

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.

IPR2024-00456

U.S. Patent No. 8,612,888

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 8,612,888**

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

LISTING OF CHALLENGED CLAIMS.....	X
I. INTRODUCTION	1
II. GROUNDS FOR STANDING.....	2
III. STATEMENT OF PRECISE RELIEF REQUESTED FOR EACH CLAIM CHALLENGED.....	2
IV. '888 PATENT OVERVIEW	4
A. Specification.....	4
B. Prosecution History	7
C. Prior Patent Office Proceeding	8
V. DISCRETIONARY DENIAL WOULD BE INAPPROPRIATE HERE	9
A. Status of Prior and Co-Pending Litigation.....	9
B. <i>General Plastic</i>	10
C. <i>Fintiv</i>	12
D. Section 325(d).....	12
VI. LEVEL OF ORDINARY SKILL	13
VII. CLAIM CONSTRUCTION	13
A. “plurality of views of digital media content”.....	14
B. Means-Plus-Function (“MPF”).....	14
1. “view selector component”	15
2. “aggregation component”	15
3. “display component”	15
4. “storage component”	16
5. “execution component”	16
VIII. DETAILED EXPLANATION OF GROUNDS.....	16
A. Ground 1: Obviousness Over Reavey, Martinez, Proctor (Claims 1, 2, 24, 26-27)	16

TABLE OF CONTENTS
(continued)

	Page
1. Reavey.....	16
2. Martinez	21
3. Proctor.....	22
4. Motivation to Combine.....	24
5. Claim 1	27
a. 1[pre].....	27
b. 1[a]	31
c. 1[b].....	33
d. 1[c]	33
e. 1[d].....	36
f. 1[e1]	36
g. 1[e2]	38
h. 1[e3]	40
i. 1[f].....	41
j. 1[g].....	41
k. 1[h].....	44
l. 1[i].....	44
6. Claim 2.....	46
7. Claim 24.....	46
a. 24[a]	46
b. 24[b].....	47
c. 24[c]	47

TABLE OF CONTENTS
(continued)

	Page
8. Claim 26	49
a. 26[pre]	49
b. 26[a]	49
c. 26[b]	49
d. 26[c1]	50
e. 26[c2]	50
f. 26[c3]	50
g. 26[d]	50
h. 26[e]	50
i. 26[f]	50
j. 26[g]	50
k. 26[h]	50
9. Claim 27	50
a. 27[pre]	50
b. 27[a]	51
c. 27[b]	52
d. 27[b][i]	52
e. 27[b][ii]	53
f. 27[b][iii]	53
g. 27[c]	53
h. 27[d]	53

TABLE OF CONTENTS
(continued)

	Page
i. 27[e]	54
j. 27[f]	55
B. Ground 2: Obviousness Over Reavey, Martinez, Proctor, and Aldrich (Claims 3-8, 15-17, 20, 21)	55
1. Aldrich	55
2. Motivation to Combine	60
3. Claim 3	62
4. Claim 4	66
5. Claim 5	68
6. Claim 6	69
a. 6[a]	69
b. 6[b]	70
7. Claim 7	71
8. Claim 8	73
9. Claim 15	75
a. 15[a]	75
b. 15[b]	77
c. 15[c]	79
10. Claim 16	81
11. Claim 17	83
a. 17[a]	83
b. 17[b]	84
c. 17[c]	87
d. 17[d]	89

TABLE OF CONTENTS (continued)

	Page
12. Claim 20	92
a. 20[a]	92
b. 20[b]	92
c. 20[c]	93
d. 20[d]	95
13. Claim 21	96
a. 21[a]	96
b. 21[b]	96
C. Ground 3: Obviousness Over Reavey, Martinez, Proctor, and Pröll (Claim 25).....	97
1. Pröll.....	97
2. Motivation to Combine.....	99
3. Claim 25	100
a. 25[a]	100
b. 25[b]	102
D. Ground 4: Obviousness Over Reavey, Martinez, Proctor, Aldrich, and Chao (Claims 9, 18, 19)	103
1. Chao	103
2. Motivation to Combine.....	106
3. Claim 9	107
4. Claim 18.....	110
a. 18[a]	110
b. 18[b]	110
5. Claim 19.....	111

TABLE OF CONTENTS
(continued)

	Page
E. Ground 5: Obviousness Over Reavey, Martinez, Proctor, and Chao (Claim 22).....	113
1. Claim 22.....	113
IX. CONCLUSION.....	115
X. MANDATORY NOTICES	116
A. Real Party in Interest.....	116
B. Related Matters	116
C. Notice of Counsel and Service Information.....	116

EXHIBIT LIST

Exhibit	Reference
1001	U.S. Patent No. 8,612,888 (“the ’888 Patent”)
1002	File History of the ’888 patent
1003	Declaration of Dr. Henry Houh in Support of Petition (“Houh Decl.”)
1004	Dr. Henry Houh CV
1005	RESERVED
1006	German Patent Application Publication DE10331185A1 (“Pröll”) with certified translation
1007	U.S. Patent 6,137,468 (“Martinez”)
1008	Joan Preppernau & Joyce Cox, <i>Step By Step Windows Vista</i> , Microsoft Press (Jan. 3, 2007) (“Preppernau”)
1009	U.S. Patent 5,847,698 (“Reavey”)
1010	U.S. Patent Application Publication 2006/0227122 A1 (“Proctor”)
1011	U.S. Patent Application Publication 2006/0062141 A1 (“Chandhri”)
1012	U.S. Patent Application Publication 2006/0265390 A1 (“Aldrich”)
1013	U.S. Patent No. 7,970,240 B1 (“Chao”)
1014	RESERVED
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)

Exhibit	Reference
1020	Scheduling Order, <i>LiTL LLC v. HP Inc.</i> , No. 23-120 (D. Del. Jan. 11, 2024), ECF No. 44
1021	Foley, James D., et al., <i>Computer Graphics Principles and Practice</i> , Second Edition in C (July 1997)
1022	Dino Esposito, <i>New Graphical Interface: Enhance Your Programs with New Windows XP Shell Features</i> , MSDN Magazine
1023	Maintenance & Service Guide, <i>HP Pavilion dv1600 Entertainment Notebook PC</i> (June 2006)
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	RESERVED
1033	RESERVED
1034	RealPlayer 7 Plus User Manual
1035	RESERVED
1036	Australia Patent Application Publication AU2001100022A4

Exhibit	Reference
1037	Apple Reinvents the Phone with iPhone, available at https://www.apple.com/newsroom/2007/01/09Apple-Reinvents-the-Phone-with-iPhone/
1038	Twist and Shoot: Nokia N90 makes it première, available at https://web.archive.org/web/20140714193817/http://company.nokia.com/en/news/press-releases/2005/04/27/twist-and-shoot-nokia-n90-makes-its-premiere
1039	Adobe Photoshop Elements 3.0 Getting Started Guide (2004)
1040	U.S. Patent 7,433,876 (“Spivack”)
1041	An Overview of HTML+, available at https://web.archive.org/web/19970605134644/https://www.w3.org/MarkUp/HTMLPlus/htmlplus_7.html

LISTING OF CHALLENGED CLAIMS

Reference	Claim Limitations
Claim 1	
1[pre]	A method for accessing and managing digital media libraries on a streamlined computing device with a plurality of selectable I/O profiles, the method comprising:
1[a]	displaying a graphical user interface on the computing device, wherein the graphical user interface comprises at least a plurality of views of digital media content;
1[b]	providing for transition between the plurality of views in response to selection of an I/O profile;
1[c]	providing for transition between the plurality of views in response to activation of a view selector component configured to permit a user to select one of the plurality of views,
1[d]	wherein providing for the transition between the plurality of views in response to selection of the I/O profile includes:
1[e1]	permitting the user to rotate a display component of the computing device about a longitudinal axis running along an interface between the display component and a base of the streamlined computing device;
1[e2]	wherein rotating the display component about the longitudinal axis from a closed mode to a first physical orientation configures the computing device into a laptop mode having a first physical configuration of the display component and the base, with one of the plurality of views as a default display; and
1[e3]	wherein rotating the display component about the longitudinal axis from the closed mode to a second physical orientation configures the computing device into another display mode having a second physical configuration of the display component and the base, with another one of the plurality of views as the default display;
1[f]	associating at least one of a plurality of visual representations with digital media content;
1[g]	executing the association with the at least one of the plurality of visual representations with digital media content in response to selection;
1[h]	transitioning a display on the computing device to a view of the digital media content in response to the act of executing the association; and

1[i]	providing for display of user digital media content and referenced digital media content in the view of the digital media content.
Claim 2	
2	The method according to claim 1, further comprising an act of displaying in the view user digital media content and referenced digital media content in response to the act of executing the association with the at least one of the plurality of visual representations.
Claim 3	
3	The method according to claim 2, wherein the act of displaying in the view user digital media content and referenced digital media content includes an act of accessing a reference to remote digital content not controlled by the user in order to display referenced digital content.
Claim 4	
4	The method according to claim 1, further comprising an act of associating the at least one of the plurality of visual representations with a remote service provider.
Claim 5	
5	The method of claim 4, further comprising an act storing the association between the at least one visual representation with the remote service provider in at least one of a device profile and a user profile.
Claim 6	
6[a]	The method according to claim 1 further comprising acts of: configuring access to a remote service; and
6[b]	integrating operations provided by the remote service provider into the view of the digital media content.
Claim 7	
7	The method according to claim 1, wherein the view comprises at least one of an album view and a timeline view.
Claim 8	
8	The method according to claim 7, further comprising an act of displaying digital media content in a body portion of the view.
Claim 9	
9	The method according to claim 7, further comprising an act of displaying a toggle element in a header portion of the view, wherein the toggle element transitions the computing device

	display between the album view and the timeline view upon selection by a user.
Claim 15	
15[a]	The method according to claim 7, further comprising acts of: providing an aggregation component configured to permit the user to select a plurality of digital media content;
15[b]	displaying the plurality of digital media content in the body of the view; and
15[c]	permitting the user to perform operations on the plurality of digital media content.
Claim 16	
16	The method according to claim 15, wherein the act of permitting the user to perform operations on the plurality of digital media content includes at least one of a share operation, a create channel operation, and an order prints operation.
Claim 17	
17[a]	The method according to claim 16, wherein the at least one operation is a share operation,
17[b]	and the method further comprises acts of: identifying any state entries for the plurality of digital media content;
17[c]	identifying any remote service settings for the plurality of digital media content; and
17[d]	transmitting a visual representation associated with the plurality of digital media content, any state settings, and any remote service settings to another streamlined device user.
Claim 18	
18[a]	The method according to claim 7, wherein the view is a time view
18[b]	and the method further comprises: displaying a timeline navigation control in the body of the view, wherein the timeline navigation control is configured to provide organization segments, the organization segments providing a visual indication of a number of digital media content items in each segment.
Claim 19	
19	The method according to claim 18, wherein the timeline navigation control further comprises a handle responsive to a pointer displayed on the computer device, wherein the handle is further responsive to select and drag operations.
Claim 20	

20[a]	The method according to claim 1, further comprising acts of: permitting the user to share the at least one visual representation, including any associated digital media content with another user;
20[b]	storing shared information in response to an act of sharing by the user; and
20[c]	updating any associated digital media automatically for the another user,
20[d]	wherein the act of updating any associated digital media includes acts of: identifying any changes in shared digital media content, wherein changes include at least one of addition of digital media content associated with the at least one visual representation, deletion of digital media content associated with the at least one visual representation, edits of digital media content associated with the at least one visual representation, and updates of information associated with digital media content associated with the at least one visual representation.
Claim 21	
21[a]	The method according to claim 1, further comprising acts of: permitting the user to share the at least one visual representation, including any associated digital media content with another user;
21[b]	transmitting the at least one visual representation associated with the digital media content, any state settings, and any remote service settings to another streamlined device user.
Claim 22	
22	The method according to claim 1, further comprising an act of permitting the user to update date information associated with the digital media content.
Claim 24	
24[a]	The method according to claim 1, wherein the act of displaying the user interface includes: providing a plurality of views of the plurality of visual representations of computer content; and
24[b]	associating the plurality of visual representations of computer content with at least one of the plurality of views, and
24[c]	wherein the each of the plurality of visual representations is responsive to focus and execution, wherein execution includes selection of the visual representation.
Claim 25	
25[a]	The method according to claim 1, wherein rotating the display component about the longitudinal axis up to approximately 180

	degrees from the closed mode and configures the computing device into a laptop mode with one of the plurality of views as a default display; and
25[b]	wherein rotating the display component about the longitudinal axis configures the computing device into the another display mode with another one of the plurality of views as the default display, and includes rotating the display component beyond approximately 180 degrees from the closed mode to configure the computing device into an easel mode with another one of the plurality of views as the default display.
Claim 26	
26[pre]	A non-transitory computer-readable medium having computer-readable instructions stored thereon that as a result of being executed by a computer, instruct the computer to perform the method for accessing and managing digital media libraries on a streamlined computing device with a plurality of selectable I/O profiles, wherein the method comprises:
26[a]	displaying a graphical user interface on the computing device, wherein the graphical user interface comprises at least a plurality of views of digital media content;
26[b]	providing for transition between the plurality of views in response to selection of an I/O profile, wherein providing for the transition between the plurality of views in response to selection of the I/O profile includes:
26[c1]	permitting the user to rotate a display component of the computing device about a longitudinal axis running along an interface between the display component and a base of the streamlined computing device;
26[c2]	wherein rotating the display component about the longitudinal axis from a closed mode to a first physical orientation configures the computing device into a laptop mode having a first physical configuration of the display component and the base with one of the plurality of views as a default display; and
26[c3]	wherein rotating the display component about the longitudinal axis from the closed mode to a second physical orientation configures the computing device into another display mode having a second physical configuration of the display component and the base with another one of the plurality of views as the default display;

26[d]	providing for transition between the plurality of views in response to activation of a view selector component configured to permit a user to select one of the plurality of views;
26[e]	associating at least one of a plurality of visual representations with digital media content;
26[f]	executing the association with the at least one of the plurality of visual representations with digital media content in response to selection;
26[g]	transitioning a display on the computing device to a view of the digital media content in response to the act of executing the association; and
26[g]	providing for display of user digital media content and referenced digital media content in the view of the digital media content.
Claim 27	
27[pre]	A system for accessing and managing digital media libraries with a plurality of selectable I/O profiles, the system comprising:
27[a]	a display component configured to display a graphical user interface on a computing device, wherein the graphical user interface comprises at least a plurality of views of digital media content, wherein the plurality of views include at least one of a plurality of visual representations;
27[b]	an execution component configured to transition the graphical user interface between the plurality of views in response to selection of an I/O profile, wherein selecting the I/O profile includes:
27[b][i]	responding to user rotation of a display component of the computing device about a longitudinal axis running along an interface between the display component and a base of the streamlined computing device;
27[b][ii]	responding to rotation of the display component about the longitudinal from a closed mode to a first physical orientation configures the computing device into a laptop mode having a first physical configuration of the display component and the base with one of the plurality of views as a default display; and
27[b][iii]	responding to rotation of the display component about the longitudinal axis from the closed mode to a second physical orientation configures the computing device into another display mode having a second physical configuration of the display component and the base with another one of the plurality of views as the default display;

27[c]	a view selector component configured to transition between the plurality of views in response to activation;
27[d]	a storage component configured to store an association between at least one of a plurality of visual representations and digital media content;
27[e]	wherein the execution component is further configured to execute the association with the at least one of the plurality of visual representations with digital media content in response to selection and transition the display to a view of the digital media content in response to the act of executing the association; and
27[f]	wherein the display component is configured to display user digital media content and referenced digital media content in the view of the digital media content.

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 claims 1-9, 15-22, and 24-27 (“Challenged Claims”) of U.S. Patent 8,612,888 (“the ’888 patent”; EX-1001).

In May 2020, LiTL LLC (“PO”) sued Lenovo (United States) Inc. and Lenovo (Beijing) Ltd. (collectively, “Lenovo”) in district court. At that time, PO did not sue any of Petitioners here. Thus, Lenovo alone previously challenged the ’888 patent in an IPR but made significant errors in doing so. Notably, Lenovo failed to prove unpatentability in its IPR based on a limitation (“plurality of views”) the Examiner found in original prosecution was taught by the prior art.

Having prevailed in Lenovo’s flawed IPR, PO began a new litigation campaign, suing HP, Dell, and ASUSTek (but not Microsoft) on February 1, 2023. This time, however, PO explicitly identified Windows functionality as a basis for its infringement allegations for certain patents including the ’888 patent, and so Microsoft intervened in those district court suits in October 2023. Petitioners have filed this Petition (their first) within four months of Microsoft’s intervention and before PO has filed any infringement contentions in district court. Importantly, this

Petition shows that the Challenged Claims of the '888 patent are unpatentable as obvious, including the “plurality of views” limitation (consistent with the Examiner’s finding during original prosecution that this limitation was known).¹

II. GROUNDS FOR STANDING

Petitioners certify the '888 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 (*see* 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:

¹ Petitioners submit the declaration of Henry Houh (Ex. 1003), an expert in the field of the '888 Patent. *See* Houh, ¶40 (summary of opinions), ¶¶1-19 (discussing his background and qualifications), ¶23 (materials considered).

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)	
Martinez (U.S. Patent 6,137,468), filed on October 15, 1996, issued on October 24, 2000; prior art under at least 35 U.S.C. §102(b) (EX-1007)	
Proctor (U.S. Patent Application Publication 2006/0227122A1), filed on April 7, 2005, published on October 12, 2006; prior art under at least 35 U.S.C. §102(b) (EX-1010)	
Aldrich (U.S. Patent Application Publication 2006/0265390A1), filed on August 12, 2005, published on November 23, 2006; prior art under at least 35 U.S.C. §102(b) (EX-1012)	
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)	
Chao (U.S. Patent 7,970,240 B1), filed on December 17, 2002, issued on June 28, 2011; prior art under at least 35 U.S.C. §102(b) (EX-1013)	

Ground (all under 35 U.S.C. §103)	Claims	References
1	1, 2, 24, 26-27	Reavey, Martinez, Proctor
2	3-8, 15-17, 20, 21	Reavey, Martinez, Proctor, Aldrich
3	25	Reavey, Martinez, Pröll
4	9, 18, 19	Reavey, Martinez, Proctor, Aldrich, Chao
5	22	Reavey, Martinez, Proctor, Chao

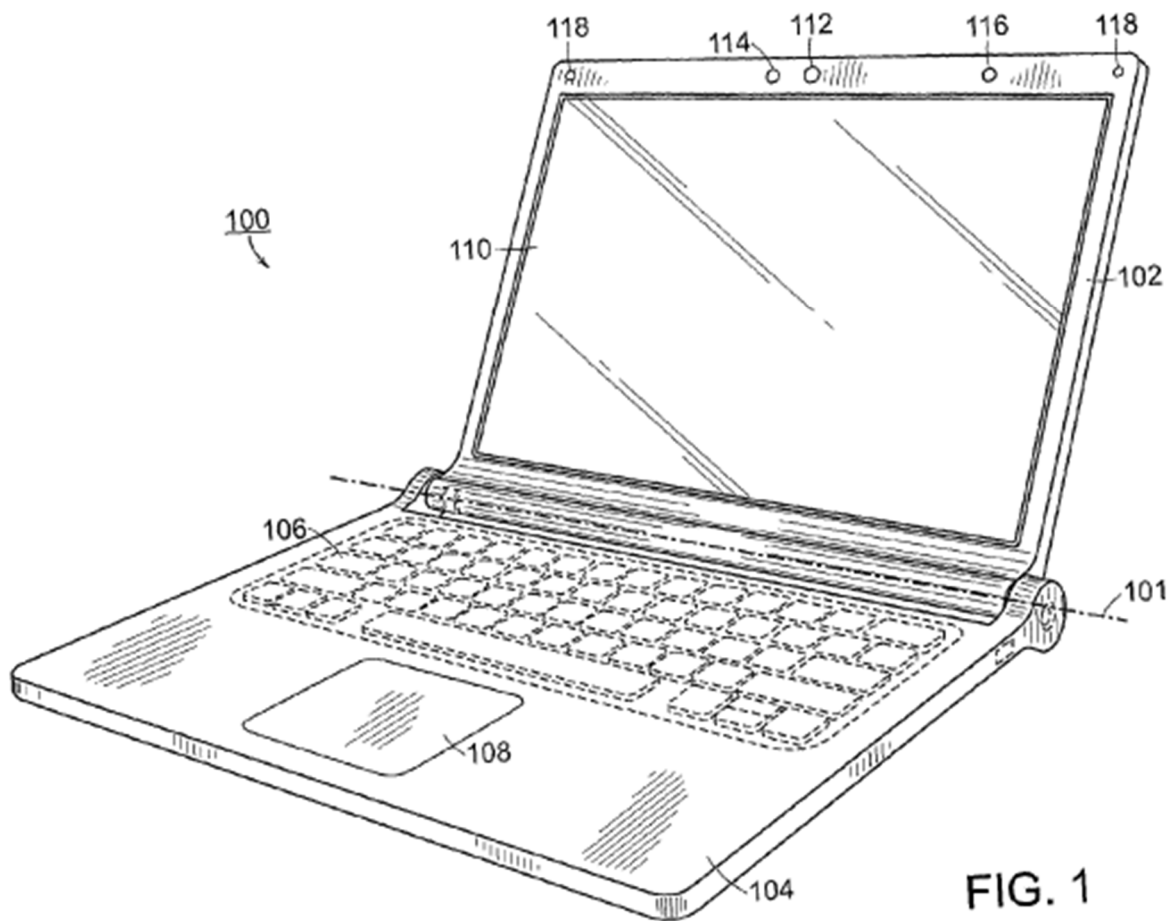
² All references to 35 U.S.C. §§102, 103 are to the pre-AIA statutory framework.

IV. '888 PATENT OVERVIEW

At the relevant time, numerous computing devices existed on the market with a variety of display screens, and a POSITA would have understood the need to customize user interfaces based on the specific configuration of a computing device. Houh, ¶¶41-43.

A. Specification

The '888 patent, filed November 3, 2009, is a continuation-in-part (“CIP”) of Application 12/170,939, filed July 10, 2008, issued as U.S. Patent 8,269,688, and a CIP of Application 12/416,479 (abandoned). Houh, ¶¶44-50. The '888 patent is directed to a “streamlined computer device...includ[ing] a plurality [of] selectable I/O profiles” and configurable into the plurality of display modes, e.g., Figs. 1 (laptop mode) and 22 (easel mode), with a hinge assembly rotatably coupling display component 102 to base 104 of computer 100. EX-1001, Abstract, 15:12-21, 36:41-50.



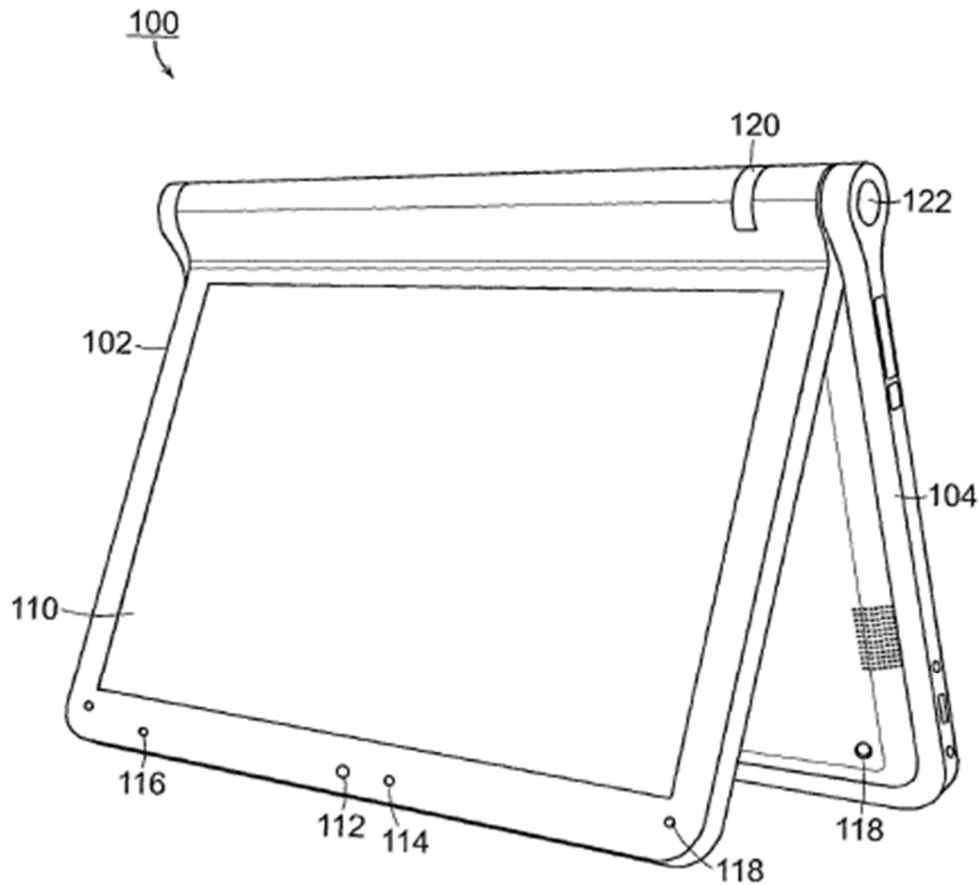


FIG. 22

Each display mode may be associated with a corresponding I/O profile (e.g., “first I/O profile in easel mode may consist of a scroll wheel and a selector button” and second I/O profile in the laptop mode may include a keyboard). *Id.*, 37:19-21, 38:44-56. In different I/O profiles, the displayed content can be rotated manually or automatically by 180° so the displayed content is properly oriented for an intended user. *Id.*, 37:29-41, 39:18-41.

A “graphical user interface [‘GUI’]...organizes interface elements into views of computer content for presentation to a user.” *Id.*, 2:48-50, Fig. 5.

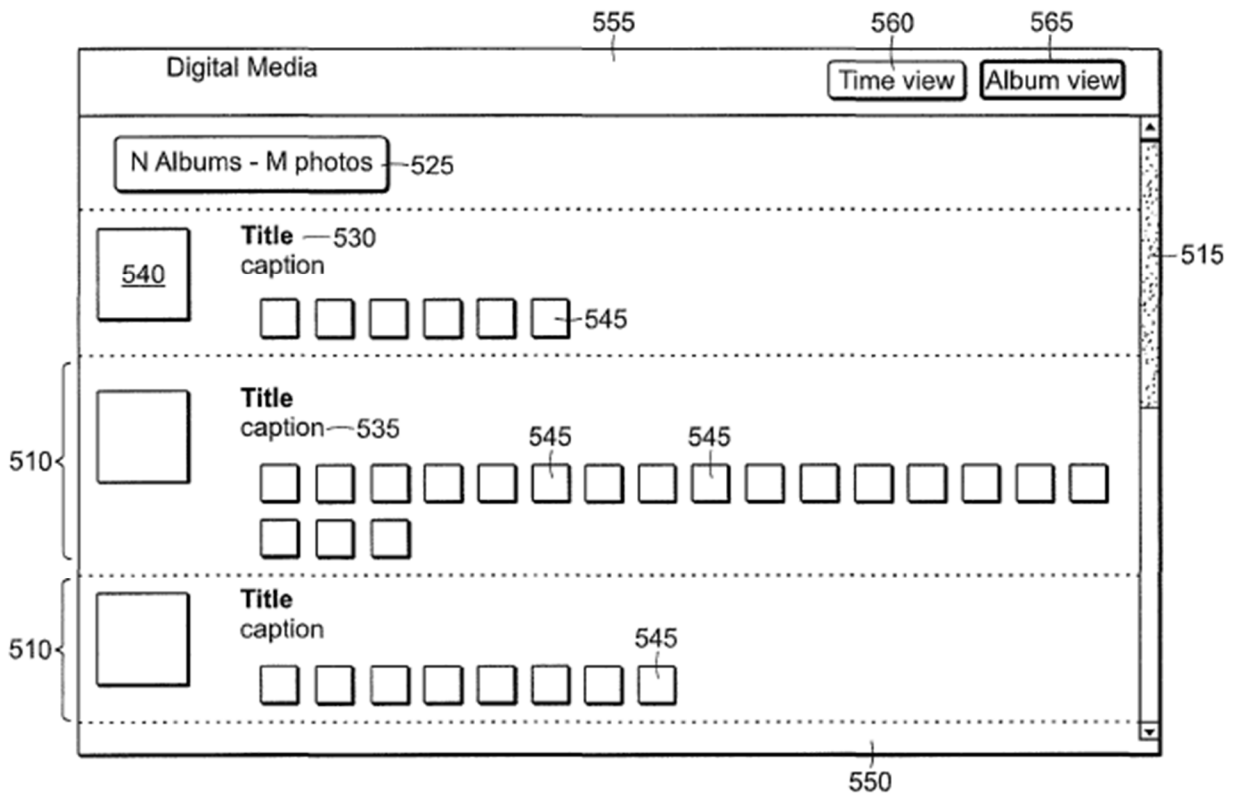


FIG. 5

“Different views are used to provide an interface that is responsive to configurations of the device and responsive to activity being performed by the user.” *Id.*, 2:50-54. The computer content includes photos, some of which may be stored remotely. *Id.*, 20:31-35.

B. Prosecution History

The '888 patent was allowed without any prior art rejections. EX-1002; Houh, ¶¶51-52. Instead, the Examiner issued a notice of allowability with an interview

summary and an examiner's amendment, adding certain claim limitations (*id.*, 729-37). Notably, “the [GUI] comprises at least a plurality of views of digital media content” existed in the pending claims prior to amendment, and the Examiner's reasons for allowance relied on only those added to distinguish from the closest prior art. *See id.*, 736.

C. Prior Patent Office Proceeding

PO sued Lenovo alleging infringement of the '888 patent in May 2020 (EX-1024), and Lenovo subsequently filed an IPR petition challenging the '888 patent. *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00821 (“-821 IPR”), Paper 1 (April 27, 2021). That petition named only Lenovo entities as real parties-in-interest (*id.*, 1-2), and asserted obviousness challenges based on primary references not relied upon in this Petition (*id.*, 3).

In the POPR, PO argued for a construction of “plurality of views” as “a plurality of ways of organizing displayed content,” and argued Lenovo's references did not teach the limitation under that construction. -821 IPR, Paper 5, 34-55. Lenovo did not file a preliminary reply.

The Board denied institution. -821 IPR, Paper 6, 15. For purposes of its decision, the Board agreed with PO's proposed construction of “plurality of views” as “referring to a plurality of ways of organizing visual representations of computer

content” and found that that limitation “is distinct from merely changing the display’s orientation.” *Id.*, 7-9.

V. DISCRETIONARY DENIAL WOULD BE INAPPROPRIATE HERE

A. Status of Prior and Co-Pending Litigation

The ’888 Patent was the subject of a prior litigation against Lenovo, filed on May 22, 2020 and asserting infringement of six patents. EX-1024. Of those, Lenovo requested indemnity from Microsoft only as to U.S. Patent 8,577,957 (the ’957 patent). EX-1031. Microsoft filed an IPR petition challenging 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 of that disclaimer. *Id.*, EX-2008, Papers 8-9. Lenovo did not request indemnity from Microsoft for any other patent involved in the Lenovo litigation, 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 the ’888 patent.

PO and Lenovo ultimately stipulated to dismissal with prejudice of the Lenovo litigation, 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, accusing those defendants of infringing eight patents, including the ’888 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, with preliminary infringement contentions due April 1, 2024; preliminary invalidity contentions due May 1, 2024; a Markman hearing scheduled for October 10, 2024; and four trial dates scheduled for January 20, 2026, February 17, 2026, March 16, 2026, and April 20, 2026. EX-1020, 8, 13, 16.

B. *General Plastic*

General Plastic factors 1-3 weigh heavily against exercising discretion to deny institution. This is each of the Petitioners' first challenge of the '888 patent. Although Lenovo previously challenged the '888 patent, Petitioners here and Lenovo do not have a substantial relationship, unlike the petitioners in *Valve Corp. v. Electronic Scripting Products, Inc.*, IPR2019-00062, Paper 11, 9 (Apr. 2, 2019) (precedential).

