

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.

IPR2024-00455

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

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

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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	German Patent Application Publication DE10331185A1 (“Pröll”) with certified translation
1007	RESERVED
1008	RESERVED
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	RESERVED
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”)
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1038	RESERVED
1039	RESERVED
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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 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 26	
26	The user interface of claim 24, wherein the execution component is further configured to transition from the first view and a home view to a channel view in response to a change in computer system configuration state from a laptop to an easel configuration.
Claim 28	
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:

Reference	Claim limitation
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 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

Reference	Claim limitation
	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 29	
29[a]	The system of claim 28, wherein the system further comprises a portable computer configurable between a plurality of display modes including a closed mode, a laptop mode and an easel mode, wherein the portable computer comprises:
29[b]	a display component including a display screen;
29[c]	a base;
29[d]	a hinge assembly at least partially housed within the base and configured to pivotably couple the display component to the base;
29[e]	wherein the display component is rotatable about a longitudinal axis running along an interface between the display component and the base;
29[f]	wherein, in the closed mode, the display screen is disposed substantially against the base;
29[g]	wherein rotating the display component about the longitudinal axis up to approximately 180 degrees from the closed mode configures the portable computer into the laptop mode; and
29[h]	wherein rotating the display component about the longitudinal axis beyond approximately 180 degrees from the closed mode configures the portable computer into the easel mode.
Claim 30	
30.	The portable computer of claim 29, wherein the single axis is a longitudinal axis running along an interface between the display component and the base; and wherein the display component is rotatable about the longitudinal axis.
Claim 31	
31[a]	The portable computer of claim 30, further comprising a display orientation module configured to control an orientation of the content displayed on the display screen;
31[b]	wherein the orientation of the content displayed on the display screen is configurable among a plurality of orientations relative to the longitudinal axis.
Claim 32	

Reference	Claim limitation
32[a]	The portable computer of claim 31, wherein the plurality of orientations comprises a first orientation relative to the longitudinal axis and a second orientation relative to the longitudinal axis; and
32[b]	wherein when display orientation module is configured to automatically display the content in the first orientation when the portable computer is configured into the laptop mode and in the second orientation when the portable computer is configured into the easel mode.
Claim 33	
33.	The portable computer of claim 31, wherein the plurality of display modes further comprises a flat mode in which the display component is disposed at an angle of approximately 180 degrees, measured about the longitudinal axis, relative to the base.
Claim 36	
36[a]	The portable computer of claim 31, further comprising a mode sensor configured to detect a degree of rotation of the display component relative to the base and to provide information representative of the degree of rotation; and
36[b]	wherein the display orientation module is configured to automatically adjust the orientation of the content displayed on the display screen responsive to the information from the mode sensor.
Claim 37	
37[a]	The portable computer of claim 36, wherein the display orientation module is configured to: automatically display the content in a first orientation relative to the longitudinal axis responsive to the information indicating that the degree of rotation of the display component is less than approximately 180 degrees relative to the base; and
37[b]	automatically display the content in a second orientation relative to the longitudinal axis responsive to the information indicating that the degree of rotation of the display component is greater than approximately 180 degrees relative to the base;
37[c]	wherein the second orientation is at approximately 180 degrees relative to the first orientation.
Claim 38	
38[a]	The portable computer of claim 31, further comprising a mode sensor configured to detect a current display mode of the portable computer; and

Reference	Claim limitation
38[b]	wherein the display orientation module selects the orientation of the content displayed on the display screen from one of the plurality of orientations relative to the longitudinal axis responsive to the current display mode detected by the mode sensor.
Claim 39	
39	The portable computer of claim 30, wherein plurality of display modes further comprises a closed mode; and wherein, in the closed mode, the display screen is disposed substantially against the base.
Claim 40	
40[a]	The portable computer of claim 39, wherein rotating the display component about the longitudinal axis up to approximately 180 degrees from the closed mode configures the portable computer into the laptop mode; and
40[b]	wherein rotating the display component about the longitudinal axis beyond approximately 180 degrees from the closed mode configures the portable computer into the easel mode.
Claim 41	
41.	The portable computer of claim 40, wherein the display component is rotatable about the longitudinal axis up to approximately 320 degrees from the closed mode.
Claim 42	
42[a]	The portable computer of claim 30, wherein the longitudinal axis comprises multiple parallel axes; and
42[b]	wherein the hinge assembly is configured to permit rotation of the display component about any of the multiple parallel axes to configure the portable computer between the plurality of display modes.
Claim 52	
52.	The portable computer of claim 29, further comprising: a foot disposed along at least a portion of the base and configured to support the portable computer when in the easel mode.

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”) (all of which are collectively referred to herein as “Petitioners”) request *inter partes* review (“IPR”) of 1, 23, 24, 26, 28-33, 36-42, and 52 (“Challenged Claims”) of U.S. Patent 9,003,315 (“the ’315 patent”; EX-1001). LiTL (“Patent Owner” or “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); *id.*, ¶¶1-19 (discussing his 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), and 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)
Pröll (Germany Patent Application Publication DE10331185A1), filed on October 7, 2003, published on March 2, 2005, and qualifies as prior art under at least 35 U.S.C. § 102(b) (EX-1006)
Lane (International Application WO 95/24007), filed on February 28, 1995, published on September 8, 1995, and qualifies as prior art under at least 35 U.S.C. § 102(b) (EX-1014)

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

Ground (all under 35 U.S.C. §103)	Claims	References
1	1, 23, 24, 28	Reavey, Chandhri
2	26, 29-33, 36-41, 52	Reavey, Chandhri, Pröll
3	42	Reavey, Chandhri, Pröll, Lane

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.

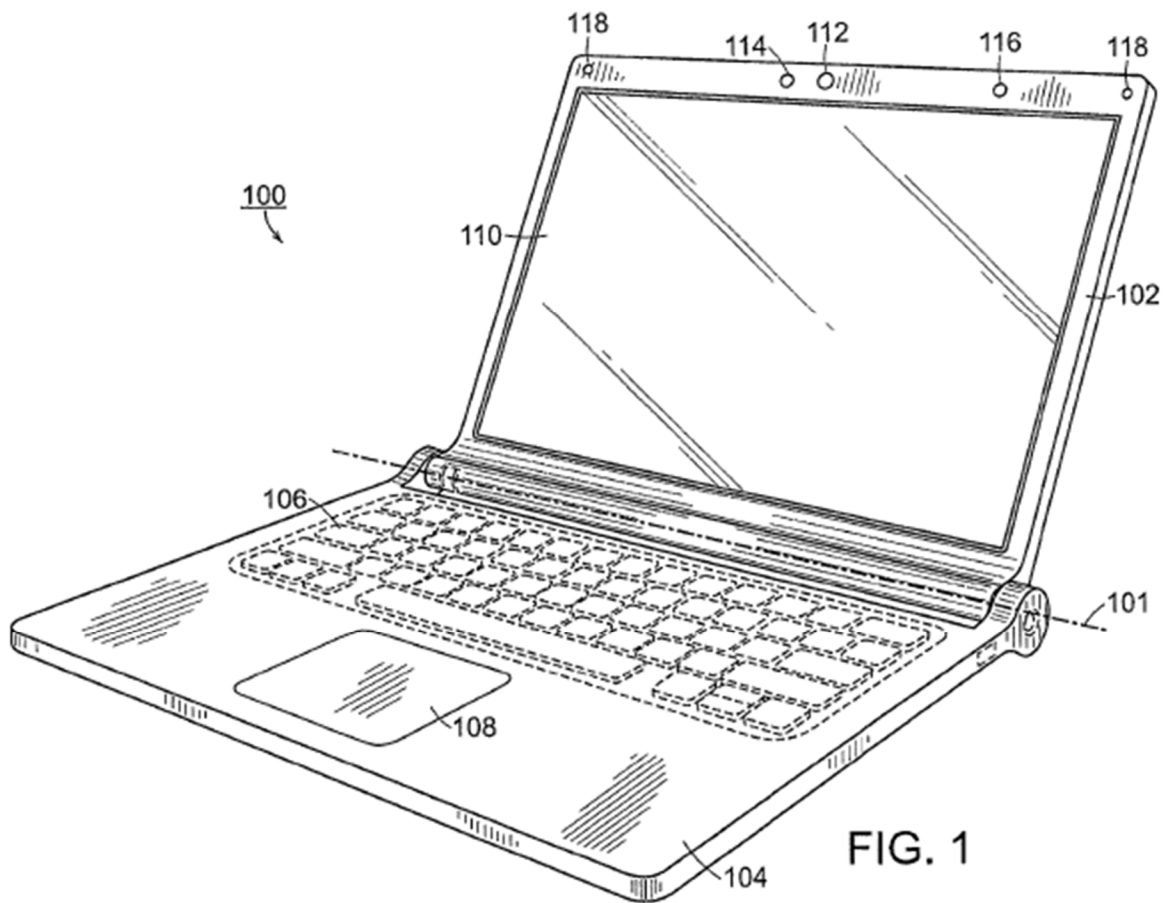
A. Specification

The '315 patent is titled “System and Method for Streamlining User Interaction with Electronic Content” and was issued from U.S. Application No. 12/416,496, filed April 1, 2009. EX-1001, [21], [22], [54]; 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 also claims priority to a provisional application filed on April 1, 2008.³
EX-1001, [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 computer system configurations includes a laptop mode (e.g., Figure 1 below) where display component 102 is pivotably coupled to a base 104 that includes a keyboard 106. *Id.*, 6:25-42, Fig. 1.

³ 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.



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.

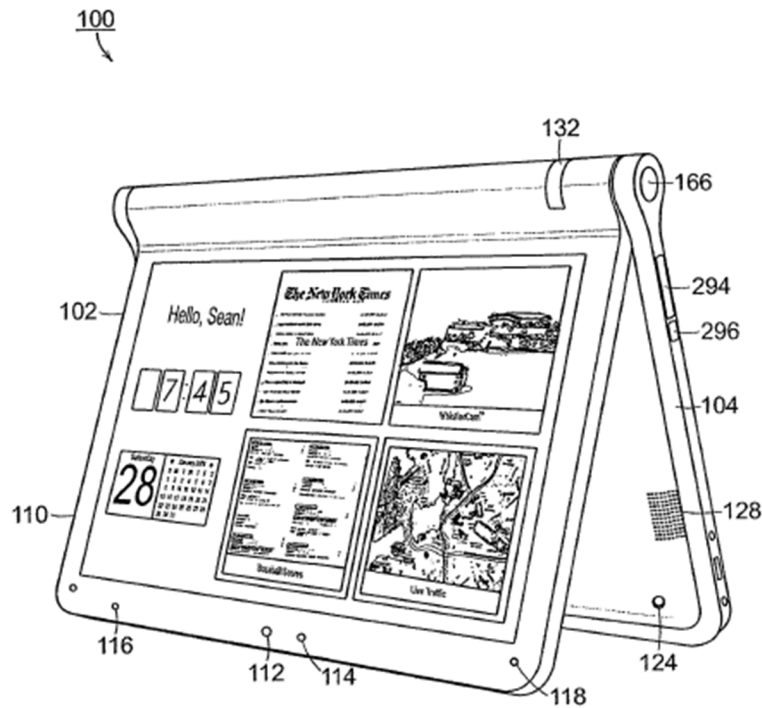


FIG. 4

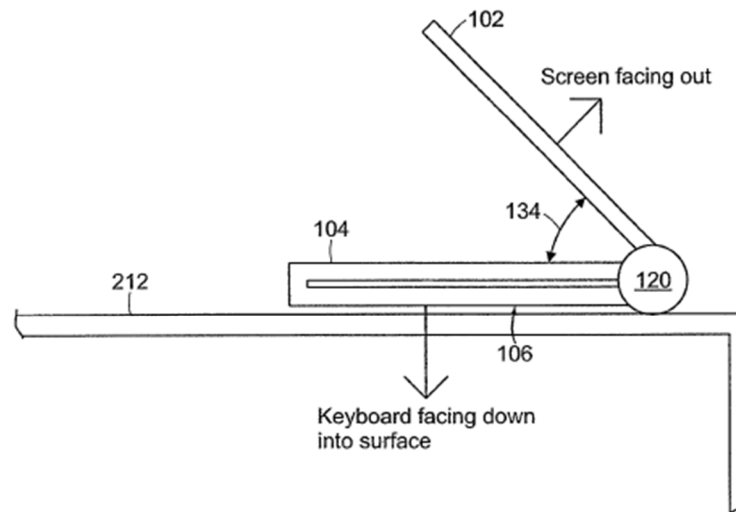


FIG. 26

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,” as well as 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; Houh, ¶¶48-50. 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. 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”)), and PO did not assert the ’315 patent in any district court litigation until February 2023. Houh, ¶¶51-53.

As discussed above, the ’315 patent is a continuation-in-part of the applications that led to each of the ’688 and ’844 patents. PO sued Lenovo alleging infringement of the ’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 Litigation⁴

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-1024. That suit asserted infringement by Lenovo of six patents. *Id.* Of those,

⁴ As discussed above, the prior litigation against Lenovo did not assert the ’315 patent. EX-1024.

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. EX-1020. Under that Order, preliminary infringement contentions are due on April 1, 2024, and preliminary invalidity

contentions are due on May 1, 2024; a Markman hearing is set for October 10, 2024; and four trial dates are set for January 20, 2026, February 17, 2026, March 16, 2026, and April 20, 2026. *Id.*, 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).

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 four 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 three references (Chandhri, Pröll, and Lane) 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), (d)), although one of the same references have been before the Office, the same or substantially the same art or arguments were not previously presented to or considered by the Office. Only Reavey was listed in an IDS, but not applied by the Examiner during prosecution. None of Chandhri, Pröll, or Lane 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-10X32 ('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. Houh, ¶¶54-56.

B. Means-Plus-Function (“MPF”)⁵

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. Houh, ¶57.

1. “display component”

Limitation (Function Underlined)	Corresponding Structure
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⁵ 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 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...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 organize 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 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.
Claim 26: “The user interface of claim 24, wherein the execution component is further configured to <u>transition...</u> ” as recited in claim 26	A program (or programs) executing on a processor that can perform the limitations from claim 24 and transition from a first view and a home view to a channel view based on a change in computer system configuration from laptop to easel. <i>See, e.g.</i> , '315 Patent, 6:20-24, 8:48-62, 11:11-19.

3. “storage component”

Limitation (Function Underlined)	Corresponding Structure
Claim 23: “The user interface of claim 1, further comprising a storage component configured to <u>retain...</u> ” as recited in claim 23	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.

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> ” / “a second user interface component configured to <u>display...</u> ” as recited in claim 28[b], [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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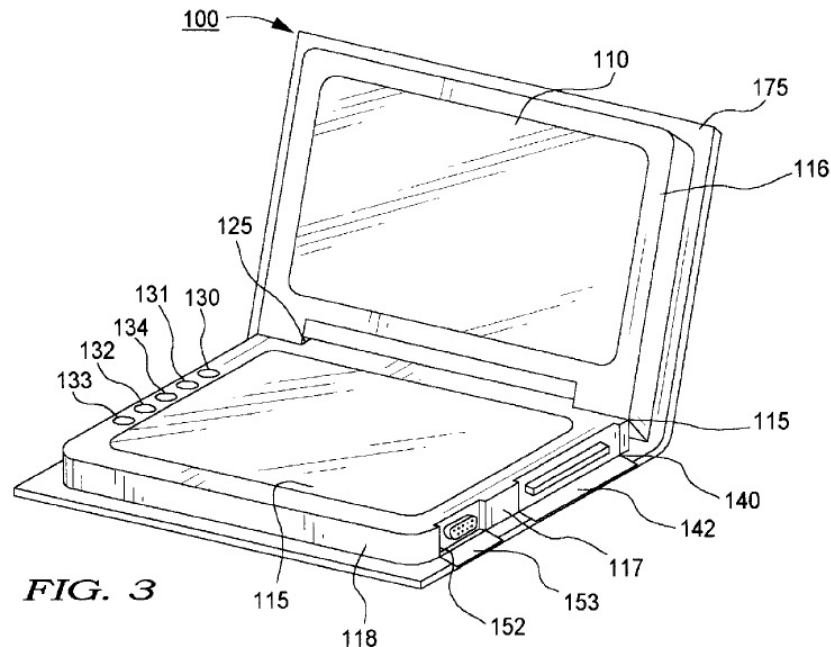
VIII. DETAILED EXPLANATION OF GROUNDS

A. Ground 1: Obviousness over Reavey and Chandhri, Reavey (Claims 1, 23, 24, 28)

1. Reavey

Reavey (EX-1009) discloses an electronic book device 100 that can be used in multiple physical configurations. Reavey, 1:11-15; 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

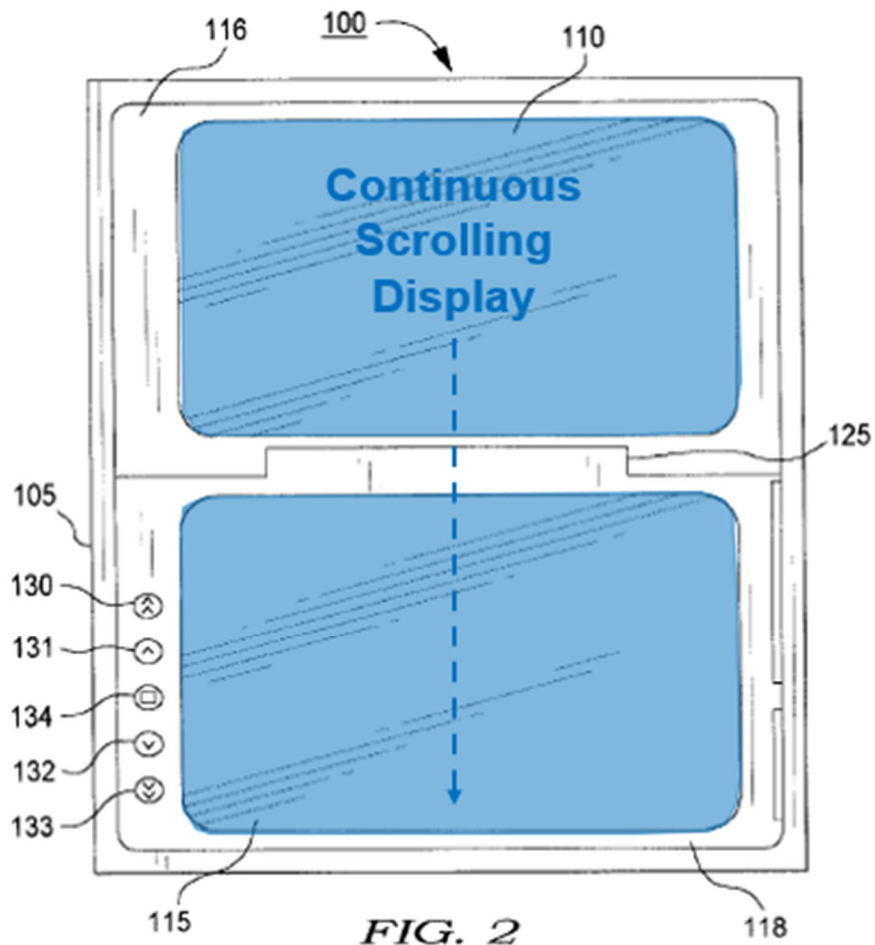
touchscreen. *Id.*, 5:46-48. Device 100 includes other user input/output devices, including navigation keys 130-133 and “assistant key 134.” *Id.*, 5:39-42.



Reavey, Fig. 3.

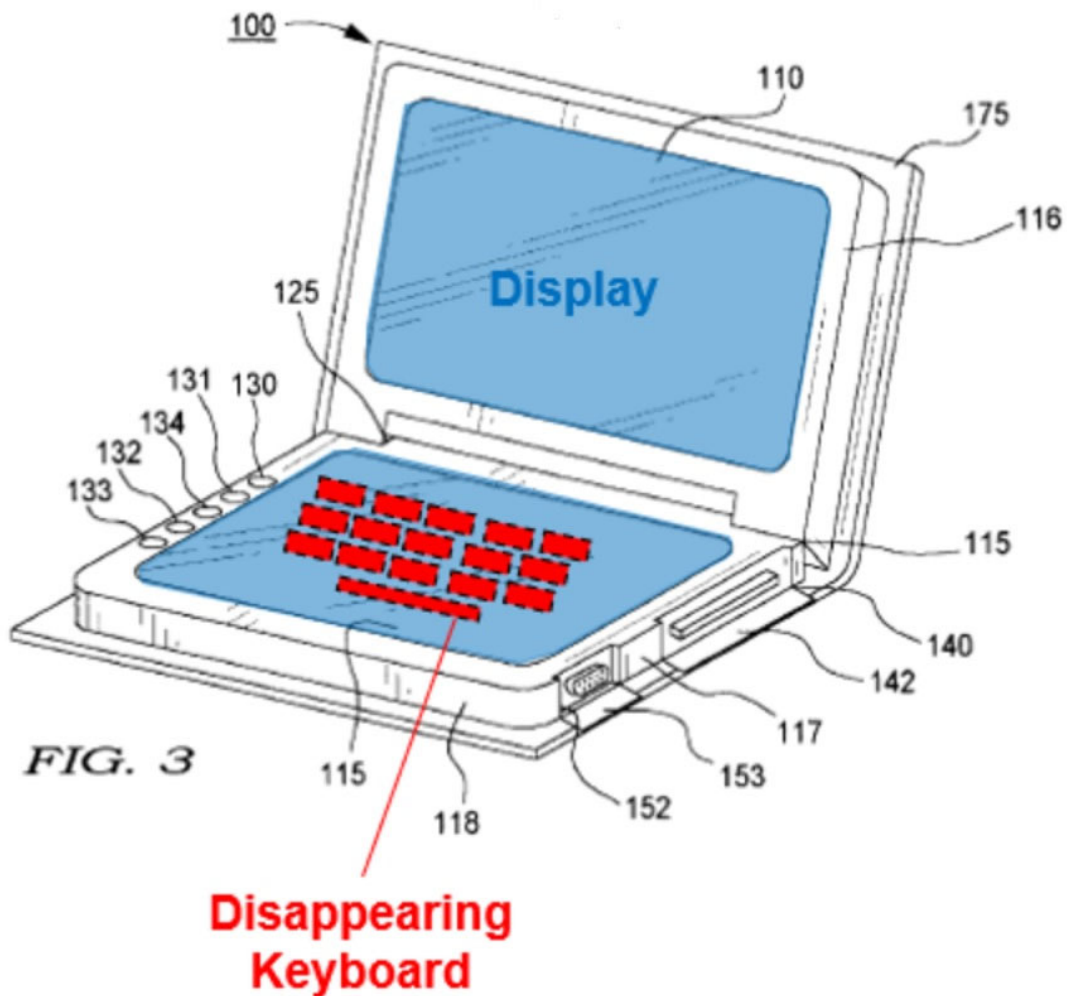
Reavey’s device 100 can be used in three modes. In Mode 1, device 100 is held with screens 110/115 arranged vertically and held side-by-side, like a book. Reavey, 7:35-39.

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.



