c. Limitation [20b1]

The Shimura-Tsuji combination discloses [20b1] and renders it obvious. *See* VI.B.1; VIII.B.3.b; VIII.D.3.b; EX-1011, ¶311.

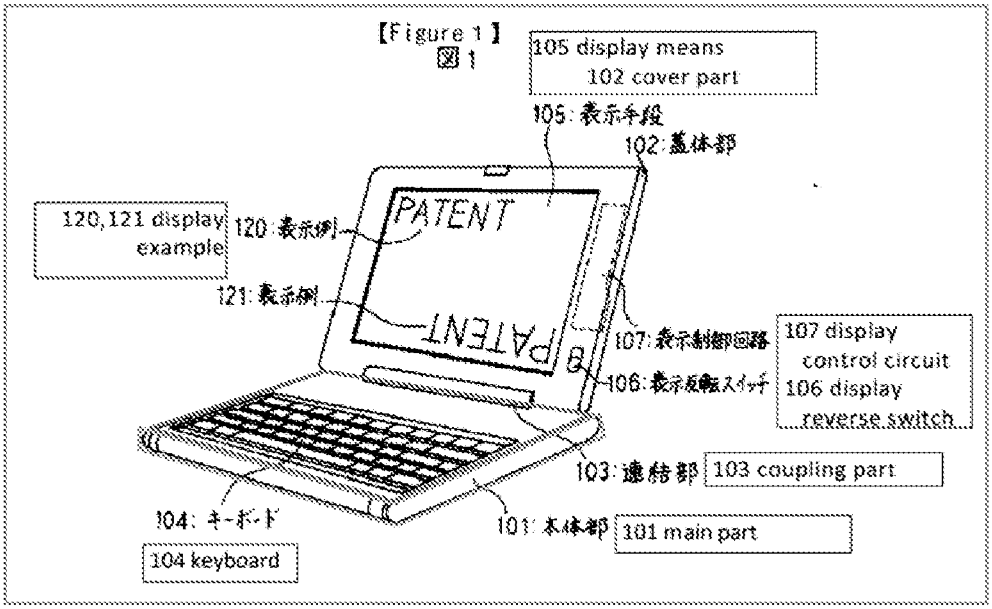
d. Limitation [20b2]

Kawai discloses [20b2]. *See* VI.A.6; VIII.D.3.d; EX-1011, ¶312.

e. Limitation [20b3]

Shimura discloses [20b3]. VI.A.1; EX-1011, ¶¶313-314.

Shimura discloses a top surface (red) and a lateral surface (blue), as illustrated in Figure 1 below. EX-1004, ¶11. Shimura also discloses a bottom surface (not visible in Figure 1 below) in contact with a surface (e.g., a desk) when the portable computer is in a laptop mode. *See* VIII.D.3.e; EX-1004, ¶11.


【Figure 1】
図1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
PATENT
B
107: 表示制御回路
106: 表示反転スイッチ
107 display control circuit
106 display reverse switch
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

f. Limitation [20b4]

The Shimura-Tsuji-Tonouchi combination discloses [20b4] and renders it obvious. *See* VI.B.2; VIII.B.3.c; EX-1011, ¶315.

g. Limitation [20b5]

Ryuuzaki discloses [20b5]. *See* VIII.D.3.g; EX-1011, ¶316.

h. Limitation [20b6]

Tsuji discloses [20b6]. *See* VIII.D.3.h; EX-1011, ¶317.

i. Limitation [20b7]

Ryuuzaki discloses [20b7]. VI.A.5; EX-1011, ¶¶318-319.

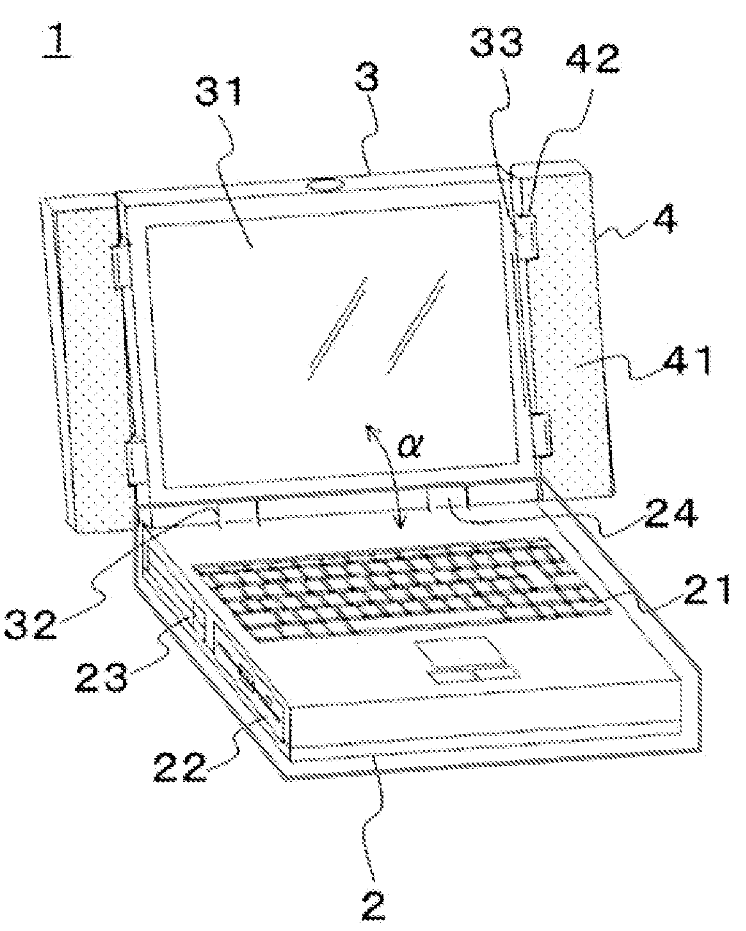
Ryuuzaki discloses a speaker unit installed on a portable computer. EX-1008, 1:5-8. Incorporating such a well-known common component (e.g., the speaker) in a base (101) of a portable computer would have been an obvious design choice for a POSITA. VI.D.1; EX-1011, ¶319.

j. Limitation [20b8]

Ryuuzaki discloses [20b8]. VI.A.5; EX-1011, ¶¶320-321.

Ryuuzaki discloses a volume control "provided on the lateral side edges of the first casing 2 [red in FIG. 1 below]." EX-1008, 4:52-54.

FIG. 1



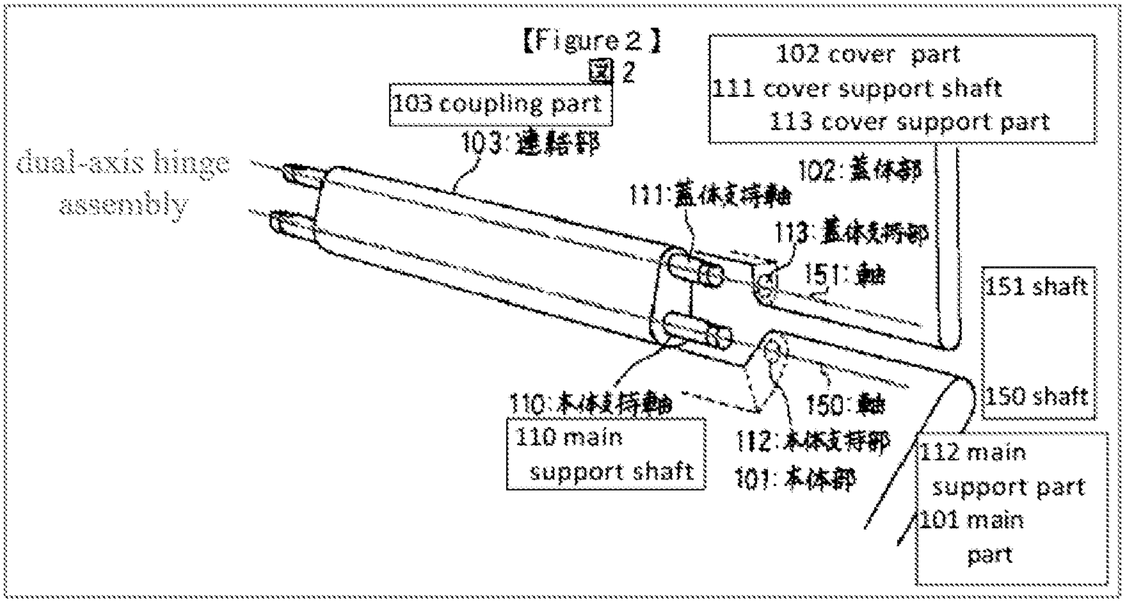
Incorporating such a well-known component in a portable computer, especially when there is express disclosure from Ryuuzaki as to where the volume control is located, would have been obvious to a POSITA. VI.D.1; EX-1011, ¶321.

k. Limitation [20c1]

Shimura discloses [20c1]. *See* VI.A.1; VIII.B.3.d; VIII.D.3.b; VIII.D.3.e; EX-1011, ¶¶322-323.

Shimura discloses a dual-axis hinge assembly. EX-1004, ¶¶13-15;

Annotated Figure 2 below (red dashed lines).


【Figure 2】
図 2
103 coupling part
103:連結部
102 cover part
111 cover support shaft
113 cover support part
dual-axis hinge assembly
102:蓋体部
111:蓋体支持軸
113:蓋体支持部
151:軸
151 shaft
150 shaft
110:本体支持軸
110 main support shaft
150:軸
112:本体支持部
101:本体部
112 main support part
101 main part

l. Limitation [20c2]

Shimura discloses [20c2]. *See* VI.A.1; VIII.B.3.d; VIII.D.3.b; VIII.D.3.e; EX-1011, ¶324.

m. Limitation [20d]

The Shimura-Tsuji combination discloses [20d] and renders it obvious. *See* VI.B.1; VIII.B.3.h; VIII.B.7; EX-1011, ¶¶325-326.

The output of the gravity sensor (e.g., toward or away from the hinge assembly) in the Shimura-Tsuji-Tonouchi-Ryuuzaki Computer is "indicative of an orientation [e.g., face up or down] of at least part of the portable computer [the cover part 102]." Table 1. Moreover, a gravity sensor is a type of accelerometer. *See* VIII.B.7; EX-1011, ¶326; EX-1018, 1, 4.

n. Limitation [20e1]

The Shimura-Tsuji combination discloses [20e1] and renders it obvious. The Shimura-Tsuji Computer discloses the function and corresponding structure of the means-plus-function limitation "display manager" recited in [20e1], or its equivalents. *See* VI.B.1; VIII.B.3.f; VIII.D.9.a; EX-1011, ¶327.

a. Limitation [20e2]

The Shimura-Tsuji combination discloses [20e2] and renders it obvious. The Shimura-Tsuji Computer discloses the function and corresponding structure of the means-plus-function limitation "display manager" recited in [20e2], or its equivalents. *See* VI.B.1; VIII.D.3.a; EX-1011, ¶328.

a. Limitation [20e3]

The Shimura-Tsuji combination discloses [20e3] and renders it obvious. The Shimura-Tsuji Computer discloses the function and corresponding structure of the means-plus-function limitation "display manager" recited in [20e3], or its equivalents. See VI.B.1; VIII.D.3.b; EX-1011, ¶329.

b. Limitation [20e4]

The Shimura-Tsuji-Tonouchi combination discloses [20e4] and renders it obvious. The Shimura-Tsuji-Tonouchi Computer discloses the function and corresponding structure of the means-plus-function limitation "display manager" recited in [20e4], or its equivalents. *See* VI.B.2; VIII.B.3.g; VIII.D.9.a; EX-1011, ¶330.

c. Limitation [20f]

Shimura and Tsuji each disclose [20f]. *See* VI.A.1; VI.A.2; VIII.B.7; EX-1011, ¶331.

Accordingly, the Shimura-Tsuji-Tonouchi-Ryuuzaki-Kawai combination renders obvious Claim 20. VI.D.2; *id.*, ¶¶309-332.

E. Ground 4: Shimura in view of Tsuji, Tonouchi, Ryuuzaki, Kawai, and Pogue rendered Claims 17-19 obvious.

1. Combination of Shimura, Tsuji, Tonouchi, Ryuuzaki, Kawai, and Pogue (hereafter "Shimura-Tsuji-Tonouchi-Ryuuzaki-Kawai-Pogue combination")

For all the reasons set forth in VI.D.2 above, a POSITA would have been motivated to combine Kawai with Shimura, Tsuji, Tonouchi, and Ryuuzaki. EX-1011, ¶¶279-280.

A POSITA would have also been motivated to combine Pogue with Shimura, Tsuji, Tonouchi, Ryuuzaki, and Kawai for several reasons. *Id.*, ¶¶334-338.

Commercially available computers at the Critical Date would have met at least the hardware requirements to run Windows XP. VI.A.4; EX-1007, 558; EX-1015; EX-1016; EX-1017; EX-1030; EX-1031; EX-1032; EX-1033; EX-1034; EX-1046; EX-1050. While Shimura, Tsuji, Tonouchi, Ryuuzaki, and Kawai disclose hardware components and related circuitry, they do not expressly disclose an operating system; Pogue expressly discloses Windows XP, one example of a well-known operating system at the Critical Date. EX-1007, 1.

In Windows XP, a user can access the desktop via a desktop button (e.g., pressing the Windows logo key+D on the keyboard, or clicking the Show Desktop button on the desktop). *Id.*, 95. A user can access the Start menu via a Start menu button (e.g., pressing the Windows logo key or Ctrl+Esc on the keyboard, or clicking the Start menu button on the desktop). *Id.*, 25. Tsuji provides express disclosure that "[a]ny given function can programmably be assigned to each of the R and L button switches 118 and 119." VI.A.4; EX-1005, ¶38. As such, a POSITA would have been motivated to program at least one of the R and L buttons to the desktop and/or Start menu buttons so that a user would be able to easily access the desktop and/or Start menu, respectively, in all display modes by pressing one of the programmed R and L buttons. EX-1011, ¶336.

There would have been motivation to combine, and a reasonable expectation of success in combining, Pogue with Shimura, Tsuji, Tonouchi, Ryuuzaki, and Kawai because prior art elements are merely combined according to known methods to yield predictable results. *See* KSR, 550 U.S. at 415-21. Pogue taught the well-known Windows XP operating system. VI.A.4; *id.* Application of this teaching to Shimura, Tsuji, Tonouchi, Ryuuzaki, and Kawai would have yielded a predictable portable computer with at least one of the R and L buttons of Tsuji programmed to access the desktop and/or the Start menu of Pogue. EX-1011,

¶337.

For the foregoing reasons, the POSITA would have been motivated to combine the teachings of Shimura, Tsuji, Tonouchi, Ryuuzaki, and Kawai with the teachings of Pogue to arrive at the Shimura-Tsuji-Tonouchi-Ryuuzaki-Kawai-Pogue Computer using the Windows XP operating system that utilizes at least one of the R and L buttons programmed to access the desktop and/or the Start menu of Pogue. *Id.*, ¶¶334-338.

2. **Claim 17**

The Shimura-Tsuji-Tonouchi-Pogue combination discloses the additional limitation of this claim and renders it obvious, and the Shimura-Tsuji-Tonouchi-Ryuuzaki-Kawai-Pogue combination renders the claim obvious. *See* VI.C.1; VI.E.1; VIII.C.2; EX-1011, ¶¶339-343.

First, the Shimura-Tsuji-Tonouchi-Pogue Computer discloses the means-plus-function limitation "display manager" recited in Claim 17. The Shimura-Tsuji-Tonouchi-Pogue Computer discloses the function of the "display manager." *See* V.E; VI.A.4; VIII.C.2; EX-1006, Figures 2-2, 2-3.

Second, the combination of Tsuji's BIOS, the modified display control circuit 107, and the modified electronic circuit in the Shimura-Tsuji Computer discloses the computer operating system and/or dedicated logic circuitry of the '154 Patent, which detects a current display mode (e.g., laptop mode), orients the displayed content accordingly (e.g., normal view), detects execution of a navigation element (e.g., programmed R or L button), and transitions the display to the home screen (e.g., desktop or Start menu of Pogue) in the correct display orientation (e.g., normal view) based on the detected display mode (e.g., laptop mode) and detected execution of the navigation element (e.g., programmed R or L button), or its equivalents. V.A; EX-1011, ¶343.

3. **Claim 18**

The Shimura-Tsuji-Tonouchi-Pogue combination discloses the additional limitation of this claim and renders it obvious, and the Shimura-Tsuji-Tonouchi-Ryuuzaki-Kawai-Pogue combination renders the claim obvious. *See* VI.C.1; VI.E.1; VIII.B.3.h; VIII.B.5; VIII.B.6.a; VIII.B.6.b; VIII.C.2,VIII.E.2; EX-1011, ¶¶344-349.

First, the Shimura-Tsuji-Tonouchi-Pogue Computer discloses the means-plus-function limitation "display manager" recited in Claim 18. The Shimura-Tsuji-Tonouchi-Pogue Computer discloses the function of the "display manager." *See* V.E; VIII.E.2, EX-1011, ¶345.

Alternatively, the Shimura-Tsuji-Tonouchi-Pogue Computer discloses the function of the "display manager" because, as discussed above, when the Shimura-Tsuji-Tonouchi Computer is in the easel mode, the displayed content is enlarged because the user is limited to using a stylus and/or finger (i.e., a less sensitive input method than a touch-pad accessible in the laptop mode) to interact with the displayed content. *See* VI.B.1.b; VI.B.2; VIII.E.2; EX-1006, FIG. 5; EX-1011, ¶347. Pogue also discloses enlarging content: a user can "control both the size of [the] desktop icons and the font used for their names (as shown in Figure 8-11)." EX-1007, 264.

With the Shimura-Tsuji-Tonouchi-Pogue Computer in an easel mode, a POSITA would have known to enlarge the displayed content presented in the desktop and/or Start menu so that a user can more easily interact with such displayed content when the user is limited to using a stylus and/or finger. Thus, the output of the programmed R or L button in the easel mode of the Shimura-Tsuji-Tonouchi-Ryuuzaki-Kawai-Pogue Computer displays enlarged displayed content. The enlarged version of the desktop and/or Start menu is the claimed "second home screen." This is different from the first home screen, which includes a normal-sized version of the desktop and/or Start menu. EX-1011, ¶348.

Second, the Shimura-Tsuji Computer also discloses the corresponding structure for the "display manager," or its equivalents. *See* V.A; VIII.E.2; EX-1011, ¶349.

4. **Claim 19**

Ryuuzaki discloses the additional limitation of this claim, and the Shimura-Tsuji-Tonouchi-Ryuuzaki-Kawai-Pogue combination renders the claim obvious.

See VI.A.5; VI.E.1; VIII.D.9.i; VIII.D.9.j; EX-1011, ¶350.

Dated: May 4, 2021

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CERTIFICATION UNDER 37 C.F.R. § 42.24(D)

I certify that the foregoing complies with the type-volume limitation of 37 C.F.R. § 42.24 and contains 13,898 words based on the word count indicated by the word-processing system used to prepare the paper, and excluding those portions exempted by § 42.24(a).

Date: May 4, 2021 /Martin R. Bader/
Martin R. Bader
Registration No.: 54,736

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§42.6(e) and 42.105(a), the undersigned hereby certifies that the foregoing **PETITION FOR INTER PARTES REVIEW UNDER 35 U.S.C. §311 ET SEQ. AND 37 C.F.R. §42.100 ET SEQ. (CLAIMS 1-20 OF U.S. PATENT NO. 10,289,154)**, including all exhibits and supporting evidence, was served in its entirety on April 30, 2021, by electronic mail pursuant to written agreement, upon counsel for the Patent Owner, the WOLF GREENFIELD & SACKS, P.C. firm, to the following individuals and email addresses:

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO (UNITED STATES) INC.
Petitioner

v.

LITL LLC
Patent Owner

IPR Case No. IPR2021-00821
U.S. Patent No. 8,612,888

PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. §311 *ET SEQ.* AND 37 C.F.R. §42.100 *ET SEQ.* (CLAIMS 1-9, 15-22, AND 24-27 OF U.S. PATENT NO. 8,612,888)

EXHIBIT LIST

EXHIBIT	DESCRIPTION
1001	U.S. Pat. No. 8,612,888 ("the '888 Patent")
1002	Prosecution History of the '888 Patent
1003	JP 1994-242853 to Shimura ("Shimura")
1004	Certified English translation of JP 1994-242853 ("Shimura")
1005	U.S. Pub. No. 2005/0062715 to Tsuji et al. ("Tsuji")
1006	U.S. Pub. No. 2006/0265390 to Aldrich et al. ("Aldrich")
1007	U.S. Pub. No. 2004/0172451 to Biggs et al. ("Biggs")
1008	U.S. Pat. No. 7,970,240 to Chao et al. ("Chao")
1009	U.S. Pub. No. 2004/0189694 to Kurtz et al. ("Kurtz")
1010	U.S. Pat. No. 7,778,973 to Choi et al. ("Choi")
1011	U.S. Pat. No. 7,243,079 to Manolis et al. ("Manolis")
1012	Declaration of Jean Renard Ward
1013	Curriculum Vitae of Jean Ward
1014	Claim Listing
1015	Family Diagram of Modified Shimura Computers
1016	U.S. Pub. No. US 2005/0122318 ("Tonouchi")
1017	JP 2002-258982 to Kiyoyuki
1018	Certified English translation of JP 2002-258982 ("Kiyoyuki ")
1019	DE 1031455A1 to Schweizer

EXHIBIT	DESCRIPTION
1020	Certified English translation of DE 1031455A1 ("Schweizer")
1021	Windows XP Home Edition: The Missing Manual ("Pogue")
1022	Schwartz, Organizing and Editing Your Photos with Picasa ("Picasa")
1023	U.S. Pub. No. US 2009/0019383 ("Riley")
1024	Microsoft Computer Dictionary 5th Edition ("Microsoft Dictionary")
1025	Microsoft Windows Internals 4th Edition ("Microsoft Windows")
1026	Wikipedia, Windows Special Folder ("Windows Special Folder")
1027	Wikipedia, Environment Variable ("Environment Variable")
1028	Microsoft Digital Image Suite User's Manual ("Microsoft Digital Image Suite")
1029	U.S. Pat. No. 6,760,721 to Chasen et al. ("Chasen")
1030	U.S. Pub. No. 2006/0007503 to Nakamura ("Nakamura ")
1031	U.S. Pub. No. 2005/0110880 to Parulski et al. ("Parulski ")
1032	The Internet Society, HTTP Authentication: Basic and Digest Access Authentication ("HTTP Authentication")
1033	U.S. Pub. No. 2004/0230663 to Ackerman ("Ackerman")
1034	U.S. Pub. No. 2007/011852 to Svendsen ("Svendsen ")
1035	U.S. Pat. No. 5,903,723 to Beck et al. ("Beck")

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I. INTRODUCTION

The 21 challenged claims are directed to a portable computer with multiple display modes and related features, all of which were well-known before the priority date. This portable computer is configurable between various display modes, including laptop and easel modes, by rotating a display component. But these modes, and portable computers configurable to transition between them, were all well-known before the priority date. Related claimed features include a plurality of selectable I/O profiles, a graphical user interface comprising a plurality of views, transitioning between the plurality of views in response to selection of an I/O profile or activation of a view selector component, and transitioning a display to a view of digital media content in response to executing an association between a visual representation and the digital media content. But likewise, these and other claimed features were all well-known before the priority date.

As explained below, eight prior art references—Shimura, Tsuji, Aldrich, Biggs, Chao, Kurtz, Choi, and Manolis—in various combinations render obvious all 21 challenged claims. This Petition requests that the Board find unpatentable and cancel all challenged claims.

II. MANDATORY NOTICES UNDER 37 C.F.R. §42.8

A. Real Parties-In-Interest (§42.8 (b)(1))

Petitioner Lenovo (United States) Inc. is a real party-in-interest. Petitioner is an indirect wholly-owned subsidiary of Lenovo Group Limited. Because Lenovo

(Beijing) Limited has been named as a defendant in the "related matter" identified pursuant to 37 C.F.R. § 42.8(b)(2) (i.e., *LiTL LLC v. Lenovo (United States) Inc. and Lenovo (Beijing) Limited*, Case No. 1:20-cv-00689 (D. Del.)), Lenovo (Beijing) Limited is also a real party-in-interest.

B. Related Matters (§42.8 (b)(2))

The patent at issue, U.S. Patent No. 8,612,888 ("'888 Patent"), is the subject of the following district court proceeding: *LiTL LLC v. Lenovo (United States) Inc. and Lenovo (Beijing) Limited*, Case No. 1:20-cv-00689 (D. Del.).

C. Lead and Backup Counsel (§42.8 (b)(3))

Petitioner appoints Martin Bader (Reg. No. 54,736) of Sheppard, Mullin, Richter & Hampton LLP as Lead Counsel, and appoints Nam Kim (Reg. No. 64,160), and Mike Kim (Reg. No. 72,867), of the same firm as Back-Up Counsel. An appropriate Power of Attorney is filed concurrently herewith.

D. Service Information (§42.8 (b)(4))

Service of any documents to Counsel can be made via hand delivery to Sheppard Mullin Richter & Hampton LLP, 12275 El Camino Real, Suite 100, San Diego, California 92130. Petitioner consents to service by email at LegalTm-LNV-LTL@sheppardmullin.com.

III. FEE FOR *IPR* (37 C.F.R. §42.15(a) and §42.103)

Petitioner has paid the required fees. The Office is authorized to charge any fee deficiency, or credit any overpayment, to Deposit Account No. 50-4561.

IV. REQUIREMENTS FOR *IPR* UNDER 37 C.F.R. §42.104

A. Grounds for Standing (§42.104(a))

Petitioner certifies that the '888 Patent is available for IPR and that the Petitioner is not barred or estopped from requesting IPR challenging the claims of the '888 Patent.

B. Identification of Challenged Claims (§42.104(b)(1))

This Petition challenges the validity of claims 1-9, 15-22, and 24-27 of the '888 Patent ("Challenged Claims").

C. Grounds of Challenge (§42.104(b)(2))

The Grounds of unpatentability presented in this Petition are as follows.

Ground	Basis	References	Challenged Claim
1	§103	Obvious over Shimura in view of Tsuji, in further view of Aldrich	1-4, 6-8, 15-16, 24-27
2	§103	Obvious over Shimura in view of Tsuji and Aldrich, in further view of Biggs	5
3	§103	Obvious over Shimura in view of Tsuji and Aldrich, in further view of Chao	9, 18-19
4	§103	Obvious over Shimura in view of Tsuji and Aldrich, in further view of Kurtz	22
5	§103	Obvious over Shimura in view of Tsuji and Aldrich, in further view of Choi	20
6	§103	Obvious over Shimura in view of Tsuji, Aldrich, and Choi, in further view of Manolis	17, 21

The '888 Patent issued from U.S. Application No. 12/611,282, filed November 3, 2009, and claims priority to U.S. Provisional Application No.

61/041,365, filed April 1, 2008. Without conceding valid priority entitlement, for purposes of this Petition only, it is assumed that April 1, 2008 marks the earliest effective priority date (the "Critical Date") of the '888 Patent.

V. PROPOSED GROUNDS SHOULD NOT BE DENIED INSTITUTION ON ANY DISCRETIONARY BASIS

The grounds in the instant Petition rely upon prior art and argument that have never before been presented to the USPTO. While Shimura was listed as one reference in over 100 other references submitted in an Information Disclosure Statement, it was never discussed during prosecution of the '888 patent or the prosecution of any parent application. Thus, the specific arguments and supporting evidence presented in this petition—including the detailed supporting declaration of Petitioner's expert witness Jean Ward—were never presented to, nor addressed by, the examiner of the parent applications or the examiner of the '888 Patent. *See Microsoft Corp. v. Parallel Networks Licensing, LLC*, Case No. IPR2015-00483 at 15 (PTAB July 15, 2015) (Paper 12) (instituting review where there was no evidence the asserted prior art, listed on a "lengthy Information Disclosure Statement initialed by the Examiner," was ever considered by the Examiner); *Cisco Systems, Inc. v. Crossroads Sys., Inc.*, Case No. IPR2014-01544 at 13-14 (PTAB Apr. 3, 2015) (Paper 9) (instituting review where "the Examiner did not address substantively the teachings" of asserted prior art references that had been disclosed during prosecution); *Taro Pharm. U.S.A., Inc., v. Apotex Tech., Inc.*, Case No.