For example, unlike in *Valve*, Petitioners and Lenovo are not co-defendants (PO sued Lenovo almost three years earlier), and the prior and co-pending district court litigations do not accuse the same products. Indeed, HP, Dell, and ASUS are direct competitors with Lenovo.

Although Petitioners file this Petition after the decision to deny institution in Lenovo's petition, the timing is the product of PO's litigation conduct, rather than

Petitioners' choice. PO waited almost three years to sue HP, Dell, and ASUS after suing Lenovo (and PO has chosen never to sue Microsoft directly). In addition, any concerns of road-mapping are minimized because the previous Board decision rested on a claim construction issue.

The remaining factors (4-7) also weigh against discretionary denial. Petitioners have diligently worked towards filing this Petition since learning of the asserted prior art. Finally, the Board will not be unduly burdened by addressing this Petition. *See United Fire Protection Corp. v. Engineered Corrosion Solutions LLC*, IPR2018-00991, Paper 10, 17 (Nov. 15, 2018).

This Petition is not an abusive serial attack, but rather these Petitioners' first Petition to challenge a patent on which they were sued well after the prior petitioner. Particularly given the prior petition's shortcomings (not sufficiently alleging a claim element was met when the Examiner found that element in the prior art during original prosecution), evaluating this Petition on the merits will serve the Board's mission "to improve patent quality and restore confidence in the presumption of validity that comes with issued patents." *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 272 (2016).

C. *Fintiv*

Petitioners expect PO will not raise *Fintiv* 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 (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 six prior art references. Of those, one (Reavey) was cited in an IDS during original prosecution and never applied by the Examiner (EX-1002, 229, 773), and two (Aldrich and Chao) were relied on by Lenovo in its prior IPR (-821 IPR, Paper 6, 6). The other three references (Martinez, Proctor, and Pröll) have never been before the Office as to the '888 patent.

Considering the first part of the *Advanced Bionics* framework (*Becton, Dickinson* factors (a), (b), (d)), although three 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. During prosecution, Reavey was listed in an IDS, but the Examiner did not apply Reavey in a rejection or consider Reavey in combination with any of the references on which this Petition relies.

Lenovo's IPR petition relied on Aldrich and Chao, but that IPR petition did not include Reavey at all, which forms the basis for all of the unpatentability challenges in this Petition. This Petition relies on Aldrich and Chao as to only certain dependent claim limitations in Grounds 2, 4, and 5, and not for the “plurality of views” limitation on which the Board's institution decision rested in the prior IPR. 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 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

Other than as discussed below, Petitioners believe the Challenged Claims have their plain and ordinary meaning, and Petitioners do not believe express claim construction is needed to demonstrate the Challenged Claims are unpatentable. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

A. “plurality of views of digital media content”

In IPR2021-00821, the Board preliminarily construed a “plurality of views of digital media content” 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.” -00821 IPR, Paper 6, 7-9. Because the Board denied institution, it did not further consider that construction based on a full trial record. *See id.* This Petition shows that the Challenged Claims are unpatentable under the Board’s construction of “plurality of views of digital media content.” Houh, ¶¶54-56.

B. Means-Plus-Function (“MPF”)³

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(I)(A) (“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 claims are unpatentable regardless of whether the claims are treated as MPF, if the

³ Petitioners reserve the right to raise and address indefiniteness, enablement, and/or written description issues for the Challenged Claims in other proceedings.

Board agrees the claims are MPF and require corresponding structure in the specification, Petitioners identify description of corresponding structure for each such limitation below. Houh, ¶57.

1. “view selector component”

Limitation (Function Underlined)	Corresponding Structure
a view selector component configured to <u>permit...</u> as recited in 1[c] and 26[d]	a keyboard, touchpad, mouse, scroll wheel, or navigation buttons configured to allow a user to manually select an organization of the displayed content, and its equivalents. <i>See, e.g.</i> , EX-1001, 6:18-23, 37:12-28, 39:23-41.
a view selector component configured to <u>transition...</u> as recited in 27[c]	

2. “aggregation component”

Limitation (Function Underlined)	Corresponding Structure
an aggregation component configured to <u>permit...</u> as recited in 15[a]	an organization tool on a GUI (e.g., the “pick list” control) that gathers together a group of digital content items for a particular action, and its equivalents. <i>See, e.g.</i> , EX-1001, 26:39-42, 28:26-29, 28:41-52, 28:59, Fig. 10.

3. “display component”

Limitation (Function Underlined)	Corresponding Structure
a display component configured to <u>display...</u> as recited in 27[a], 27[f]	A display screen. <i>See, e.g.</i> , EX-1001, 8:3-5, 8:23-27, 10:3-4, 11:37-39, 15:33-36, FIG. 1.

4. “storage component”

Limitation (Function Underlined)	Corresponding Structure
a storage component configured to <u>store...</u> as recited in 27[d]	A local or remote storage device. <i>See, e.g.,</i> EX-1001, 15:56-58, 16:27-33, 16:51-56, 16:63-67, 17:5-10, 17:16-22, 20:26-28, Fig. 2 (storage system 250).

5. “execution component”

Limitation (Function Underlined)	Corresponding Structure
an execution component configured to <u>transition...execute... transition...</u> as recited in 27[b], 27[e]	A processor and related software configured to: (i) automatically reorganize the displayed content in response to a physical configuration of the computer device (<i>see, e.g.,</i> EX-1001 at 6:18-23, 37:12-28, 38:5-11, 38:49-56, 39:4-5) and (ii)-(iii) implement GUI elements that allow a user to transition between different views of the digital media content (<i>see, e.g., id.,</i> Fig. 5, 6:18-23, 21:60-67, 37:12-28, 38:49-56, 39:4-5) and its equivalents.

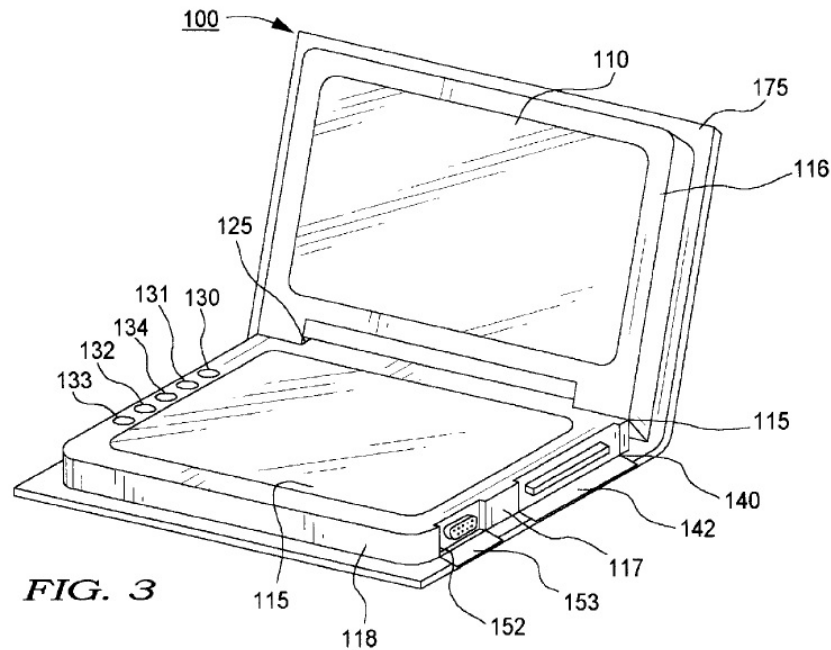
VIII. DETAILED EXPLANATION OF GROUNDS

A. Ground 1: Obviousness Over Reavey, Martinez, Proctor (Claims 1, 2, 24, 26-27)

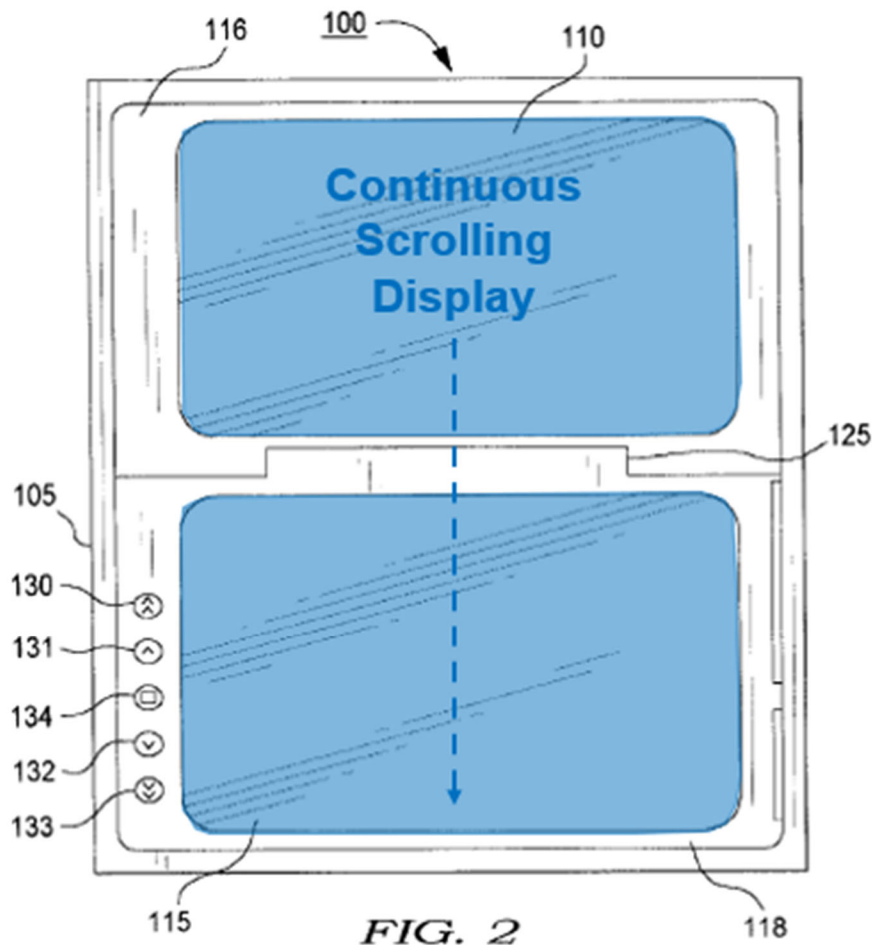
1. Reavey

Reavey discloses an electronic book device 100 for use in multiple physical configurations, including two screens, first panel screen 110 and second panel screen 115, connected by hinge 125. Reavey, 1:11-15, 5:32-35; *see* Hough, ¶¶58-59. Either

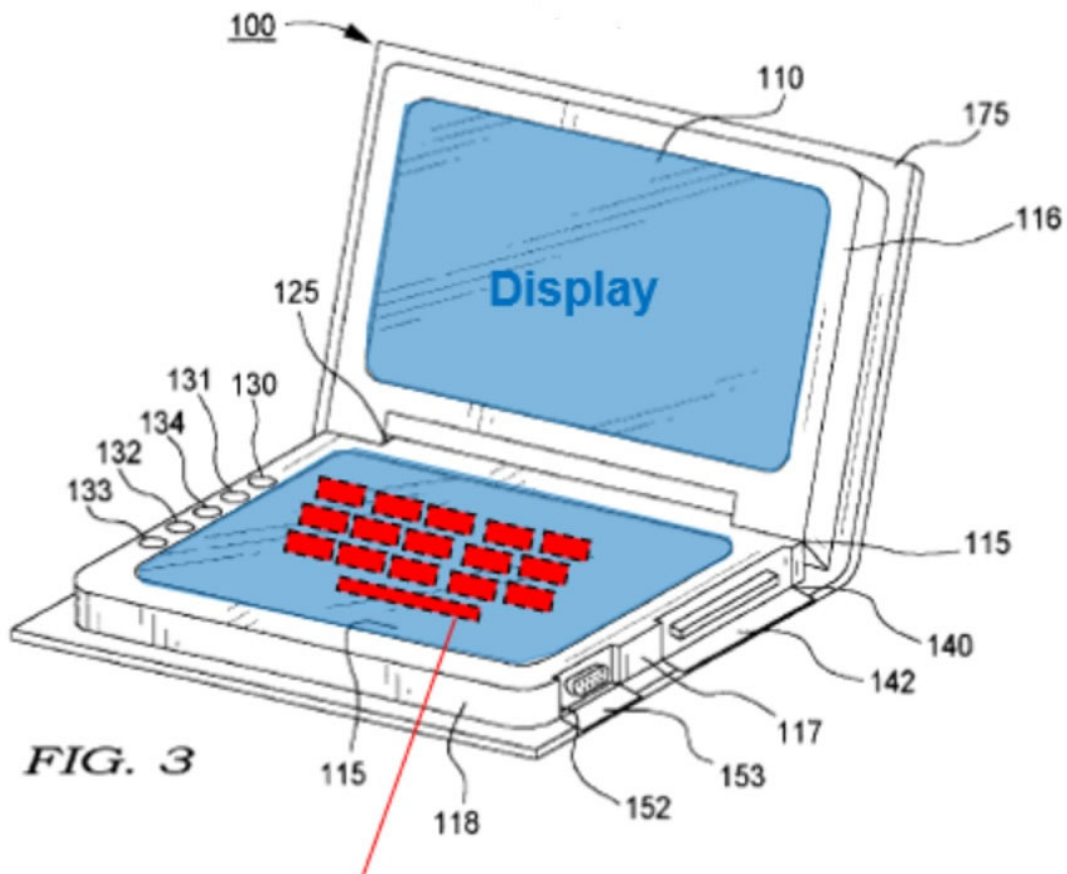
screen can be provided as a touchscreen, and device 100 has other user input/output devices, including navigation keys 130-133 and “assistant key 134.” *Id.*, 5:39-48, Fig. 3.



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. *Id.*, 7:35-39. In Mode 2, screens 110/115 are arranged horizontally, in an over-under fashion, lying flat on a surface, and “act as one screen, with the text and graphics scrolling downward from one to the other.” *Id.*, 7:42-62, Fig. 2 (annotated below).



In Mode 3, screens 110/115 are arranged horizontally, in an over-under fashion, with the screens only partially open with respect to one another, such as at 120°, and 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, 7:53-58, Fig. 3 (annotated below).



**Disappearing
Keyboard**

Device 100 changes between these modes “automatically” when “opened.”

Id., 7:45-46, Fig. 9 (below).

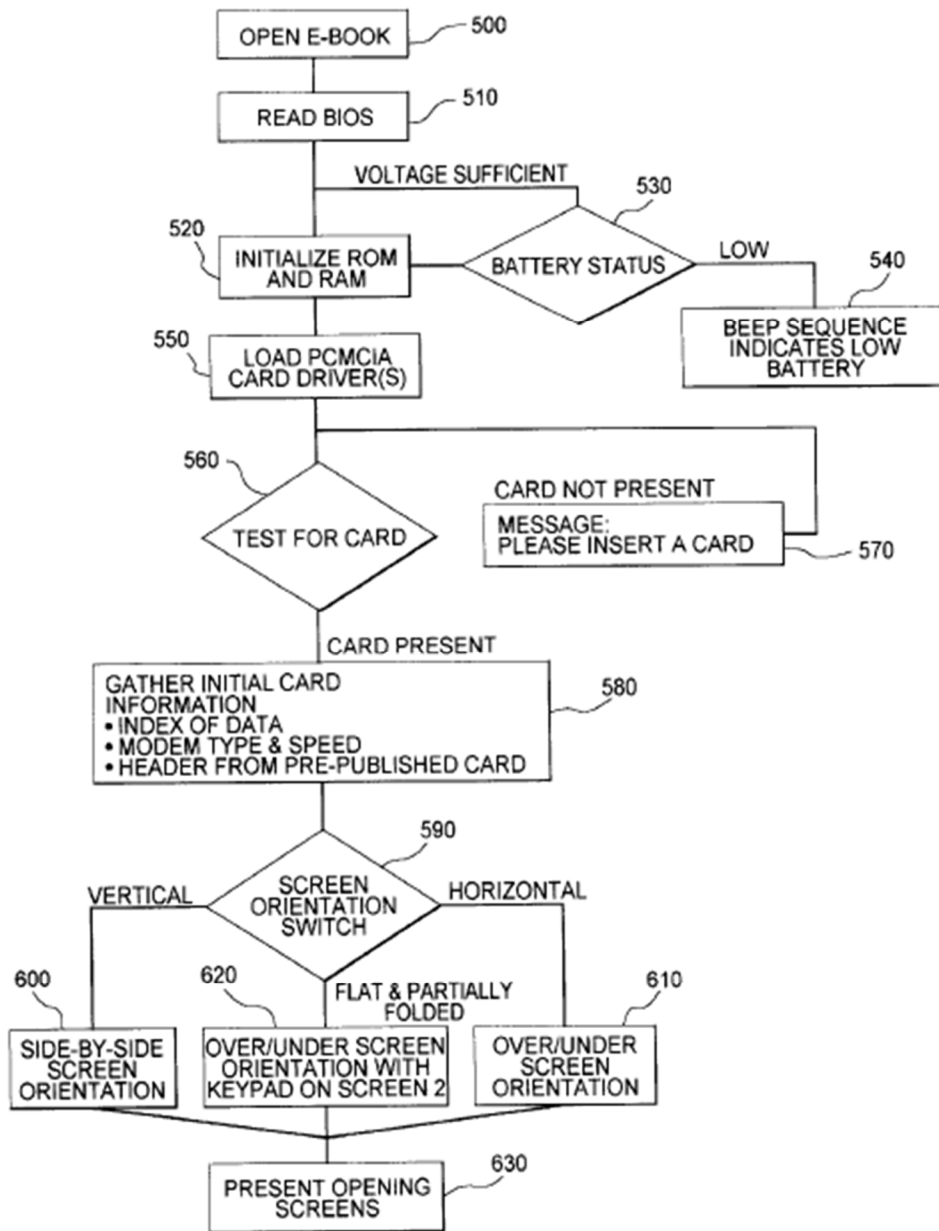
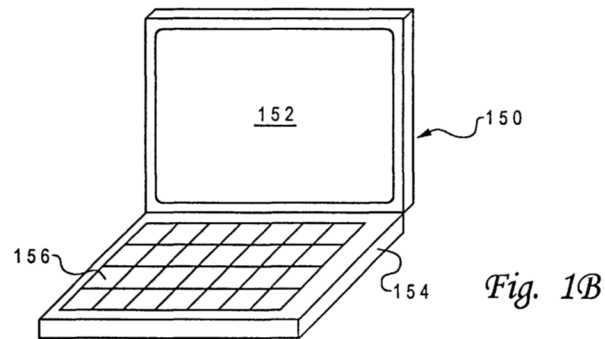


FIG. 9

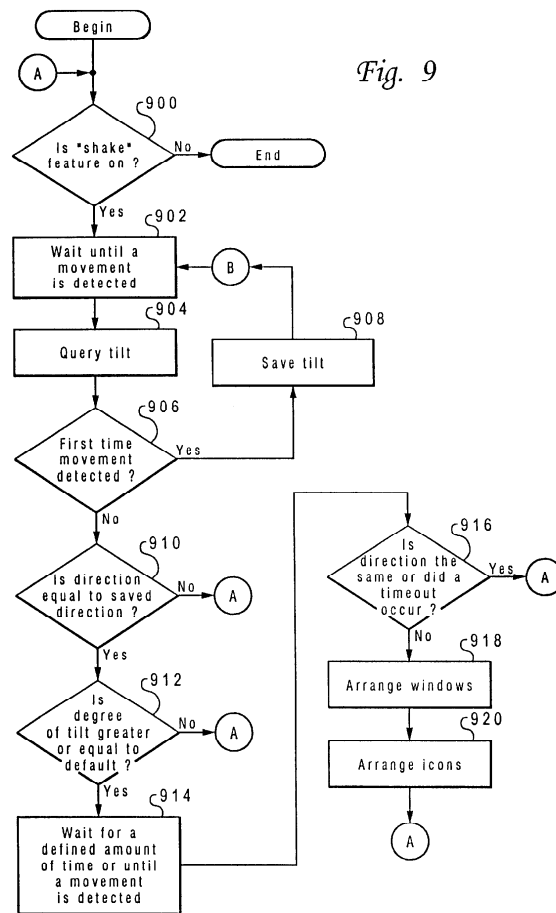
This “[s]creen orientation processing” determines the correct mode for Reavey’s device and then displays the associated screens. *Id.*, 8:42-9:6.

2. Martinez

Martinez relates to “altering the display of an object on a display device in a data processing system.” Martinez, Abstract, Fig. 1 (below); *see* Houh, ¶¶60-62.



Martinez adjusting its display based on sensor input, such as in response to a “shake.” Martinez, Fig. 9 (below).



Martinez detects shaking the device containing the sensor to the left and right relative to the user in steps 902-916. *Id.*, 6:5-31. If a shake is detected, the process “arranges the windows (step 918). For example, the windows could be arranged in a tile or cascading fashion. Next, the icons are arranged (step 920). The icons can be arranged in any preselected manner the user or programmer desires.” *Id.*, 6:32-37.

3. Proctor

Proctor relates to an “electronic device” with “display panel that operates in multiple modes to support different display capabilities” including a “first mode” in

which “the entire display panel is operational” and a “second” or “partial display mode.” EX-1010, ¶[0008], Figs. 10-11 (below), ¶[0056]; *see* Houh, ¶¶63-66.

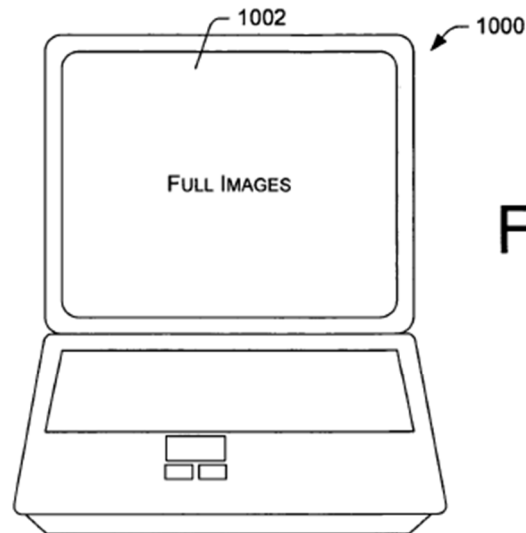
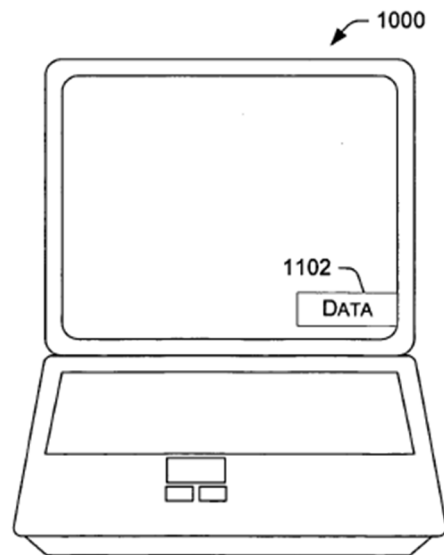


Fig. 11



Proctor’s device accepts several types of inputs to transition between its two display modes, including mechanical triggers (e.g., sliding two media player covers open and closed), “soft-keys or other visual controls” in a GUI, and manual, user-

selectable switch 114 mounted on the side of device case 102. *Id.*, Figs. 1, 6-7, ¶¶[0030], [0051].

4. Motivation to Combine

A POSITA would have been motivated to combine the Reavey's with Martinez's GUI display changes and Proctor's display switching. Houh, ¶¶67-76. A user manipulates Reavey's device into different physical configurations, including a laptop configuration (Mode 3) and a flat configuration (Mode 2). EX-1009, 1:11-15, 7:24-62, Figs. 2-3. Reavey's flat configuration (Mode 2) has two screens 110/115 available for the display of content, and its laptop configuration (Mode 3) has only one screen 110 available for the display of content, with other screen 115 displaying a touch-sensitive keyboard. *Id.*, 7:39-62, Figs. 5-6. In the. *Id.*, 7:39-42, 7:53-58, Fig. 6.

A POSITA would have recognized the organization of Reavey's GUI in changes when the user manipulates the device from the laptop configuration (Mode 3) to the flat configuration (Mode 2). Houh, ¶¶68. 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. EX-1009, 7:24-62, Figs. 2-3. Furthermore, in Reavey's laptop configuration, a keyboard is available, while in the flat configuration no keyboard is available and the GUI content is accessed 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, ¶68.

Although a POSITA would have recognized that a change to the organization of the GUI was required between the laptop configuration (Mode 3) and flat configuration (Mode 2), Reavey itself does not explicitly disclose how the GUI should be organized. A POSITA would have been motivated to combine Martinez's GUI display changes triggered by Proctor's switch with Reavey's device as discussed below. *Id.*, ¶¶69-75.

Martinez teaches a GUI that allows arranging different "preselected" views that include the reorganization of icons and windows. EX-1007, Figs. 9, 10, 6:32-36. Reavey and Martinez disclose similar systems with a laptop configuration, as well as hardware-based triggers that detect physical changes to the configuration or orientation of the device. Houh, ¶70; Reavey, Figs. 1-2, 6:6-10; EX-1007, Figs. 9-10, 6:32-36. A POSITA would have been motivated to trigger Martinez's views based on Reavey's "spring and ball bearing mechanism" using "hinge detents" and "multi-function gravity switches." EX-1007, 1:62-67; EX-1009, 6:43-46, 7:54-58; Houh, ¶70. Modifying Reavey by adding Martinez's teachings would have been

desirable to allow for a more user-friendly GUI organization when its display is used in different configurations. Houh, ¶70.

Further, Martinez teaches its invention “can adjust visual components on a display device so that the components are level regardless of the position of the display device” including portrait or landscape orientations, using a tilt sensor that reads x- and y-direction tilts with reference to a relative plane. EX-1007, 4:41-46, 5:24-39, Figs. 8-10. A POSITA would have been motivated to integrate Martinez’s sensor into the hinge assembly alongside Reavey’s “spring and ball bearing mechanism” because Martinez teaches that it would be “advantageous to have a method and apparatus to detect various changes in orientation of hardware associated with a data processing system in which the display is altered in response to various changes in the orientation of hardware.” EX-1007, 1:62-67; Houh, ¶70. That is, Martinez provides the “how” to Reavey’s automatic orientation, and it would have been well within a POSITA’s skill to incorporate the mechanical and electrical components into the existing hinge of Reavey’s device to achieve a predictable improvement increasing the responsiveness and accuracy of Reavey’s display in relation to any degree of rotation of a laptop with respect to *both* its opening angle and its side-to-side movement. Houh, ¶70.

Proctor improves upon the combination by further expanding the set of inputs that trigger a change in display, and a POSITA would have been motivated to apply

Proctor’s teachings to the combination for that reason. All of Reavey, Martinez, and Proctor describe changing a view in response to detecting changes to a physical configuration or aspect of a computing device. *Compare* EX-1009, 7:24-62, 8:61-65, Fig. 9, *with* EX-1007, 5:40-7:20, *with* EX-1010, ¶[0030]; Houh, ¶76.

5. Claim 1

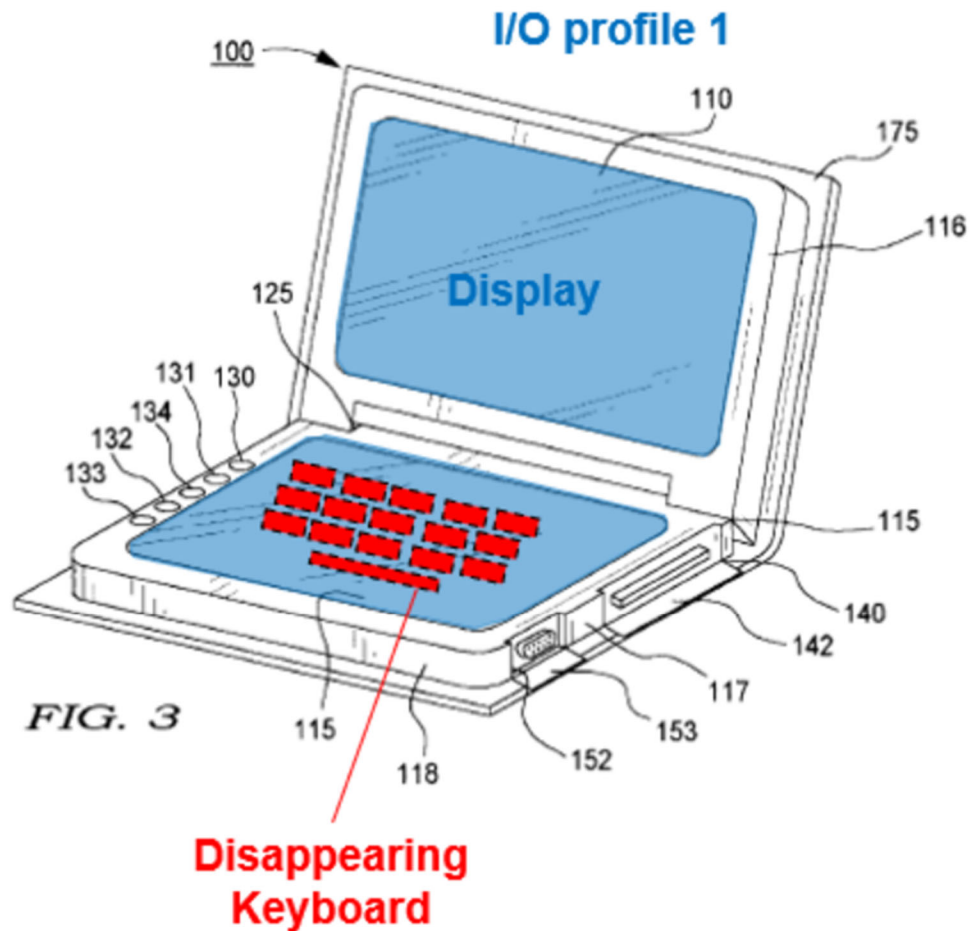
a. 1[pre]

To the extent limiting, Reavey teaches 1[pre]. Houh, ¶¶77-82. Specifically, Reavey’s device connects to the internet and “various sources” to source, download, scroll and page through electronic periodicals, books, and “updates to books” (i.e., “access and manage digital media libraries”) that are “of interest.” EX-1009, 3:42-57, 8:11-36. A POSITA would have understood Reavey’s device is “streamlined” in the same way taught in the ’888 patent. Houh, ¶77 (citing EX-1001, 2:44-50, 13:59-61, 18:31-38, 19:7-23).