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:

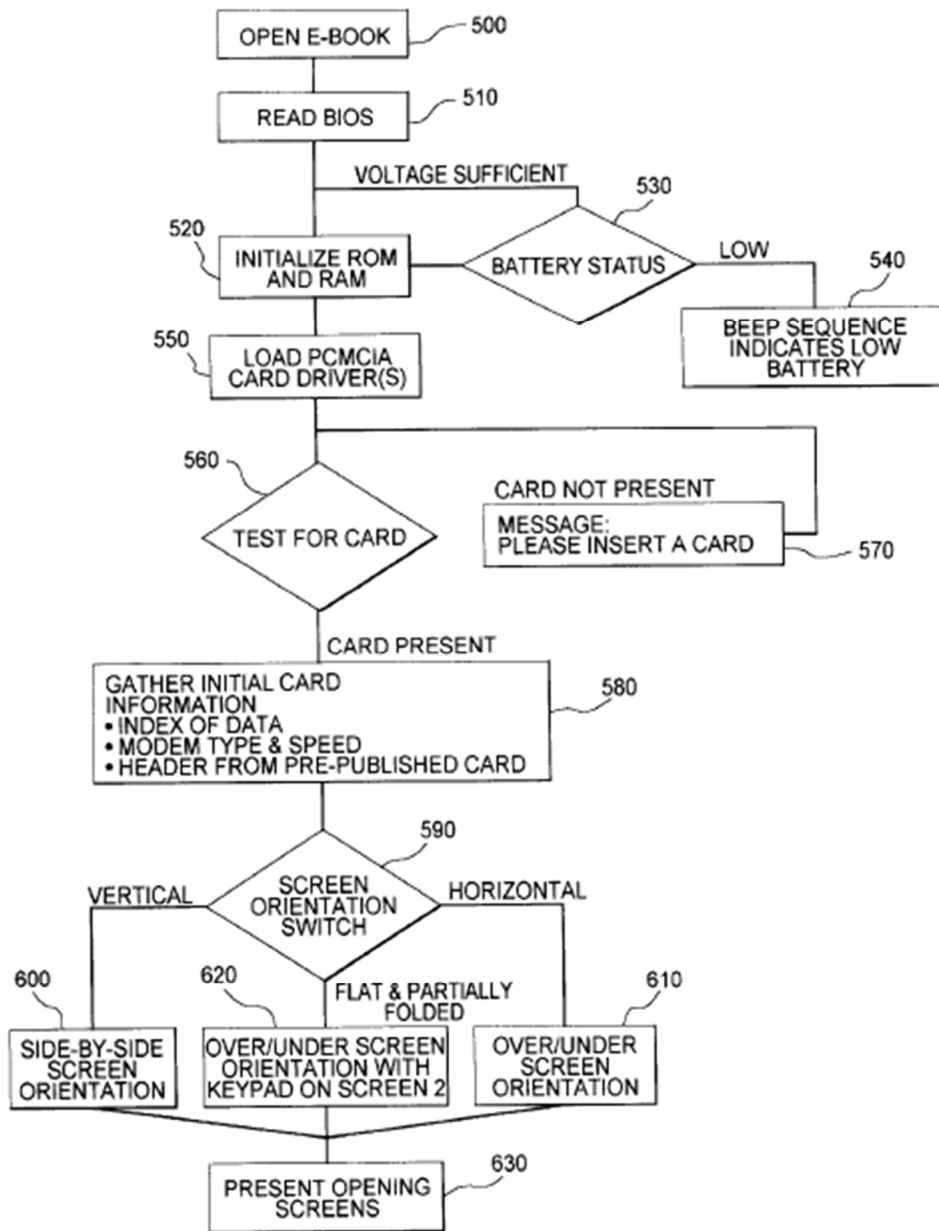


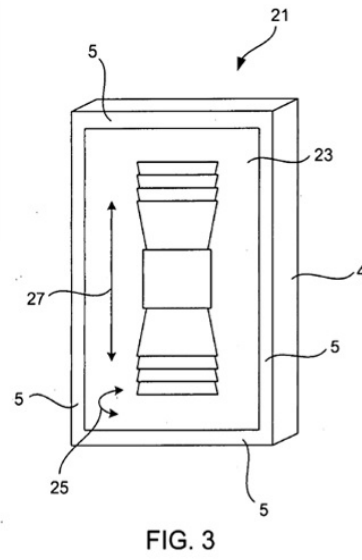
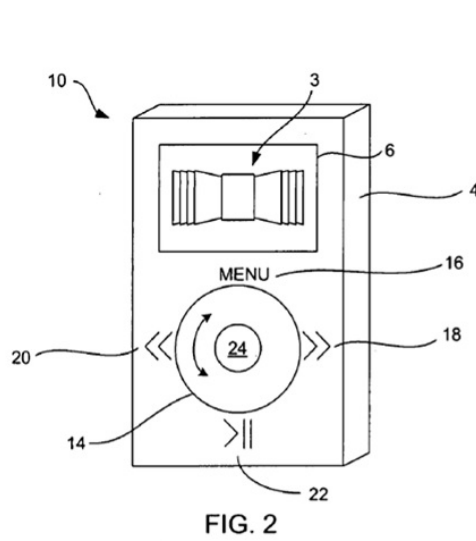
FIG. 9

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; 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 discloses a tile-based browser a 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).



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).

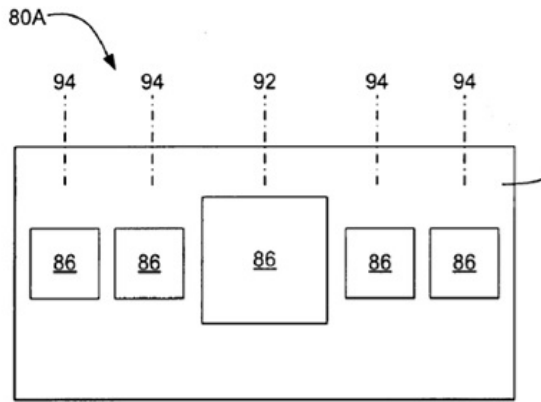


FIG. 5

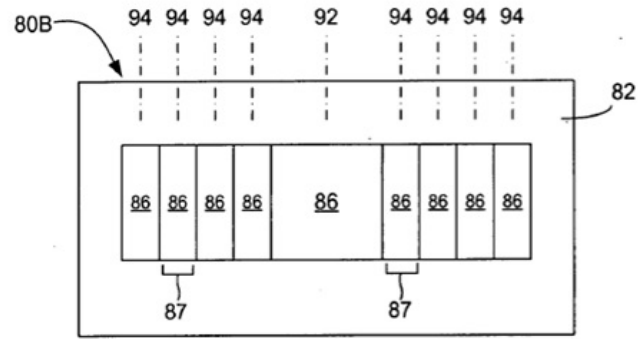


FIG. 6

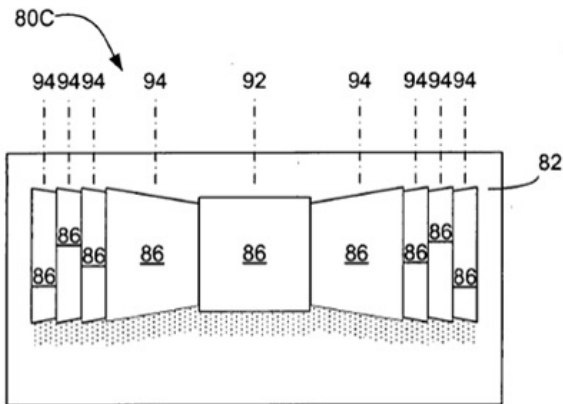


FIG. 7

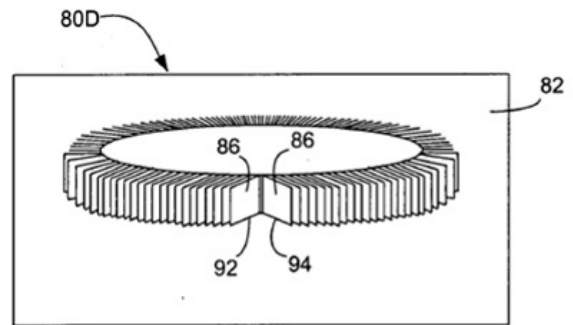


FIG. 8

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).

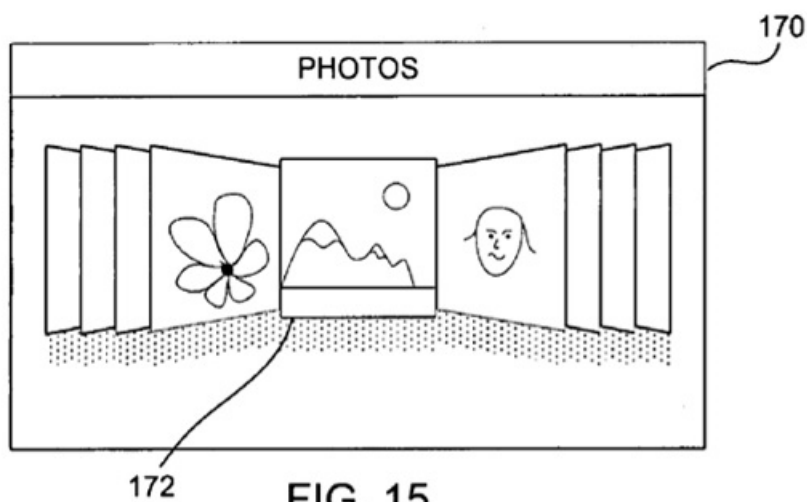


FIG. 15

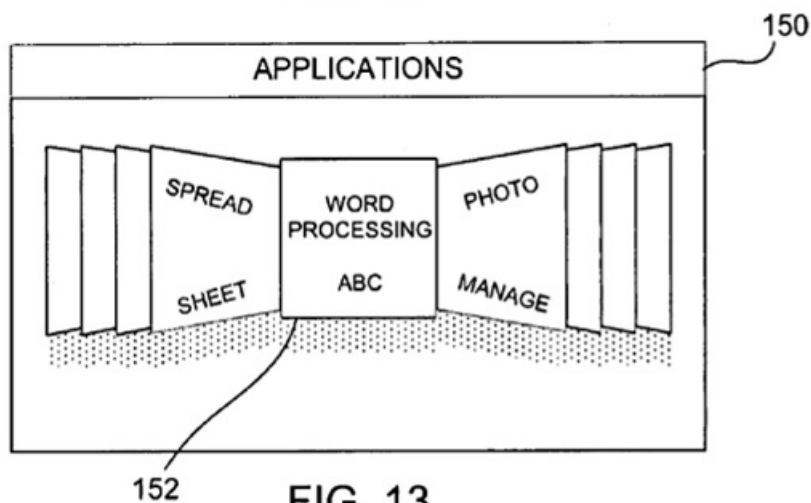


FIG. 13

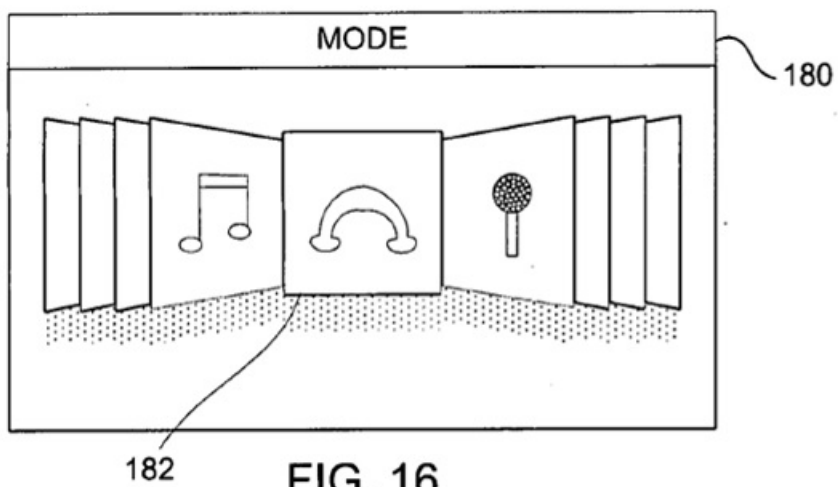


FIG. 16

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

Fig. 10.

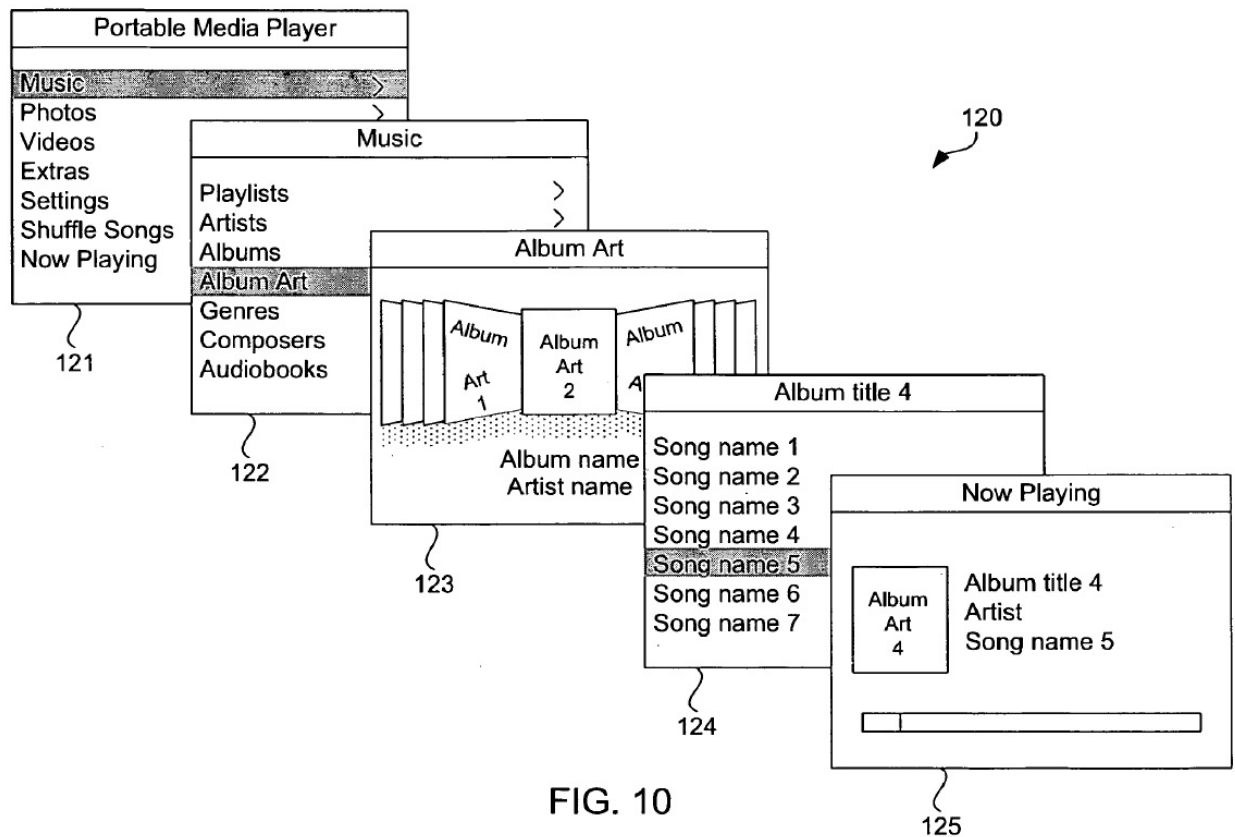


FIG. 10

Chandhri's device switches 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. Chandhri, ¶0059, ¶0224-0225, ¶0229, Fig. 34:

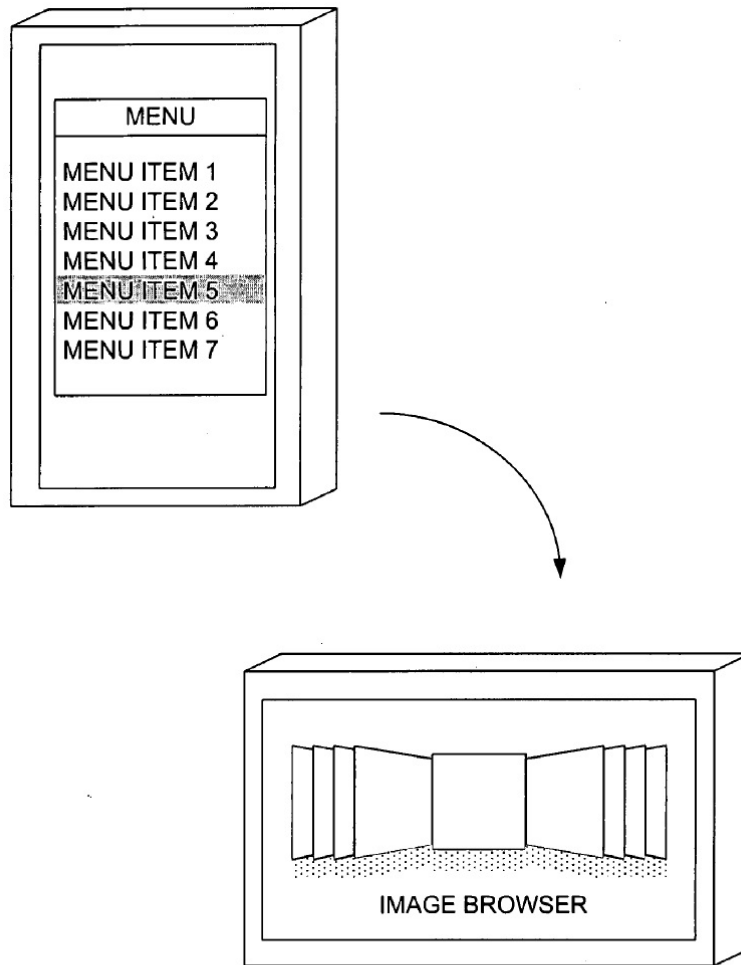


FIG. 34

3. Motivation to Combine

A POSITA would have been motivated to combine Reavey's device with Chandhri's GUI disclosures. 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 the 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 Reavey's device GUI organization changes when the user manipulates the device from the laptop configuration (Mode 3) to the flat configuration (Mode 2). Houh, ¶¶76-77. 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. 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 that 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 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 requires a GUI organization that: (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. Chandhri's tile-based browsing interface can be arranged in a vertical-scrolling organization (requirement (3)). *Id.*, Fig. 3. 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." *Id.*, ¶0082-0086.

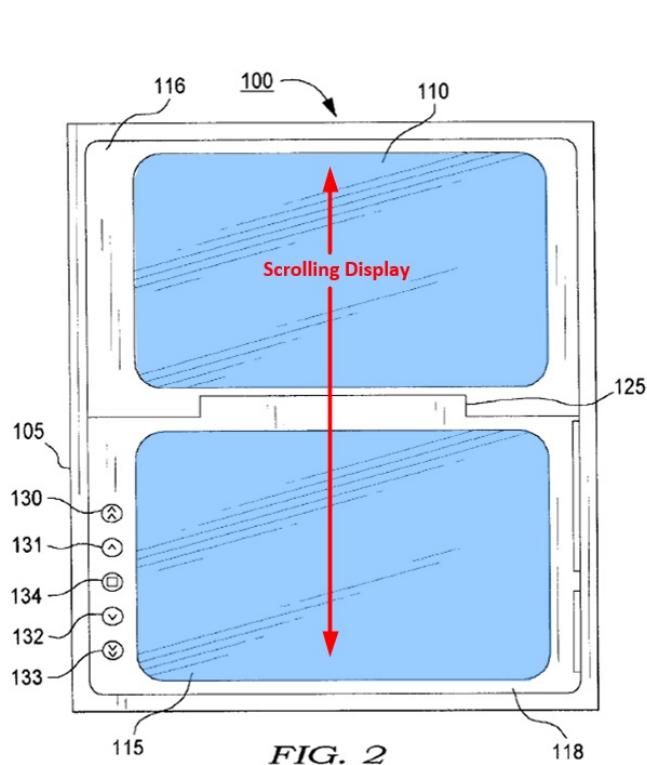


FIG. 2

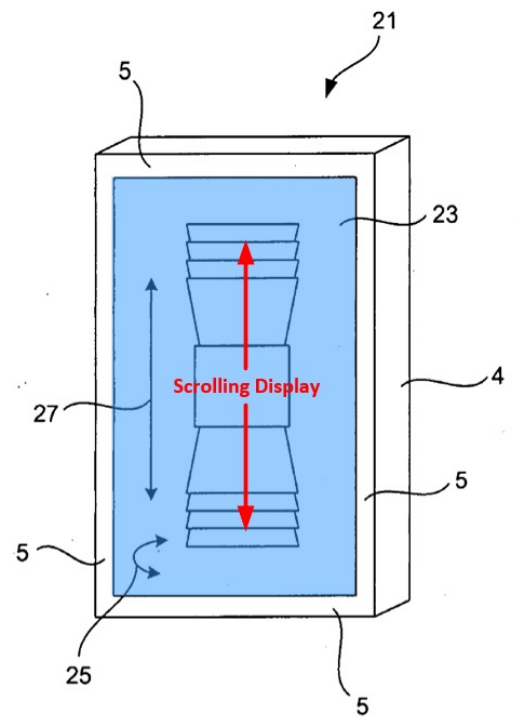


FIG. 3

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 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 menu-based GUI organization, like a “conventional menu list.” Chandhri, ¶0053, 0059, Figs. 10-11, 34. 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 that 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 conventional 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, ¶¶0224-29, Fig. 34. A POSITA would have recognized the need for Reavey’s device, i.e., a way to change GUI organization 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 Reavey’s device with Chandhri’s GUI disclosures. 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. A POSITA would have found it straightforward to program Reavey’s device to use Chandhri’s GUI arrangements. Houh, ¶84.

4. Claim 1

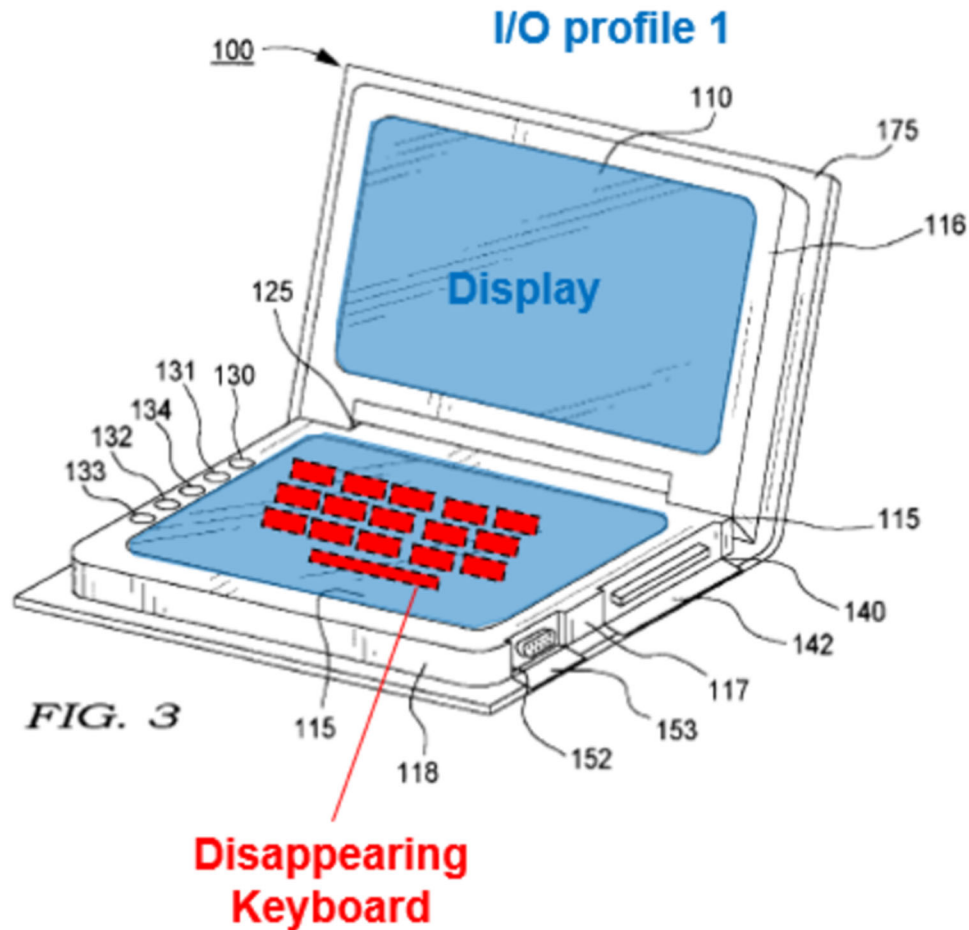
a. 1[pre]

To the extent limiting, Reavey discloses or suggests 1[pre], under MPF (§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 a first panel screen 210 (a “display screen”), a second panel screen 215 (also a “display screen”), navigation keys 230-233, and an 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.” As context, 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. 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 “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.