IPR2017-01446 at 18 (PTAB Nov. 28, 2017) (Paper 7) (instituting review where the prior art reference had been considered by the examiner, but new declaration evidence had not been previously presented to the Patent Office); *Synaptic Medical Inc. v. Karl Storz-Endoscopy-America, Inc.*, Case No. IPR2018-00462 at 10 (PTAB July 16, 2018) (Paper 6) (instituting review where "the references here were not applied to reject the claims of the [challenged] Patent and there is no evidence that the Examiner considered the particular disclosures cited in the Petition or addressed arguments similar to those Petitioner now presents"); *Comcast Cable Communs., LLC v. Promptu Sys. Corp.*, Case No. IPR2018-00342 at 17 (PTAB July 19, 2018) (Paper 13) (instituting review where the prior art "was only cited in an IDS and not applied by the examiner in the reissue application process in any rejection of claims"); *Pure Storage, Inc. v. Realtime Data LLC*, Case No. IPR2018-00549 at 11 (PTAB July 23, 2018) (Paper 7) (instituting review where "there is no evidence of record that [the prior art references] were substantively considered by the Examiner").

Petitioner respectfully submits that the Board should not exercise its discretion to deny institution under 35 U.S.C. § 325(d) for at least these reasons.

VI. RELEVANT INFORMATION CONCERNING THE '888 PATENT

A. Overview of the '888 Patent

The '888 Patent is directed to a "streamlined computer device … includ[ing] a plurality [of] selectable I/O profiles." EX-1001, Abstract. The streamlined computer device is configurable into the plurality of display modes, e.g., FIGs. 1 (laptop mode) and 22 (easel mode), based on a hinge assembly rotatably coupling the display component 102 to the base 104 of the computer 100. *Id.*, 15:12-21, 36:41-50.

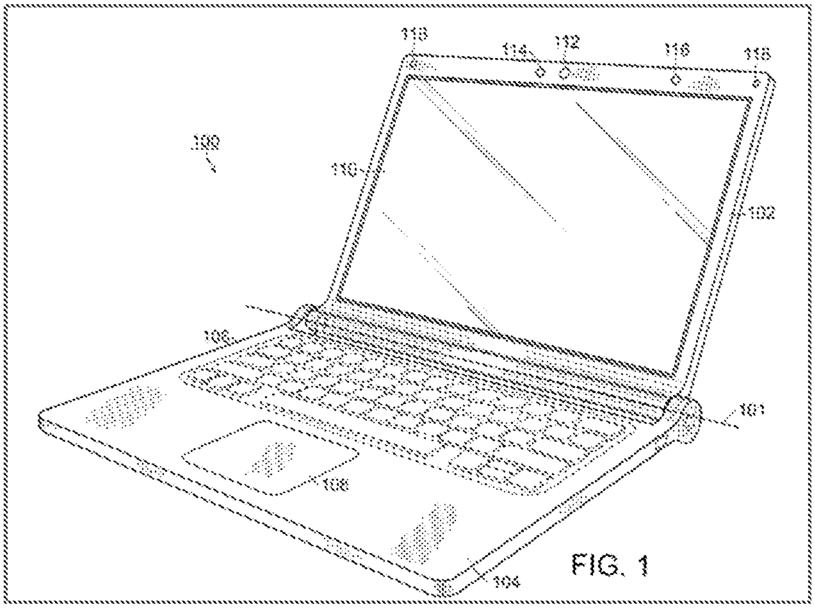


FIG. 1

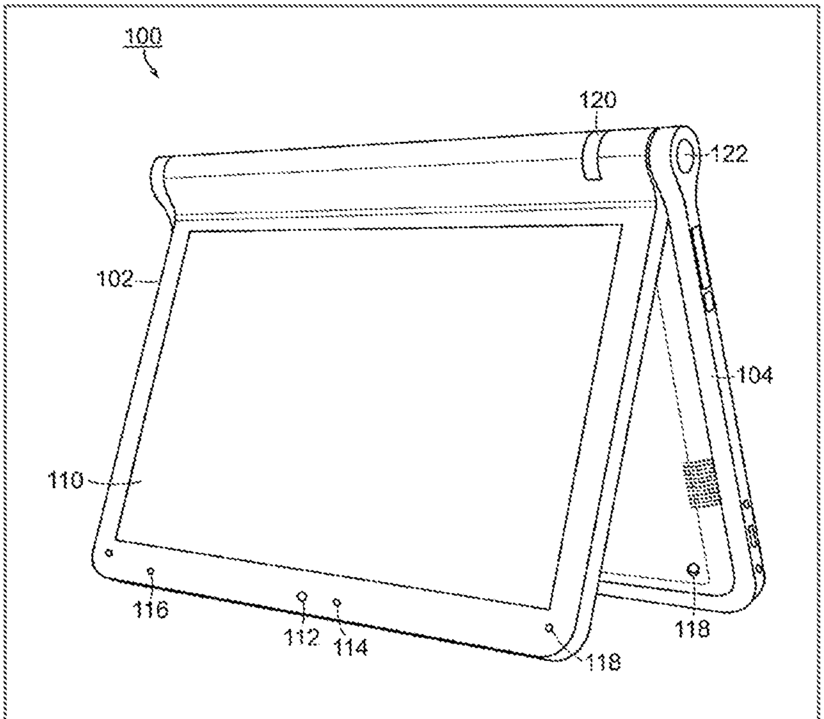


FIG. 22

Each display mode may be associated with a corresponding I/O profile (e.g., an easel mode is associated with a first I/O profile and a laptop mode is associated with a second I/O profile). *Id.*, 38:44-56. "The first I/O profile in easel mode may consist of a scroll wheel and a selector button." *Id.*, 37:19-21. The second I/O profile in the laptop mode may include a keyboard. *Id.*, 38:51-52. In different I/O profiles, the displayed content can be rotated by 180° so that the displayed content is properly oriented for an intended user. *Id.*, 37:29-41, 39:18-41. The 180° rotation of the displayed content may be manual or automated. *Id.*, 39:26-41.

With respect to the displayed content, the '888 Patent discloses "a graphical user interface that organizes interface elements into views of computer content for presentation to a user." *Id.*, 2:48-50, FIG. 5.

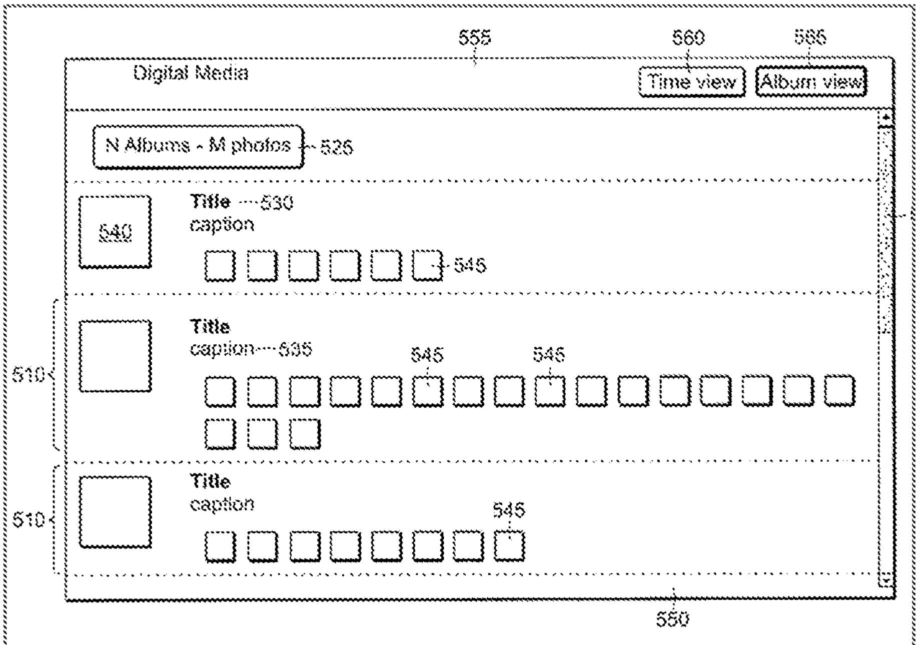

555
560
565
Digital Media
Time view
Album view
N Albums - M photos
525
Title
530
caption
540
545
Title
caption
535
545
545
510
Title
caption
545
510
550

FIG. 5

"Various views of digital media content permits users to easily and efficiently access various digital media content. 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. *Id.*, 20:31-35. Some of the photos may be stored remotely. *Id.* "For example, digital content items added to the user's account with any online hosting service (e.g., FLICKR, SHUTTERFLY, etc.) the user has registered with the portable computer 100 may be automatically added to the user's digital media library." *Id.*, 20:44-49. These remotely stored photos may be "a visual representation of digital content stored in the cloud, rather than a locally stored digital content item." *Id.*, 26:25-26.

In FIG. 5 above, "in the album view, the albums 510 are displayed as a list in the body portion 550, with a scroll bar 515 that allows the user to scroll down to see additional albums that do not fit within the page view." *Id.*, 21:38-42. "Each photograph in the album may be displayed as a thumbnail 545." *Id.*, 21:59-60. "User selectable 'buttons' 560, 565 … allow the user to select between the time view and the album view." *Id.*, 21:60-62.

Challenged Claim 1 (reproduced below) is representative.

> 1. 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:
>
> 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;
>
> providing for transition between the plurality of views in response to selection of an I/O profile;
>
> 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, wherein providing for the transition between the plurality of views in response to selection of the I/O profile includes:
>
> 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;
>
> 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
>
> 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;
>
> associating at least one of a plurality of visual representations with digital media content;
>
> executing the association with the at least one of the plurality of visual representations with digital media content in response to selection;
>
> 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
>
> providing for display of user digital media content and referenced digital media content in the view of the digital media content.

Id., 47:54-48:28. As shown below, however, at the Critical Date, portable streamlined computers with user interfaces displaying digital content items that were configurable into a plurality of I/O profiles, were known in the art. EX-1012, ¶52.

B. Prosecution History of the '888 Patent

The '888 Patent was allowed after a preliminary amendment, terminal disclaimer, and an examiner's amendment. EX-1002, *passim*. The Examiner's amendments, dated April 29, 2013, are shown below:

Claim 1. 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:

displaying a graphical user interface on ~~a~~ the computing device, wherein the graphical user interface comprises at least a plurality of views of digital media content;

providing for transition between the plurality of views in response to selection of an I/O profile;

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, wherein providing for the transition between the plurality of views in response to selection of the I/O profile includes:

> 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;
>
> 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
>
> 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;

associating at least one of a plurality of visual representations with digital media content;

executing the association with the at least one of the plurality of visual representations with digital media content in response to selection;

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

providing for display of user digital media content and referenced digital media content in the view of the digital media content.

EX-1002, 81-82. Other amendments were made to the other independent claims that led to allowance, and the amendments to those independent claims are generally related to the following claim limitations:

(1) transitioning the display to a view based on a selection of an I/O profile, and

(2) rotating a display component into
  (a) a laptop mode with
    (i) a first physical orientation,
    (ii) a first physical configuration, and
    (iii) a first default view, and
  (b) another display mode with
    (i) a second physical orientation,
    (ii) a second physical configuration, and
    (iii) a second default view.

Id., 83-85. The Notice of Allowance also notes that these claim limitations distinguished the independent claims from the closest prior art Riley. *Id.*, 86.

However, as demonstrated below, all of these limitations (along with the rest of the limitations in the Challenged Claims) were squarely within the prior art, including the prior art relied upon in this Petition.

C. Level of Ordinary Skill in the Art

A person of ordinary skill in the art ("POSITA") would have had at least a Bachelor's degree in Electrical Engineering, Computer Engineering, or Computer Science, plus two to three years of work experience in designing hardware and/or software aspects of the User Interface (UI) for computing devices, including the user interface employed and displayed by the operating system and its organization of content and functionality, and Web applications programming and technologies. EX-1012, ¶26. Alternatively, the POSITA would have received a graduate degree such as a Master's or PhD degree with at least one year of work experience related to hardware and/or software design aspects of the UI for computing devices, including the user interface employed and displayed by the operating system and its organization of content and functionality, and Web applications programming and technologies. *Id.*

D. Claim Listing

EX-1014 is a claim listing that enumerates each claim element.

VII. CLAIM CONSTRUCTION—37 C.F.R. §42.104 (b)(3)

The claim construction standard defined in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) applies to this proceeding. 83 Fed. Reg. No. 197, 51340 (Oct. 11, 2018); 37 C.F.R. 42.100. Words in a claim are given their plain meaning, which is the meaning understood by a POSITA after reading the entire patent. *Phillips*, 415 F.3d at 1312-1313.

Petitioner proposes that only the terms below in the Challenged Claims require express construction for purposes of the current validity challenges. Petitioner reserves the right to respond to any constructions that LiTL may offer or that the Board may adopt. Petitioner is not waiving any arguments concerning indefiniteness or claim scope that may be raised in other proceedings.

A. "view selector component"

Claim limitations construed below directly or indirectly include "a view selector component" configured to perform recited functions.

For purposes of this Petition only, a "view selector component" is assumed to be a means-plus-function limitation under 35 U.S.C. §112, ¶6. *See Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348-50 (Fed. Cir. 2015); M.P.E.P. § 2181.I.A (identifying "component for" as a non-structural generic placeholder that invoked 35 U.S.C. 112 ¶6).

1. [1c] and [26d]

The function of the "view selector component" recited in [1c] and [26d] is "permit[ting] a user to select one of the plurality of views."

The '888 Patent describes that "[t]he visual display on the display screen 110 may also be manually adjusted by a user using, for example, the keyboard 106, touch pad 108 or mouse (not shown), scroll wheel 122 or navigation buttons (not shown)." EX-1001, 39:23-26. The '888 Patent describes inverting the displayed content so a person sitting across from the user can view the displayed content. *Id.*, 39:26-41.

Thus, based on this disclosure, the corresponding structure for the view selector component recited in [1c] and [26d] to include at least a keyboard, touchpad, mouse, scroll wheel, or navigation buttons configured to allow a user to manually select an orientation of the displayed content, and its equivalents. EX-1012, ¶¶124-126.

2. [27d]

The function of the "view selector component" recited in [27d] is "transition[ing] between the plurality of views in response to activation."

The '888 Patent describes orienting the displayed content. EX-1001, 37:29-54, 39:18-41. E.g., "[t]he visual display on the display screen 110 may also be manually adjusted by a user using, for example, the keyboard 106, touch pad 108 or mouse (not shown), scroll wheel 122 or navigation buttons (not shown)." *Id.*, 39:23-26. "For example, if a user (located at position A) wishes to display information for a person located opposite the user (at position B), the visual display may be rotated (automatically or manually) 180 degrees such that the information appears "right-way up" to the person at location B, even through [sic] the display screen 110 is upside-down for that person." *Id.*, 39:26-32. "In one example, a user can 'toggle' the visual display among various orientations." *Id.*, 39:35-37.

Thus, based on this disclosure, the corresponding structure the means-plus-function limitation of [27d] to include at least hardware (e.g., central processing unit and memory) and related software configured to control the orientation of the displayed content based on the user's manual selection, and its equivalents. EX-1012, ¶127-129.

B. "aggregation component"

For purposes of this Petition only, an "aggregation component" is assumed to be a means-plus-function limitation under 35 U.S.C. § 112, ¶6. *See Williamson*, 792 F.3d at 1348-50; M.P.E.P. § 2181.I.A.

The function of the "aggregation component" recited in [15a] is "permit[ting] the user to select a plurality of digital media content."

The '888 Patent describes a view that includes a toolbar 1040 (red) including one or more controls, such as an "add to pick list" control (blue). EX-1001, 26:39-42, FIG. 10 (annotated).

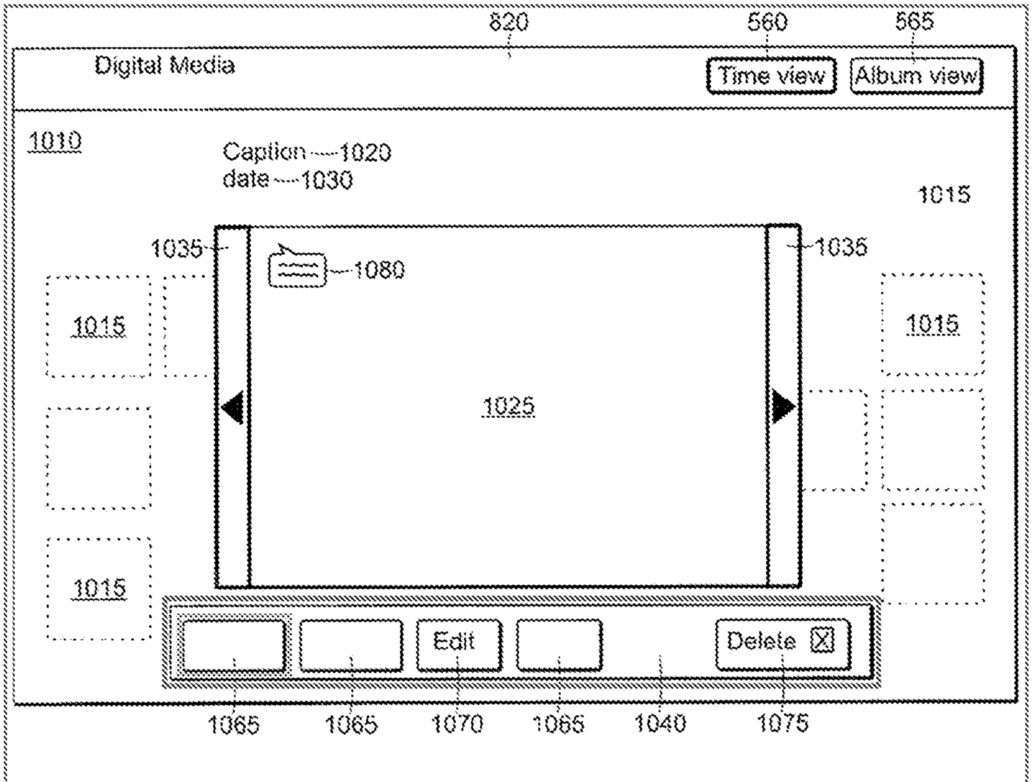

820
560
565
Digital Media
Time view
Album view
1010
Caption 1020
date 1030
1015
1035
1035
1080
1015
1015
1025
1015
Edit
Delete ☒
1065
1065
1070
1065
1040
1075

FIG. 10

"The pick list is an organization tool that allows the user to gather together a group of digital content items for a particular action." *Id.*, 28:26-28. A user can "collect content items to be shared with another user" using the pick list control. *Id.*, 28:28-29. Among other options, the pick list controls include clearing and closing the pick list. *Id.*, 28:59. The '888 Patent indicates that the pick list can be displayed in various places on the screen, including vertically along one side of the screen. *Id.*, 28:41-44. "[T]he pick list 1310 comprises one or more thumbnails 1320 corresponding to the content items added to the pick list, as shown in FIGS. 13A and 13B." *Id.*, 28:45-48. "Navigation controls 1330 allow the user to scroll through the pick list 1310." *Id.*, 28:51-52.

Thus, based on this disclosure, the corresponding structure for the aggregation component recited in [15a] to include at least 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. EX-1012, ¶¶130-133.

C. "execution component"

For purposes of this Petition only, an "execution component" is assumed to be a means-plus-function limitation under 35 U.S.C. §112, ¶6. *See Williamson*, 792 F.3d at 1348-50; M.P.E.P. § 2181.I.A.

1. [27b]

The function of the "execution component" recited in [27b] is "transition[ing] the graphical user interface between the plurality of views in response to selection of an I/O profile."

The '888 Patent describes that "the streamlined computer system/device includes a plurality of I/O devices that a user needs to operate and transitions between modes (e.g. easel) triggers [sic] the presentation of different I/O profiles to the computer user. One should appreciate that the various I/O profiles can be selected through physical configuration of the device." EX-1001, 38:5-11. "In one embodiment, an easel mode presents the user with the first I/O profile and by rotating the computer device about a longitudinal axis; the user may select a second I/O profile, including a keyboard (e.g. laptop mode). The transition from one I/O profile to another may also cause the computer device to alter its display. In one example, the user interface provided to the user is responsive to selection of device mode and/or selection of I/O profile." *Id.*, 38:49-56. "In some examples, changes in device mode and changes I/O profile [sic] will occur together." *Id.*, 39:4-5.

Thus, based on this disclosure, the corresponding structure for of the execution component recited in [27b] to include at least hardware (e.g., central processing unit) and related software configured to automatically orient the displayed content in response to a physical configuration of the computer device. EX-1012, ¶¶135-137.

2. [27f]

A first function of the execution component recited in [27f] is "execut[ing] the association with the at least one of the plurality of visual representations with digital media content in response to selection."

A second function of the execution component recited in [27f] is "transition[ing] the display to a view of the digital media content in response to the act of executing the association."

The '888 Patent describes "user-selectable 'buttons' 560, 565 [red] which allow the user to select between the time view and the album view, for example, by clicking (e.g., using a mouse, the touchpad, the scroll wheel, or a navigation button) on the button corresponding to the desired view." EX-1001, 21:60-65; FIG. 5 (annotated).

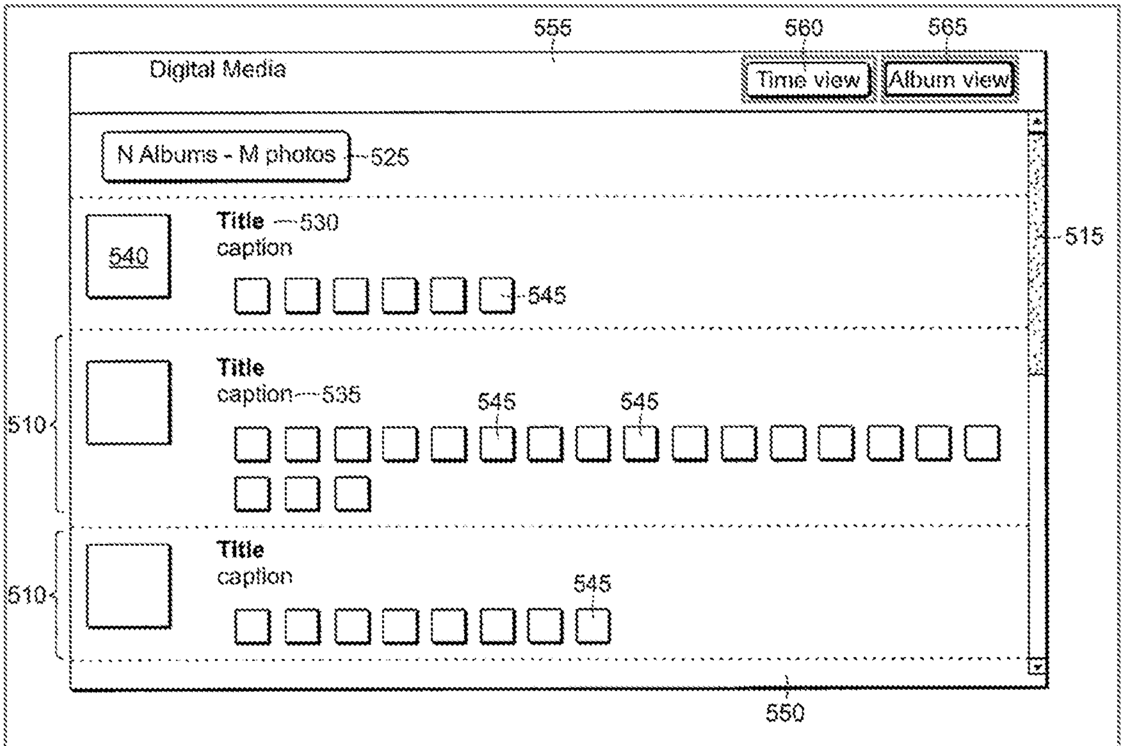

555
560
565
Digital Media
Time view
Album view
N Albums - M photos
525
Title
530
caption
540
545
515
Title
caption
535
545
545
510
Title
caption
545
510
550

FIG. 5

"[T]he album view allows the user to access and view albums of their own photographs." *Id.*, 21:66-67.

Thus, based on this disclosure, the corresponding structure for the first and second functions of the execution component recited in [27f] to include at least hardware (e.g., central processing unit) and related software configured to implement GUI elements that allow a user to transition between different views of the digital media content, and its equivalents. EX-1012, ¶¶138-141.

VIII. PRECISE REASONS FOR RELIEF REQUESTED

A. Summary of the Prior Art Applied in This Petition

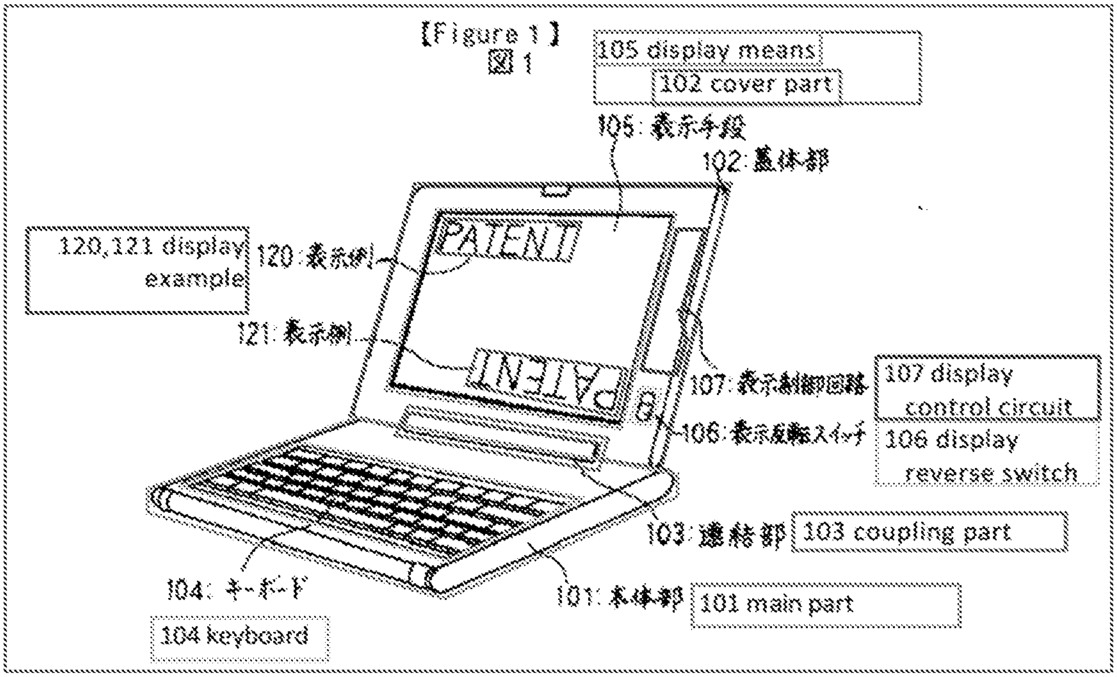
1. Overview of Shimura

Shimura published as Japanese Patent No. 1994-242853 on September 2, 1994, from an application filed on February 15, 1993. Shimura therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (b). The Shimura reference was published in Japanese (EX-1003) and a certified English translation is provided herein as EX-1004 (reference hereinafter will be made to the certified English translation for simplicity).