In Reavey, a user accesses and manages digital media libraries with “a plurality of selectable I/O profiles,” as the ’888 patent describes. EX-1001, 47:55-56. As context, a “first I/O profile in easel mode” includes “a scroll wheel and a selector button” (*id.*, 37:19-21, 38:44-50), and a “second I/O profile” includes “a keyboard (e.g., laptop mode)” (*id.*, 38:51-52). These I/O profiles are “selectable” by the user manipulating the device itself (e.g., from an easel orientation to a laptop orientation). *Id.*, 38:48-52. In other words, the ’888 patent’s intrinsic record shows

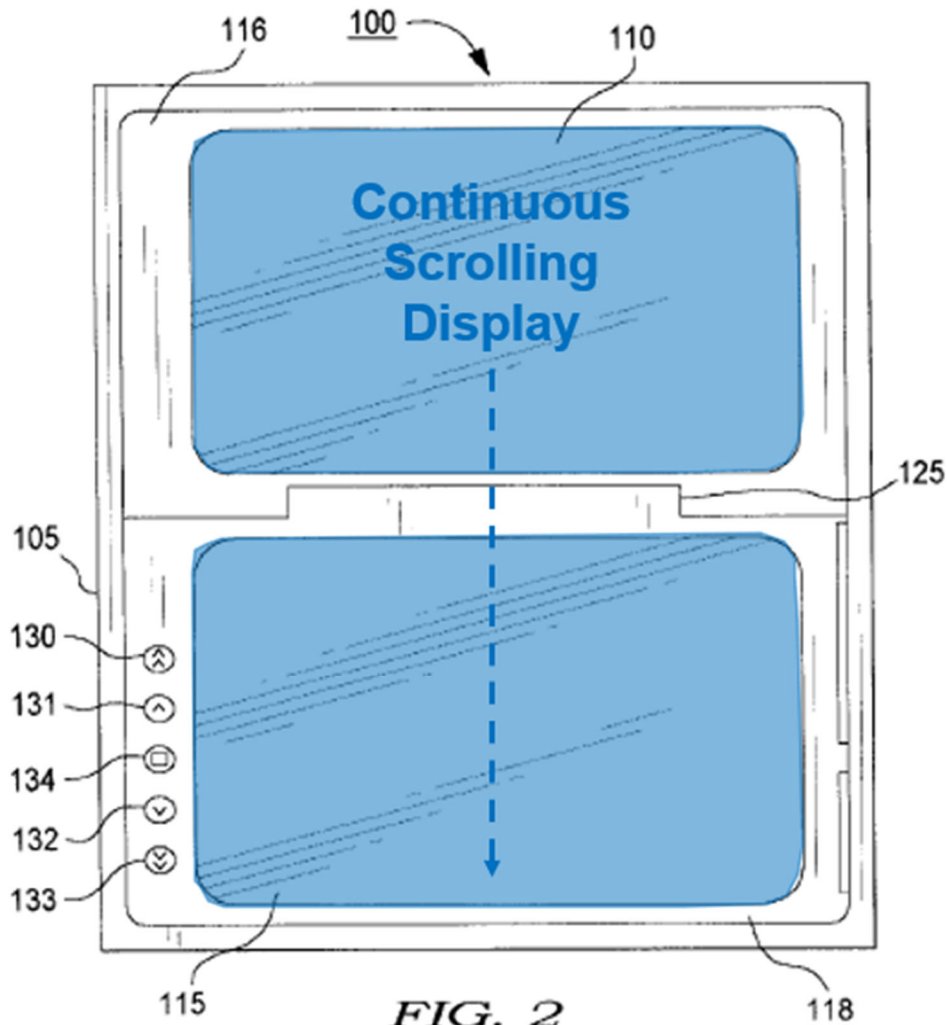
“a plurality of selectable I/O profiles” encompasses the available user input platforms selected when a user manipulates the device into different physical configurations.

Consistently, Reavey teaches two or more such I/O profiles. One selectable I/O profile is “mode 3” (also called “over-under with touchscreen keyboard” mode), in which a top screen displays content (i.e., output) and a bottom touch screen displays a keyboard for manipulation (i.e., input) when the devices’s two halves are rotated to a laptop-type configuration. *Id.*, 3:12-28, 7:24-62, Fig. 3 (annotated below).



Another selectable I/O profile is “second [mode]” (also called “over-under” mode, in which the device’s two 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.*, 3:18-21, 7:24-62, Fig. 2 (annotated below).

I/O profile 2



If PO argues a “plurality of I/O profiles” is synonymous with a “plurality of views,” as recited in 1[a], the Reavey-Martinez combination teaches that limitation (see §VIII.A.5.b below).

b. 1[a]

The Reavey-Martinez combination teaches 1[a]. Houh, ¶¶83-92. Reavey teaches “displaying a [GUI] on the computing device” because its device have two displays operable as two touch screens to present digital media content. EX-1009, Fig. 7 (items 331, 332), 5:32-38. A POSITA would have understood Reavey includes a GUI for a user to interact with that content. Houh, ¶¶83-84.

The Reavey-Martinez combination teaches “the [GUI] comprises at least a plurality of views of digital media content.” 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 this limitation does not encompass “merely changing the display’s orientation.” *See* §VII.A.

As discussed in §VIII.A.5.a (1[pre]), Reavey teaches a device with a plurality of I/O profiles, which automatically adjusts the display to a desired mode. *See* EX-1009, Figs. 2-3, 3:12-28, 7:24-62. Specifically, Reavey teaches two different organizations of content (one with a single screen of content with a virtual keyboard and the second with two screens of content in a tall continuously scrolling display). Houh, ¶87.

Although Reavey discloses different GUI organizations of content, PO may argue Reavey is not sufficiently explicit in its teaching of a “plurality of ways of organizing visual representations of computer content.” If PO argues or the Board

finds Reavey's teachings insufficient alone, a POSITA would have found it obvious to combine Reavey with Martinez's teachings for this limitation.

Specifically, in its Figure 9 and associated description, Martinez teaches using a sensor to detect movement (in Martinez's particular embodiment, a shake gesture) and based on that movement, to arrange (i.e., organize) windows and/or icons in a pre-selected manner, such as "a tile or cascading fashion." EX-1007, Fig. 9, 5:66-6:37. A POSITA would have recognized tile and cascading as two different ways of organizing icons or windows ("views of digital media content"). Houh, ¶¶89-90.

A POSITA would have been motivated to apply Martinez's views to be triggered based on Reavey's hardware-based trigger that detects rotational changes between the halves of Reavey's device and responds to such changes with a different view. Reavey and Martinez disclose similar systems containing a sensor that detects changes to the device and responds to such changes with a different GUI display. Houh, ¶92. A POSITA would have found the combination of Martinez's views in Reavey's system to predictably improve usability of Reavey's system to allow for views that include the reorganization of the icons and windows, as discussed in §VIII.A.4. *Id.*, ¶89-91. Such a modification would have been well within the programming skills of a POSITA and would have been desirable to allow for a more user-friendly GUI organization when Reavey's keyboard is not in use. *Id.*

c. 1[b]

The Reavey-Martinez combination teaches 1[b]. Houh, ¶93. As discussed in §VIII.A.5.a (1[pre]), Reavey teaches selecting an I/O profile when the user manipulates the device into a configuration (e.g., laptop, flat). As discussed in §VIII.A.5.b (1[a]), the Reavey-Martinez combination teaches transitioning between views in response to a detected change in device configuration (which results in I/O profile selection). A POSITA would have been motivated to combine the relied-upon teachings of Reavey and Martinez for the same reasons discussed in §§VIII.A.4, VIII.A.5.b. Houh, ¶¶67-76, ¶¶91-92.

d. 1[c]

The Reavey-Martinez combination in further combination with Proctor teaches 1[c], under MPF or not. Houh, ¶¶94-99. For MPF, the corresponding structure includes navigation buttons configured to allow a user to manually select an organization of the displayed content, and equivalents. *See* §VIII.A.4.

As discussed in §§VIII.A.5.b, VIII.A.5.c (1[a], 1[b]), the Reavey-Martinez combination teaches transitioning between the plurality of views in response to selection of an I/O profile. A POSITA would have been motivated to include functionality to also allow a user to transition between views manually by using a view selector component, such as a navigation button. Houh, ¶¶95-96. In other words, taking an automatic activity and merely allowing it to be performed manually

would have been obvious to a POSITA. *Cf.* MPEP §2144.04(III) (citing *In re Venner*, 262 F.2d 91, 95 (CCPA 1958)). Houh, ¶¶98-99.

It was well known at the relevant time to use a user interface element such as a navigation button to change the GUI presentation. Houh, ¶96. For example, Proctor's switch 114 is a "mechanical switch that allows a user to physically choose a desired mode of operation" where "[p]ressing or sliding the switch 114 to a first operation position selects the full display mode, and movement to a second operational position chooses the partial display mode." EX-1010, Fig. 1 (annotated below), ¶[0030]; *see also id.*, ¶¶ [0049], [0056].

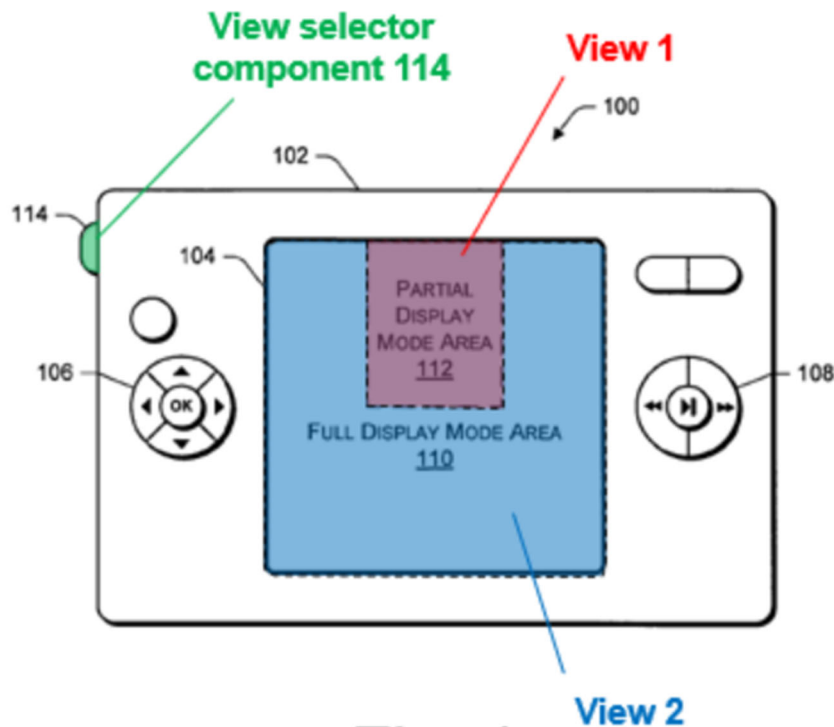
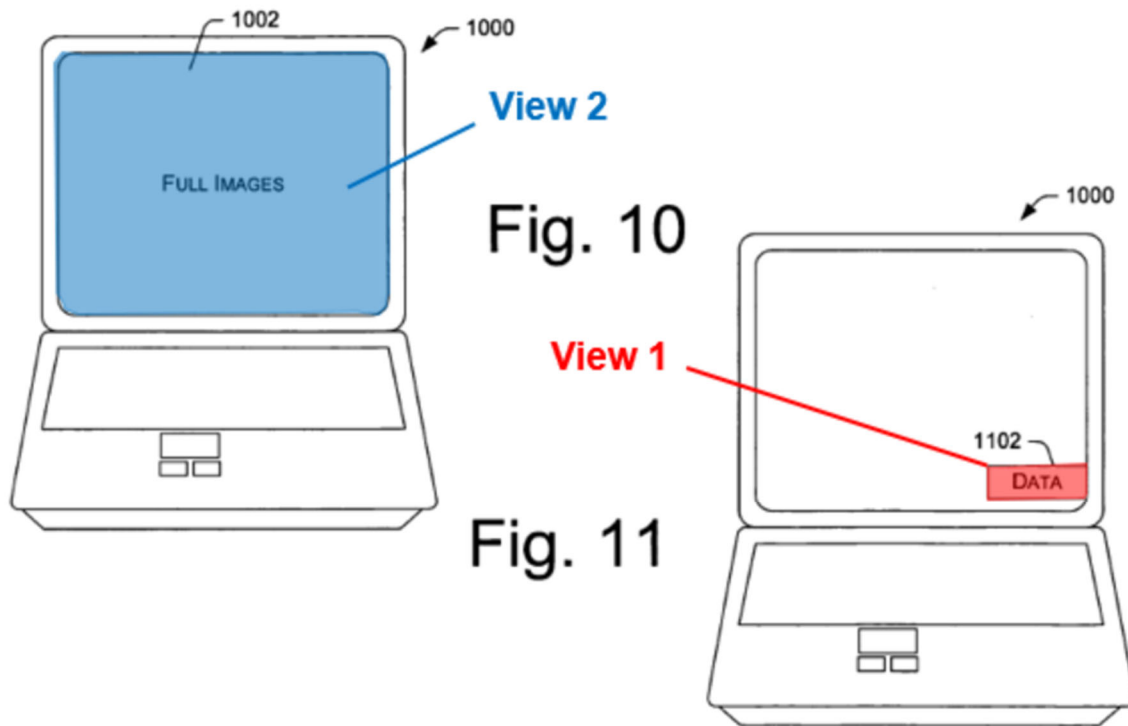


Fig. 1

It would have been obvious to apply known navigation buttons, such as Proctor's switch, to the Reavey-Martinez combination to allow the additional functionality of the user being able to manually switch between views. Houh, ¶98. Doing so would have amounted to no more than applying a known technique (using a manual switch) to a known device (Reavey's device) to achieve a predictable result (manual user switching between views). *Id.* Although Proctor expressly discloses its switch in its portable entertainment device embodiment (EX-1010, ¶[0010], Fig. 1), a POSITA would have recognized such a switch as equally applicable to a laptop configuration, such as in the Reavey-Martinez combination or in Proctor's Figures 10 and 11 (annotated and reproduced below). Houh, ¶98; EX-1010, Figs. 10-11, ¶[0056].

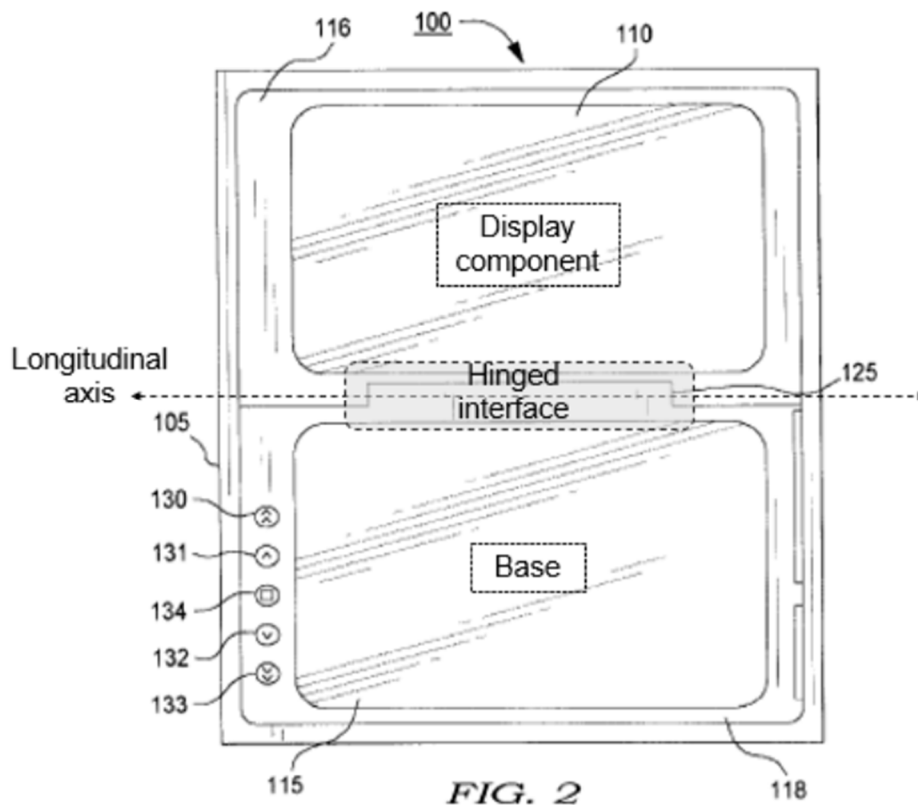


e. 1[d]

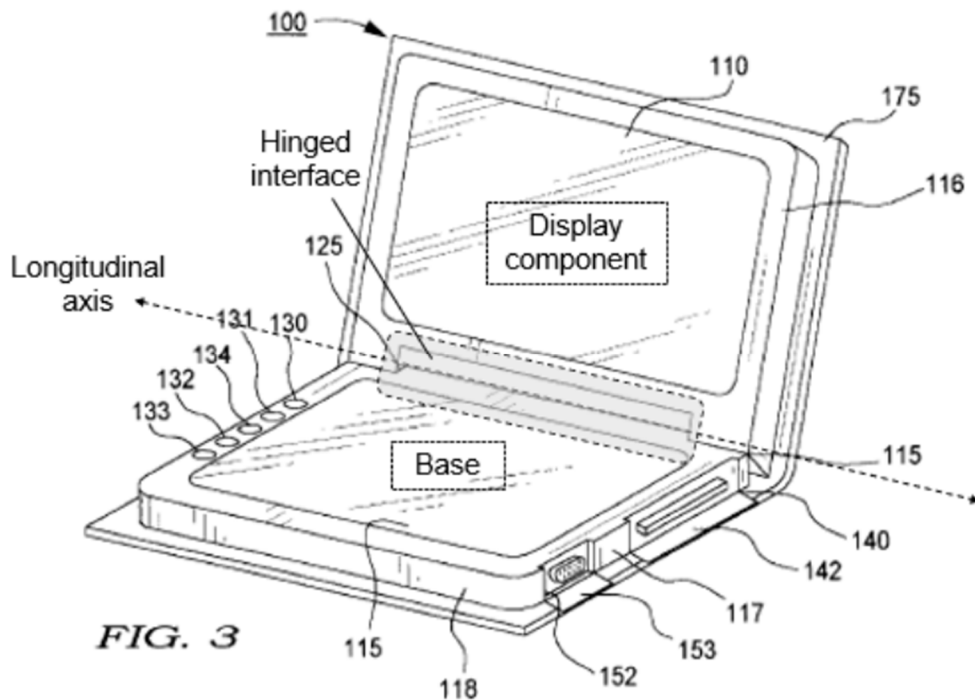
See §VIII.A.5.c (1[b]). Houh, ¶100.

f. 1[e1]

Reavey teaches 1[e1]. Houh, ¶101. As discussed in §VIII.A.5.a (1[pre]), Reavey teaches a number of modes where a user can rotate the display and base relative to one another about a longitudinal axis. EX-1009, Abstract (“The device features a means for orientating the material on the electronic display unit responsive to an opening position of the electronic book device.”), 1:5-16, 3:13-27, 5:32-37. Reavey’s Figure 2 (annotated below) shows its hinged interface and longitudinal axis about which the display component and base rotate:



Reavey's Figure 3 (annotated below) shows those same components when the base and display components are rotated a different amount:



Houh, ¶101.

g. 1[e2]

The Reavey-Martinez combination teaches 1[e2]. Houh, ¶¶102-04. Reavey discloses “rotation of the display component about the longitudinal axis from a closed mode to a first physical orientation configures the computing device into a laptop mode having a first physical configuration of the display component and the base.” EX-1009, Abstract (“responsive to an opening position of the electronic book device”), 1:5-16 (“in an over/under fashion, i.e. like a laptop computer”), 3:13-29 (“Activation and deactivation is accomplished by the opening and closing of the device, respectively.”), 4:1-6 (“The electronic book device features a means for

orientating the material on the electronic display unit responsive to an opening position of the electronic book device.”), Fig. 3.

Figure 9 (annotated below) depicts of flowchart of the operation of Reavey’s device.

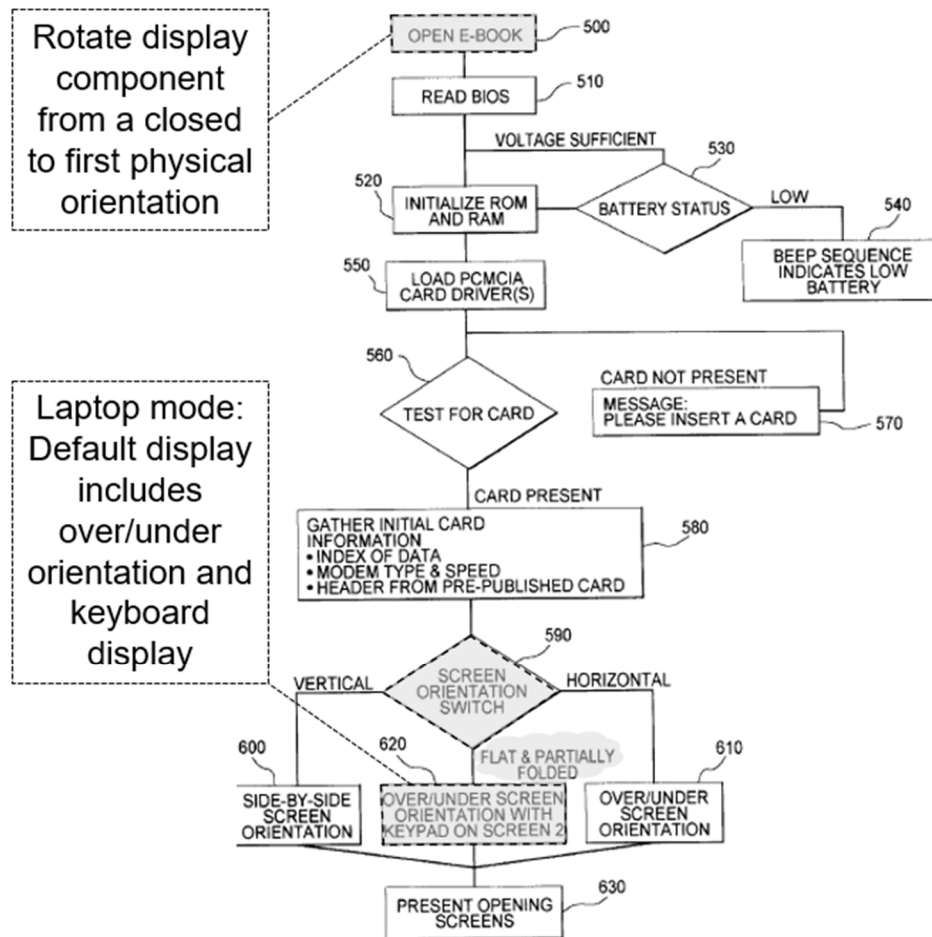


FIG. 9

As shown in Figure 9, after Reavey’s device is opened from closed to laptop mode in step 500, the screen orientation switch determines in step 590 that the device is flat and partially folded (i.e., in laptop mode). The device then presents the

opening screen with an over/under orientations and a keyboard on the base. *Id.*, 8:43-46, 61-66, Fig. 9.

In the combination, a POSITA would have been motivated to organize windows in a cascading view as taught in Martinez as the default for Reavey's laptop configuration as beneficial for Reavey's laptop configuration to conserve screen real estate when one of the screens is dedicated to the virtual keyboard and so only one screen is available for keeping multiple computer application windows open and running. Houh, ¶104.

h. 1[e3]

The Reavey-Martinez combination teaches 1[e3]. Houh, ¶¶105-06. Reavey teaches “rotating the display component about the longitudinal axis from the closed mode to a second physical orientation configures the computing device into another display mode having a second physical configuration of the display component and the base.” EX-1009, Abstract (“responsive to an opening position of the electronic book device”), 3:13-27 (“the panels are in an over-under placement and can function as one panel with text and graphics scrolling downward from one to the other”), 3:28-29 (“Activation and deactivation is accomplished by the opening and closing of the device.”), 4:1-6. Figure 2 shows Reavey's device in a second physical configuration (i.e., horizontal, flat, not folded), and when going from closed to this

mode, the device presents the opening screen with an over/under orientation but with *no* keyboard on the base (instead the base serves as another screen) (*id.*, Fig. 9).

In the combination, a POSITA would have been motivated to organize windows in a tile view as taught in Martinez as the default view for Reavey's Figure 2 configuration as beneficial with two touchscreens available for content to allow more windows to be displayed and more gestures to be used to navigate them in an environment with more available screen real estate. Houh, ¶106..

i. 1[f]

The Reavey-Martinez combination teaches 1[f]. Houh, ¶¶107-08. Associating a visual representation (such as a thumbnail or icon) with digital media content (such as a picture or application) was well-known and conventional at the relevant time. *Id.* Thus, a POSITA would have understood the windows organized in the combination's views (based on Martinez's teachings) as visual representations associated with digital media content. *Id.*

j. 1[g]

The Reavey-Martinez-Proctor combination teaches 1[g]. Houh, ¶¶109-111.

Initially, the Reavey-Martinez combination teaches 1[g]. *Id.* Specifically, executing the association between a visual representation (e.g., thumbnail, icon, window) and the digital media content (e.g., picture, application) was well-known and conventional at the relevant time. *Id.* Thus, a POSITA would have understood

a user could click on any of the windows organized in the Reavey-Martinez combination's views, and software would then execute the association with digital media content so that the user could view it. *Id.*

If PO argues or the Board finds the Reavey-Martinez combination is insufficient to teach this limitation, it would have been obvious in further view of Proctor. *Id.*, ¶110. Proctor teaches a user “browses the audio library” of titles and selects a song while the device is in full display mode. EX-1010, Fig. 2, ¶[0028]. Upon selection, Proctor's hardware and software transition to a partial display showing only the selected song title. *Id.*, Fig. 3, ¶[0029]. Proctor's audio player embodiment discloses this expressly: a user picks a song (“digital media content”) from a menu of songs (“plurality of visual representations”) and displays the song in partial display (“transition the display to a view of the digital media content in response to the act of executing the association”). *Id.*, Figs. 6-7, ¶¶[0050]-[0051].

Proctor also discloses the selection of digital media content and transition to another view of it. *Id.*, Figs. 2-3, 6-7 (annotated below).

Digital media content selected
from visual representations
displayed in view 1

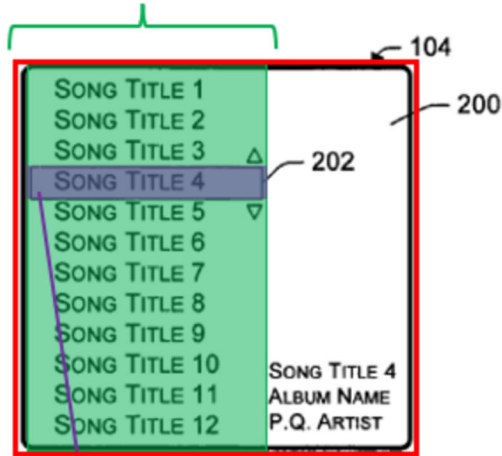


Fig. 2 View 1 (200)

Selection component (202);
executes association

Digital media content
displayed in view 2

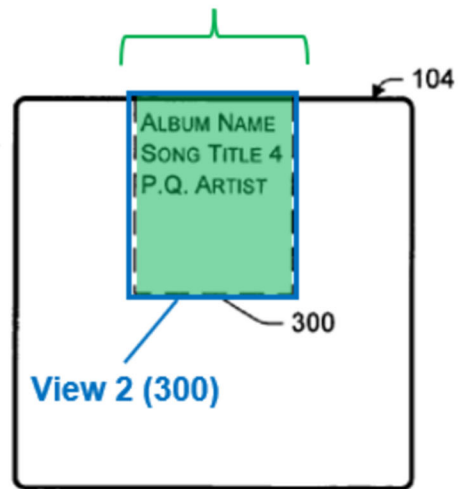


Fig. 3

Digital media content selected
from visual representations
displayed in view 1

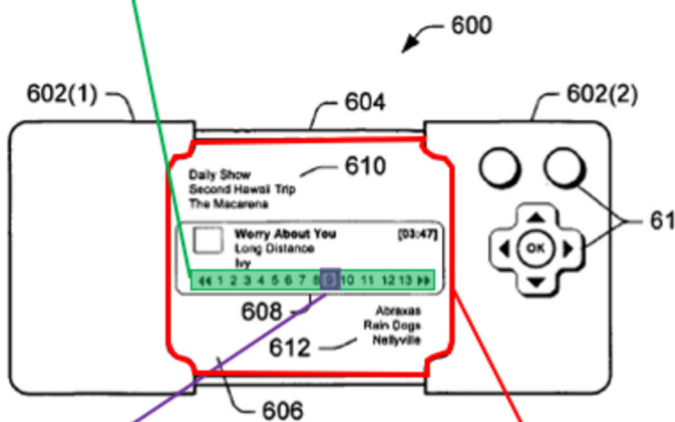


Fig. 6 View 1 (606)

Selection
component;
executes
association

Digital media content
displayed in view 2

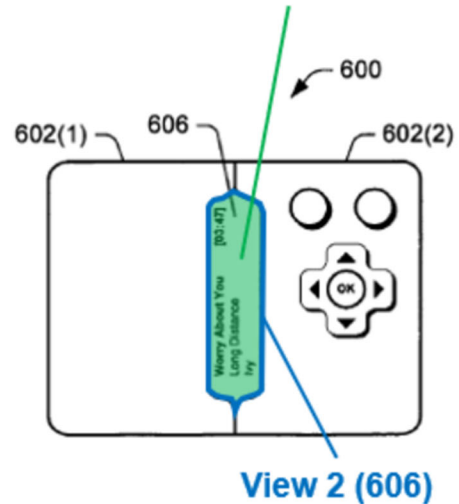


Fig. 7

A POSITA would have been motivated to apply this teaching to the Reavey-Martinez combination so that the user achieves the expected operation of selecting a visual representation. Houh, ¶111.

k. 1[h]

§VIII.A.5.j explains Reavey-Martinez combination teaches 1[g]. Houh, ¶112. For the same reasons, a POSITA would have understood that combination teaches 1[h] (i.e., after the association is executed, the display transitions to a view of the associated digital media content, so the user can view the content they selected). Houh, ¶¶109-112.

l. 1[i]⁴

The Reavey-Martinez-Proctor combination teaches 1[i]. Houh, ¶¶113-18. This limitation allows for the display of “user digital media content” and “referenced digital media content” in response to the execution of the association of a visual representation and digital media content. Initially, a POSITA would have understood that, in the context of the ’888 patent, (1) “referenced digital media content” encompasses digital media content that is stored remotely and to which the

⁴ Petitioners address “the view” in 1[i] as having antecedent basis in “a view” in 1[h]. Petitioners note that they may address possible indefiniteness of this term in other proceedings.

user's device has stored only a reference and (2) "user digital media content" encompasses digital media content stored locally on the user's device. Houh, ¶113 (citing EX-1001, 3:34-36, 29:40-44).

At the relevant time, displaying either user digital media content or referenced media content was well-known and conventional. Houh, ¶114. Indeed, Reavey discloses both locally-stored books and downloading books. EX-1009, 8:11-36. A POSITA would have understood that in the Reavey-Martinez combination, Martinez's windows and icons (visual representations) would be associated with either user digital media content or referenced digital media content, and that whichever type was associated with the executed association would be displayed. Houh, ¶116.

As one example, at the relevant time, a POSITA would have been aware of music streaming services and their associated applications (e.g., Real Player Plus 7) and would have been motivated to implement software on the combination's device to allow the device to accommodate such known capabilities. *Id.*, ¶117. Based on this, a POSITA would have understood devices at the relevant time provided for both display of "user digital media content" and "referenced digital media content." *Id.*, ¶¶115-118.

6. Claim 2

Claim 2 depends from claim 1 (*see* §VIII.A.5). §VIII.A.5.1 (1[i]) explains the claim 1 combination teaches “providing for display of user digital media content and referenced digital media content in the view of the digital media content.” Claim 2 explicitly recites that such display occurs in response to executing the recited association. For the same reasons in §VIII.A.5.1 (1[i]), the additional limitation of claim 2 is taught by the Reavey-Martinez-Proctor combination. Houh, ¶119.

7. Claim 24

a. 24[a]⁵

Claim 24 depends from claim 1 (*see* §VIII.A.5). §§VIII.A.5.b, VIII.A.5.i-VIII.A.5.1 (1[a], 1[f]-[i]) explain the claim 1 combination teaches a plurality of views of the plurality of representations of computer content are displayed (i.e., “provid[ed]”) in response to changes in physical configuration. Houh, ¶120.

⁵ “[T]he act of displaying the user interface” refers to the “displaying” limitation in claim 1, i.e., “displaying a [GUI] on the computing device, wherein the [GUI] comprises at least a plurality of views of digital media content[.]” Thus, claim 24 specifies additional requirements for the “wherein” clause in that claim 1 “displaying” limitation (and does not require displaying an additional/distinct “plurality of views”).

b. 24[b]

See §§VIII.A.5.i-VIII.A.5.l (1[f]-[i]), explaining a plurality of visual representations are associated with a plurality of digital media content that transition responsive to changes in physical configuration. Houh, ¶121. For 24[b]’s additional limitations, §§VIII.A.5.i-VIII.A.5.l explain when a user selects the visual representation in the combination, software transitions the display so the user can view the associated content, thus creating an association between the visual representation and associated view. *Id.*

c. 24[c]

See §§VIII.A.5.i-VIII.A.5.j (1[f]-[g]), explaining a POSITA would have understood the Reavey-Martinez-Proctor combination teaches displaying “visual representations” of, e.g., an “audio library” for a user to browse, highlight a specific song (“focus”), then choose to play by clicking on it (“execution” by “selection”). EX-1010, Figs. 2-3, 6-7 (combined, annotated, reproduced below), ¶¶[0028-0029], [0050-0051]; Houh, ¶122.