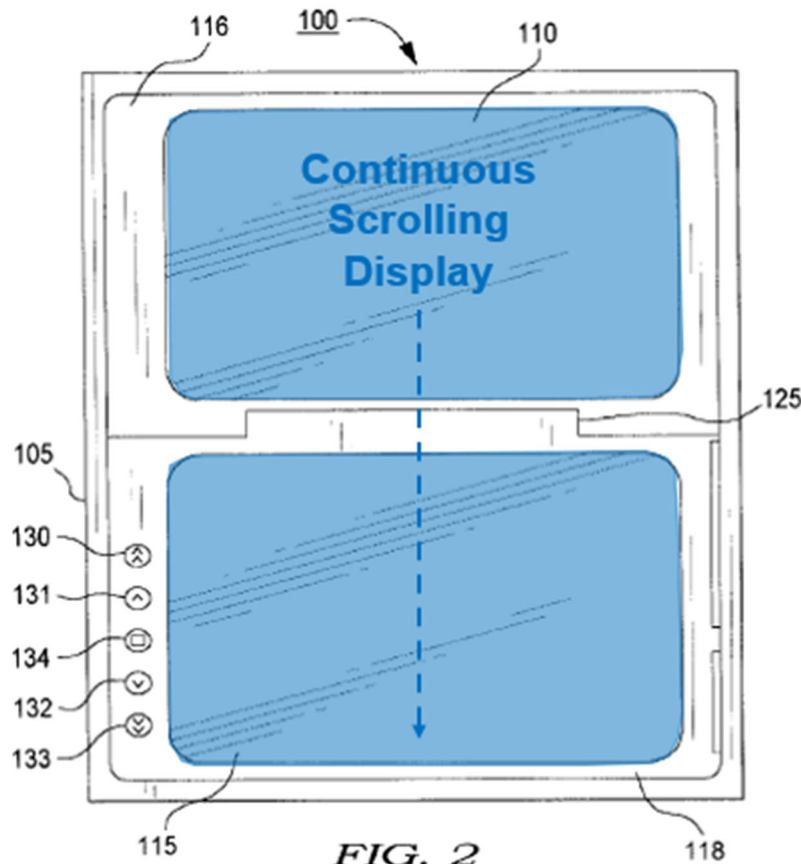
Consistently, Reavey discloses two or more such I/O profiles. Reavey, 3:12-28, 7:24-62. For one selectable I/O profile, Reavey teaches Mode 3 (also called an “over-under with touchscreen keyboard” mode) for its device. *Id.*, 3:21-24, 7:26-44, 7:53-55. Reavey’s Figure 3 (annotated) shows this mode:



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) shows this mode:

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 per §VIII.A.4.d below.

b. 1[a]

Reavey teaches 1[a] because its 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 with Chandhri teaches or suggests 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.

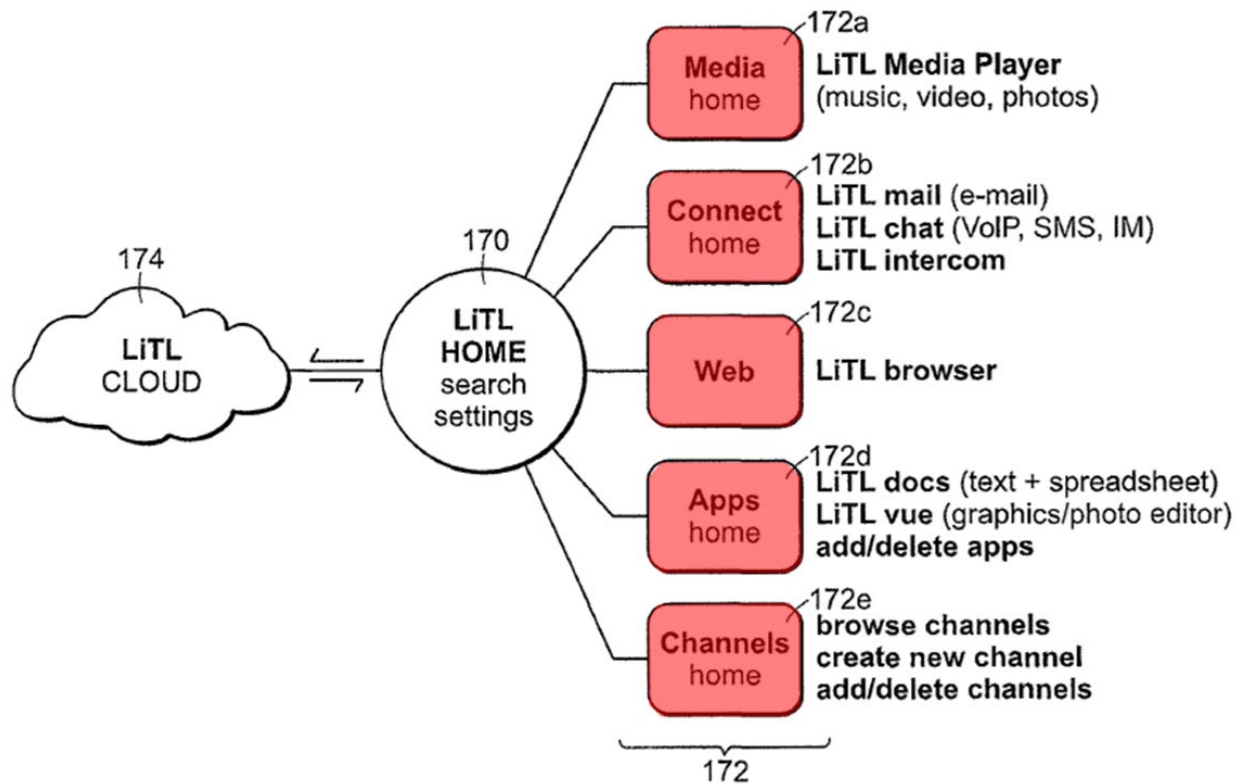
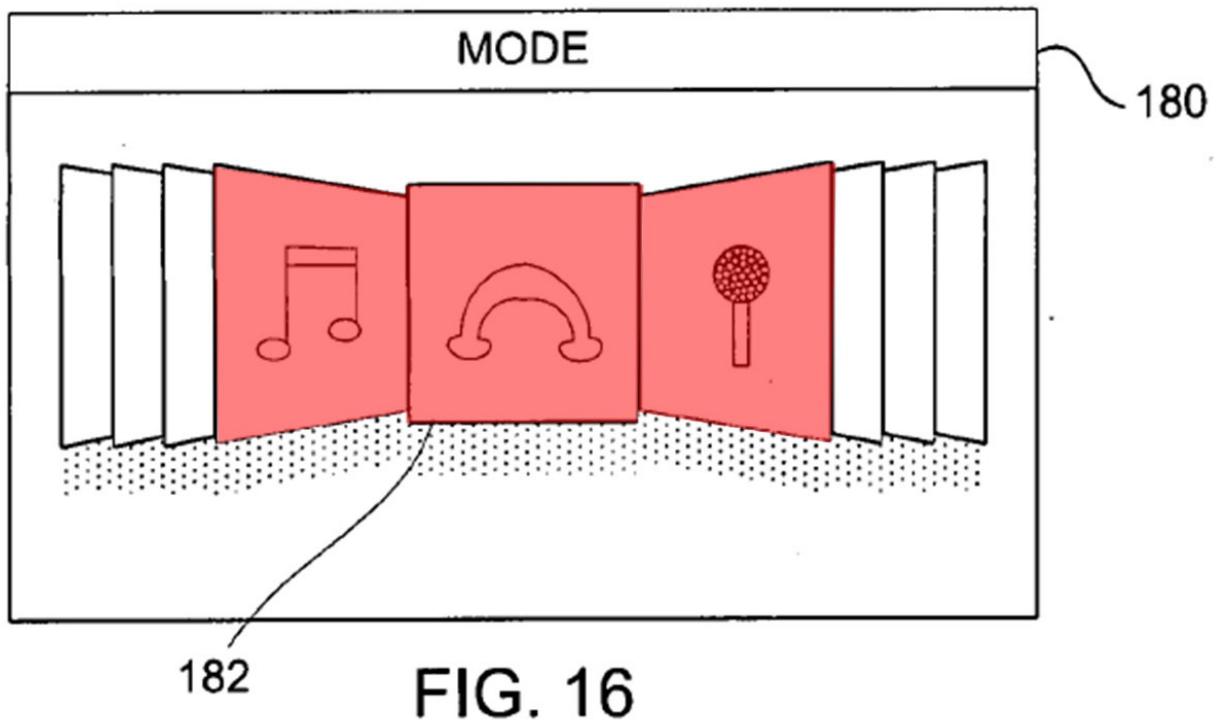


FIG. 11

The '315 patent refers to these groupings of content as “modes,” stating that: “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.*, ¶[0142]. 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 the 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’s 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 the 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 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.

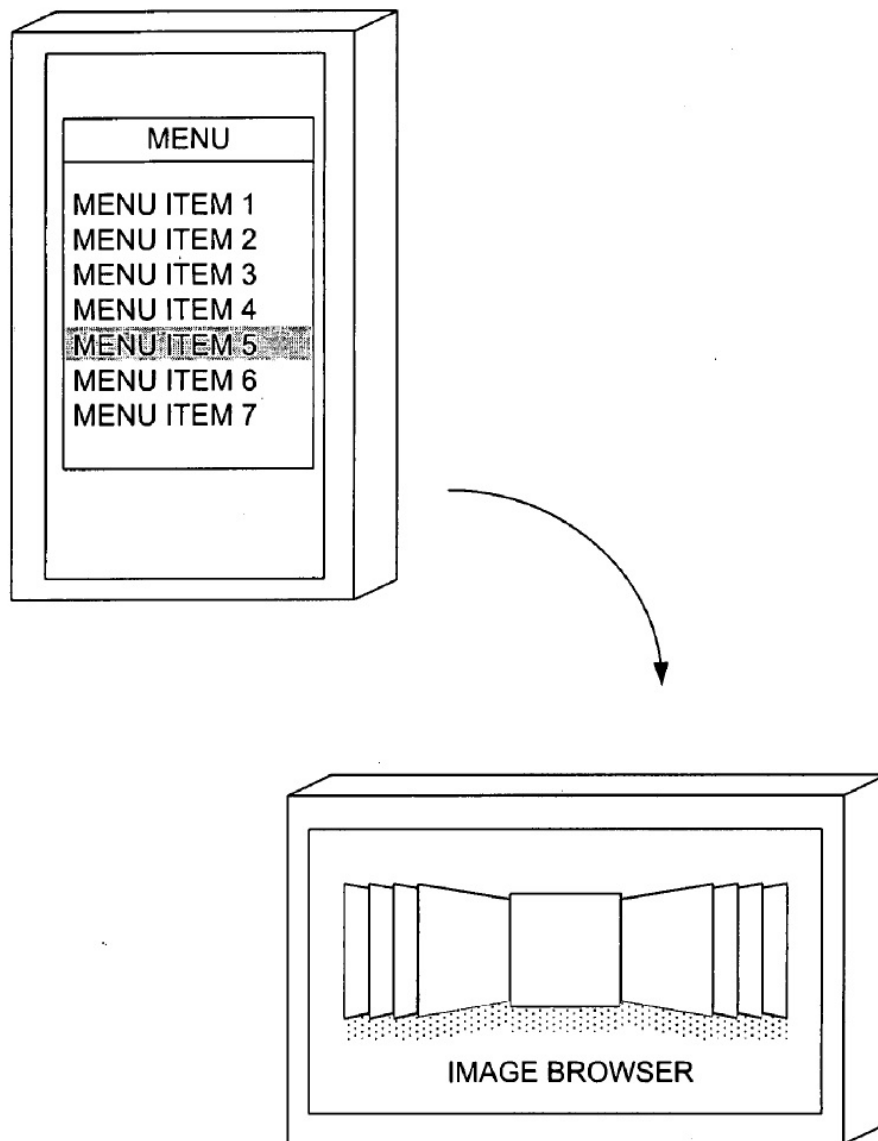


FIG. 34

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. 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. 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, ¶¶0052-54; Houh, ¶¶99.

e. 1[d]

The Reavey-Chandhri combination teaches 1[d]. Houh, ¶¶100-109. The ’315 patent discloses a “home view” that displays a plurality of modes of content (e.g., five modes):

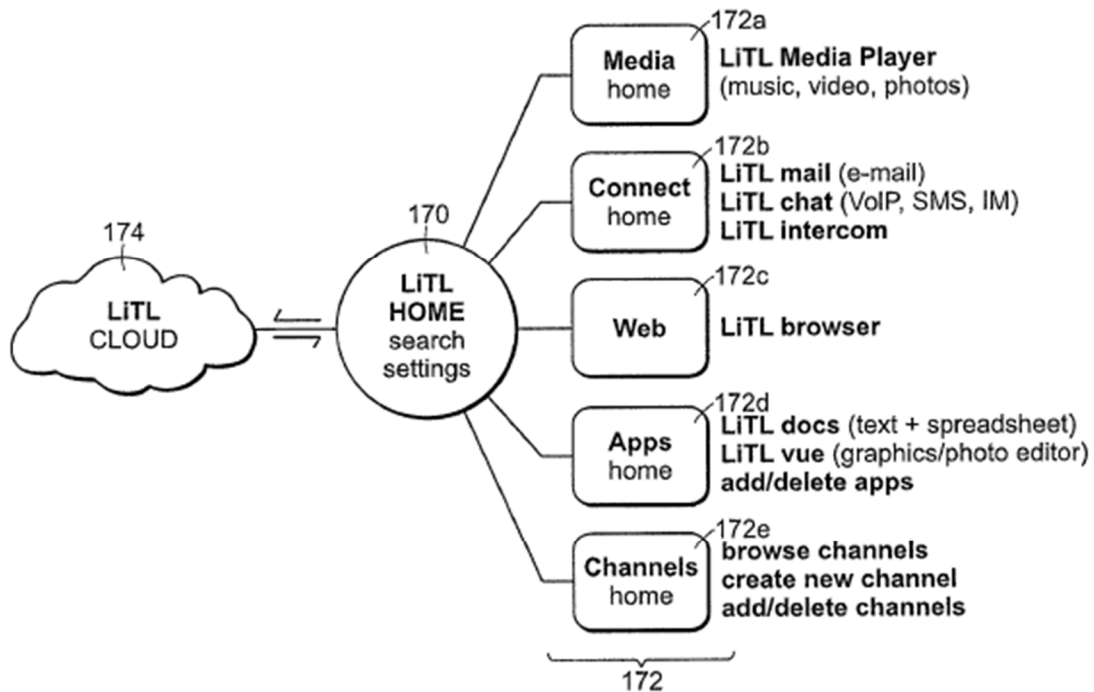


FIG. 11

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 view and in the 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, ¶0224-0229, Figs. 10-11, 13, 16, 34; Houh, ¶103.

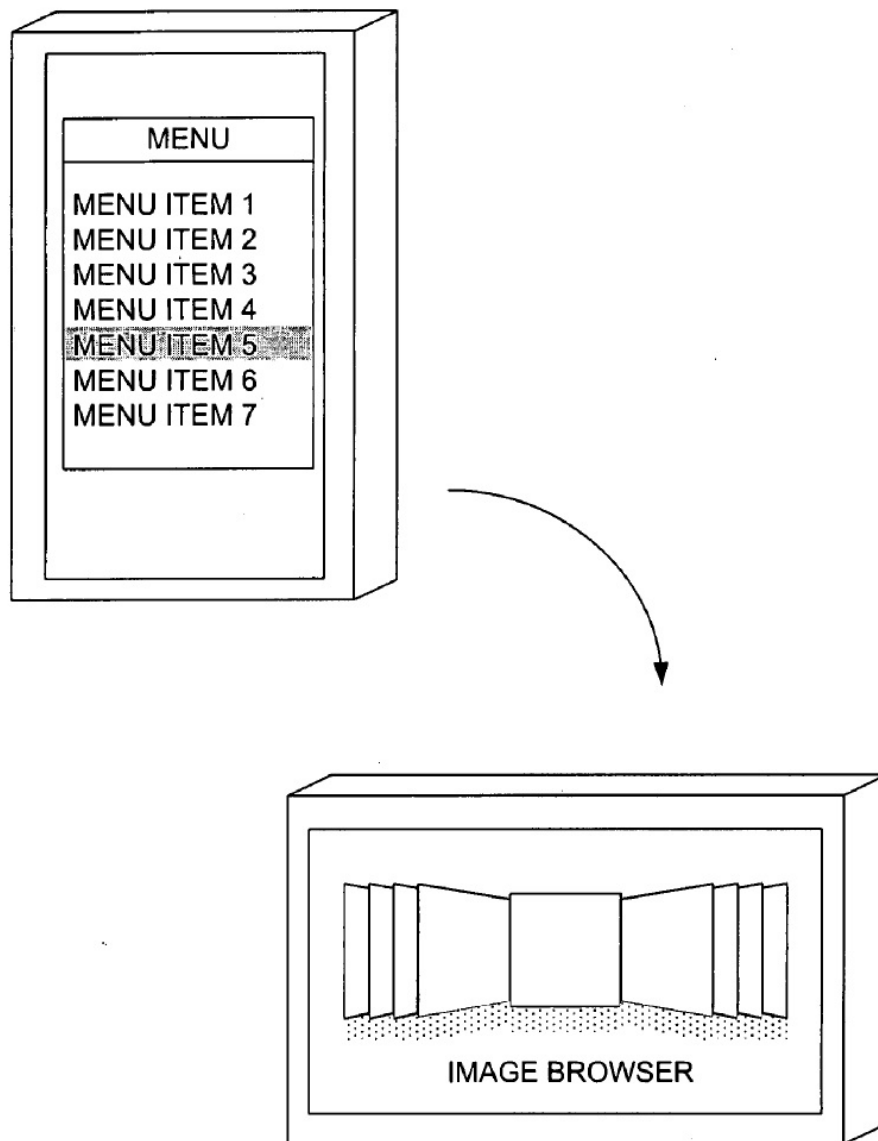


FIG. 34

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 with a first home view of the plurality of views.” Houh, ¶104. A POSITA would have understood that Chandhri’s menu-based view teaches

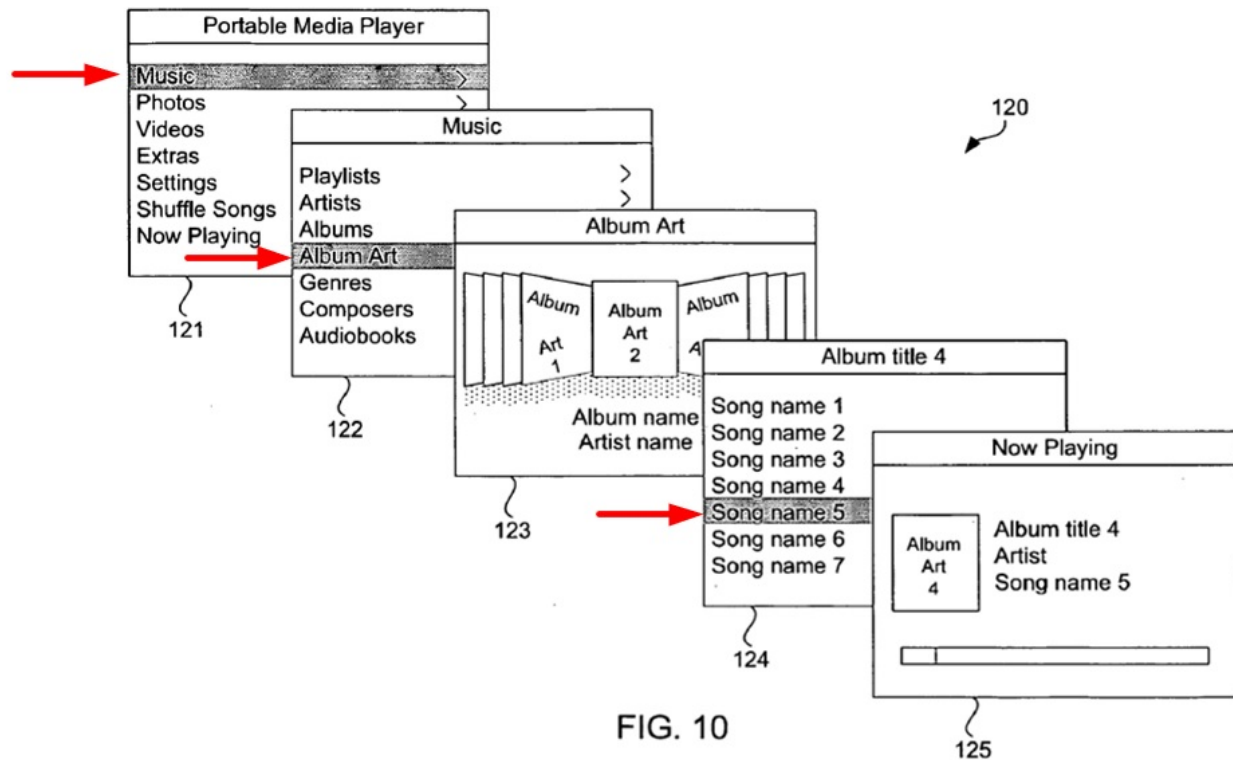
a first home view. *Id.* Namely, in the Reavey-Chandhri combination, the electronic device would default to the menu-based view when used in the laptop configuration (Mode 3). §VIII.A.3. Reavey’s electronic device sets the mode of the device “automatically when electronic book device 100 is opened.” Reavey, 7:45-46. When Reavey’s electronic 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. 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. 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 by, 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, 34 (annotated).