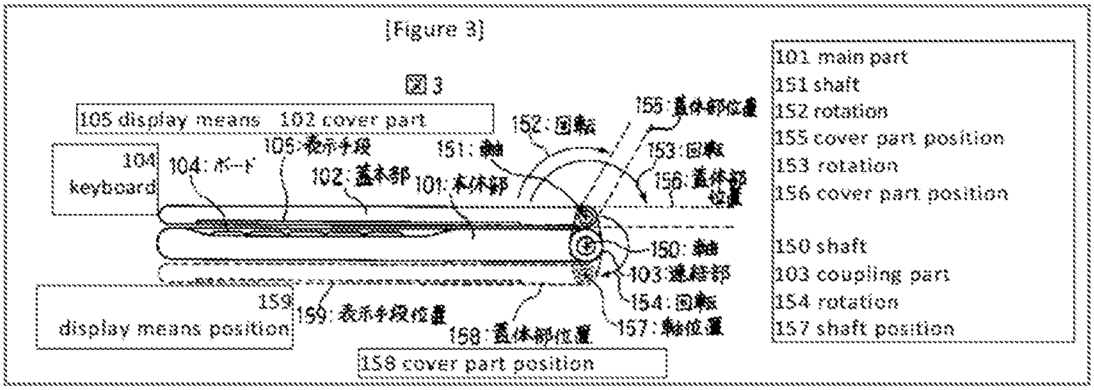
Shimura is directed to a portable "computer which can adopt a mode suitable for a user environment." EX-1004, Abstract. The portable computer includes:

- a main part 101 (dark green in annotated Figure 1 of Shimura below) with a keyboard 104 (light green);
- a cover part 102 (dark blue) with a display means 105 (light blue);
- a coupling part 103 (red) fastening the main part 101 to the cover part 102;
- a display reverse switch 106 (orange) to set the display to a normal view or an inverted view (the displayed content is turned upside down) via display control circuit 107 (purple) and electronic circuit (not shown); and
- display elements 120, 121 (dark red).

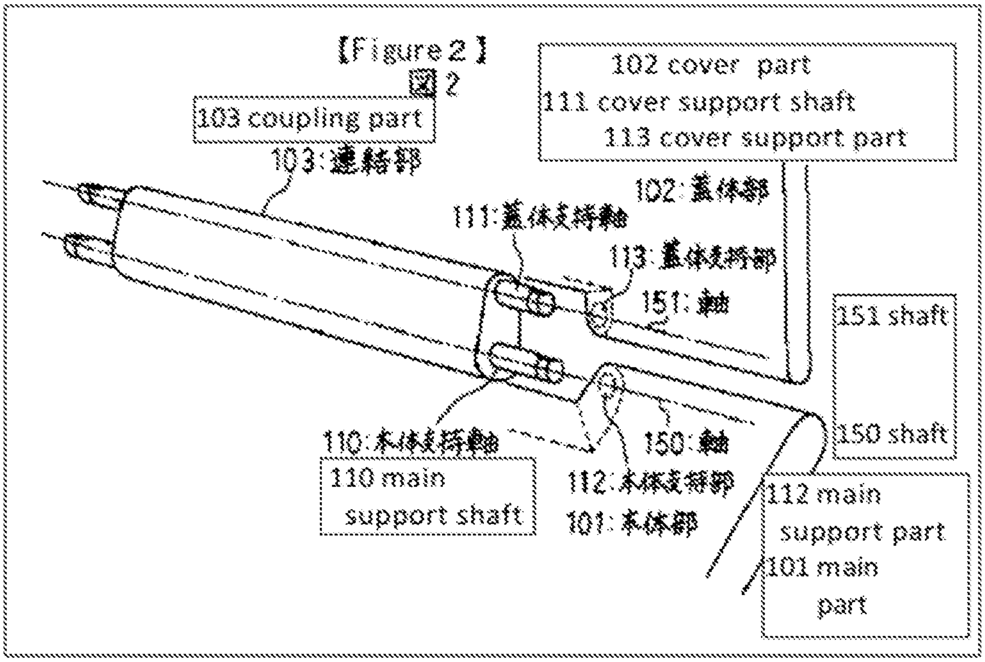
Id., Abstract, ¶¶10-12, 17.


【Figure 1】
図1
105 display means
102 cover part
105:表示手段
102:蓋体部
120,121 display example
120:表示例
121:表示例
PATENT
PATENT
B
107:表示制御回路
107 display control circuit
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part
104:キーボード
104 keyboard
101:本体部
101 main part

The coupling part 103 allows the cover part 102 to be rotated up to 360° about the main part 101 into various display modes. *Id.*, ¶¶11-17, Figure 3.


[Figure 3]
図3
105 display means 102 cover part
104 keyboard
104:ボード
105:表示手段
102:蓋本部
101:本体部
151:軸
152:回転
155:蓋体部位置
153:回転
156:蓋体部位置
150:軸
103:連結部
154:回転
157:軸位置
159:表示手段位置
158:蓋体部位置
159 display means position
158 cover part position
101 main part
151 shaft
152 rotation
155 cover part position
153 rotation
156 cover part position
150 shaft
103 coupling part
154 rotation
157 shaft position

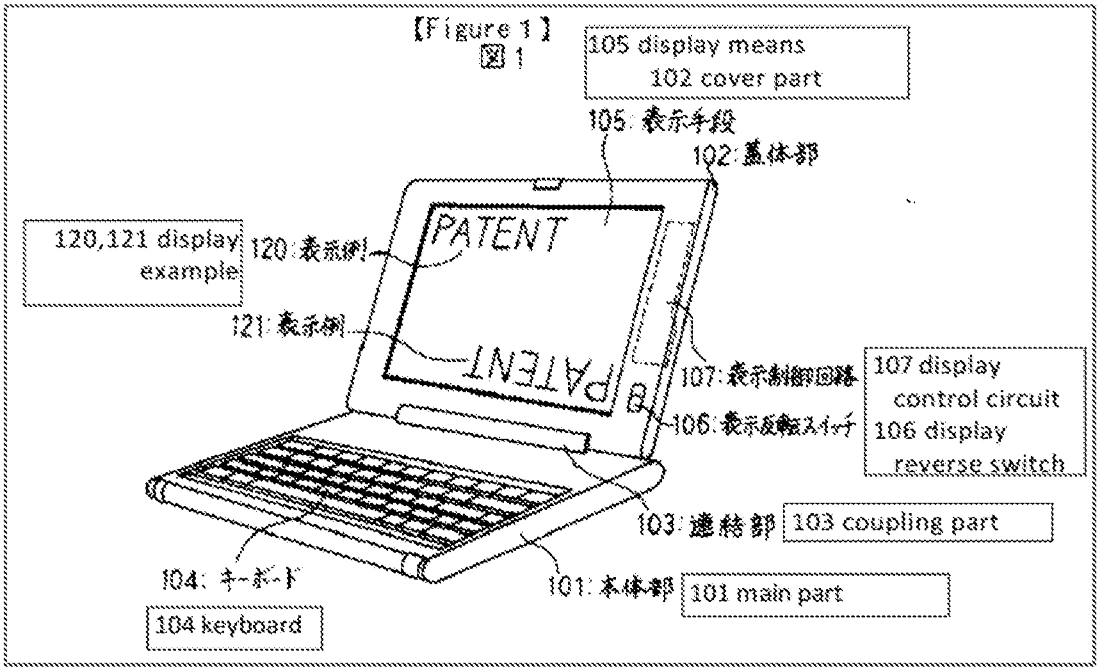
The coupling part 103 may include two shafts 150, 151, which facilitates rotation of the cover part 102 about the main part 101. *Id.*, ¶¶13-14; Figure 2.


【Figure 2】
図2
103 coupling part
103:連結部
102 cover part
111 cover support shaft
113 cover support part
102:蓋体部
111:蓋体支持軸
113:蓋体支持部
151:軸
151 shaft
150 shaft
110:本体支持軸
110 main support shaft
150:軸
112:本体支持部
101:本体部
112 main support part
101 main part

The coupling part 103 includes a main support part 112 of the main part 101 and a cover support part 113 of the cover part 102. *Id.*, ¶13.

In a first display mode, corresponding to the laptop mode of the '888 Patent, the keyboard 104 faces upward and the display means 105 faces the user. *Id.*, ¶¶11, 14 ("The user can operate the computer while facing keyboard 104 and display means 105 in a natural mode."), Figure 1; EX-1012, ¶147.

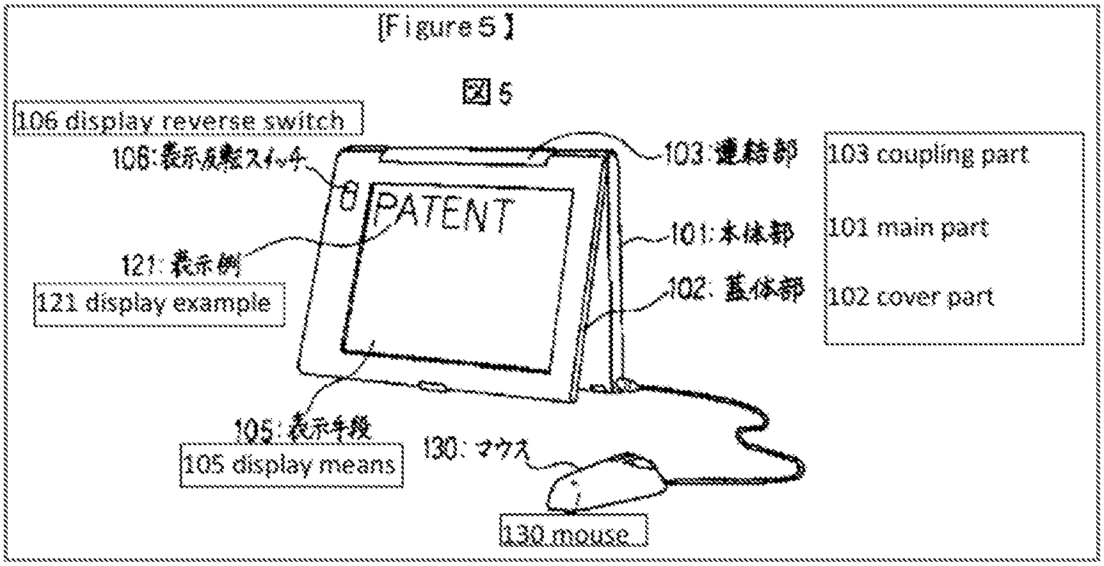
【Figure 1】
図1


105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
PATENT
B
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

In a second display mode, corresponding to the easel mode of the '888 Patent, the cover part is rotated 340° about the main part 101 such that the display means 105 faces the user and the keyboard 104 faces away from the user, and the user may be limited to interacting with the operating environment using a mouse 130. *Id.*, ¶¶14-17, Figure 5; EX-1012, ¶148.

【Figure 5】

図5


106 display reverse switch
106: 表示反転スイッチ
B
PATENT
103: 連結部
103 coupling part
101: 本体部
101 main part
102: 蓋体部
102 cover part
121: 表示例
121 display example
105: 表示手段
105 display means
130: マウス
130 mouse

Shimura also discloses a "second switching means" that can be set to invalidate input from the keyboard. EX-1004, ¶8. The input invalidation functionality can be used in a display mode where data may be mistakenly inputted from the keyboard on the back of the display means 105. *Id.*, ¶18. Shimura also discloses that the input invalidation functionality operates automatically based on an angle of the cover part 102 compared to a main part 101. *Id.*, ¶¶18- 19.

2. **Overview of Tsuji**

Tsuji published on March 24, 2005 and claims priority to a Japanese application filed on September 19, 2003. Tsuji therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Tsuji discloses a portable computer 1 including a computer main body 11 with a CPU (central processing unit). EX-1005, ¶30; FIGs. 1 & 5. The portable computer 1 can be configured into a PC style (FIG. 1) and a PDA style (FIG. 5). *Id.*, ¶34.

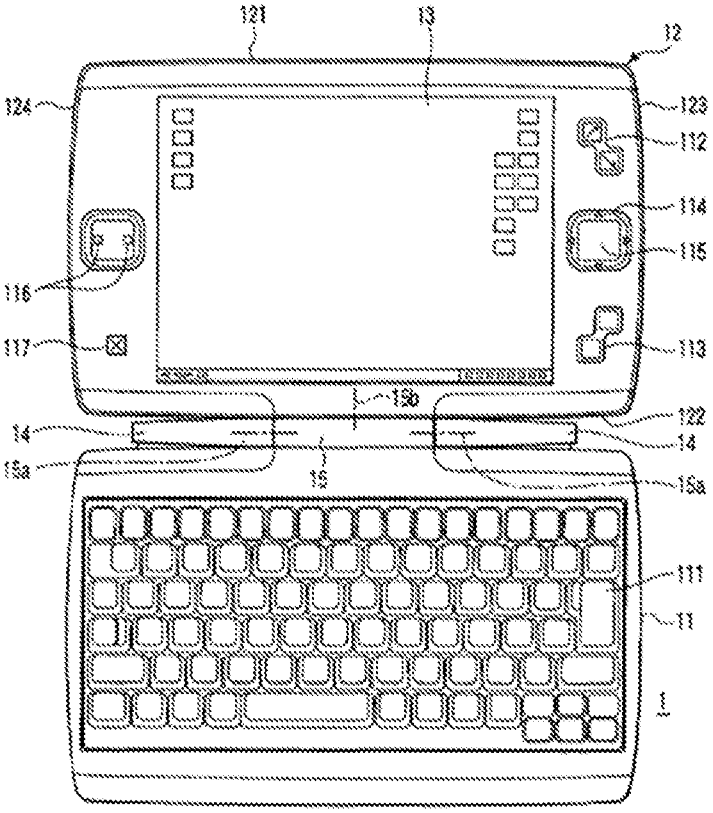


FIG. 1

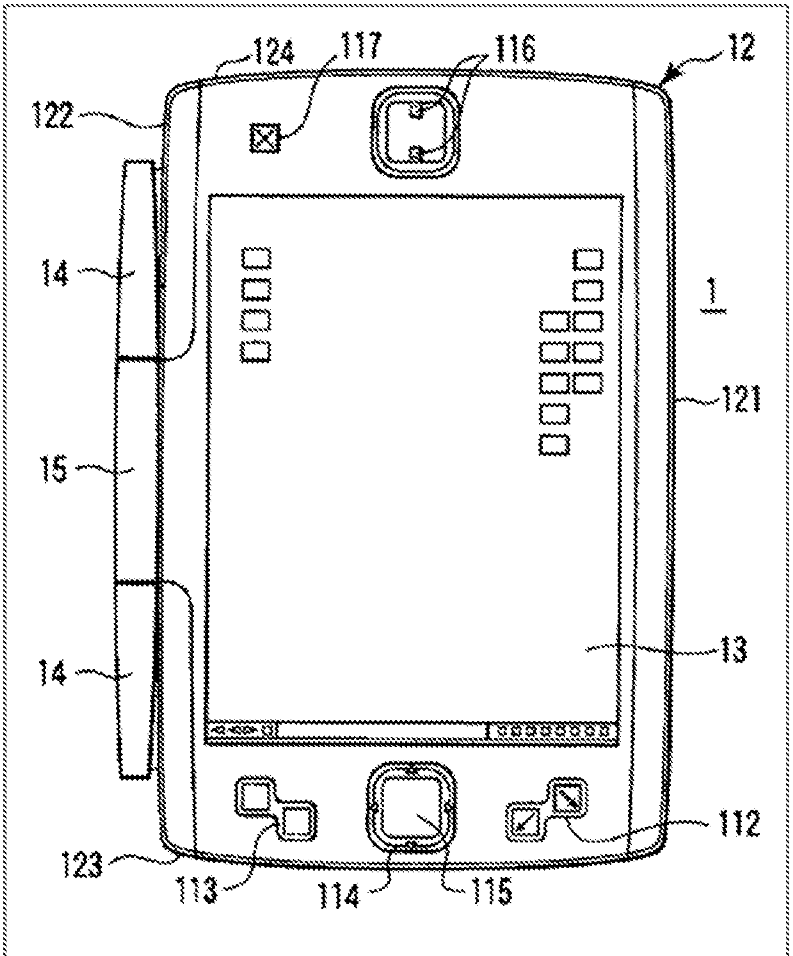


FIG. 5

A display driver 303 in the portable computer 1 "performs an operation for rotating a screen image displayed on the LCD 13 and a scaling operation for varying the aspect ratio in response to an instruction from the BIOS 301." *Id.*, ¶70. The BIOS 301 relies on a gravity sensor 203 and/or a rotation angle sensor 202 to orient the display unit 12 (i.e., rotate the screen image). *Id.*, ¶¶48, 50-51, 74, 77, FIG. 10.

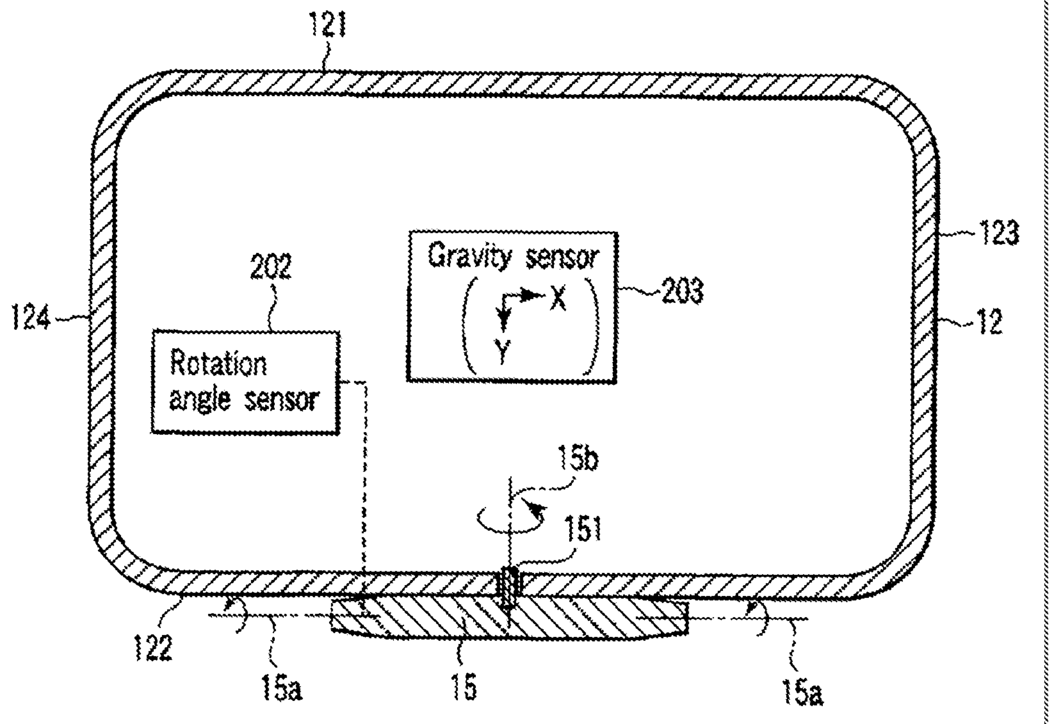
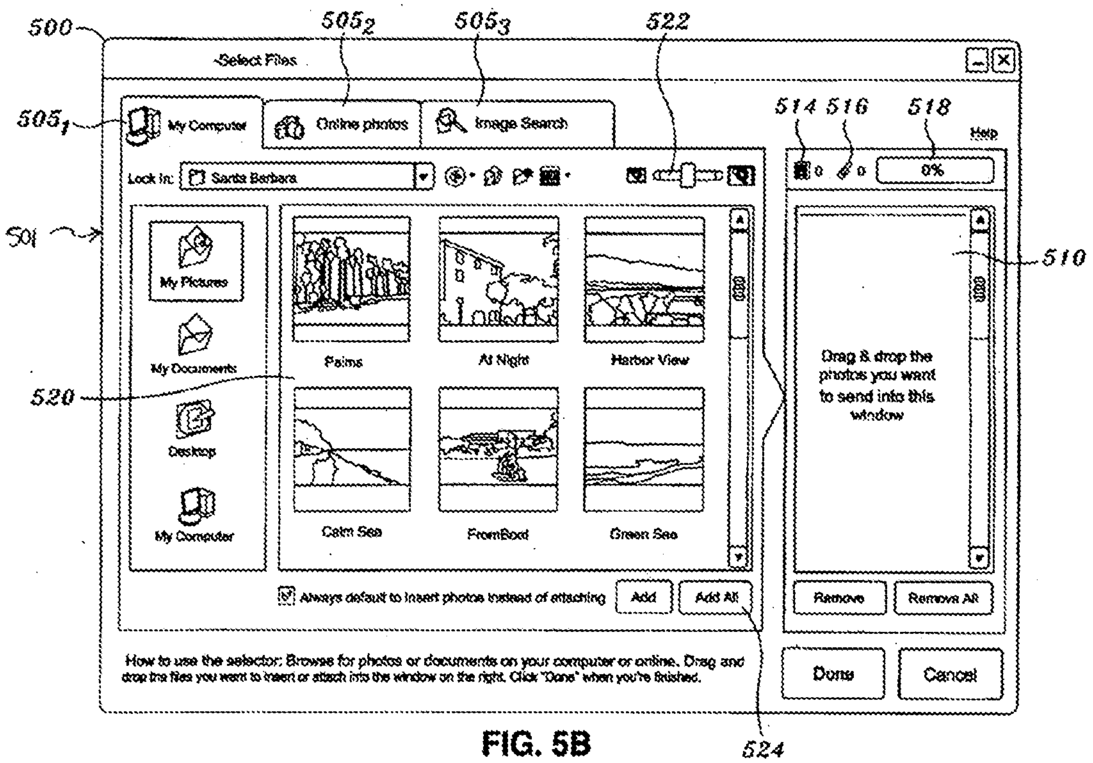

121
123
12
124
202
Rotation angle sensor
Gravity sensor
X
Y
203
15b
151
122
15a
15
15a

FIG. 10

3. Overview of Aldrich

Aldrich published on November 23, 2006 and claims priority to a provisional application filed on May 20, 2005. Tsuji therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Aldrich is directed to sharing files using a file selection interface system. EX-1006, Abstract. The files include photo or video files. *Id.* "The file selection interface may be integrated with the operating system and/or the Internet browser." *Id.*, ¶21. The file selection interface system includes GUI 500. *Id.*, FIG. 5B.


500
505₂
505₃
522
Select Files
505₁
My Computer
Online photos
Image Search
514 516
518
Help
Look In:
Santa Barbara
0
0
0%
501
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
510
520
Add
Add All
Remove
Remove All
Done
Cancel
524

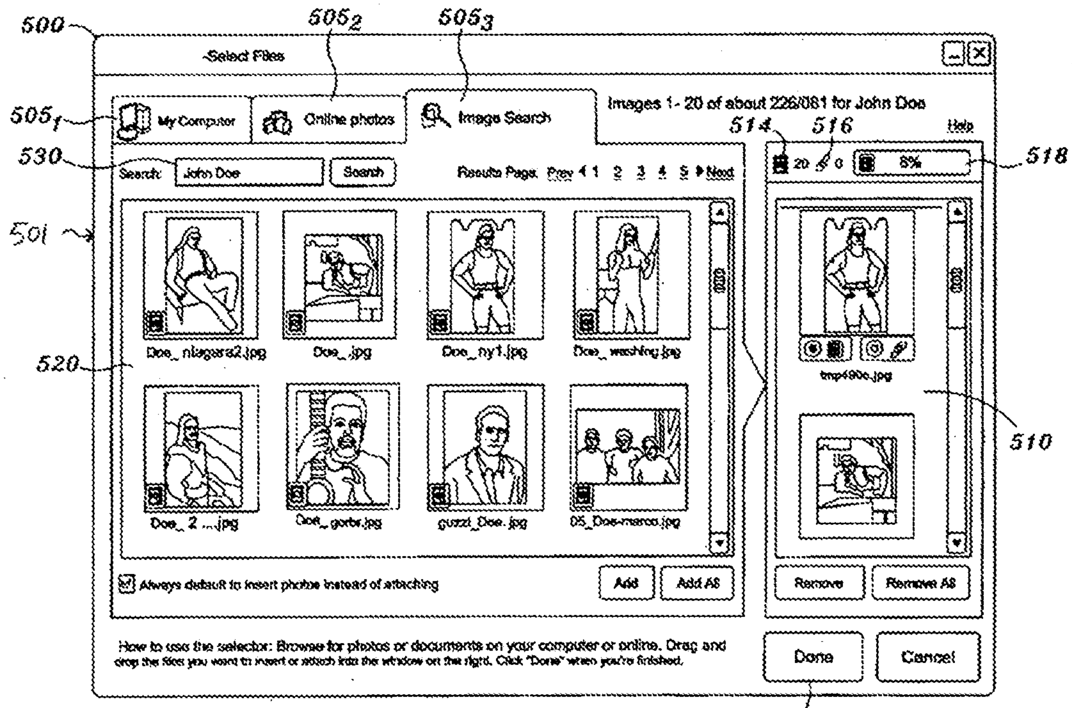
Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

GUI 500 includes My Computer tab (505_1), Online Photos tab (505_2), Image Search tab (505_3) (FIG. 5G), queue 510, and display panel 520. *Id.*, ¶48.


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
514
516
Help
530
Search:
John Doe
Search
Results Page: Prev 1 2 3 4 5 Next
20
0
8%
518
501
Doe_ niagara2.jpg
Doe_.jpg
Doe_ny1.jpg
Doe_ washing.jpg
tmp490e.jpg
520
510
Doe_ 2 ....jpg
Doe_ gorbr.jpg
guzzi_Doe. jpg
05_Doe-marco.jpg
Add
Add All
Remove
Remove All
Done
Cancel
532

Images 1 - 20 of about 226,081 for John Doe

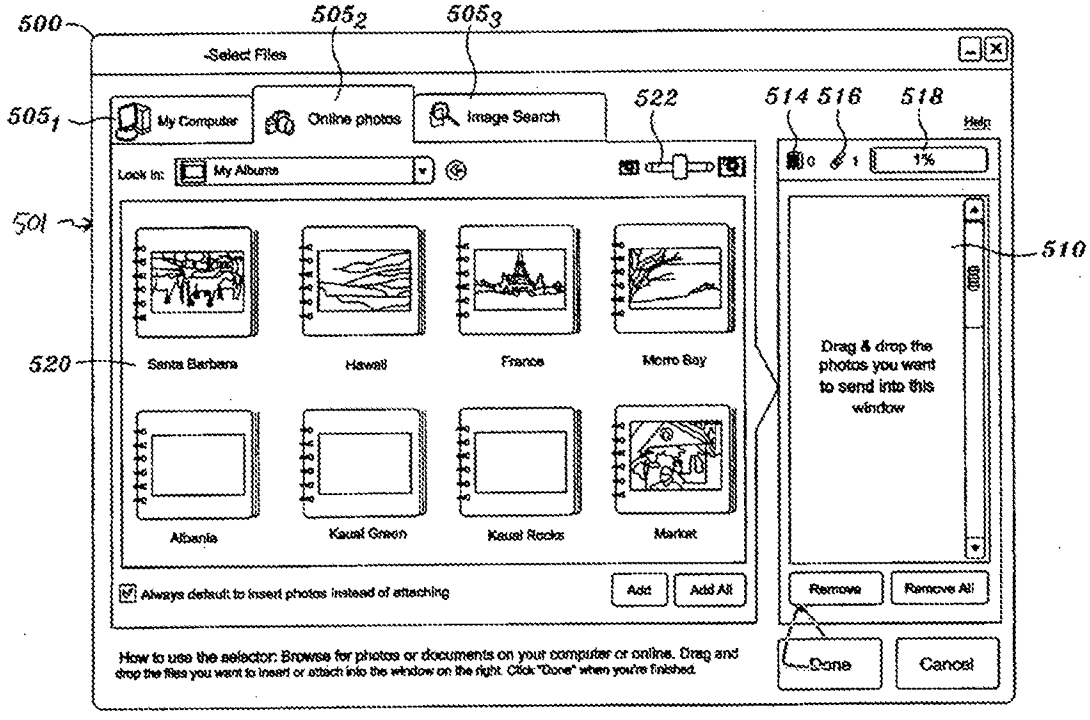
☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5G

GUI 500 "is operable to attach and/or embed files into webmail correspondence." *Id.*, ¶47. This provides "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.*, ¶48. When a 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). In the My Computer tab (505_1) and Online Photos tab (505_2), a user is presented with tree-structured folders where a user can "drill down through the tree-structured arrangement to select image files." *Id.*.

In order to access the photos from the Online Photos tab (505_2), a user may log in with a username and/or password, though "cookies or another authentication mechanism may be used to automatically log the user into their account." *Id.*, ¶56. The photos may be organized into albums, "which function essentially the same as a tree-structured foldering system." *Id.*, ¶57, FIG. 5E.

