolling through content. Houh, ¶79.

Chandhri's tile-based browsing interface is an "efficient and user friendly" GUI organization that is manipulable with a touchscreen and buttons (requirement (1)) and is used in a device without a keyboard (requirement (2)). Chandhri, ¶0060, ¶0067, ¶0086, Fig. 3. Further, Chandhri's tile-based browsing interface can be arranged in a vertical-scrolling organization (requirement (3)). Chandhri, Fig. 3. Furthermore, as with Reavey's device in the flat configuration, Chandhri's vertical scrolling organization is advantageously used with a "full or near full screen display" and "the touch screen allows the display area to be enlarged as other input means are typically not necessary." Chandhri, ¶¶0082-0086, Fig. 3.



Reavey, Fig. 2 (annotated, left); Chandhri, Fig. 3 (annotated, right).

Second, Chandhri discloses how to use its vertical scrolling-based GUI in conjunction with a text menu-based GUI that was typical of a laptop device with a keyboard—like when Reavey’s device is in the laptop configuration (Mode 3). A POSITA would have recognized that when Reavey’s device is in the laptop configuration, it would be beneficial and expected for the GUI to use a more standard organization, such as a GUI with windows, text-based menus, and the like. Houh, ¶81. Although Chandhri’s device itself did not have a keyboard, Chandhri discloses that its new tile-based scrolling interface is suitable for use in conjunction with a more standard GUI organization, like a “conventional menu list.” Chandhri, ¶0053,

0059, Figs. 10-11, 34. Indeed, Chandhri discloses that its device “often includes both menu driven lists and image based browsers.” *Id.*, ¶0059.

Third, Chandhri discloses that a device could switch between the conventional menu-based GUI organization and the tile-based scrolling GUI in the same situation for which Reavey’s device needed to switch GUI organizations, i.e., when the user changed his physical interaction with the device. Houh, ¶82. A POSITA would have recognized the situation when Reavey’s device needed to change its GUI organization from a menu-based GUI to a scrolling tile-based GUI occurs when the user changed the physical configuration of the device from the laptop configuration (Mode 3) to the flat configuration (Mode 2). Reavey, 7:24-62. Although Chandhri’s device does not have the same “laptop” and “flat” configurations, Chandhri discloses its GUI organization would ideally be changed from a menu-based organization to a scrolling tile-based browser when the user changes the physical configuration of the device from a vertical orientation to a horizontal orientation. Chandhri, ¶¶0224-0029, Fig. 34. At least on this basis, a POSITA would have recognized the need for Reavey’s device, i.e., a way to change GUI organizations from menu-based to tile-based, and to do so automatically, based on sensor data, when the user changed the physical configuration of the device. Houh, ¶83.

A POSITA would have had a reasonable expectation of success combining the multi-configuration device of Reavey with the GUI disclosures of Chandhri.

Houh, ¶84. A POSITA would have recognized that Reavey and Chandhri were in the same field of configurable devices and solved the same problem of providing improved user interactions with electronic devices, especially touchscreen devices. Houh, ¶84. Further, a POSITA would have found it straightforward to program Reavey's device to use the GUI arrangements disclosed in Chandhri. Houh, ¶84.

4. Claim 1

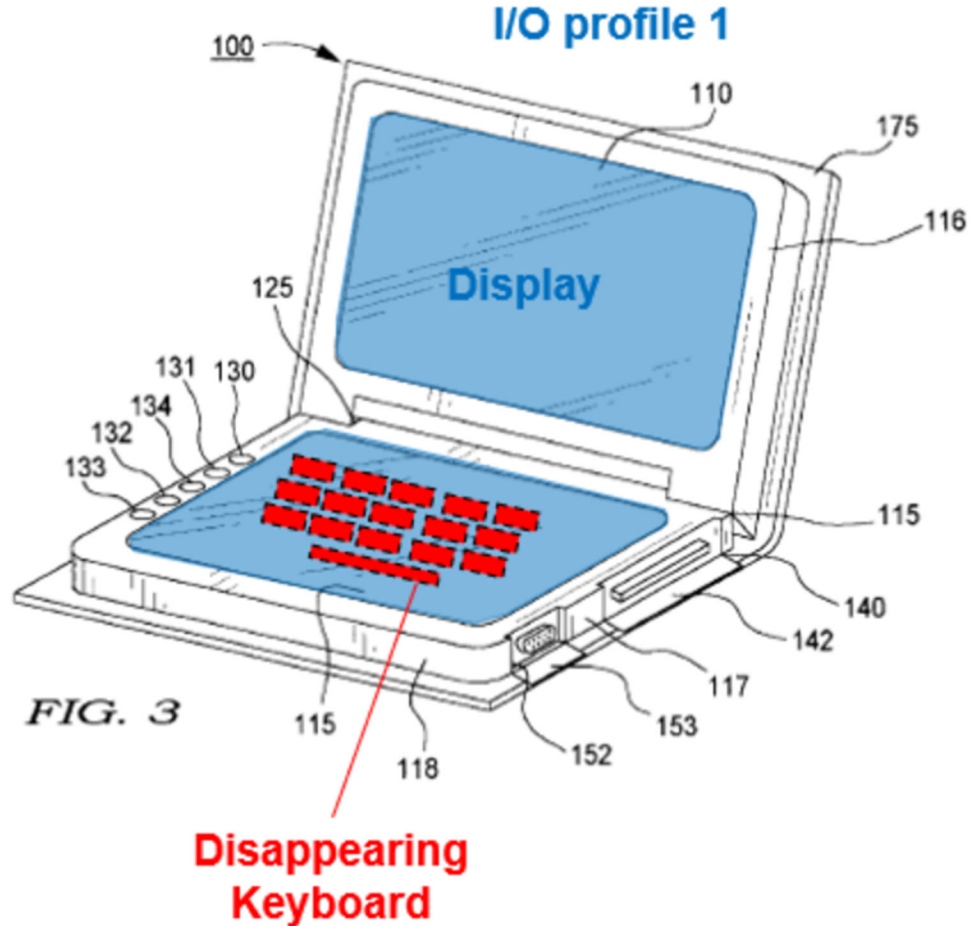
a. 1[pre]

To the extent limiting, Reavey discloses or suggests 1[pre], under MPF (*see* §VII.B.1) or not. Houh, ¶¶85-90. Reavey discloses an “electronic book device” (a “computer system”) that a user interacts with through a user interface that includes first panel screen 210 (a “display screen”), second panel screen 215 (also a “display screen”), navigation keys 230-233, and assistant key 234, among other user interface devices. Reavey, Abstract, 5:52-65. Reavey's device includes a “display component” in the form of first panel screen 110 alone or in combination with second panel screen 115. *Id.*, 5:32-35.

Reavey discloses or suggests “a plurality of selectable I/O profiles configured to present computer operations to a user in a format configured to a selected I/O profile.” The '315 patent describes a “first I/O profile” that includes “a scroll wheel and a button interface” when the device is in “easel mode,” and a “second I/O profile, including a keyboard.” EX-1001, 17:55-63. These I/O profiles are “available for

user selection by manipulation of the device itself.” *Id.*, 17:58-60. For example, the user may start with the device in easel mode with a first I/O profile, and the user may “select a second I/O profile” by “rotating the computer device about a longitudinal axis.” *Id.*, 17:60-63. In other words, the ’315 patent’s intrinsic record shows that “a plurality of selectable I/O profiles” encompasses the available user input platforms that are selected when a user manipulates the device into different physical configurations.

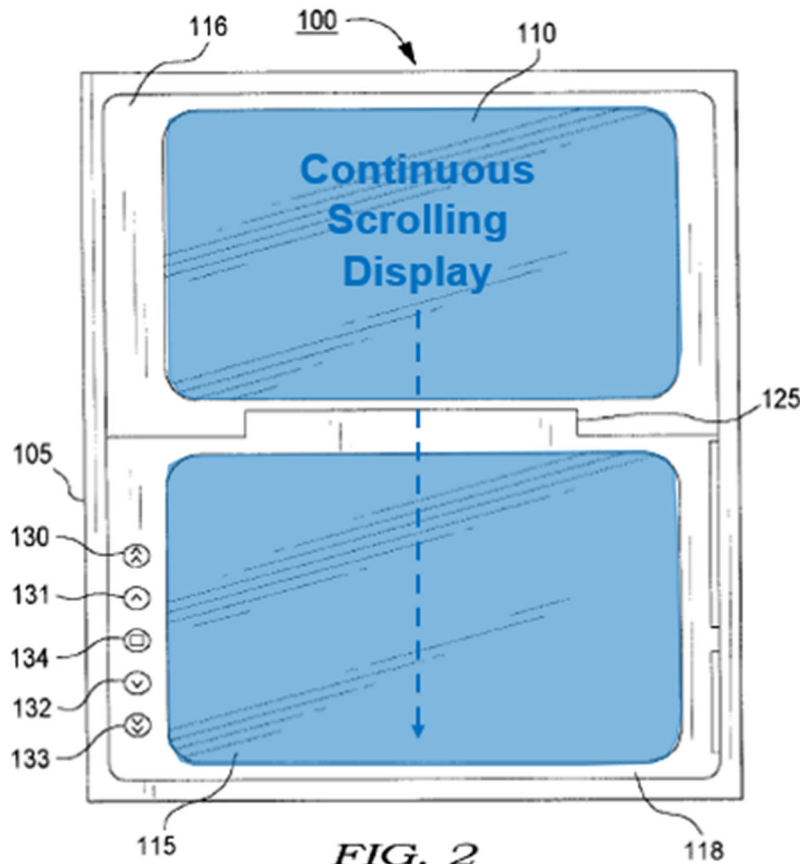
Reavey discloses two or more such I/O profiles. Reavey, 3:12-28, 7:24-62. For example, for one selectable I/O profile, Reavey teaches Mode 3 (also called an “over-under with touchscreen keyboard” mode) for its device. *Id.*, 3:21-24, 7:26-44, 7:53-55. Reavey’s Figure 3 (annotated) depicts Mode 3:



In this I/O profile, a top screen displays content (i.e., output) and a bottom touch screen displays a keyboard for manipulation (i.e., input) when the device's two halves are rotated to a laptop-type configuration. *Id.*, Fig. 3, 7:24-62.

Reavey teaches another selectable I/O profile, its Mode 2 (also called "over-under" mode). *Id.*, 3:18-21, 7:42-44, 7:50-53. Reavey's Figure 2 (annotated) depicts Mode 2:

I/O profile 2



In this I/O profile, the device's two screen-holding panels are rotated to a flat position in which the two screens act as one, larger touch screen (i.e., input) that displays information scrolled from the top of the first screen to the bottom of the second screen (i.e., output). *Id.*, Fig. 2, 7:24-62.

To the extent PO contends a “plurality of I/O profiles” is synonymous with a “plurality of views,” as recited in 1[c], the Reavey-Chandhri combination teaches that limitation as discussed in §VIII.A.4.d below.

b. 1[a]

Reavey teaches 1[a] because its electronic book device includes a “processor,” at least in the form of “a central processing unit (CPU) 300.” Reavey, 6:5-10, Fig. 7; Houh, ¶¶91.

c. 1[b]

The Reavey-Chandhri combination teaches 1[b]. Houh, ¶¶92-96. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

As context, the ’315 patent describes that a “map mode of navigation is a hierarchical mode that reduces the number of items to select amongst at any stage of navigation, thereby facilitating user access with the scroll wheel 132 and, optionally, the navigation button(s) 166, 168.” EX-1001, 20:39-44. It “provides a clear overview of the entire computing environment and searching capability within the environment[.]” *Id.*, 20:33-35. “Using the map user interface, information, programs, features and applications may be grouped into the various modes of content 172.” *Id.*, 20:58-60. The ’315 patent explains Figure 11 is a “block diagram of one example of an architecture of the portable computer including a map user interface,” with groupings of content annotated in red. *Id.*, 20:47-49.

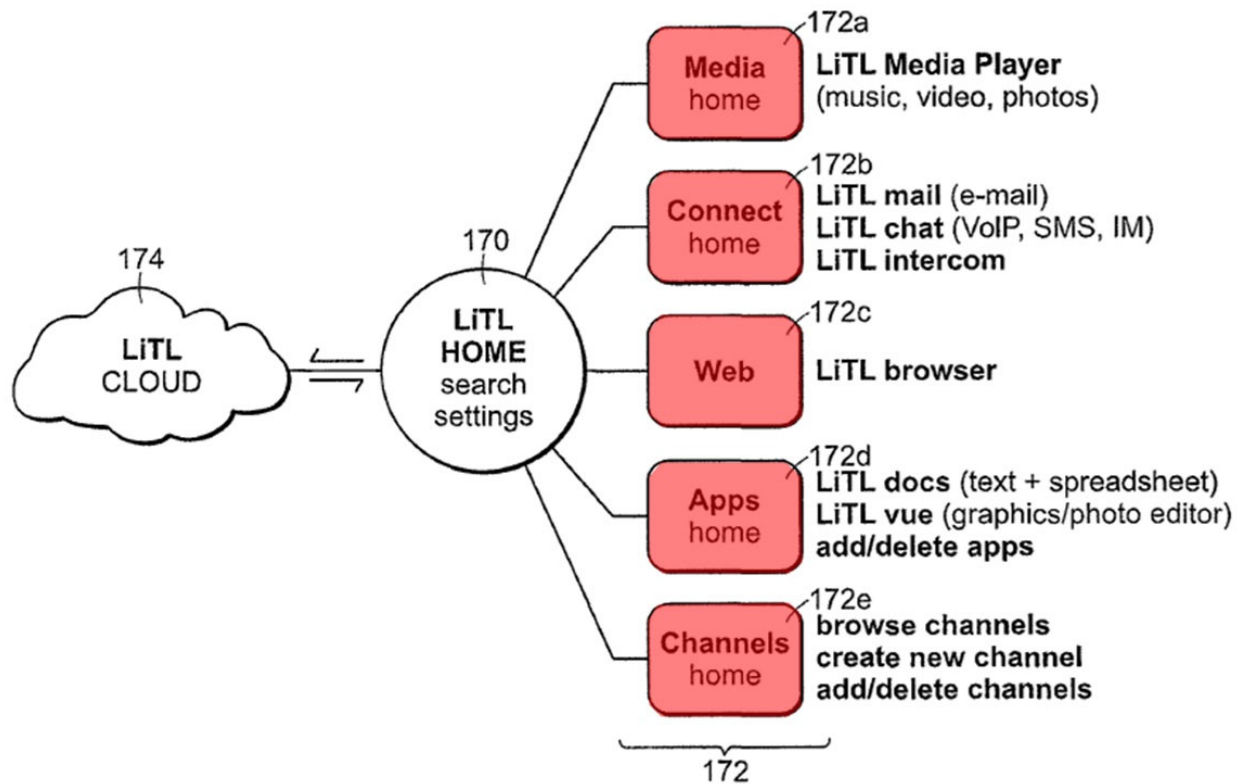
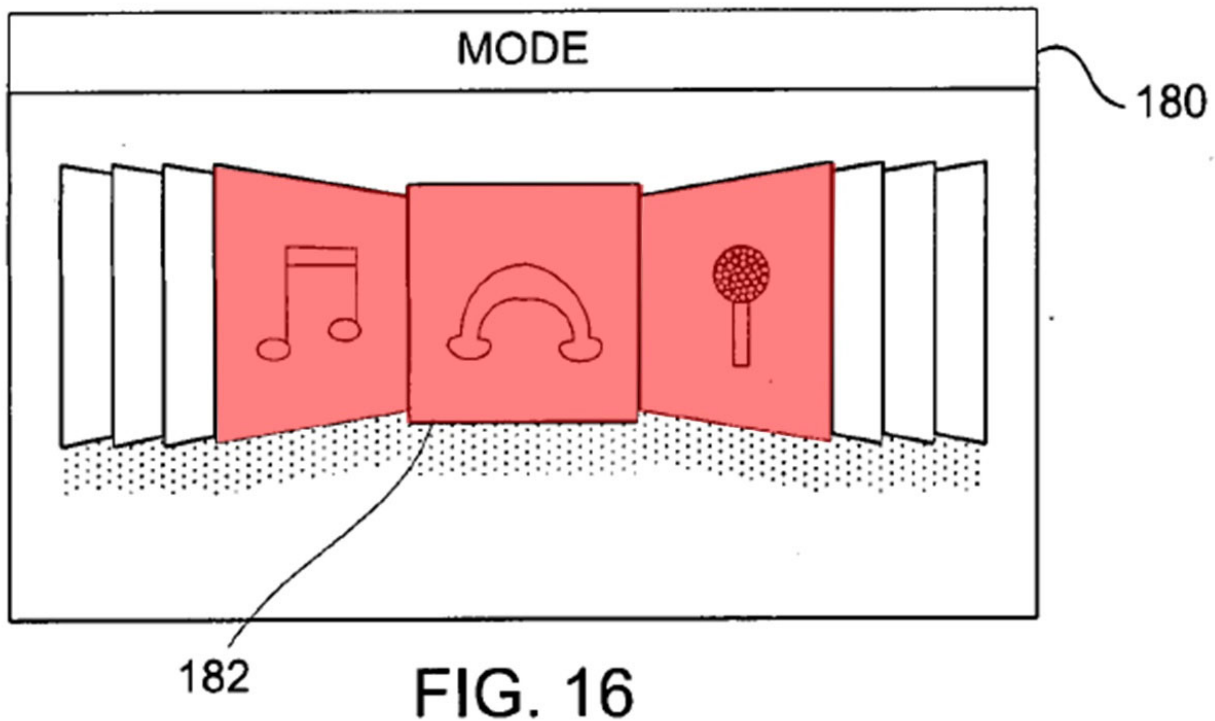


FIG. 11

EX-1001, Fig. 11 (annotated). The '315 patent refers to these groupings of content as “modes,” stating: “Modes of content may include for example, media, channel, connection, application, and web, among other options.” *Id.*, 27:6-8.

Consistently, the Reavey-Chandhri combination includes a map based graphical user interface configured to display information on display 110 (“the display component”) of Reavey’s device 100 (“the computer system”). Houh, ¶¶94-95. Chandhri’s tile-based scrolling GUI organization includes tiles “associated with modes of the portable electronic device.” Chandhri, ¶0142, Fig. 16 (annotated).



The user can use this interface to “change modes of the device.” *Id.*, ¶0141. Chandhri provides examples of potential modes of operation, including “email, video player, music player, game, phone, microphone, camera, game player and/or the like.” *Id.* In Chandhri’s Figure 16, the tile-based browser “may be hierarchical with other browsers” (*id.*, ¶0142), such as launching Figure 10’s browser when the media player mode is selected, or Figures 12A and 12B’s browser when the phone mode is selected (*id.*, ¶0142, Figs. 10, 12A-12B, 16).

The Reavey-Chandhri combination teaches that map-based GUI executes on CPU 300 (“at least one processor”) operatively connected to a memory of Reavey’s device (“the computer system”). Houh, ¶96. Reavey teaches its device includes

various memories, including “read only memory (ROM) 310,” “random access memory (RAM),” “static RAM with battery 320,” “cache RAM 340,” and “PC cards 346.” Reavey, 5:66-6:32, Fig. 7. Although Reavey does not explicitly disclose the specific interaction between CPU 300 and these memories or that the GUI software executes on the CPU 300, a POSITA would have understood CPU 300 executes software operating on device 100, and that CPU 300 is connected to the memories to allow retrieving of program instructions and data needed to execute that software. *Id.*; Houh, ¶96.

d. 1[c]

The Reavey-Chandhri combination teaches 1[c]. Houh, ¶¶97-99. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

The Reavey-Chandhri combination teaches “display a plurality of views of a plurality of visual representations of computer content on the computer system.” Houh, ¶98. The Board previously construed a “plurality of views” as “referring to a plurality of ways of organizing visual representations of computer content,” and the Board noted that this limitation does not encompass merely changing the display’s orientation. *See* §VII.A. In addition, the ’315 patent makes clear that “visual representations” can include cards (EX-1001, 15:34-58), and preview images, such as thumbnails (*id.*, 20:7-9, 35:58-62, 41:1-7, Fig. 2).

Per §VIII.A.4.a (1[pre]), Reavey teaches a device with a plurality of I/O profiles, which automatically adjusts the display to a desired mode. Reavey, 3:12-28 (“The ability to have multiple operational modes is facilitated by having a screen orientation feature which automatically adjusts the text and graphics to the desired mode.”), 7:24-62, Figs. 2-3. Although Reavey discloses adjusting the text and graphics on its GUI in a plurality of ways, PO may argue that Reavey does not sufficiently teach “plurality of ways of organizing visual representations of computer content.” Should PO argue, or the Board find, Reavey’s teachings insufficient alone, a POSITA would have found it obvious to combine Reavey with Chandhri’s teachings for this limitation.

Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device. A POSITA would have found it obvious to modify Reavey based on Chandhri’s teachings to switch from a menu-based GUI organization to a tile-based scrolling GUI organization when changing from the laptop configuration (Mode 3) to the flat configuration (Mode 2). *See* §VIII.A.3.

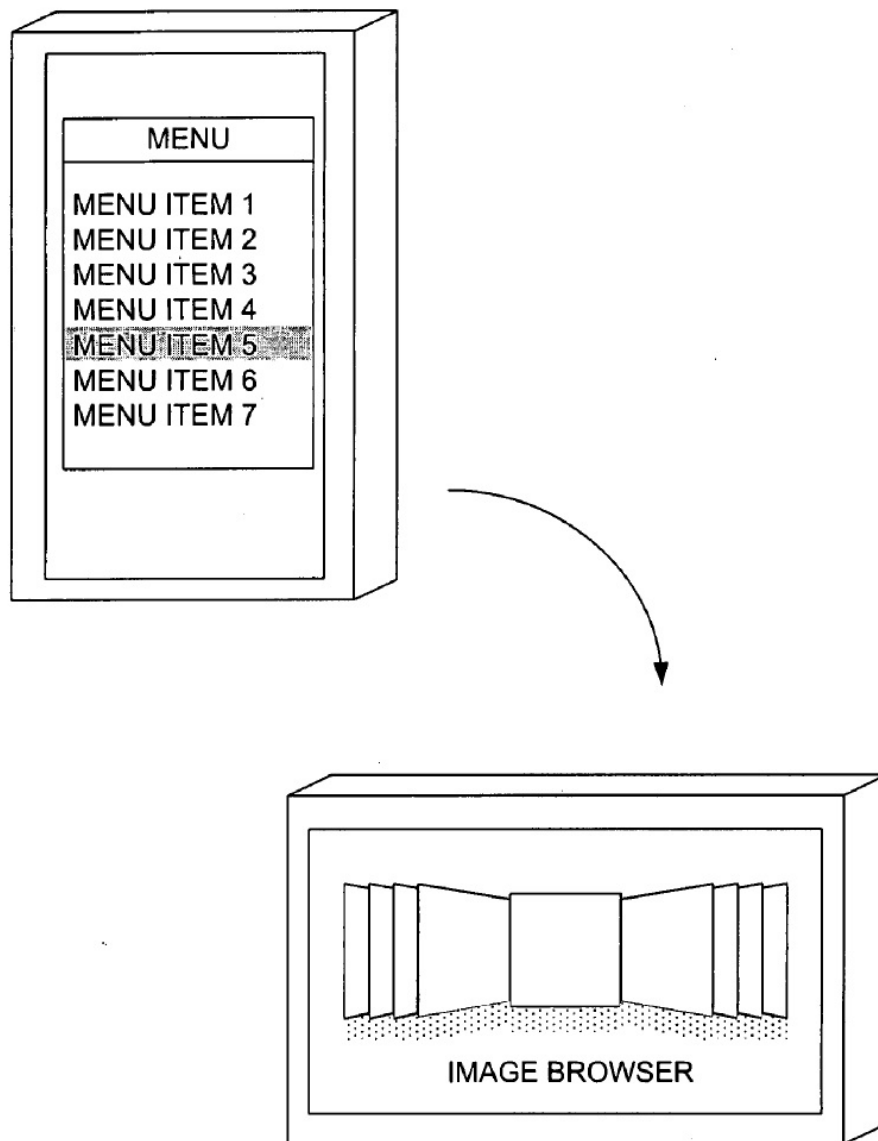


FIG. 34

Chandhri, Fig. 34. Chandhri refers to this process of changing the GUI organization from a “first GUI” to a “second GUI.” *Id.*, ¶0225, Fig. 33. “The first and second GUIs are based on the same data *but use different formatting schemes to show the data.*” *Id.*, ¶0225 (emphasis added).

The Reavey-Chandhri combination teaches that “the computer content includes at least one of selectable digital content, executable computer applications, configurable computer settings, selectable computer operations and passive digital content.” Houh, ¶¶99. For example, Chandhri teaches that the visual representations correspond to computer content that includes selectable digital content, such as music, photos, and videos. Chandhri, ¶¶0134-0137, 0141, Figs. 10-11, 15. As a further example, Chandhri teaches that the visual representations correspond to computer content that includes executable computer applications. *Id.*, ¶0139, Fig. 13. A POSITA would have also understood the computer content represented by Chandhri’s user-selectable content and computer applications was conventional for personal user computing (e.g., computer applications and modes for managing user media and document files) that includes “selectable digital content,” “selectable computer operations,” and “passive digital content” because they are all integral to Chandhri’s computer and subject to its “graphical user interface that allows a user to navigate through and/or select” from that data. Chandhri, ¶¶0052-0054; Houh, ¶99.

e. 1[d]

The Reavey-Chandhri combination teaches 1[d]. Houh, ¶¶100-09. The ’315 patent discloses a “home view” that displays a plurality of modes of content (e.g., five modes) as depicted in Fig. 11:

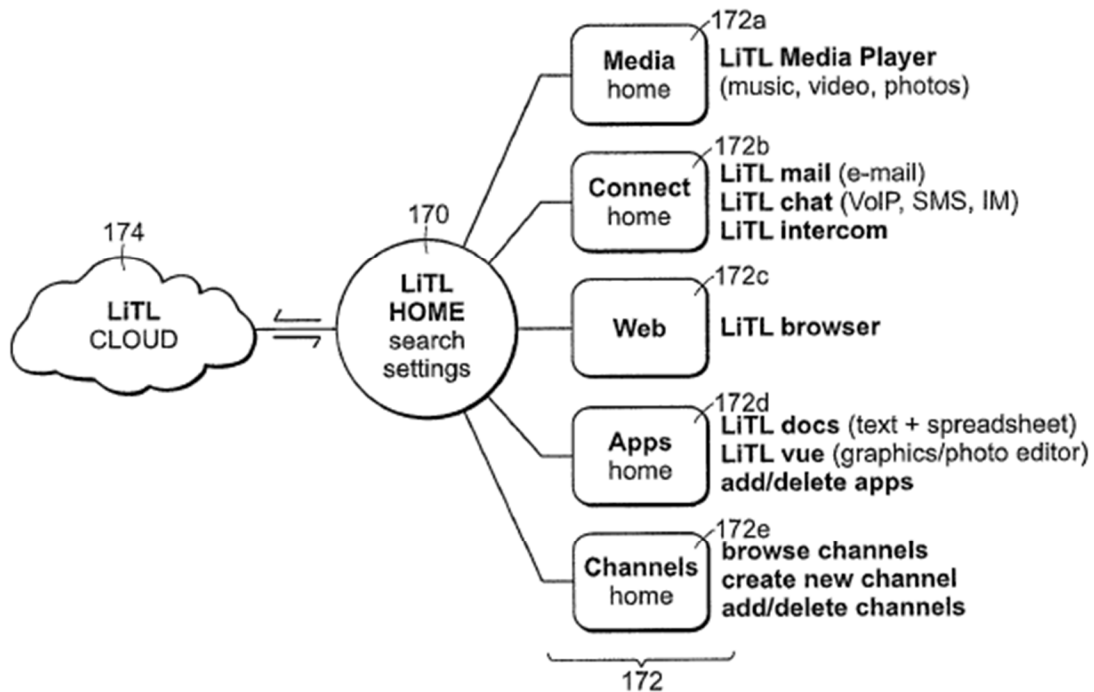


FIG. 11

EX-1001, Fig. 11, 30:32-45. The '315 patent further discloses “focus” as identification using tabbing, hotkeys, and hovering over a screen element with a cursor (*id.*, 34:60-35:13) and “execution” as “initiating an operation associated with a visual object” such as by clicking on it (*id.*, 35:18-22).

Per §§VIII.A.3 and VIII.A.4.d, a POSITA would have found it obvious to modify Reavey based on Chandhri’s teachings to switch from a menu-based GUI organization to a tile-based scrolling GUI organization when changing from the laptop configuration (Mode 3) to the flat configuration (Mode 2).

In both the menu-based and tile-based scrolling view, Reavey's GUI as modified by Chandhri displays the plurality of visual representations of computer content rendered on the display component, at least in the form of displaying the menu items (menu-based view) and at least in the form of displaying the cards (tile-based scrolling view) on the display 110 and/or display 115. Chandhri, ¶¶0224-0029, Figs. 10-11, 13, 16, 34; Houh, ¶103.

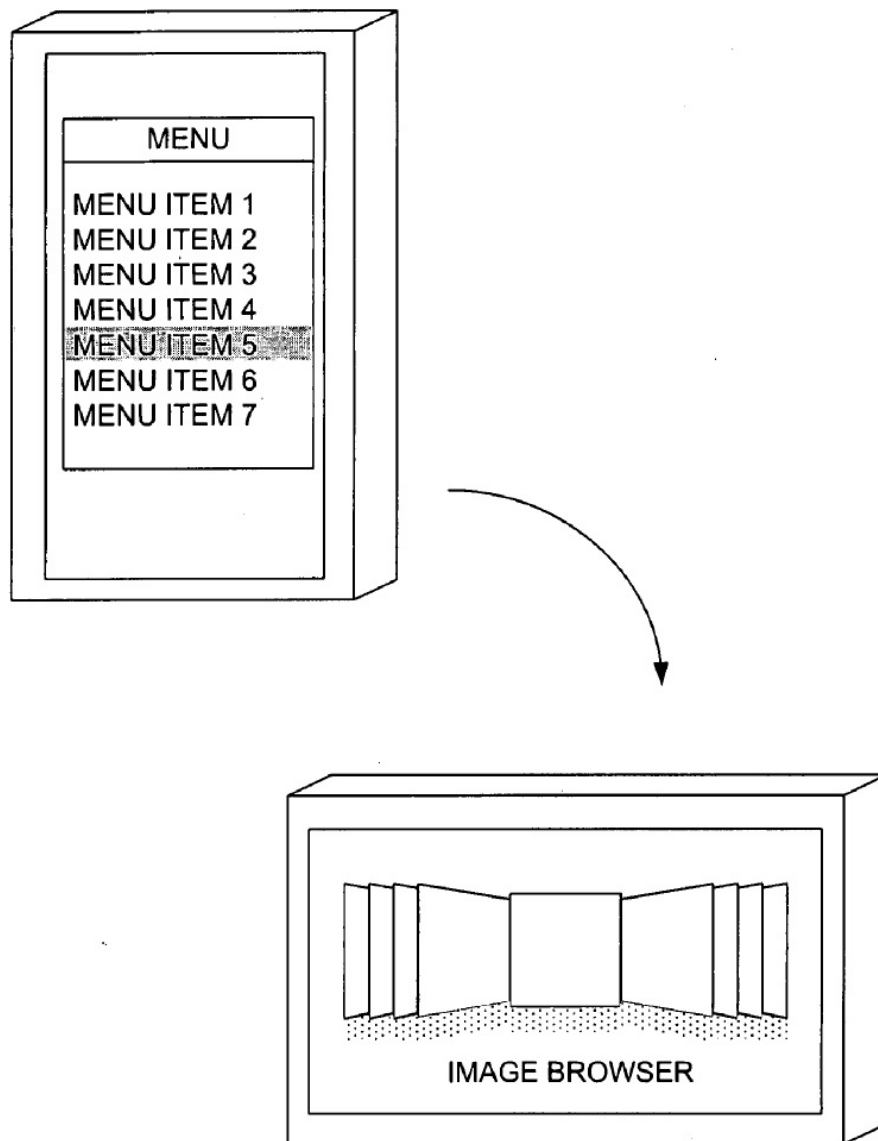


FIG. 34

Chandhri, Fig. 34.

In the Reavey-Chandhri combination, “the plurality of visual representations of computer content” are displayed and rendered on the display component and “include an association to a first home view of the plurality of views.” Houh, ¶104.

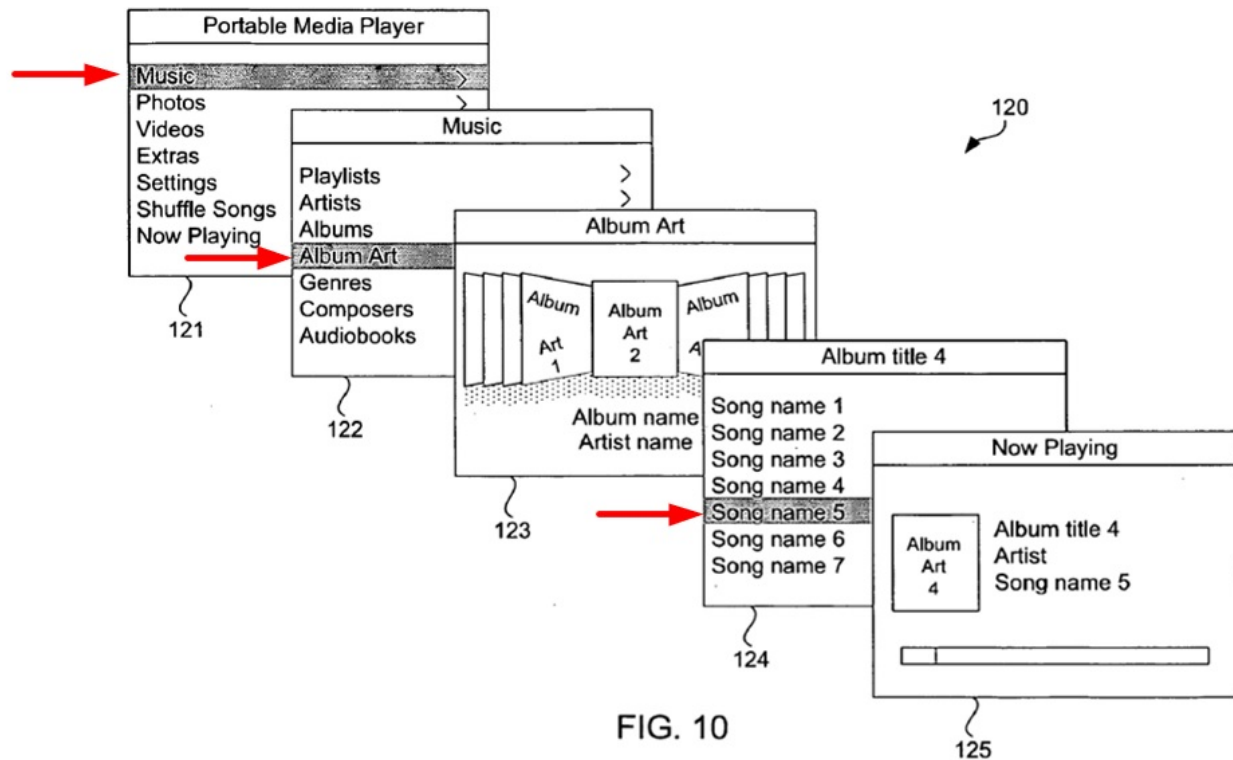
A POSITA would have understood that Chandhri's menu-based view teaches a first home view. *Id.* Namely, the Reavey-Chandhri device would default to the menu-based view when used in the laptop configuration (Mode 3). *See* §VIII.A.3. Further, Reavey's device sets the mode of the device "automatically when electronic book device 100 is opened." *Id.*, 7:45-46. And when Reavey's device is opened, it first enters the laptop configuration (e.g., 120° open) before it reaches the flat configuration (e.g., 180° open). Reavey, 7:45-62. Thus, a POSITA would have understood the default view (menu-based view) for the first physical configuration reached after opening the device to be a "first home view." Houh, ¶104.

Further, the plurality of visual representations in the combination includes an association to the menu-based view ("first home view"), at least because the menu-based view is configured to display those visual representations (e.g., displaying "Menu Item 4," "Menu Item 5," etc.). Chandhri, Fig. 34; Houh, ¶105.

The menu-based view also includes "a display of the computer content," for example, by displaying computer content associated with each menu item. Chandhri, ¶¶0134-0136, 0229, Figs. 10, 11, 34; Houh, ¶105.

Each of the plurality of visual representations is "responsive to focus and execution." Houh, ¶106. For example, as indicated (red arrows) in Chandhri's Figures 10 and 34 below, Chandhri uses at least highlighting to indicate the current user "focus." Chandhri, Figs. 10, 11, 34. Further, each of the visual representations

in Chandhri is responsive to “execution,” such as, in response to the user selecting a menu item, opening a new menu, playing a selected song, playing a video, etc. (“selecting the visual representation”) Chandhri, ¶¶0134-0136, Figs. 10, 11.



Chandhri, Fig. 10.

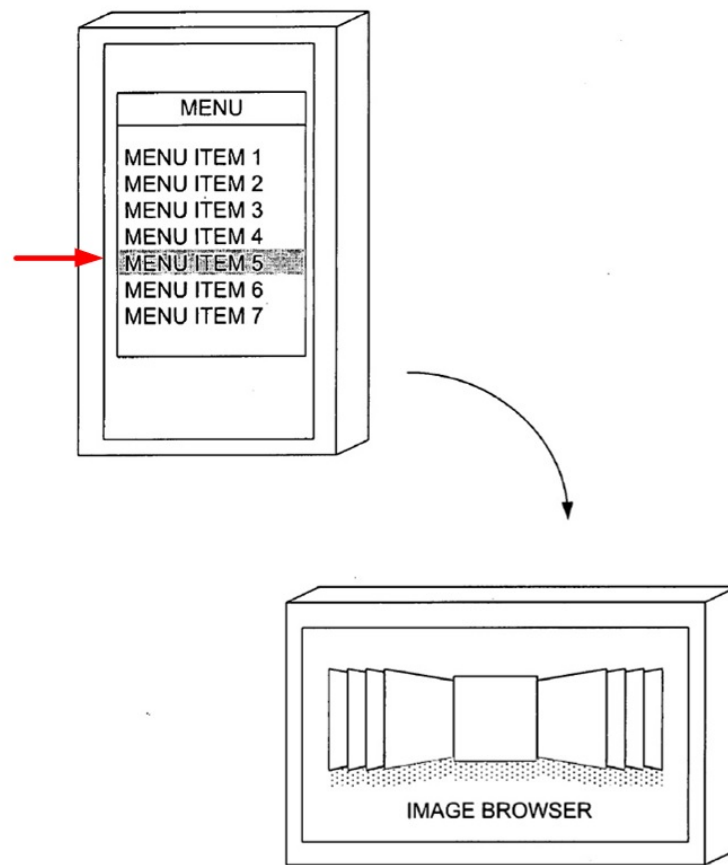
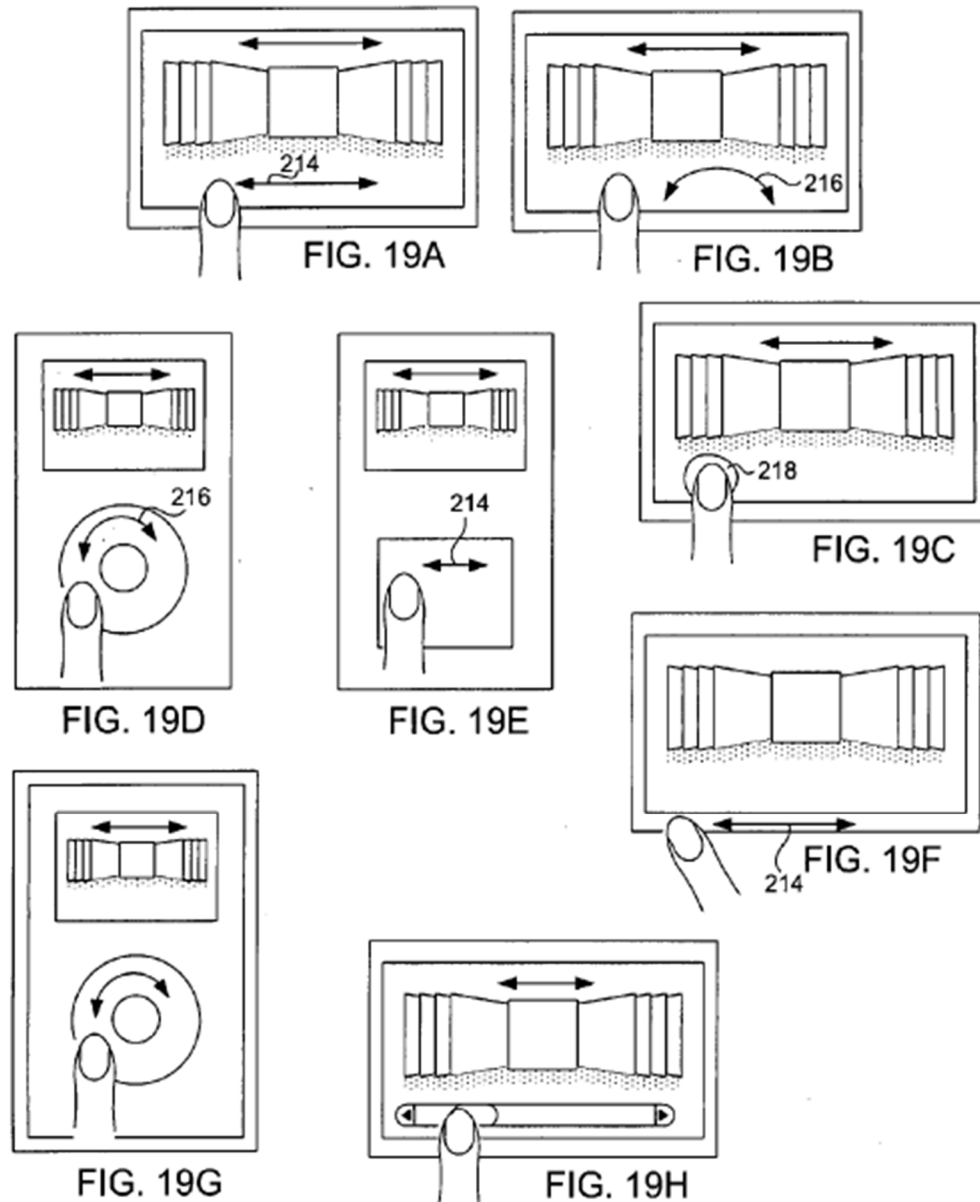


FIG. 34

Chandhri, Fig. 34.