Digital media content selected
from visual representations
displayed in view 1

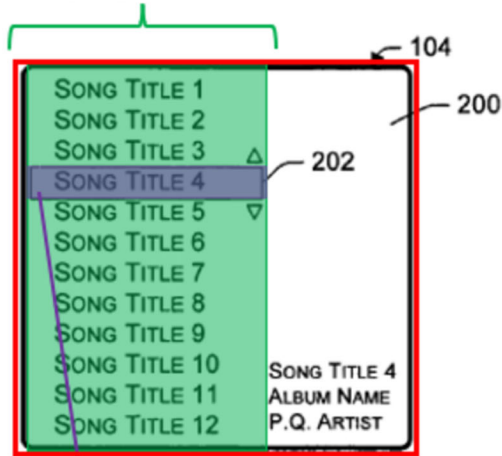


Fig. 2 View 1 (200)

Selection component (202);
executes association

Digital media content
displayed in view 2

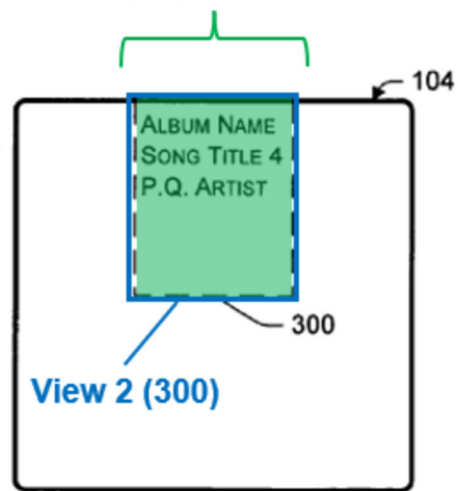


Fig. 3

Digital media content selected
from visual representations
displayed in view 1

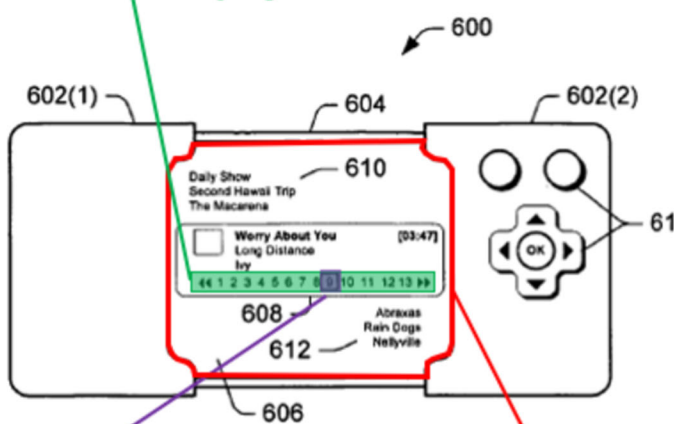


Fig. 6 View 1 (606)

Selection
component;
executes
association

Digital media content
displayed in view 2

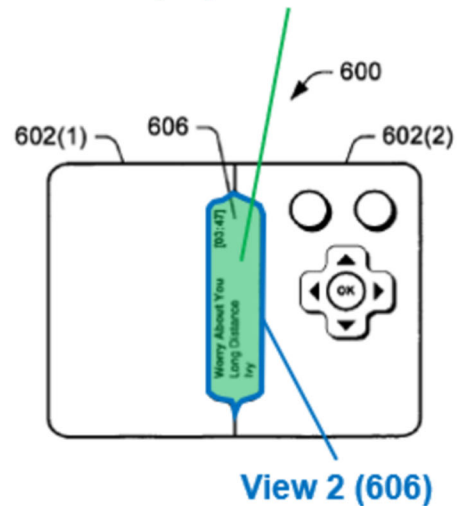


Fig. 7

A POSITA would have been further motivated to implement Proctor’s highlighting and selection process in the Reavey-Martinez combination so that the user achieves the expected operation of selecting a visual representation (i.e., executing the association between a visual representation (such as a window, thumbnail, or icon) and the digital media content (such as a song)). §VIII.A.4; Houh, ¶¶121-22.

8. Claim 26

a. 26[pre]

See §VIII.A.5.a (1[pre]). Houh, ¶124. Additionally, Reavey discloses that its device contains a “central processing unit (CPU) 300, a read only memory (ROM) 310, a random access memory (RAM) 315, a static RAM with battery 320, a video controller 330, a cache RAM 340 and a PCMCIA controller 345.” EX-1009, 6:6-10. A POSITA would have understood Reavey’s device includes a “non-transitory computer-readable medium having computer-readable instructions” that are executed by the computer. Houh, ¶124. Having such a computer system with a processor connected to a memory was well-known at the relevant time. *Id.*

b. 26[a]

See §VIII.A.5.b (1[a]). Houh, ¶125.

c. 26[b]

See §§VIII.A.5.c, VIII.A.5.e (1[b], 1[d]). Houh, ¶126.

d. 26[c1]

See §VIII.A.5.f (1[e1]). Houh, ¶127.

e. 26[c2]

See §VIII.A.5.g (1[e2]). Houh, ¶128.

f. 26[c3]

See §VIII.A.5.h (1[e3]). Houh, ¶129.

g. 26[d]

See §VIII.A.5.d (1[c]). Houh, ¶130.

h. 26[e]

See §VIII.A.5.i (1[f]). Houh, ¶131.

i. 26[f]

See §VIII.A.5.j (1[g]). Houh, ¶132.

j. 26[g]

See §VIII.A.5.k (1[h]). Houh, ¶133.

k. 26[h]

See §VIII.A.5.l (1[i]). Houh, ¶134.

9. Claim 27

a. 27[pre]

See §VIII.A.5.a (1[pre]). Reavey’s device is a “system.” EX-1009, 6:5-10; Houh, ¶135.

b. 27[a]

§VIII.A.5.b (1[a]) explains the Reavey-Martinez combination teaches “display[ing] a [GUI] on a computing device, wherein the [GUI] comprises at least a plurality of views of digital media content.” Under MPF, the display component must be a display screen (§VII.B.3), which Reavey’s screen teaches, under MPF or not. EX-1009, Fig. 2, 3:18-21 (single screen display 110), Figs. 2-4, 3:21-24, 7:26-44, 7:53-55 (dual screen display 110/115); Houh, ¶136.

The Reavey-Martinez combination teaches “the plurality of views include at least one of a plurality of visual representations.” The ’888 patent explains “visual representations” can include cards (EX-1001, 18:10-30) and preview images, such as thumbnails (*id.*, 23:53-58). As discussed in §VIII.A.5.b (1[a]), Martinez teaches using a sensor to detect movement (in Martinez’s particular embodiment, a shake gesture) and based on that movement, to arrange (i.e., organize) windows and/or icons in a pre-selected manner, such as “a tile or cascading fashion.” EX-1007, Fig. 9, 5:66-6:37. A POSITA would have recognized tile and cascading as two different ways of organizing icons or windows (“visual representations of computer content”). Houh, ¶¶90-91, 136. §VIII.A.5.b also explains a POSITA would have been motivated to combine that teaching with Reavey’s device. *Id.*

c. 27[b]

See §VIII.A.5.c (1[b]), under MPF or not. Under MPF, 27[b] requires a processor and related software that is configured to: automatically reorganize the displayed content in response to a physical configuration of the computer device. §VII.B.5. Reavey discloses the use of a “central processing unit (CPU) 300,” which a POSITA would have understood is used to control the GUI on the display screen. EX-1009, 5:66-6:32, Fig. 7; Houh, ¶¶137-38. And §§VIII.A.5.b, VIII.A.5.i-VIII.A.5.1 (1[a], 1[f]-[i]) explain how the Reavey-Martinez-Proctor combination, operated via its CPU, teaches a plurality of views of the plurality of representations of computer content are displayed in response to changes in physical configuration (i.e., the GUI is transitioned between views in response to selection of an I/O profile).

d. 27[b][i]

§VIII.A.5.f (1[e1]) explains Reavey teaches “user rotation of a display component of the computing device about a longitudinal axis running along an interface between the display component and a base of the streamlined computing device”; §VIII.A.5.c (1[b]) explains the Reavey-Martinez combination teaches “responding” to such user rotation by transitioning between a plurality of views; and

§VIII.A.5.a (1[pre]) explains that Reavey teaches a “streamlined computing device.”⁶ Houh, ¶140.

e. 27[b][ii]

See §VIII.A.5.g (1[e2]). Houh, ¶141. §VIII.A.5.c (1[b]) explains the Reavey-Martinez combination teaches “responding” to such user rotation by transitioning between a plurality of views in response to a detected change in device configuration.

f. 27[b][iii]

See §VIII.A.5.h (1[e3]). Houh, ¶141. §VIII.A.5.c (1[b]) explains the Reavey-Martinez combination teaches “responding” to such user rotation by transitioning between a plurality of views in response to a detected change in device configuration.

g. 27[c]

See §VIII.A.5.d (1[c]). Houh, ¶142.

h. 27[d]

§VIII.A.5.i (1[f]) explains the Reavey-Martinez combination teaches “associating at least one of a plurality of visual representations with digital media

⁶ 27[b][i] refers to both “the computing device” and “the streamlined computing device”; it appears that both are intended to refer to “a computing device” in 27[a].

content.” Under MPF, 27[d] requires the storage component to be a local or remote storage device. *Supra* §VII.B.4. A POSITA would have found it obvious to store that association in a storage component based on the combination’s teachings, under MPF or not. Houh, ¶¶143-144.

Reavey’s device includes Flash ROM for storage (“local storage device”). EX-1009, Fig. 7, 5:66-6:18. A POSITA would have understood, and found it obvious, that in the Reavey-Martinez combination, Reavey’s device stores the association between the organized icons in Martinez’s views and the underlying digital media content so that, for example, a user could select the icon to access the desired (associated) content. *Id.*

i. 27[e]

See §§VIII.A.5.j, VIII.A.5.k (1[g], 1[h]), under MPF or not. Houh, ¶145. Under MPF, 27[e] requires a processor and related software that is configured to: implement GUI elements that allow a user to transition between different views of the digital media content. §VIII.A. Reavey discloses the use of a “central processing unit (CPU) 300,” (EX-1009, 6:5-10), and §§VIII.A.5.j, VIII.A.5.k (1[g], 1[h]) explain how the Reavey-Martinez-Proctor combination uses that processor (and software related thereto) to execute the association in response to a selection and transition the display. Houh, ¶145.

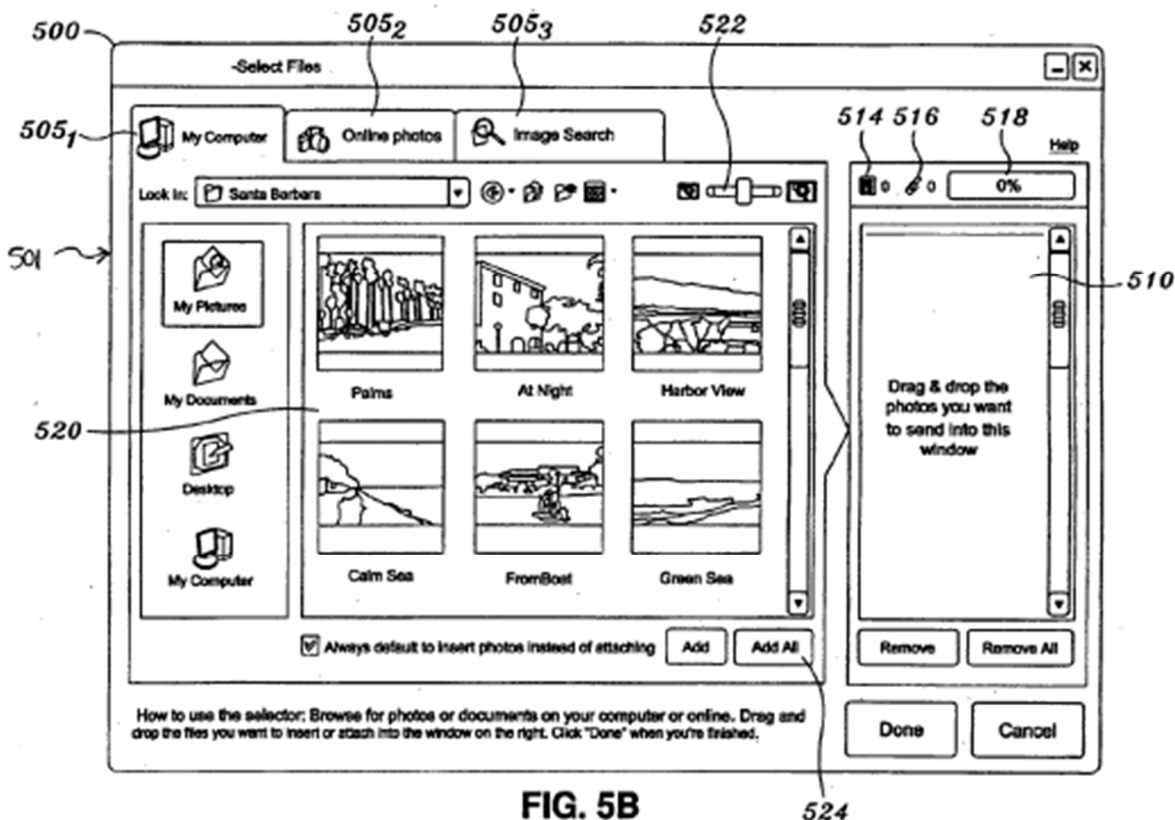
j. 27[f]

See §§VIII.A.5.1, VIII.A.6 (1[i], claim 2). Houh, ¶146.

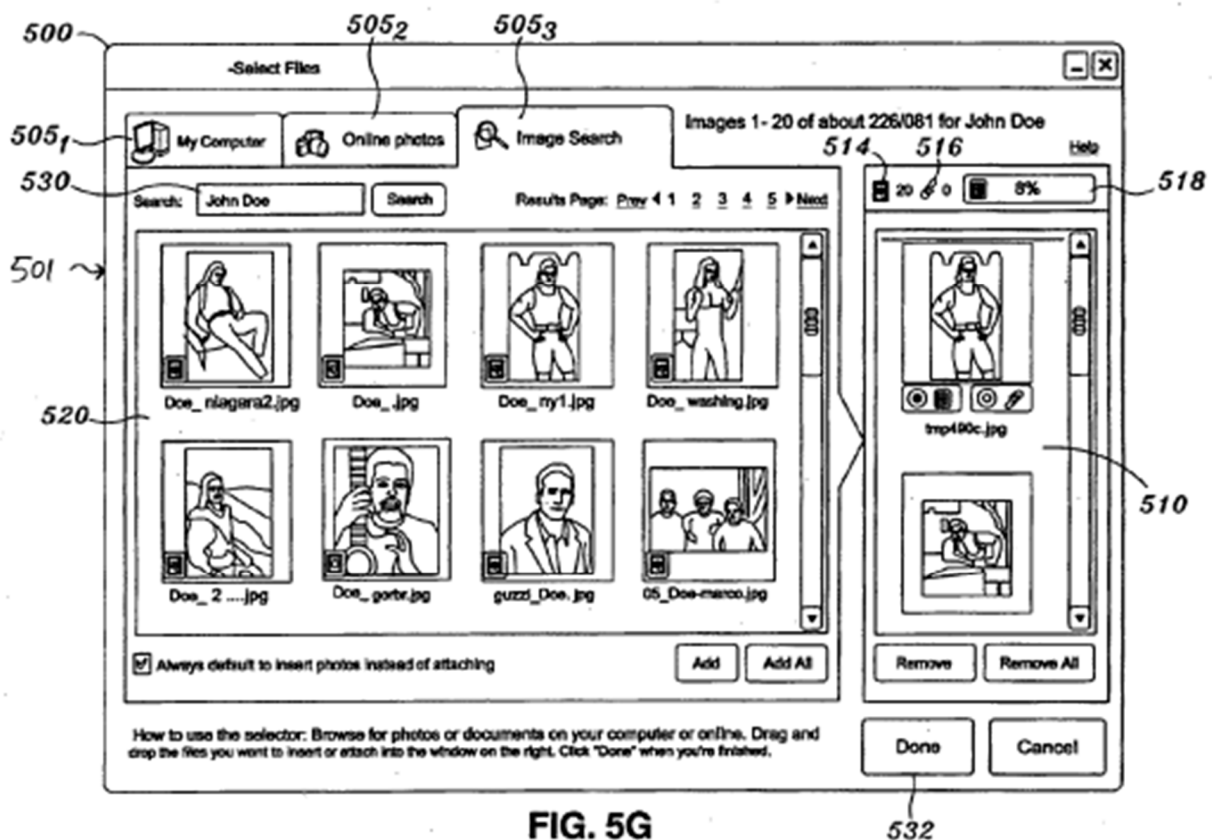
B. Ground 2: Obviousness Over Reavey, Martinez, Proctor, and Aldrich (Claims 3-8, 15-17, 20, 21)

1. Aldrich

Aldrich relates to file sharing using a file selection interface system for, e.g., photo or video files. EX-1012, Abstract; Houh, ¶¶147-52. “The file selection interface may be integrated with the operating system and/or the Internet browser,” and includes GUI 500. Aldrich, ¶¶[0021], [0051], Fig. 5B (below).



GUI 500 includes My Computer tab (505₁), Online Photos tab (505₂), Image Search tab (505₃), queue 510, and display panel 520. *Id.*, ¶¶[0047]-[0048], Fig. 5G (below).



GUI 500 “is operable to attach and/or embed files into webmail correspondence,” providing “a single interface which enables users to select image files from both local, as well as remote source such as an online storage account or the like.” *Id.*, ¶¶[0047]-[0048]. When tab 505 is selected, display panel 520 is populated with files associated with My Computer (local computer), Online Photos (remote storage account), or Image Search (online third-party image sources). *Id.* In

My Computer tab (505₁) and Online Photos tab (505₂), a user is presented with tree-structured folders where a user can “drill down through the tree-structured arrangement to select image files.” *Id.*

To access photos from Online Photos tab (505₂), a user may log in with a username and/or password, though “cookies or another authentication mechanism...used to automatically log the user into their account.” *Id.*, ¶[0056]. The photos may be organized into albums, “which function essentially the same as a tree-structured foldering system.” *Id.*, ¶[0057], Fig 5E (below).

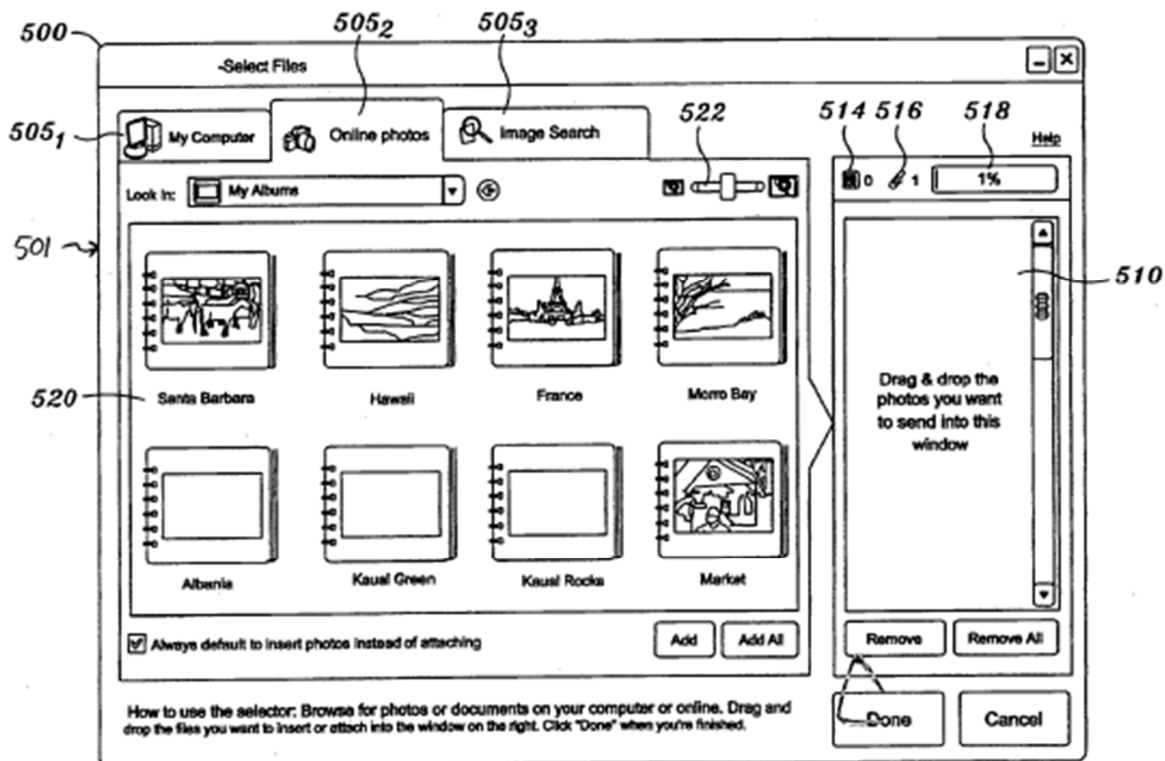


FIG. 5E

By clicking on any of the albums in display panel 520, the user can access the individual image files contained therein. *Id.*, ¶[0057]-[0058], Figs. 5A, 5F (below).

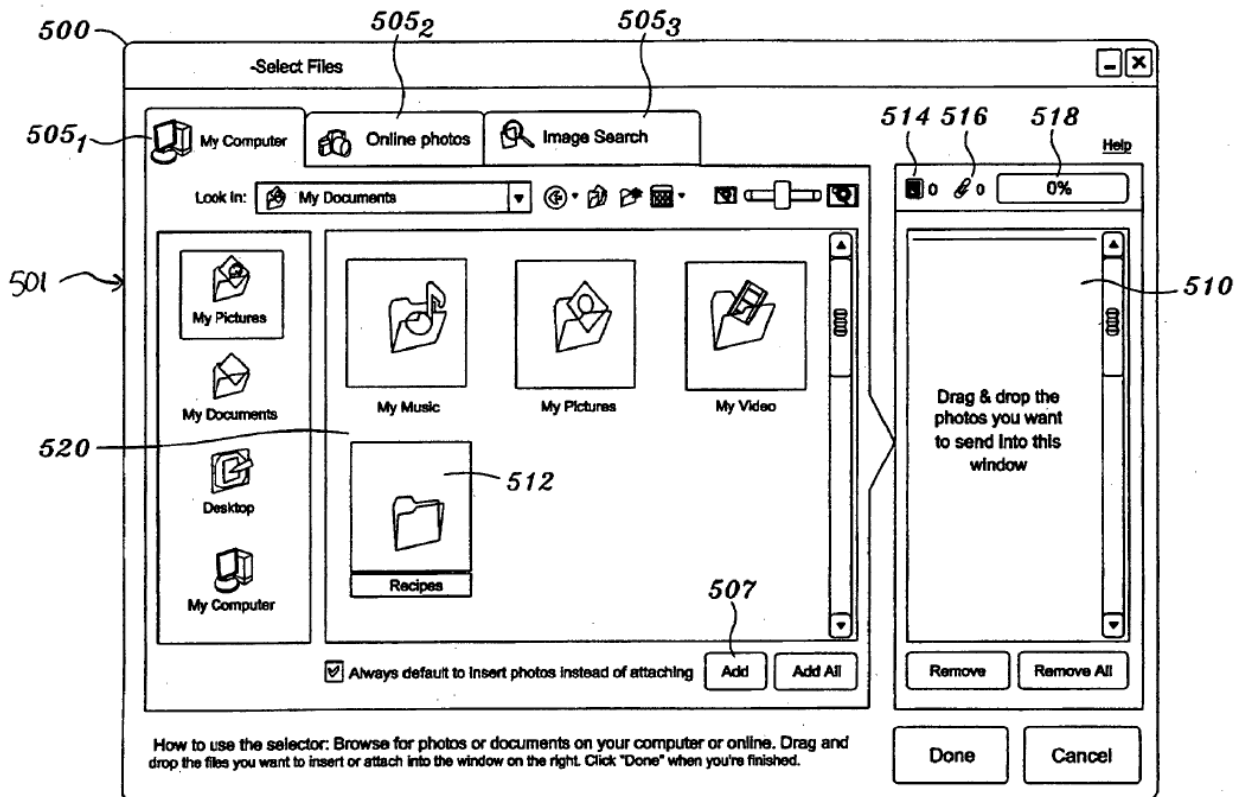


FIG. 5A

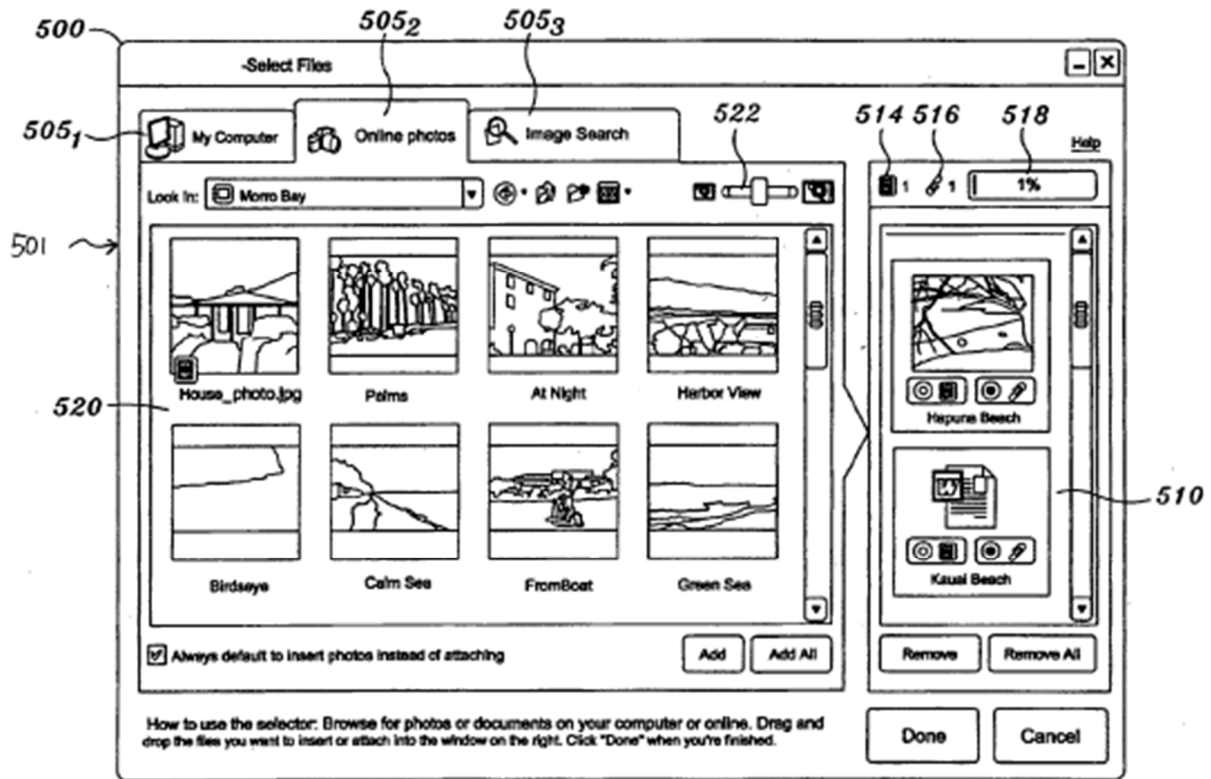


FIG. 5F

The files populating display panel 520 may be selected item by item to be added to queue 510 using either (i) “add” button 507 or all files in the current folder may be (ii) added to queue 510 by selecting “add all” button 524. *Id.*, ¶¶[0049], [0051]. Alternatively, items may be selected and dragged into queue 510. *Id.* Items in queue 510 are items that will be embedded and/or attached into the webmail. *Id.*, ¶[0052]. The embedded file may be in the form of an ActiveX control reference to a remote email account with that reference being “visually represented in an email as a thumbnailed image which corresponds to a full image file stored on a remote server.” *Id.*, ¶¶[0046], [0050]; Houh, ¶¶147-52.

2. Motivation to Combine

A POSITA would have found it obvious to combine Reavey, Martinez, and Proctor (§VIII.A.4; Houh, ¶¶67-76), and a POSITA would have been motivated to modify that combination with Aldrich for several reasons. Houh, ¶¶153-60. Specifically, the Reavey-Martinez-Proctor combination does not expressly disclose certain features of the associated software to accomplish known functions for the combination's device; Aldrich discloses a file selection interface, which is a software component providing computer functionality that can “be integrated with the operating system and/or the Internet browser.” EX-1012, ¶¶[0021], [0044]-[0048]; Houh, ¶154. Aldrich further discloses its file selection interface can be implemented in a variety of computing devices, including a laptop. *Id.* A POSITA would have had a reasonable expectation of success in implementing software with functionalities taught in Aldrich in the Reavey-Martinez-Proctor combination and would have been motivated to do so to take advantage of that known functionality as discussed in further detail below.

Aldrich discloses a GUI 500 of the file selection interface. EX-1012, ¶[0058]. GUI 500 includes tabs 505₁-505₃, queue 510, and display panel 520. *Id.*, ¶¶[0048]-[0051], Figs. 5A, 5B. A POSITA would have been motivated to implement the file selection interface and the related GUI of Aldrich (“the Aldrich software”) in the Reavey-Martinez-Proctor computer to allow users to share photos with other users

with the benefits of the Aldrich software (i.e., additional features and functionality for photo sharing). Houh, ¶¶155, 157-59.

Further, a POSITA would have understood that in the different display modes of the Reavey-Martinez-Proctor computer (e.g., at least laptop and flat modes), the orientation of Aldrich's displayed content, such as GUI 500, would be controlled using all the available inputs from at least Reavey's mode-based screen orientation processing software (EX-1009, 6:3-36), the shake, tilt, and rotate processing flows of Martinez (EX-1007, Figs. 8-10, 5:40-7:20), and manual or automated view selection operations of Proctor (EX-1010, ¶¶0030, ¶¶0058, ¶¶0060)). Houh, ¶156.

A POSITA would have had a reasonable expectation of success in combining, Aldrich with the Reavey-Martinez-Proctor computer as a combination of prior art hardware and software elements and processes according to known methods to yield predictable results. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007); Houh, ¶160. Aldrich teaches one example of computer software (i.e., photo sharing software), which was well understood to be suitable and desirable for integration in an operating system and/or an Internet browser, and a POSITA would have recognized application of this teaching to the Reavey-Martinez-Proctor computer would have yielded a predictable computing system capable of running software to select and manage image files and share those image files with other computer users.

Id. Thus, a POSITA would have been motivated to combine the above teachings to arrive at the Reavey-Martinez-Proctor-Aldrich computing system. *Id.*, ¶¶153-60.

3. Claim 3

Claim 3 depends from claim 2 (*see* §§VIII.A.5.1, VIII.A.6 (1[i], claim 2)), including the display of two types of digital content (“digital media content,” “referenced digital media content”). Claim 3 explicitly recites the action of displaying that content in the view “includes an act of accessing a reference to remote digital content not controlled by the user.” Aldrich teaches claim 3’s additional limitations. Houh, ¶¶161-67.

Aldrich discloses GUI 500 of a Windows-based photo module that “enables users to select image files from...remote source[s] such as an online storage account or the like.” EX-1012, ¶[0048]. A user selects “Online photos” tab 505₂ of GUI 500 to access a remote storage account—e.g., Yahoo! Photos—using username, cookie, or other authentication mechanisms. *Id.*, ¶[0056]. Using the third-party photos hosting service allows users to populate display panel 520 with, e.g., Yahoo! Photos account images as if those remote images “were in a local directory.” *Id.*, ¶[0048], ¶¶[0056]-[0057].