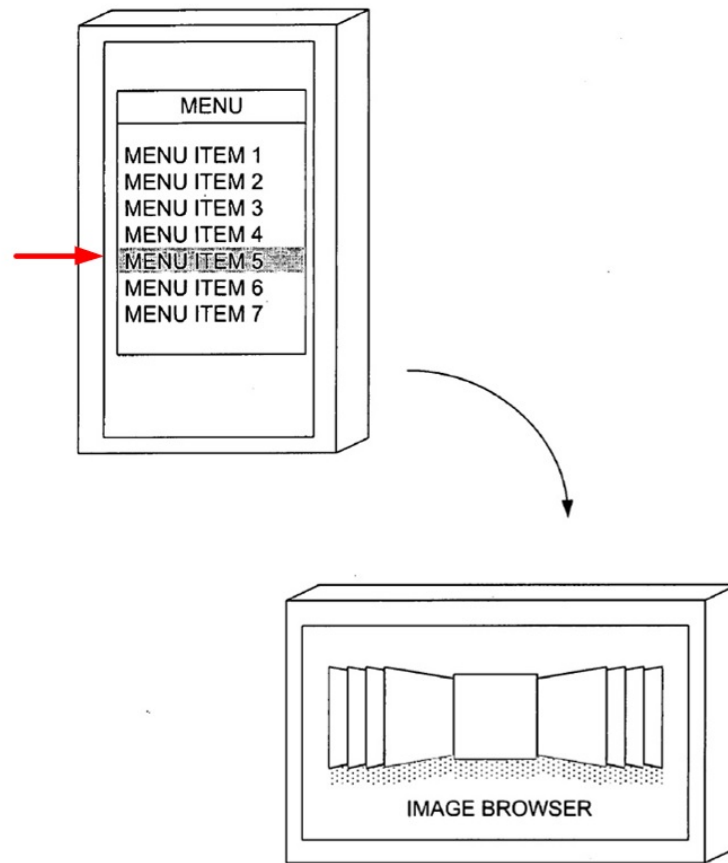
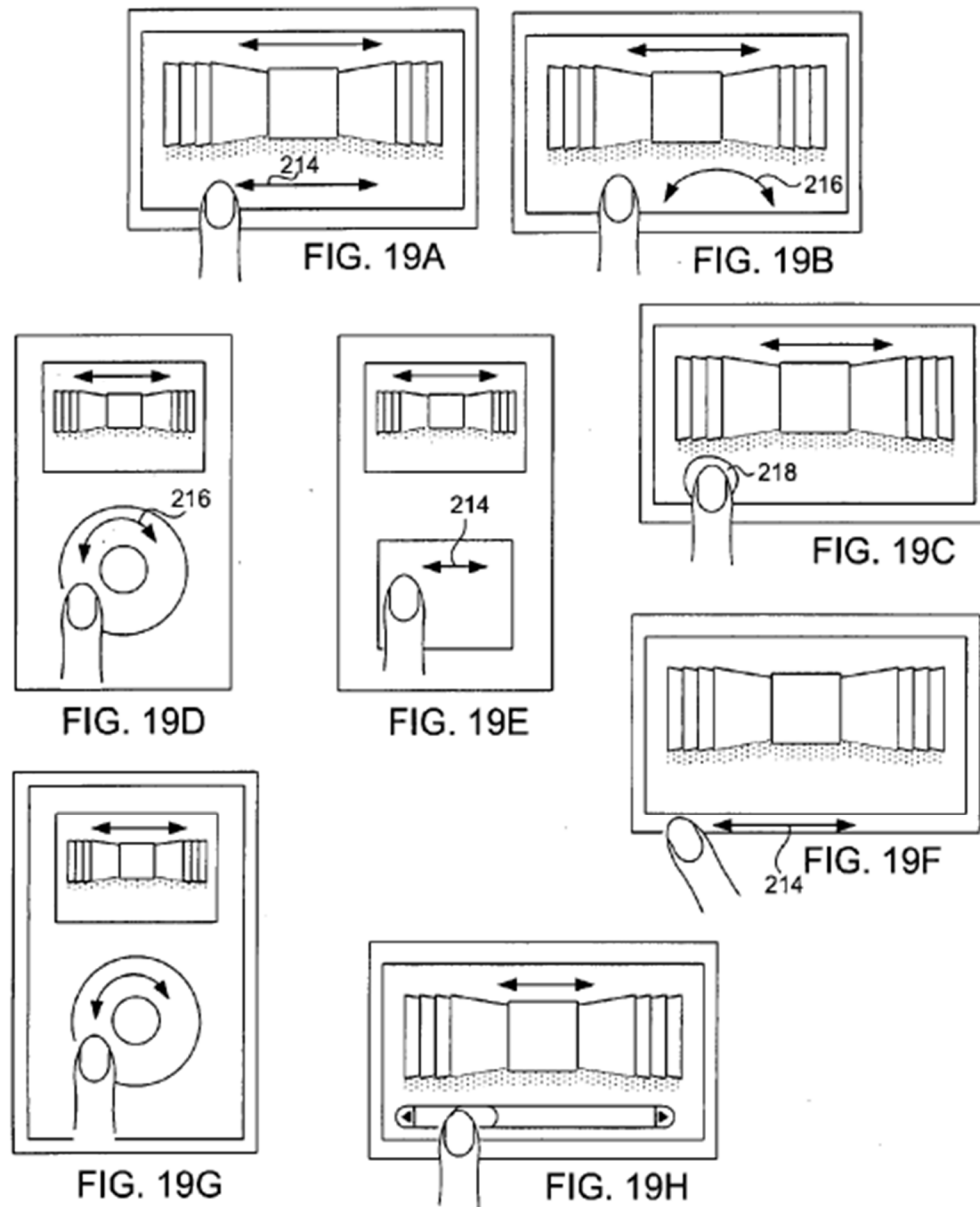


FIG. 34

Chandhri's visual representation in the tile-based scrolling view is 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. Users may "hover" over the device to provide an input.

Id., ¶0088. Users select images from these inputs (“visual representations...responsive to focus and execution”). *Id.*, Figs. 19A-H. .



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, ¶0134-0136, 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.*, ¶0134-0135, 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], under MPF (*see* §VII.B.2) or not as discussed below 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 the hinge 125. Namely, display 110 and its housing 116 are coupled to base housing 118 including display 115 with a 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. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

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

Per 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., in 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 per 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. Chandhri, Fig. 34, ¶0225.

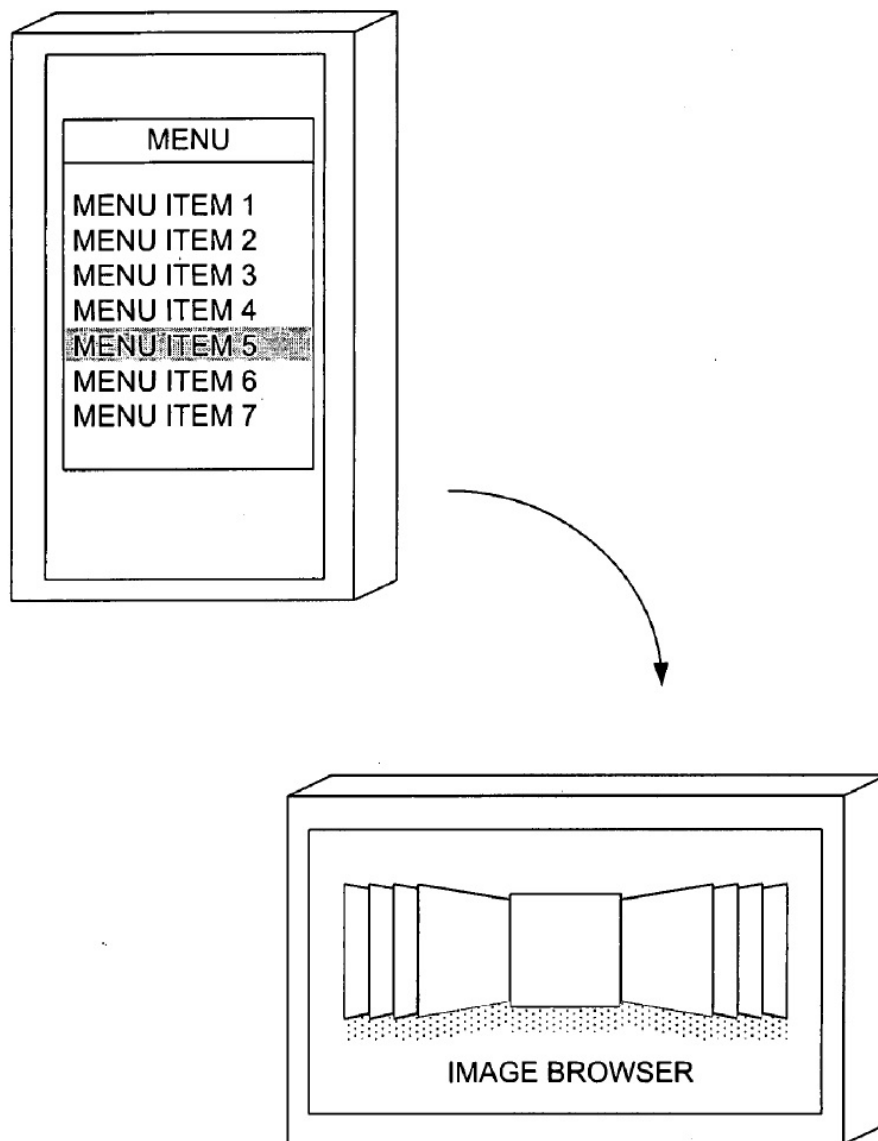
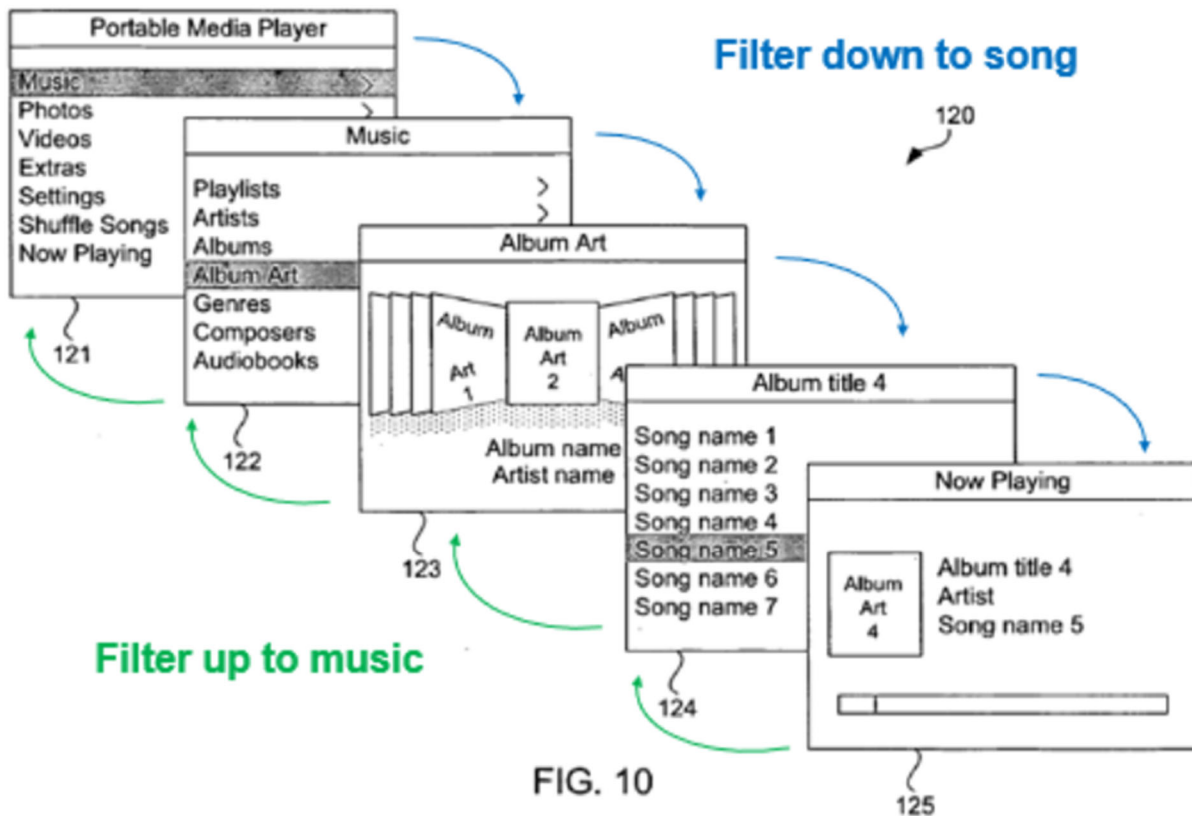
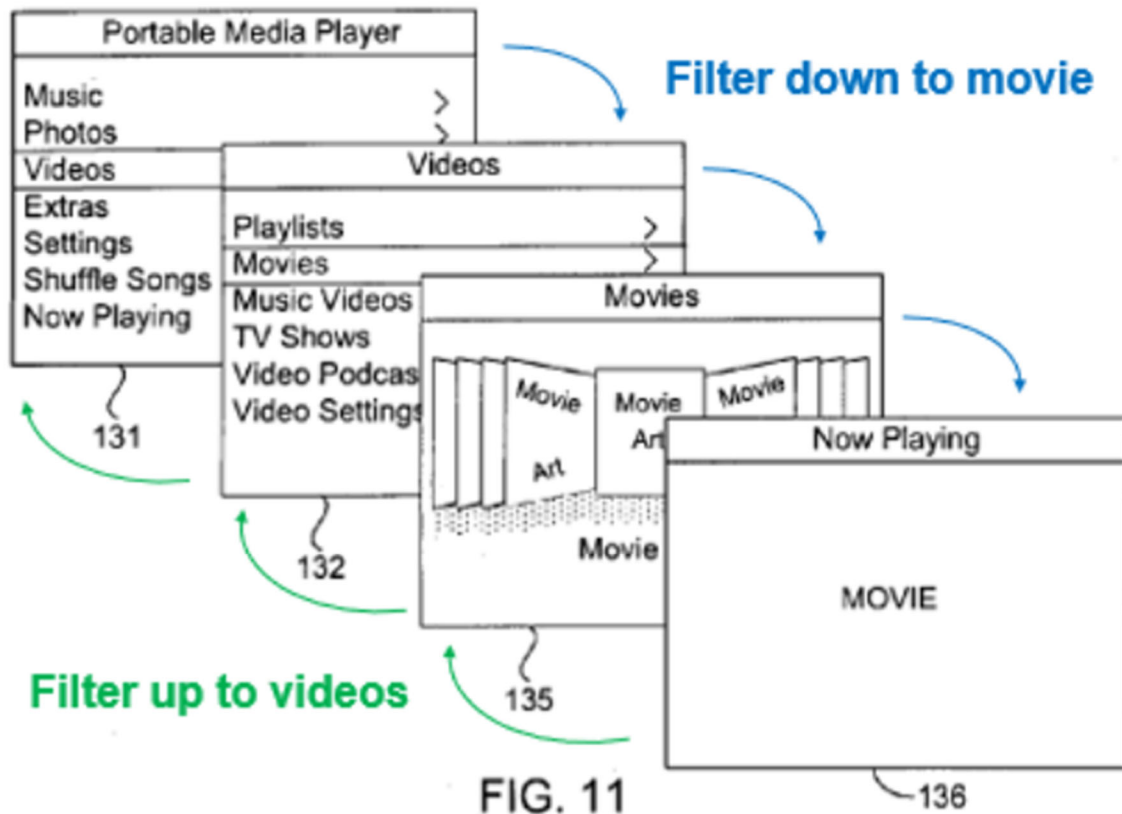


FIG. 34

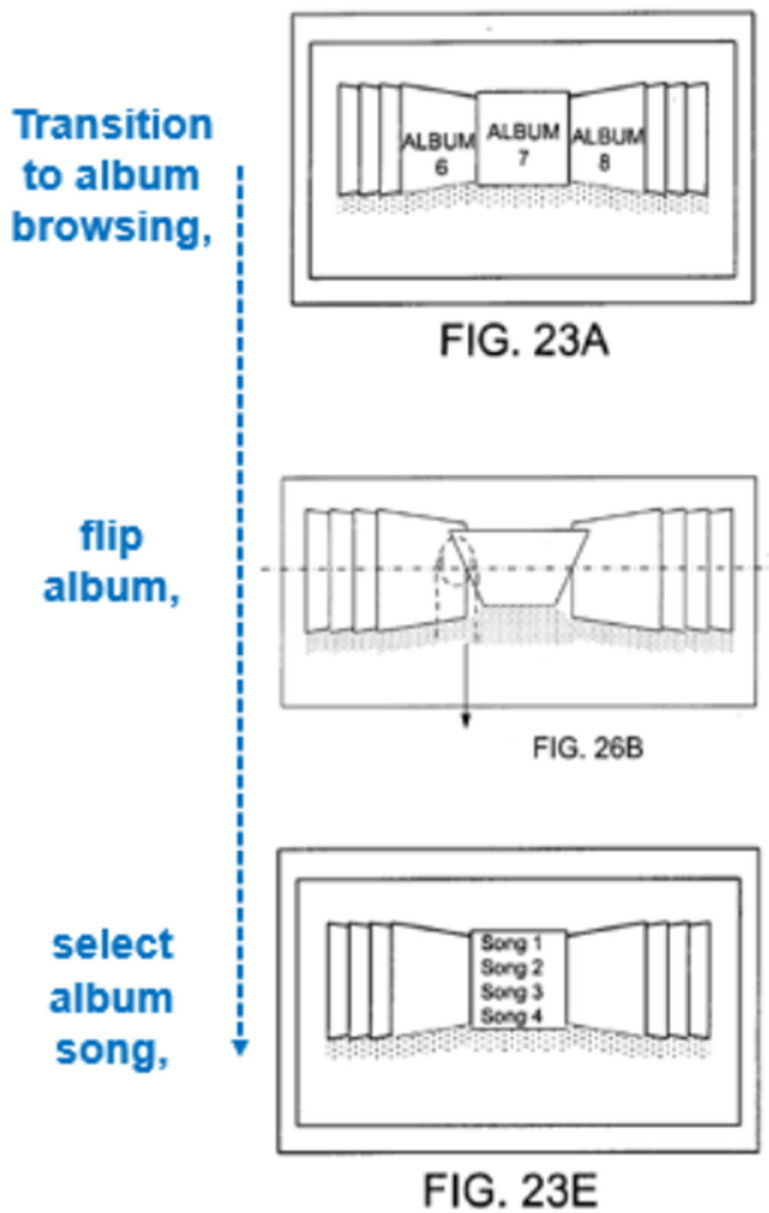
Chandhri makes clear these view changes enable users to navigate up and down a menu hierarchy to narrow or broaden results to a desired content (“filter”), such as by selecting a song to play (*id.*, Fig. 10) or movie to watch (*id.*, Fig. 11).





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. Chandhri, Figs. 23A, 26B, 23E (annotated), ¶¶0182, 0186, 0204-0205.



Chandhri also discloses a vertical display of the image-based browser. Chandhri, Fig. 3, ¶¶0082-0083.

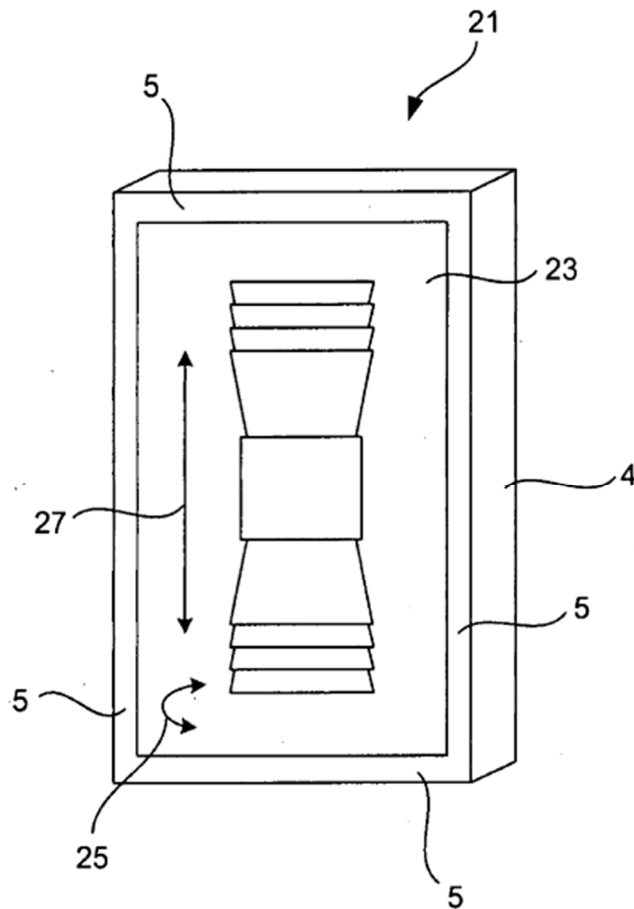


FIG. 3

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”). Chandhri, Fig. 5, ¶0106.

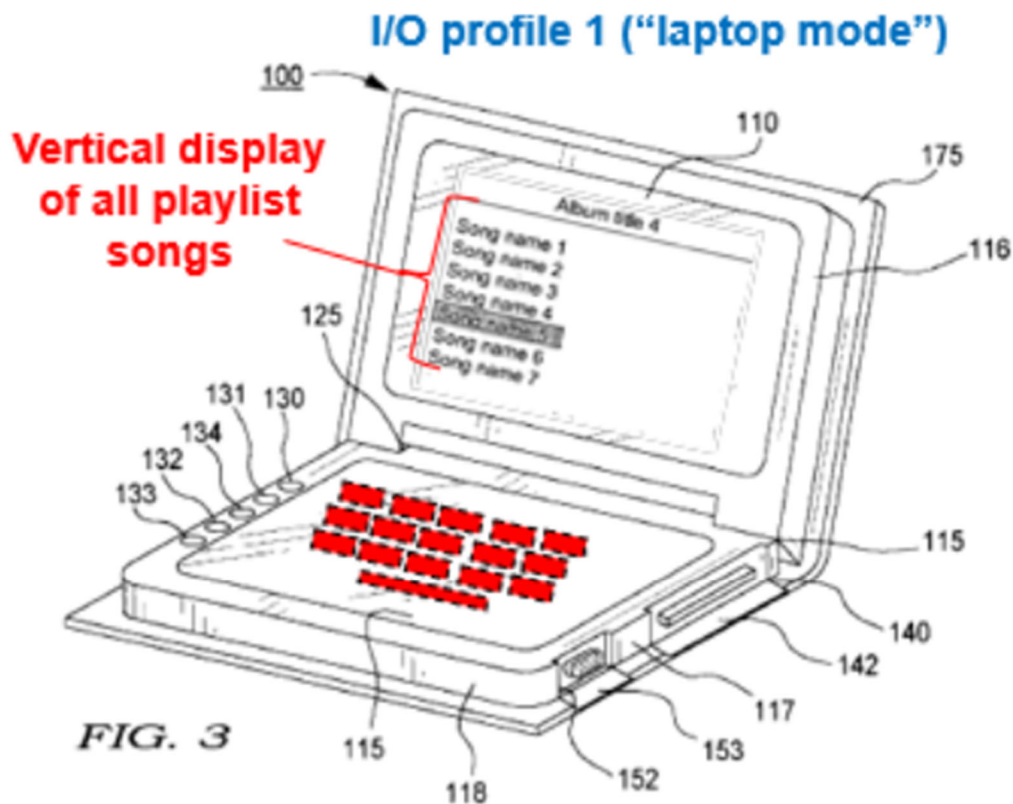
A POSITA would have been motivated to combine the above interfaces to provide a vertically-scrollable menu of images (e.g., an album that may be flipped to any respective list of songs displayed on the back to create an embodiment

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.