In addition, Chandhri discloses that visual representations in the tile-based scrolling view are responsive to “focus” and “execution” and a POSITA would have found it obvious to apply these teachings additionally in the menu-based view of Chandhri. Houh, ¶107. For example, configurable as an application “finder,” the image-based browser depicted in Figures 13 and 16 allows users to navigate computer applications and modes using “[s]election commands” detected from “rotational and/or linear user inputs.” Chandhri, ¶¶0069, 0094. Images are selected

from these inputs (“visual representations...responsive to focus and execution”) as shown in the example figures below. Chandhri, Figs. 19A-H. Users may even “hover” over the device to provide an input. Chandhri, ¶0088.



Chandhri, Fig. 19A-19H. A POSITA would have found it obvious to apply these teachings of focus (e.g., hover, selection) and execution (e.g., further selection) in the menu-based view as well. Houh, ¶108. A POSITA would have recognized the

desirability of allowing a user to select menu items for focus and select menu items for execution regardless of the GUI organization, to allow the user to navigate the menu system and access the computer content (e.g., play a song, play a video). Chandhri, ¶¶0134-36, Figs. 10, 11; Houh, ¶108.

The menu-based view (“first home view”) is a “first organizational view of at least one application and computer content displayed responsive to activation of the system.” Houh, ¶109. For example, in Chandhri, applications (e.g., a “photo management program,” a “music management program,” a “video management program”) “can be launched on the electronic device.” Chandhri, ¶0139. Chandhri’s menu-based view teaches an organizational view of at least one of these applications and computer content in response to user activation of the system, for example, by showing organization of a music management program and associated content responsive to user interaction with the system (*id.*, ¶¶0134-35, Fig. 10) and showing organization of a video management program and associated content responsive to user interaction with the system (*id.*, ¶0136, Fig. 11). Houh, ¶109.

f. 1[e]

The Reavey-Chandhri combination teaches 1[e], whether under a MPF interpretation (*see* §VII.B.2) or not as discussed below and with respect to 1[f], 1[g], 1[h], and 1[i]. Houh, ¶¶110-111. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

A POSITA would have recognized that, to perform the GUI functionality disclosed in Reavey (e.g., virtual keyboard), the configuration switching functionality disclosed in Reavey (e.g., changing screen 115 functionality in switch from Mode 3 to Mode 2), and the GUI functionality disclosed in Chandhri (e.g., tile-based scrolling GUI and menu-based GUI), Reavey's device 100 executes hardware and/or software instructions to perform that functionality, which would be executed using a processor. Houh, ¶111. Reavey and Chandhri teach or at least suggest execution instructions. *See, e.g.*, Reavey, 7:24-62, 8:61-9:6, Fig. 9; Chandhri, ¶¶0224-0229, Figs. 33-34.

g. 1[f]

The Reavey-Chandhri combination teaches 1[f], under MPF or not. Houh, ¶¶112-114. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey's device.

Reavey's device 100 identifies a first computer system configuration (laptop configuration, Mode 3) and a second computer system configuration (flat configuration, Mode 2) based on sensor input indicating a position of the display component relative to a base component. Reavey, 5:32-45, 7:24-62, Figs. 2-3.

Reavey's device 100 differentiates between the display 110 and its housing 116 being "approximately at 120° open" to the base housing 118 including the

display 115—laptop configuration, Mode 3—versus “fully opened all the way”—flat configuration, Mode 2. *Id.*, 7:24-62, Figs. 2-3.

Reavey’s device 100’s configuration is determined based on a sensor associated with hinge 125. Namely, display 110 and its housing 116 are coupled to base housing 118 including display 115 with hinge 125. Reavey, 5:33-35. “Hinge 125 will employ commonly used hinge detents together with on/off switching process 350, i.e., a spring and ball bearing mechanism, *to sense if electronic book device 100 is closed, open or partially open.*” *Id.*, 6:43-46 (emphasis added). Reavey thus teaches or at least suggests device 100 distinguishes between the laptop configuration and the flat configuration based on a hinge sensor. *Id.*, 6:43-46, 7:45-62, 8:61-65, Figs. 2-3, 9.

h. 1[g]

The Reavey-Chandhri combination teaches 1[g], under MPF or not. Houh, ¶¶115-118. As in §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

As explained for 1[f], Reavey teaches device 100 uses sensor input to determine device 100’s physical configuration. *See* §VIII.A.4.g.

As explained for 1[c], Reavey as modified by Chandhri uses a different view depending on whether device 100 is in the laptop configuration or the flat configuration. *See* §VIII.A.4.d. For example, in the combination, Reavey’s device

100 would use a menu-based GUI organization when in the laptop configuration, and a tile-based scrolling GUI organization when in the flat configuration. *Id.* Thus, device 100 selects a first home view, e.g., the menu-based GUI organization, for the laptop configuration, i.e., the first computer system configuration. *Id.*

In the Reavey-Chandhri combination, “the first home view is configured to organize a first set of the plurality of visual representations.” For example, the menu-based GUI organization organizes in the menu a plurality of visual representations, e.g., all menu items that will fit within the menu on the screen. Chandhri, ¶¶0025-0029, Figs. 33-34.

i. 1[h]

The Reavey-Chandhri combination teaches 1[h], under MPF or not. Houh, ¶¶119-126. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

The ’315 patent provides an example of filtering by removing identified content as moving cards from a home view and allowing the remaining cards to be reordered by the device. EX-1001, 44:11-31.

Per §VIII.A.4.d for 1[c], “visual representations” can include cards (EX-1001, 15:34-58), and preview images, such as thumbnails (*id.*, 20:7-9, 35:58-62, 41:1-7, Fig. 2). Also as explained for 1[c], a POSITA would have found it obvious to modify Reavey based on Chandhri’s teachings to switch from a menu-based GUI

organization to a tile-based scrolling GUI organization of the same data when changing from the laptop configuration (Mode 3) to the flat configuration (Mode 2). *See* §VIII.A.3. Further per 1[c], the Reavey-Chandhri combination displays a plurality of views of the same content organized differently, as shown in the following figure:

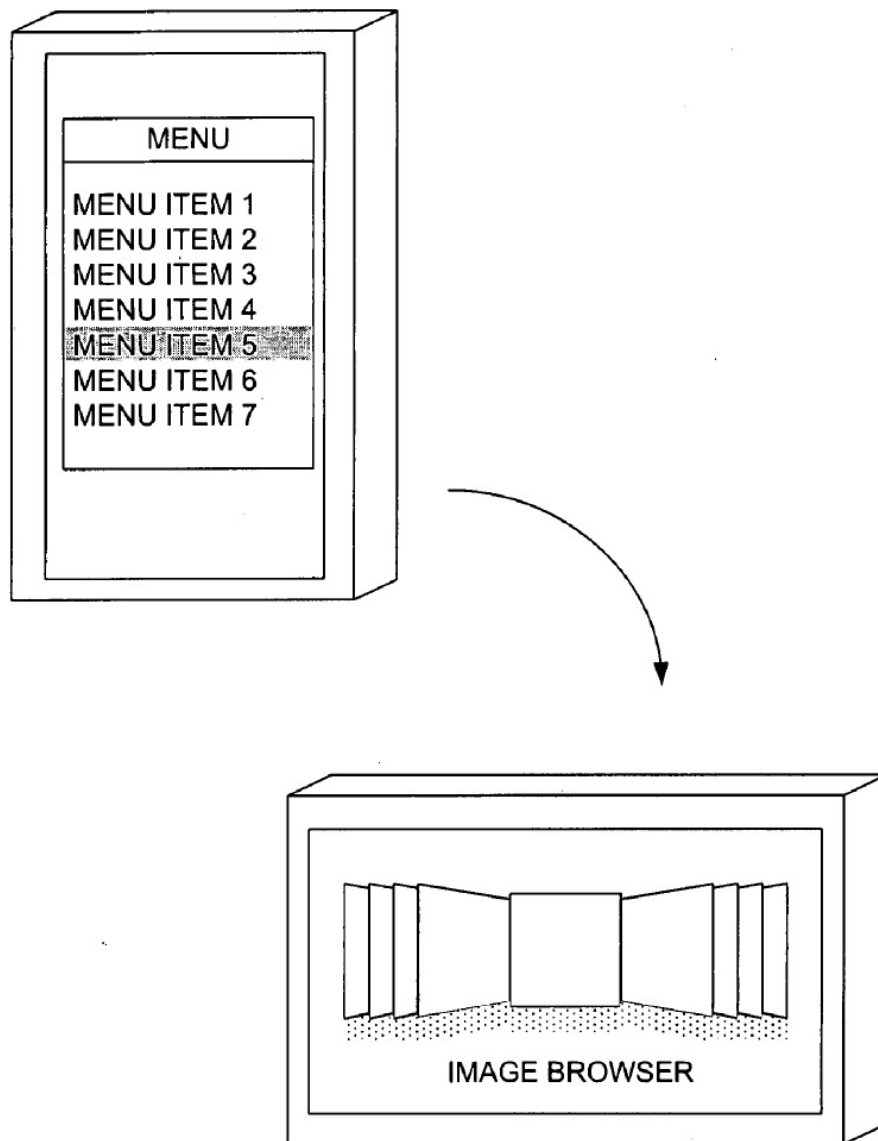
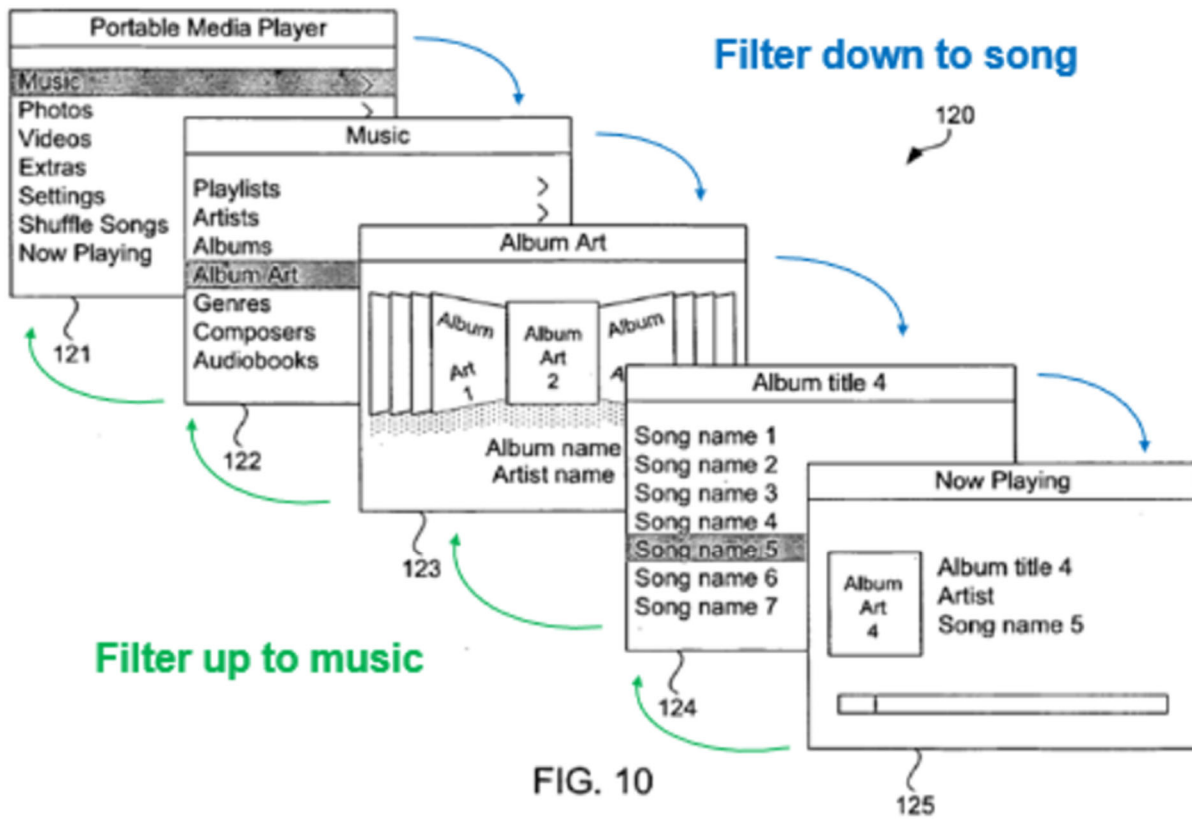
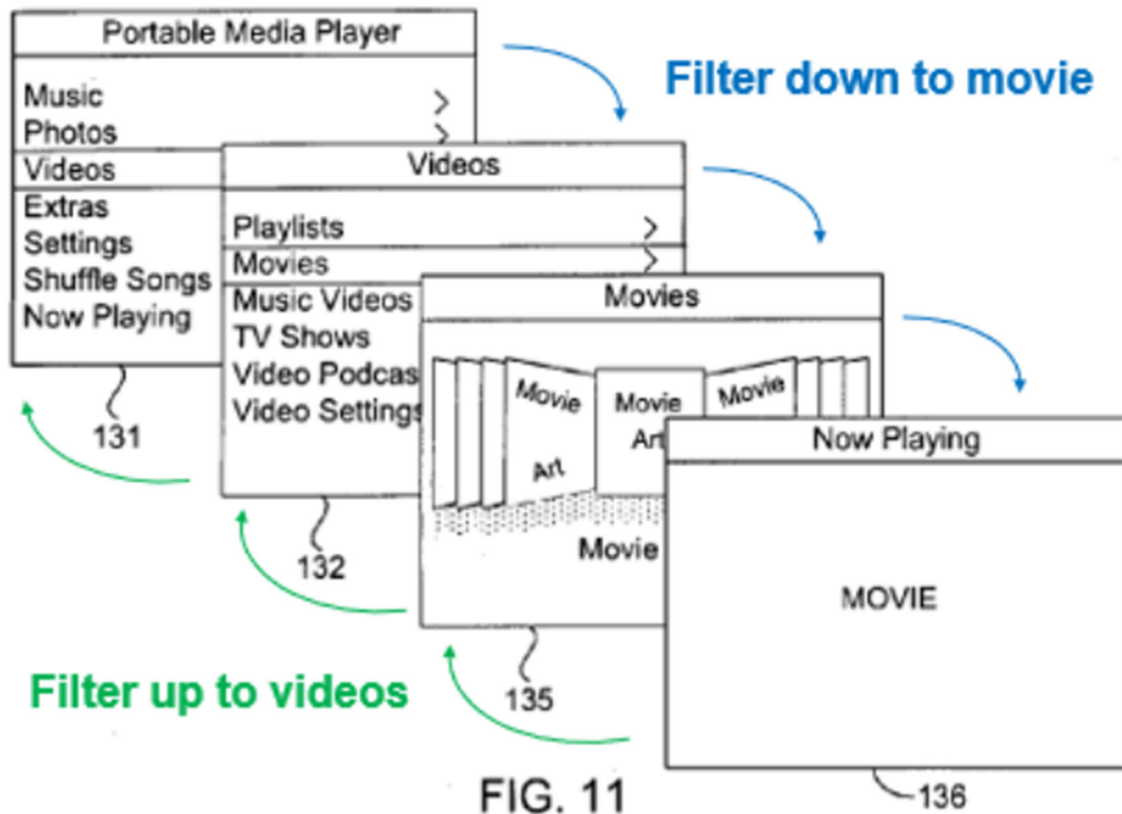


FIG. 34

Chandhri, Fig. 34, ¶0225. Chandhri makes clear these view changes enable users to navigate up and down a menu hierarchy to narrow or broaden results to a desired content (“filter”), such as by selecting a song to play (*id.*, Fig. 10) or movie to watch (*id.*, Fig. 11).





Id., Figs. 10, 11 (annotated), ¶¶0134-0136. A user may set which windows of the hierarchy display content in a first layout of column-bound row items in a vertical menu (first “member[s]”) or as a second layout comprising a rolodex-type browser of images (second “member[s]”). *Id.*, ¶0135 (describing user-set menu and browser displays), Figs. 7-8, ¶0111 (describing the image-based browser as a “rolodex”).

Chandhri’s image-based browser permits scrolling through albums and flipping an album to find songs on the reverse of that album image to mimic the feel of flipping an album cover over to reveal the listing of songs on the back as depicted

in the figures (annotated) reproduced below. *Id.*, Figs. 23A, 26B, 23E, ¶¶0182, 0186, 0204-0205.

Transition
to album
browsing,

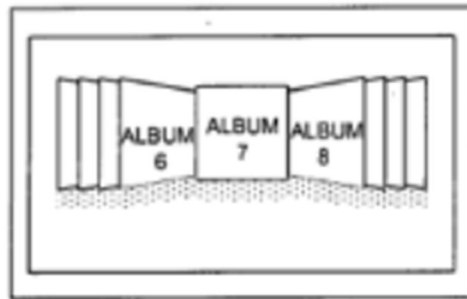


FIG. 23A

flip
album,

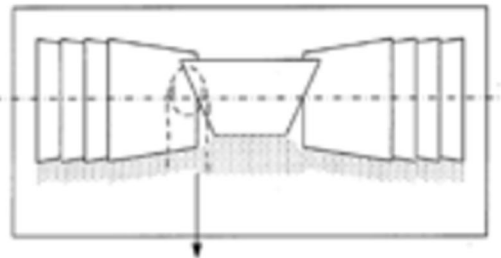


FIG. 26B

select
album
song,

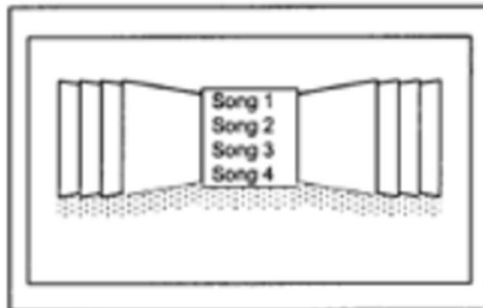


FIG. 23E

Chandhri also discloses a vertical display of the image-based browser depicted below.