In claim 3, there is ambiguity as to whether “an act of accessing a reference to remote digital content not controlled by the user” means (1) the content or (2) the reference to the content must not be “controlled by the user.” Regardless, Aldrich

teaches both possibilities. First, a POSITA would have understood the remote storage account service is managed by a third party and not the user, meaning the user has access to, but not control of, the content on the host server system. Houh, ¶¶163-64.

Second, Aldrich teaches users access the remote content, and then add selected images to a queue, which embeds an “ActiveX control reference to the [sending user’s] online account” in thumbnail images. EX-1009, ¶¶[0057], [0046]. A POSITA would have understood Aldrich teaches that users *sending* emails (“User Computer 1”) thus reference remote digital media content controlled by the sending user, but *recipient* users (“User Computer N”) of the embedded ActiveX references thus access that ActiveX reference to remote digital content not under that recipient user’s control. EX-1012, Figs. 1, 3C; Houh, ¶165. A POSITA would have understood this configuration allows users *sending* images to other users (“sharing”) to comply with conventional email attachment size limits and further allows the email recipient (“User Computer N”) to view thumbnail images and decide which full-size, full-data images to proceed to download. *Id.*, ¶[0050] (ActiveX control reference to a remote online account...may be useful...where an email attachment size limit is being imposed”), ¶[0057] (“The recipient of the email may then view and/or download the full image file from the remote online account”), Houh, ¶165.

Figure 3C (annotated) showing a recipient's email populated with the email sender's ActiveX thumbnail photos is reproduced below.

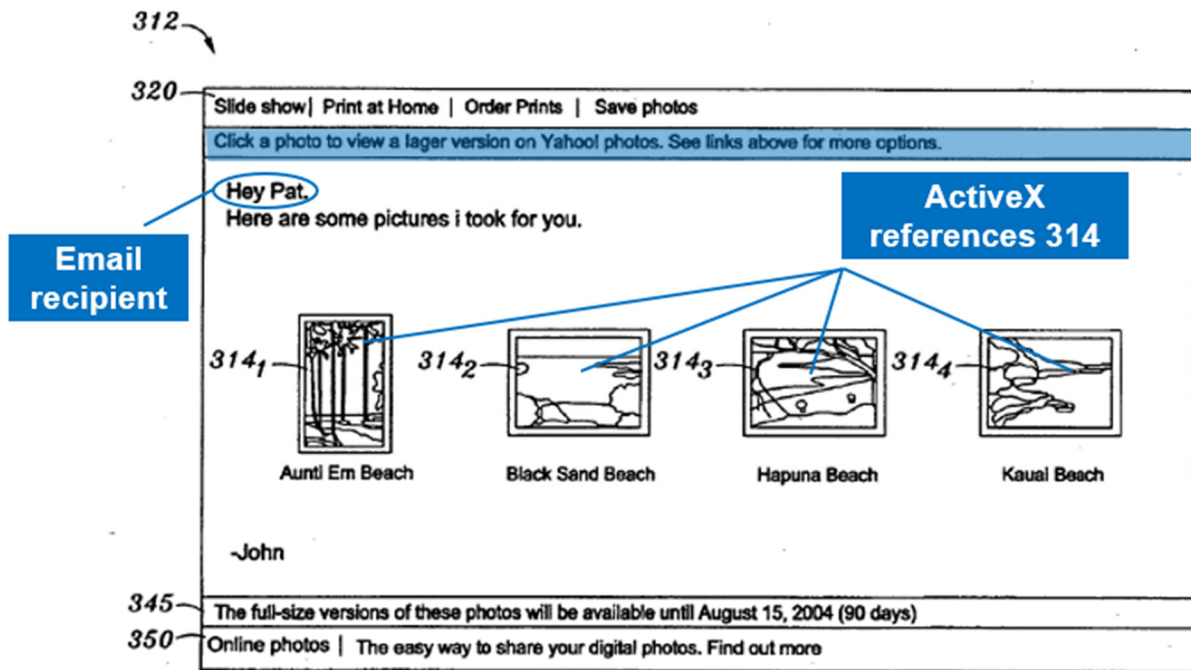
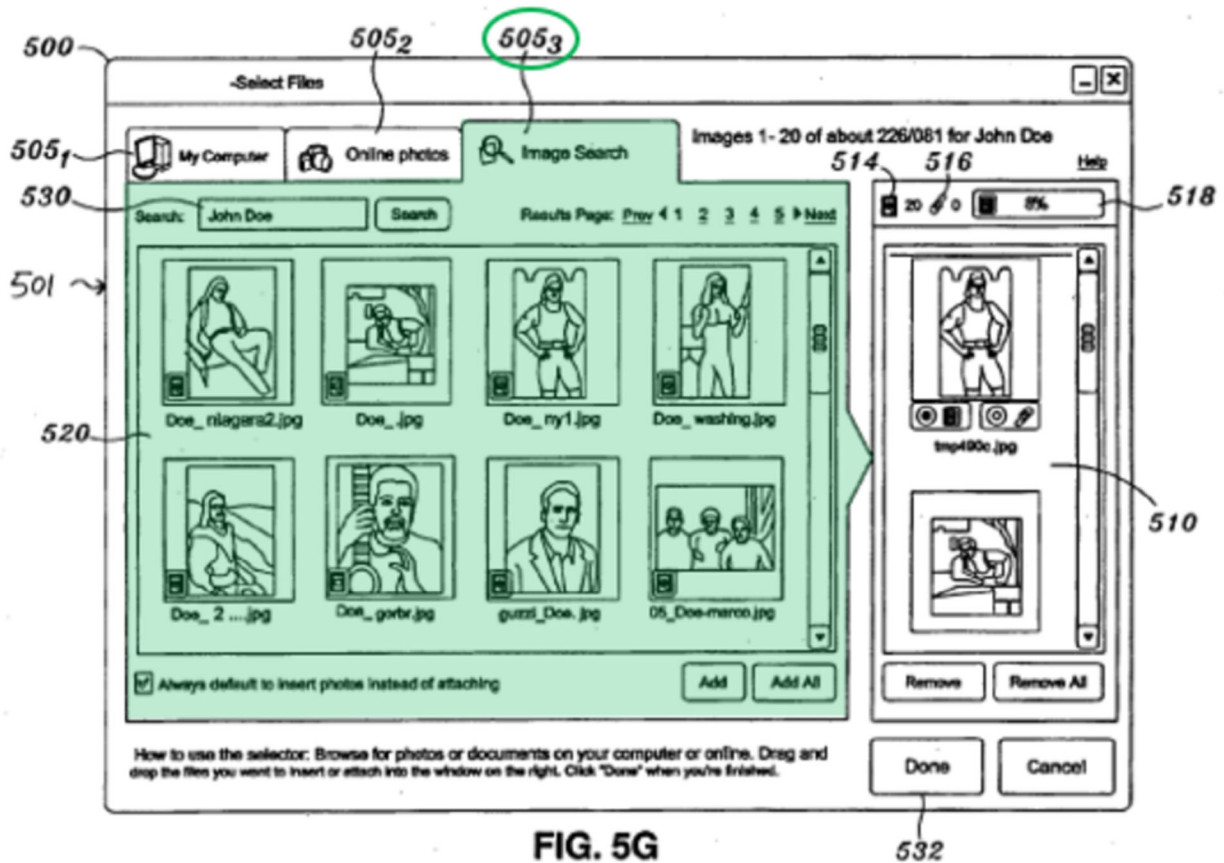


FIG. 3C

Id., ¶[0037].

Aldrich also discloses that a user may search for online-hosted and sourced images by selecting tab 505₃ of the GUI as shown in Figure 5G (annotated) reproduced below. *Id.*, ¶[0048], (“when tab 505₃ is selected, a search dialog box may be presented to the user for searching from available online third-party image sources (e.g., Internet picture search). Accordingly, from a single file selection interface 501, e.g., of GUI 500, a user may select files from local and remote sources for attachment or embedding within an email message.”), ¶[0059], Houh, ¶¶167-68.

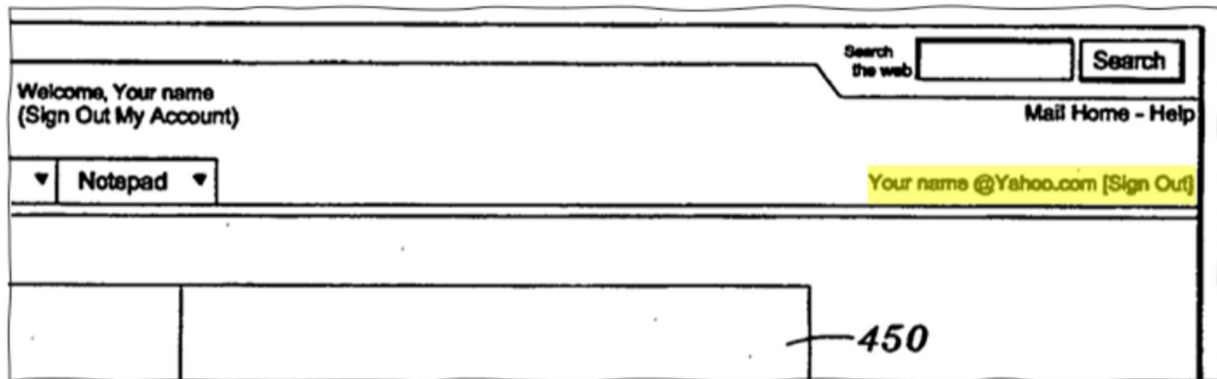


Id., Fig. 5G (annotated). Thus, Aldrich teaches the receiving user controls neither the content nor the reference to it.

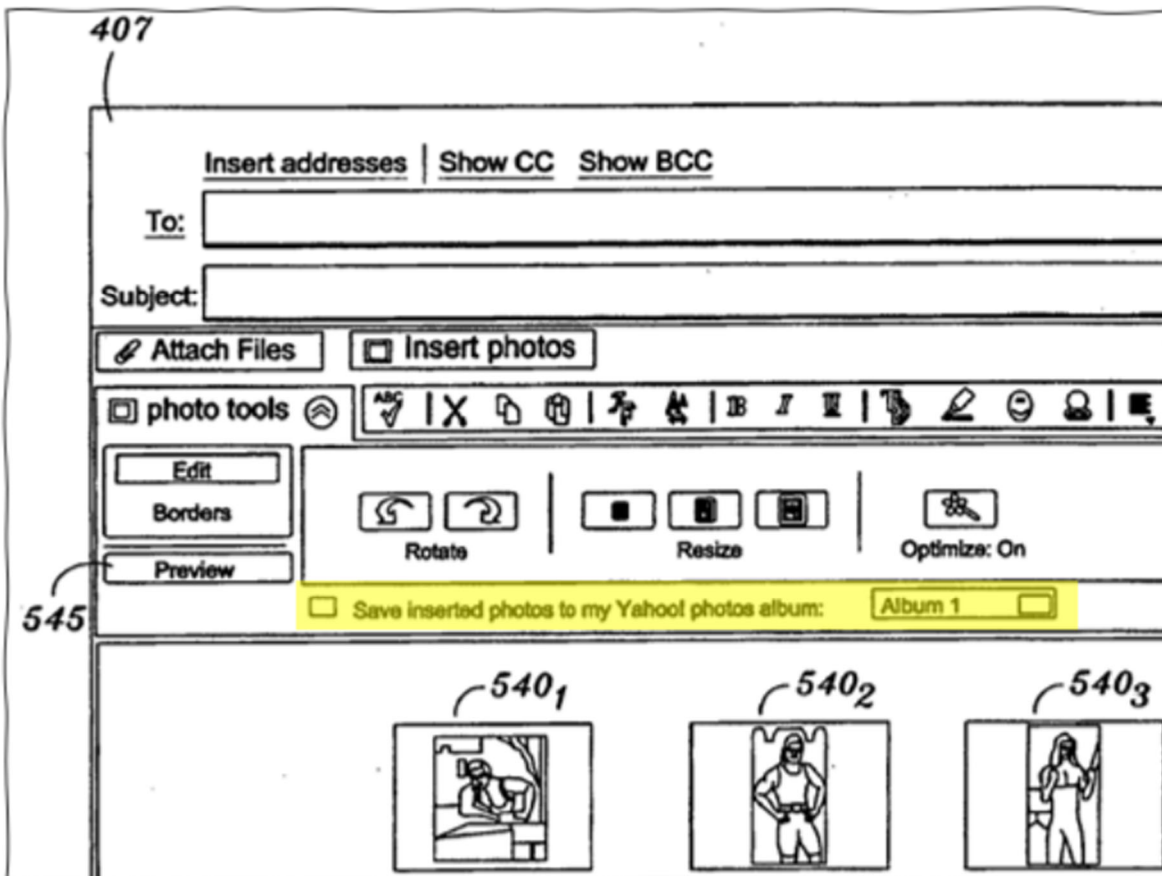
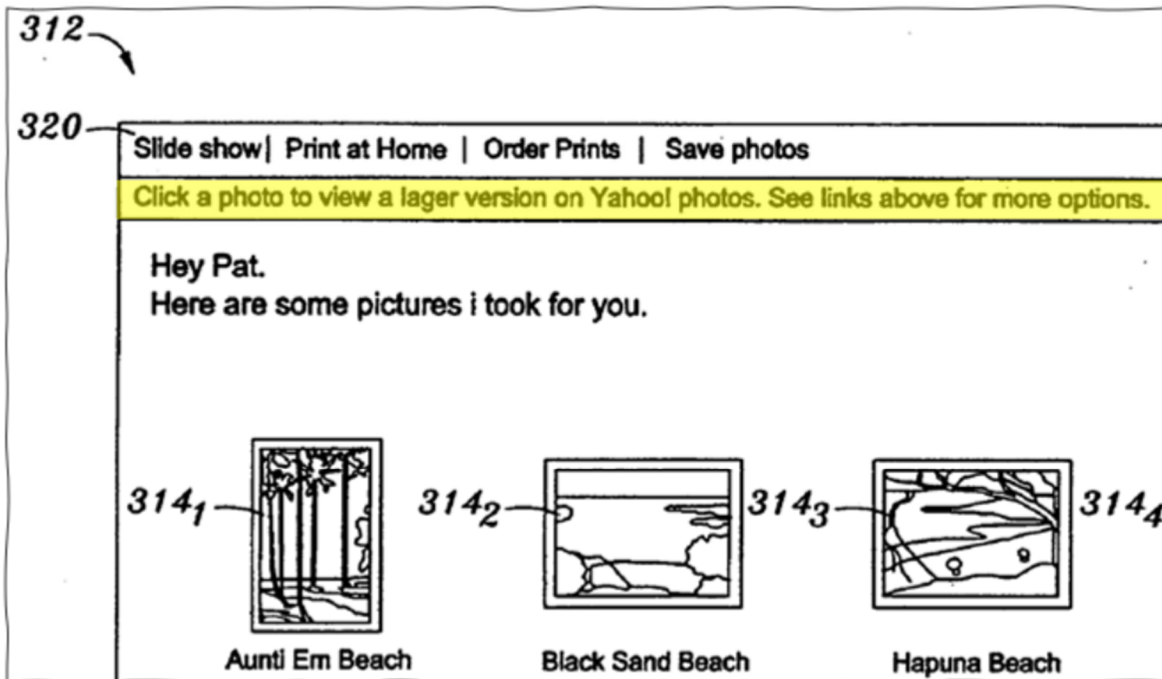
A POSITA would have been motivated to incorporate software such as Aldrich's Windows-based photo module in the Reavey-Martinez-Proctor device for the reasons discussed in §VIII.B.2, including for example, to improve the utility of that device by more efficiently navigating and sharing both locally stored and remotely hosted large data photo files. Houh, ¶168 (citing EX-1012, ¶[0003], ¶[0020], ¶[0027], ¶[0057]).

4. Claim 4

Claim 4 depends from claim 1 (*see* §VIII.A.5). Aldrich teaches claim 4's additional limitations. Houh, ¶¶168-70. Aldrich discloses that users may save image files to a Yahoo! Photos account ("Your name@Yahoo.com") as depicted in the figure reproduced below.



EX-1012, Fig. 4C (annotated and excerpted), ¶[0061]. A user may also access, view, download, and/or print any image files uploaded—i.e., saved—to that user's account. *Id.*, ¶[0039]. Examples of these actions are depicted in the figures reproduced below:



Id., Figs. 3C, 6 (both annotated and excerpted).

A POSITA would have recognized uploading, saving, accessing, downloading from, and printing any images from a Yahoo! Photos account as associating visual representations with a remote service provider because these actions digitally connect the images to the remote provider. Houh, ¶170. A POSITA would have been motivated to incorporate this teaching of Aldrich into the Reavey-Martinez-Proctor combination for the same reasons discussed in §VIII.B.3 (claim 3). *Id.*

5. Claim 5⁷

Claim 5 depends from claim 4 (§VIII.B.4). Aldrich teaches claim 5's additional limitations. Houh, ¶¶171-72. Specifically, Aldrich teaches thumbnails of a user's images ("visual representations") are maintained ("stored") by Yahoo!

⁷ Petitioners understand "at least one of" in claim 5 is disjunctive and so only one of a user profile or a device profile is required (not both). As support for this understanding, Petitioners point out the '888 patent discusses identifying local storage requests and transforming them into a storage request to an online service provider identified in a "user *and/or* device profile." EX-1001, 17:18-22 (emphasis added).

Photos (“remote service provider”), which sends emails to users notifying them of the photos sent to their account (“user profile”). *E.g.*, EX-1012, [0024], [0039]. A POSITA would have understood this arrangement to disclose storing an association between the images and Yahoo! Photos in the user profile. Houh, ¶172. A POSITA would have been motivated to incorporate this teaching of Aldrich into the Reavey-Martinez-Proctor combination for the same reasons discussed in §VIII.B.3 (claim 3). Houh, ¶172.

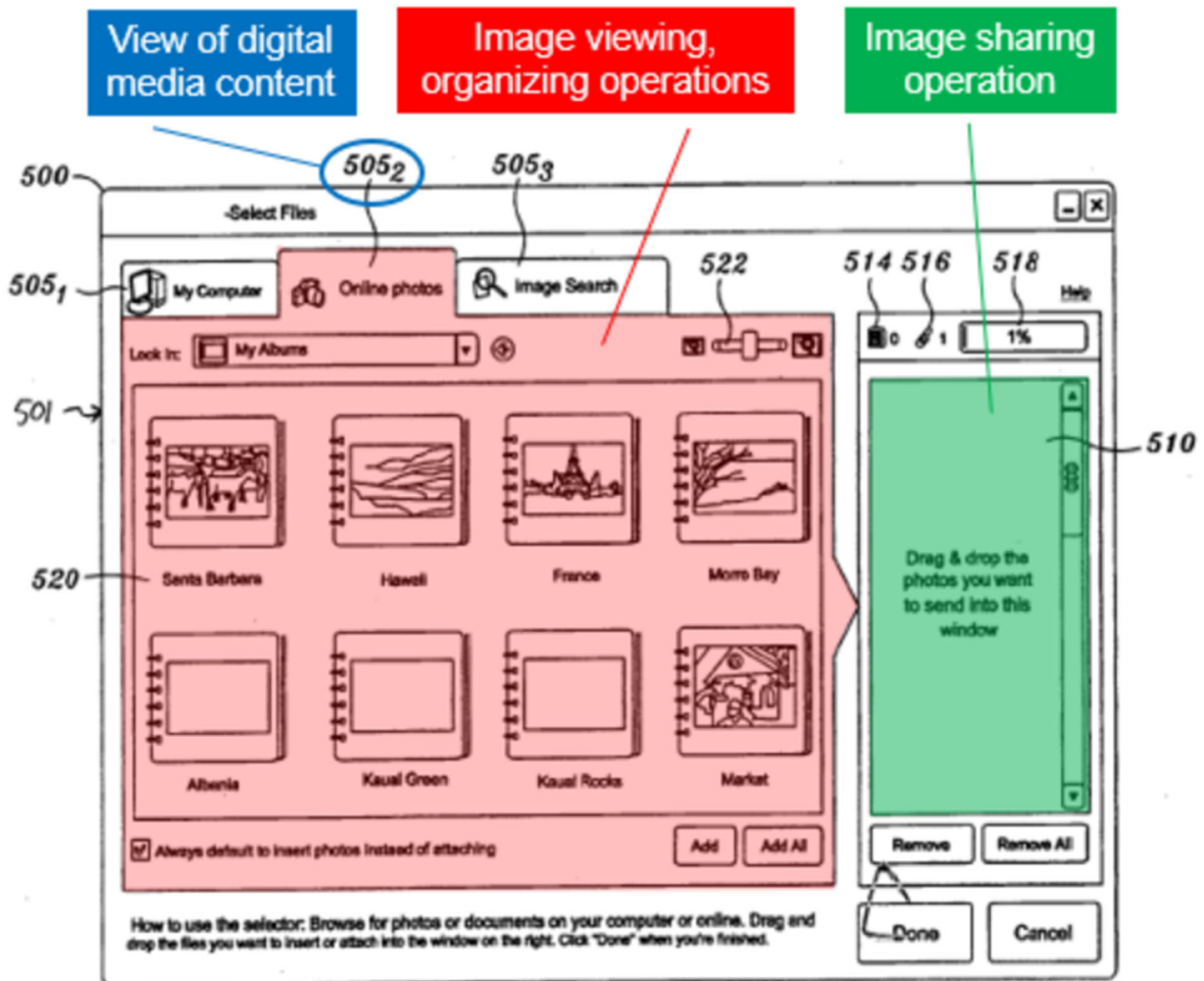
6. Claim 6

a. 6[a]

Claim 6 depends from claim 1 (*see* §VIII.A.5). Aldrich teaches 6[a]. Houh, ¶173. §VIII.B.3 (claim 3) explains that Aldrich teaches “accessing a reference to remote digital content...to display referenced digital content” by logging in to a Yahoo! Photos account and selecting tab 505₂ of Aldrich’s GUI. A POSITA would have understood and found it obvious that logging into a Yahoo! Photos account teaches configuring access to Yahoo! Photos (“a remote service”). Houh, ¶174. A POSITA would have been motivated to incorporate this teaching of Aldrich into the Reavey-Martinez-Proctor combination for the same reasons discussed in §VIII.B.3 claim 3). Houh, ¶168.

b. 6[b]

Aldrich teaches 6[b]. Houh, ¶174. The '888 patent describes various operations of a remote service provider, such as “organiz[ing],” “view[ing],” and “shar[ing] digital photograph collections.” EX-1001, 20:6-16. Aldrich discloses viewing and sharing digital media content. EX-1012, ¶[0039]. Aldrich depicts access, view, tree-structured album organization, and drag-and-drop file sharing operations in the figure (annotated) reproduced below.



Id., Fig. 5E.

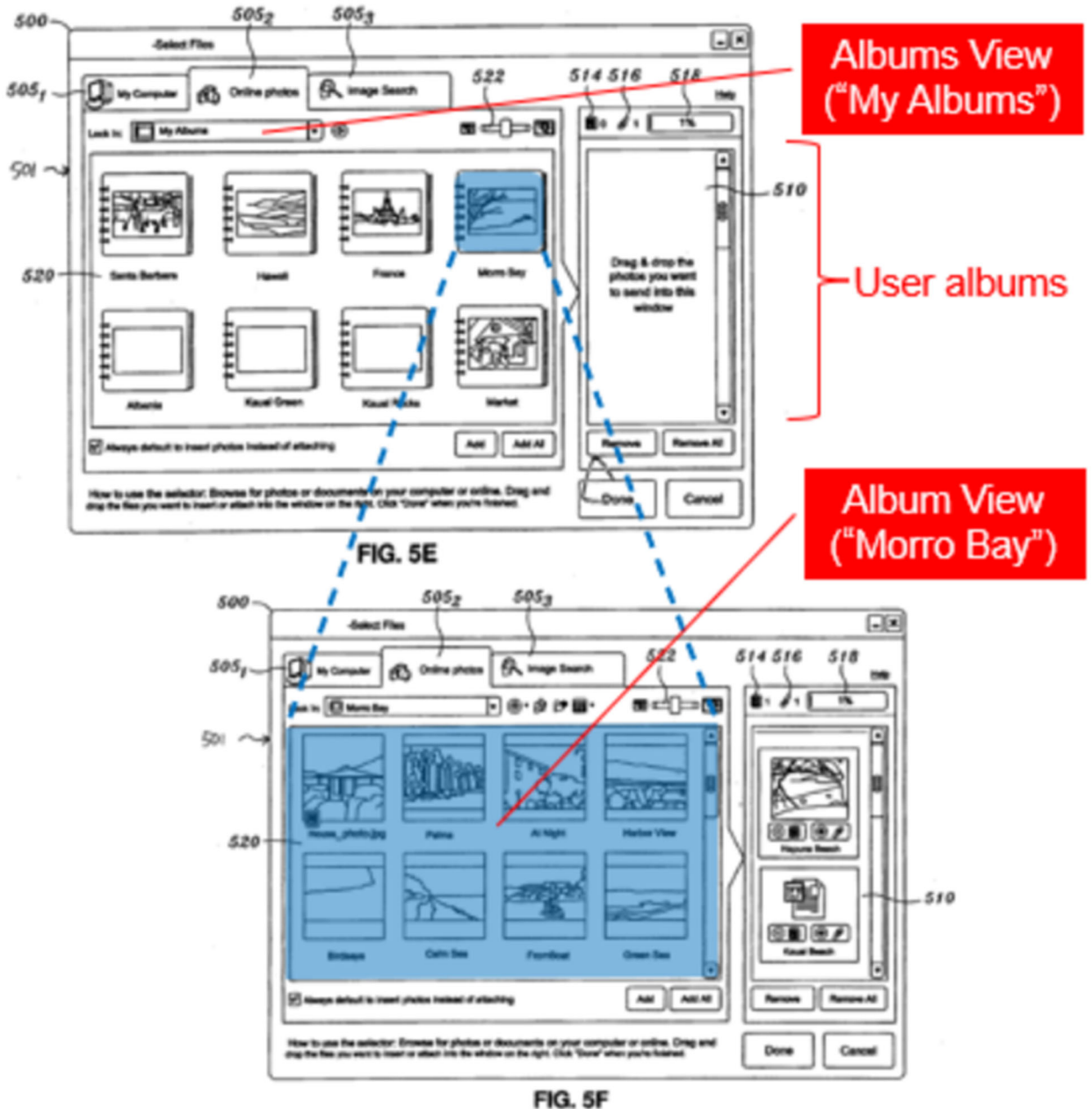
In addition to the reasons in §VIII.B.2, a POSITA would have been motivated to apply this teaching of Aldrich into the Reavey-Martinez-Proctor combination so that a user could perform the operations provided by that service provider in the view of the content, and would have been motivated to do so to simplify the needed steps to interact with and perform operations for that content. Houh, ¶¶175-76.

7. Claim 7⁸

Claim 7 depends from claim 1 (*see* §VIII.A.5). In claim 7, “the view” refers to “the view of digital media content” in 1[i] to which the display transitions in 1[h] in response to executing the association of a visual representation with digital media content in 1[g]. §§VIII.A.5.j-VIII.A.5.l. Aldrich teaches the “album view” in claim 7’s additional limitation. Houh, ¶¶176-79.

⁸ Petitioners understand “at least one of” in claim 7 is disjunctive and so only an album view or a timeline view is required (not both). As support for this understanding, Petitioners point out claim 18 (which depends from claim 7) recites a “time[line] view” and would not need to do so if such view was already required by claim 7.

In Aldrich, Tab 505₂ includes a view of a user's albums ("My Albums"), selecting one of which transitions to a more detailed view of the images within that specific album as shown in the figure (annotated) reproduced below.



Id., Figs. 5E-F (combined and annotated), ¶¶[0057]-[0058]. Thus, Aldrich teaches an “album view.”

Dr. Houh explains that a POSITA would have been motivated to use Aldrich’s album view in the Reavey-Martinez-Proctor combination because such a view was a well-known way to organize digital content, particularly images. Houh, ¶179.

8. Claim 8

Claim 8 depends from claim 7 (*see* §VIII.B.7). Aldrich discloses claim 8’s additional limitation. Houh, ¶¶180-81. In Aldrich’s album view, GUI 500 with tab 505₂ (purple) includes a header portion (red) and body portion (blue) as depicted in the figure (annotated) reproduced below.