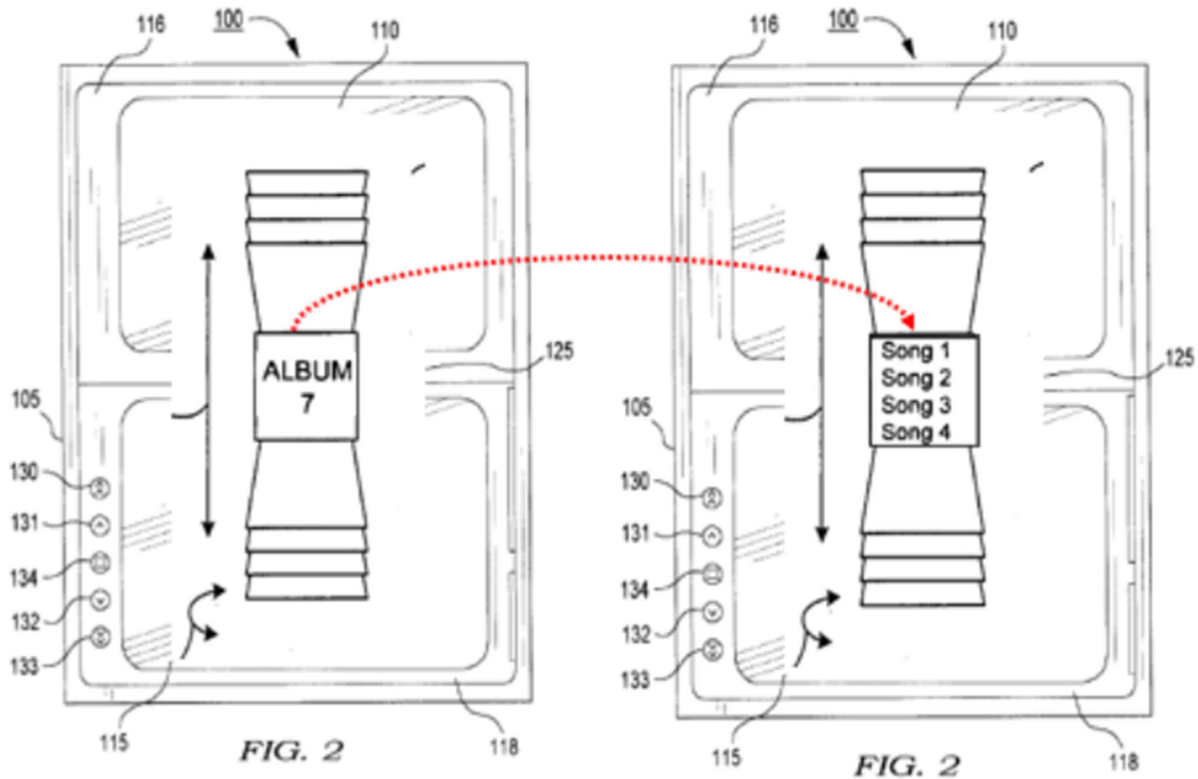
A POSITA would have also understood Chandhri’s user-customizable hierarchy (Chandhri, Figs. 10, 11, ¶¶0134-0137) enables a user to set a preferred view with respect to one of Reavey’s physical computer configurations, which creates increasingly intuitive views of voluminous computer content as a function of available screen real estate (Reavey, Figs. 2, 3, 4:39-42, 7:42-43, 7:61-62) to provides 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 increasingly 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 “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 categorically view a smaller (“filter...[by] removing”) set of items, e.g., 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. Reavey, Fig. 3; Chandhri, Fig. 10 (combined, annotated); Houh, ¶125.



I/O profile 2 (“flat mode”)



Vertical-flipping and side-flipping navigation of album art

Reavey, Fig. 2 (annotated); Chandhri, Figs. 3, 23A, 23E (combined, annotated).

j. 1[i]

The Reavey-Chandhri combination teaches 1[i], under MPF or not. Houh, ¶¶127-30. Per §VIII.A.3, a POSITA would have been motivated to use the GUI disclosure of Chandhri in Reavey’s device.

Per 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 “transitions 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. Per 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. Per 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, per 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 (Reavey, 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. Per 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 23

Claim 23 depends from claim 1 (*see* §VIII.A.4). Reavey teaches claim 23’s additional limitations. 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, user preferences, 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.

6. Claim 24

Claim 24 depends from claim 23 (*see* §VIII.A.5). The Reavey-Chandhri combination teaches claim 24's additional limitations. Houh, ¶142. §§VIII.A.4.e, VIII.A.4.g, VIII.A.4.i explain the Reavey-Chandhri combination teaches claim 1's execution component (1[d]) that transitions from a first home view (1[f]) to a second default content view responsive to a sensor detecting a second computer system configuration (1[h]) (“transitions[s] the display component between the plurality of views”). A POSITA would have understood and found it obvious to transition 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. *Id.*, Fig. 9 (step 520), 6:17-18. Reavey teaches that upon startup, device 100 determines the appropriate operation mode (“current computer system configuration”) and presents the appropriate screen in response (“transition the display component”). Thus, the Reavey-Chandhri combination teaches this limitation, under MPF or not. Houh, ¶132.

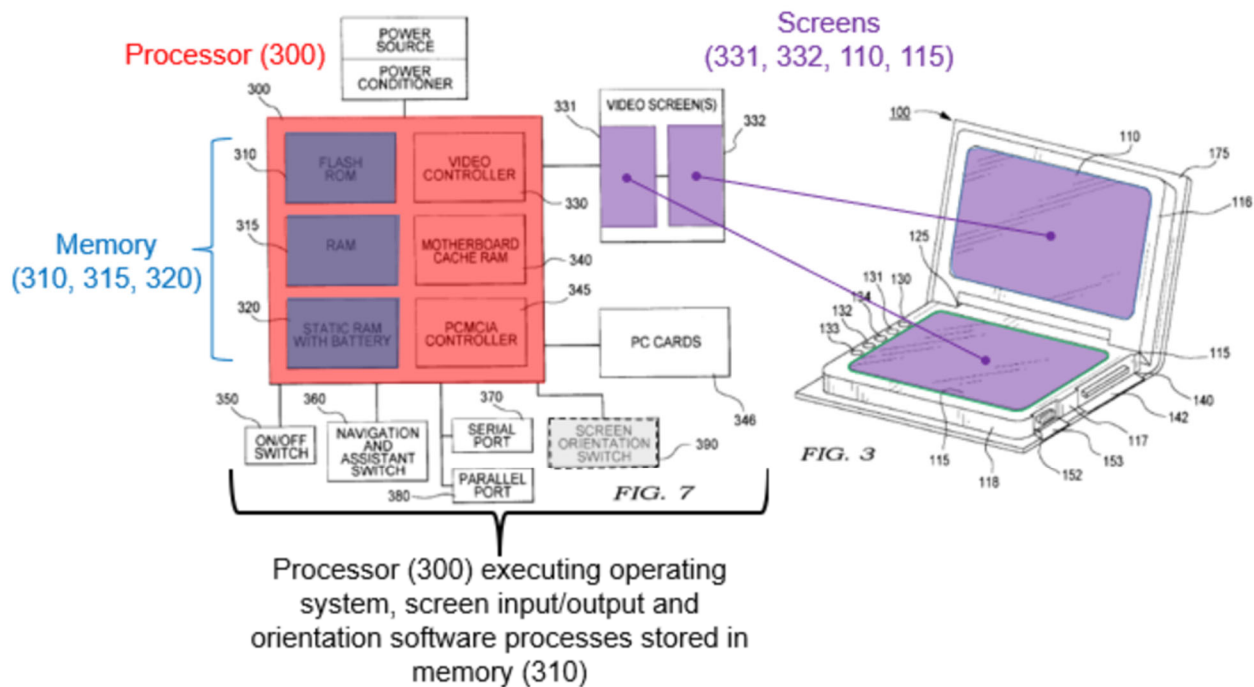
7. Claim 28

a. 28[pre]

Per §VIII.A.4.a, 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 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]

Per §VIII.A.4.b, 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, 6:5:66-7:18, Figs. 3, 7 (combined, annotated); Houh, ¶151.



c. 28[b]

Per §VIII.A.4.d, 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.e for 1[d] , 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).

The '315 patent 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 particular 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.7.b, 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]

Per §VIII.A.4.e, 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 displays 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.7.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.7.b, 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]⁶

See §VIII.A.4.g for 1[f]. Houh, ¶155.

g. 28[f]

See §VIII.A.4.h for 1[g]. Houh, ¶156.

⁶ Petitioner assumes claim 28 meant to recite “a display component,” as otherwise the claim term “display component” would lack antecedent basis.

h. 28[g]

See §VIII.A.4.i for 1[h]. Houh, ¶157.

i. 28[h]

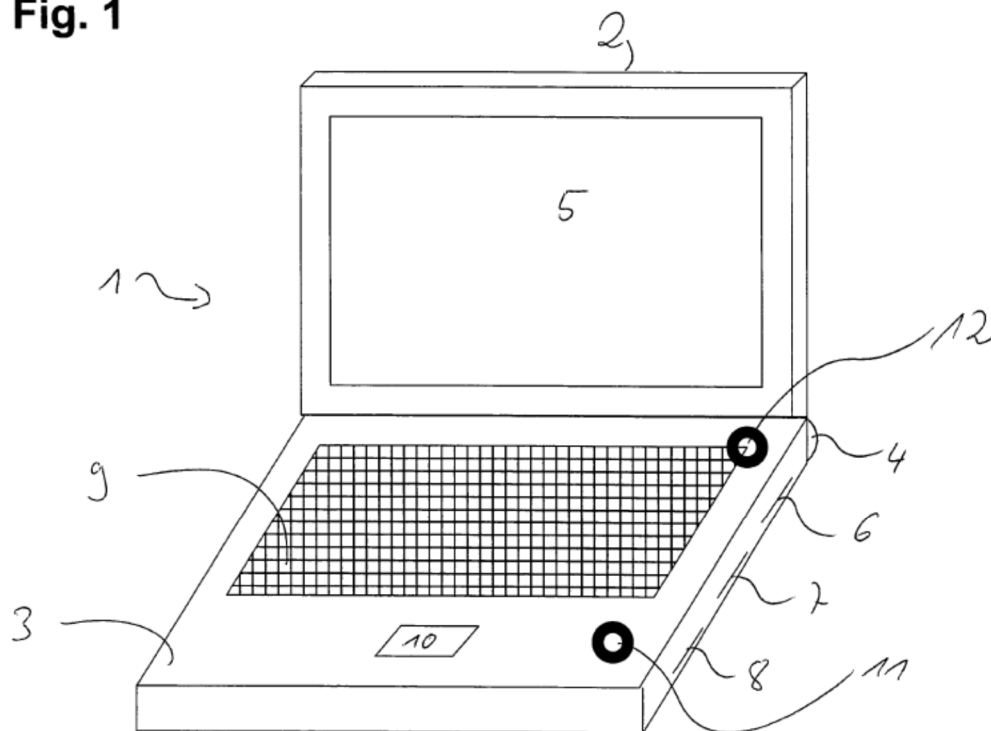
See §VIII.A.4.j for 1[i]. Houh, ¶158.

B. Ground 2: Obviousness over Reavey, Chandhri, and Pröll (Claims 26, 29-33, 36-41, 52)

1. Pröll

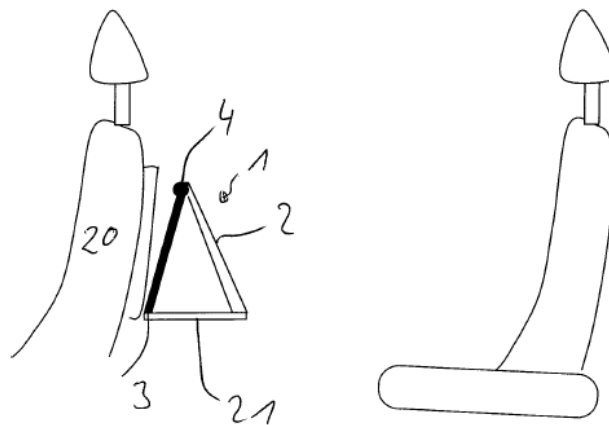
Pröll is directed to a “[m]obile data processing device,” e.g., laptop, with two housing halves (one with a screen and one with an input unit such as a keyboard) connected by a hinge that can rotate 360 degrees. *See* Pröll, Title, Abstract, claims 1, 3, 5, Fig. 1; Houh, ¶¶69-71.

Fig. 1



Housing halves 2, 3 can rotate “in reference to each other by almost 360° degrees” using pivoting device 4. *Id.*, Fig. 1, [0033]. Housing half 2 contains display device 5, and housing half 3 contains keyboard 9. *Id.* Other figures in Pröll show its device in other configurations. *E.g., id.*, Fig. 6 (360°), Fig. 7 (270°), Fig. 8 (360°). Pröll describes using its Figures 6-8 in mobile environments, e.g., a vehicle. *Id.*, [0051]-[0057]. Figure 7 shows device 5 on a seat tray:

FIG. 7



Pröll’s pivoting device 4 includes a switch to detect whether housing half 2 has been pivoted towards housing half 3 by more than 180°; if so, the representation on the display device is rotated by 180° and the input devices, including keyboard 9, are automatically blocked. *Id.*, [0049]-[0050].

2. Motivation to Combine

A POSITA would have been motivated to combine the Reavey-Chandhri device with the teachings of Pröll. Houh, ¶¶166-68. Per §VIII.A.3, a user manipulates Reavey's 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. Further, as noted in §VIII.A.1, Reavey's device can be placed in a side-by-side book view (Mode 1). Reavey, 7:35-39. Based on these teachings, a POSITA would have understood that the Reavey device was designed to be highly configurable to provide many user-convenient form factors. Houh, ¶167. Per §VIII.A.3, a POSITA would have found it obvious to modify the Reavey device based on the GUI teachings of Chandhri.

A POSITA would have been motivated to modify the Reavey-Chandhri device to use the 270° “easel” mode taught by Pröll because a POSITA would have recognized that Pröll's additional physical configuration would have been compatible and desirable with Reavey's existing physical configurations. Houh, ¶167. Reavey and Pröll both teach their devices include a top display portion connected to a base portion that rotate with respect to one another about a lateral hinge. Reavey, Figs. 2-4, 5:32-39; Pröll, Fig. 1, [0033]. Both devices are closed at 0° of rotation when the top and base face one another. Reavey, 6:56-57; Pröll, [0039] (“swiveled about the hinge...by 360...in reference to the starting position”). Both

open to a first laptop-like physical configuration when the top and base are rotated approximately between 90° and 180° with respect to one another. Reavey, Fig. 2, 3:21-24, 7:53-62; Pröll, Fig. 2, [0036]. Both open to a second flat physical configuration when the top and base are rotated approximately 180° with respect to one another. Reavey, Fig. 5, 3:18-20; Pröll, Fig. 3, [0038]. Reavey does not expressly disclose other configurations with rotations of the top and base with respect to one another greater than 180° , but Pröll teaches that another desirable physical configuration could be reached by continuing to rotate the top and base to approximately 270° with respect to one another. Pröll, Fig. 7, [0052]. A POSITA would have recognized the addition of this fourth physical configuration, Mode 4 in effect, to further Reavey's goal of providing a highly configurable device that provides many user-convenient form factors. Houh, ¶167.

Further, a POSITA would have been motivated to add the easel mode to the Reavey-Chandhri device because Pröll teaches that it was useful in certain situations that Reavey does not account for. Houh, ¶167. Pröll teaches that the easel mode is useful in certain travel situations, such as when the device is used on a tray table attached to the back of a seat in front of the user. Pröll, [0054]. Pröll also teaches that the easel mode is advantageous in these situations because it “minimizes the required storage space,” i.e., minimizes the space needed for the device to be firmly placed on a depth-limited working surface (the tray table here) not deep enough or

with the mechanical retention (“grip”) to accommodate the entire base of a slippery, smooth-bottom laptop configuration. Pröll, Fig. 7, [0052]; Houh, ¶167. Further, Pröll taught that, in this situation, the easel mode “ensures that a user has a good view of the display device[.]” *Id.* Because Pröll itself already taught a laptop mode and a flat mode, a POSITA would have understood that the easel mode was more effective than both of those configurations when used in this confined-space travel scenario allowing a user to minimize the footprint of the device. Houh, ¶167. Thus for Reavey’s device, a POSITA would have recognized that the addition of an easel mode would have allowed the device to be convenient for a user in scenarios where Reavey’s existing physical configurations would have been insufficient. Houh, ¶167. And because use of portable devices like that of Reavey were very common in travel scenarios (e.g., in cars and airplanes), a POSITA would have been motivated to provide a physical configuration (easel mode) that was more convenient to the user in those scenarios. Houh, ¶167.

A POSITA would have had a reasonable expectation of success combining the Reavey-Chandhri device and its existing modes with Pröll’s additional easel mode, at least because (1) Reavey already teaches that its devices can be configured to operate in three positions rotated about the horizontal axis, making a fourth position a straightforward addition; (2) Reavey already teaches automatically changing the display orientation of the GUI 90° in response to a change in the

physical configuration of the device, making a change to the orientation of the GUI an additional 90° a straightforward modification; and (3) Reavey and Chandhri both taught highly configurable devices and GUIs that could be changed with changes to the physical positioning of the device, making an additional such change (for easel mode) a straightforward modification.. Pröll, Fig. 7, [0049]; Reavey, 6:43-46, 7:24-31, 7:53-62; Houh, ¶168.

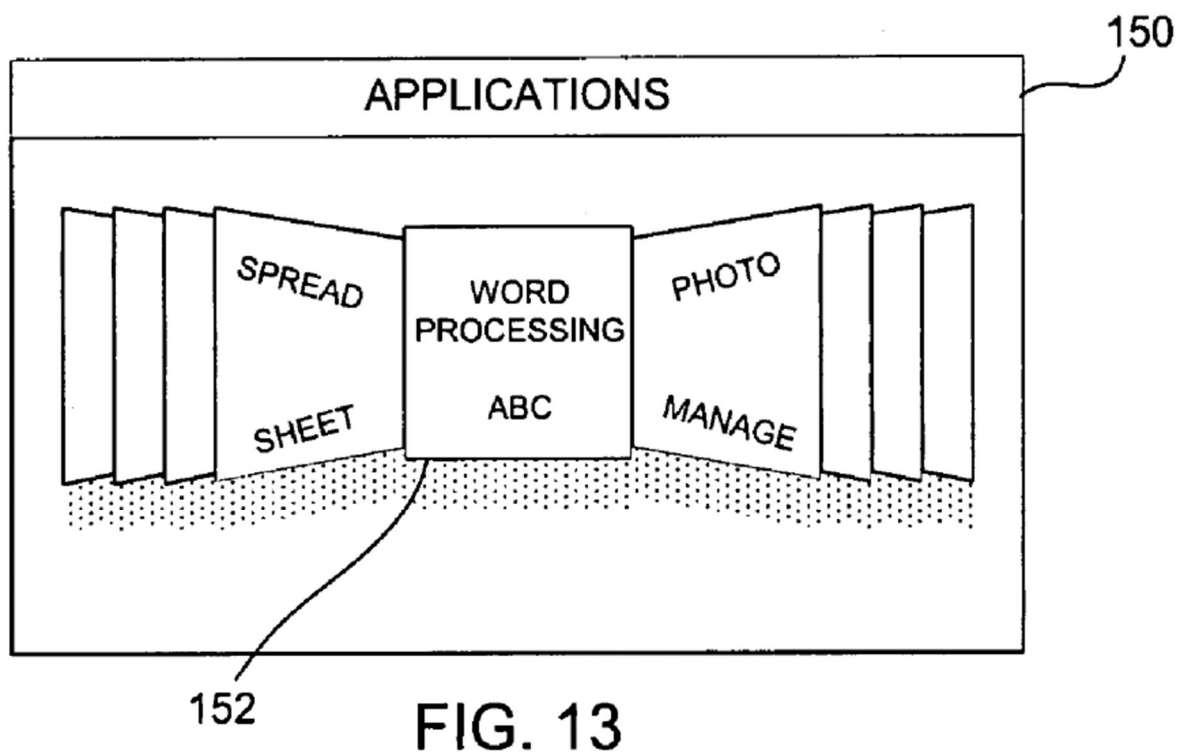
3. Claim 26⁷

Claim 26 depends from claim 24 (*see* §VIII.A.6). Per §§VIII.A.4.f, VIII.A.4.h, VIII.A.4.g, VIII.A.4.j, the Reavey-Chandhri combination teaches an execution component that identifies a first home view and selects it responsive to a first system configuration (laptop), then transitions to a second view responsive to a detected second computer system configuration (flat). Reavey, 7:24-62, Figs. 2-3; Houh, ¶¶169-70.

Chandhri’s image-based browser window in Figure 13 teaches a “channel view configured to organize...a single content mode” because it displays a linear

⁷ Claim 26 recites “the first view and a home view.” Because “the first view” appears to refer to “a first home view” in claim 1, Petitioners understand this limitation should read “the first home view.” Petitioners reserve the right to challenge claim 26 per *supra* note 5.

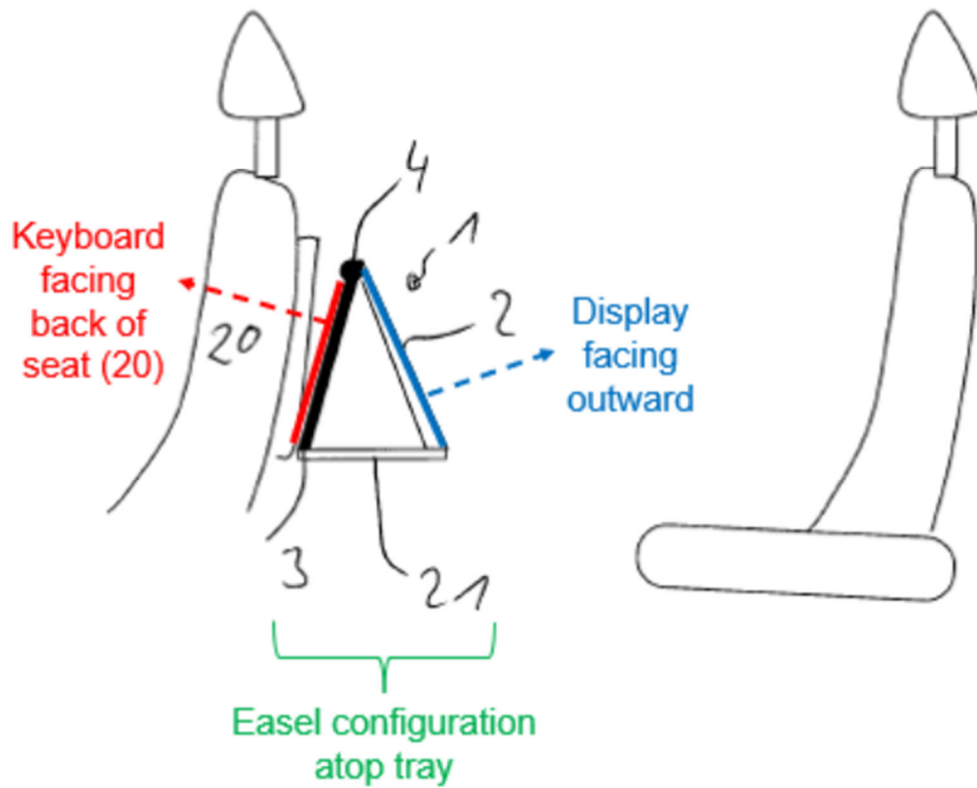
sequence of visual representations of one content type selected from a broader, categorical menu of content. *Compare* EX-1001, Figs. 12, 14, 21:12-29 (access channel content by selecting “channel” 172e in Fig. 12), 22:10-26 (Fig. 12 shows selectable channel mode of content), 35:32-44 (Fig. 14 displays left-to-right row of channel cards following user selection), *with* Chandhri, Fig. 13 , [0139] (depicting icons application programs arranged from left to right).



Reavey does not expressly transition to an easel configuration of the computer system, but Pröll does. Pröll’s Figure 7 (annotated) depicts a device with two

“housing halves” 2 and 3 that are folded in relation to each at approximately 270° (“easel configuration”). Pröll, [0052].