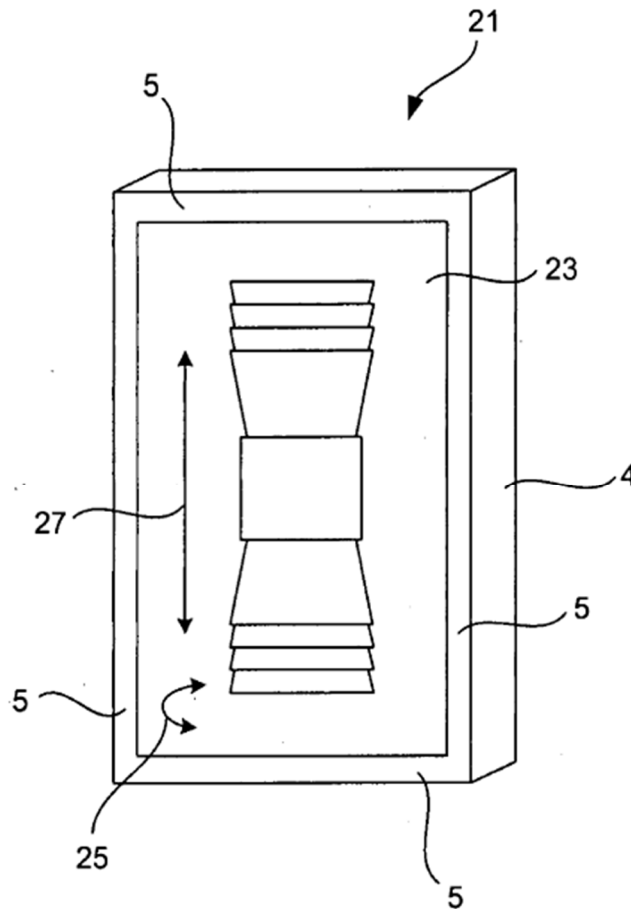


FIG. 3

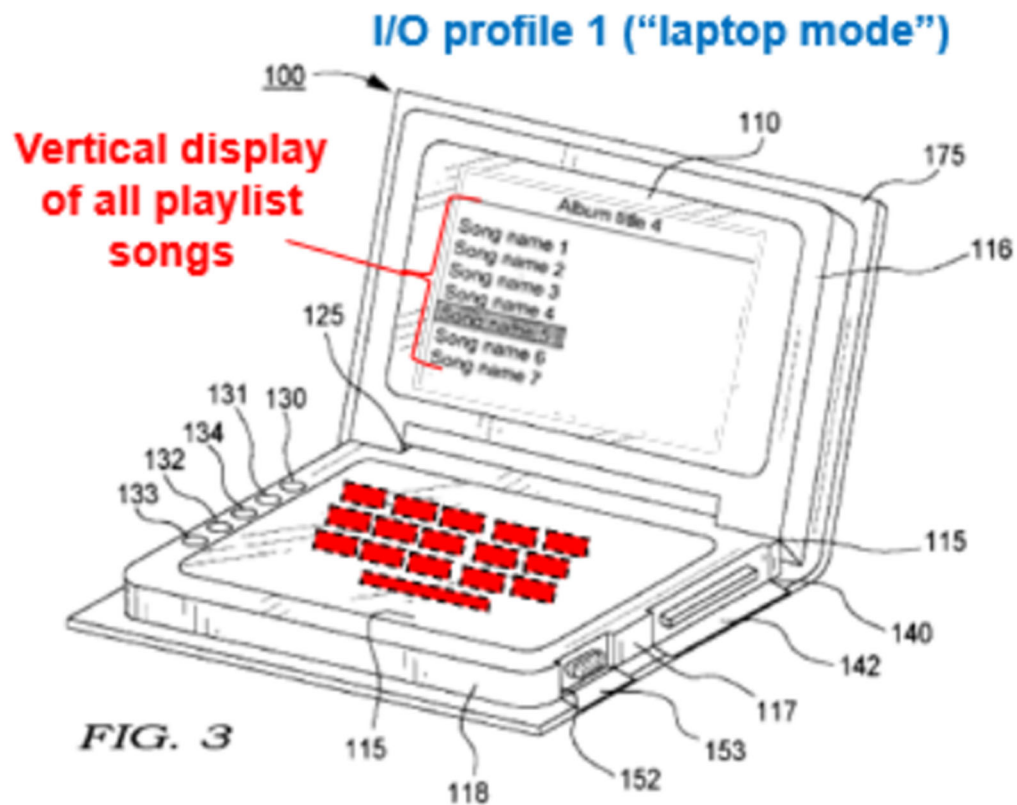
Id., Fig. 3, ¶¶0082-0083. Whether horizontal or vertical, Chandhri makes clear that images are scrolled such that a new image appears on one side and disappears on the opposite side respective to the direction of scrolling e.g., scrolling right to left introduces a new left image and causes the right-most image to disappear from sight (“removing the identified content”). *Id.*, Fig. 5, ¶0106.

A POSITA would have been motivated to combine the above interfaces to provide a vertically-scrollable menu of images (e.g., an album that may be flipped to any respective list of songs displayed on the back to create an embodiment wherein a user experiences the true feel of efficiently and easily (i) flipping through albums as in a store in a rolodex-type arrangement and (ii) flipping an album cover over (laterally) to view the respective songs on its back). Chandhri, ¶¶0100, 0134 (describing flipping an album over to view songs on the back), 0111, 0183-0184 (“flipping through a bin of albums”), Houh, ¶123.

A POSITA would have also understood that Chandhri’s user-customizable hierarchy (Chandhri, Figs. 10, 11, ¶¶0134-0137) enables a user to set a preferred view with respect to one of Reavey’s physical computer configurations, which creates increasingly intuitive views of voluminous computer content as a function of available screen real estate (Reavey, Figs. 2, 3, 4:39-42, 7:42-43, 7:61-62), to provide users an increasingly controllable, configurable, and tunable user interface that makes navigating large amounts of content (e.g., a playlist of curated songs from different artists) in an easy and intuitive way. Houh, ¶124.

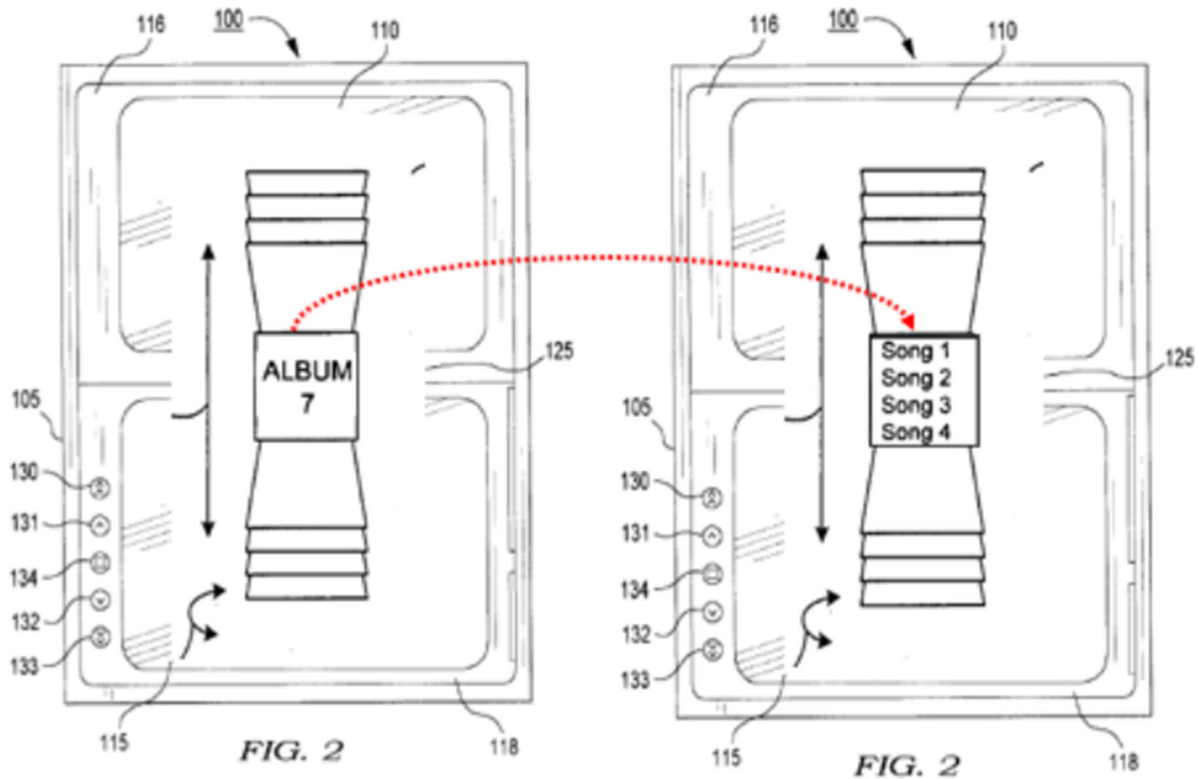
Specifically, a POSITA would have been motivated to set the display of a long, vertical menu of items, e.g., playlist songs (“first set of visual representations”) while in laptop mode (“first system configuration”) to view the total set of, e.g., song titles more quickly in row form more easily displayed with restricted one-screen real

estate (Reavey, Fig. 3; Chandhri Fig. 10), but would have transitioned to Chandhri's vertical, image-based scrolling view, e.g., of albums ("second set of visual representations") as described above in a flat mode of Reavey's device ("second system configuration") to enable a user to view a smaller ("filter...[by] removing") set of items, e.g., an album-grouped ("different member[s]") display of the playlist songs, then flip that album to reveal the available songs on the back. Houh, ¶125. A POSITA would have found this desirable to permit a user to more quickly locate information such as a desired playlist song by referencing the artist then song rather than scrolling through all items, such as an entire playlist of songs as depicted in the image (annotated) reproduced below. *Id.*, ¶125.



Reavey, Fig. 3; Chandhri, Fig. 10 excerpt (combined and annotated to show vertical menu display of playlist songs).

I/O profile 2 (“flat mode”)



Vertical-flipping and side-flipping navigation of album art

Reavey, Fig. 2; Chandhri, Figs. 3, 23A, 23E (combined and annotated to show vertical and side-flip navigation of playlist-type music).

j. 1[i]

The Reavey-Chandhri combination teaches 1[i], under MPF or not. Houh, ¶¶127-130. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

As explained for 1[f], Reavey as modified by Chandhri receives sensor input that indicates a transition to the second computer system configuration. See

§VIII.A.4.g. Namely, Reavey's device 100 uses a hinge sensor to detect whether the device is in the laptop configuration or the flat configuration, and thus detects transition between the two. *Id.*; Houh, ¶128.

Reavey as modified by Chandhri "transition[s], automatically in response to the sensor input, the display component between at least the first home view of the plurality of views and a second default content view of the plurality of views." Houh, ¶129. As explained for 1[g], Reavey as modified by Chandhri uses the menu-based GUI organization as the default view for Reavey's device 100 when it is in the laptop configuration. *See* §VIII.A.4.h. As explained for 1[h], Reavey as modified by Chandhri uses the tile-based scrolling GUI organization as the default view for Reavey's device 100 when it is in the flat configuration. *See* §VIII.A.4.i. Similarly, as explained for 1[pre], Reavey as modified by Chandhri transitions from using screen 110 as a display screen and screen 115 as a touchscreen keyboard (while in laptop configuration) to using both screens 110 and 115 as display screens (while in flat configuration). *See* §VIII.A.4.a. These modes are "set automatically when electronic book device 100 is opened" (Reavey, 7:45-62, Figs. 2-3), based on the hinge sensor input (*id.*, 6:43-46, 7:45-62, Figs. 2-3).

In the combination, "the second default content view is configured to organize the second set of visual representations." Houh, ¶130. As explained for 1[h], the tile-

based scrolling GUI organization organizes and displays the second set of visual representations. *See* §VIII.A.4.i.

In the combination, “the second default content view is a second organizational view of at least one application and computer content.” Houh, ¶130. For example, the tile-based scrolling GUI organization is a second organizational view of at least a photo viewer application and the photo content therein (Chandhri, ¶0141, Fig. 15), as opposed to a menu-based GUI organization (*id.*, ¶¶0053, 0059). Houh, ¶130.

5. Claim 2

§VIII.A.4 explains the Reavey-Chandhri combination teaches “the user interface of claim 1,” which also teaches claim 2 (under MPF or not) for the same reasons as provided in §VIII.A.3 for 1[i], explaining the combination receives hinge sensor input to detect a transition from a first (e.g., laptop) computer system configuration to a second (e.g., flat) computer system configuration and transitions the computing device from a single screen display (with virtual keyboard) to a two-display screen display, accordingly (“transition between the plurality of views in response to execution of at least one of...a change in computer system configuration”). Houh, ¶131. A POSITA would have also understood that transitioning to a *second* computer system configuration requires establishing a *first* computer system configuration, established upon activation of the device and with

the launch of computer applications upon startup per §VIII.A.4.e for 1[d] (“execution of at least one of...a computer system configuration”). *Id.*

Additionally, Chandhri’s Figure 10 depicts transitioning to image-based browser window 123 in response to a user selecting the album art item in sub menu 122 (“transition...in response to execution” of a “visual representation” and “computer system operation”). Chandhri, Fig. 10, ¶0134. A POSITA would have understood this occurs because Chandhri’s GUI changes views responsive to selection and navigation of image-based content in an image-based browser (“execution of...a visual representation”) by inputting linear/rotational selection and movement commands with input devices like buttons, a mouse, and “navigation pads” (“execution of... a computer system operation”). Chandhri, ¶¶0067-0069; Houh, ¶131.

6. Claim 3

§VIII.A.4 explains the Reavey-Chandhri combination teaches “the user interface of claim 1.” Claim 3 does not require the recited “modes of content...rendered on the computer display” to be selected in response to the detected current computer system configuration, as recited in 1[i]. The ’315 patent uses the term “content mode” to refer to displaying a certain type of content for viewing by a user. *E.g.*, EX-1001, 3:33-35 (“the media content mode is configured

to display media based content for non-proximal viewing”), 3:58-60 (“application content mode is configured to display computer applications for use by a user”).

Chandhri teaches claim 3. Houh, ¶¶132-35. Specifically, main menu 121 of Chandhri’s Figure 10 teaches a “music” option (corresponding to the ’315 patent’s media content mode). Chandhri, ¶0134, Fig. 10 (annotated version reproduced below).

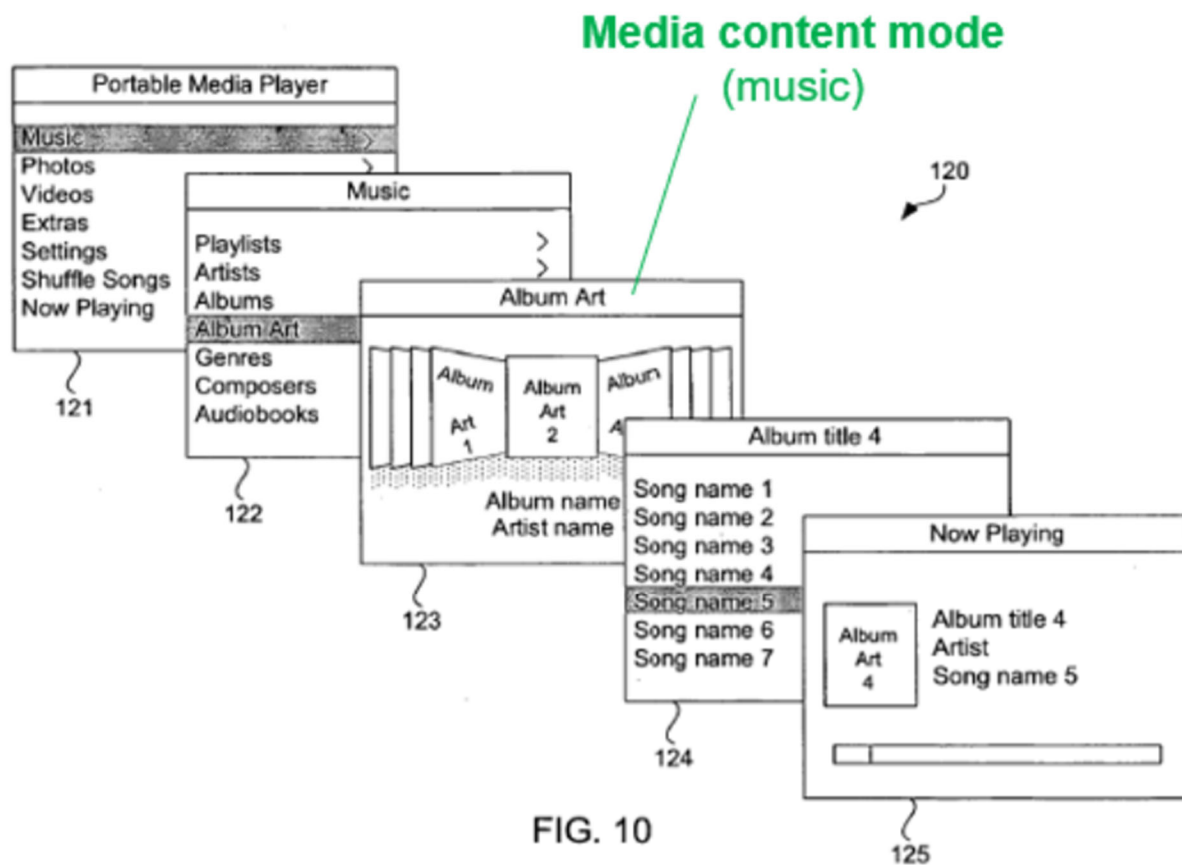
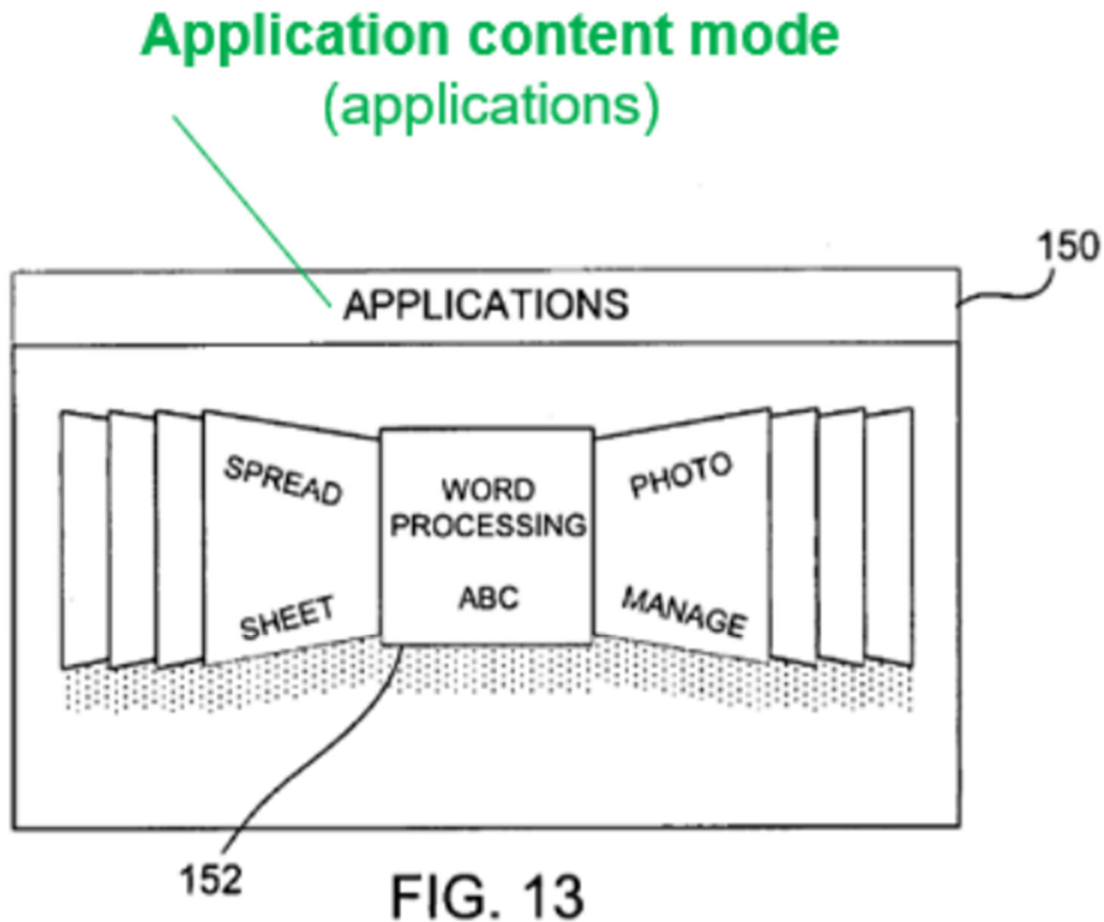


Image-based browser window 123 of Chandhri’s Figure 13 teaches an “application content mode” because it displays visual representations of spreadsheet,

word processing, and photo management applications available to a user. *Id.*, Fig. 13 (annotated version reproduced below), ¶0139.



A POSITA would have understood Chandhri’s hierarchical menus and image-based browser navigation is not limited to music and applications, but any other type of content (“web...channel...communication...passive”) based on known capabilities of conventional internet-based personal computer utilities . Houh, ¶134.

A POSITA would have been motivated to combine Reavey and Chandhri per §VIII.A.3, and implement Chandhri's modes into Reavey's device because a user would have understood the need to accommodate these kinds of content. Houh, ¶135.