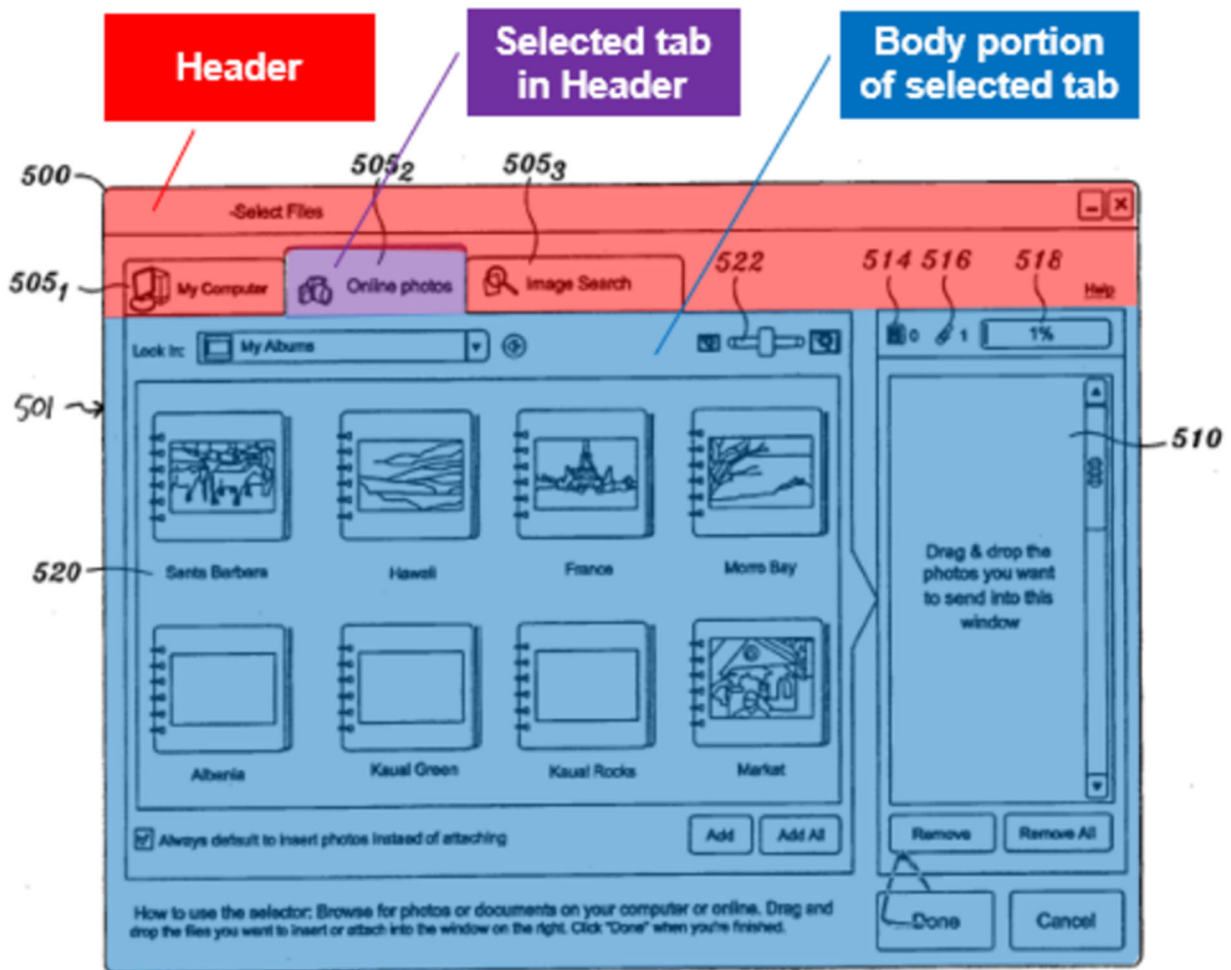


FIG. 5E

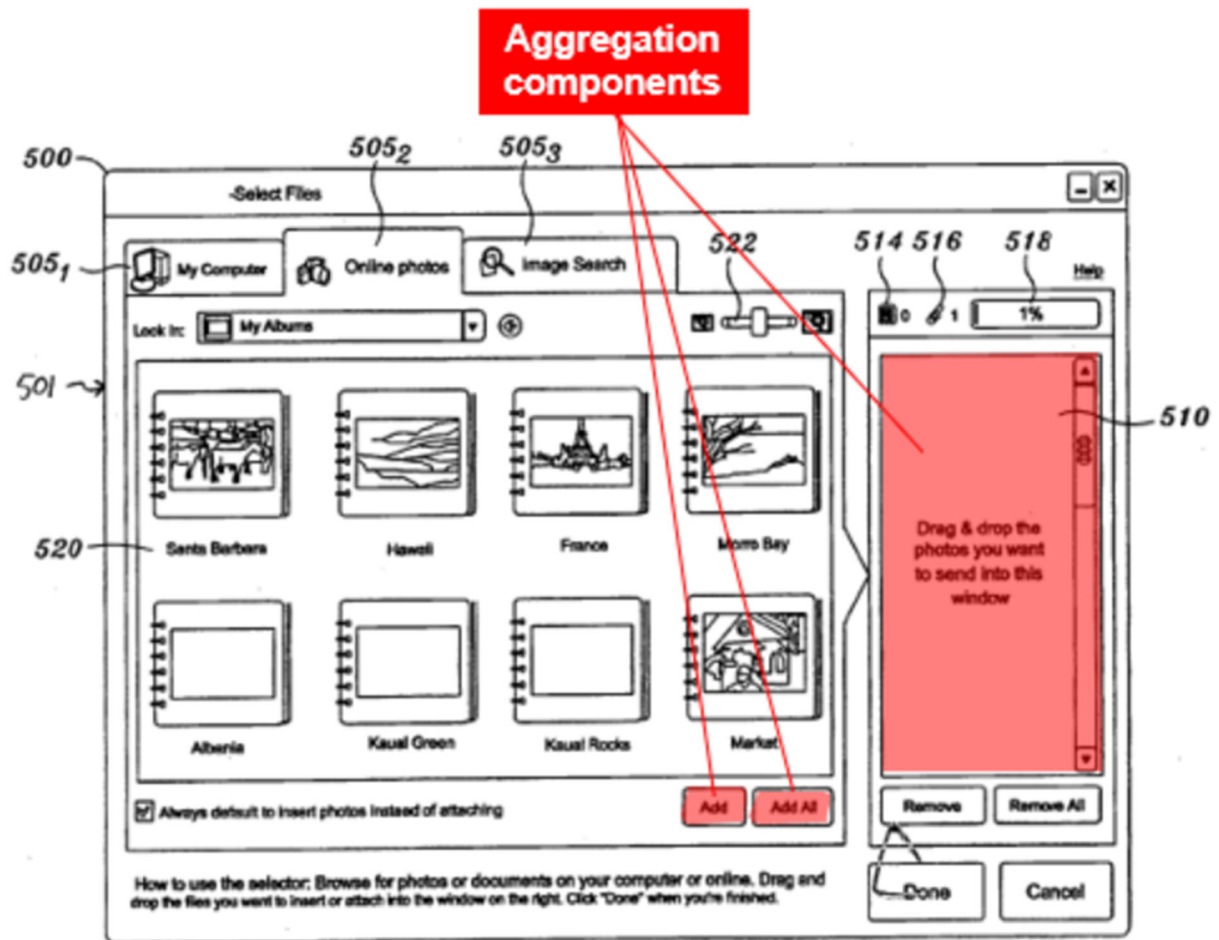
EX-1012, Fig. 5E (annotated), ¶¶[0056]-[0057]. As discussed in §VIII.B.7 (claim 7), a POSITA would have been motivated to use an album view as taught in Aldrich in the Reavey-Martinez-Proctor combination. Houh, ¶¶181-82. A POSITA would have understood and found it obvious for that album view to include digital media content in a body portion as depicted in annotated Figure 5E above. *Id.*

9. Claim 15

a. 15[a]

Claim 15 depends from claim 7 (*see* §VIII.B.7). Aldrich teaches 15[a]’s additional limitations under MPF or not. Houh, ¶¶182-85. For MPF, the aggregation component must be an organization tool on a GUI (e.g., the “pick list” control) that gathers together a group of digital content items for a particular action, and equivalents. *See* §VII.B.2; Houh, ¶183.

Aldrich’s GUI 500 allows users to select a folder or file (“select a plurality of digital media content” / “gathers together a group of digital content items”), then select any of (i) “Add” button 507, (ii) “Add All” button 524, or (iii) “Drag & drop” feature 510 (organizational tools which are “aggregation component[s]”) to add images or files to emails. EX-1012, Fig. 5A (“Add” button), 5B (“Add All” button), ¶[0047], ¶¶[0049]-[0051]. These features are present in tabs 505₁₋₃ of Aldrich’s “file selection interface 501” part of GUI 500 as shown in the representative figure (annotated) reproduced below. *Id.* Figs. 5A-G.



Id., Fig. 5E (annotated).

In addition to the reasons to combine the Reavey-Martinez-Proctor device with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to implement these operations in the combination because they were predictable and well-known GUI elements that a POSITA would have understood as user friendly to interact with and efficiently select content. *See Houh*, ¶¶184-85.

b. 15[b]

§VIII.B.8 (claim 8) explains that Aldrich teaches “displaying digital media content in a body portion of the view.” Aldrich also teaches displaying “the plurality of digital media content,” as recited in 15[b]. Houh, ¶¶186-87. In Aldrich, the images or photos (the same “plurality of digital media content” in 15[a]) are displayed in a body portion of the GUI as shown in the figure (annotated) reproduced below. As discussed in 15[a], a user can select these images or photos and select an “Add”, “Add All,” or “Drag & drop” button to add the images to email. EX-1012, ¶[0047], ¶¶[0049]-[0051].

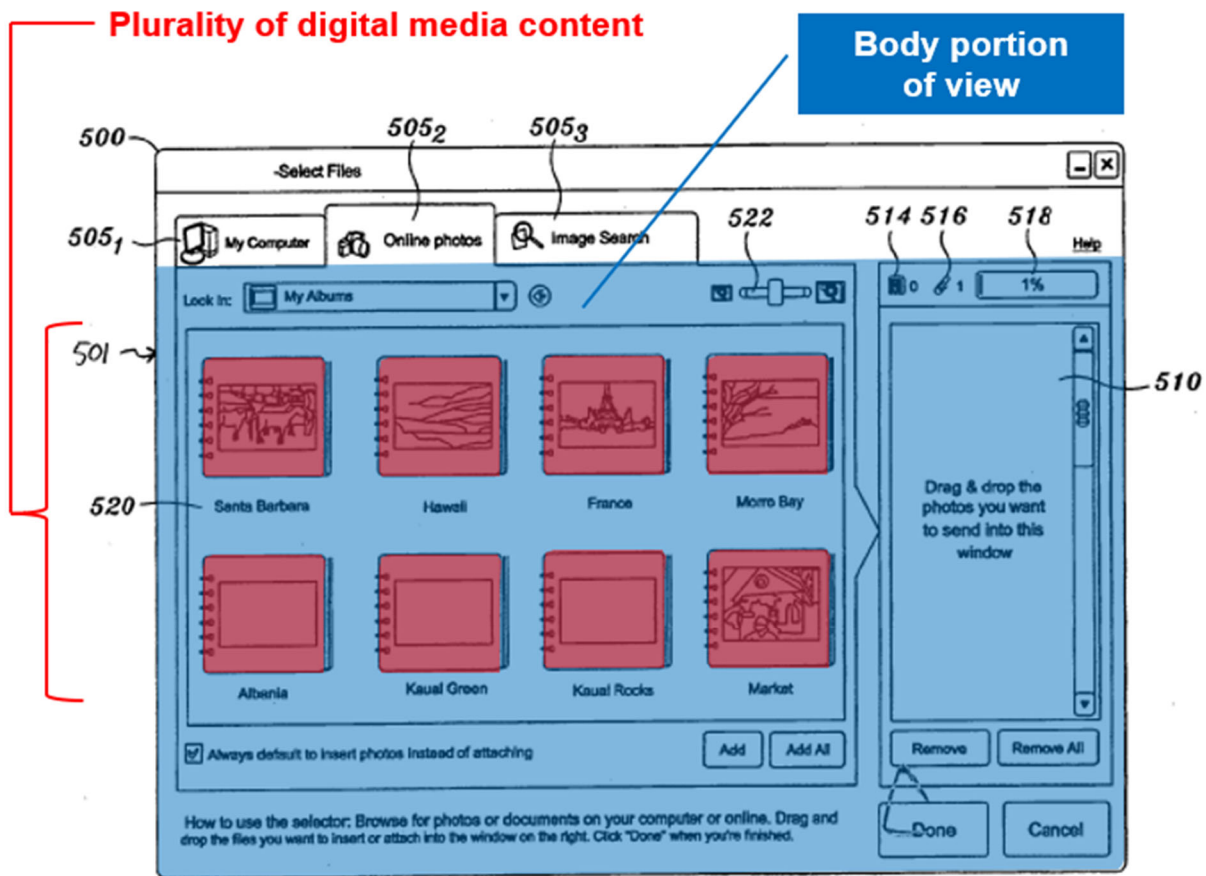


FIG. 5E

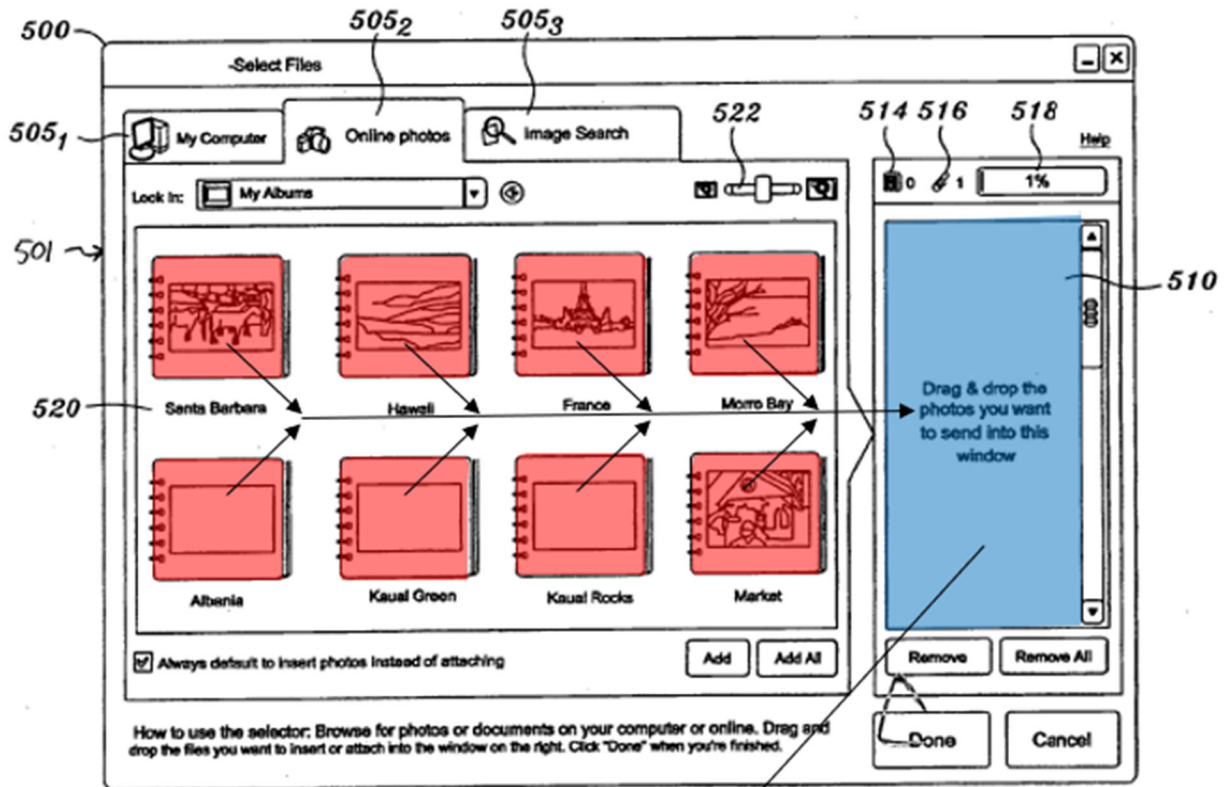
Id., Fig. 5E (annotated), ¶¶[0056]-[0057] (“in the embodiment of FIG. 5E the available content used to populate the display panel 520 has been organized into ‘albums’...[b]y clicking on any of the albums in the display panel 520, the user would be able to access the individual image files contained therein”).

In addition to the reasons to combine the Reavey-Martinez-Proctor device with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to implement Aldrich’s album view as well known and beneficial for photo content. *See* Houh, ¶¶187-88.

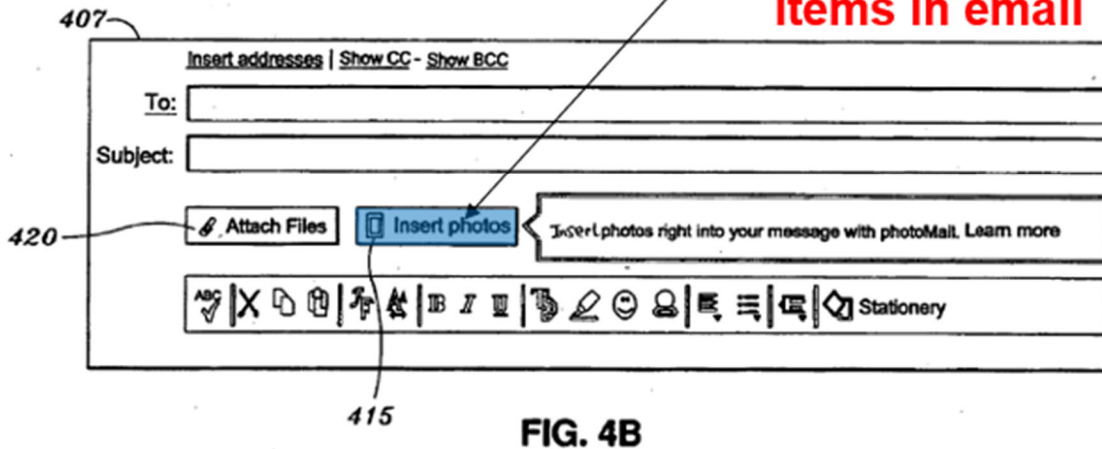
c. 15[c]

§VIII.B.6.b (6[b]) explains Aldrich teaches “integrating operations provided by the remote service provider into the view of the digital media content.” Aldrich also teaches “permitting the user to perform operations,” as recited in 15[c] for the same reasons discussed in §VIII.B.6.b. Houh, ¶¶188-90. Specifically, in Aldrich, the performed operations all occur in the same tab 505₂ of the GUI. Furthermore, Aldrich discloses that a user adds images or drags and drops images into queue 510 that embeds and attaches the image itself or an “ActiveX control reference” to a first user’s online photo account in email 407 sent to a second user to view and/or download that image (“perform operations” including sharing, viewing, downloading images). EX-1012, ¶[0043], ¶[0057]. This is depicted in the following figures (annotated) reproduced below.

Add images or image ActiveX reference to queue



Embed queued items in email



Id., Figs. 5E, 4B.

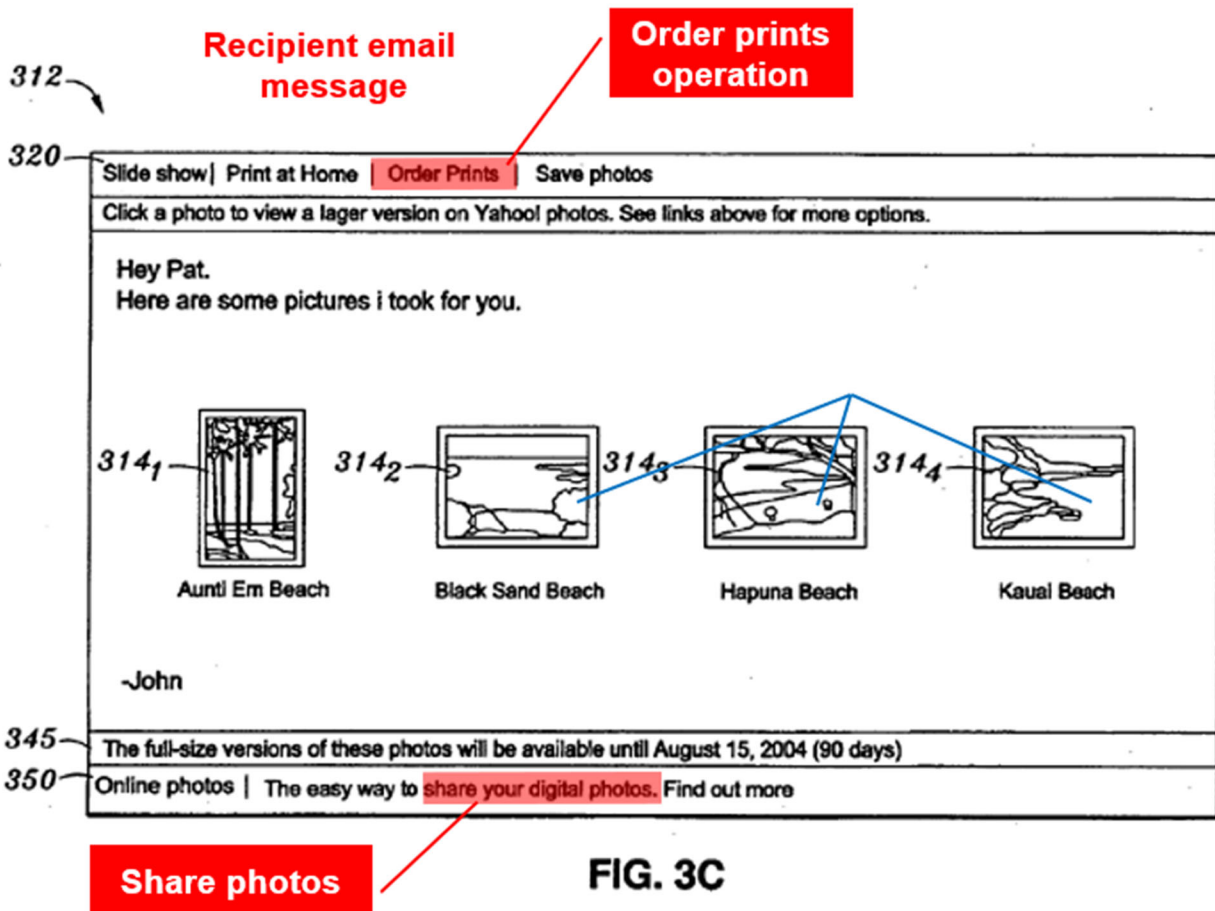
A POSITA would have been motivated to implement Aldrich's image embedding process in the Reavey-Martinez-Proctor device for the reasons discussed

in §VIII.B.2, specifically because a POSITA would have recognized that application of this teaching would have predictably improved the user’s ability to select and manage image files and share those image files with other computer users. EX-1012, ¶[0006] (discussing the need to improve the integration between electronic mail and file selection and management). *See* Houh, ¶190.

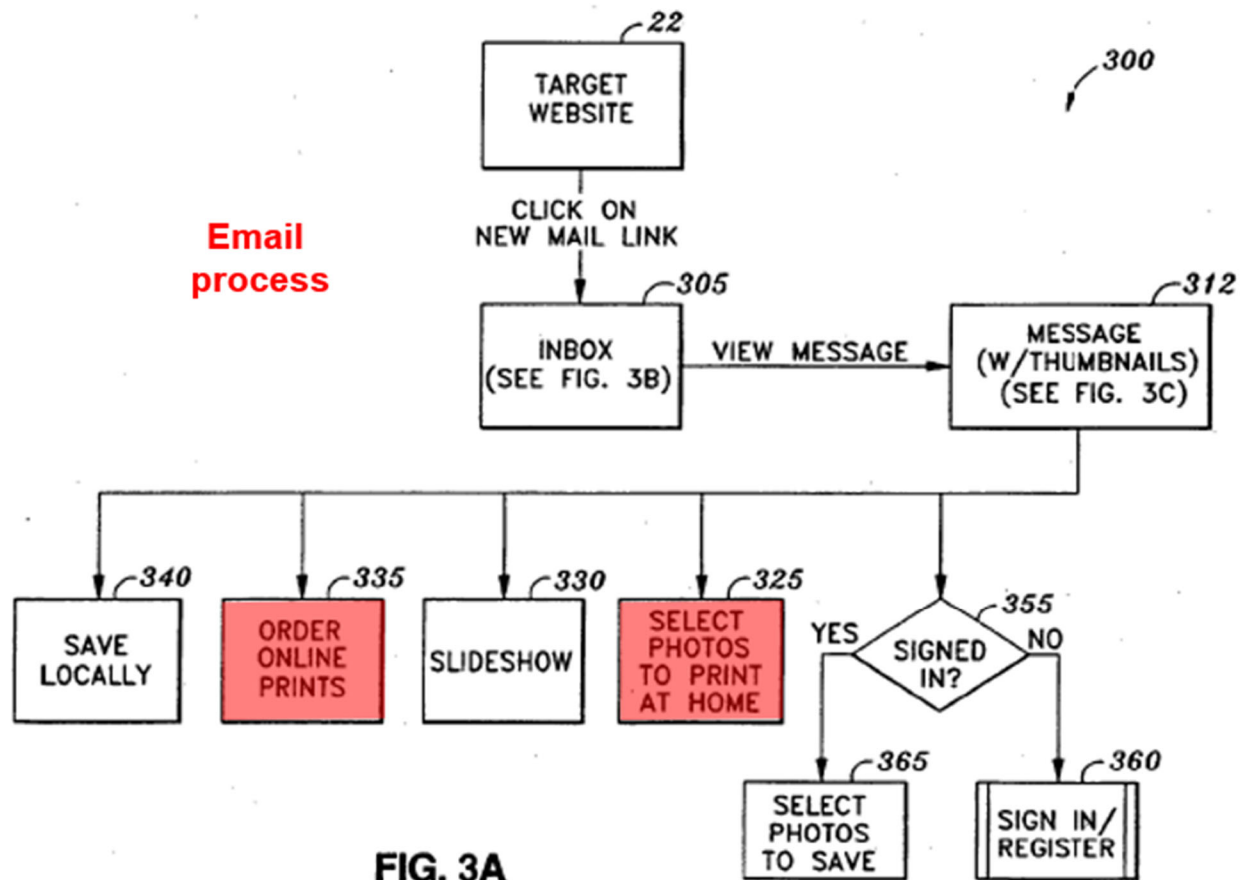
10. Claim 16⁹

Claim 16 depends from claim 15 (*see* §VIII.B.9). Aldrich teaches a “share operation” (*see* §§VIII.B.3, VIII.B.6.b, VIII.B.9.c), and an “order prints operation,” as discussed in this section. Houh, ¶¶191-92. Aldrich’s GUI includes options for users to print photos at home or order online prints. EX-1012, Fig. 3A (items 325, 335), ¶[0038]. At least the sharing and ordering prints features are depicted in the figures (annotated) reproduced below.

⁹ Petitioners understand “at least one of” in claim 16 is disjunctive and so only one of a share operation, a create channel operation, and an order prints operation is required (not all three). As support for this understanding, Petitioners point out claim 17 (which depends from claim 16) recites “the at least one operation is a share operation” and would not need to do so if such operation was already required by claim 16.



Id., Fig. 3C (annotated).



Id., Fig. 3A (annotated).

In addition to the reasons to combine the Reavey-Martinez-Proctor device with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to implement in the combination these operations taught in Aldrich because they were well known and desirable features for photo applications. *See* Houh, ¶¶192-93.

11. Claim 17

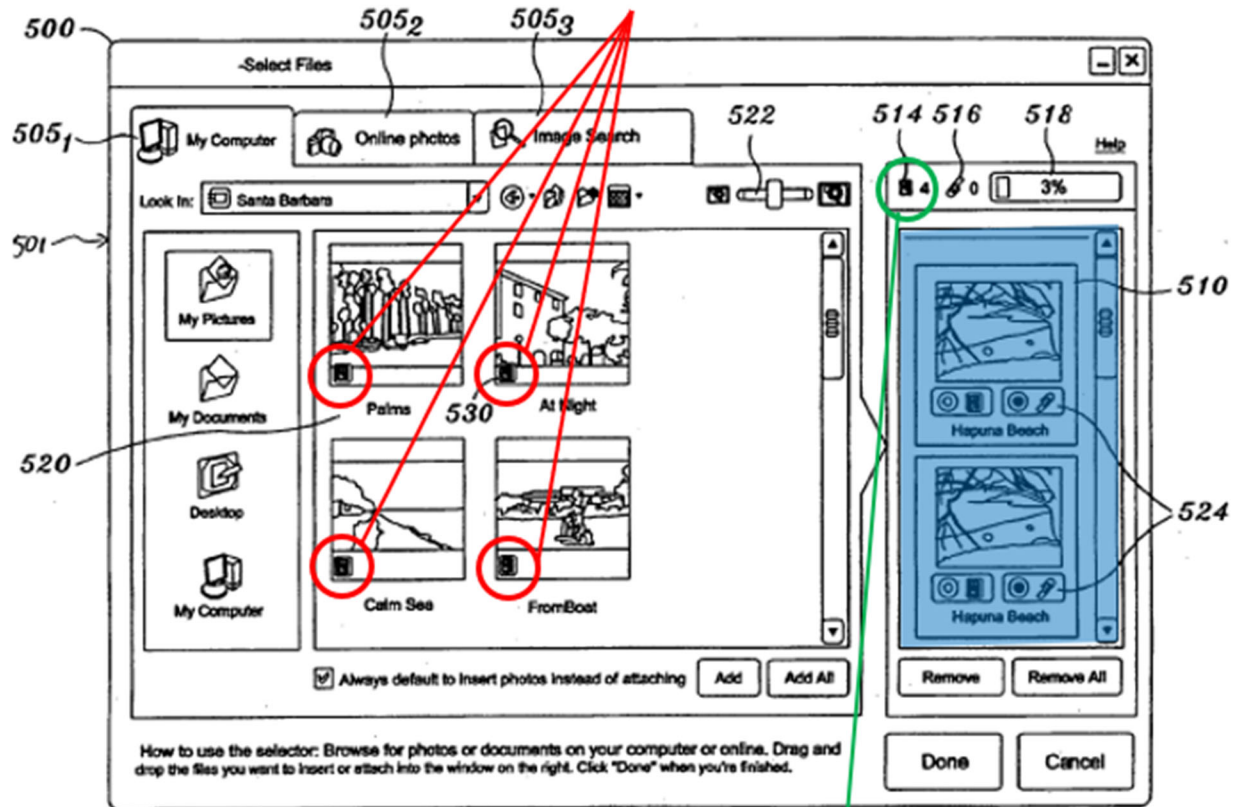
a. 17[a]

Claim 17 depends from claim 16, including a “share operation” (see §VIII.B.10). Houh, ¶193.

b. 17[b]

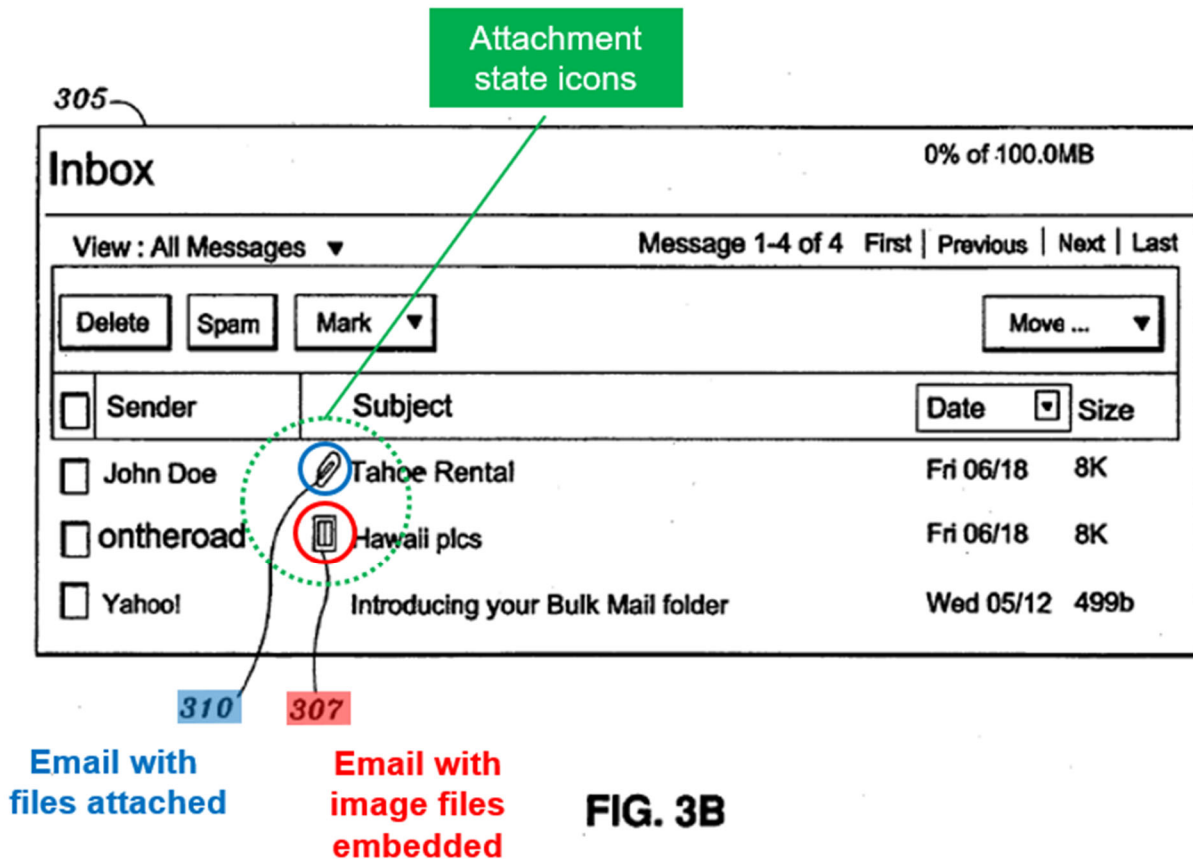
Aldrich teaches 17[b]. Houh, ¶¶194-97. As an initial matter, the '888 patent describes that state entries are associated with a view and source of digital media content. EX-1001, 4:9-12, 6:44-49, 9:1-7. Aldrich discloses two types of “attachment state icon 530” depending on whether an email includes files themselves (attached) or ActiveX embedded thumbnails directing a recipient to an online photos storage account storing those files. EX-1012, ¶[0046], ¶[0055]. As a user adds an image file in Aldrich’s GUI to a queue to include it in an email, the “thumbnail is **updated** with an attachment **state icon** 530 to reflect this fact.” *Id.*, ¶[0054] (emphasis added). These indications are depicted in the figure (annotated) reproduced below.