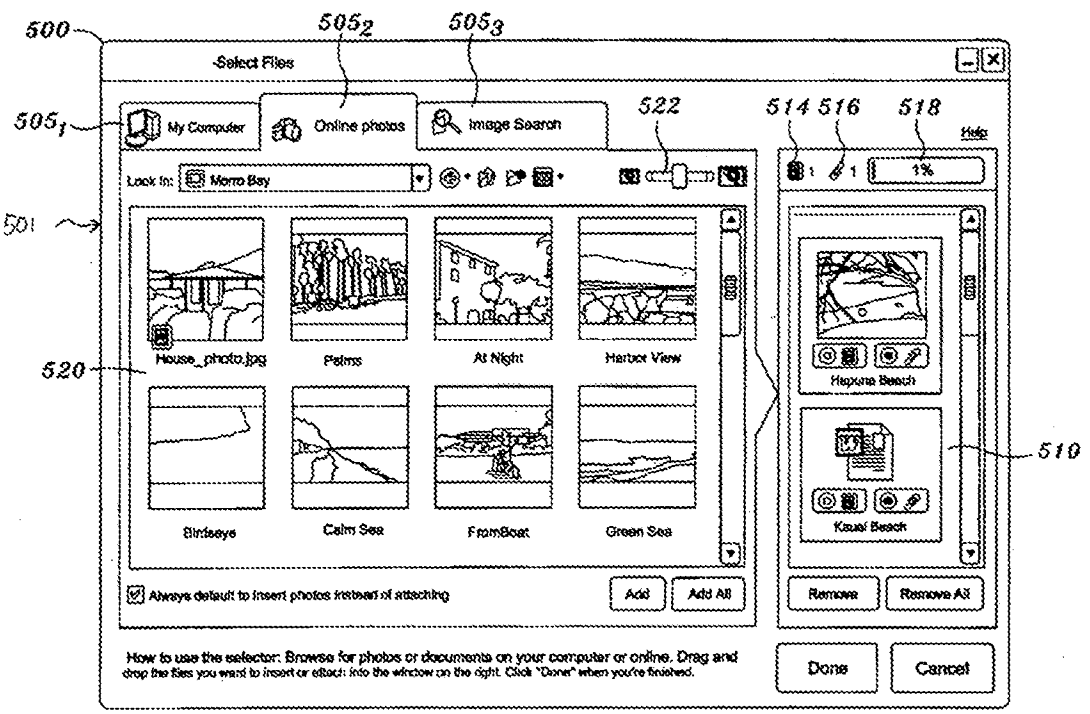

500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514
516
518
Help
Look in:
My Albums
0
1
1%
501
510
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Rocks
Market
Drag & drop the photos you want to send into this window
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5E

By clicking on any of the albums in display panel 520, the user would be able to access the individual image files contained therein. *Id.*, ¶57, FIG. 5F.


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514
516
518
Help
Look In: Morro Bay
1%
501
520
House_photo.jpg
Palms
At Night
Harbor View
Birdseye
Calm Sea
FromBoat
Green Sea
Hapuna Beach
Kauai Beach
510
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

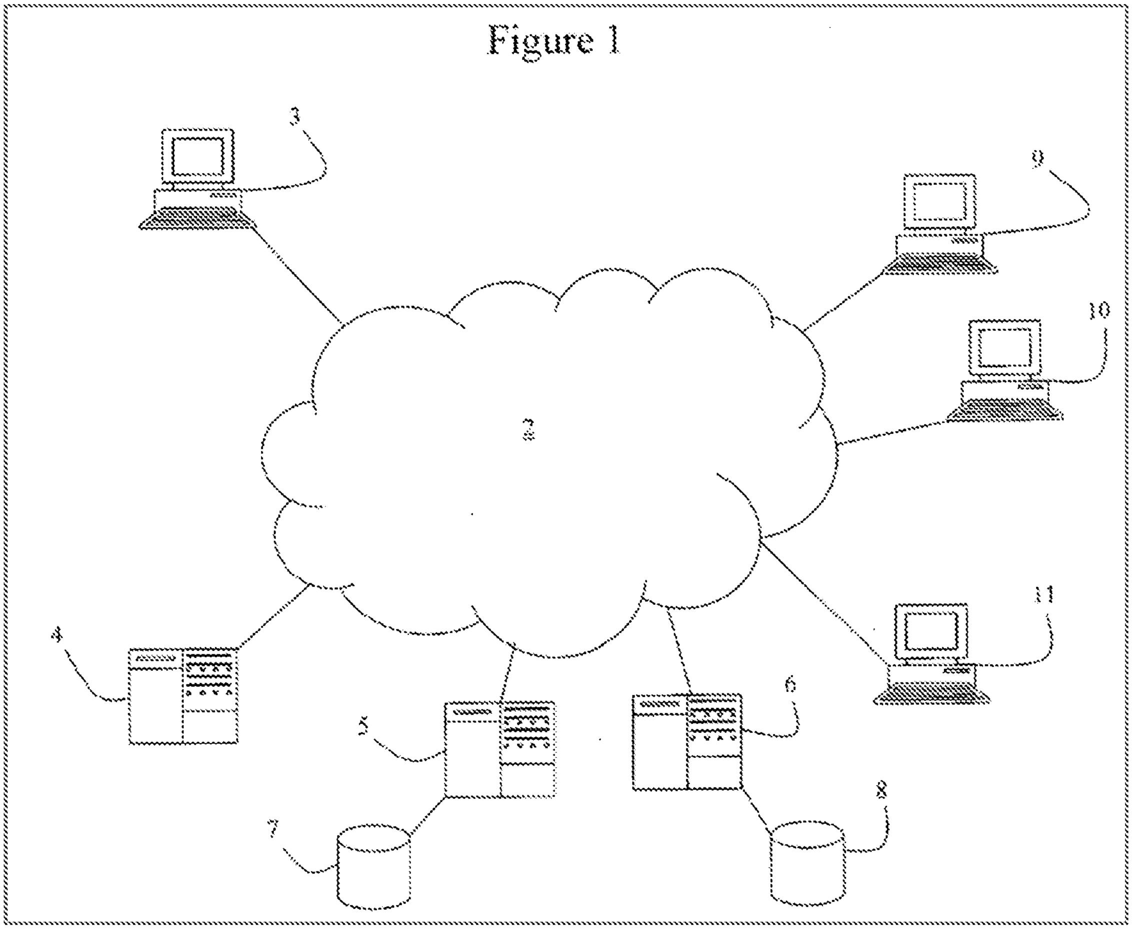
FIG. 5F

The files populating display panel 520 may be selected item by item to be added to queue 510 using 'add' button 507 or all files in the current folder may be added to queue 510 by selecting the 'add all' button 524. *Id.*, ¶¶49, 51. 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.* The embedded file may be in the form of an ActiveX control reference to a remote email account. *Id.*, ¶50. The "ActiveX [control] reference is visually represented in an email as a thumbnailed image which corresponds to a full image file stored on a remote server." *Id.*, ¶46.

4. Overview of Biggs

Biggs published on September 2, 2004 from an application filed on February 27, 2003. Biggs therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Biggs is directed to a system and method for sharing one or more digital image files. EX-1007, Abstract. Biggs discloses sharing such files using network 1, including sender's computer 3, Pmail servers 5, 6, and Pmail data stores 7, 8. *Id.*, ¶30, FIG. 1.



Pmail data store 7 is connected to an "account related to the sender's name and email address." *Id.*, ¶42. The user can generate a new Pmail (e.g., an email message with thumbnails attached sent from Pmail server 5, 6 to recipient 9, 10, 11). *Id.*, ¶¶30, 34. The user can send the Pmail, the client software prepares the Pmail, and Pmail server 5 receives the Pmail text, images, and thumbnails, as well as other related information. *Id.*, ¶41. Pmail server 5 builds the corresponding email, and, among other things, "adds click-links 405 to each thumbnail pointing back to its related screen size image 204 in the Pmail data store 7." *Id.*, ¶43.

5. Overview of Chao

Chao issued as a U.S. patent on June 28, 2011 from an application filed on December 17, 2002. Chao therefore qualifies as prior art under at least pre-AIA 35 U.S.C. § 102(e).

Chao is directed to a digital image management system for searching for specific images. EX-1008, Abstract. E.g., Chao disclose an archiving system. *Id.*, 12:56-58; FIG. 8.

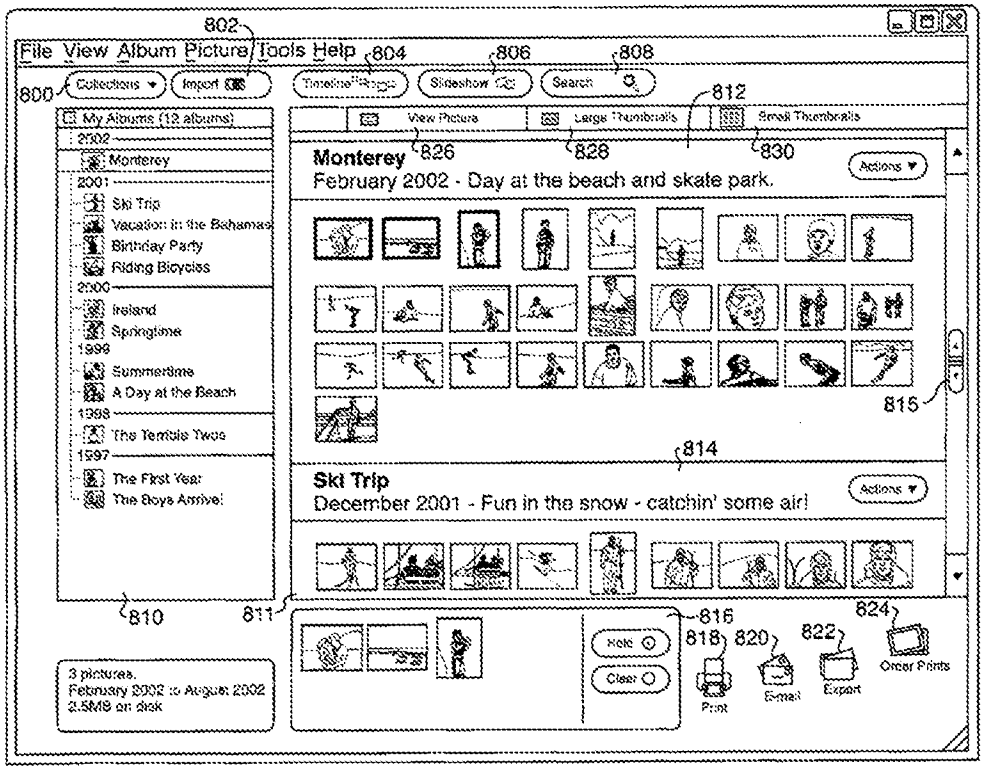

802
File View Album Picture Tools Help
804
806
808
800
Collections
Import
Timeline Range
Slideshow
Search
812
My Albums (12 albums)
2002
Monterey
2001
Ski Trip
Vacation in the Bahamas
Birthday Party
Riding Bicycles
2000
Ireland
Springtime
1999
Summertime
A Day at the Beach
1998
The Terrible Twos
1997
The First Year
The Boys Arrive!
View Picture
Large Thumbnails
Small Thumbnails
826
828
830
Monterey
February 2002 - Day at the beach and skate park.
Actions
815
814
Ski Trip
December 2001 - Fun in the snow - catchin' some air!
Actions
810
811
816
818
820
822
824
3 pictures.
February 2002 to August 2002
2.5MB on disk
Hide
Clear
Print
E-mail
Export
Order Prints

FIG. 8

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

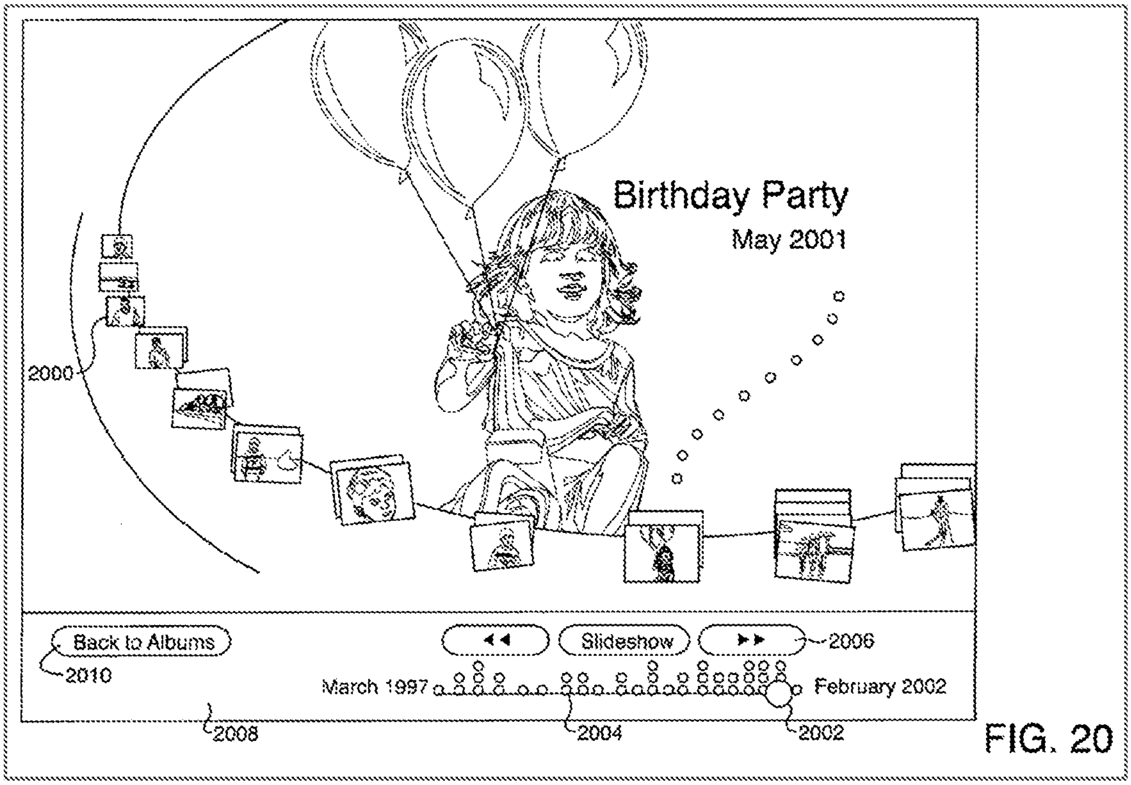

Birthday Party
May 2001
2000
Back to Albums
2010
Slideshow
2006
March 1997
February 2002
2008
2004
2002

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 timeline 200[0].[1] Scrubber 2004 indicates the number of image albums associated with various time periods within the displayed range (March 1997 to February 2002 in this example)." *Id.*, 15:11-17.

---

[1] The timeline is identified as "2002" in this quotation, but is referred to as "2000" in Chao, column 15:11. The "2002" is understood as a typographical error here and should have been "2000."

6. Overview of Kurtz

Kurtz published on September 30, 2004 from an application filed on March 24, 2003. Kurtz therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Kurtz is directed to a system and method for user modification of metadata. EX-1009, Abstract. Kurtz discusses various issues with conventional technology, such as an image browser where a user can view photos, and photo details like "dimensions, the date and time it was taken, and the name of the camera that took it." *Id.*, ¶7. In this context, Kurtz states that there is a need for an improved user experience that enables users to locate an item based on its metadata, and enter and edit metadata within a shell browser. *Id.*, ¶8.

7. Overview of Choi

Choi issued as a U.S. patent on August 17, 2010 from an application filed on May 18, 2007. Choi therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e).

Choi is directed to sharing photos via a hosting site with various levels of sharing to access and/or modify the photos. EX-1010, Abstract. E.g., a user may create an album, and give various levels of sharing to other users. *Id.*, 5:48-61. Choi disclosed presenting a status icon to indicate changes to an album/photo to multiple users in a GUI. *Id.*, 9:17-25.

8. Overview of Manolis

Manolis issued as a U.S. Patent on July 10, 2007 from an application filed on November 22, 2000. Manolis therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e).

Manolis is directed to sharing photos with another user using an online print service. EX-1011, Title, Abstract. E.g., a user can access a Share Photos page 2400, and identify recipients for the Share Photos envelope 2401. "[T]he Share Photos envelope 2401 hold[s] images that are to be made accessible online to the specified share recipient." *Id.*, 9:48-50. The user is able to enter a subject line and message to be included in an email that has the selected photos. *Id.*, 9:52-54. When the email with the shared photos is sent, "information (URL, Sign In name, password, etc.) for accessing the shared images" is sent along with the email. *Id.*, 9:55-57.

9. Family Diagram

EX-1015 is a diagram depicting different modified Portable Computers of Shimura used in the Grounds below.

B. Ground 1: Shimura in view of Tsuji and Aldrich renders Claims 1-4, 6-8, 15-16, and 24-27 obvious.

1. Combination of Shimura and Tsuji (hereafter "Shimura-Tsuji combination")

A POSITA would have been motivated to combine Shimura with Tsuji, as they are:

- contemporaneous references directed toward complementary solutions to highly analogous problems in the same field of endeavor;
- directed toward a portable computer that can be used in various display modes and displayed content orientations (EX-1004, ¶¶10–17, Figures 1, 5; EX-1005, ¶¶34, 51, FIGs. 1, 5-8); and
- directed to display modes with corresponding inputs and outputs(EX-1004, ¶¶8, 18, 19; EX-1005, ¶¶32, 45).

EX-1012, ¶174.

While Shimura discloses a portable computer capable of orienting the displayed content using a display reverse switch, it does not disclose automatically orienting the displayed content. EX-1004, ¶¶12, 17. Tsuji, however, discloses rotation angle and gravity sensors used to automatically control the orientation based on the outputs of the sensors. EX-1005, ¶36.

A POSITA would have been motivated to further incorporate the rotation angle and gravity sensors of Tsuji (FIG. 10 below) into the Shimura Computer to improve operability and/or usability, by providing the option of automatically controlling the orientation of the displayed content based on one or more sensors. EX-1005, ¶36; EX-1012, ¶176.

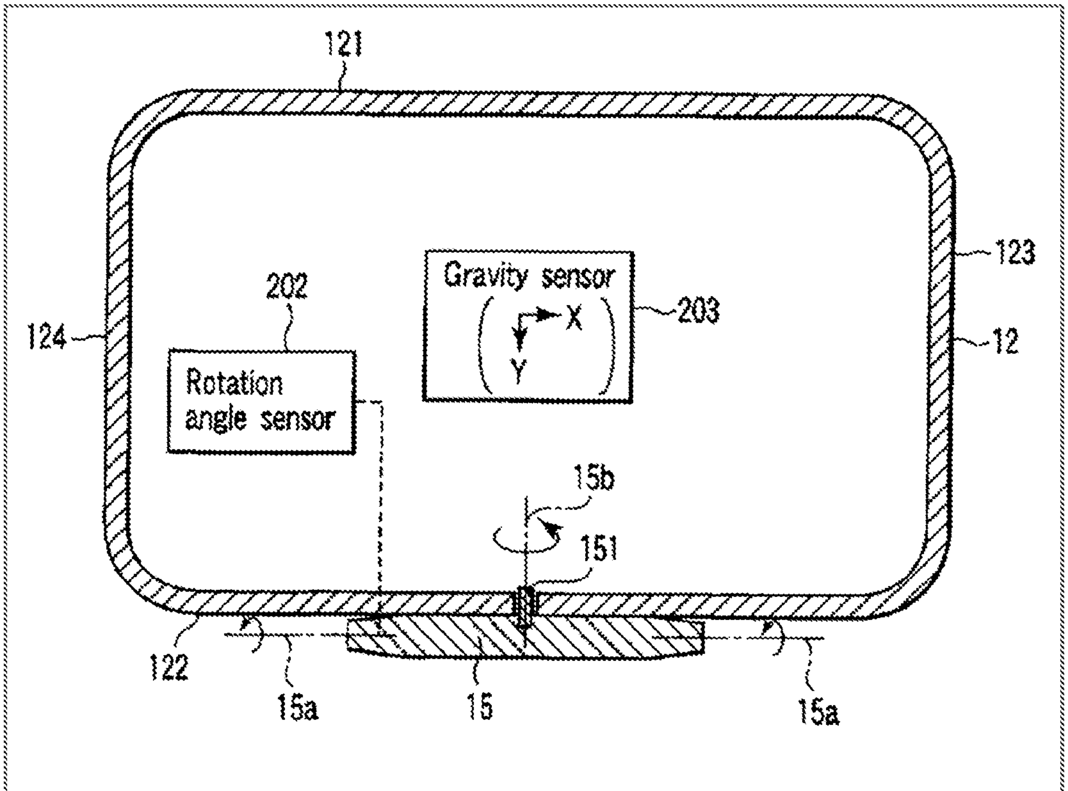
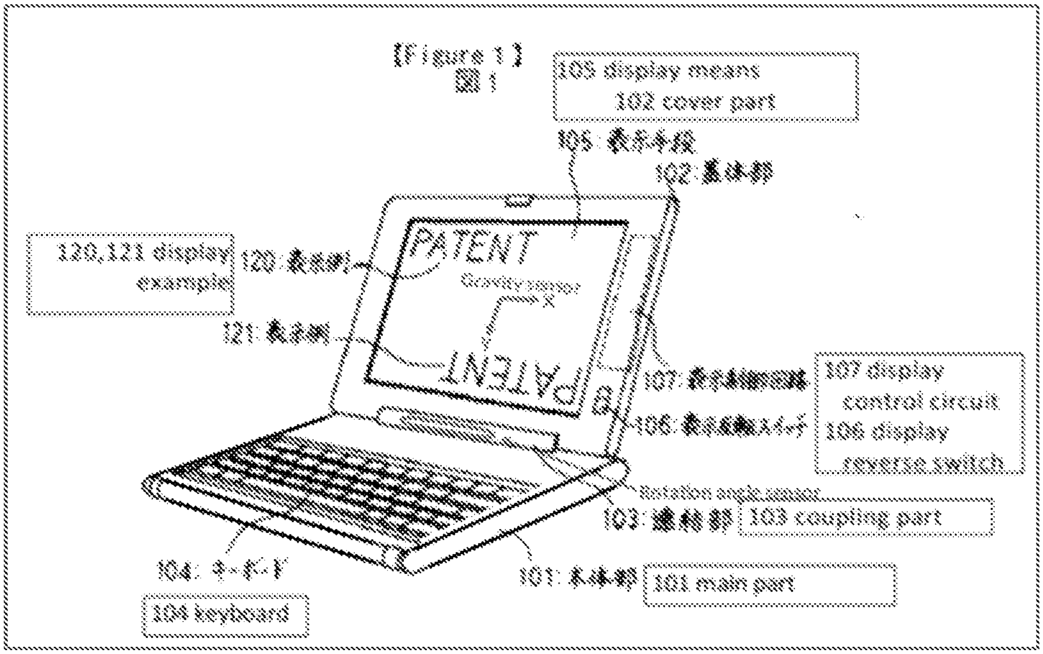


FIG.10

Specifically, Tsuji discloses the rotation angle sensor 202 sensing whether a rotation angle is greater than a specific rotation angle, and the gravity sensor 203 "sensing which orientation the display unit main body is located in relative to the orientation of the force of gravity." EX-1005, ¶¶58-59. Based on this disclosure, a POSITA would have been motivated to implement the combination of the rotation angle sensor 202 and the gravity sensor 203 in the Shimura Computer to enable it to distinguish between various display modes (e.g., the laptop and easel modes). EX-1012, ¶177.

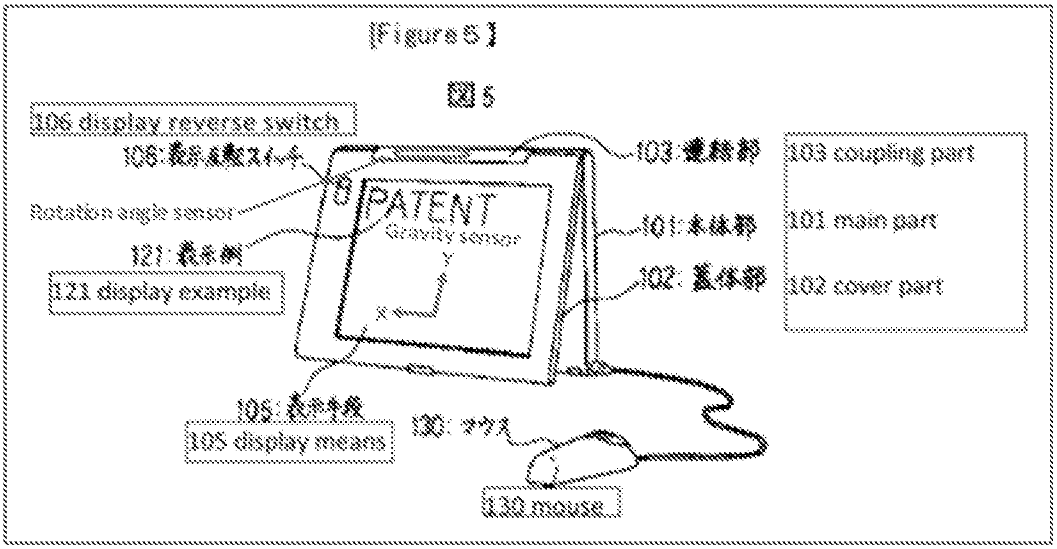
Also based on the above disclosure of Tsuji, a POSITA would have been motivated to implement the rotation angle sensor of Tsuji in the hinge of the

Shimura Computer, and the gravity sensor of Tsuji in the cover part 102 of the Shimura Computer. EX-1004, Figure 1 (annotated, modified); EX-1012, ¶178.


[Figure 1]
105 display means
102 cover part
120,121 display example
PATENT
Gravity sensor
X
Y
PATENT
107 display control circuit
106 display reverse switch
Rotation angle sensor
103 coupling part
101 main part
104 keyboard

The output of the rotation angle sensor indicates the amount of rotation of the display component (102) relative to the base (101). *Id.* The output of the gravity sensor indicates the X-component and the Y-component of gravity in the plane of the display component (102). *Id.* The output of the gravity sensor would indicate the Y-component of gravity in the plane of the display component (102) pointing towards the hinge (103). *Id.*

In easel mode, the output of the gravity sensor would indicate the Y-component of gravity in the plane of the display component (102) pointing away from the hinge (103). EX-1004, Figure 5 (annotated, modified); *id.*, ¶179.


[Figure 5]
106 display reverse switch
106
Rotation angle sensor
121
121 display example
PATENT
Gravity sensor
Y
X
105
105 display means
130
130 mouse
103
101
102
103 coupling part
101 main part
102 cover part

Exemplary logic for determining the display mode based on outputs of the rotation angle and gravity sensors is summarized in Table 1 below (*id.*, ¶180):

Rotation Angle Sensor Rotating Angle	**Gravity Direction (Y-Component)**	**Display Mode**
Between 0° and 180°	Not used	Laptop mode
>180°	Away from the hinge assembly	Easel mode

Table 1

The modified display control circuit 107 and modified electronic circuit of Shimura receiving the outputs of the rotation angle sensor 202 and gravity sensor 203 of Tsuji orient the displayed content between at least a normal view and an inverted view. EX-1012, ¶181. E.g., the displayed content would be oriented in a normal view in the laptop mode and an inverted view in the easel mode. *Id.* In a laptop mode, where the rotation angle sensor is less than 180°, the displayed content is in a normal view. *Id.* In an easel mode, where the rotation angle sensor is greater than 180°, and the output of the gravity sensor indicates the Y-component of gravity in the plane of the cover part 102 points away from the hinge assembly, the displayed content is in an inverted view. *Id.* Otherwise, the displayed content would appear upside-down to the user. *Id.* Automatically controlling the orientation of displayed content in different display modes of a portable computing device based on a rotation angle sensor and/or a gravity sensor was known at the Critical Date. *Id.* Moreover, it was well-known to configure a streamlined computing device into multiple display modes with corresponding selectable I/O profiles. *Id.*; EX-1004, *passim*; EX-1016, *passim*; EX-1005, *passim*, EX-1018, *passim*, EX-1020, *passim*. The resulting system will be hereafter referred to as the "Shimura-Tsuji Computer." *Id.*, ¶181.