7. Claim 4

§VIII.A.6 explains that the Reavey-Chandhri combination teaches “the user interface of claim 3.” The combination also teaches claim 4. Houh, ¶136. §VIII.A.4.j for claim 1[i] explains Chandhri teaches two views organizing content differently (menu- and scrolling-based GUI organizations). In doing so, Chandhri also teaches organizing modes of content into those different views. Chandhri organizes music (“media content mode”) by both types of views. *Compare* Chandhri, Fig. 10 (menu-based GUI organization of songs), *with* Figs. 23E (scrolling-based GUI organization) (annotated versions reproduced below):

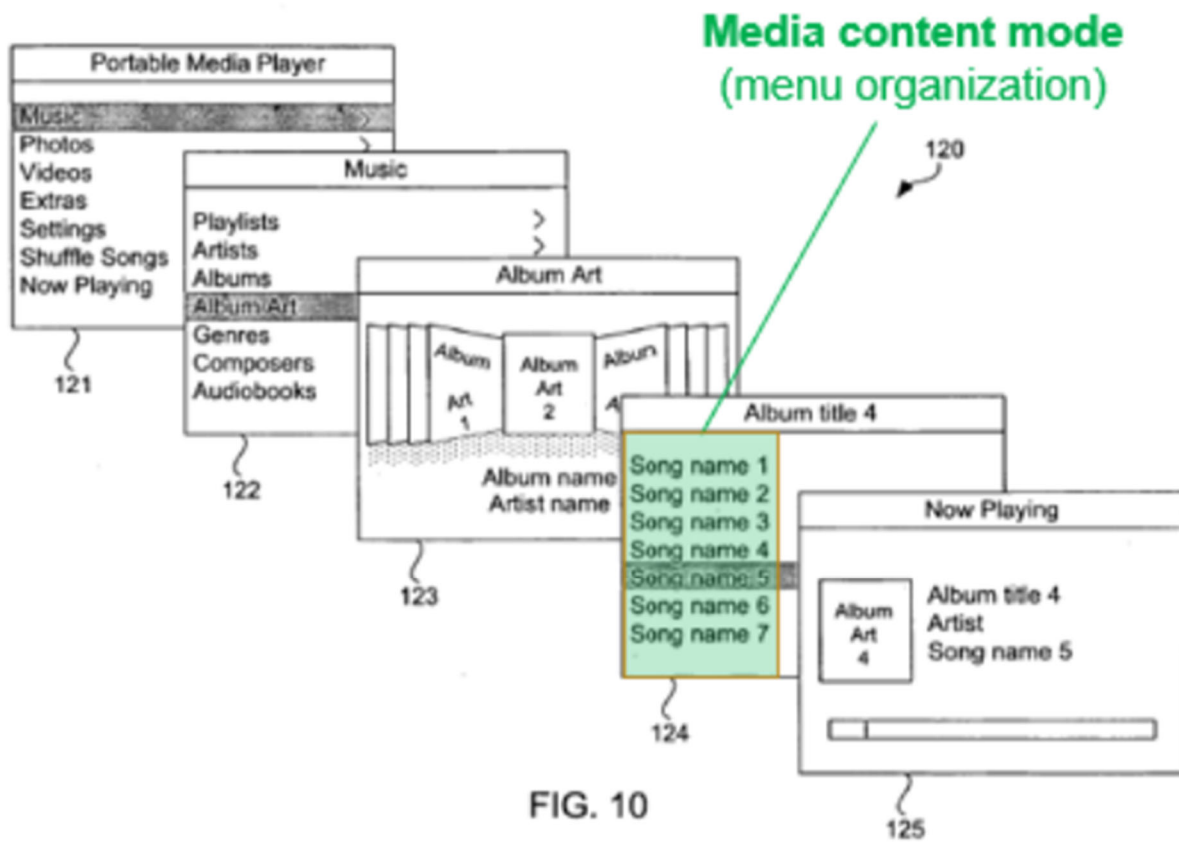


FIG. 10

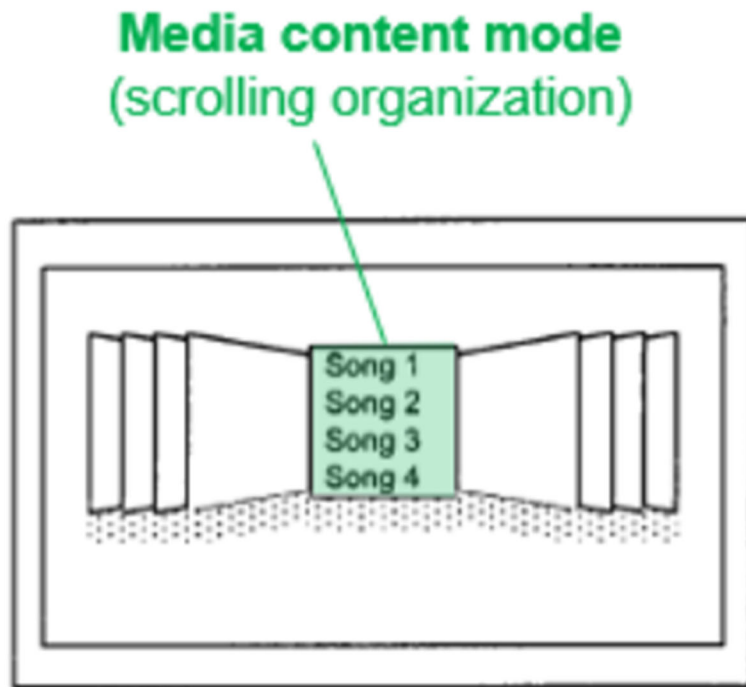


FIG. 23E

8. Claim 5

§VIII.A.6 explains the Reavey-Chandhri combination teaches “the user interface of claim 3.” Although claim 5 recites details of a number of different content modes recited in claim 3, when those claims are read in conjunction they appear to require only a plurality of content modes with one of that plurality being among those specified. *See* Houh, ¶¶137-138. Per §VIII.A.6 for claim 3, Chandhri teaches at least two of the enumerated modes (“media content mode” and “application content mode”).

Chandhri’s modes also teach “wherein the media content mode is configured to display media based content for non-proximal viewing by a user on the display

component” and “wherein the application content mode is configured to display computer applications for use by a user on the display component.” The ’315 patent does not define “proximal” or “non-proximal” beyond the use of the term itself, and the Examiner did not impart special meaning to it. *See, e.g.*, EX-1001, 3:25-4:9, 7:10-35; 9:39-52; EX-1002, 370. Therefore, Chandhri’s display of music for play by a user and applications available for use by a user render the claim obvious. Houh, ¶138.

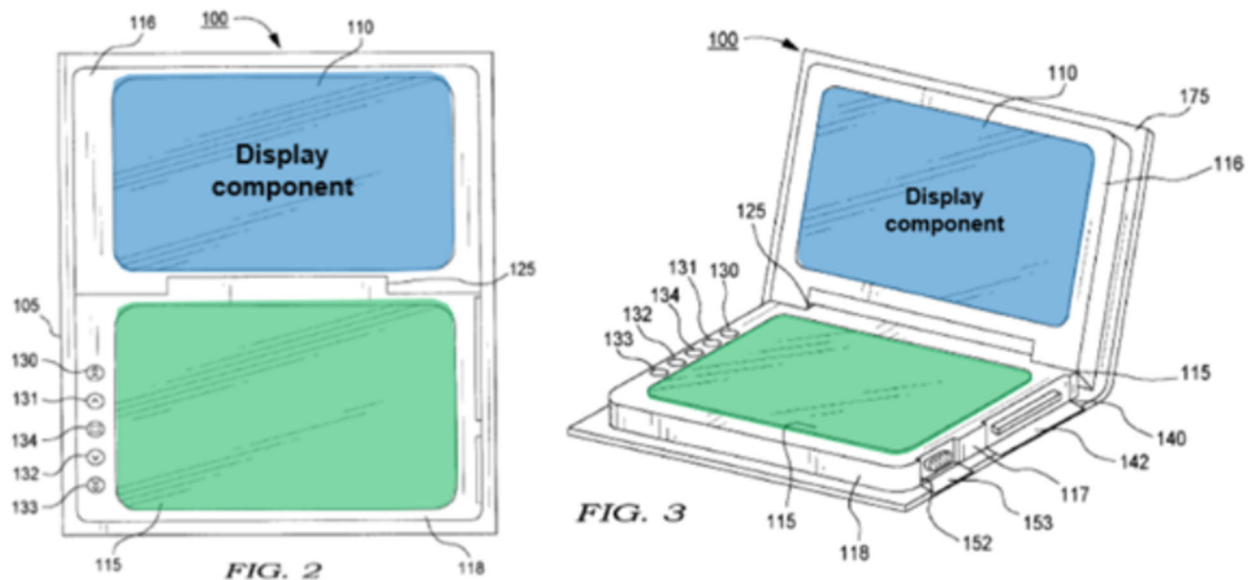
9. Claim 8

§VIII.A.4 explains the Reavey-Chandhri combination teaches the “user interface of claim 1,” which also teaches claim 8. Houh, ¶139. “[T]he home view” in claim 8 appears to refer to “a first home view” in claim 1. For the same reasons explained in §VIII.A.4.e for 1[d], the combination teaches that home view “organiz[es] a plurality of visual representations of digital content” and is “displayed responsive to system activation.” For the same reasons explained in §VIII.A.4.h for 1[g], the combination teaches that home view “is displayed responsive to a computer system configuration” (e.g., the transition from closed to laptop mode).

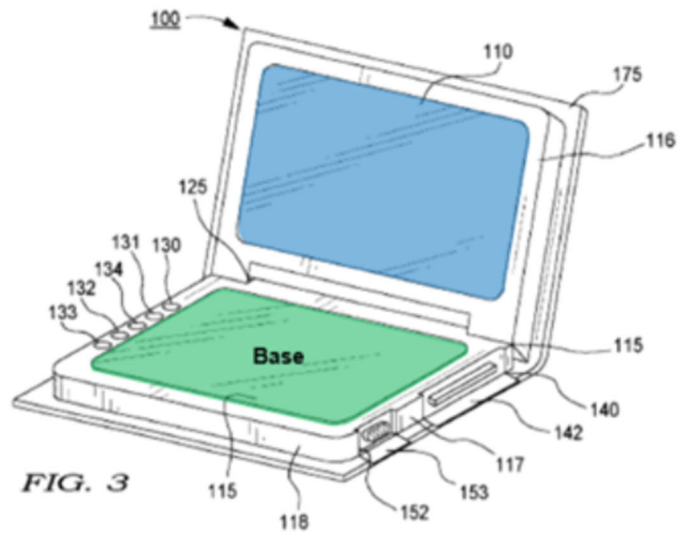
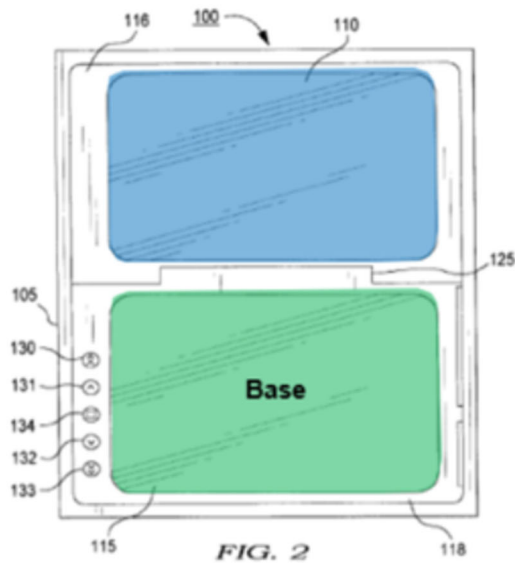
10. Claim 9

Per §VIII.A.9, the Reavey-Chandhri combination teaches the “user interface of claim 8,” which also teaches claim 9. Houh, ¶140. §VIII.A.4.g for 1[f] explains that the combination teaches a “computer system” configurable in both a laptop and

flat mode. Reavey's device includes a "dual screen display" with first and second panel screens 110/115 contained in housings 116/118 mechanically and electrically connected via hinge 125, with housing 116/screen 110 teaching the "display component." Reavey, 5:32-45, Figs. 2-3 (combined and annotated versions reproduced below):

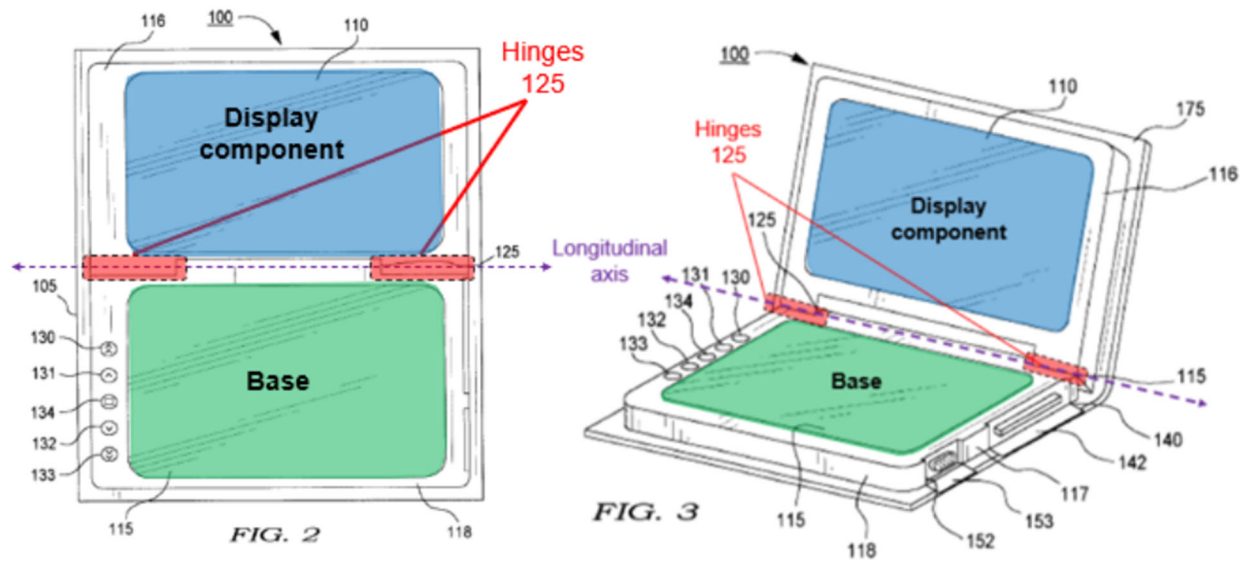


When the device is in Mode 3 (laptop configuration), bottom housing 118 ("base") is used for user input via a keyboard. Reavey, 3:21-27, 7:53-62, Figs. 2-3 (combined and annotated versions reproduced below).



A POSITA would have understood Reavey's housing 118 teaches a "base" because it is weighted for typing. Reavey, 7:59-62; Houh, ¶140.

Reavey further teaches its dual screen device electrically and mechanically connects two display screens contained within housings 116/118, which are rotated relative to one another via hinge 125 placed at the joining axis between the bottom ("base") and top ("display component") screens. Reavey, 5:32-35, 7:24-31, Figs. 2-3 (combined and annotated version reproduced below).



11. Claim 23

§VIII.A.4 explains the Reavey-Chandhri combination teaches “the user interface of claim 1.” Reavey teaches claim 23. Houh, ¶141. Reavey’s device includes static RAM for storage, which teaches the recited “storage component,” under MPF or not. Reavey, Fig. 7 (310), 6:6-22. A POSITA would have understood and found it obvious that Reavey’s static RAM retains a computer system configuration state and respective view state to allow the computer system to correctly initialize the appropriate display in the appropriate configuration when it is restarted, upgraded, and while the user actively changes their configuration preferences, etc. *Id.*, Fig. 9 (step 520), 6:19-22 (“static RAM with battery 320 is provided to save various user specific parameters, Such as communications parameters, user preferences, electronic bookmarks, passwords, parameters for power management”); Houh, ¶141.

12. Claim 24

§VIII.A.11 explains the Reavey-Chandhri combination teaches “the user interface of claim 23,” which also teaches claim 24. Houh, ¶142. §§VIII.A.4.e, VIII.A.4.g, VIII.A.4.i explain the Reavey-Chandhri combination teaches claim limitations 1[d], 1[f], 1[h]. A POSITA would have understood and found it obvious to transition responsive to the current computer system configuration state and/or the current view state stored in Reavey’s static RAM to allow the computer system to correctly initialize the appropriate display in the appropriate configuration when it is restarted, upgraded, and while the user actively changes their configuration preferences, etc. Reavey, Fig. 9 (step 520), 6:17-18; Houh, ¶142.

13. Claim 27

a. 27[pre]⁷

See §VIII.A.4.a for 1[pre]. Houh, ¶143.

b. 27[a]

See §VIII.A.4.c for 1[b]. Additionally, the “display component” is discussed further in §VIII.A.4.a discussing 1[pre]. Houh, ¶144.

c. 27[b]

See §VIII.A.4.d for 1[c]. Houh, ¶145.

⁷ Petitioner understands this limitation should recite “plurality of.”

d. 27[c]

See §§VIII.A.4.e, VIII.A.4.g for 1[d], 1[f]. Houh, ¶146.

e. 27[d]

See §§VIII.A.4.f, VIII.A.4.h for 1[e], 1[g]. Houh, ¶147.

f. 27[e]

See §§VIII.A.4.f, VIII.A.4.i for 1[e], 1[h]. Houh, ¶148.

g. 27[f]

See §§VIII.A.4.f, VIII.A.4.j for 1[e], 1[i]. Houh, ¶149.

14. Claim 28

a. 28[pre]⁸

§VIII.A.4.a for 1[pre] explains that Reavey teaches a “customized user interface” that includes “selectable I/O profiles.” Further, Reavey’s device “integrates the look and feel familiarity of a book with advanced computer technology to create an easy to use, multi-functional and versatile tool for viewing information in the form of text and graphics” that further contains a rechargeable battery. Reavey, 4:39-55. A POSITA would have recognized Reavey’s device is “portable” because it is intended to be carried like a “conventional book” but with “state of the art electronic technology” used to provide an “easy to read and use

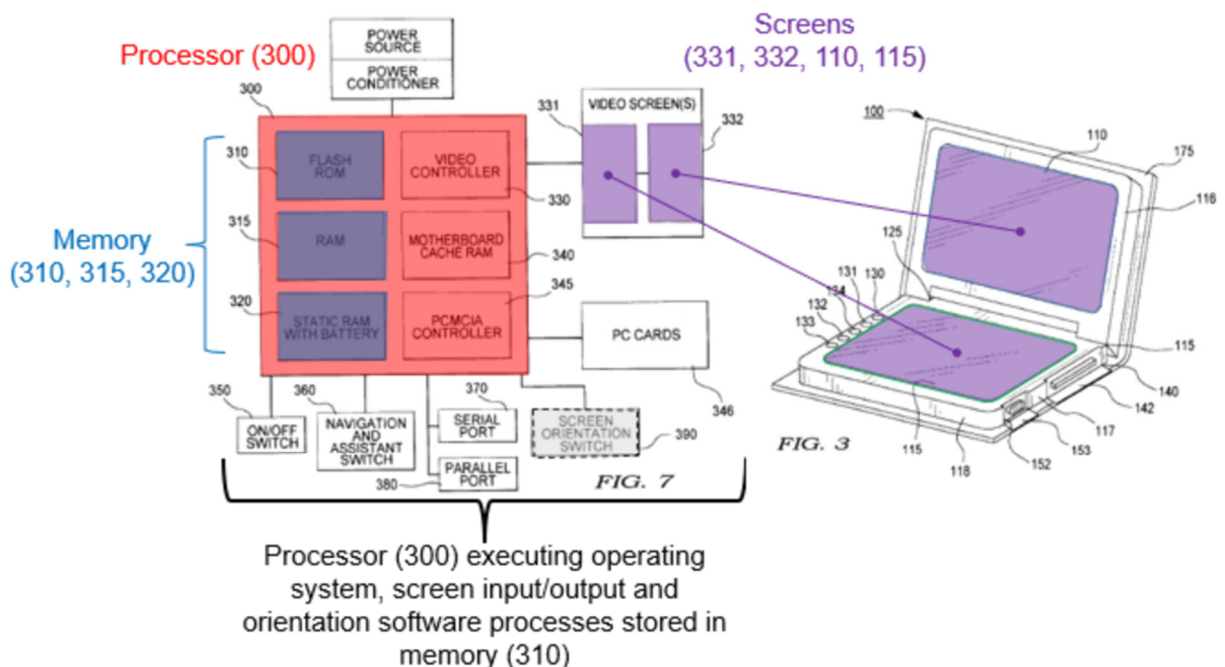
⁸ Petitioner understands this limitation should recite “plurality of.”

electronic device for reviewing various types of information” in a spectrum of places and with a variety of people, all powered using a battery to facilitate its mobility.