FIG. 7



Per §VIII.B.2, a POSITA would have found it obvious to modify the Reavey-Chandhri device to include the easel mode based on the teachings of Pröll, which would be further improved by implementing Chandhri’s user-friendly, image-based browser to browse content while in the easel mode. A POSITA would have been motivated to use Chandhri’s image-based browser to browse content while in the easel mode, at least because in both Pröll’s device and the Reavey-Chandhri-Pröll

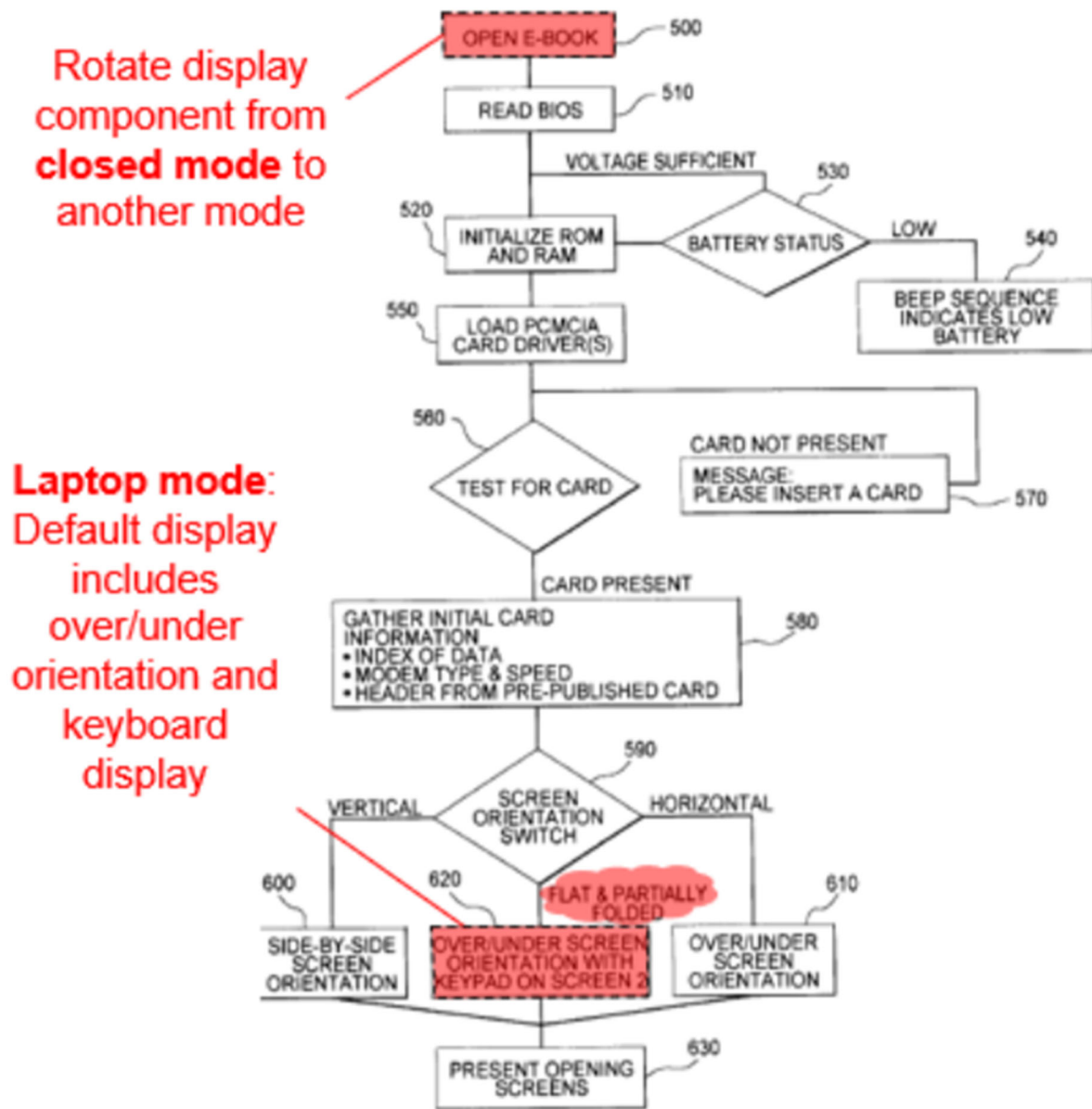
device, the keyboard is not available to the user while in easel mode, making Chandhri's scrolling image-based browser ideally suited for that physical configuration. Thus, the Reavey-Chandhri-Pröll combination teaches this limitation, under MPF or not. Houh, ¶¶169-170.

4. Claim 29

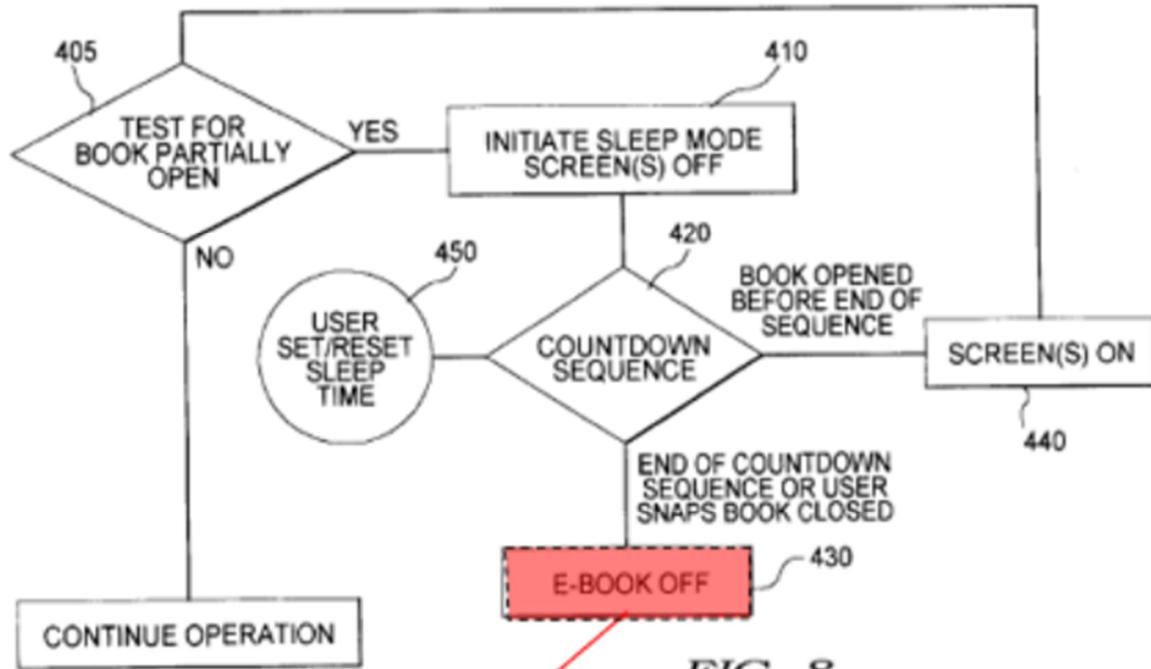
a. 29[a]

Claim 29 depends from claim 29 (*see* §VIII.A.7). Per §VIII.A.4.g, VIII.B.3, Reavey teaches a plurality of display modes corresponding to physical configurations (e.g., laptop, flat). Houh, ¶¶171-75. These display modes correspond to different positions of a display and base relative to one another as a user rotates them about a longitudinal axis. Reavey, 7:45-62 (“the modes are set automatically when electronic book device 100 is opened”).

Reavey also teaches a closed mode. *Id.*, 6:56-57 (“electronic book device 100 is snapped closed”). In operation, Reavey's device is opened (from a “closed mode”) to another mode (e.g., laptop mode). Fig. 9 (annotated).



A user may return Reavey's device to a closed mode. Fig. 8 (annotated).



Closed mode

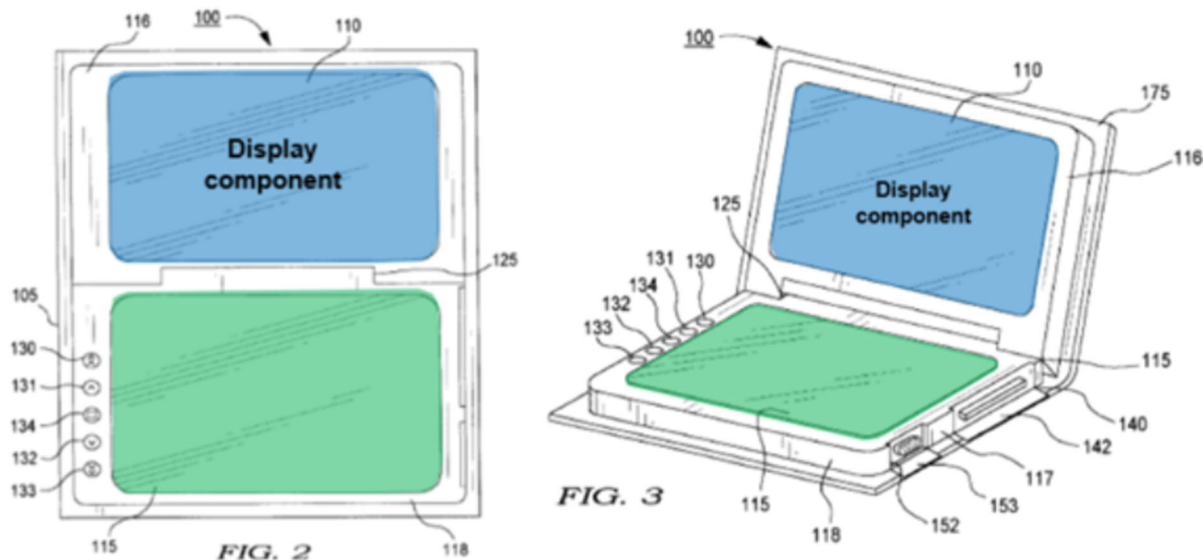
Per §VIII.B.4.a, the Reavey-Chandhri-Pröll combination teaches an “easel mode.”

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 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, ¶175.

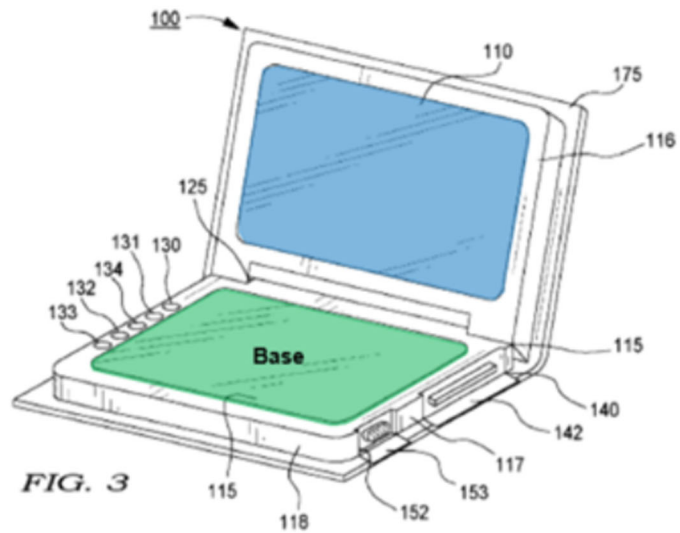
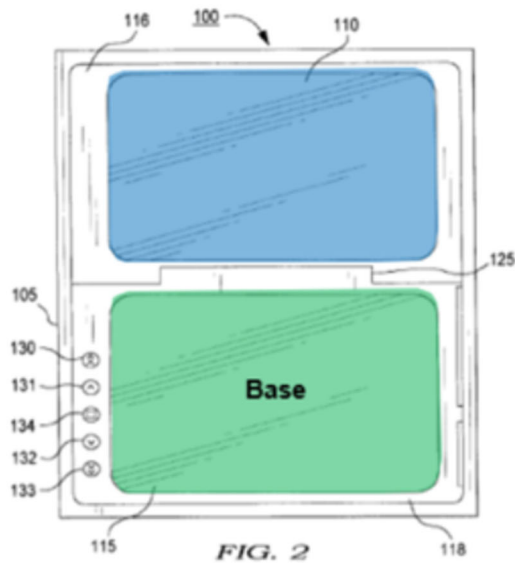
b. 29[b]

Reavey's computing device includes a “dual screen display” with a first and second panel screen 110, 115 contained in housings 116 and 118 mechanically and electrically connected via hinge 125. Reavey, 5:32-45, Figs. 2-3 (combined, annotated). Houh, ¶176.



c. 29[c]

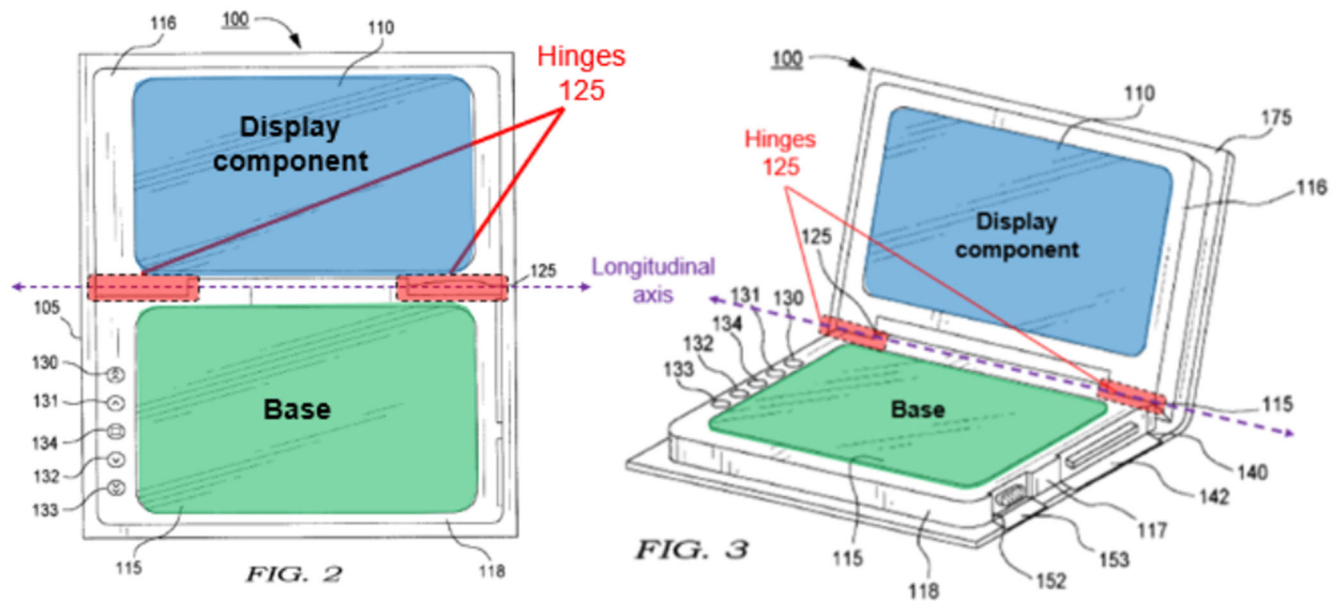
When the device is in Mode 3 (laptop configuration), bottom housing 118 (“base”) is used for user input via a keyboard. Reavey, 3:21-27, 7:53-62, Figs. 2-3 (combined, annotated).



A POSITA would have understood the bottom panel or screen as annotated above is a “base” upon which the laptop rests because Reavey discloses the device is “weighted such that it is balanced on a hard surface...to permit typing on the keyboard.” Reavey, 7:59-62; Houh, ¶177.

d. 29[d]

Reavey teaches its dual screen display device electrically and mechanically connect two display screens contained within housings 116 and 118 rotated via a hinge 125 placed at the joining axis between the bottom (“base”) and top (“display component”) screens, allowing the device to be used in different operational modes according to different physical configurations. Reavey, 5:32-35, 7:24-31, Figs. 2-3 (annotated and combined versions reproduced below); Houh, ¶178. Reavey’s hinge 125 is partially housed within the base, as can be seen from the portions of the hinges that extend into the base component. Houh, ¶178.



e. 29[e]

See §VIII.B.4.d for 29[d]. Houh, ¶179.

f. 29[f]

Per §VIII.B.4.a, Reavey teaches a “closed mode.” A POSITA would have understood Reavey teaches the computing device upper display screen is disposed substantially against the base in a closed mode because this is a conventional position in both the laptop and paper book arts for a closed device or book. Reavey, Fig. 8 (430), 6:37-7:9 (“Off occurs when electronic book device 100 is snapped close.”); Houh, ¶180.

g. 29[g]

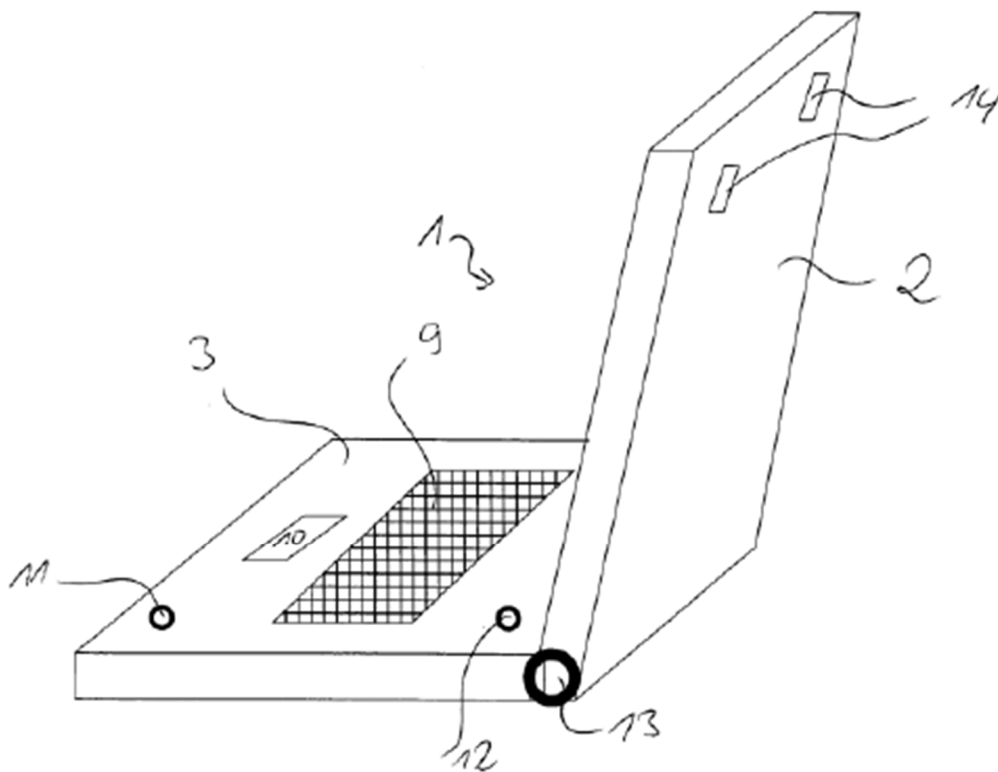
Per §VIII.B.4.a, the Reavey-Chandhri device includes a closed mode that opens into a laptop mode. Per §§VIII.B.4.b-VIII.B.4.e, the Reavey-Chandhri device

rotates about a longitudinal axis using a hinge to do so. Houh, ¶181. Reavey further discloses that a screen orientation switch detects whether the device is “flat & partially folded,” which causes the device to assume a “laptop configuration” described as an “over/under screen orientation with keypad on screen 2.” Reavey, Fig. 9, 3:21-24, 7:45-53, 8:61-65. The spring detent mechanism in the hinge of the device detects a degree of opening, such as “approximately at 120° open” when the device is in a laptop mode to “activate a touchscreen keypad on the bottom screen.” *Id.*, 7:53-58.

A POSITA would have understood Reavey’s disclosure of a “Mode 3” laptop mode that is “set on a flat surface and is partially opened” to an example angle of “approximately 120°” teaches a device configured into laptop mode when opened to an angle of “up to approximately 180 degrees” because “approximately” is a term of degree that refers to a range of rotation degrees spanning between 0° (the initial closed position) and “approximately 180” (open position), of which 120° and anything “partially opened” (but not flat) falls within. *Id.*, Fig. 9 (590), 7:53-58; Houh, ¶¶181-182. *See also* MPEP § 2144.05 (“obviousness of similar and overlapping ranges”).

Should PO argue that Reavey’s disclosure is insufficient, Pröll discloses or suggests this claim limitation. Pröll’s mobile data processing device is “folded open to 90° degrees, wherein the first housing half 2 and the second housing half 3 of the

mobile data processing device 1 assume an angle of approx. 90° in reference to each other.” Pröll, [0036]. Pröll’s device is configured into what a POSITA would have recognized as the well-known form of a laptop computer in this orientation shown in Pröll’s Figure 2 (below). Pröll, [0036]; Houh, ¶183.



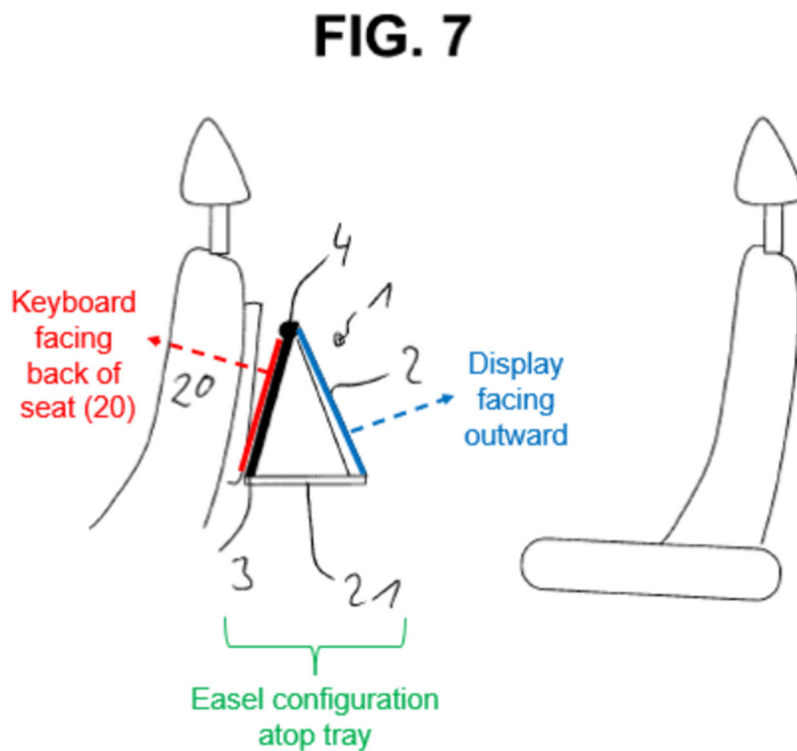
A POSITA would have recognized Pröll’s laptop configuration teaches “**up to 180 degrees.**” Pröll’s device operates in easel mode when “use[d] as a portable computer with an angle between the first and second housing halves 2, 3 [is] of **more than 180° degrees**” and “in this case the display on the display device must be rotated by 180° degrees since otherwise the display would be upside down.” Pröll,

Fig. 7, [0049] (emphasis added). Thus, a POSITA would have understood that Pröll's device operates in a laptop mode when it is rotated from a closed position to one "up to approximately 180 degrees" because at more than 180 degrees, Pröll's device changes to a different display (e.g., for easel mode). Houh, ¶¶184-185.

h. 29[h]

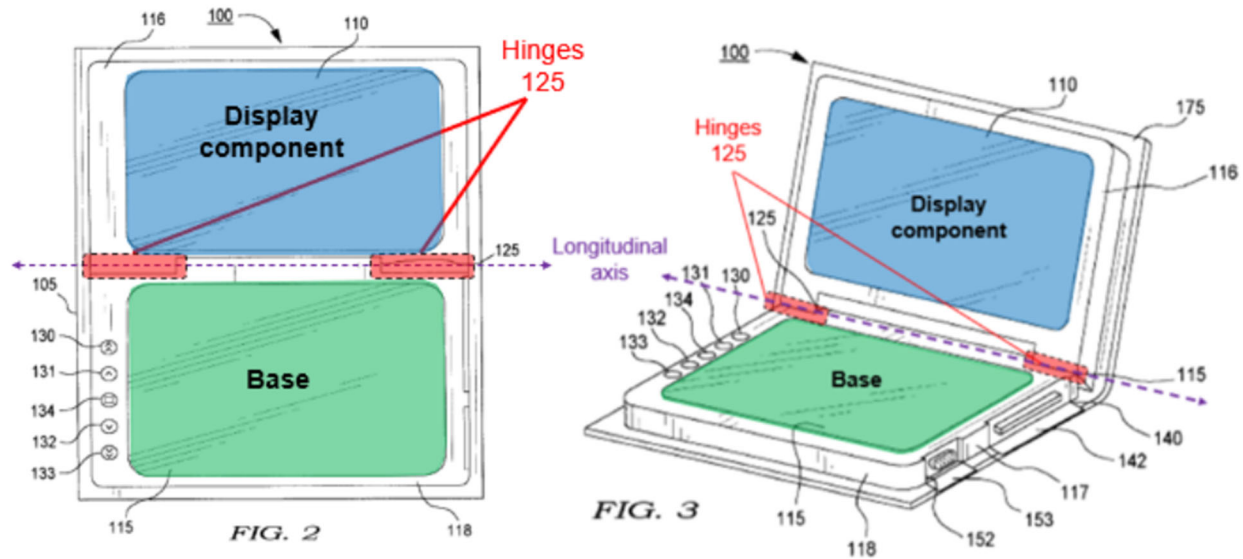
Per §VIII.B.4.a, Reavey teaches laptop and closed modes, and that it would have been obvious to implement Pröll's easel mode in the Reavey-Chandhri device.