Attachment state icons showing files have been added to queue for embedding in email



Attachment state icon 514 showing total image files (4) queued for embedding in email

Id., Fig. 5C (annotated). The state icon indicates file attachments with paperclip icon 310 and indicates embedded image files with image file icon 307 as depicted in the figure (annotated) that follows:

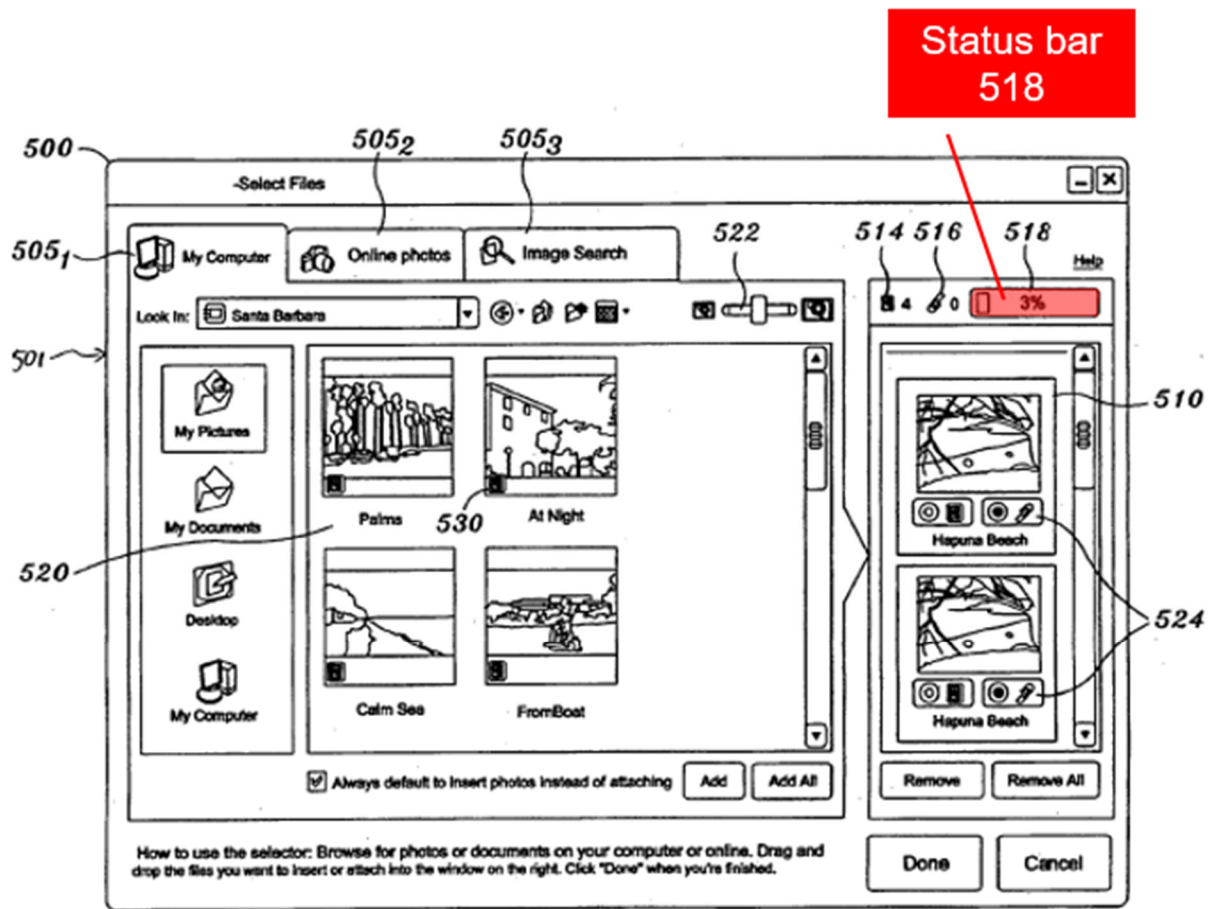


Id., Fig. 3B (annotated). A POSITA would have recognized the attachment state icon 530 of Fig. 5C as the same icon 307 and, further, that the paperclip or rectangular-type icon indicates the source of an image because it indicates whether the image itself is included in the email (is attached) or is instead hosted by a Yahoo! Photos account linked to an embedded ActiveX thumbnail of that image in the email to which a recipient user may navigate. Houh, ¶¶195-98. Further, a POSITA would have understood that in the combination, the device would identify state entries so that it can display the appropriate icon corresponding to those entries. *Id.*

In addition to the reasons to combine the Reavey-Martinez-Proctor device with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to implement Aldrich's process for identifying information to display the appropriate attachment icon in the combination to improve usability so that the user knows whether an image is attached locally within an email or must be accessed/retrieved from a remote source. *See* Houh, ¶197.

c. 17[c]

Aldrich teaches 17[c]. Houh, ¶¶198-200. In Aldrich, a remote online account (e.g., Yahoo! Photos) hosts digital media content as discussed in §§VIII.B.3-VIII.B.4 (claims 3-4). Further, ActiveX control references are embedded in thumbnails included in emails sent between user computers running a web browser and Windows photo attachment module. EX-1012, ¶[0024], ¶[0046]. The ActiveX control reference is a link to a location of an image file on a remote online account server. *Id.*, ¶[0007], ¶[0050]. To embed and send such a link, a user sending an email must first log in to the remote account with username, password, cookies, or other authentication mechanisms. *Id.*, ¶[0056]. Aldrich's GUI uses a progress bar to indicate how much of an allowable attachment size is consumed by any images currently queued for embedding in an email as depicted in the figure (annotated) reproduced below.



Id., Fig. 5C. A POSITA would have understood allowable attachment size information (“remote service settings”) must be established (“identif[ied]”) to present status bar 518 to a user. Houh, ¶¶199-201.

In addition to the reasons to combine the Reavey-Martinez-Proctor computer with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to implement in the combination, a status bar showing indicate how much of an allowable attachment size is consumed by any images currently queued for embedment embedding in an email as taught in Aldrich, to enhance usability (e.g.,

so that a user knows whether she has exceeded that allowable attachment size prior to sending the email). *See* Houh, ¶201.

d. 17[d]

Aldrich teaches 17[d]. Houh, ¶¶201-03. Specifically, Aldrich teaches sending emails to a recipient user that include attachment state icons indicating whether an image is attached to an email or included as a hyperlinked thumbnail (“visual representation[s] associated with...digital media content” and “state settings”) accessible only to users logged into the requisite Yahoo! Photos account to access such images (“remote service settings”) in the GUI as depicted in the figures (annotated) below.

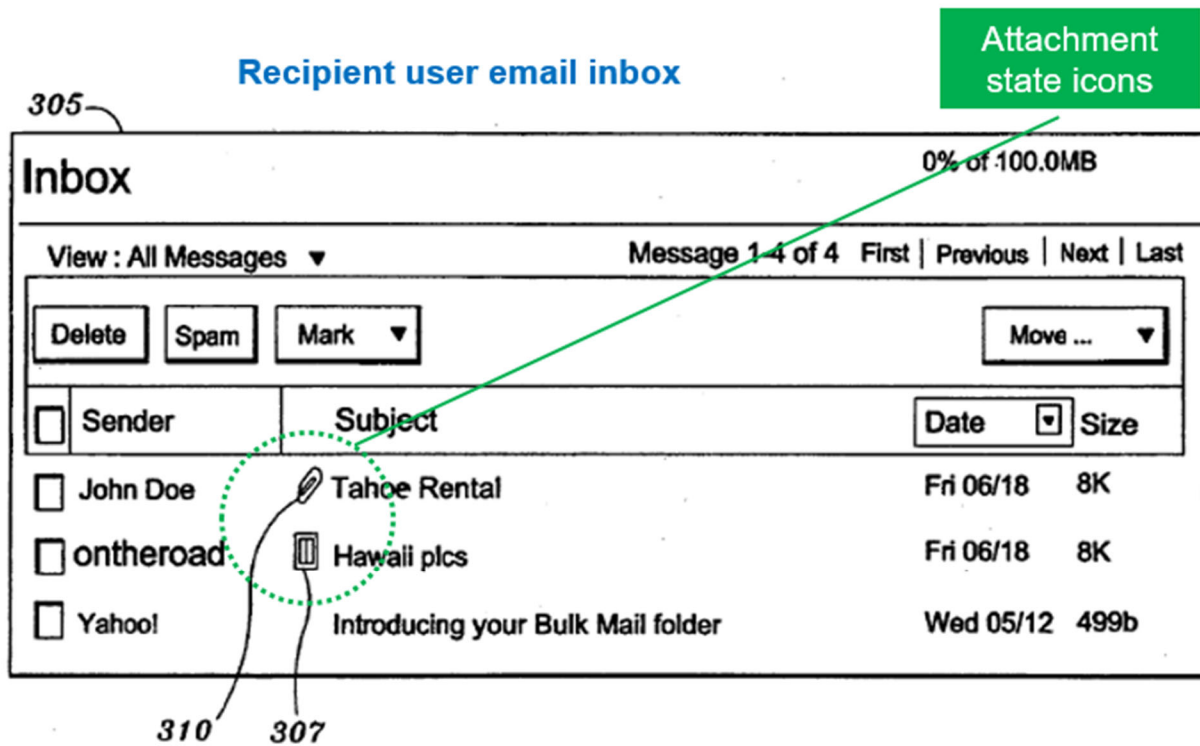


FIG. 3B

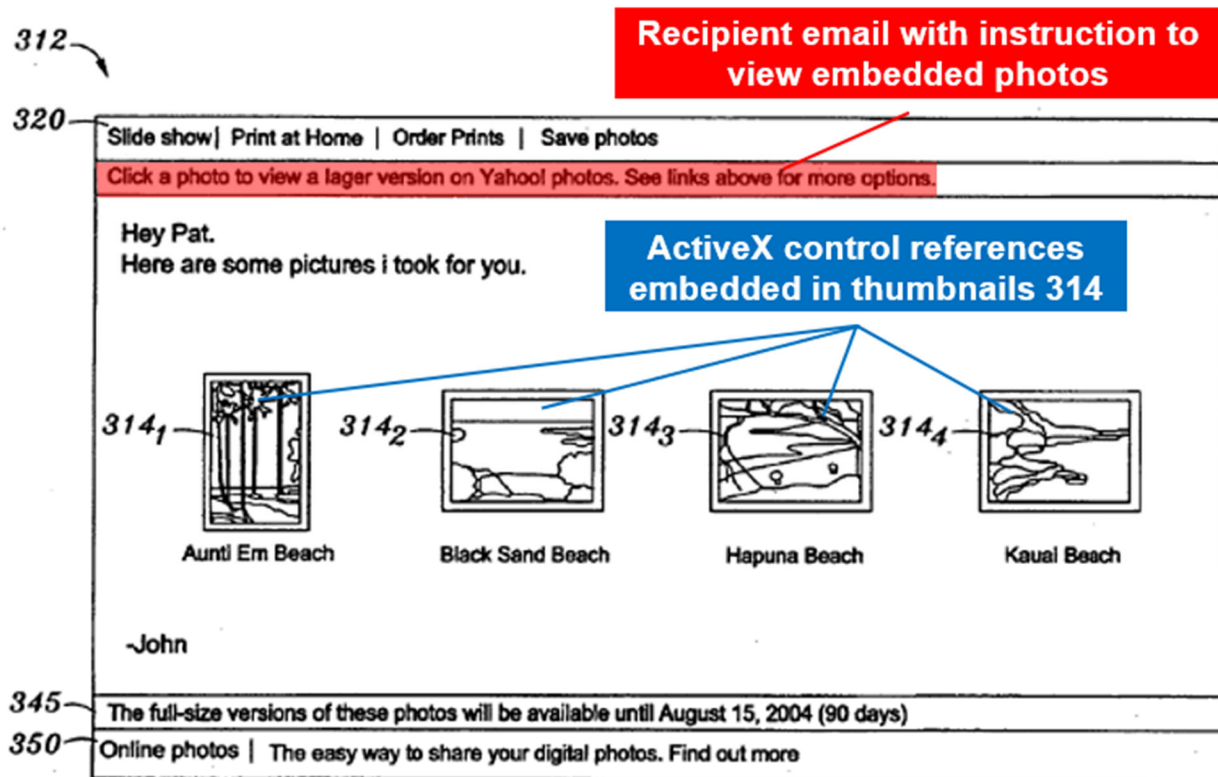


FIG. 3C

Id., Figs. 3B-3C, ¶¶[0036]-[0040].

In addition to the reasons to combine the Reavey-Martinez-Proctor computer with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to implement these Aldrich teachings into the combination for the reasons discussed in §§VIII.B.11.b, VIII.B.11.c. Specifically, a POSITA would have motivated to transmit such information to the recipient user when transmitting, e.g., a thumbnail, so the recipient can also view this useful information (e.g., attachment size when determining whether to forward the received email). *See* Houh, ¶¶202-04.

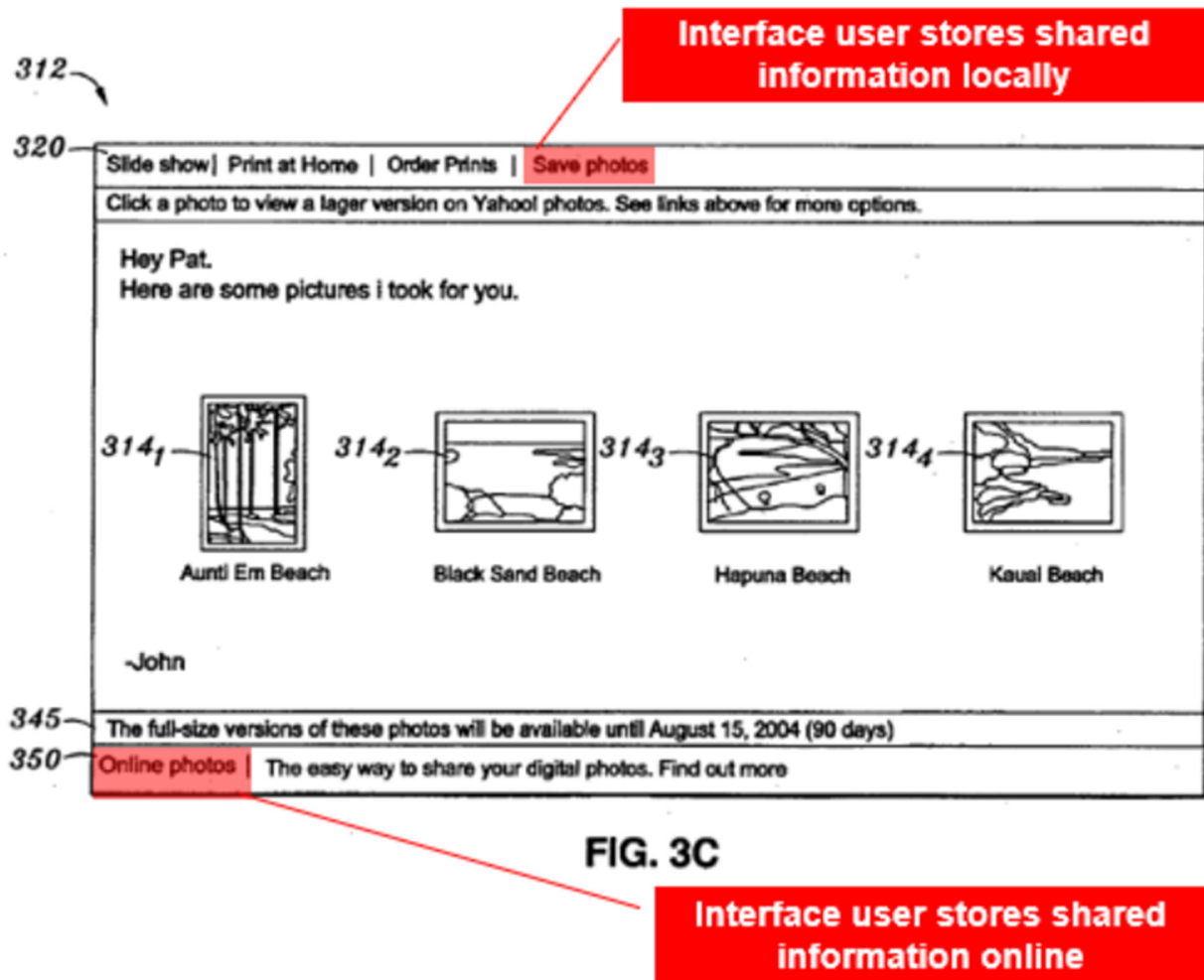
12. Claim 20

a. 20[a]

Claim 20 depends from claim 1 (*see* §VIII.A.5). Aldrich teaches 20[a]’s limitations for the same reasons discussed in §VIII.B.11 (claim 17), namely, describing embedding ActiveX control references to remote account-hosted photos in thumbnails emailed between users (“share the at least one visual representation”). Houh, ¶204.

b. 20[b]

Aldrich teaches 20[b]. The users of Aldrich’s file sharing system interface may save photos online or locally as depicted in the figure (annotated) reproduced below. EX-1012, ¶¶[0038]-[39]; Houh, ¶205.



Id., Fig. 3C (annotated).

In addition to the reasons to combine the Reavey-Martinez-Proctor computer with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to allow a user to also store locally when sharing in the combination as beneficial for the user to retain a local record of what was shared. *See Houh*, ¶¶205-207.

c. 20[c]

Aldrich teaches 20[c]. *Houh*, ¶¶207-08. In Aldrich, availability information is automatically provided to a recipient of online-hosted photos shared as thumbnails

with embedded ActiveX control references. EX-1012, ¶[0039]. A figure (annotated) depicting this information is reproduced below.

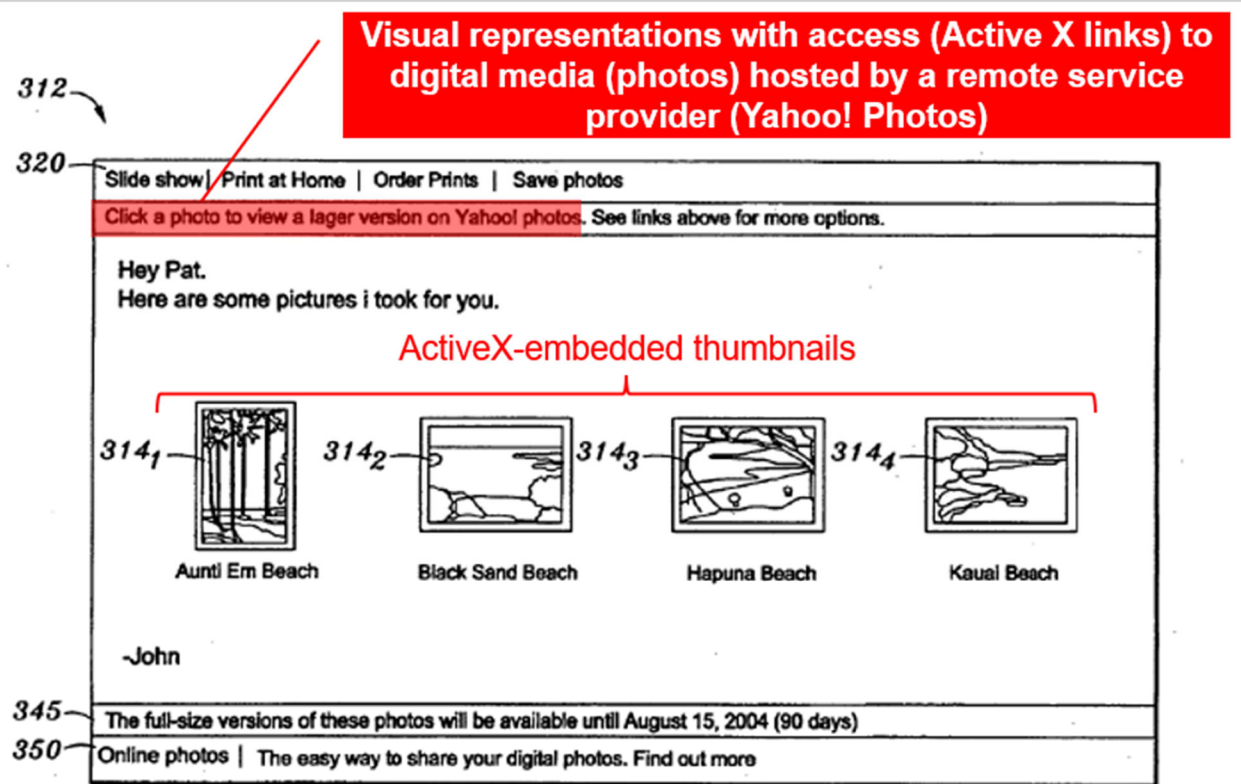


FIG. 3C

Id., Fig. 3C (annotated).

Dr. Houh explains that a POSITA would have understood that when a content controlling user updates an image (e.g., photo) stored in a remote sharing location (e.g., Yahoo! Photos), a content-accessing user that navigates to that online-hosted photo through a shared ActiveX link (e.g., in email as above), would access the image stored at that linked location, including any changes to or replacements of that

image made by the content-controlling user (i.e., that image (“associated digital media content”) has been “update[ed] automatically for the another user”). Houh, ¶208.

In addition to the reasons to combine the Reavey-Martinez-Proctor computer with Aldrich as discussed in §VIII.B.2, a POSITA would have been motivated to such automatic updating, as taught by Aldrich and well known by a POSITA, so that when “the another user” accesses the associated content that is accessing the latest version. *See* Houh, ¶¶209-10.

d. 20[d]

Aldrich teaches claim 20[d] for the same reasons discussed in §VIII.B.12.c (20[c]). Houh, ¶209. In Aldrich, availability information is automatically provided to a recipient of online-hosted photos shared as thumbnails with embedded ActiveX control references. EX-1012, ¶[0039]. A POSITA would have understood that when a content controlling user updates an image (e.g., photo) stored in a remote sharing location (e.g., Yahoo! Photos), a content-accessing user that navigates to that online-hosted photo through a shared ActiveX link (e.g., in email as above), would access the image stored at that linked location, including any changes to or replacements of that image made by the content-controlling user (i.e., the image (“associated digital media content”) that has been “update[ed] automatically for the another user”). Houh, ¶208. A POSITA would have also understood updating the content-accessing

user with the current version of the photo linked via the ActiveX reference involves identifying changes the shared digital media content, including whether the photo has been deleted, edited, or otherwise updated. Houh, ¶208; EX-1012, ¶[0007], ¶[0039].

A POSITA would have been motivated to implement Aldrich's photo-managing GUI elements to the Reavey-Martinez-Proctor computer for the same reasons as discussed in §VIII.B.12.c (20[c]). Houh, ¶211.

13. Claim 21

a. 21[a]

Claim 21 depends from claim 1 (*see* §VIII.A.5). Aldrich teaches or suggests 21[a]'s additional limitations for the same reasons described with respect to the organizing, emailing ("share"), viewing, and downloading operations discussed in §§VIII.B.9, VIII.B.12.a (claims 15, 20[a]). Houh, ¶¶210-11.

A POSITA would have been motivated to implement Aldrich's photo-managing GUI elements to the Reavey-Martinez-Proctor computer for the same reasons as discussed in §§VIII.B.9 and VIII.B.12.a (claims 15, 20[a]). Houh, ¶¶210-211.

b. 21[b]

Aldrich teaches 21[b] for the same reasons discussed in §§VIII.B.11.a, VIII.B.11.b, VIII.B.11.c (17[a], 17[b], 17[c]). Houh, ¶¶212-13.

A POSITA would have been motivated to implement Aldrich's photo-managing GUI elements to the Reavey-Martinez-Proctor computer for the same reasons as discussed in §§VIII.B.11.a, VIII.B.11.b, VIII.B.11.c (17[a], 17[b], 17[c]). Houh, ¶¶212-13.

C. Ground 3: Obviousness Over Reavey, Martinez, Proctor, and Pröll (Claim 25)

1. Pröll

Pröll is directed to a “[m]obile data processing device,” such as a 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* EX-1006, Title, Abstract, claims 1, 3, 5; Houh, ¶¶214-16. Pröll's Figure 1 is reproduced below:

Fig. 1

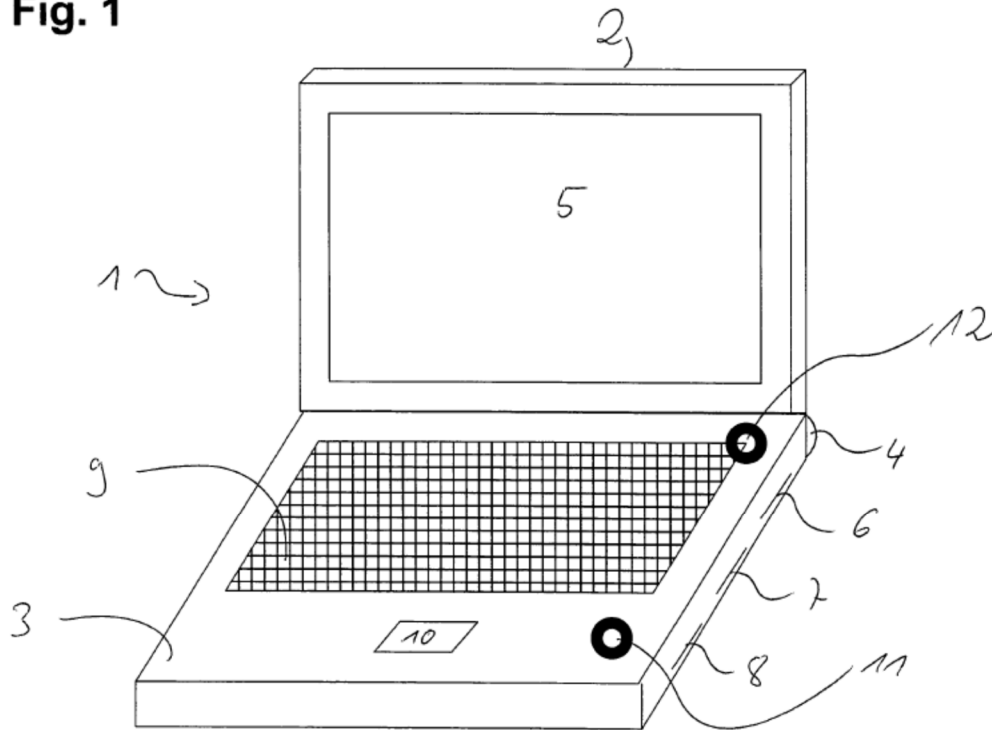
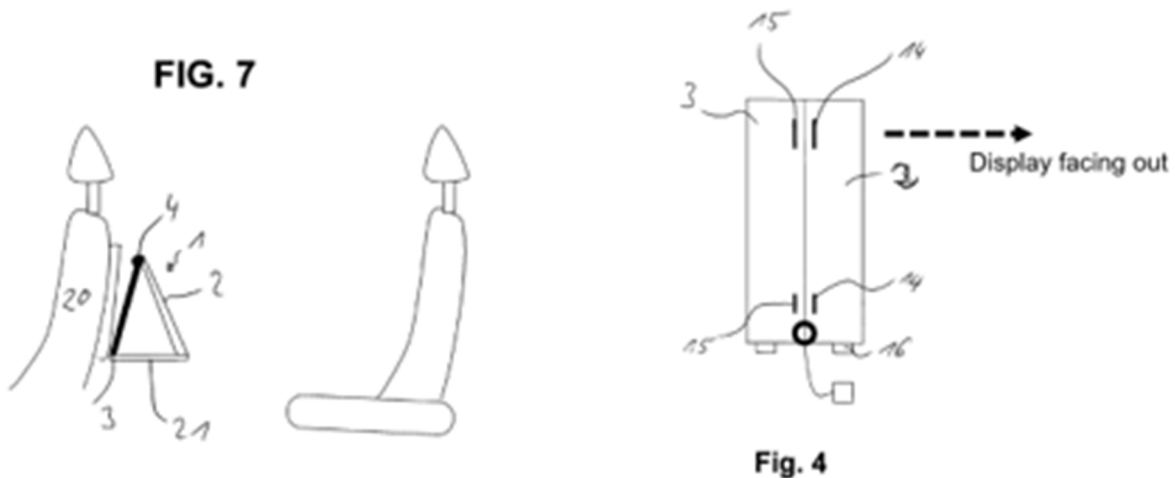


Figure 1 shows Pröll's device in a laptop configuration where housing halves 2, 3 “can be swiveled in reference to each other by almost 360° degrees” using pivoting device 4. *Id.*, ¶[0033]. Housing half 2 contains display device 5, and housing half 3 contains keyboard 9. *Id.*, ¶[0034] Other figures in Pröll show its device in other configurations. *E.g., id.*, Fig. 3 (180°), Fig. 4 (360°), Fig. 6 (360°), Fig. 7 (270°).

As two examples, Figures 7 and 4 are reproduced below:



Id., Fig. 4 (annotated) (rotated 360°), Fig. 7 (rotated 270°).

Pröll discloses it has a switch in pivoting device 4 to detect whether the 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-Martinez-Proctor combination with Pröll. Houh, ¶¶217-19. As discussed in §VIII.A.1, Reavey teaches that a user manipulates its device into different physical configurations, including a laptop configuration (Mode 3) and a flat configuration (Mode 2). EX-1009, 1:11-15, 7:24-62, Figs. 2-3.

It would have been obvious to a POSITA to implement Pröll's easel configuration as another mode (e.g., Mode 4) of the Reavey-Martinez-Proctor device

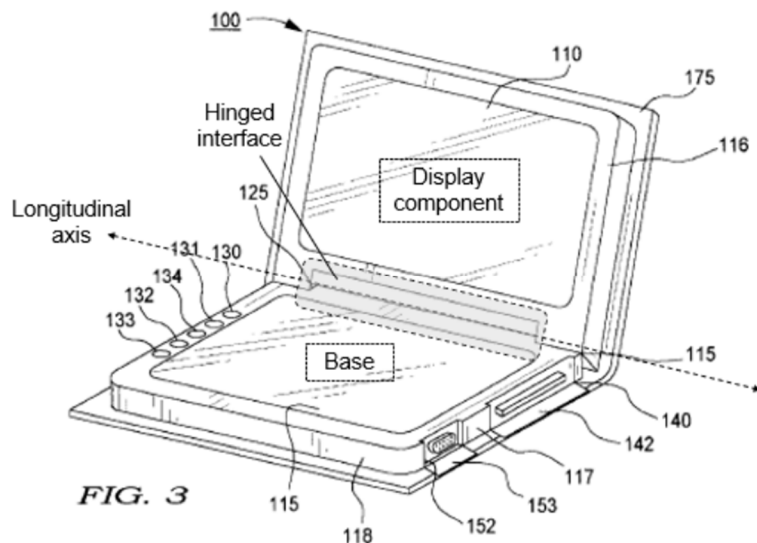
because the Reavey-Martinez-Proctor device already contains the requisite hinge and sensor to sense the degree of the device's opening conducive to its "ability to have multiple operational modes...facilitated by having a screen orientation feature which automatically adjusts the text and graphics to the desired mode." EX-1009, 6:43-46; Houh, ¶¶218-19. Configuring the device to operate in an easel mode would have been a simple improvement within the electrical and mechanical abilities of a POSITA and obvious to try as new application of the same device with the same screen orientation and device rotation characteristics, just at a different opening angle to assist a user in another environment (e.g., car or airplane travel). EX-1006, ¶¶[0052]-[0054]; Houh, ¶¶218-19; *Compare* EX-1009, 3:24-27, 6:43-46, 7:26-31 (disclosing the use of hinge 125 and switches to detect a device configuration and set a proper screen orientation) 7:24-26 (disclosing automatic text and graphic display rotation responsive to screen orientation) *with* EX-1006, ¶[0049], ¶[0053] (disclosing the need to rotate the display 180° when a switch detects an easel configuration to avoid an upside-down display relative to a user's view); Houh, ¶218.

3. Claim 25

a. 25[a]

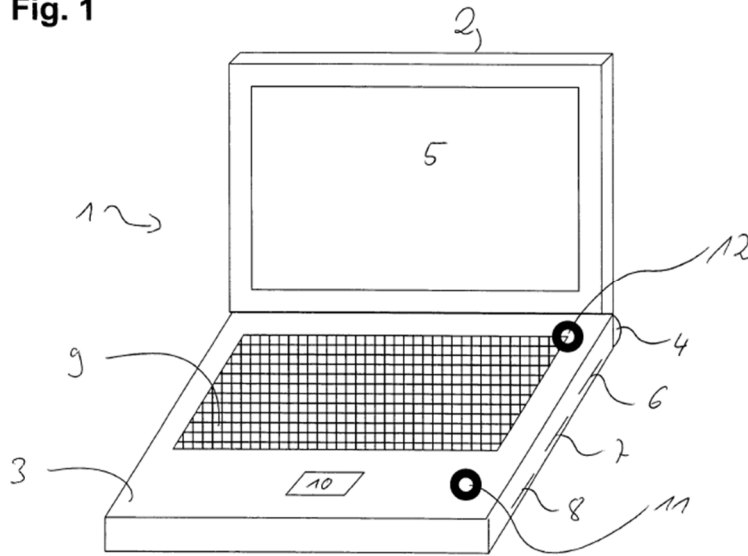
Claim 25 depends from claim 1 (*see* §VIII.A.5). §VIII.A.5.g (1[e2]) explains Reavey discloses a "laptop configuration." 25[a] further requires this configuration

to be displayed by default between 0 and approximately 180 degrees. Reavey discloses a “laptop configuration” that is configured by default “approximately at 120° open,” which discloses rotating the display component “up to approximately 180 degrees from the closed mode.” EX-1009, 7:53-58; Houh, ¶220. Reavey depicts an embodiment of this configuration in Figure 3 (annotated and reproduced below), where the display component 110 is rotated up to approximately 180° into a laptop mode so it remains useful to a device operator. EX-1009, 7:39-58.