Reavey, 2:66-3:12, 6:11; Houh, ¶150.

b. 28[a]

§VIII.A.4.b for 1[a] explains that Reavey teaches “at least one processor.” Reavey also teaches 28[a]’s remaining limitations, namely, CPU 300 (“processor”) along with Flash ROM (“operatively connected to a memory”) for storing software for executing, e.g., operating system, “touchscreen/digitizer,” and screen orientation functions (“configured to execute a plurality of system components”). Reavey, 5:66-6:18, Figs. 3, 7 (combined and annotated version reproduced below); Houh, ¶151.



c. 28[b]

§VIII.A.4.d for 1[c] explains the Reavey-Chandhri combination teaches “display a plurality of views of a plurality of visual representations of computer content, wherein the computer content includes at least one of selectable digital content, executable computer applications, configurable computer settings, selectable computer operations and passive digital content.” Per §§VIII.A.4.d and VIII.A.7 for 1[d] and claim 4, the Reavey-Chandhri combination also teaches organizing content into different views by changing the orientation and type of content displayed (e.g., a vertical scrolling menu or image based browser menu of scrolling items). Houh, ¶152.

EX-1001 discloses the “first user interface component” may include a display of a search tool and navigation element in a header and may include a quick access view. EX-1001, 10:8-11 (search tool), 10:24-27 (navigation element), 10:50-52 (quick access view). A POSITA would have understood any one of the combination’s different views teaches a “first user interface component” in the same way as the ’315 patent disclosure. Houh, ¶152.

Per §VIII.A.14.b for 28[a], Reavey teaches a computer device with a CPU including ROM-stored operating system, screen input/output, and orientation software instructions for displaying views on two separate display screens. Because “a first user interface component” is one of the system components the processor

executes, as recited in 28[a], a POSITA would have understood that component to be implemented in software. Houh, ¶152. A POSITA would have further understood that in the combination, such a software component performs the recited display function for a user to view the desired displayed information. *Id.*

d. 28[c]

§VIII.A.4.e for 1[d] explains the Reavey-Chandhri combination teaches the function (i.e., “configured to” portion) of 28[c]. As to the “second user interface component,” the ’315 patent explains that component may display a nascent card in the body. EX-1001, 10:37-41. By including a user interface element (nascent card) *different* than that disclosed for the first user interface component of 28[b] per §VIII.A.14.c, above (navigation, search, and quick access view elements), a POSITA would have understood the second user interface component is any one of a *different* one of the plurality of views taught by the Reavey-Chandhri combination. Houh, ¶153.

Per §VIII.A.14.b for 28[a], Reavey teaches a computer device with a CPU including ROM-stored operating system, screen input/output and orientation software instructions for displaying views on two separate display screens. Because “a second user interface component” is one of the system components the processor executes, as recited in 28[a], a POSITA would have understood that component to be implemented in software. Houh, ¶153. A POSITA would have further understood

that in the combination, such a software component performs the recited display function for a user to view the desired displayed information. Houh, ¶153.

e. 28[d]

See §VIII.A.4.f for 1[e]. Houh, ¶154.

f. 28[e]

See §VIII.A.4.g for 1[f]. Houh, ¶155.

g. 28[f]

See §VIII.A.4.h for 1[g]. Houh, ¶156.

h. 28[g]

See §VIII.A.4.i for 1[h]. Houh, ¶157.

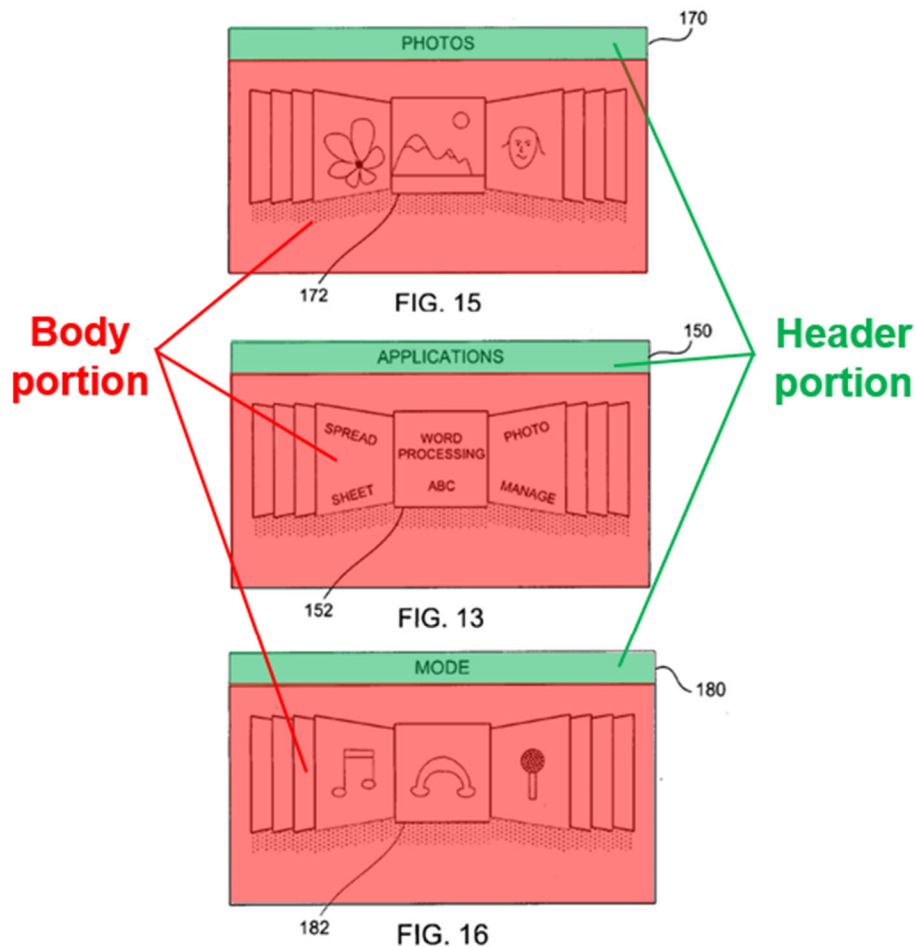
i. 28[h]

See §VIII.A.4.j for 1[i]. Houh, ¶158.

15. Claim 53

§§VIII.A.4, VIII.A.4.a, VIII.A.4.c, VIII.A.4.d for 1[pre], 1[b], 1[c] explain the Reavey-Chandhri combination teaches “the user interface of claim 1” including a “map based graphical user interface” including a “plurality of visual representations of computer content.” For claim 53’s remaining limitations, Chandhri’s image-based browser displays many types of content using the same layout arrangement that includes images in a bottom portion of the screen (“body portion”) and a title in a boxed, top portion of the screen (“header”). *See, e.g.,*

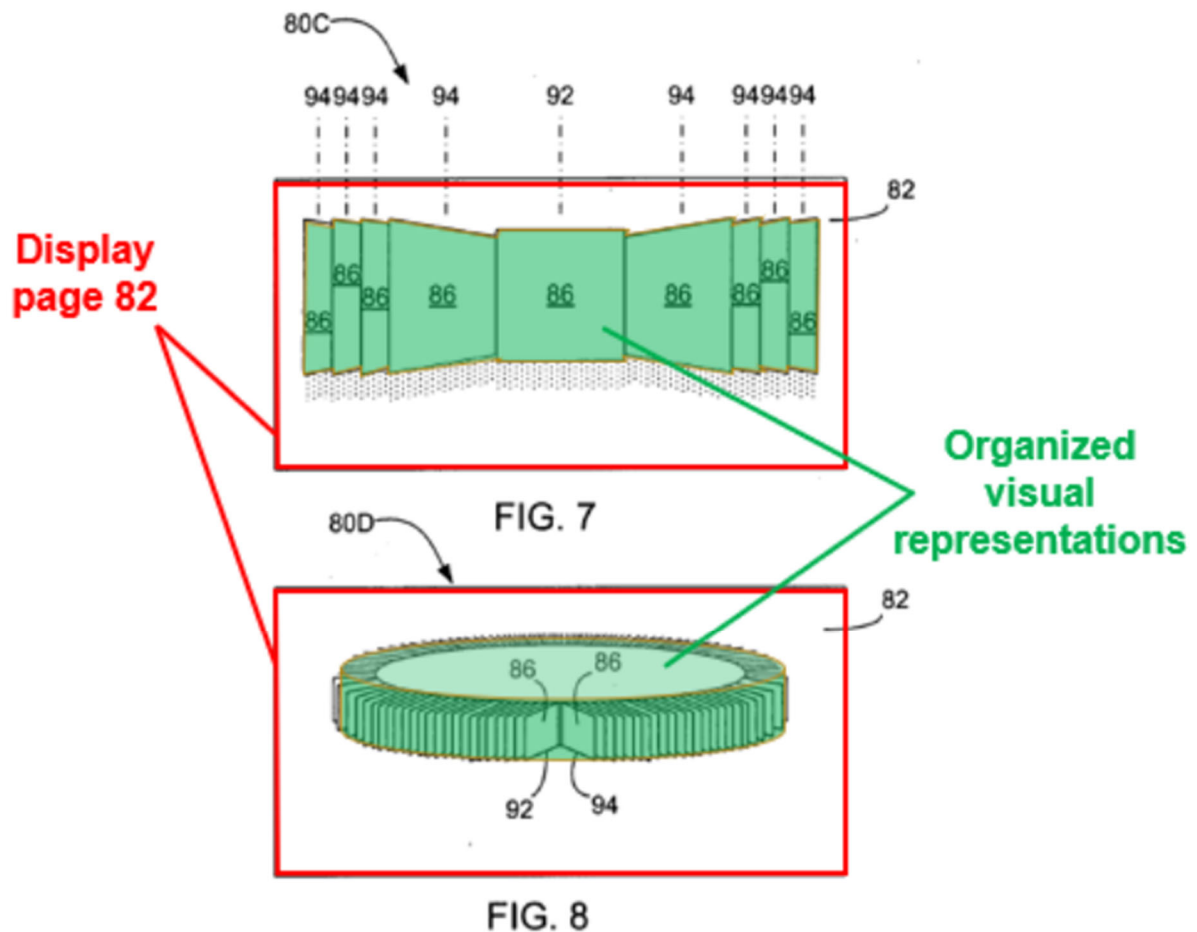
Chandhri, ¶¶0026, 0028, 0029, 0139, 0141-0142, Figs. 13, 15, 16 (annotated versions reproduced below); Houh, ¶¶159-60.



Thus, Chandhri teaches items like applications or modes (“computer operations”) in Figures 13 and 16 and photos (“computer content”) in Figure 15 with cards in each view (“consistent appearance”). §VIII.A.3 explains the reasons a POSITA would have been motivated to incorporate Chandhri’s GUI teachings into Reavey’s device.

16. Claim 54

§VIII.A.15 explains that the Reavey-Chandhri combination teaches the “user interface of claim 53.” As to claim 54, Chandhri’s image browser organizes images representing data files (“visual representations”) in a consistent, rolodex-type viewing area 82 (“display page”). Chandhri, ¶¶0100, 0111, Figs. 7, 8 (annotated versions reproduced below); Houh, ¶¶161-162.



Chandhri teaches that the number of images displayed may be limited to a viewing area so that a user scrolling left displays a new image on the right and makes an image on the left disappear. Chandhri, ¶¶0103, 0106, Fig. 7 (annotated version reproduced below).

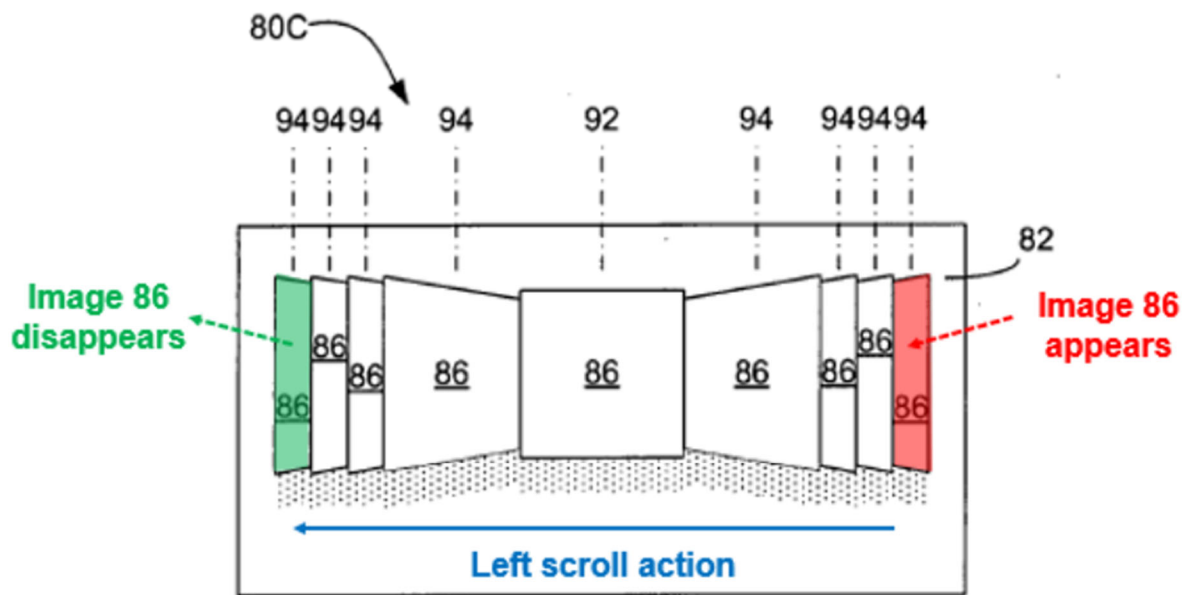


FIG. 7

Therefore, a POSITA would have understood that the number of images (“visual representations”) displayed (“display limit”) is limited to the size of the display area (“displayed page”). Houh, ¶162.

§VIII.A.3 explains the reasons a POSITA would have been motivated to incorporate Chandhri’s GUI teachings into Reavey’s device.

17. Claim 55

§§VIII.A.4, VIII.A.4.e explain the Reavey-Chandhri combination teaches or suggests “the user interface of claim 1,” which includes a “plurality of visual representations...responsive to focus” in 1[d]. The ’315 patent refers to “focus” as identification using tabbing, hotkeys, and hovering over a screen element with a cursor. EX-1001, 34:60-35:13. Dr. Houh explains a POSITA would have understood “focus” on “visual representation” encompasses a user selecting displayed content from other content on the screen in preparation for additional action (e.g., clicking on a hyperlinked element to display a web view of content). EX-1001, 15:46-48, 35:18-22; Houh, ¶¶163-64.

Chandhri teaches several instances of enlarging content responsive to specific user interaction with it (“focus”). For example, when its image-based browser displays thumbnails of photos from an album, “selecting a particular thumbnail picture can enlarge the picture for viewing.” Chandhri, ¶0122. Chandhri applies the same capability to song and personal contact information selection, in which a specific image of a respective song or a person’s contact information is “enlarged as compared to the original image size to make viewing and selections easier.” Chandhri, ¶¶0186, 0196. Subsequent to viewing the enlarged image, a user further acts upon it by, e.g., playing the song selected. Chandhri, ¶0101.

§VIII.A.3 explains the reasons a POSITA would have been motivated to incorporate Chandhri’s GUI teachings into Reavey’s device.

18. Claim 57

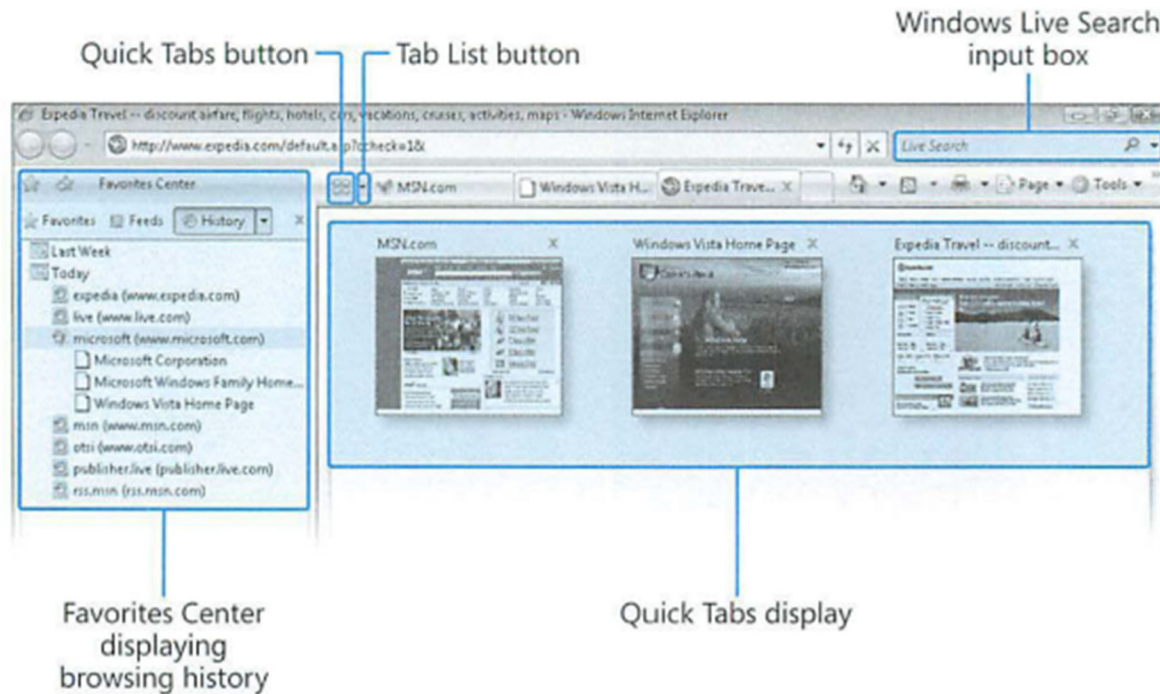
§VIII.A.9 explains the Reavey-Chandhri combination teaches “the user interface of claim 8.” Further, §VIII.A.4.j for 1[i] explains the Reavey-Chandhri combination teaches a transition to a “second default content view” that is an “organizational view of...content” including “digital content”—e.g., a photo application comprising photos. Houh, ¶165. Finally, §VIII.A.4.e for 1[d] explains that a POSITA would have understood, in the combination, Chandhri’s organization of computer applications and modes using an image-based browser as a “finder” would have occurred subsequent to startup and initialization of Reavey’s electronic device (“activation”). Reavey, 3:28-31 (“**Upon activation** the user can easily page through the information”), 8:42-46 (“Activation of electronic book device is accomplished by simply opening [the] device 100.”); Houh, ¶165.

B. Ground 2: Obviousness over Reavey, Chandhri, and Preppernau (Claims 7, 10-13, 16, 18, 56)

1. Preppernau

Preppernau (Ex. 1008) is a publication printed in 2007 detailing step-by-step instructions for operating the Windows Vista operating system by Microsoft. Preppernau, Title, xi; *see also* Houh ¶75. In particular, Preppernau discloses tab-

based internet browsing organized in multiple ways. *Id.*, 182. As one example, a figure from Chapter 6 is reproduced below.⁹ *Id.*



2. Motivation to Combine

A POSITA would have been motivated to implement, in the Reavey-Chandhri device, various user interface elements that Preppernau taught existed in the Windows Vista operating system. Houh, ¶225. A POSITA would have recognized that Windows Vista was a well-known operating system available in five editions to personal and business laptop computer users at the time of the invention, that was

⁹ Throughout the Petition, all blue annotations in Preppernau figures are original; Petitioner's annotations are made in separate color.

commonly installed on laptops as a default operating system, and widely used by business and consumer users. Preppernau, xi (“Windows Vista is the latest and greatest in the illustrious line of Windows operating systems from Microsoft ... [that] is specifically designed to fill the needs of both business and personal users.”), xii; Houh, ¶225. A POSITA would have understood that, because Windows Vista was one of the most widely used operating systems in the years preceding the date of invention, a typical end user would have been familiar with the user interface elements described in Preppernau and would have expected to have access to those user interface elements in a consumer electronic device. A POSITA would have recognized that providing familiar interface elements, including those described in Preppernau, would have improved user familiarity with the user interface, making the device easier to use by the user and thereby increasing user satisfaction. This would have furthered the purposes of Reavey and Chandhri to provide a user-friendly device with a variety of physical configurations and visual organizations. At least for these reasons, a POSITA would have been motivated to modify the Reavey-Chandhri device to include various interface features taught by Preppernau, as discussed further below. Houh, ¶225.