Per §VIII.B.4.g, Pröll's Figure 7 (annotated) shows easel mode; Houh, ¶186



5. Claim 30⁸

Per §VIII.B.4.e, Pröll's computing device includes a hinge enabling rotation (“longitudinal axis”) between (“interface”) a first and second half (“base” and “display”):



Pröll, Figs. 2-3 (combined, annotated). Per §VIII.B.4.d, these figures show Reavey teaches a dual screen display device that electrically and mechanically connects two display screens placed within housings 116 and 118 that are further rotated via a hinge 125 placed at the joining, interfacing axis between the bottom (“base”) and

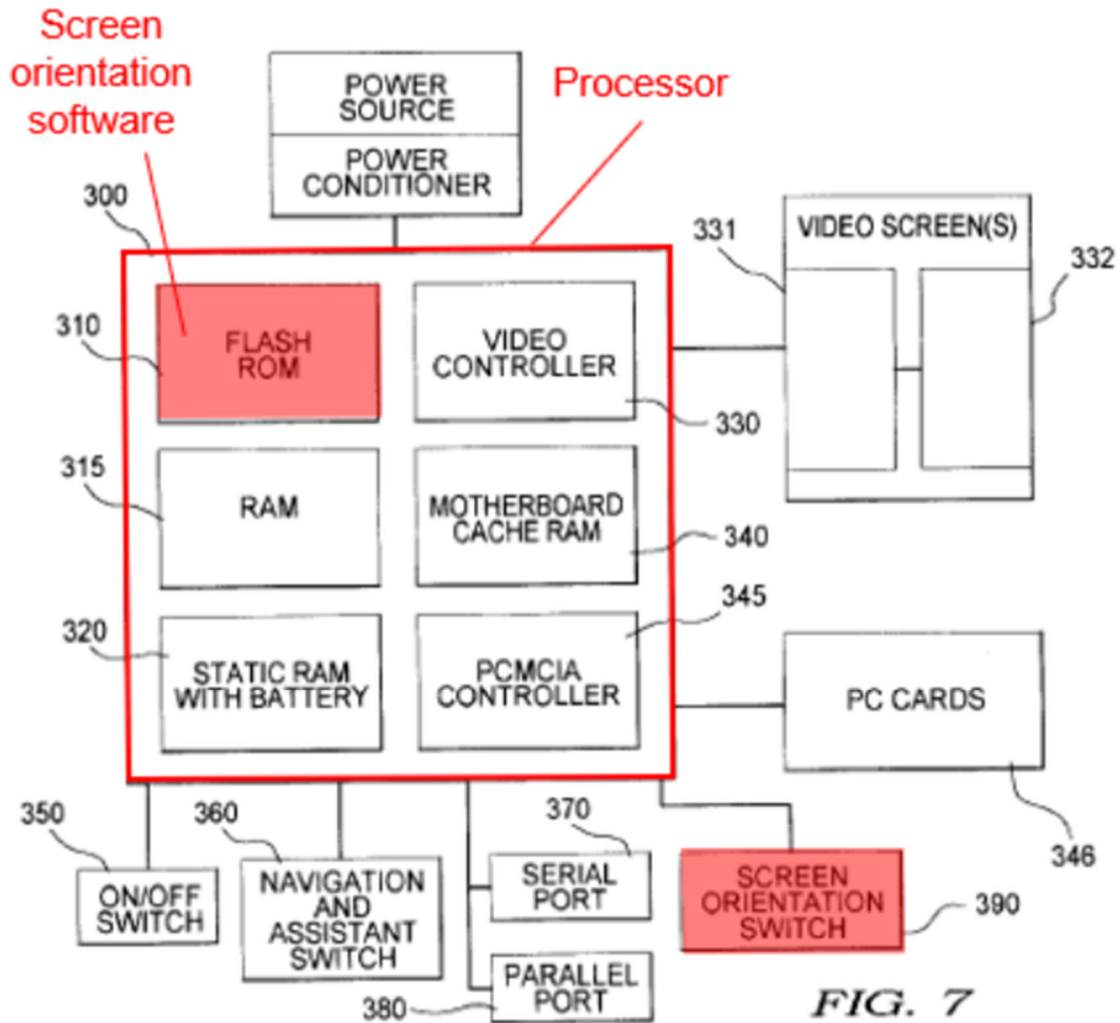
⁸ Petitioners note “single axis” in this claim has no antecedent basis, and therefore Petitioners treat it as the “longitudinal axis” of claim 29. Petitioners reserve the right to argue the invalidity of this claim in other forums for failure to comply with the requirements of 35 U.S.C. §112.

top (“display component”) screens, the coupling of which enables Reavey’s device to be used in different operational modes according to different physical configurations. Reavey, 5:32-35, 7:24-31; Houh, ¶187.

6. Claim 31

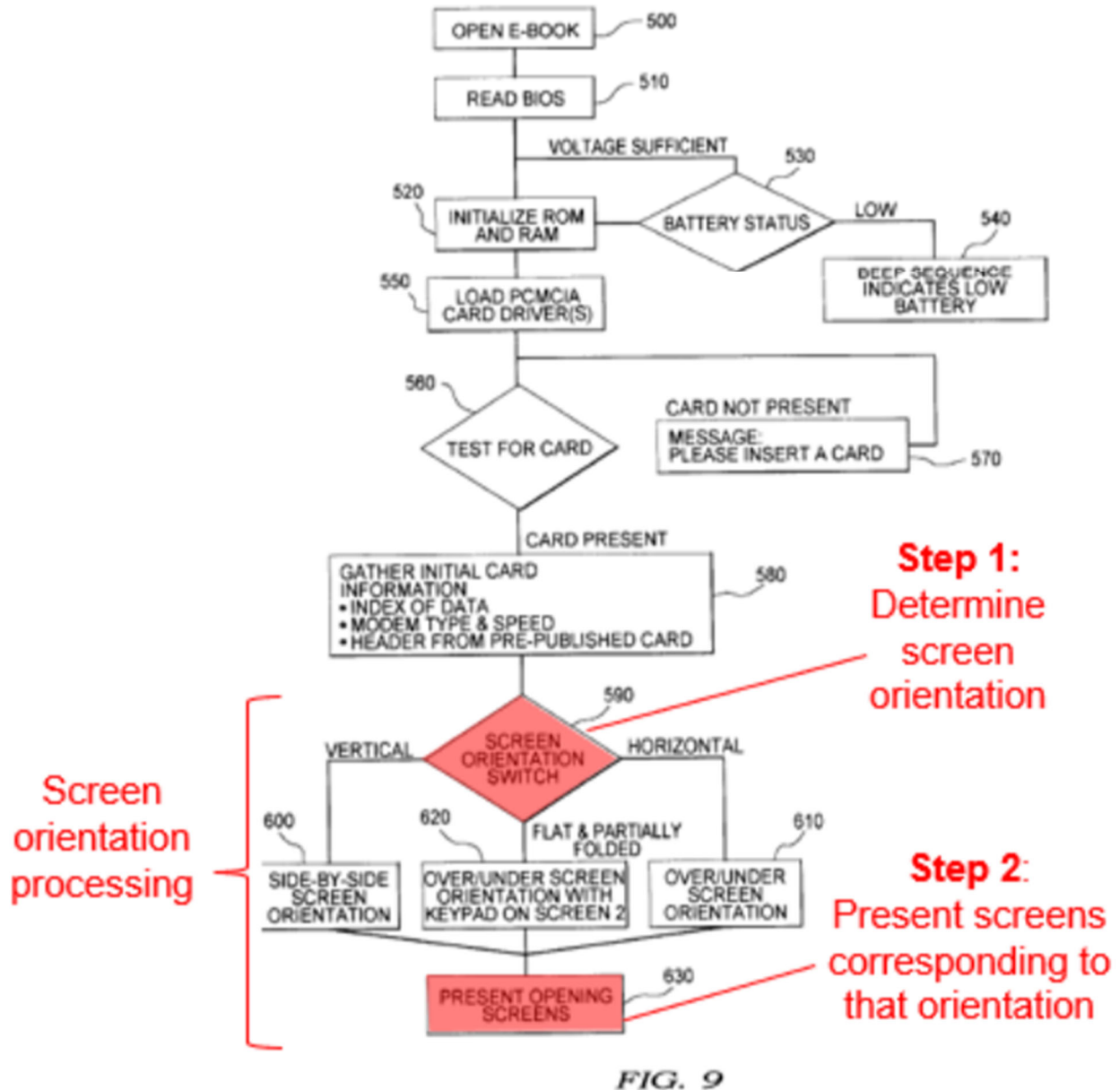
a. 31[a]

Claim 31 depends from claim 30 (*see* §VIII.B.5). Reavey teaches a “screen orientation switch” (i.e., “display orientation module”) in communication with a CPU processor including a Flash ROM storing screen orientation software instructions for executing “screen orientation processing 390.” Reavey, 3:24-27, 6:11-18, Fig. 7 (annotated version reproduced below); Houh, ¶¶188-89.



Reavey teaches the combination of screen orientation processing and multi-function gravity switches and hinge with embedded spring detent mechanism enables “[e]lectronic book device 100 [to] automatically rotate text and graphics on the display panel to change the screen orientation.” Reavey, 6:43-46, 7:24-31, 7:53-62. Doing so performs steps of detecting a screen orientation and presenting a user with opening screen corresponding to that orientation (i.e., “control[s] an orientation of the content displayed on the display screen”). *Id.*, 7:53-62 (describing keyboard

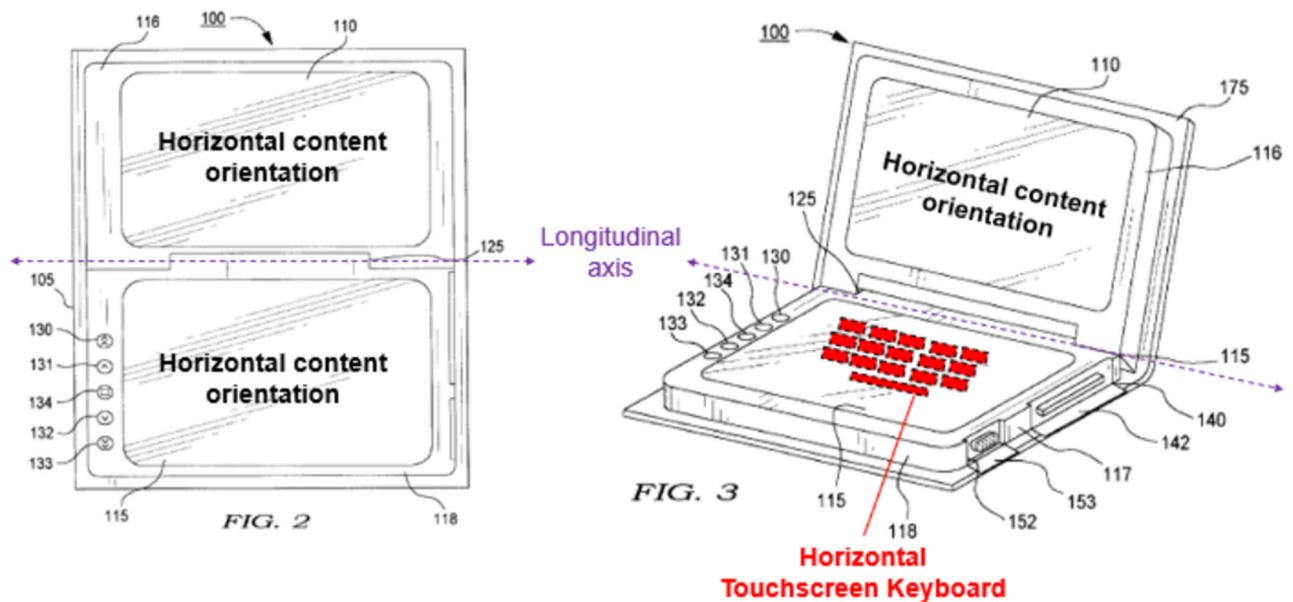
appearance or disappearance on bottom screen pending laptop or flat configuration, respectively), 8:61-66, Fig. 9 (annotated version reproduced below).

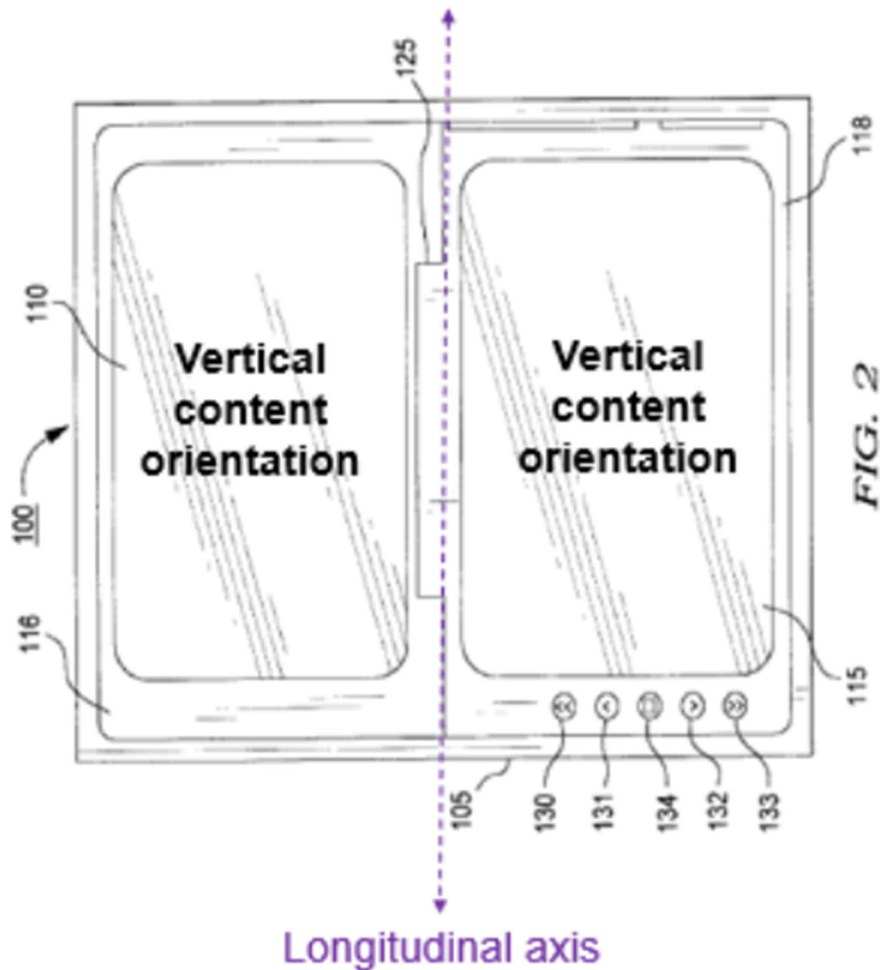


b. 31[b]

Per §§VIII.B.4.d-VIII.B.4.e, VIII.B.6.a, Reavey controls the orientation of content displays on two screens responsive to a physical configuration of Reavey's

computing device with a hinge (“longitudinal axis”). Reavey further discloses the electronic book device “can automatically rotate text and graphics on the display panel to change the screen orientation” relative to three different modes. Reavey, 7:24-31); Houh, ¶¶190-93. Reavey teaches two different orientations of text and graphics on the hinged electronic book device’s screens corresponding to first (mode 1) “side-by-side mode...having the display screen in a vertical position” and second (modes 2 and 3) “over-under mode” with “horizontal positioning” as depicted in the figures (annotated) reproduced below. *Id.*, 1:11-15, 7:36-44, Figs. 2-3 (combined, annotated).





Pröll teaches that a horizontal content orientation is rotated 180° relative to the hinge when a switch detects the computing device is transitioned from, e.g., a laptop configuration into an easel configuration, else the content would be displayed upside down to a user. Pröll, [0044] (describing using the “mobile data processing device” as a “laptop”), [0049] (describing using the same “mobile data processing device” “in the form of...a portable computer” but rotated “more than 270°” into an easel configuration).

Per §VIII.B.2, a POSITA would have found it obvious to modify the Reavey-Chandhri device to include the easel mode based on the teachings of Pröll. When modified to include an easel mode, a POSITA would have found it obvious to implement Pröll's 180° (upside-down to right-side up), switch-triggered reorientation of content displayed on the screen of the Reavey-Chandhri device because, in the absence of such a orientation switch, then content on the display would be presented upside-down to the user. Houh, ¶193.

7. Claim 32

a. 32[a]

Claim 32 depends from claim 31 (*see* §VIII.B.6). Per §VIII.B.6.b, the Reavey-Chandhri-Pröll device includes a first orientation relative to the longitudinal axis (e.g., 0° orientation while in laptop mode) and a second orientation relative to the longitudinal axis (e.g., 180° flipped orientation while in easel mode). Houh, ¶194.

b. 32[b]

Per §VIII.B.6.b, the Reavey-Chandhri-Pröll device includes a first orientation relative to the longitudinal axis (e.g., 0° orientation while in laptop mode) and a second orientation relative to the longitudinal axis (e.g., 180° flipped orientation while in easel mode). These orientations are “automatically” displayed in their respective physical orientations at least because Reavey teaches that the modes, and thus the respective display orientations, “are set automatically when the book device

100 is opened.” Reavey, 7:45-47; Houh, ¶¶195-196. Further, Pröll teaches that the reorientation of the display by flipping it 180° when the device is in easel mode is done automatically, as a switch-triggered event. Pröll, [0049]; Houh, ¶¶195-196.

8. Claim 33

Claim 33 depends from claim 31 (*see* §VIII.B.6). Per §VIII.A.4.j, Reavey’s device has a second, “flat” mode in claim 1[i]. Houh, ¶197.

9. Claim 36

a. 36[a]

Claim 36 depends from claim 31 (*see* §VIII.B.6). Per §§VIII.B.3, VIII.B.4.a, VIII.B.4.e, the Reavey-Chandhri-Pröll device opens from a closed physical configuration into any one of a laptop, flat, and easel physical configuration. Per §§VIII.B.4.b-VIII.B.4.e, the Reavey-Chandhri device rotates about a longitudinal axis using a hinge to do so. Per §VIII.B.6, the Reavey-Chandhri-Pröll combination uses a combination of computer-executable screen orientation software processing and mechanical sensor components (e.g., compressible spring and ball detent mechanism, multi-function gravity switches) (“mode sensor”) to detect the amount of opening of the electronic book device (“degree of rotation of the display component relative to the base”) and provide a rotational reading of, e.g., 120° (“information representative of the degree of rotation”). Houh, ¶198.

b. 36[b]

Per, §§VIII.B.6.a, VIII.B.9.b, the Reavey-Chandhri-Pröll device automatically adjusts the orientation of content displayed on a screen responsive a degree of the device's opening. Houh, ¶199.

10. Claim 37

a. 37[a]

Claim 37 depends from claim 36 (*see* §VIII.B.9). Per §VIII.B.4.g, the Reavey-Chandhri-Pröll combination teaches a portable computer with a laptop configuration when the device is opened to approximately 180 degrees. Per §VIII.B.6.a, the Reavey-Chandhri-Pröll combination teaches a display orientation module that automatically displays content in an orientation relative to any physical configuration (including laptop) of the device as. Houh, ¶200.

b. 37[b]

Per §VIII.B.3, the Reavey-Chandhri-Pröll combination teaches an easel configuration when the device is opened beyond 180 degrees to approximately 270 degrees. Per §VIII.B.6 the Reavey-Chandhri-Pröll combination teaches a display orientation module that automatically changes the display of content to an orientation corresponding to any (including an easel) physical configuration of the device. Houh, ¶201.

c. 37[c]

Per §VIII.B.6.b, the Reavey-Chandhri device, when modified to include the easel mode taught by Pröll, would have rotated the orientation of content displayed on a screen by 180° when the device is rotated into an easel mode to ensure that content is not upside down relative to a user's view. Houh, ¶¶202-203.

11. Claim 38

a. 38[a]

Claim 38 depends from claim 31 (*see* §VIII.B.6). Per §§VIII.B.6.a, VIII.B.9, the Reavey-Chandhri-Pröll combination teaches a combination of screen orientation processing and multi-function gravity switches and hinge with embedded spring detent mechanism (“mode sensor”) to determine the current physical configuration of the computing device (“current display mode”), each of which has specific display attributes as determined by Reavey's screen orientation processing hardware and process. Houh, ¶¶204-06.

Should PO argue Reavey detects a current **mode** but not a current **display** mode (i.e., detection of the physical configuration, but not how information is displayed), Dr. Houh explains that Reavey teaches both. Specifically, a POSITA would have understood that Reavey teaches a hinge spring detent mechanism embedded in the hinge and multi-functional gravitational switches (“mode sensor”) to detect both the current physical configuration of the computing device and its

associated display of content (“current display mode”) because each mode in the combination has an associated way to display content (e.g., reserving keyboard display for a laptop configuration in which a user may actually access and use that keyboard, which is not feasible in the easel configuration). Reavey, 7:53-62; Houh, ¶205.

Dr. Houh also explains this mechanical reconfigurability of Reavey’s hinged, portable computing device creates opportunities for its use; is intended to be reconfigured into any of a number of different physical configurations at any given time by a user employing the device in any of a number of environments to view information in any of a number of ways (e.g., sharing a real estate contract with a customer in easel mode, writing up that contract with a word processing application and keyboard in laptop mode, viewing images of a property for sale in flat, vertical scrolling mode). Reavey, 3:10-12 (describing the purpose of providing a user “an aesthetically pleasing, easy to read and use electronic device for reviewing various types of information”), 3:13 (“The device can be used in multiple configurations.”), 3:28-29 (“Activation and deactivation is accomplished by the opening and closing of the device, respectively.”); Houh, ¶206.

b. 38[b]

Per §VIII.B.6.a, the Reavey-Chandhri-Pröll portable computing device detects a physical configuration mode and selects a corresponding display

orientation. Per §VIII.B.6.b, the device displays content in different orientations relative to the hinged axis of the device responsive to the physical configuration of the device. §VIII.B.11.a explains the device uses a combination of screen orientation processing and multi-function gravity switches and hinge with embedded spring detent mechanism to determine the current physical configuration of the computing device. Houh, ¶¶207-208.

12. Claim 39

See §§VIII.B.4.a, VIII.B.4.f, VIII.B.5 for Claims 29[a], 29[f], 30. Houh, ¶209.

13. Claim 40

a. 40[a]

See §§VIII.B.4.g, VIII.B.12 for Claims 29[g], 39. Houh, ¶210.

b. 40[b]

See §VIII.B.4.h for Claim 29[h]. Houh, ¶211.