Moreover, Pröll teaches this additional limitation of 25[b]. Houh, ¶¶217-19. As shown in the Figures below, Pröll’s Figure 1 shows its processing device arranged as a “laptop” and Figure 3 shows the device “folded open by almost 180 degrees.”

Fig. 1



Pröll, Fig. 1, [0025], [0033]. Pröll’s device mirrors Reavey’s when used in this traditional laptop configuration, supporting that a POSITA would have been motivated to combine their teachings for the same reasons as described in §VIII.C.2. Houh, ¶219.

b. 25[b]

See §VIII.A.5.h (1[e3]). Notably, 25[b] also requires “rotating the display component beyond approximately 180 degrees from the closed mode to...an easel mode.” Pröll teaches this additional limitation of 25[b]. Houh, ¶¶221-23.

Pröll discloses that “in the form of use as a portable computer with an angle between the first and second housing halves 2, 3 of **more than 180° degrees** . . . the display on the display device must be rotated by 180° degrees since otherwise the display would be upside down.” EX-1006, ¶[0049]. Pröll depicts an embodiment

of this configuration in Figures 4 and 7 (annotated and reproduced below), where the halves are rotated beyond 180° to approximately 270° into an easel mode that similarly rotates the display 180° degrees so it remains useful to a device operator.

Id., ¶¶[0052]-[0053].

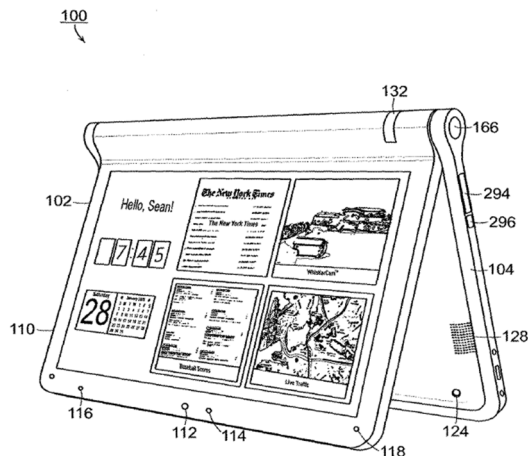


FIG. 4

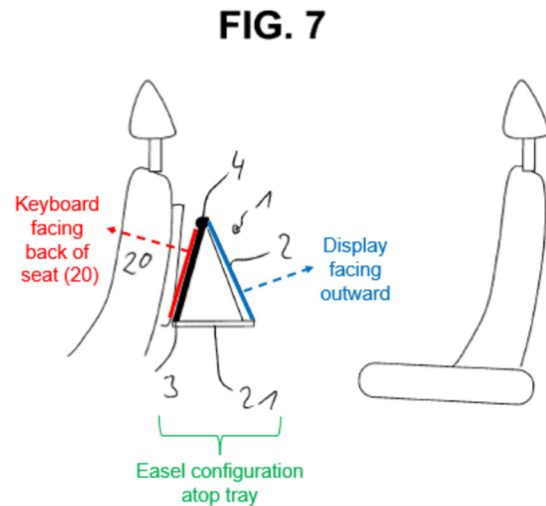


FIG. 7

It would have been obvious to a POSITA to implement Pröll's easel configuration as another mode (e.g., Mode 4) of the Reavey-Martinez-Proctor device for the same reasons as described in §VIII.C.2. Houh, ¶223.

D. Ground 4: Obviousness Over Reavey, Martinez, Proctor, Aldrich, and Chao (Claims 9, 18, 19)

1. Chao

Chao is directed to a digital image management system for searching for specific images embodied as at least an “archiving system” shown in the figure reproduced below. EX-1013, Abstract, 12:56-58, Fig. 8; Houh, ¶¶224-26.

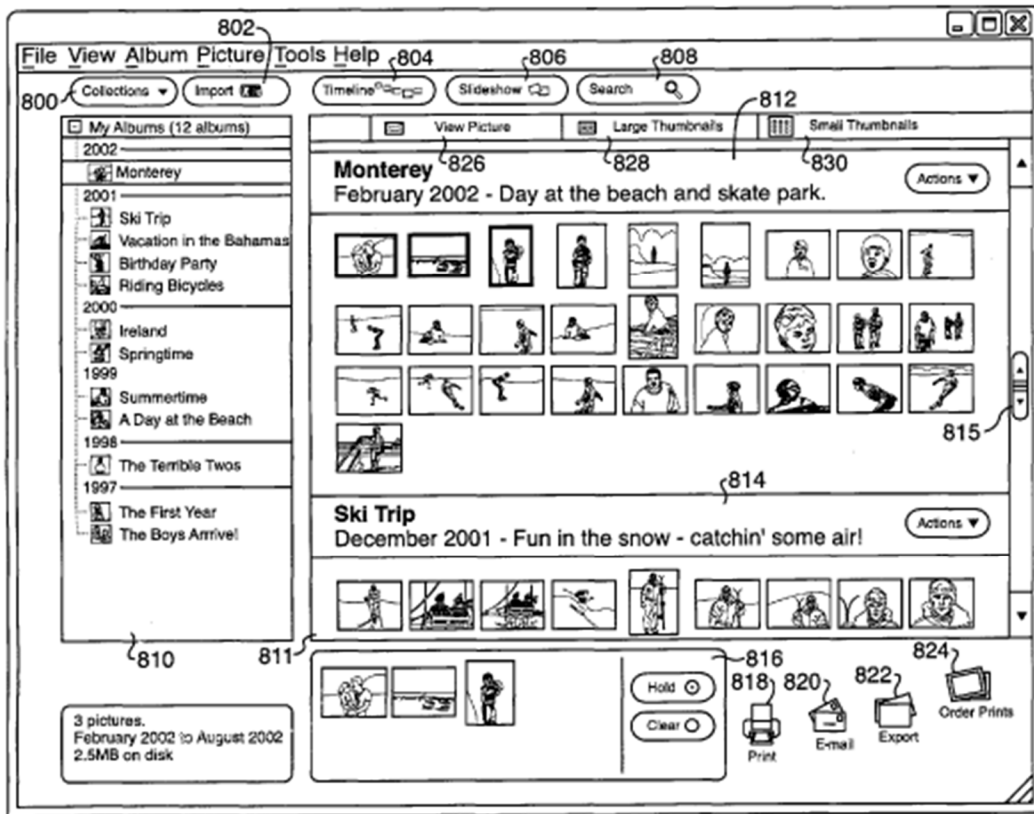


FIG. 8

Display area 810 of the archiving system is set aside for presenting archived collections, and the images are clustered into albums. EX-1013, 13:5-7, Fig. 8 (above). Along the top of this archiving system, there are, among other elements, timeline button 804 (Figure 8 above) to display archived images according to a timeline view Figure 20 below). *Id.*, 12:63-65, 15:7-11.



FIG. 20

In this view, “[a] user may employ an interactive device, such as a mouse, to move along the timeline, thereby searching through time for images of interest. Moving the slide 2002 may shift the timeline 200[0].¹⁰ The scrubber 2004 indicates the number of image albums associated with various time periods within the displayed

¹⁰ The timeline is identified as “2002” in this quotation, but is referred to as “2000” in EX-1013, 15:10-11. “2002” is understood as a typographical error here that should read, “2000.”

range (March 1997 to February 2002 in this example).” *Id.*, 15:11-17; Houh, ¶¶227-29.

2. Motivation to Combine

A POSITA would have been motivated to implement GUI timeline views and controls as taught in Chao in the Reavey-Martinez-Proctor-Aldrich GUI. Houh, ¶¶227-30. Aldrich discloses a GUI 500 displaying different albums in an album view (EX-1012, ¶¶[0057]-[0058], Fig. 5E), but does not disclose a timeline view. Chao discloses both an album view and a timeline view and further provides a timeline button 804 to switch between those views. EX-1013, 12:63-65, 15:7-22, Fig. 20. A POSITA would have been motivated to incorporate Chao's timeline view with timeline button 804 into the combination's GUI (which includes Aldrich's photo GUI elements and associated functionality) to allow for increased functionality and usability (i.e., to create a timeline view of photos that allows users to “quickly disregard a large number of collections in the wrong years, and focus on a subset that has a high probability of containing the desired image”). *Id.*, 4:52-56; Houh, ¶¶227-28.

It would have been obvious to combine these teachings, and a POSITA would have had a reasonable expectation of success in combining them, because the combination would have amounted to no more than combining prior art elements according to known methods to yield predictable results. *See KSR*, 550 U.S. at 416;

Houh, ¶230. Chao teaches the well-known concept of a timeline view, and a button to transition the displayed content from the album view to the timeline view. *Id.* Application of this teaching to the Reavey-Martinez-Proctor-Chao combination would have yielded a predictable GUI capable of transitioning between the album and timeline views by selecting a button. *Id.*

3. Claim 9

Claim 9 depends from claim 7, including an album view with header (*see* §VIII.B.7). Houh, ¶¶231-34. Chao teaches claim 9's additional limitations. Specifically, Chao teaches a GUI including an album view with header that further includes a selectable button (“displaying a toggle element in a header portion of the view”) that transitions from a display of photos grouped by album (“album view”) to a display of photos serialized by timeline progression in a timeline metaphor (“timeline view”) as depicted in the figures (annotated) reproduced below.

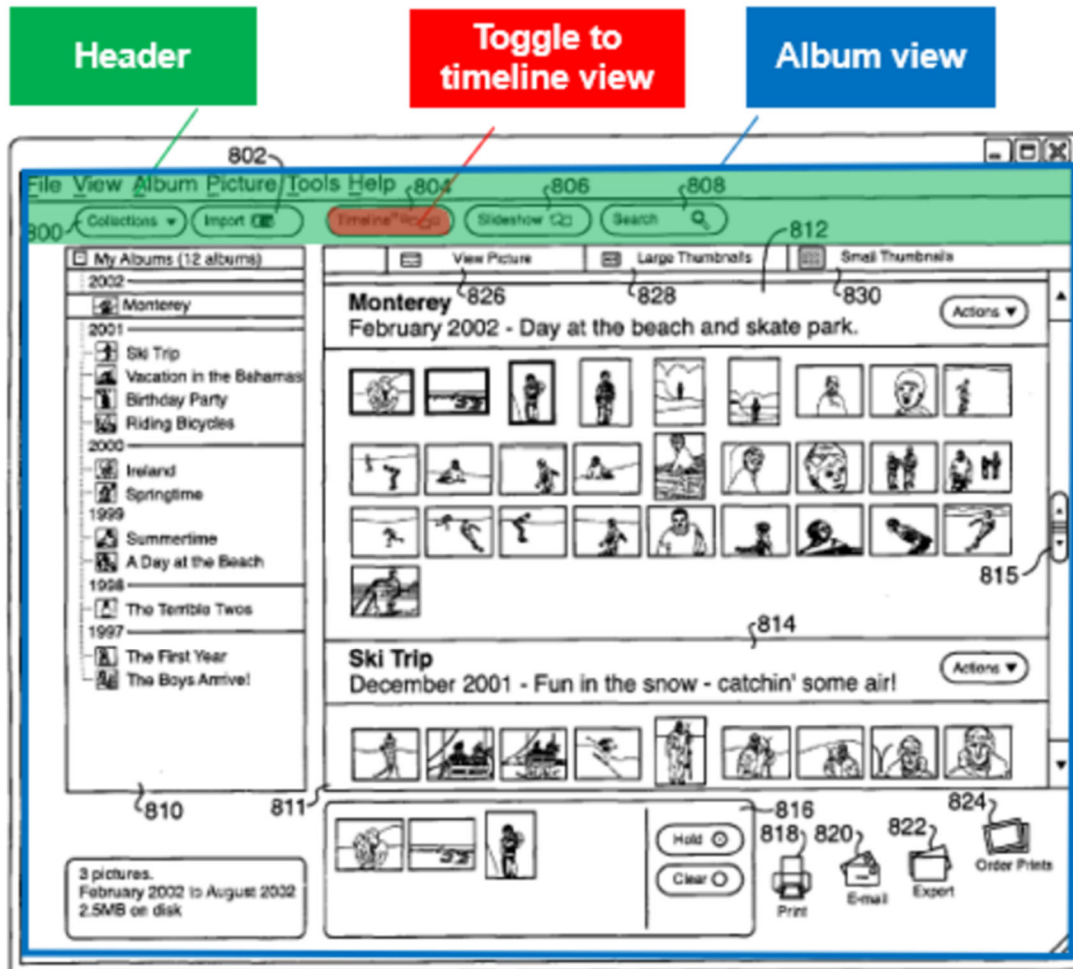


FIG. 8

EX-1013, Fig. 8 (annotated).

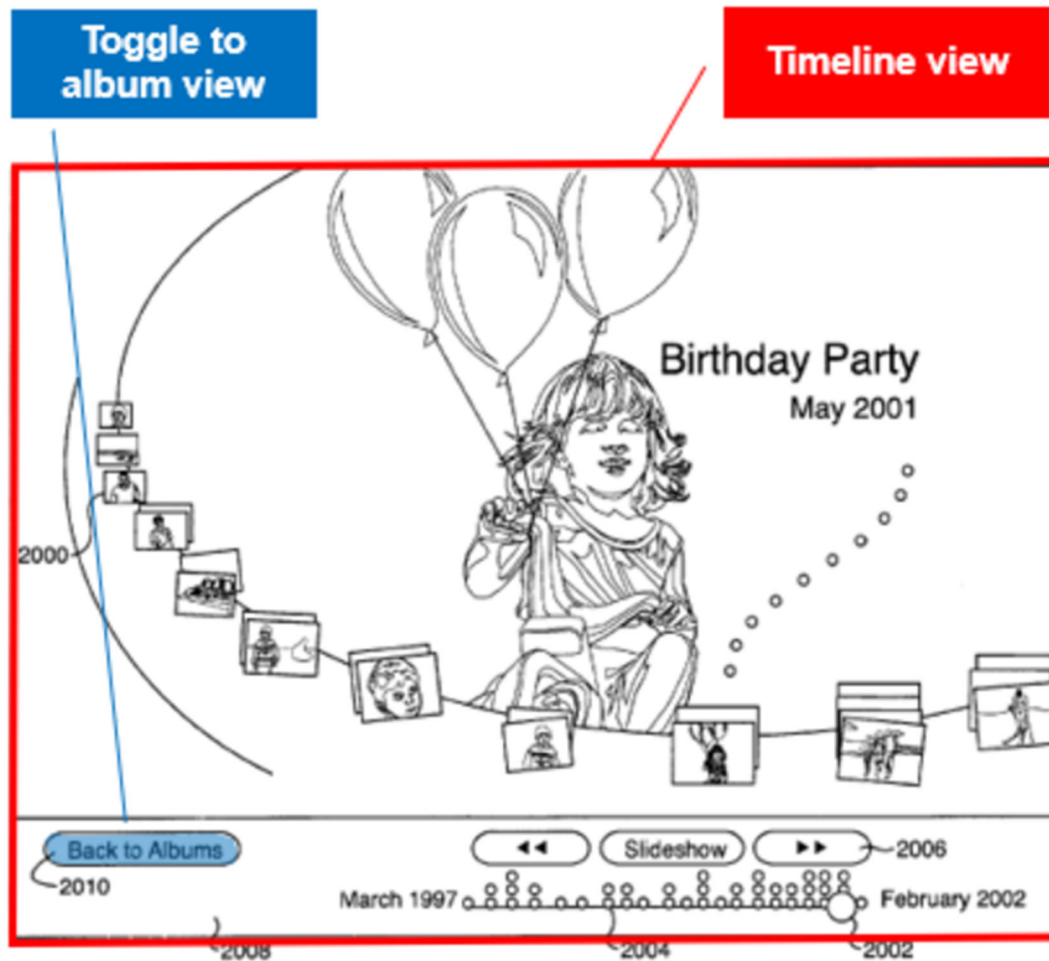


FIG. 20

Id., Figs. 8, 20, 12:63-65 (“The Timeline button 804 allows a user to display archived images using the...timeline metaphor.”), 15:7-22 (“A button 2010 allows a user to toggle between timeline and slideshow views.”).

A POSITA would have been motivated to implement Chao’s timeline metaphor and button 804 in the combination for the reasons discussed in §VIII.D.2, including for example that a POSITA would have recognized this combination improves usability of the combination’s device. Houh, ¶¶233-34 (describing release

of the iPhone and similar internet-connected, portable photo capturing phone models antedating the invention of the '888 patent in 2008).

4. Claim 18

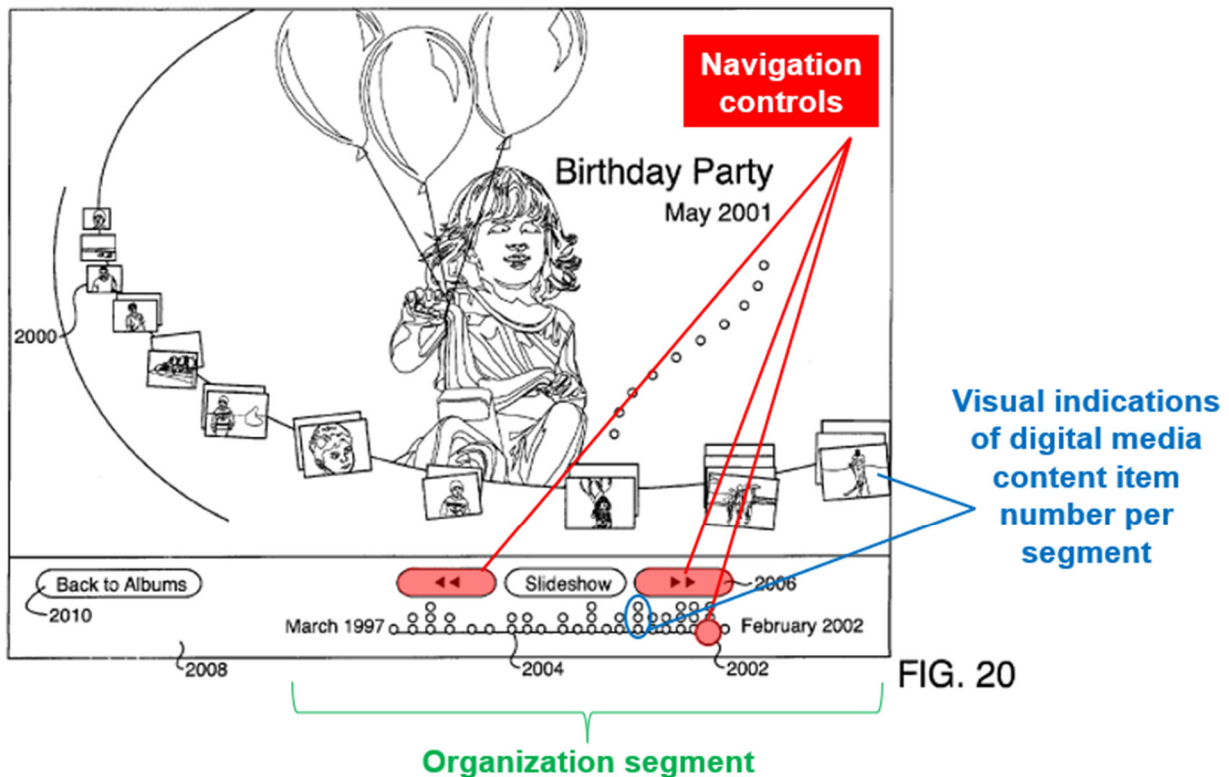
a. 18[a]

Claim 18 depends from claim 7 (*see* §VIII.B.7). Chao teaches 18[a] based on its “timeline metaphor” including a timeline view for the same reasons discussed in §VIII.D.3 (claim 9). Houh, ¶235. A POSITA would have been motivated to combine Chao’s timeline view with the Reavey-Martinez-Proctor-Aldrich combination for the same reasons discussed in §§VIII.D.3, VIII.D.2. *Id.*

b. 18[b]

Chao teaches 18[b]. Houh, ¶¶236-37. Chao’s timeline metaphor further includes a timeline showing a timeframe (e.g., March 1997 to February 2002) with a slide 2002, forward button 2006, and backward button used to shift the timeline forward and backward (“timeline navigation control[s]”) to show different image albums associated with the selected time period (“organization segments”) further organized as a cascading view of photos within an album, the number of respective albums per chosen timeframe further displayed by a “scrubber 2004” and the number of photos in an album corresponding to the number of vertically-stocked circles on the scrubber (“visual indication of a number of digital media content items in each

segment”). EX-1013, 15:7-22; Houh, ¶236. These elements are displayed “in the body of the view” as shown in the figure (annotated) reproduced below.

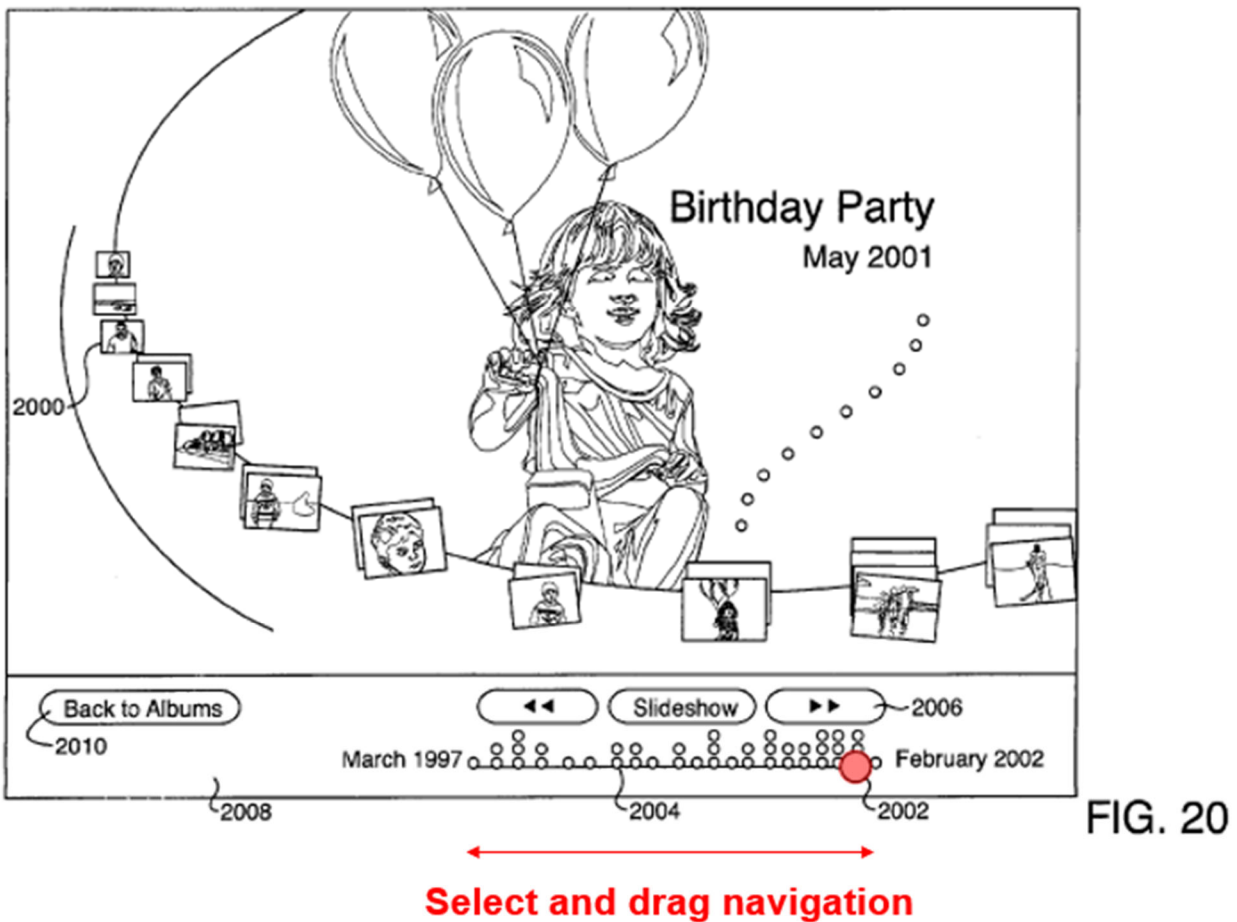


EX-1013, Fig. 20 (annotated). A POSITA would have been motivated to combine Chao’s timeline view with the Reavey-Martinez-Proctor-Aldrich combination for the same reasons discussed in §VIII.D.2. Houh, ¶237.

5. Claim 19

Claim 19 depends from claim 18 (see §VIII.D.4). As discussed in §VIII.D.4.b (18[b]), Chao teaches timeline navigation controls, specifically a slider 2002 (“handle”) selectable and manipulatable by a mouse. Chao further discloses the

mouse is an “input device” used “for controlling cursor movement.” EX-1013, 6:21-28; Houh, ¶¶238-39. A figure (annotated) depicting the slider is reproduced below.



EX-1013, Fig. 20 (annotated).

A POSITA would have recognized that controlling a linear-moving slider with cursor movements controlled by a mouse teaches “select and drag operations” with a “pointer” because a “pointer” was the well-known shape of mouse cursors displayed in a GUI to manipulate objects therein, and would have considering sliding and dragging as synonymous operations; therefore sliding Chao’s cursor would have

required a user to first select then drag it across a screen by dragging a corresponding mouse across a desktop or finger across a touch or track pad to register that intended control movement from a user. Houh, ¶239. A POSITA would have been motivated to combine Chao's timeline view with the Reavey-Martinez-Proctor-Aldrich combination for the same reasons discussed in §VIII.D.2. *Id.*

E. Ground 5: Obviousness Over Reavey, Martinez, Proctor, and Chao (Claim 22)

1. Claim 22

Claim 22 depends from claim 1 (*see* §VIII.A.5). Chao teaches claim 22's additional limitations. Houh, ¶¶240-42. The '888 Patent describes updating the date of items in an album, which updates the album itself. EX-1001, 43:44-47. Chao teaches automatic and continuous collection of metadata for each image file captured. EX-1013, 3:35-42. Chao's metadata includes temporal information—e.g., a date a photo is taken—and is used as criteria to group images into albums according to events like those reflected in the figure reproduced below. *Id.*, Figs. 2, 20, 8:33-46; Houh, ¶240.

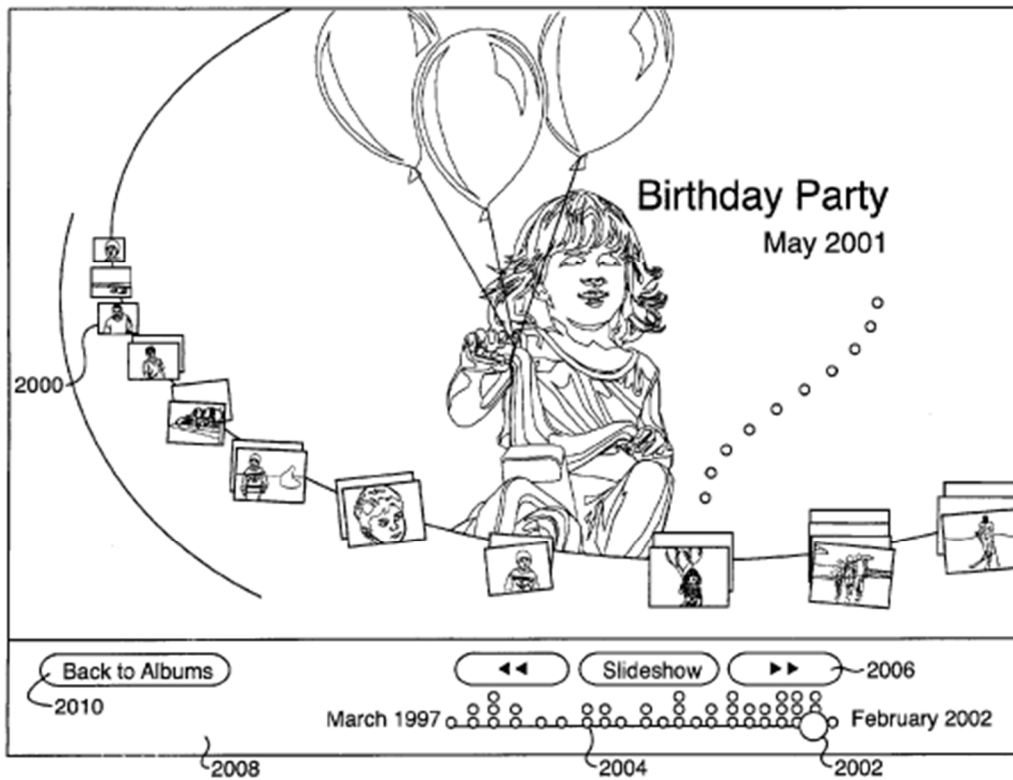


FIG. 20

EX-1013, Fig. 20, 15:7-22. Images are grouped into collections using time criteria as a constraint reflecting, e.g., a recurring, discrete day (e.g., December 25), or a span of hours on a certain day to group images by a certain event (e.g., attendance at “Red Sox games”). *Id.*, 4:19-37, 12:2-6. This process is called “temporal clustering,” and users can “‘tweak’ the clusters,” permitting users to determine convergence points to include and exclude the appropriate images from a collection (album). *Id.*, 9:61-64; Houh, ¶241.

A POSITA would have understood Chao teaches updating date information of digital media content because users control the algorithms used to cluster images relevant to a specific date- and time-based event on an iterative basis (e.g., refining

criteria to correctly converge upon a “Rex Sox game[]” occurring over certain times of a certain day). Therefore, a POSITA would have understood in Chao that users update the date information associated with a given collection of images (album) dedicated to the convergence event. *Id.*, 4:19-47; Houh, ¶¶241-42. Dr. Houh further explains a POSITA would have found it obvious to update date information for certain images. Houh, ¶241 (citing EX-1039, 24).

A POSITA would have been motivated to implement Chao’s user-driven temporal clustering technique in the Reavey-Martinez-Proctor device because it provides improved management of content using that device’s computing processes (algorithmic solving) to more intuitively organize images (i.e., photo albums) according to the “superb human capability for remembering events, people, and emotional context” and accommodate “human preference for visual and spatial” characteristics of information beyond the conventional, textual and linguistic characteristics otherwise relied upon to make image organization convenient for machine organization rather than the user recollection and use. Houh, ¶245, EX-1013, 8:12-20, 1:24-49 (describing prior art methods of image organization convenient to the machine rather than the natural inclinations of a human attempting to remember the events captured in the images).

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 '818 patent has been involved in the following district court litigation:

Microsoft Corporation v. LiTl LLC, Case No. 1:23-cv-00122-RGA (D. Del.)

C. Notice of Counsel and Service Information¹¹

LEAD COUNSEL
Jessica Kaiser (Reg. No. 58,937) kaiser-ptab@perkinscoie.com Perkins Coie LLP 1900 Sixteenth Street, Suite 1400 Denver, CO 80202-5255 Telephone: (303) 291-2300
BACK-UP LEAD COUNSEL
Christina McCullough (Reg. No. 58,720) McCullough-ptab@perkinscoie.com

¹¹ 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.

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, 2024

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

Pursuant to 37 C.F.R. §42.24(a), Petitioners hereby certify that portions of the above-captioned Petition for *Inter Partes* Review of U.S. Patent 8,612,888, 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 13,996. 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, 2024
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. 8,612,888 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, 2024