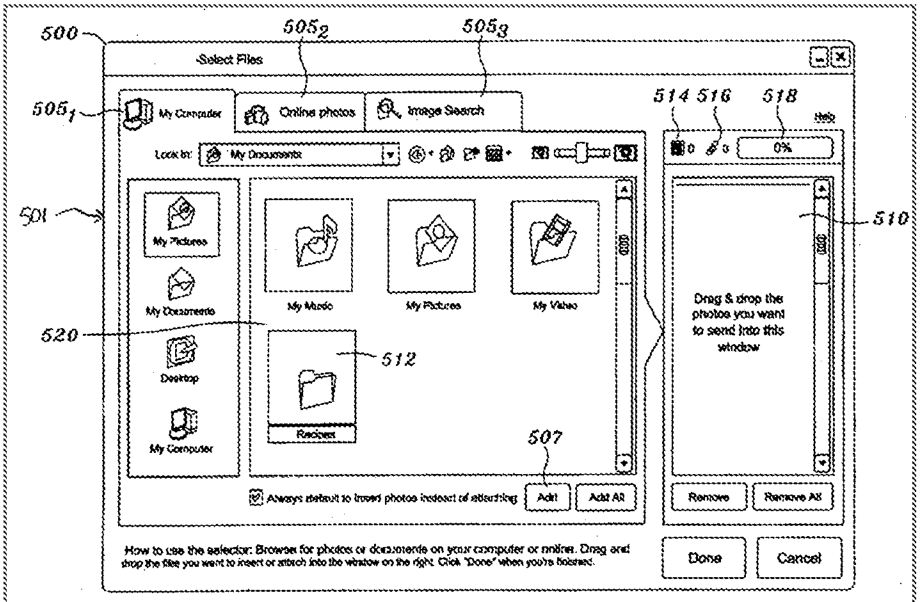
There would have been motivation to combine, and a reasonable expectation of success in combining, Tsuji with Shimura because the combination is merely a combination of well-known prior art elements according to known methods to yield predictable results. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415-21 (2007); EX-1012, ¶182. Tsuji taught the known prior art concept of automatically controlling the orientation of the displayed content in different display modes based on the rotation angle and gravity sensors. EX-1012, ¶182. Application of these teachings to Shimura would have yielded a predictable portable computer capable of automatically orienting the displayed content. *Id.*

Thus, the POSITA would have been motivated to arrive at the Shimura-Tsuji Computer by adding or otherwise integrating into the Shimura Computer Tsuji's sensor(s) to improve operability and/or usability by automatically controlling the orientation of the displayed content in different display modes. *Id.*, ¶¶174-183.

2. Combination of Shimura, Tsuji, and Aldrich (hereafter "Shimura-Tsuji-Aldrich combination")

A POSITA would have been motivated to combine Tsuji with Shimura (VIII.B.1) and Aldrich with the foregoing for several reasons. While Shimura and Tsuji disclose hardware components and related circuitry, they do not expressly disclose software providing computer functionality; Aldrich discloses a file selection interface, a software component providing computer functionality that can "be integrated with the operating system and/or the Internet browser." EX-1006, ¶¶21, 44-48; EX-1012, ¶185. Aldrich discloses that the file selection interface can be implemented in a variety of computing devices, including a laptop (i.e., portable computer). EX-1006, ¶27.

In addition, Aldrich discloses a GUI 500 of the file selection interface. *Id.*, ¶58. GUI 500 includes tabs 505_1-505_3, queue 510, and display panel 520. *Id.*, ¶¶48-50, FIGs. 5A, 5B below.

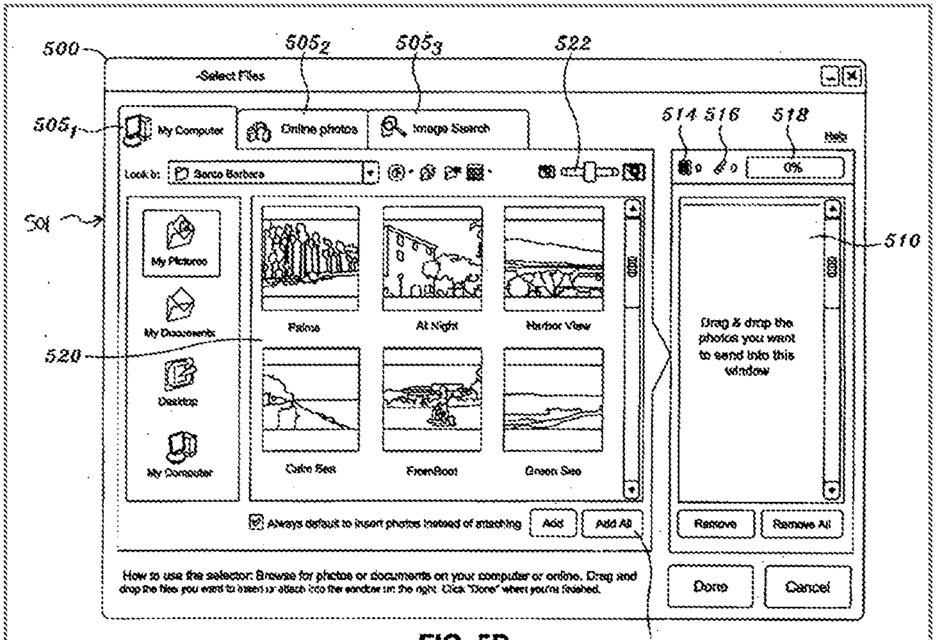

500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
514 516
518
Help
0%
Look in:
My Documents
501
My Pictures
My Documents
Desktop
My Computer
My Music
My Pictures
My Video
510
520
512
Recipes
507
Add
Add All
Remove
Remove All
Done
Cancel

Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5A


500
505₂
505₃
522
Select Files
505₁
My Computer
Online photos
Image Search
514 516
518
Help
0%
Look in:
Santa Barbara
501
My Pictures
My Documents
Desktop
My Computer
520
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
510
Add
Add All
Remove
Remove All
Done
Cancel
524

Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

A POSITA would have been motivated to implement the file selection interface and the related GUI of Aldrich (hereafter "the Aldrich software") via the Shimura-Tsuji Computer to perform the task of sharing photos with other users using email. EX-1012, ¶186. A GUI including a plurality of views of digital media content was well-known at the Critical Date. *Id.*; EX-1006, *passim*; EX-1008, *passim*; EX-1021, *passim*; EX-1022, *passim*; EX-1023, *passim*.

A POSITA would have understood that in the different display modes of the Shimura-Tsuji Computer (e.g., the laptop and easel modes), the orientation of the displayed content of Aldrich, such as GUI 500, would be controlled based on the logic described in Table 1 above. *Id.*, ¶187; VIII.B.1. The resulting computing system, including the Shimura-Tsuji Computer having the Aldrich software integrated in the operating system and/or the Internet browser, will be hereafter referred to as the "Shimura-Tsuji-Aldrich Computing System." *Id.*, ¶187.

There would have been motivation to combine, and a reasonable expectation of success in combining, Aldrich with Shimura and Tsuji because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415–21; EX-1012, ¶188. Aldrich taught one example of computer software (i.e., photo sharing software), which is well-understood to be integrated in an operating system and/or an Internet browser, and application of this teaching to Shimura and Tsuji 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. EX-1012, ¶188.

Thus, the POSITA would have been motivated to combine the above teachings to arrive at the Shimura-Tsuji-Aldrich Computing System. *Id.*, ¶¶184-189.

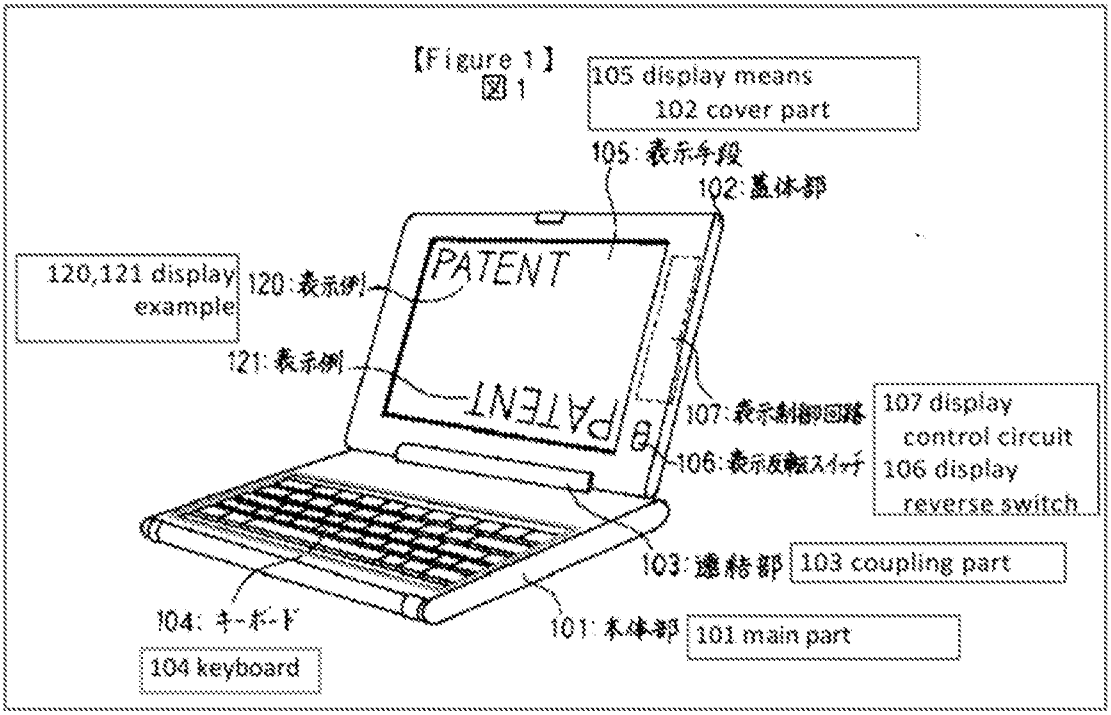
3. Claim 1

a. Limitation [1pre]

Shimura in combination with Aldrich discloses [1pre] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶190-195.

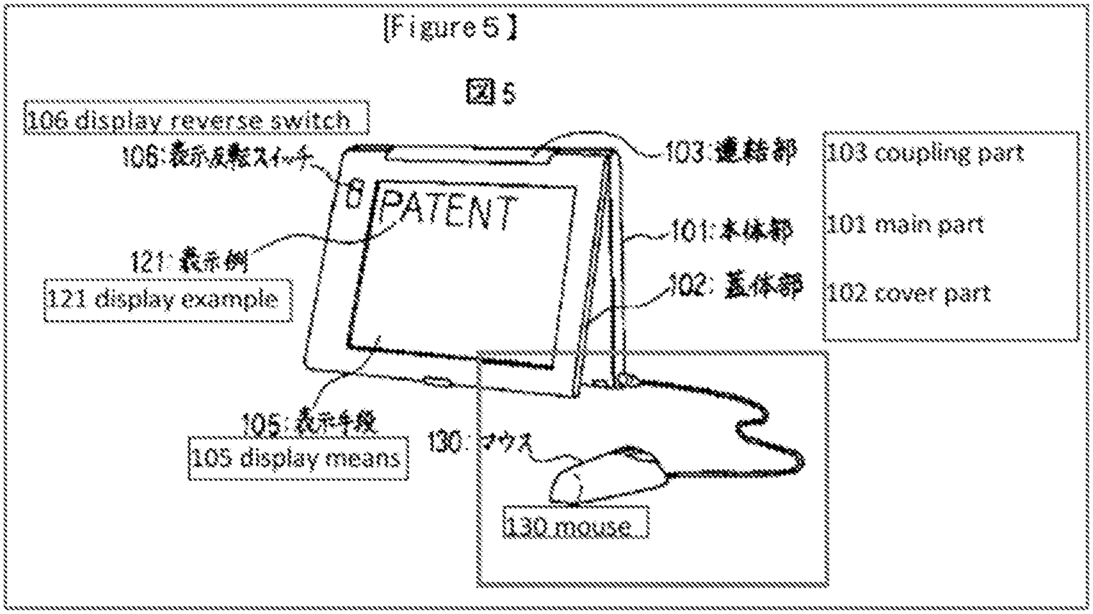
Aldrich discloses a method for selecting, viewing, and managing ("accessing and managing") image files ("digital media libraries"). EX-1006, Abstract, ¶¶20, 37, 39, 57.

Shimura discloses a "streamlined computing device" (e.g., a portable computer) that includes a keyboard. EX-1004, ¶¶11, 18-19, Figure 1 (annotated).


【Figure 1】
図1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
PATENT
121: 表示例
PATENT
B
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

In a first display mode, corresponding to a first claimed I/O profile, the display is directed toward the user, the keyboard is face up, and the user can provide input via the keyboard. EX-1004, ¶11, Figure 1 (above, annotated); EX-1012, ¶192.

Shimura teaches that in a second display mode, corresponding to a second claimed I/O profile, the keyboard can be disabled, and a mouse or a pen can be used as an input device. EX-1004, ¶¶11, 16-20, Figure 5 (annotated).

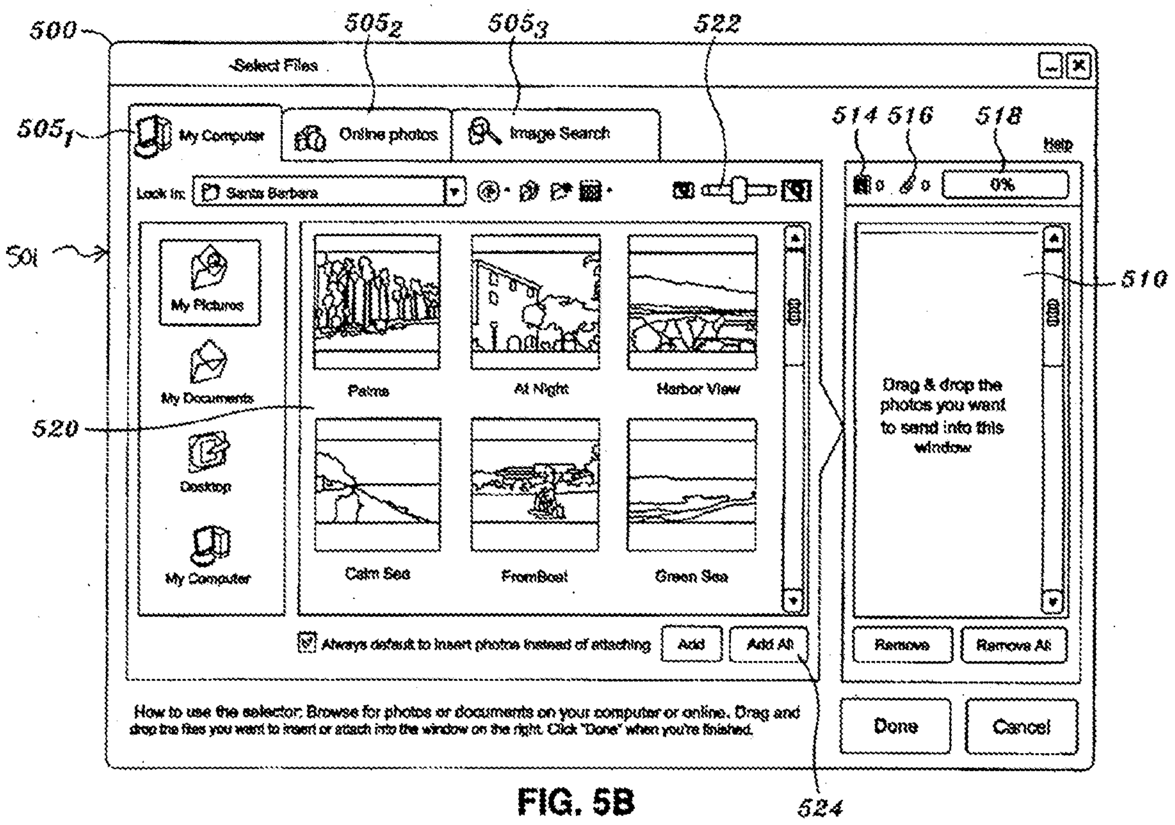

[Figure 5]
図5
106 display reverse switch
106:表示反転スイッチ
103:連結部
103 coupling part
PATENT
121:表示例
121 display example
101:本体部
101 main part
102:蓋体部
102 cover part
105:表示手段
105 display means
130:マウス
130 mouse

In the second display mode, the main body part is approximately 340° from the cover body part and the keyboard is on the opposite side of the user. EX-1004, ¶17. The two aforementioned I/O profiles are selectable in the sense that the user can configure the Shimura Computer in either the laptop mode or the easel mode. EX-1012, ¶195.

b. Limitation [1a]

Shimura in combination with Aldrich discloses [1a] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶196-198.

Aldrich discloses GUI 500, which includes display panel 520 populated with the image files (e.g., photos) in the "Santa Barbara" folder. EX-1006, ¶ 51, FIG. 5B.


500
505₂
505₃
522
Select Files
505₁
My Computer
Online photos
Image Search
514 516 518
Help
Look in: Santa Barbara
0%
501
510
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
520
Add
Add All
Remove
Remove All
Done
Cancel
524

☑ Always default to insert photos instead of attaching

Drag & drop the photos you want to send into this window

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

The Shimura-Tsuji Computer can orient the displayed content in either a normal view in the laptop mode or an inverted view in the easel mode based on the outputs of the rotation angle and gravity sensors. *See* VIII.B.1; EX-1012, ¶198. In the Shimura-Tsuji-Aldrich Computing System, the GUI 500, which can include image files such as those in the "Santa Barbara" folder, would be displayed in either a normal view in the laptop mode or an inverted view in the easel mode, thereby disclosing "the graphical user interface comprising at least a plurality of views of digital media content." EX-1012, ¶198.

c. Limitation [1b]

The Shimura-Tsuji-Aldrich combination discloses [1b] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶199-200.

The Shimura-Tsuji-Aldrich Computing System orients the displayed content, such as the GUI 500 of Aldrich, based on the outputs of the rotation angle and gravity sensors. *See* VIII.B.3.b; EX-1012, ¶200. Moreover, Shimura discloses disabling the keyboard automatically using a switching means based on a rotation angle. EX-1004, ¶¶8, 18-19. In Shimura's laptop mode, corresponding to the first claimed I/O profile, the user can provide input via the keyboard. *See* VIII.B.3.a; EX-1004, ¶11; EX-1012, ¶200. In Shimura's easel mode, corresponding to the second claimed I/O profile, the keyboard can be disabled, and a mouse or a pen can be used as an input device. *See* VIII.B.3.a; EX-1004, ¶¶11, 16-20. When a user configures the Shimura-Tsuji-Aldrich Computing System between the laptop and easel modes, the displayed content (GUI 500) of Aldrich would "transition between the plurality of views [normal and inverted views] in response to selection of an I/O profile." EX-1012, ¶200.

d. Limitation [1c]

The Shimura-Tsuji-Aldrich combination discloses [1c] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶201-204.

First, Shimura in combination with Aldrich discloses the means-plus-function limitation "view selector component" recited in [1c]. Shimura in combination with Aldrich discloses the function of the "view selector component." *See* VII.A; EX-1012, ¶202. Aldrich discloses digital media content (i.e., image files such as photos). EX-1006, ¶ 51. Shimura discloses a display reverse switch 106 that a user can set to orient the displayed content (i.e. the digital media content of Aldrich) to a normal view or an inverted view, thereby "permit[ting] a user to select one of the plurality of views." EX-1004, ¶12; EX-1012, ¶202.

Second, the Shimura-Tsuji-Aldrich Computing System also discloses the corresponding structure for the "view selector component." *See* VII.A; EX-1012, ¶203. Shimura's display reverse switch 106 that can be manually set by the user is an example of the navigation button of the '888 Patent, or its equivalent. EX-1012, ¶203.

Shimura's display reverse switch 106 "provid[es] for transition between the plurality of views in response to activation of a view selector component" by allowing a user to set the display reverse switch 106 between a normal view or an inverted view of the displayed content (i.e., the image files of Aldrich). EX-1004, ¶12; EX-1012, ¶204

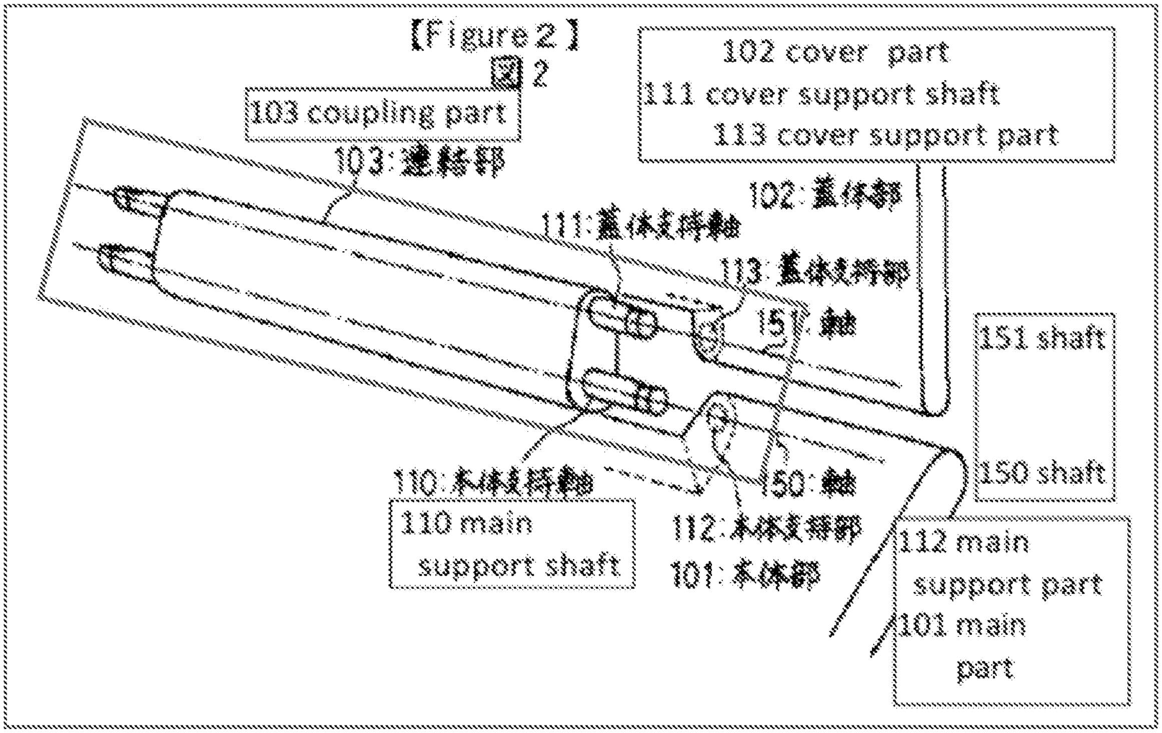
e. Limitation [1d]

The Shimura-Tsuji-Aldrich combination discloses [1d] and renders it obvious. *See* VIII.B.2; VIII.B.3.c; EX-1012, ¶205.

f. Limitation [1e1]

Shimura discloses [1e1]. *See* VIII.A.1; EX-1012, ¶¶206-207.

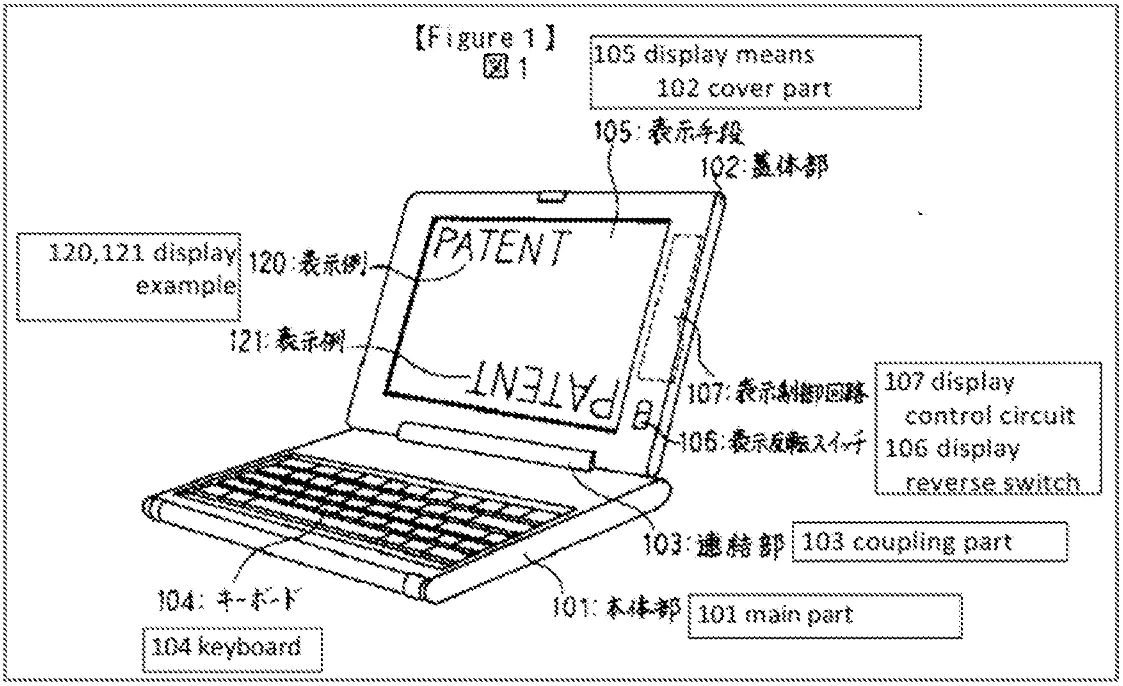
The Shimura Computer discloses coupling part 103 of Shimura inside a red box that "permit[s] the user to rotate a display component of the computing device [cover part 102 of Shimura] about a longitudinal axis [shaft 150 or shaft 151] running along an interface [coupling part 103] between the display component [102] and a base [main part 101 of Shimura] of the streamlined computing device." EX-1004, ¶¶12-13, Figure 2 (annotated); EX-1012, ¶¶207.


【Figure 2】
図 2
103 coupling part
103:連結部
102 cover part
111 cover support shaft
113 cover support part
102:蓋体部
111:蓋体支持軸
113:蓋体支持部
151:軸
151 shaft
150 shaft
110:本体支持軸
150:軸
110 main support shaft
112:本体支持部
101:本体部
112 main support part
101 main part

g. Limitation [1e2]

The Shimura-Tsuji-Aldrich combination discloses [1e2] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶208-209.

Shimura discloses a laptop computer, which is a portable computer, configurable into the claimed "laptop mode" of the '888 Patent. EX-1004, ¶¶11-14, Figure 1.

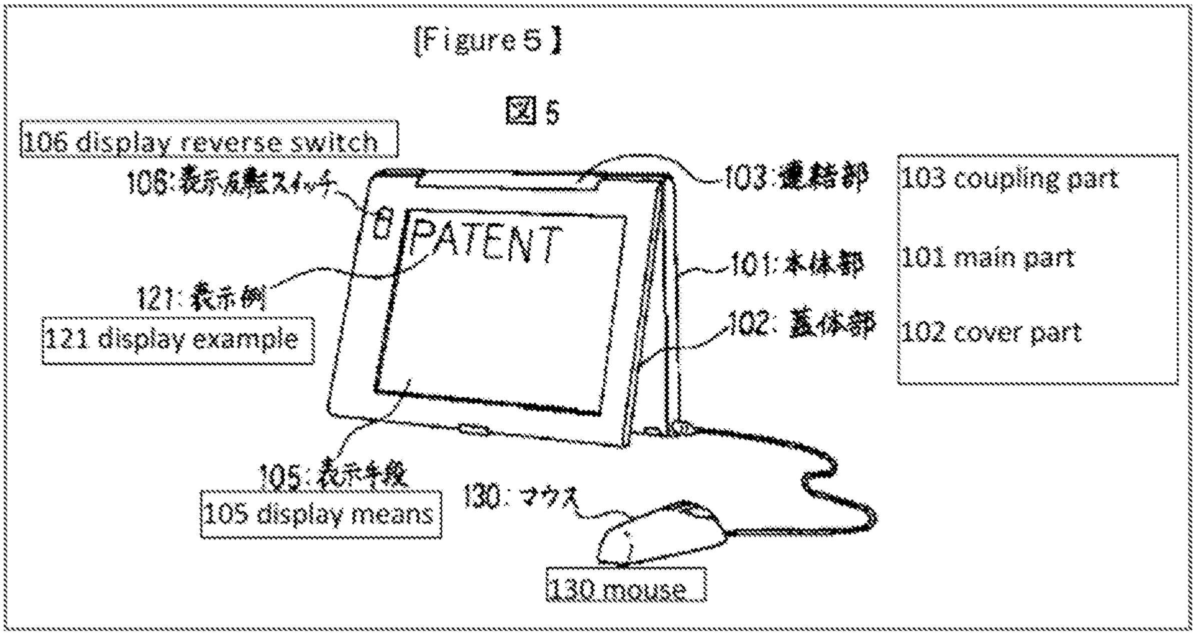

【Figure 1】
図1
105 display means
102 cover part
105:表示手段
102:蓋体部
120,121 display example
120:表示例
PATENT
121:表示例
PATENT
B
107:表示制御回路
107 display control circuit
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part
104:キーボード
104 keyboard
101:本体部
101 main part

The first physical orientation of the display component can be any angle up to 180° from the closed mode. EX-1012, ¶209; VIII.B.1. The first physical configuration of the display component and the base include the bottom surface of the base against a surface and the display component up to a 180° angle from the base. EX-1012, ¶209; VIII.B.1. In the laptop mode, the displayed content is in a normal view ("one of the plurality of views as a default display"). EX-1012, ¶209; VIII.B.1.

h. Limitation [1e3]

The Shimura-Tsuji-Aldrich combination discloses [1e3] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶210-211.