14. Claim 41

Claim 41 depends from claim 40 (*see* §VIII.B.13). Per §VIII.B.4.a, the Reavey-Chandhri-Pröll device has two halves rotatable about a hinge from a closed position to a position of “more than 270° degrees” to each other to assume an easel-type configuration. Pröll further discloses that the first and second housing halves can be swiveled in reference to each other about a hinge by “by “**almost** 360°,”

“**approximately** 360° degrees,” and by “**nearly** 360 degrees.” Pröll, Abstract, [0026], [0033], [0037], [0039], [0051], claim 1, claim 11 (emphases added).

A POSITA would have understood that rotation of Pröll’s display component 5 in housing half 2 from a closed position to a degree of opening beyond 270° but almost, approximately, or nearly 360° establishes a range of opening angles spanning roughly 270°-360°, of which “approximately 320 degrees” falls within. *Id.*, 7:53-58; Houh, ¶¶212-213. *See also* MPEP § 2144.05 (“obviousness of similar and overlapping ranges”).

15. Claim 52

Per §§VIII.B.3, VIII.B.4, the Reavey-Chandhri-Pröll combination teaches a portable computer and easel mode. Additionally, when describing the easel configuration embodiment, Pröll teaches the use of “at least one **foot**...arranged on the corresponding setup edges” of the “mobile data processing device 1” when it is placed upon a tray folded down from the back of a seat to provide “secure stability and support” for the device and further provide “anti-slip protection” when in the easel configuration of Fig. 7. Pröll, Fig. 7, [0054] (emphasis added); Houh, ¶¶214-15.

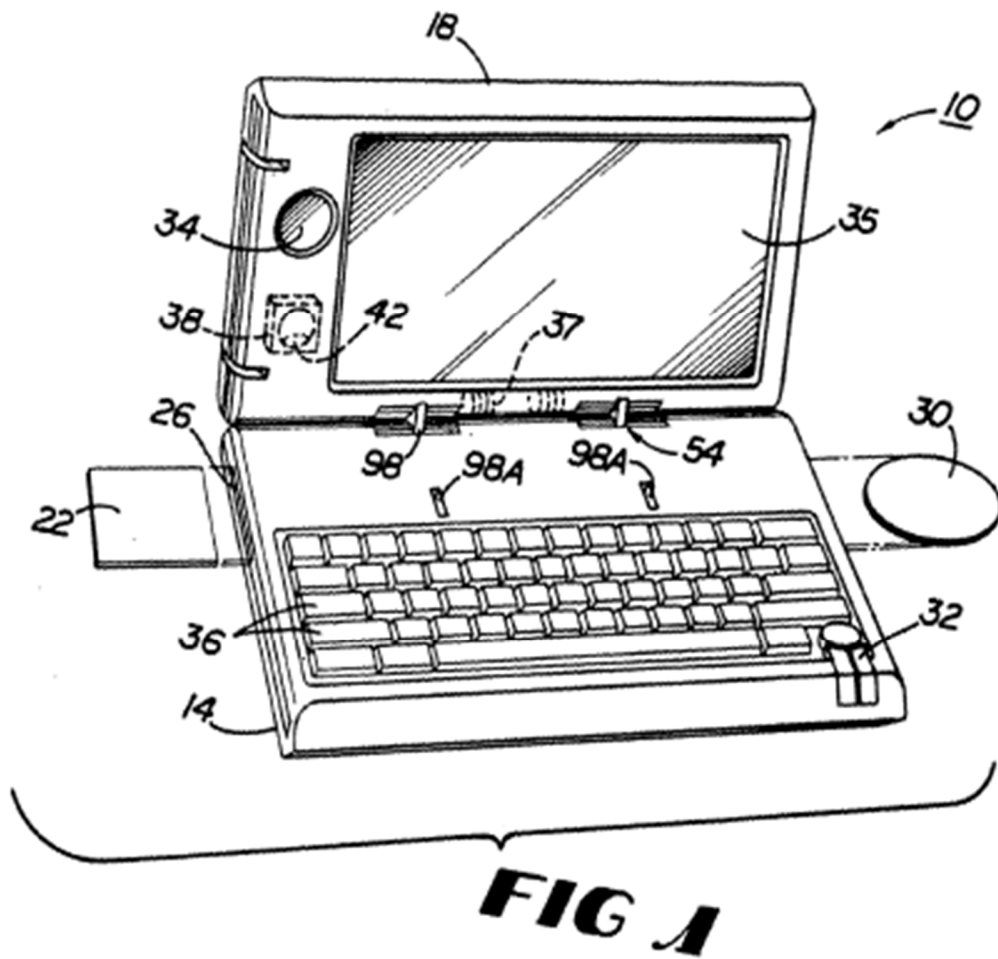
A POSITA would have been motivated to use the foot taught by Pröll in the Reavey-Chandhri-Pröll device, at least because (1) Pröll teaches the foot provides “secure stability and support” for the device while in the easel mode, and (2) a

POSITA would have recognized that this additional support would have been especially beneficial in the vehicle-based scenarios (e.g., that involved motion, jostling, etc.) where Pröll teaches its easel mode is especially useful. Pröll, [0054]; Houh, ¶215.

C. Ground 3: Obviousness over Reavey, Chandhri, Pröll, and Lane (Claim 42)

1. Lane

Lane discloses a “reconfigurable portable computer[]” having a first module 14 and a second module 18 that are rotatable relative to one another by up to 360° to transition the computer into various modes using a hinge with two axles 86, 102 enabling two rotational axles 58, 62. Lane, 1:3-6, 2:27, 3:5-14, 5:4-6, 6:7-24, Figs. 1, 3; Houh, ¶¶72-74.



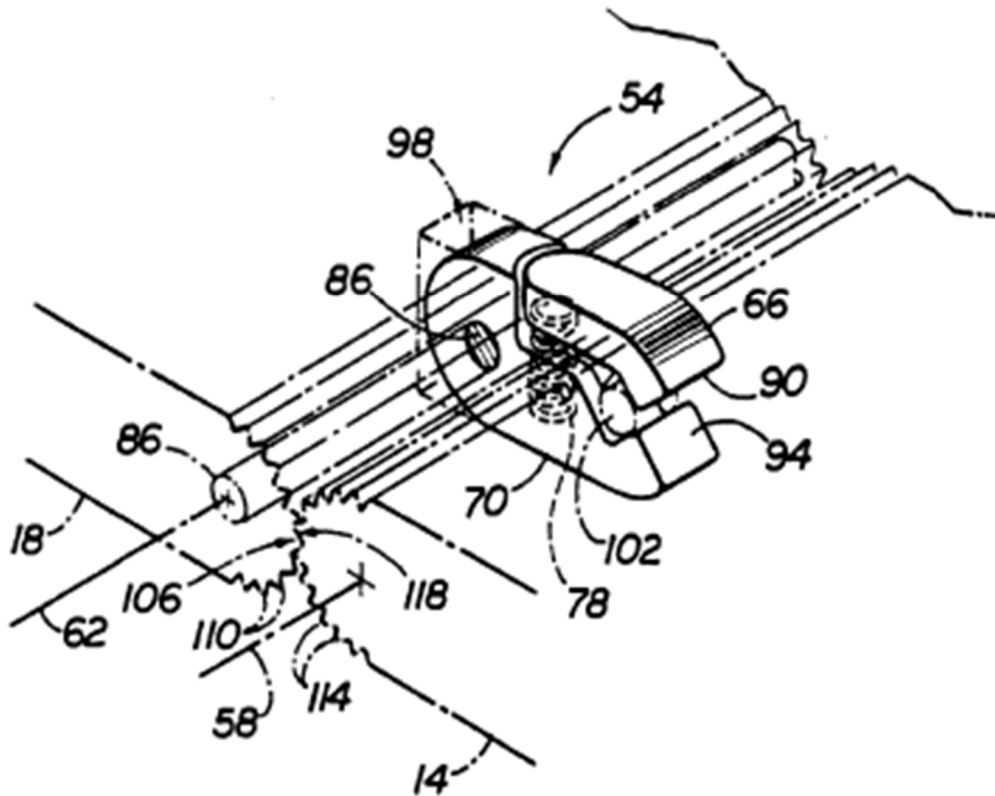


FIG 3

Lane's computer is configurable in many physical configurations, including a closed, laptop, flat, and easel mode. *Id.*, 1:12-17 (closed mode), 10:24-31 (laptop, flat, and easel modes), Figs. 19, 20, 21, 28.



FIG 19

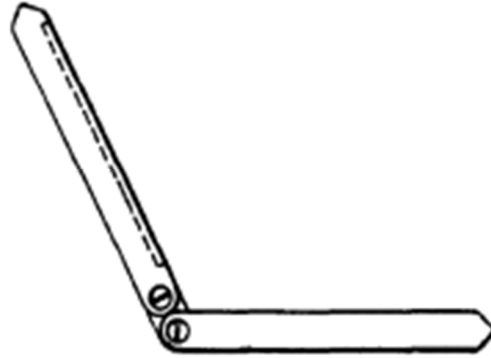


FIG 20



FIG 21

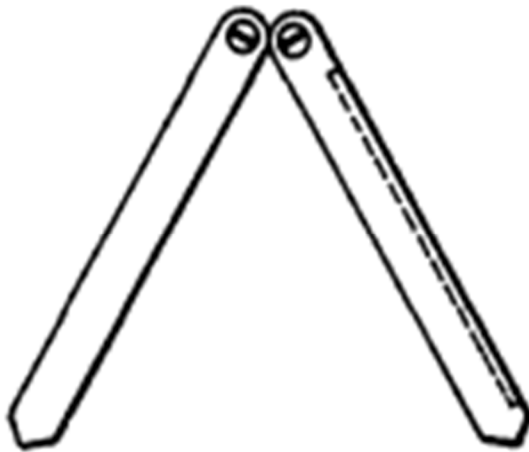


FIG 28

Lane's computer includes software for automatically reorienting displayed content based on an indication of the spatial orientation of the first and/or second modules 14, 18 provided by position-indicating mechanism 38. *Id.*, 5:23-6:6.

2. Motivation to Combine

A POSITA would have been motivated to modify the single-axis hinge of the Reavey-Chandhri-Pröll device with the double-axle, double-axis hinge of the Lane computer so that the Reavey-Chandhri-Pröll device would remain reconfigurable in the known closed, laptop, flat, and easel configuration, but further implement Lane's type of electrical- and mechanically-coupled hinge that allows the device to be beneficially uncoupled and reconfigured into additional modes. Reavey, Figs. 2-3 3:62-64; Pröll, Fig. 7, [0033]-[0034], [0041]; Lane, 10:32-11:16, Figs. 22-24, 26; Houh, ¶216-19.

A POSITA would have had a reasonable expectation of success combining the Reavey-Chandhri-Pröll device and its detected modes and screen orientations with Lane's hinge allowing for additional modes and detected screen orientations as known improvements to like devices to achieve a predictable, increasingly ergonomic and adaptive user computing device usable in more environments. Houh, ¶217. The Reavey-Chandhri-Pröll device allows changing orientations of content displayed on a screen responsive to a detected change in physical configurations of the device (modes), the same components and process of which provide a user more configurations of the computing device using Reavey's existing screen orientation processing software, Pröll's switch-based 180° displayed screen rotations, and Lane's "position-indicating mechanism" for determining whether information

should be displayed in portrait or landscape position and its particular hinge. Reavey, 6:43-46, 7:24-31, 7:53-62; Pröll, Fig. 7, [0049]; Lane, 5:23-6:6; Houh, ¶217.

A user would have been motivated to substitute Lane’s two-axle, two-axis hinge for that in the Reavey-Chandhri-Pröll combination because Lane’s hinge is designed to mechanically and electrically **couple** the two halves of the computing system to more easily facilitate a 0-360° rotation with respect to each other and attain more configurable modes of operation, but also preserve the ability to cleanly and easily **decouple** the halves using a “snap” and “clamp” type attachment, which (i) reduces the cost of replacing either half should one fail to operate, (ii) allows a user to upgrade only the respective half with technological improvements available for its respective components, and (iii) allow a user to “mix and match” the two components making up the two halves of the portable computer because each half may be decoupled from the other half and replaced, upgraded, or used with a different half on a modular basis. Lane, 2:26-3:4, 6:25-7:2, Houh, ¶218.

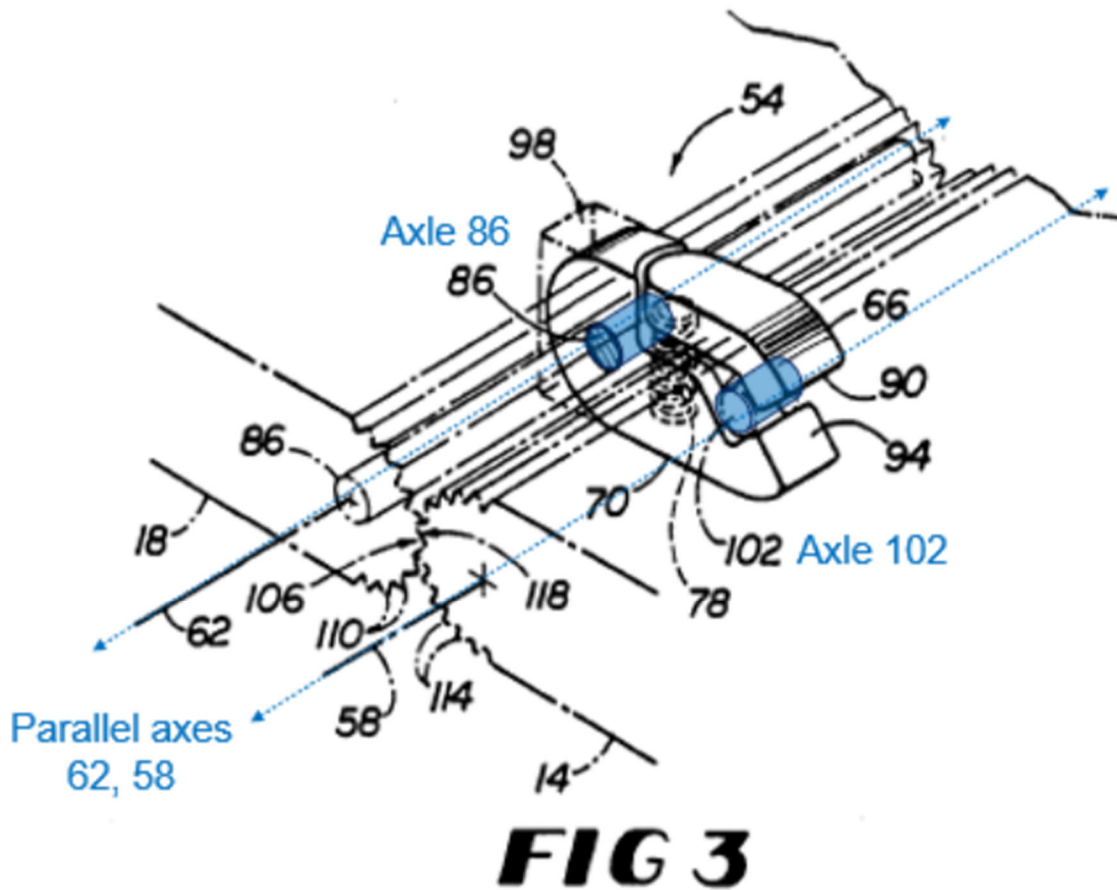
3. Claim 42

a. 42[a]

Claim 42 depends from claim 30 (*see* §VIII.B.5) including “the display component is rotatable about the longitudinal axis.”

Lane teaches or suggests a computer system with a display component that rotates about “multiple parallel axes,” as recited in 42[a]. Houh, ¶¶220-22.

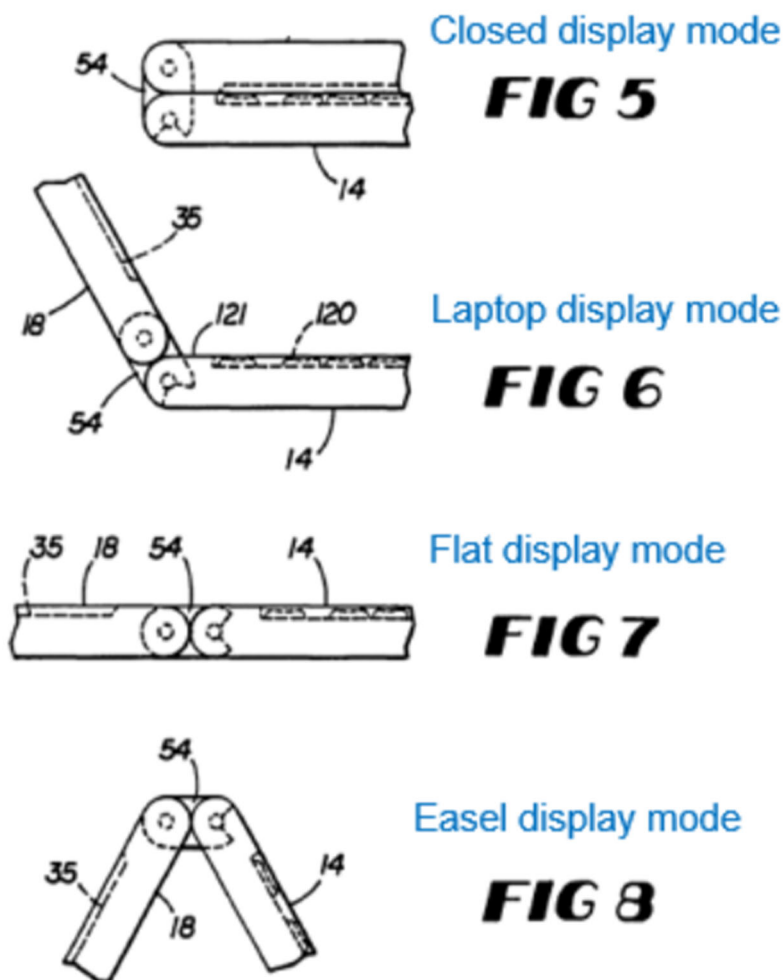
Specifically, Lane teaches a first axis of rotation 58 and second, parallel and adjacent axis of rotation 62 contained within connector 54 that mechanically and electrically couples two separate modules of a computer together. Lane, 3:5-6, 6:7-36, Fig. 3 (annotated):



Per §VIII.C.2, a POSITA would have found it obvious to modify the single-axis hinge of the Reavey-Chandhri-Pröll device with the double-axle, double-axis hinge of the Lane computer. Houh, ¶222.

b. 42[b]

The Reavey-Chandhri-Pröll-Lane combination teaches 42[b]. Houh, ¶¶223-24. Lane teaches the same “display modes” as the Reavey-Chandhri-Pröll combination (closed, laptop, flat, easel), and Lane further teaches configuring its portable computing device into those display modes by permitting rotation of the display component about the multiple parallel axes discussed in 42[a] above. Lane, 7:30-8:24, 10:10-31 Figs. 5-9, 19, 20, 21, 28 (annotated):



Closed display mode



FIG 19

Laptop display mode

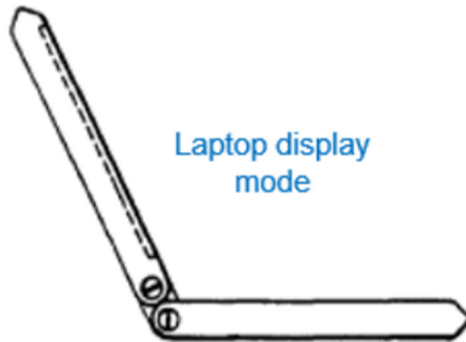


FIG 20

Flat display mode



FIG 21

Easel display mode

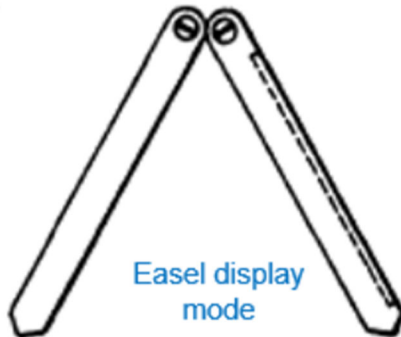


FIG 28

Lane shows the predictability of the combination, and that a POSITA would have been motivated to incorporate Lane's connector 54 with multiple parallel axes into the Reavey-Chandhri-Pröll combination because Lane discloses the same physical configurations of its device using that connector. Houh, ¶224.

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 Information⁹

LEAD COUNSEL
Jessica Kaiser (Reg. No. 58,937) kaiser-ptab@perkinscoie.com Perkins Coie LLP 1900 Sixteenth Street, Suite 1400

⁹ For purposes of this IPR, the Petitioner parties have designated a lead counsel as a commitment to act as a single entity in the proceeding. Counsel for each party will coordinate and act through the designated lead counsel. This designation is not a representation of an attorney-client relationship.

Denver, CO 80202-5255
Telephone: (303) 291-2300

BACK-UP LEAD COUNSEL

Christina McCullough (Reg. No. 58,720)
McCullough-ptab@perkinscoie.com
Perkins Coie LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Telephone: (206) 359-8000

Kyle Canavera (Reg. No. 72,167)
Canavera-ptab@perkinscoie.com
Perkins Coie LLP
11452 El Camino Real, Suite 300
San Diego, CA 92130-2080
Telephone: (858) 720.5700

Tyler Knox (Reg. No. 79,948)
Knox-ptab@perkinscoie.com
Perkins Coie LLP
1900 Sixteenth Street, Suite 1400
Denver, CO 80202-5255
Telephone: (303) 291-2300

Andrew Ohlert (*pro hac* vice to be submitted)
AOhlert@perkinscoie.com
Perkins Coie LLP
1201 Third Avenue, Suite 4900
Seattle, WA 98101-3099
Telephone: (206) 359-8000

Microsoft-LiTL-IPR@perkinscoie.com

BACK-UP COUNSEL

James L. Day (Reg. No. 72,681)

jday@fbm.com

Farella Braun & Martel

One Bush Street, Suite 900

San Francisco, CA 94104

Telephone: (415) 954-4400

Daniel Callaway (Reg. No. 74,267)

dcallaway@fbm.com

Farella Braun & Martel

One Bush Street, Suite 900

San Francisco, CA 94104

Telephone: (415) 954-4400

James M. Heintz (Reg. No. 41,828)

jim.heintz@dlapiper.com

DLA Piper

One Fountain Square

11911 Freedom Drive, Suite 300

Reston, Virginia 20190-5602

Telephone: (703) 773-4000

Respectfully submitted,

/ Jessica Kaiser /

Jessica Kaiser
Reg. No. 58,937
Attorney for Petitioners

PERKINS COIE LLP
1900 Sixteenth Street, Suite 1400
Denver, CO 80202-5255

Date: January 30, 2023

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 13,990. 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,

/ Jessica Kaiser /

Jessica Kaiser
Reg. No. 58,937
Attorney for Petitioners

Date: January 30, 2023
PERKINS COIE LLP
1900 Sixteenth Street, Suite 1400
Denver, CO 80202-5255

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:

WOLF GREENFIELD & SACKS, P.C.
600 ATLANTIC AVENUE
BOSTON, MA 02210-2206
UNITED STATES

A courtesy copy was also sent via electronic mail to Patent Owner's litigation counsel listed below:

Adam Wyatt Poff
apoff@ycst.com
Alexis Stombaugh
astombaugh@ycst.com
Eric J. Rutt
erutt@wolfgreenfield.com
Gerald B. Hrycyszyn
ghrycyszyn@wolfgreenfield.com
Kevin Y. Li
kli@wolfgreenfield.com
Michael A. Albert
malbert@wolfgreenfield.com
Robert M. Vrana
rvrana@ycst.com
Suresh S. Rav
suresh.rav@wolfgreenfield.com

Respectfully submitted,

/ Jessica Kaiser /

Jessica Kaiser
Reg. No. 58,937
Attorney for Petitioners

Date: January 30, 2023