3. Claim 7

§§VIII.A.4, VIII.A.6 explain that the Reavey-Chandhri combination teaches “the user interface of claim 3” and a “plurality of views” displaying “modes of

content” as recited in claims 1 and 3. A POSITA would have found claim 7 obvious based on Preppernau’s teachings. Screen saver views were well known at the relevant time as shown in Preppernau. Preppernau, 112-15, 121; Houh, ¶¶226-229. Preppernau teaches including a slide show of specific images as the screen saver view. Preppernau, 113. A POSITA would have been motivated to apply a passive viewing mode, such as a well-known screen saver to the plurality of views in the Reavey-Chandhri combination because, for example, it would have amounted only to applying a known technique (e.g., passive viewing of content) to yield predictable results (e.g., a screen saver that displays selected content for passive viewing). Houh, ¶227.

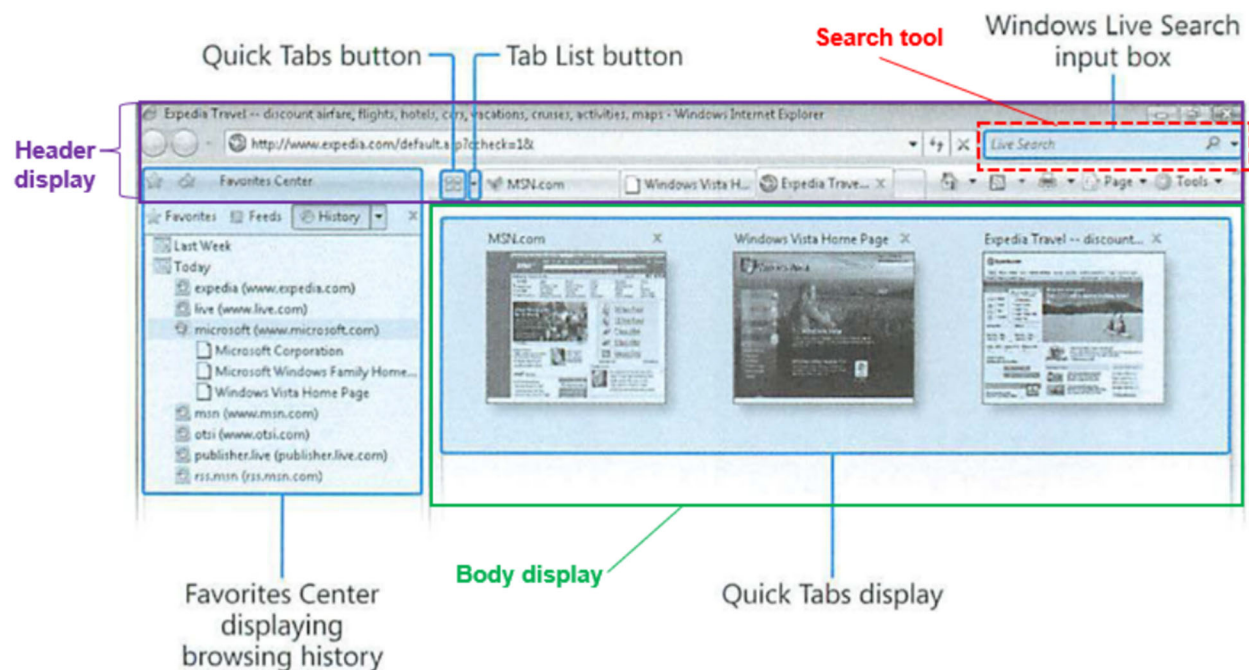
Dr. Houh explains that a POSITA would have understood choosing to display a slideshow of a user’s stored photos as a screen saver teaches a “media content mode” as in claim 3, which a user “select[s]...for passive viewing” as in claim 7 because a user has the option to select which content is displayed from those discussed above, one of which comprises user-curated and selected content (photos stored in a folder on the computing device). Preppernau, 113-115, 121 (disclosing steps and choice for a user to create a screen saver slideshow from stored user photos); Houh, ¶228.

A POSITA would have been motivated to implement these views from Preppernau in the Reavey-Chandhri device because a screensaver view, including a

slideshow screensaver view, was a well-known interface element from common operating systems at the time (such as Windows Vista), which users would have been familiar with and would have expected to have access to. As discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction. Houh, ¶1229.

4. Claim 10

§VIII.A.9 explains that the Chandhri-Reavey combination teaches “the user interface of claim 8.” Preppernau teaches claim 10. Houh, ¶¶230-232. A figure (annotated) shows Preppernau’s “Windows Live Search input box” configured to allow users to search the internet for web pages associated with textual entries entered by a user. Preppernau, lv, 182-183 .



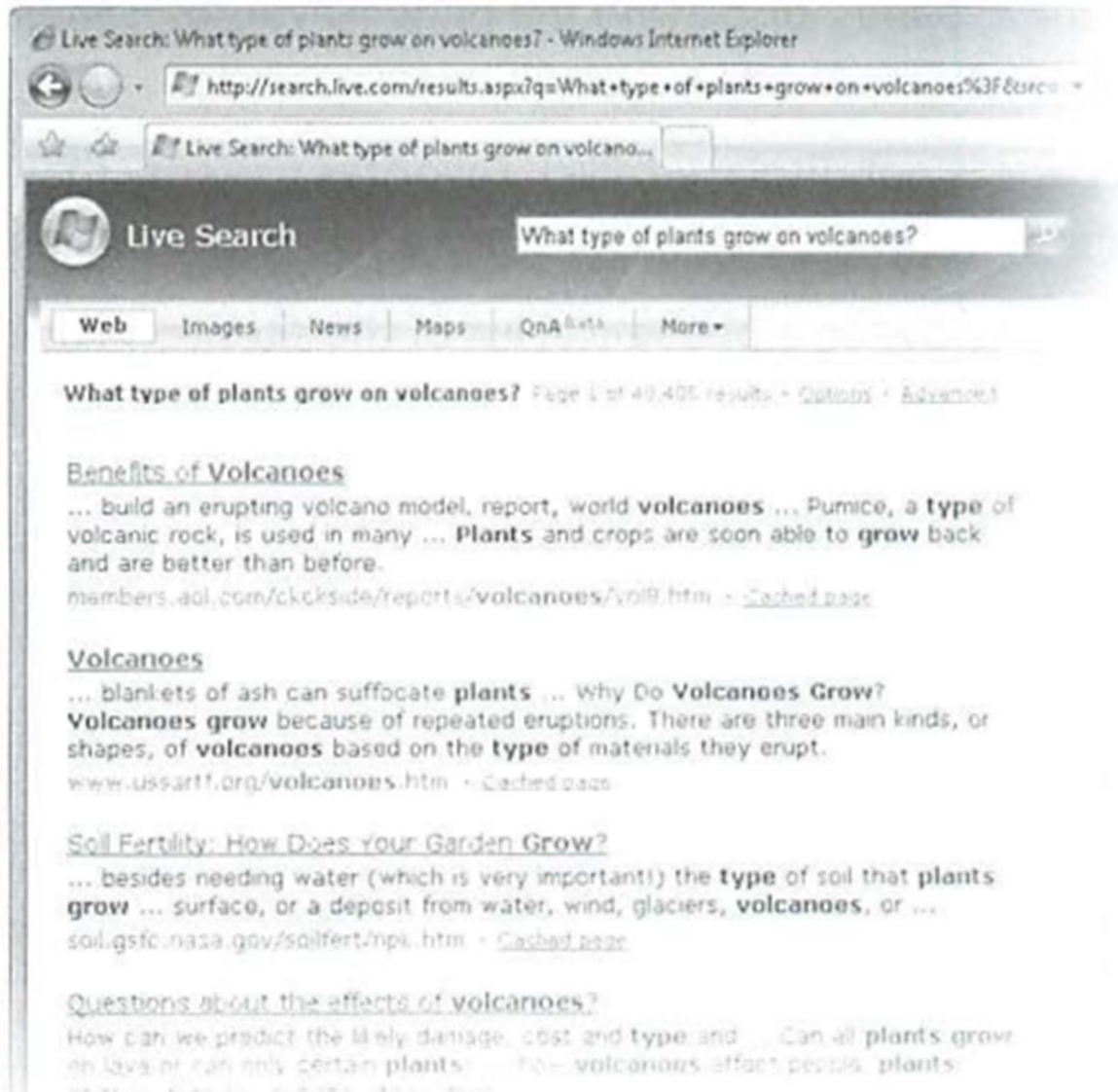
Preppernau's figures also show that users "click the Search button" ("execution") to search web pages ("digital content") according to text a user enters into a Windows Live Search input box ("search engine") that returns and displays hyperlinked web content ("results") in the browser window ("navigate to a view of a first visual representation of digital content"). Preppernau, 183.



Search



Search Options



Besides Live Search, the user interface presents users with “two dozen” other search providers (“search engines”) for use. *Id.*

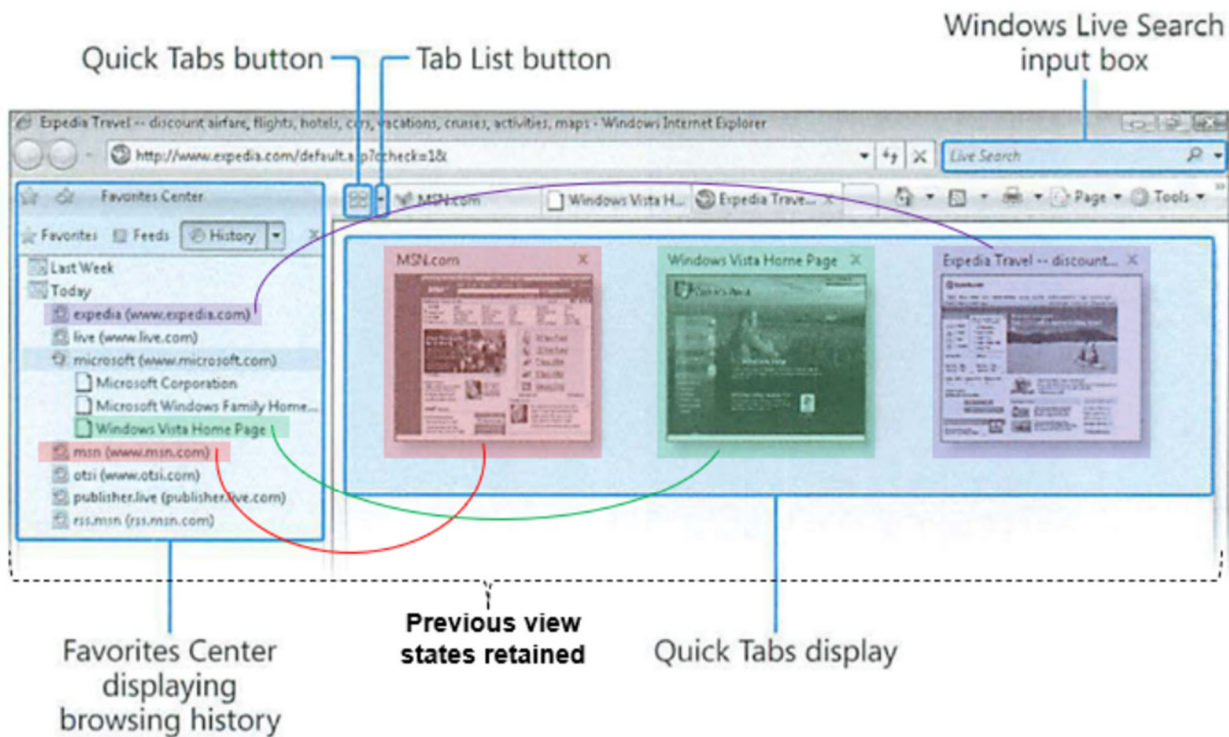
A POSITA would have been motivated to implement Preppernau’s search functionality in the Reavey-Chandhri combination because a search tool, including an easily-accessible search bar, was a well-known interface element from common operating systems at the time (such as Windows Vista), which users would have

been familiar with and would have expected to have access to. As discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction. Houh, ¶232.

5. Claim 11

§VIII.A.4 explains that the Reavey-Chandhri combination teaches “the user interface of claim 1.” §VIII.A.4.c for 1[b] explains Reavey further includes a memory (“storage component”).

Preppernau teaches claim 11 under MPF or not. Houh, ¶¶233-36. The Windows Vista Quick Tabs display includes thumbnails and tabs of previously-opened web pages (“previous view state”). Preppernau, 182. Previous user internet browsing search results are “retain[ed]” in a record “History” lasting 0 to 999 days temporally categorized by at least “Today” and “Last Week.” *Id.*, 182-185. The “Today” results appear as thumbnails in the Quick Tabs display (e.g., “msn,” “Windows Vista Home Page,” “Expedia”) in the figure (annotated) below. *Id.*, 182.



A POSITA would have understood computing systems require memory (local or remote) to retain operating system instructions for all functions included in that OS (e.g., Windows Vista), including browsing history and Quick Tabs display functions, in the Reavey-Chandhri-Preppernau combination. Houh, ¶¶235-236.

A POSITA would have been motivated to implement Preppernau's teaching of retaining a view state in the Reavey-Chandhri combination because the ability for a device to retain a user's interaction history, was a well-known feature from common operating systems at the time (such as Windows Vista), which users would have been familiar with and would have expected to have access to. As discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known

interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction. Houh, ¶236.

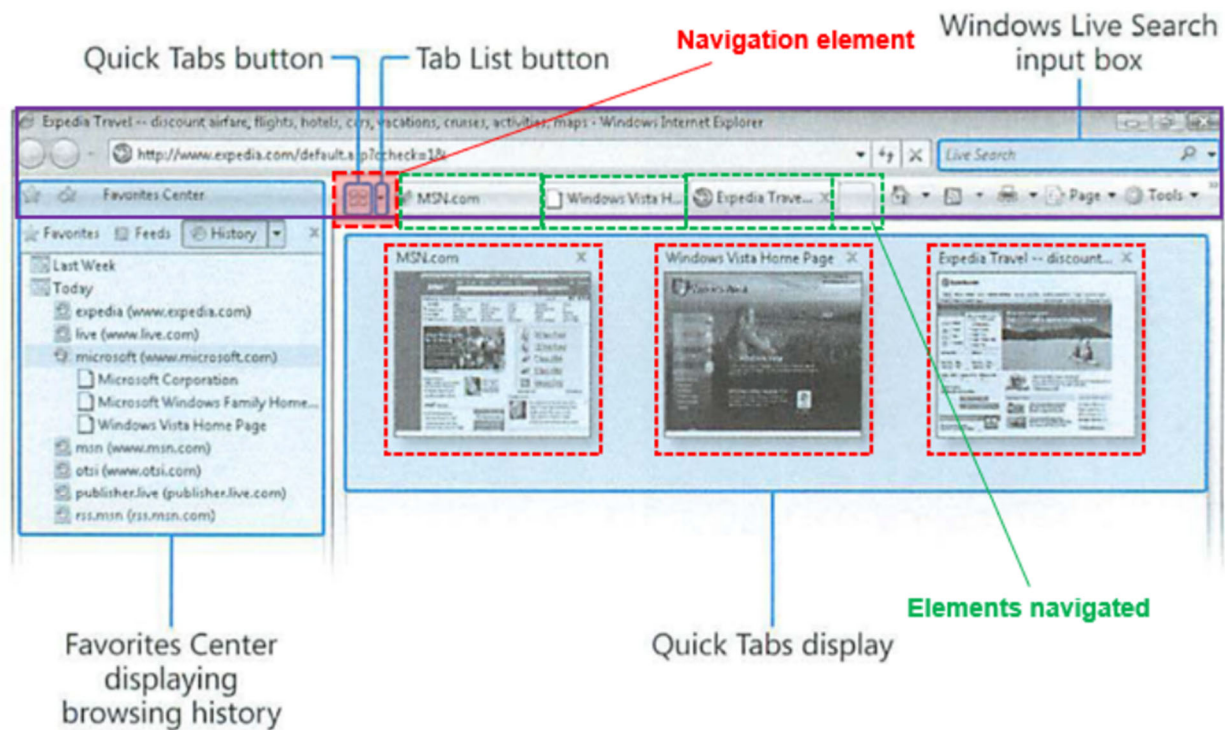
6. Claim 12

§VIII.A.4.f explains the Reavey-Chandhri combination teaches the “execution component” of claim 1, and §VIII.B.5 explains that the Reavey-Chandhri-Preppernau combination teaches “the user interface of claim 11” and “retain a previous view state.” Preppernau teaches claim 12.

Preppernau teaches that the Windows Internet Explorer 7 includes a tabbed browsing interface that enables a user to open multiple web pages linked to internet sites as tabs that populate a single instance of Internet Explorer to select (“execut[e]”) and switch (“transition”) between previously opened—i.e., viewed—web sites faster and easier. Preppernau, 170-71, 174, 198, 364; Houh, ¶¶237-240. To use Preppernau’s interface and corresponding navigation elements, a POSITA would have understood, and found it obvious, that a processor detects execution of a navigation element (e.g., a user clicking on a previously-viewed tab or the Quick Tabs button) and, based on the detection, changes its view accordingly, as depicted below. Preppernau, 170; Houh, ¶238.



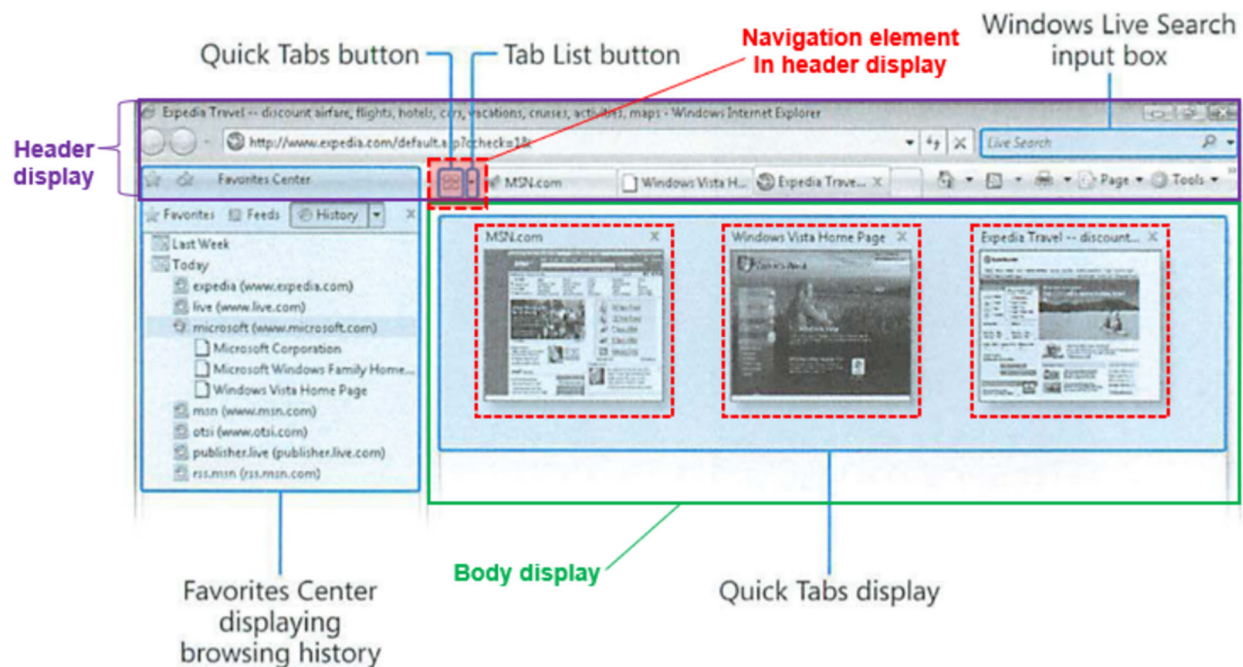
Preppernau's Quick Tabs button launches a Quick Tabs display of representative thumbnails of tabbed websites while maintaining those tabs above the thumbnails displayed. *Id.*, 175, 182. Preppernau's figure (annotated) shows user-selected ("execut[ed]") tabs with corresponding thumbnails of previously viewed web sites ("previous view[s]") created by selection of the Quick Tabs button ("navigation element"). *Id.*, 182.



A POSITA would have been motivated to implement Preppernau's teaching of tab-based switching in the Reavey-Chandhri combination because that feature was a well-known interface element from common operating systems at the time (such as Windows Vista), which users would have been familiar with and would have expected to have access to. As discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction. Houh, ¶240.