Shimura discloses a laptop computer, which is a portable computer, configurable into the claimed "easel mode" of the '888 Patent. *Id.* ¶17, Figure 5.


【Figure 5】
図5
106 display reverse switch
106: 表示反転スイッチ
103: 連結部
103 coupling part
PATENT
101: 本体部
101 main part
121: 表示例
121 display example
102: 蓋体部
102 cover part
105: 表示手段
105 display means
130: マウス
130 mouse

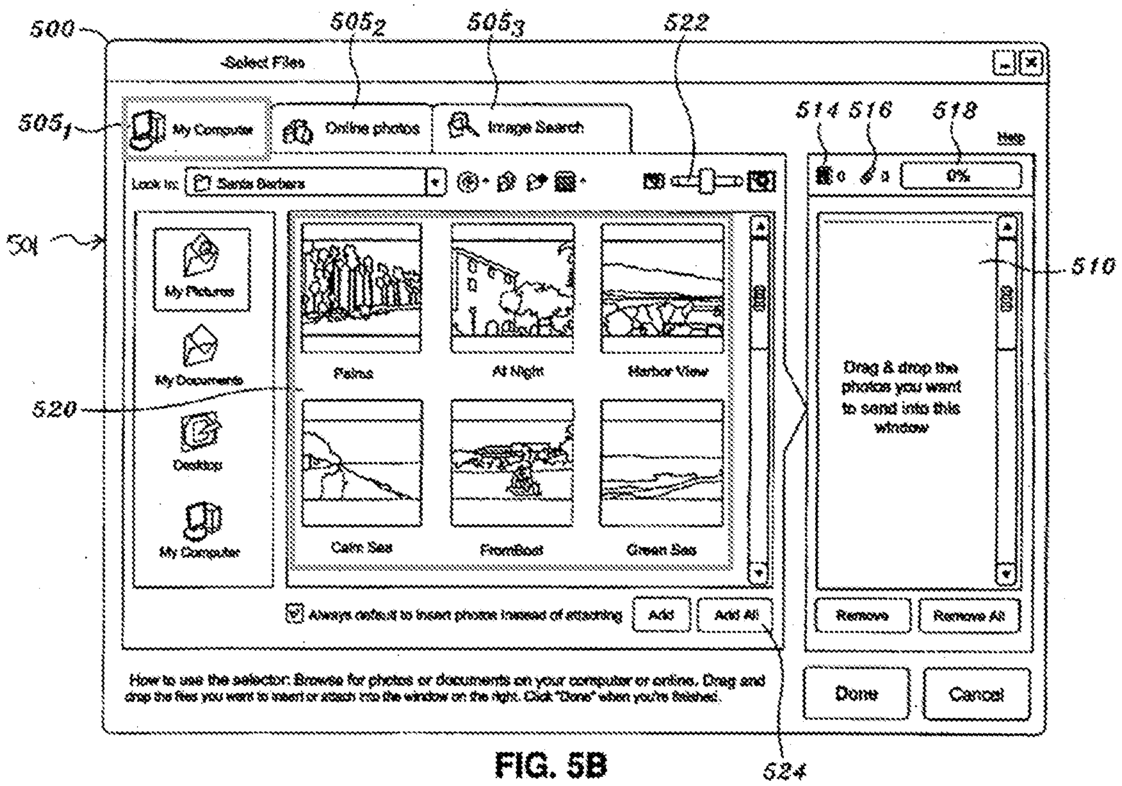
The second physical orientation of the display component can be any angle from 180° up to 360° from the closed mode. EX-1012, ¶211; VIII.B.1. The second physical configuration of the display component and the base has display component 102 facing the user with coupling part 103 placed upward and keyboard 104 of main part 101 facing the other side of the user. EX-1012, ¶211, Figure 5 (above); VIII.B.1. In the easel mode, the displayed content is in an inverted view ("another one of the plurality of views as the default display"). EX-1012, ¶211; VIII.B.1.

i. Limitation [1f]

Aldrich discloses [1f]. *See* VIII.A.3; EX-1012 ¶¶212-215.

(1) First Reasoning

Aldrich discloses associating visual representations (My Computer tab 505_1 and Online Photos tab 505_2) and digital media content (photos in "My Computer" and "Online Photos," respectively). EX-1006, ¶37. The My Computer tab 505_1 (blue) is associated with photos (green) because when a user selects the My Computer tab 505_1, photos from the "My Computer" folder are populated on the GUI 500. *Id.*, ¶48, FIG. 5B (annotated).


500
505_2
505_3
522
505_1
501
520
514
516
518
510
524
Select Files
My Computer
Online photos
Image Search
Help
Look in:
Santa Barbara
0%
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
Add
Add All
Remove
Remove All
Done
Cancel

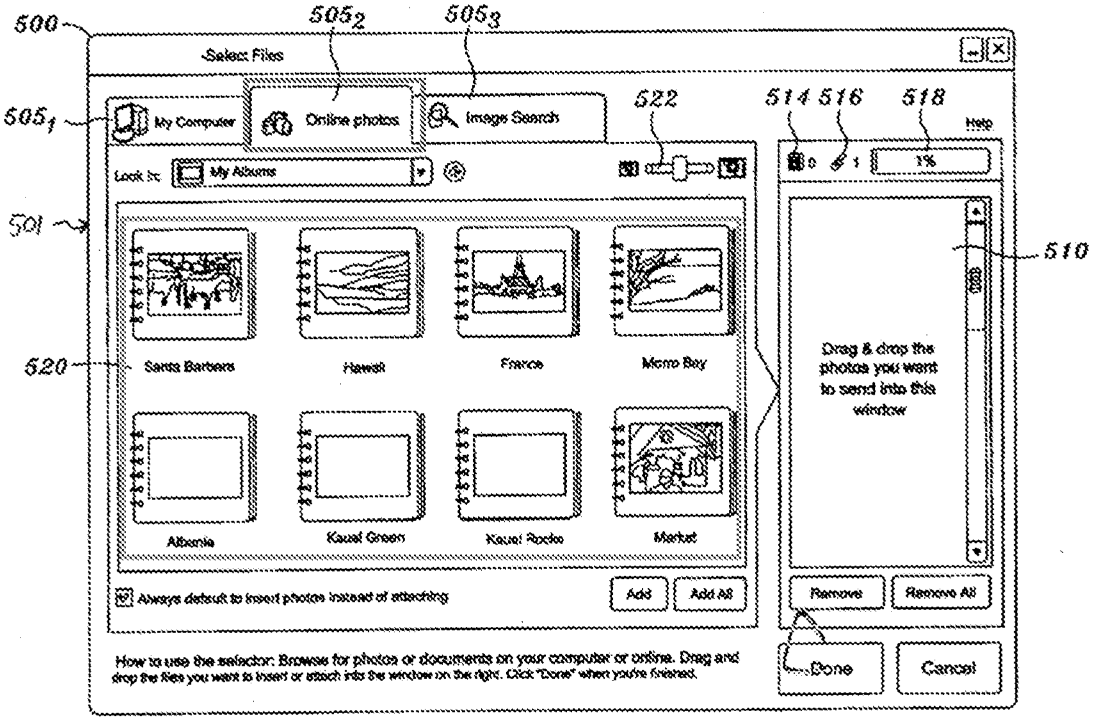
Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

The Online Photos tab 505_2 (red) is associated with photos (green) because when a user selects the Online Photos tab 505_2, photos from the corresponding remote storage account are populated on the GUI 500. *Id.*, ¶48, FIG. 5E (annotated).


500
505$_2$
505$_3$
Select Files
505$_1$
My Computer
Online photos
Image Search
522
514 516
518
Help
Look In:
My Albums
0
1
1%
501
510
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Rocks
Market
Add
Add All
Remove
Remove All
Done
Cancel

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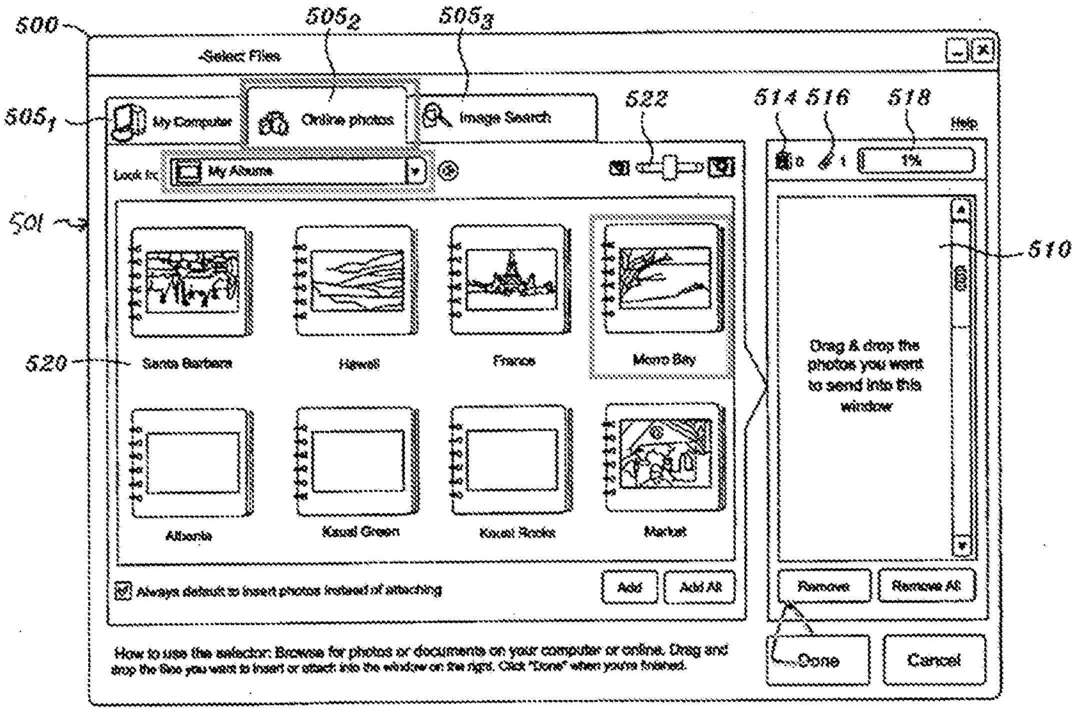
☒ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5E

(2) Second Reasoning

Aldrich discloses visual representations (a visual representation of the image file) and digital media content (image files). *Id.*, ¶37. The visual representation of the image file is associated with the image file with a reference link that includes location information for the image file. *Id.*, ¶¶7, 8. The visual representation may be a cover photo thumbnail for an album. *Id.*, ¶37. E.g., within My Albums (blue) of the Online Photos tab 505$_2$ (red), a user could select the thumbnail for the Morro Bay album (green). *Id.*, ¶ 58, FIG. 5E (annotated).


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look In:
My Albums
0
1
1%
501
510
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Rocks
Market
Add
Add All
Remove
Remove All
Done
Cancel

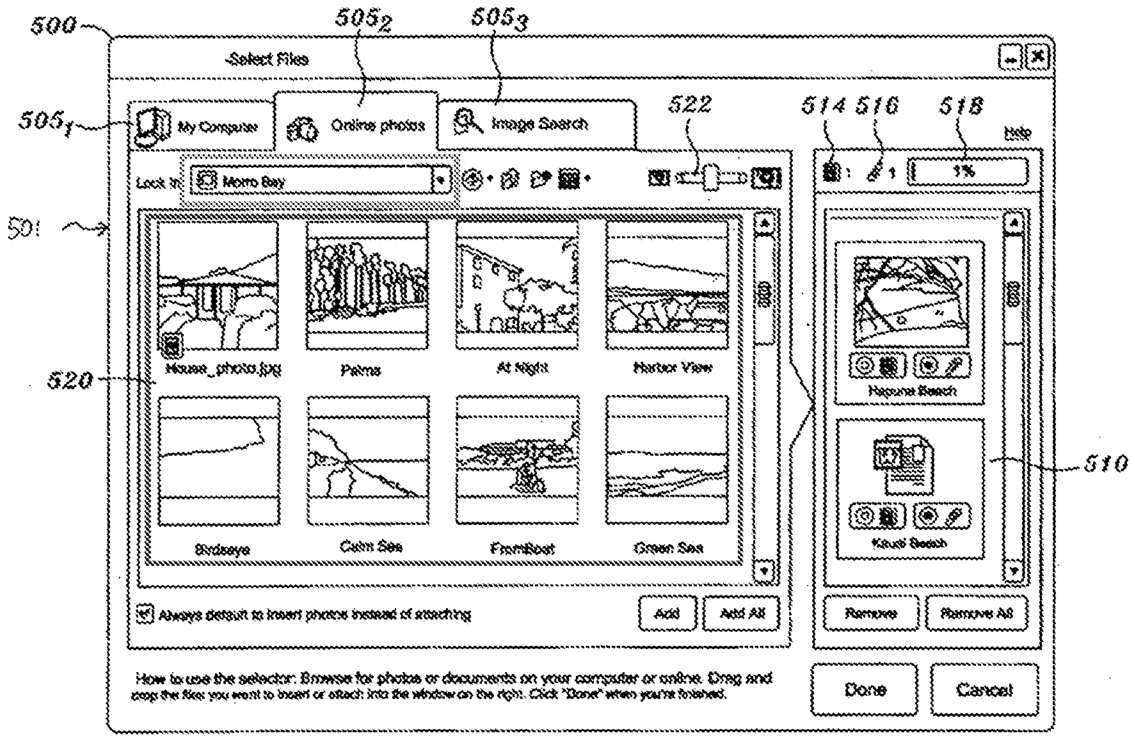
Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5E

Doing the above would open up images (purple) within the Morro Bay album (green). *Id.*, ¶¶56-58, FIG. 5F (annotated).


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514
516
518
Help
Look In: Morro Bay
1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Laguna Beach
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
510
Always default to insert photos instead of attaching
Add
Add All
Remove
Remove All
Done
Cancel

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

A POSITA would have understood that these interactive thumbnails represent links that associate the thumbnails with the photos within the album, such that the thumbnail can be selected to open to those photos. EX-1012, ¶215.

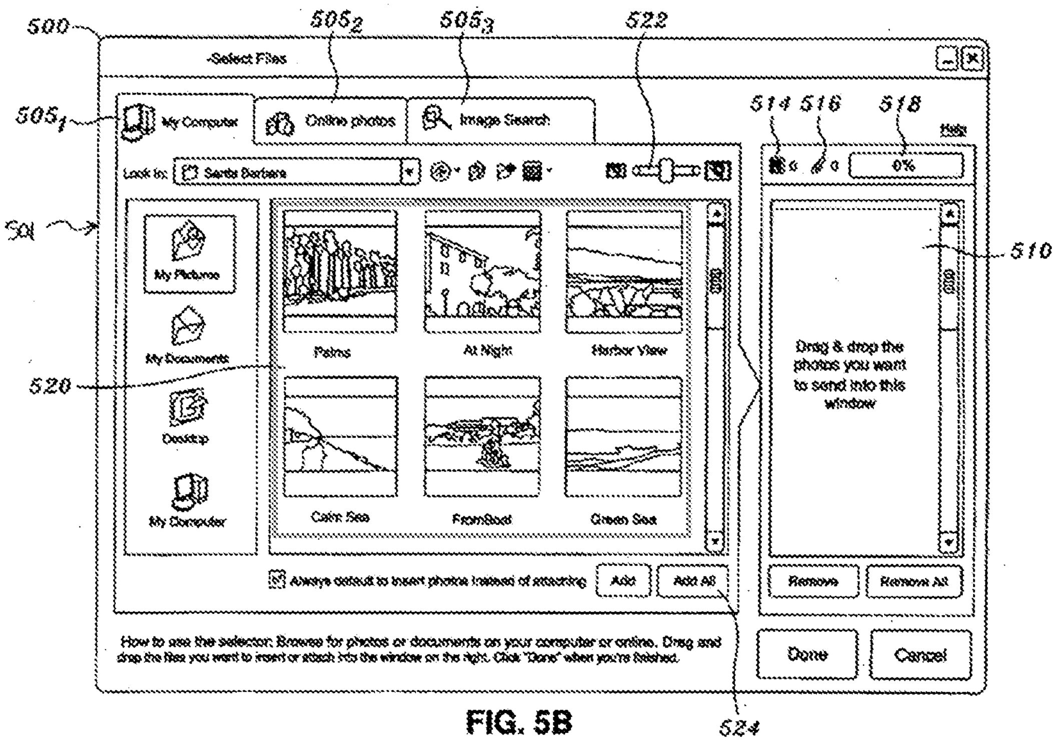
j. Limitation [1g]

Aldrich discloses [1g]. *See* VIII.A.3; EX-1012, ¶¶216-218.

(1) First Reasoning

Aldrich discloses "the association with the at least one of the plurality of visual representations [My Computer tab 505_1 or Online Photos tab 505_2] with digital media content [photos in "My Computer" and "Online Photos," respectively]." *See* VIII.B.3.i; EX-1012, ¶217. Clicking or selecting the My

Computer tab 505_1 or Online Photos tab 505_2 would execute the claimed "association" and transition the display to the GUI 500 that includes the photos in "My Computer" (green; annotated FIG. 5B) or "Online Photos" (purple; annotated FIG. 5F), respectively. EX-1006, ¶48; EX-1012, ¶217. Such a concept, that is, a view of digital media content provided in response to the act of executing an association between a visual representation and the digital media content was well-known. *Id.*, EX-1006, *passim*; EX-1008, *passim*; EX-1022, *passim*; EX-1023, *passim*.

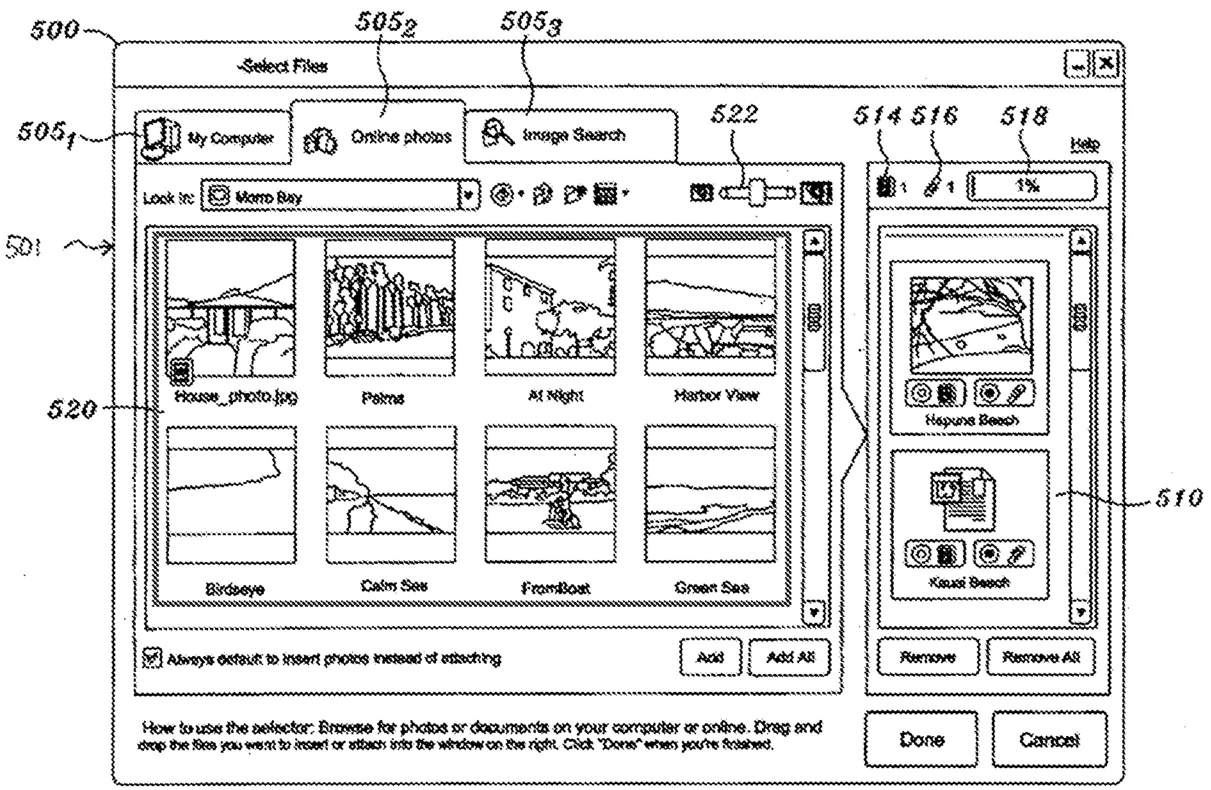

500
505_2
505_3
522
Select Files
505_1
My Computer
Online photos
Image Search
514 516 518
Help
Look in: Santa Barbara
0%
501
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
510
520
Add
Add All
Remove
Remove All
Done
Cancel
524

Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in: Morro Bay
1 1 1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Hapuna Beach
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
Add
Add All
Remove
Remove All
Done
Cancel

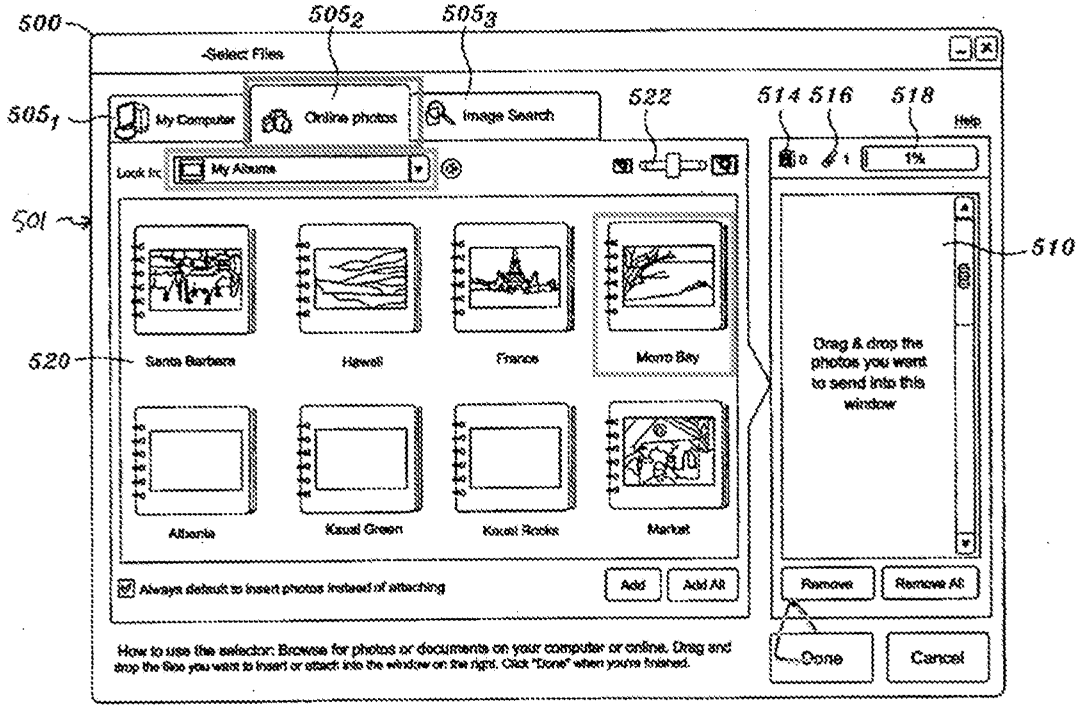
☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

(2) Second Reasoning

Aldrich discloses "the association with the at least one of the plurality of visual representations [thumbnail of a Morro Bay album] with digital media content [images in the Morro Bay album]." *See* VIII.B.3.i; EX-1012, ¶218. Clicking or selecting the Morro Bay thumbnail (green; annotated FIG. 5E) would execute the claimed "association" and transition the display to the GUI 500 that includes photos within the Morro Bay album (purple; annotated FIG. 5F).

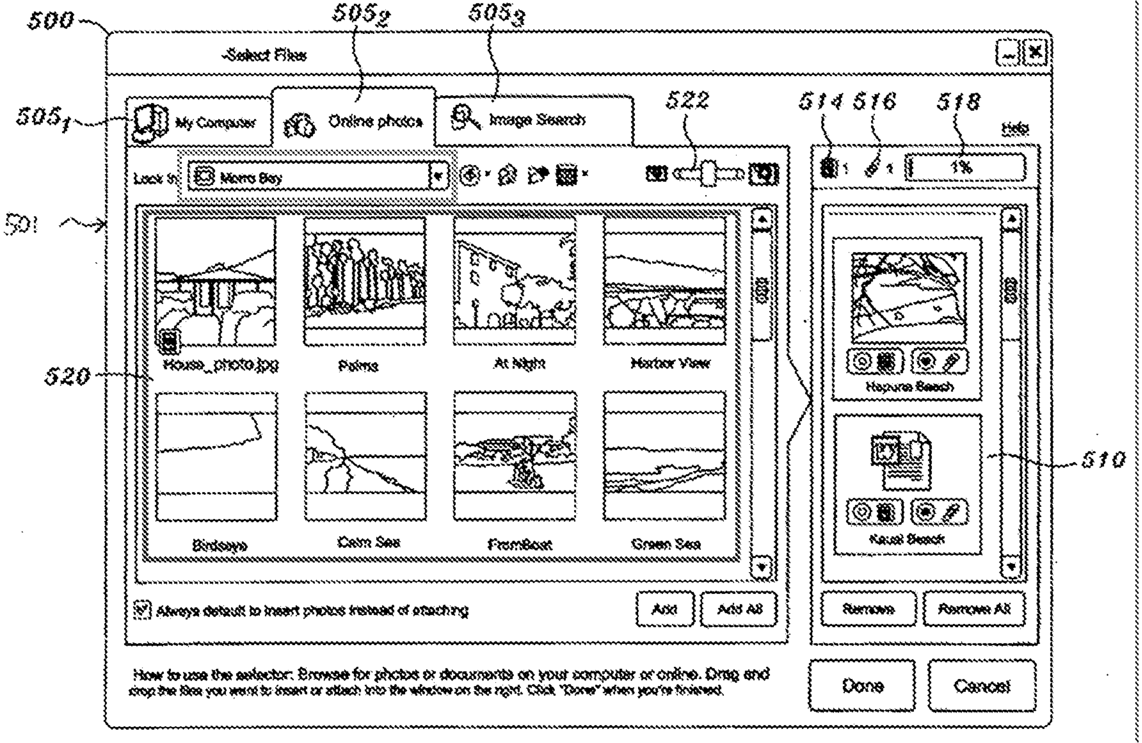

500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look In:
My Albums
0
1
1%
501
510
Santa Barbara
Hawaii
France
Morro Bay
520
Albania
Kauai Green
Kauai Rocks
Market
Add
Add All
Remove
Remove All
Done
Cancel

Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5E


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look In:
Morro Bay
1
1
1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Hanuma Beach
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

k. Limitation [1h]

Aldrich discloses [1h]. *See* VIII.A.3; VIII.B.3.j; EX-1012, ¶¶219-220.

The display transitions to the digital media content. *Id.*, ¶220; VIII.B.3.j(1)-VIII.B.3.j(2). Depending on the display mode, the orientation of the displayed content would be a normal view (e.g., laptop mode) or an inverted view (e.g., easel mode). *See* VIII.B.1; *Id.*, ¶220.

l. Limitation [1i]

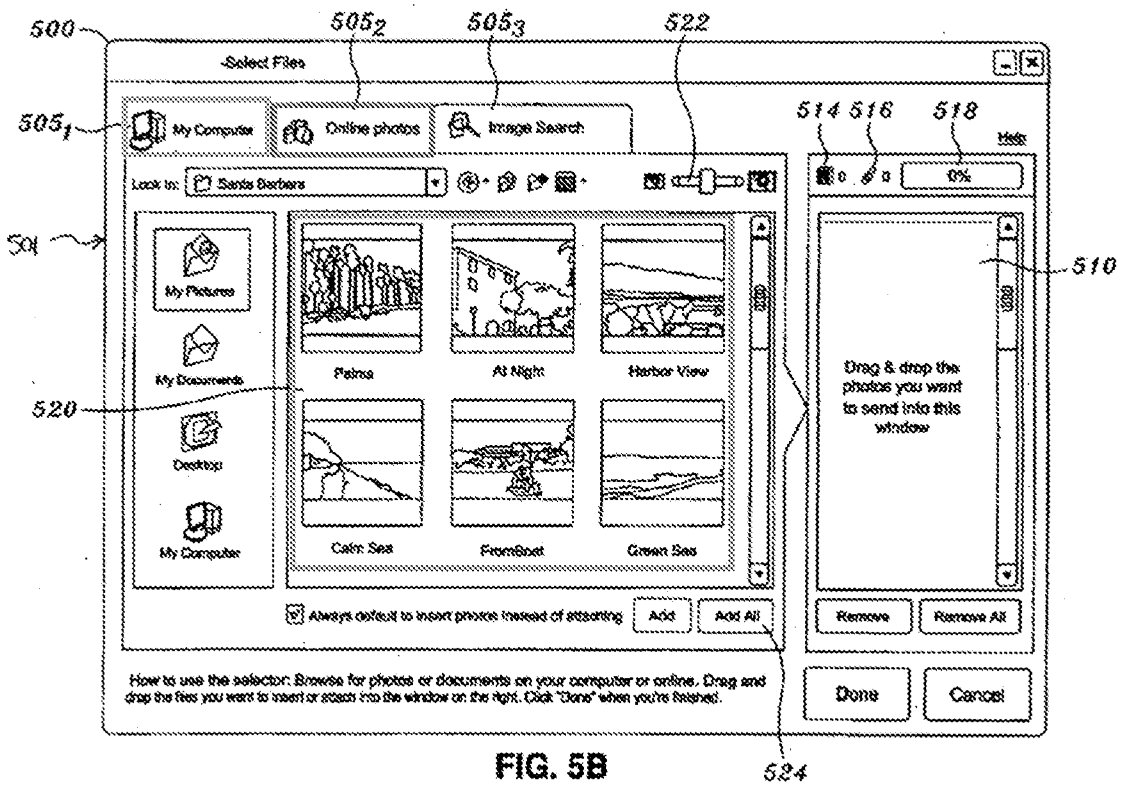
Aldrich discloses [1i]. *See* VIII.A.3; EX-1012, ¶¶221-228.

The '888 Patent describes referenced digital media content as remote digital content not controlled by the user. EX-1001, 3:34-36.

(1) First Reasoning

A POSITA would have understood that a remote storage account where the user cannot control or access the data store discloses the claimed "referenced digital media content." EX-1012, ¶223.

Aldrich discloses GUI 500 that includes My Computer tab 505_1 (blue) and Online Photos tab 505_2 (red). EX-1006, ¶48, FIG. 5B (annotated).


500
505_2
505_3
522
Select Files
505_1
My Computer
Online photos
Image Search
514 516
518
Help
Look in:
Santa Barbara
0
0
0%
501
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
510
520
Add
Add All
Remove
Remove All
Done
Cancel
524

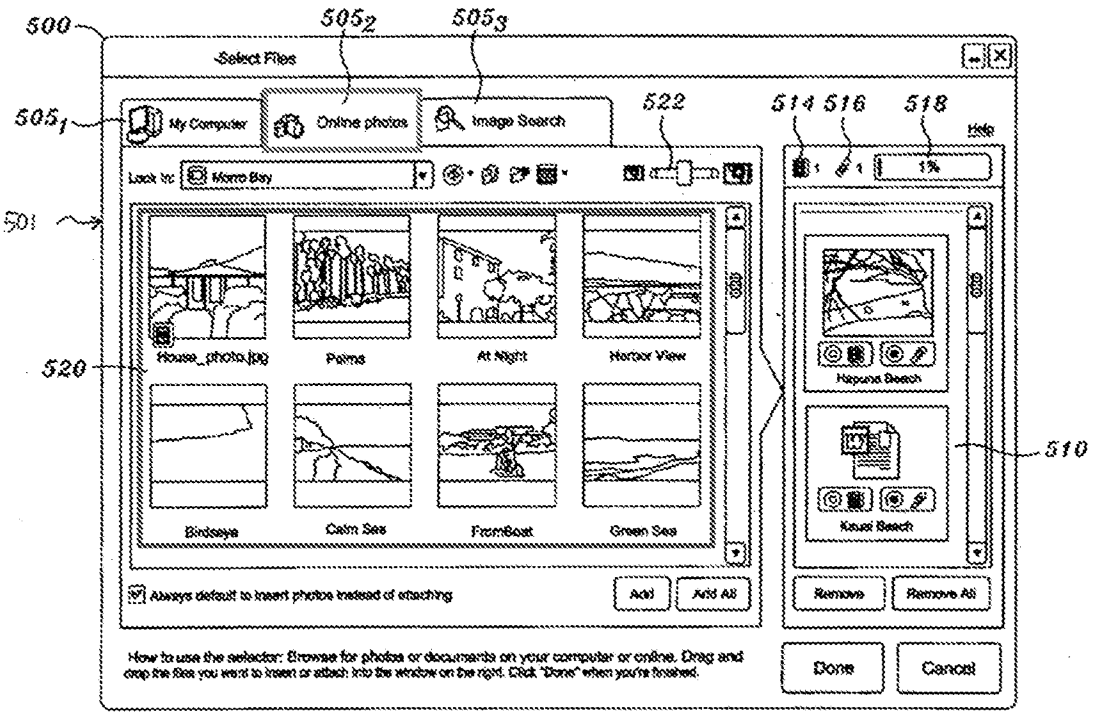
Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

Selecting the My Computer tab 505_1 (blue) populates GUI 500 with image files from the user's local computer (green), disclosing the "user digital media content." *Id.* Selecting the Online Photos tab 505_2 (red) populates GUI 500 with image files from a remote storage account (purple). EX-1006, ¶¶48, 58; FIG. 5F (annotated); EX-1012, ¶224.


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in: Morro Bay
1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Hapuna Beach
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

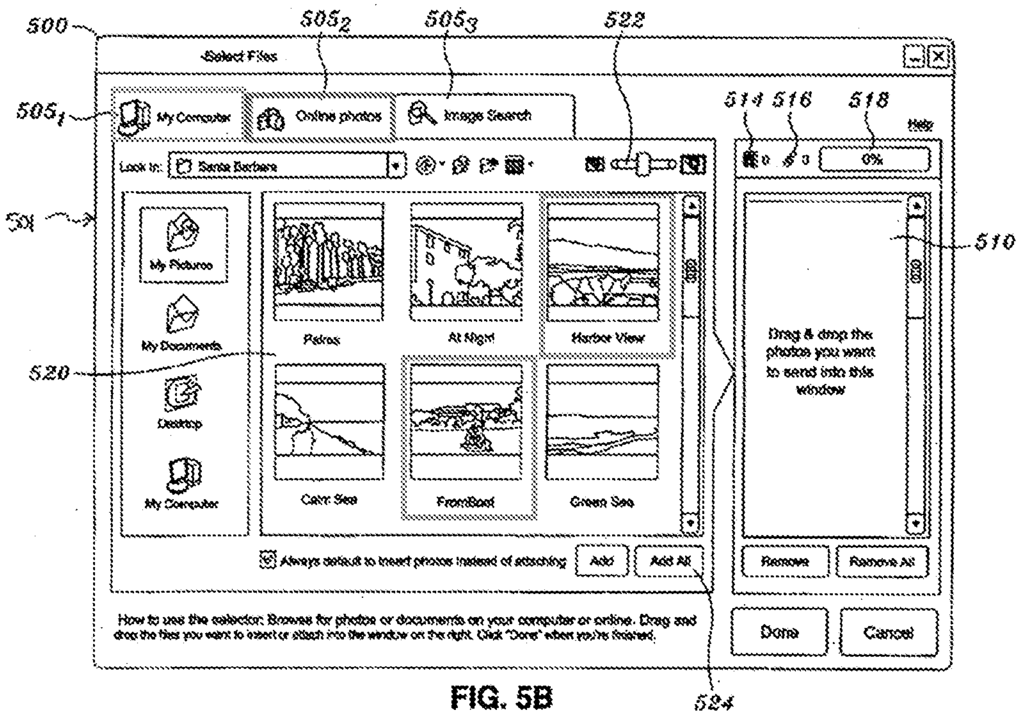
FIG. 5F

A POSITA would have understood that the remote storage account is operated and controlled by a third party (e.g., Yahoo! Photos is disclosed in Aldrich) that controls the server and storage of the photos. EX-1006, ¶48; EX-1012, ¶224. Therefore, the image files from the remote storage account disclose the "referenced digital media content." EX-1006, ¶48; EX-1012, ¶224.

By providing the GUI 500 to the user that includes My Computer tab 505_1 and Online Photos tab 505_2, Aldrich discloses "providing for display of user digital media content and referenced digital media content in the view of the digital media content." EX-1006, ¶48; EX-1012, ¶225. A view of the digital media content with user digital media content and referenced digital media content was well-known. EX-1006, *passim*; EX-1022, *passim*; EX-1023, *passim*.

(2) Second Reasoning

Aldrich discloses GUI 500 that includes display panel 520 and queue 510. EX-1006, ¶¶48-50. A user would be able to add "user digital media content," e.g., Harbor View and FromBoat (green) from the My Computer tab 505_1 (blue), into queue 510. *Id.*, ¶49, FIG. 5B (annotated).


500
505_2
505_3
522
Select Files
505_1
My Computer
Online photos
Image Search
514 516
518
Help
Look in:
Santa Barbara
0%
501
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
510
520
Add
Add All
Remove
Remove All
Done
Cancel
524

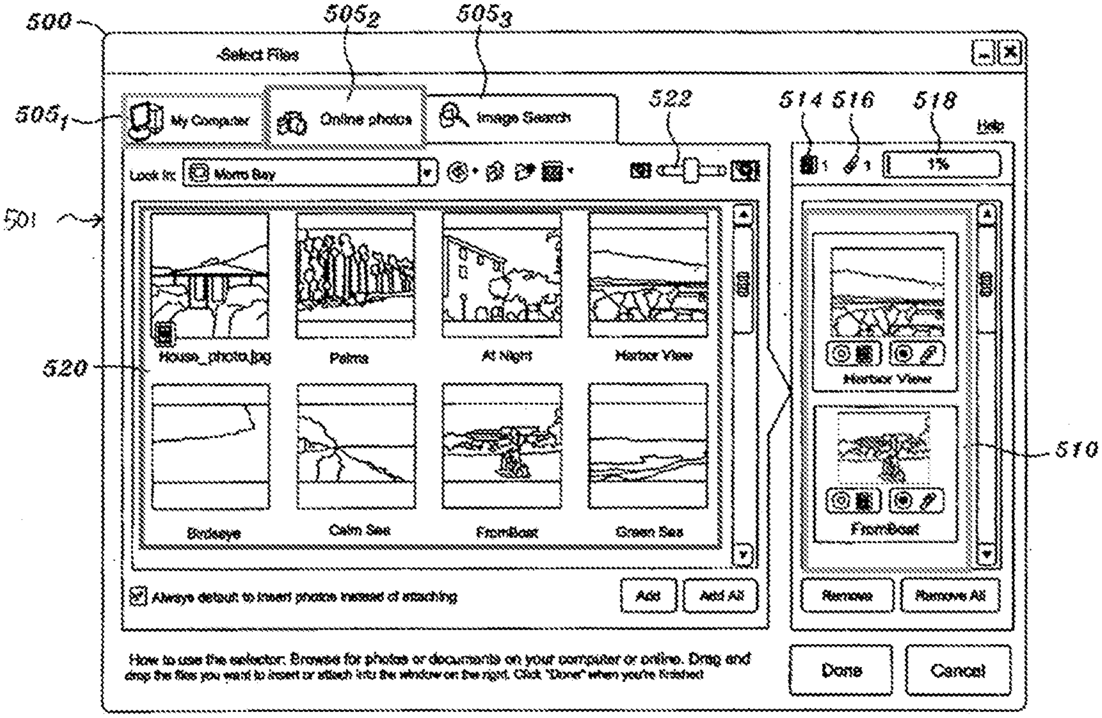
Drag & drop the photos you want to send into this window

☒ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

Afterwards, a user would be able to select the Online Photos tab 505_2 (red), and the resulting GUI 500 ("the view") would include image files corresponding to Online Photos ("referenced digital media content"; purple) in display panel 520, and the "user digital media content" (green) in queue 510. EX-1006, ¶¶48-58, FIG. 5F (annotated, modified); EX-1012, ¶227.


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in: Morro Bay
1
1
1%
501
520
House_photo.jpg
Palms
At Night
Harbor View
Harbor View
510
Birdseye
Calm Sea
FromBoat
Green Sea
FromBoat
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

Modified FIG. 5F

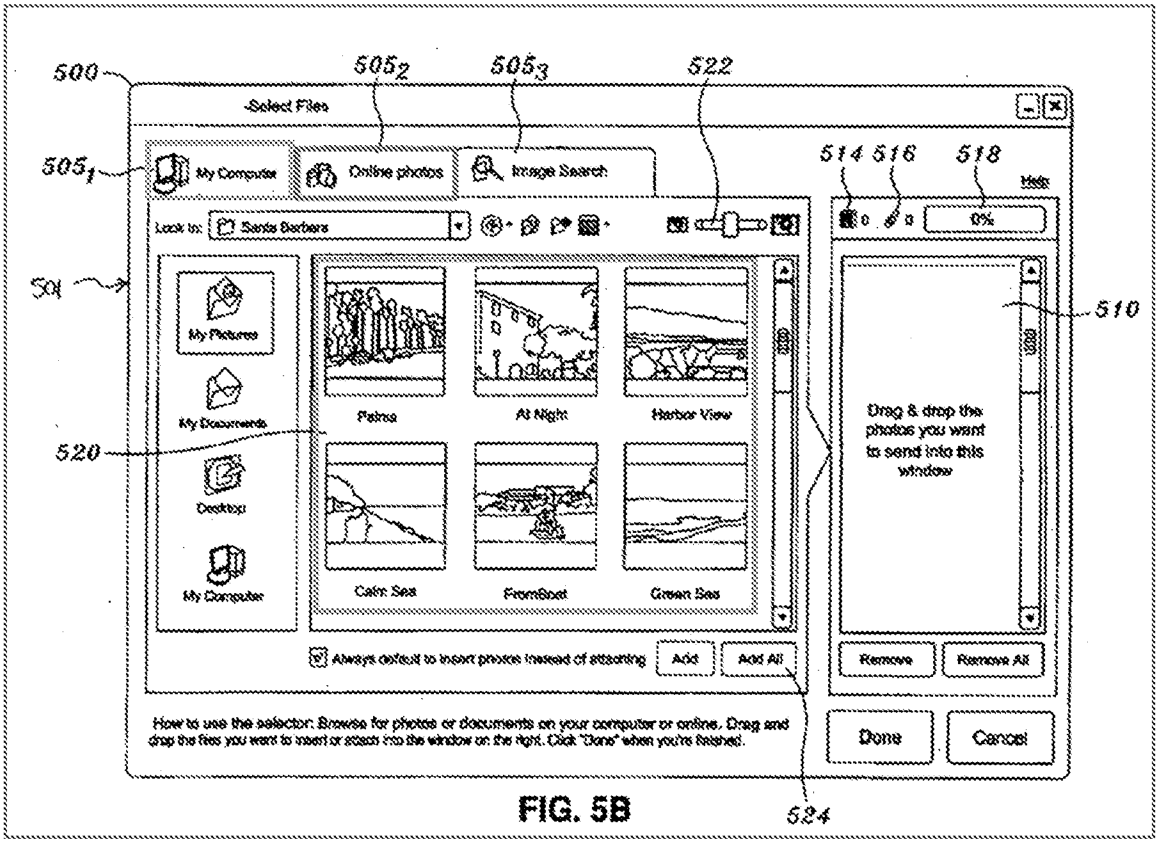
Accordingly, the Shimura-Tsuji-Aldrich combination renders obvious Claim 1. *See* VIII.B.2; EX-1012, ¶¶190-228.

4. Claim 2

Aldrich discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich combination renders the claim obvious. *See* VIII.A.3; VIII.B.2; VIII.B.3.j; VIII.B.3.l; EX-1012, ¶¶229-231.

(1) First Reasoning

Aldrich discloses "executing the association," and the view with the GUI 500 and the My Computer tab. *See* VIII.B.3.j; VIII.B.3.l; EX-1012, ¶230. GUI 500 includes the My Computer tab 505_1 populated with image files from the user's local computer (green). *Id.*; FIG. 5B (annotated).


500
505_2
505_3
522
505_1
501
514
516
518
510
520
524
Select Files
My Computer
Online photos
Image Search
Help
Look in:
Santa Barbara
0
0
0%
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
Add
Add All
Remove
Remove All
Done
Cancel

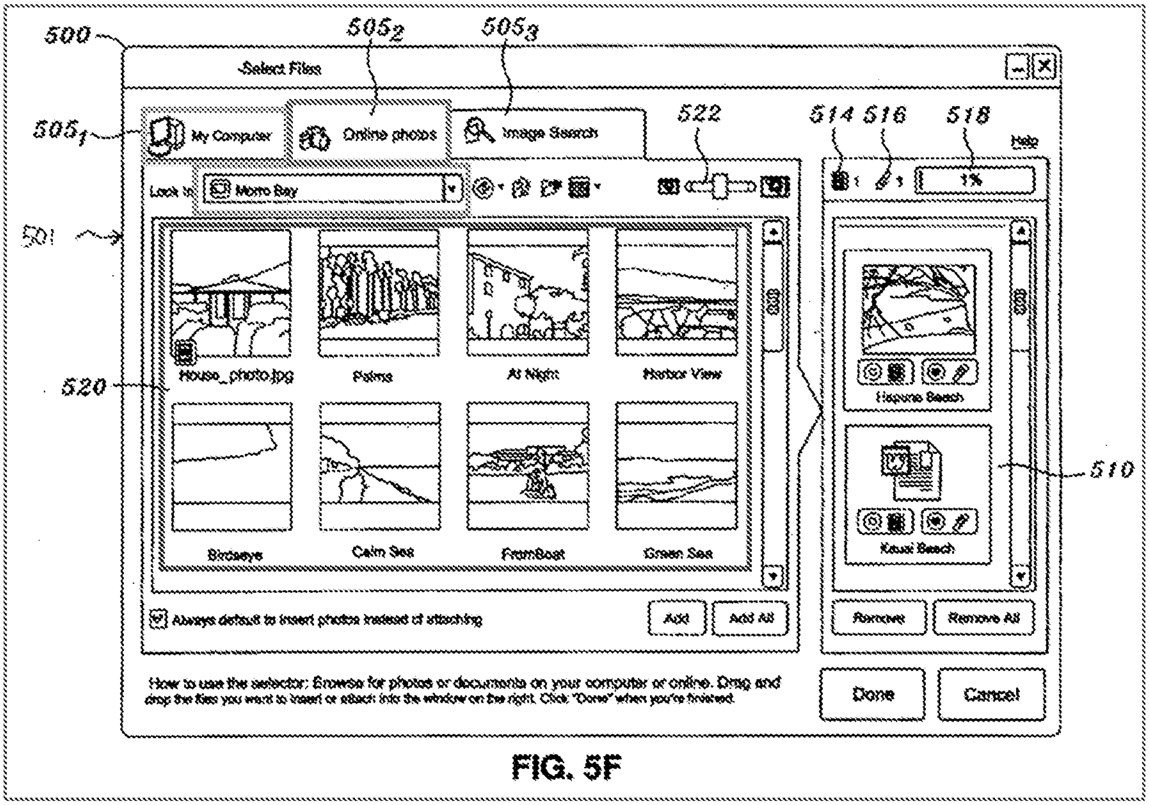
Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

GUI 500 also includes the Online Photos tab 505_2 populated with image files from a remote storage account (purple). *Id.*, FIG. 5F (annotated).


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in: Morro Bay
501
1%
House_photo.jpg
Palms
At Night
Harbor View
520
Hapuna Beach
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
Always default to insert photos instead of attaching
Add
Add All
Remove
Remove All
Done
Cancel

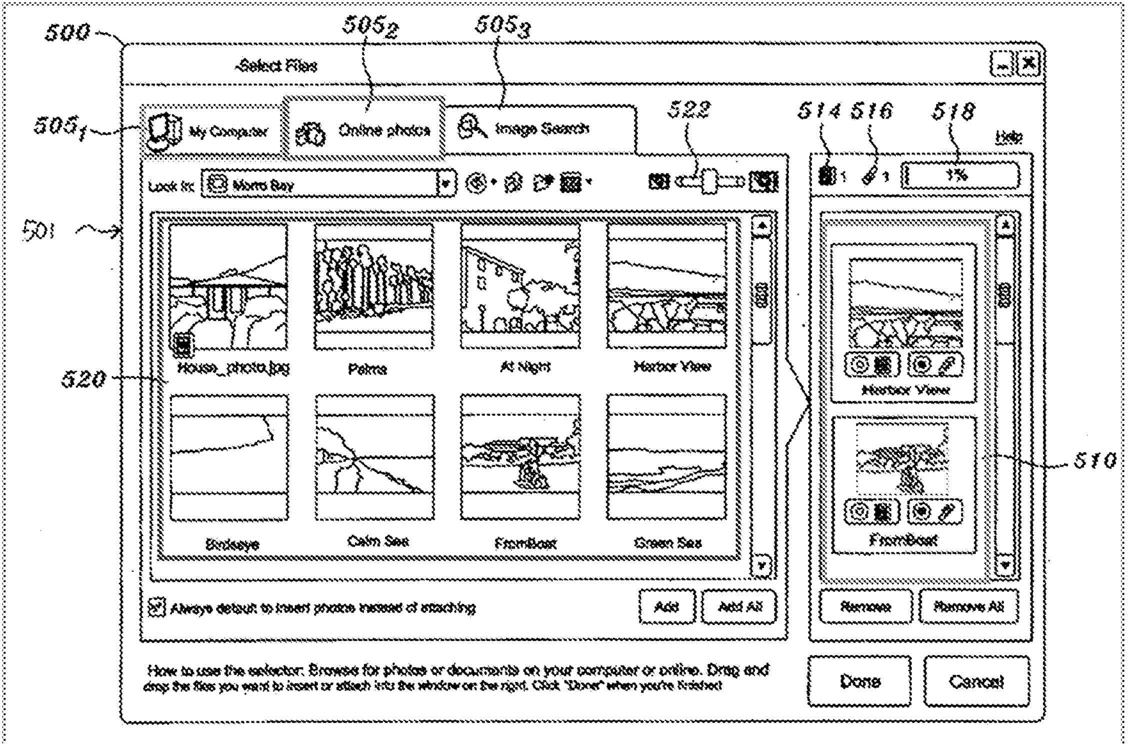
How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

The above discloses the claimed "act of displaying in the view user digital media content and referenced digital media content in response to the act of executing the association." EX-1006, ¶48; EX-1012, ¶230.

(2) Second Reasoning

Aldrich discloses "executing the association." *See* VIII.B.3.j; EX-1012, ¶231. Aldrich also discloses GUI 500 ("the view"), which includes Online Photos image files ("referenced digital media content"; purple) in display panel 520 and My Computer image files ("user digital media content"; green) in queue 510. *See* VIII.B.3.l; EX-1012, ¶231, FIG. 5F (annotated and modified).


500
5052
5053
Select Files
5051
My Computer
Online photos
Image Search
522
514 516
518
Help
501
Look in: Morro Bay
1%
520
House_photo.jpg
Palms
At Night
Harbor View
Birdseye
Calm Sea
FromBoat
Green Sea
Harbor View
FromBoat
510
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished

Modified FIG. 5F

5. Claim 3

Aldrich discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich combination renders the claim obvious. *See* VIII.A.3; VIII.B.2; VIII.B.3.i; VIII.B.3.l; VIII.B.4; EX-1012, ¶¶232-233.

Aldrich discloses "displaying in the view." *See* VIII.B.4(1)-VIII.B.4(2); EX-1012, ¶233. Additionally, the referenced digital media discussed is disclosed by image files from a remote storage account corresponding to the Online Photos tab 505_2 of GUI 500. *See* VIII.B.3.l(1)-VIII.B.3.l(2); EX-1012, ¶233. The Online Photos tab (505_2) is associated with the remote storage account. *See* VIII.B.3.i; EX-1012, ¶233. Aldrich discloses that after selecting the Online Photos tab 505_2, "a user can access a remote online account as if it were a local directory." EX-

1006, ¶56. A POSITA would have understood that the Online Photos tab 505_2 is the claimed "reference to remote digital content not controlled by the user" because selecting the Online Photos tab 505_2 links a user to the corresponding photos stored in the remote storage account operated and controlled by a third party (e.g., Yahoo! Photos is disclosed in Aldrich). EX-1012, ¶233.

6. Claim 4

Aldrich discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich combination renders the claim obvious. *See* VIII.A.3; VIII.B.2; VIII.B.3.l; EX-1012, ¶¶234-235.

Aldrich discloses associating the Online Photos tab 505_2 ("the at least one of the plurality of visual representations"), visualized in GUI 500, with a remote storage account, such as Yahoo! Photos ("a remote service provider"). *See* VIII.B.3.l(1); EX-1006, ¶48.

7. Claim 6

a. Limitation [6a]

Aldrich discloses [6a]. *See* VIII.A.3; VIII.B.5; VIII.B.6; EX-1012, ¶¶236-237.

Online Photos tab 505_2 provides access to photos in a remote storage account. *See* VIII.B.6; EX-1012, ¶237. Aldrich also discloses logging in manually or using cookies or another authentication mechanism to access the remote storage account, thereby "configuring access to a remote service." EX-1012, ¶237.

b. Limitation [6b]

Aldrich discloses [6b]. *See* VIII.A.3; EX-1012, ¶¶238-240.

The '888 Patent describes various operations of a remote service provider, such as "organiz[ing]," "view[ing]," and "shar[ing] digital photograph collections, as well as video and/or audio collections." EX-1001, 20:6-10.