7. Claim 13¹⁰

Per §VIII.B.4 for claim 10, Preppernau teaches a “header display.” Per §VIII.B.5, the Reavey-Chandhri-Preppernau combination teaches “the user interface of claim 11.” Per §VIII.B.6 for claim 12, Preppernau teaches a “navigation element.” Additionally, Preppernau’s figure (annotated) shows a Quick Tabs button (“navigation element”) located in a header of the Quick Tabs display. Preppernau, 182; Houh, ¶¶241-42.



¹⁰ Petitioner notes “the navigation element” lacks antecedent basis because claim 13 depends from claim 11 (which depends from claim 1), and neither claim 1 nor 11 recites “a navigation element.” Instead, that term appears in claim 12.

Id., 182. A POSITA would have been motivated to include the navigation element in the header display at least because (1) that allowed easy access to the navigation element by the user, and (2) that was the well-known positioning of the navigation element, as demonstrated by Preppernau, and as discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction. Houh, ¶242.

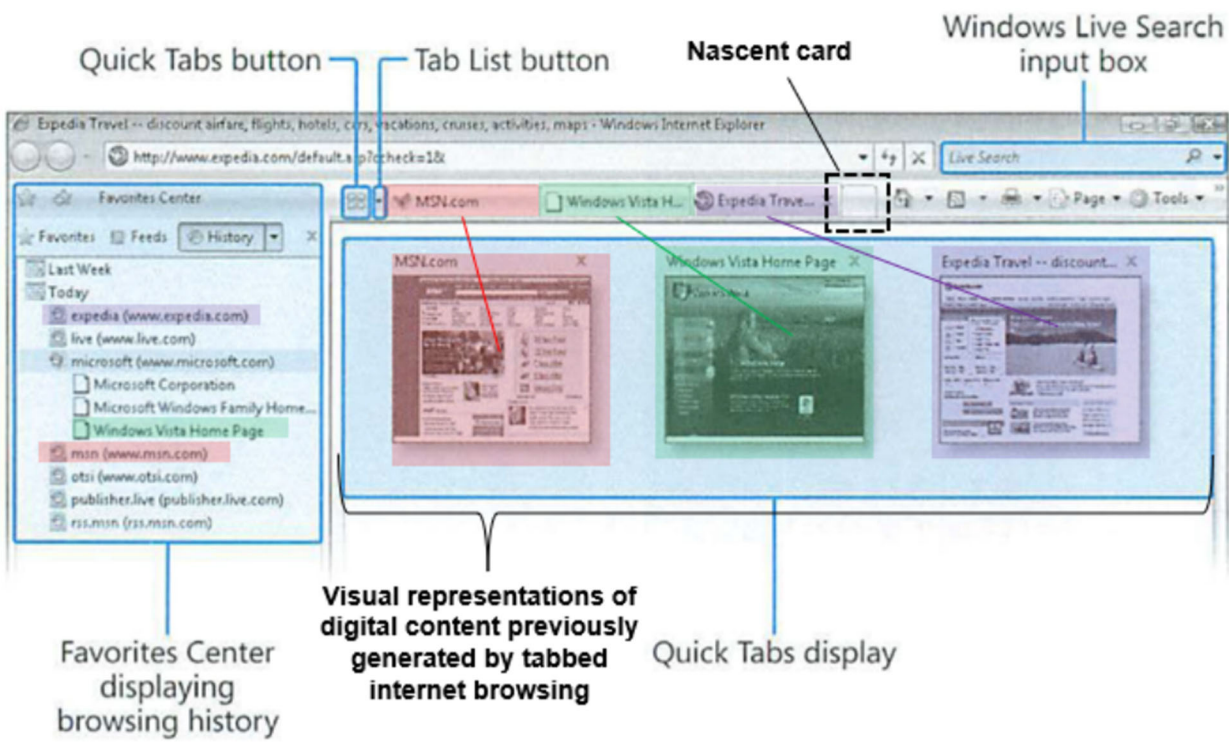
8. Claim 16

§VIII.A.9 explains the Reavey-Chandhri combination teaches the “user interface of claim 8” with a “home view.” As to claim 16, the ’315 patent discloses a “nascent card” is “configured to permit generation of additional visual representations of digital content” and is “displayed in the body of the home view.” EX-1001, Fig. 2, 5:16-20; Houh, ¶¶243-251. A nascent card is “always...available to a user,” i.e., a user cannot remove it or change its displayed position. EX-1001, 39:51-56. It also has a similar format to other cards but lacks its own page view. *Id.*, 52:39-42.

Preppernau’s figure shows the Quick Tabs display includes a row of internet browser tabs arranged above thumbnail screenshots corresponding (1:1) to each internet browser tab content previously opened by a user. Preppernau, 172, 182.



Preppernau's figure (annotated) shows the browser tabs include an additional tab at the right-most side (“nascent card”) that does not yet correspond to a generated tab or corresponding thumbnail screenshot of internet content but is used to generate an internet web page-linked browser tab. *Id.*, 169-170.

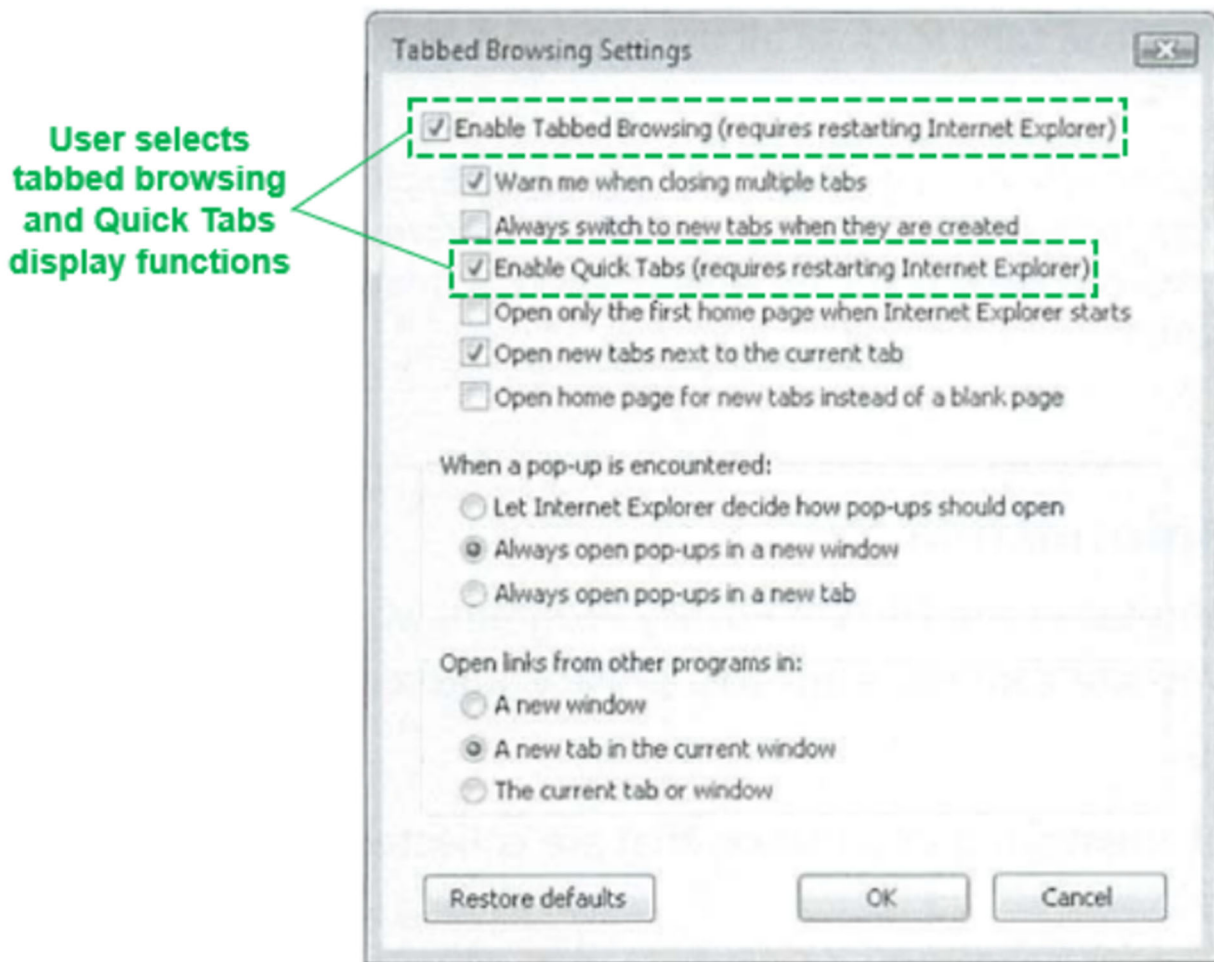


A POSITA would have understood Preppernau's Internet Explorer 7 "new tab" teaches a nascent card because it is a rectangular-shaped, selectable tab, which can create a web page association after selection, displayed in a fixed, last position in a Quick Tabs display but it has no corresponding web page and is not removable by a user. Houh, ¶247. As Dr. Houh explains, a POSITA would have understood the new browser tab has the same look, feel, and functionality as the "nascent card" the '315 patent describes. *Id.*

Regarding "wherein the nascent card is configured to permit generation of additional visual representations of digital content," Preppernau's figure also shows the right-most tab displayed of the Quick Tabs display includes the functionality to create a new tab linked to internet content. Preppernau, 169-170.



A POSITA would have understood the right-most tab in Preppernau's Quick Tabs display header is the same as that Preppernau teaches is used for general Internet Explorer tabbed browsing (immediately above) (both use tabbed internet browsing GUI elements). *Id.*, 170; Houh, ¶249. Furthermore, a specific implementation of this functionality is user-enabled in the Quick Tabs display Preppernau shows in a figure (annotated). Preppernau, 174-175.



Therefore, a POSITA would have understood the right-most tab (“nascent card”) of those tabs displayed in the Quick Tabs display allows users to create

(“generate”) additional internet browsing tabs linked to internet web pages (“digital content”) viewable as thumbnail screenshots in the Quick Tabs display (“visual representations”). Houh, ¶250.

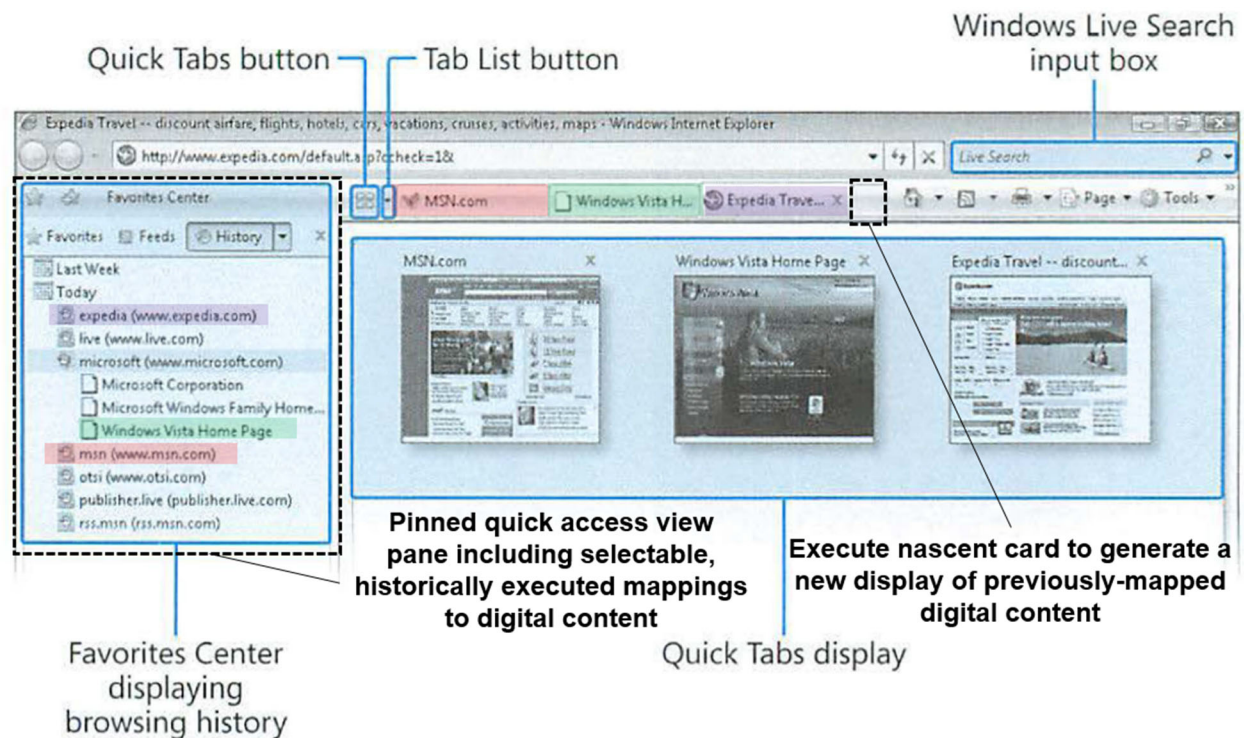
A POSITA would have been motivated to implement Preppernau’s teaching of quick tabs, including the ability new tab element and other related features described above, because that arrangement was a well-known interface element from common operating systems at the time (such as Windows Vista), which users would have been familiar with and would have expected to have access to. As discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction. Houh, ¶252.

9. Claim 18

§VIII.A.4 explains that the Reavey-Chandhri combination teaches the “user interface” and “plurality of views” of claim 1. The ’315 patent discloses a quick access view in Fig. 5 (500) that includes “content options to generating a mapping” that “may be based on frequency of access” including “most frequently visited content.” EX-1001, Fig. 5, 29:41-53. Preppernau teaches claim 18. Houh, ¶¶252-255.

Preppernau teaches a user may access a Favorites Center (“quick access view”) from a navigable tool bar in an instance of Internet Explorer 7 containing

recently-viewed web pages as depicted in the figure (annotated) reproduced below. Preppernau, 182. The Favorites Center can be pinned as a pane in the browser window. *Id.*



Dr. Houh explains when Favorites Center is pinned as a pane in a browsing window, Preppernau preserves a list (“visual representation[s]”) of previously accessed websites (“digital content”). Using that list, users can switch to a different, recent web page from an existing one or open a new instance of a recent web page in a new tab altogether to allow users to easily and efficiently reinstate a web page recently visited (“user generation of a mapping”) for updated information at that “favorite” page (e.g., “msn.com” to view updated news published at the same web page, or

“expedia.com” to review updated travel prices using the same travel-price provider).
Houh, ¶255.

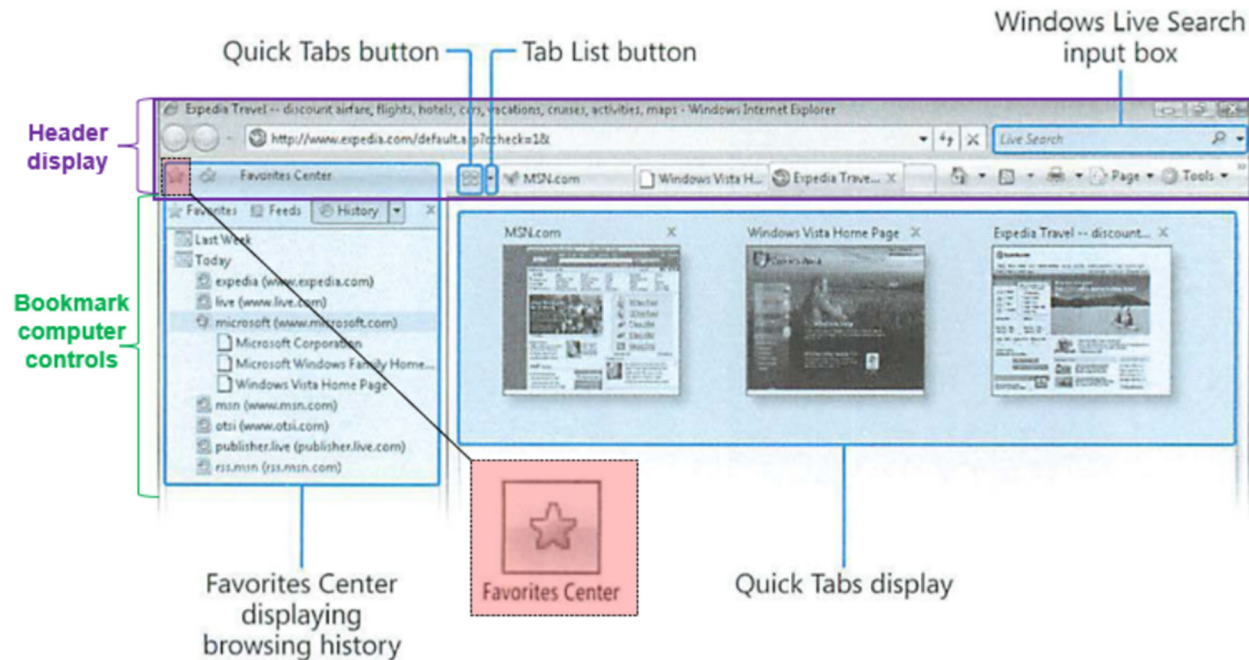
A POSITA would have been motivated to implement Preppernau’s teaching of a favorites center in the Reavey-Chandhri combination because that feature was a well-known interface element from common operating systems at the time (such as Windows Vista), which users would have been familiar with and would have expected to have access to. As discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction.
Houh, ¶256.

10. Claim 56

§VIII.A.17 explains the Reavey-Chandhri combination teaches the “user interface of claim 55” including a “display” with “header.” Notably, claim 56 requires “computer controls” to be “render[ed]...in response to focus upon the header portion.” Preppernau teaches claim 56. Houh, ¶¶256-259.

The ’315 patent provides an example of a computer control in a header portion as “bookmarks control” 504 in the header of a “quick access view.” EX-1001, Fig. 5, 29:41-53. Preppernau’s figures (annotated and combined) show an instance of Internet Explorer 7 that includes a “Favorites Center” in a top portion of the browser window (“header portion”), the selection of which (“focus upon”) displays a

“Favorites” pane providing selectable buttons for navigating a user to previously-viewed online content recorded as Favorites, Feeds, and total browsing History for subsequent navigation (“computer controls”). Preppernau, 182-84.



As Dr. Houh explains, a POSITA would have recognized Preppernau’s favorite browsing web sites listed in Favorites, Feeds, and History portions of its selectable Favorites Center pane teaches this limitation in the same way as the bookmark control in the ’315 patent because each achieves the same function (i.e., a past-visited web site saved by the user for future navigation) and differs only in labeling of that function. Preppernau, 182-184; Houh, ¶259.

A POSITA would have been motivated to implement Preppernau’s teaching of presenting controls in a header portion in response to focus in the Reavey-Chandhri combination because that feature was a well-known interface element from

common operating systems at the time (such as Windows Vista), which users would have been familiar with and would have expected to have access to. As discussed in §VIII.B.2, a POSITA would have been motivated to add such well-known interface elements to the Reavey-Chandhri device to increase user familiarity with the user interface and to increase user satisfaction. Houh, ¶260.

IX. Conclusion

Inter Partes Review of the Challenged Claims is respectfully requested.

X. Mandatory Notices

A. Real Party in Interest

Petitioners identify themselves as real parties in interest.

B. Related Matters

To the best of Petitioner's knowledge, the '315 patent has been involved in the following district court litigation:

- *LiTL LLC v. HP Inc.*, 1-23-cv-00120 (D. Del. Feb. 01, 2023)
- *LiTL LLC v. Dell Technologies Inc. et al.*, 1-23-cv-00121 (D. Del. Feb. 01, 2023)
- *LiTL LLC v. ASUSTeK Computer Inc. et al.*, 1-23-cv-00122 (DDE) (D. Del. Feb. 1, 2023)

C. Notice of Counsel and Service Information¹¹

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CERTIFICATE OF WORD COUNT UNDER 37 CFR §42.24(d)

Pursuant to 37 C.F.R. §42.24(a), Petitioner hereby certifies that portions of the above-captioned Petition for *Inter Partes* Review of U.S. Patent 9,003,315, in accordance with and reliance on the word count provided by the word-processing system used to prepare this Petition, that the number of words in this paper is 13,699. Pursuant to 37 C.F.R. §42.24(a), this word count is in compliance and excludes the table of contents, table of authorities, mandatory notices under §42.8, certificate of service, certificate of word count, appendix of exhibits, and any claim listing. This word count was prepared using Microsoft Word.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that true copies of the Petition for *Inter Partes* Review of U.S. Patent No. 9,003,315 and supporting materials (Exhibits and Power of Attorney) were served via overnight delivery on the Patent Owner at the correspondence address of record as listed on PAIR:

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