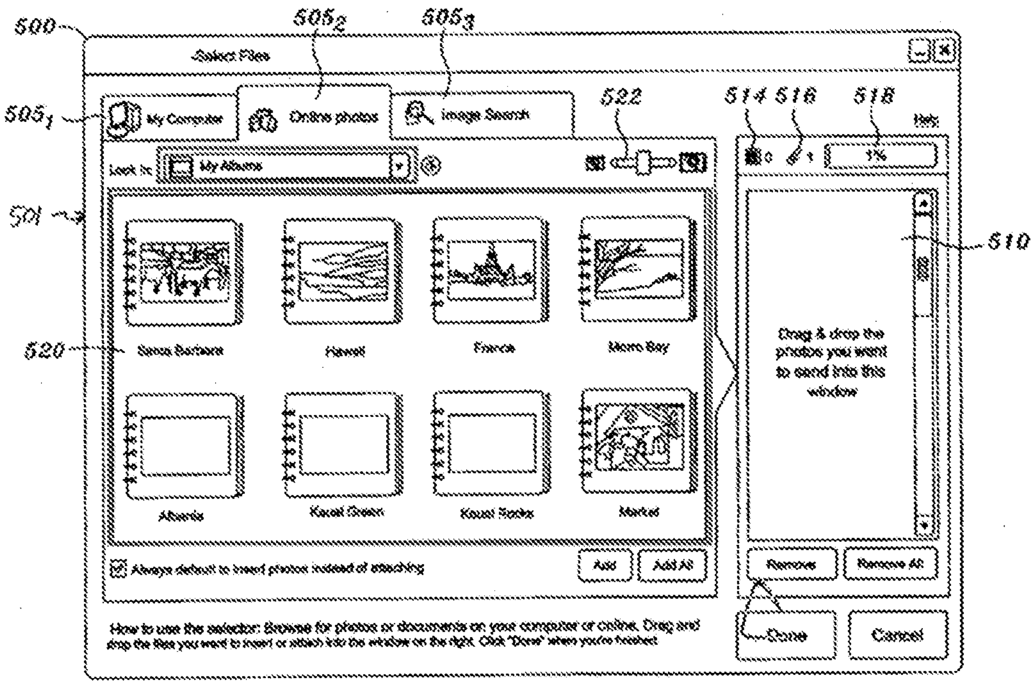
Aldrich discloses organizing, viewing, and sharing digital media content. EX-1006, ¶¶57-61. As to organizing, "[t]he available content used to populate the display panel 520 has been organized into 'albums.'" *Id.*, ¶57. As to viewing, Aldrich discloses viewing image files in GUI 500. *Id.* With respect to sharing, Aldrich discloses that a user can send embedded and/or attached files (e.g., photos) to other users. *Id.*, Abstract, ¶¶57-58.

Accordingly, the Shimura-Tsuji-Aldrich combination renders obvious Claim 6. *See* VIII.B.2; EX-1012, ¶¶236-241.

8. Claim 7

Aldrich discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich combination renders the claim obvious. *See* VIII.A.3; VIII.B.2; VIII.B.7.b; EX-1012, ¶¶242-243.

Aldrich discloses that in GUI 500 "[t]he available content used to populate the display panel 520 [purple] has been organized into 'albums.'" EX-1006, ¶57, FIG. 5E.


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514
516
518
Help
1%
Look in:
My Albums
501
510
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Rocks
Market
☑ Always default to insert photos instead of attaching
Add
Add All
Remove
Remove All
Done
Cancel

Drag & drop the photos you want to send into this window

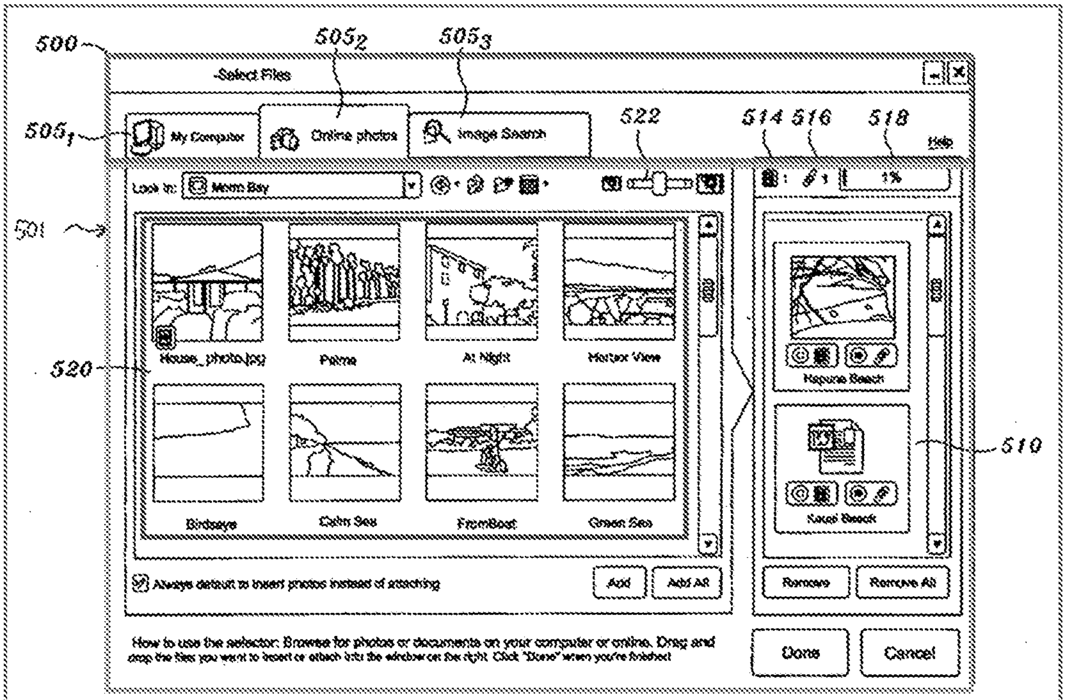
How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5E

9. Claim 8

Aldrich discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich combination renders the claim obvious. *See* VIII.A.3; VIII.B.2; EX-1012, ¶¶244-245.

Aldrich discloses GUI 500. EX-1006, FIG. 5F (annotated).


500
505_2
505_3
-Select Files
505_1
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in:
Moon Bay
1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Birdseye
Calm Sea
FromBoat
Green Sea
Napune Beach
Kauai Beach
510
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

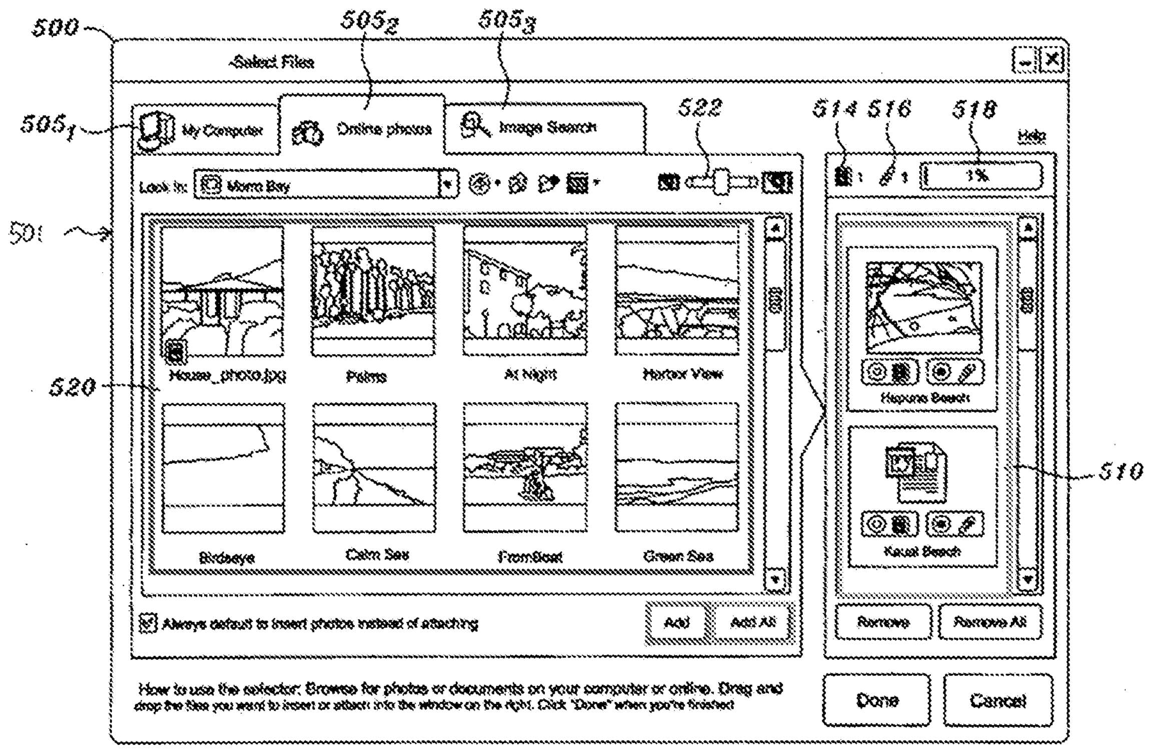
GUI 500 includes a header (red) and a body (blue), and display panel 520 (purple) populated with images to be in "a body portion of the view [blue]." EX-1012, ¶245.

10. Claim 15

a. Limitation [15a]

Aldrich discloses [15a]. *See* VIII.A.3; EX-1012, ¶¶246-248.

Aldrich discloses the function of [15a] (VII.B), by disclosing that a user can select image files (purple) from display panel 520, and add them to queue 510 (green) by pressing the "Add" button (red). EX-1006, ¶¶49-50, FIG. 5F (below, annotated). Alternatively, a user can add all image files in display panel 520 to queue 510 by pressing the "Add All" button (blue). *Id.*, ¶51. Image files in queue 510 are to be attached and/or embedded in an email to another user. *Id.*, ¶50.


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514
516
518
Help
Look in:
Morro Bay
1
1
1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Hapuna Beach
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

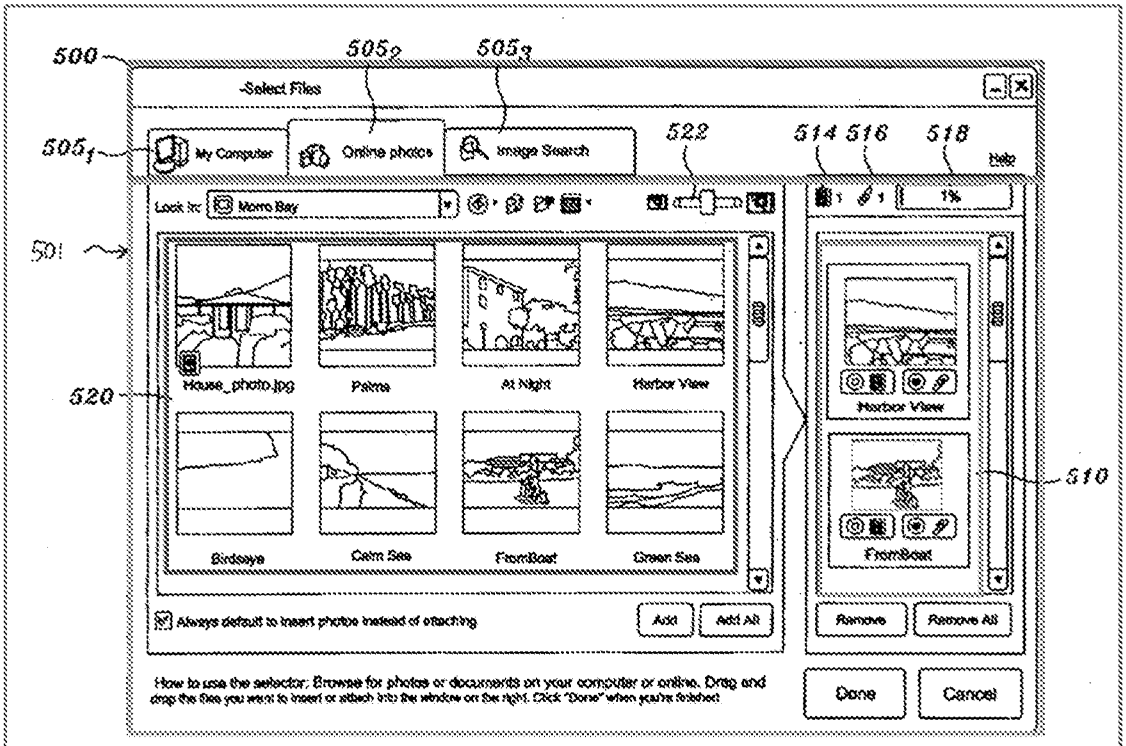
FIG. 5F

Aldrich discloses the corresponding structure of [15a]. *See* VII.B; EX-1012, ¶248. Queue 510 with the "Add" button and/or the "Add All" button are examples of a GUI's organization tool, like the '888 Patent's pick list control, that gathers together a group of digital content items for a particular action, or its equivalent. EX-1012, ¶248.

b. Limitation [15b]

Aldrich discloses [15b]. *See* VIII.A.3; EX-1012, ¶¶249-250.

GUI 500 includes a header (red) and a body (blue). EX-1012, ¶250; EX-1006, FIG. 5F (annotated).


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look In: Morro Bay
1%
501
520
House_photo.jpg
Palms
At Night
Harbor View
Birdseye
Calm Sea
FromBoat
Green Sea
Harbor View
FromBoat
510
Add
Add All
Remove
Remove All
Done
Cancel

☒ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

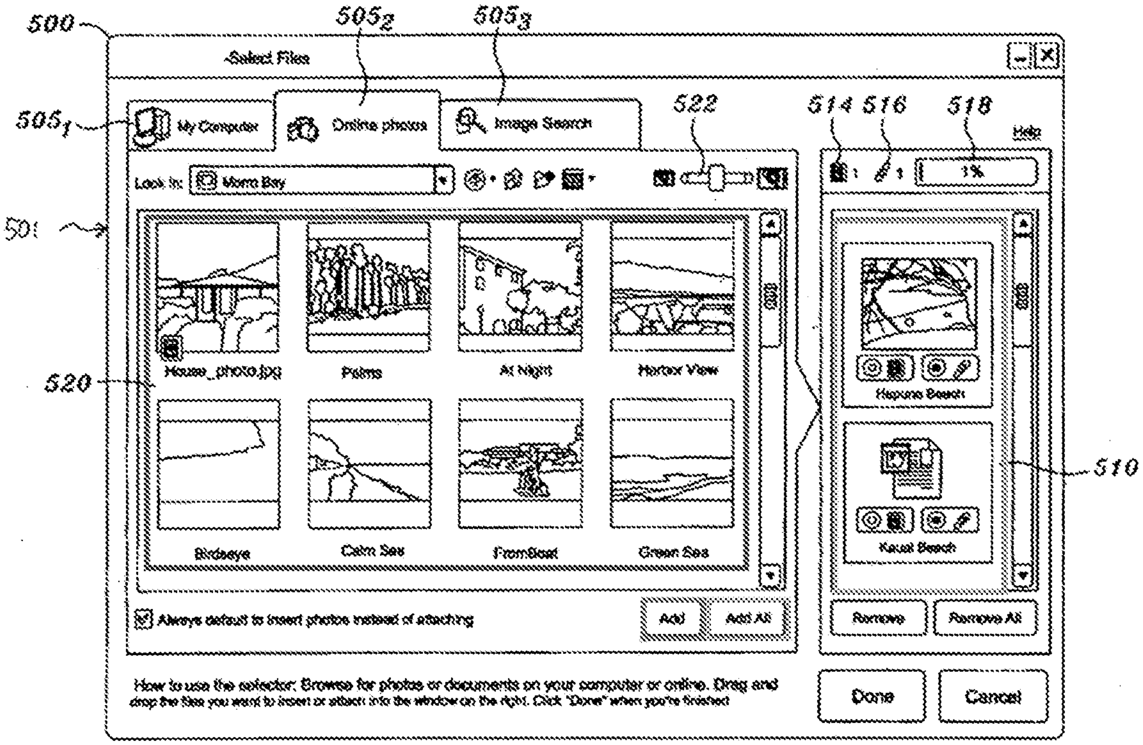
Display panel 520 (purple) and queue 510 (green) are in the body (blue) of GUI 500. *Id.*

c. Limitation [15c]

Aldrich discloses [15c]. *See* VIII.A.3; EX-1012, ¶¶251-252.

Aldrich discloses various operations that can be performed on the plurality of digital media content. E.g., Aldrich discloses that queue 510's purpose is to embed and/or attach image files to send to another user. EX-1006, Abstract, ¶¶48-51, 61. In another example, the photos in display panel 520 (purple) can be selected and added to queue 510 (green) by clicking on them and pressing the

"Add" button (red), or all photos can be added by pressing the "Add All" button (blue). *Id.*, ¶¶49-51, FIG. 5F (annotated).


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514
516
518
Help
Look in: Morro Bay
1%
501
House_photo.jpg
Palms
At Night
Harbor View
Hapuna Beach
520
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished

FIG. 5F

Accordingly, the Shimura-Tsuji-Aldrich combination renders obvious Claim 15. *See* VIII.B.2; EX-1012, ¶¶246-253.

11. Claim 16

Aldrich discloses sending image files to another user, i.e., Claim 16's "share operation." EX-1006, Abstract, ¶¶48-51, 61; EX-1012, ¶254. The Shimura-Tsuji-Aldrich combination renders the claim obvious. *See* VIII.B.10.c, VIII.A.3; VIII.B.2; EX-1012, ¶254.

12. Claim 24

a. Limitation [24a]

The Shimura-Tsuji-Aldrich combination discloses [24a] by disclosing normal and inverted views of the plurality of visual representations (e.g., My Computer tab (505_1) and Online Photos tab (505_2)), rendering it obvious. *See* VIII.B.2; EX-1012, ¶255.

b. Limitation [24b]

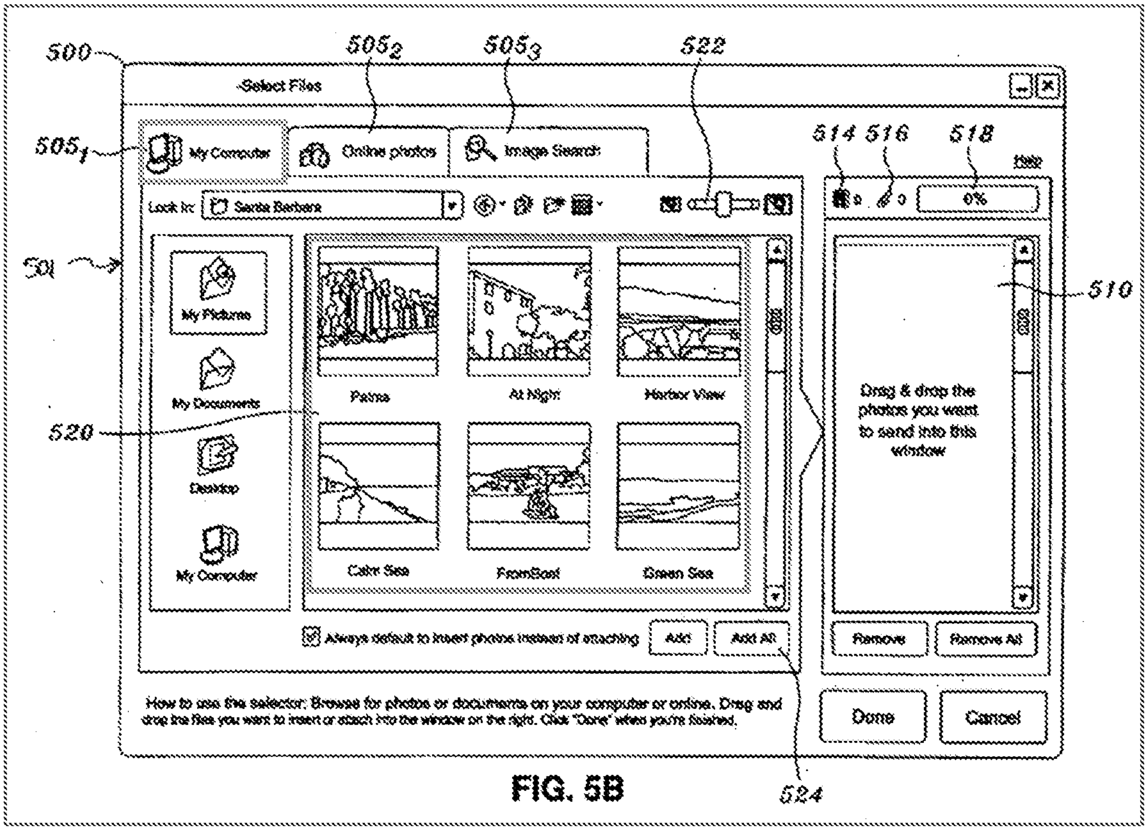
The Shimura-Tsuji-Aldrich combination discloses [24b] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶256-257.

Aldrich discloses "the plurality of visual representations." *See* VIII.B.3.b; EX-1012, ¶257. Depending on the display mode (e.g., laptop or easel mode) of the Shimura-Tsuji Computer, the visual representations (My Computer tab (505_1) and Online Photos tab (505_2)) would be mapped to a corresponding view (e.g., normal or inverted view, respectively). EX-1012, ¶257.

c. Limitation [24c]

The Shimura-Tsuji-Aldrich combination discloses [24c] and renders it obvious. *See* VIII.B.2; EX-1012, ¶¶258-260.

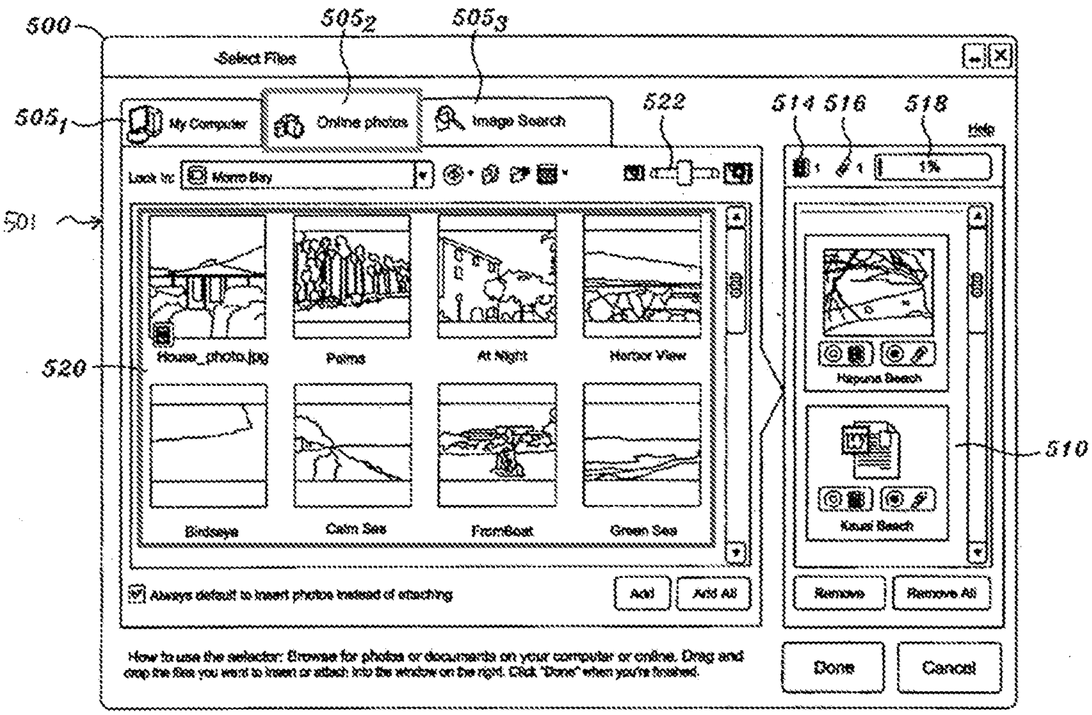
Aldrich discloses the ability to click on the My Computer tab 505_1 and Online Photos tab 505_2. EX-1006, ¶48. Clicking on the My Computer tab 505_1 focuses the interface on the My Computer tab 505_1 (blue) and executes the association with the My Computer tab 505_1 thereby populating the display panel 520 (green) with photos from My Computer. *Id.* & FIG. 5B (annotated).


500
505_2
505_3
522
505_1
Select Files
My Computer
Online photos
Image Search
514
516
518
Help
Look in: Santa Barbara
0 0
0%
501
510
My Pictures
My Documents
Desktop
My Computer
Palma
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
520
Drag & drop the photos you want to send into this window
☒ Always default to insert photos instead of attaching
Add
Add All
Remove
Remove All
Done
Cancel
524

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B

Clicking on the Online Photos tab (505_2) focuses the interface on the Online Photos tab (505_2) and executes the association with the Online Photos tab (505_2) (red), thereby populating the display panel 520 (purple) with photos from a remote storage account. *Id.* & FIG. 5F (annotated).


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514
516
518
Help
Look In: Morro Bay
1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Hapuna Beach
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

Accordingly, the Shimura-Tsuji-Aldrich combination renders obvious Claim 24. *See* VIII.B.2; EX-1012, ¶¶255-261.

13. Claim 25

a. Limitation [25a]

The Shimura-Tsuji-Aldrich combination discloses [25a] and renders it obvious. *See* VIII.B.2; VIII.B.3.g; EX-1012, ¶262.

b. Limitation [25b]

The Shimura-Tsuji-Aldrich combination discloses [25b] and renders it obvious. *See* VIII.B.2; VIII.B.3.h; EX-1012, ¶263.

Accordingly, the Shimura-Tsuji-Aldrich combination renders obvious Claim 25. *See* VIII.B.2; EX-1012, ¶¶262-264.

14. Claim 26

a. Limitation [26pre]

The Shimura-Tsuji-Aldrich combination discloses [26pre] and renders it obvious. *See* VIII.B.2; VIII.B.3.a; EX-1012, ¶¶265-266.

The functionalities discussed in Claim 26 would be implemented in an algorithm stored in a non-transitory storage device on a user computer, such as Tsuji's hard disk drive and Aldrich's mass storage device 252, and/or on a remote server such as Aldrich's remote database 24. EX-1005, ¶30; EX-1006, ¶¶28, 31; EX-1012, ¶266.

b. Limitation [26a]

Aldrich discloses [26a]. *See* VIII.A.3; VIII.B.3.b; EX-1012, ¶267.

c. Limitation [26b]

The Shimura-Tsuji-Aldrich combination discloses [26b] and renders it obvious. *See* VIII.B.2; VIII.B.3.c; EX-1012, ¶268.

d. Limitation [26c1]

Shimura discloses [26c]. *See* VIII.A.1; VIII.B.3.f; EX-1012, ¶269.

e. Limitation [26c2]

The Shimura-Tsuji-Aldrich combination discloses [26c2] and renders it obvious. *See* VIII.B.2; VIII.B.3.g; EX-1012, ¶270.

f. Limitation [26c3]

The Shimura-Tsuji-Aldrich combination discloses [26c3] and renders it obvious. *See* VIII.B.2; VIII.B.3.h; EX-1012, ¶271.

g. Limitation [26d]

The Shimura-Tsuji-Aldrich combination discloses the function and corresponding structure of [26d] and renders it obvious. The Shimura-Tsuji-Aldrich Computing System discloses the function and corresponding structure of the means-plus-function limitation "view selector component" recited in [26d]. *See* VII.A.1; VIII.B.2; VIII.B.3.d; EX-1012, ¶272.

h. Limitation [26e]

Aldrich discloses [26e]. *See* VIII.A.3; VIII.B.3.i; EX-1012, ¶273.

i. Limitation [26f]

Aldrich discloses [26f]. *See* VIII.A.3; VIII.B.3.j; EX-1012, ¶274.

j. Limitation [26g]

Aldrich discloses [26g]. *See* VIII.A.3; VIII.B.3.k; EX-1012, ¶275.

k. Limitation [26h]

Aldrich discloses [26h]. *See* VIII.A.3; VIII.B.3.l; EX-1012, ¶276.

Accordingly, the Shimura-Tsuji-Aldrich combination renders obvious Claim 26. *See* VIII.B.2; EX-1012, ¶¶265-277.

15. Claim 27

a. Limitation [27pre]

The Shimura-Tsuji-Aldrich combination discloses [27pre] and renders it obvious. *See* VIII.B.2; VIII.B.3.a; VIII.B.14.a; EX-1012, ¶278.

b. Limitation [27a]

Aldrich discloses [27a]. *See* VIII.A.3; VIII.B.3.b; EX-1012, ¶279.

c. Limitation [27b]

The Shimura-Tsuji-Aldrich combination discloses [27b] and renders it obvious. *See* VIII.B.2; VIII.B.3.c; EX-1012, ¶¶280-283.

This combination discloses the function of [27b] (VII.C.1), and it discloses orienting the displayed content (e.g., Aldrich's image files) based on a display mode (e.g., laptop and easel modes) determined by the outputs of the rotation angle and gravity sensors. *See* VIII.B.3.c; EX-1012, ¶281. In a laptop mode, the user can provide input via the keyboard, representing a first I/O profile. *See* VIII.B.3.a; EX-1012, ¶281. In an easel mode, the keyboard is disabled, representing a second I/O profile. *See* VIII.B.3.a; EX-1012, ¶281.

This combination discloses the corresponding structure of [27b] (VII.C.1). The above-described functionality of [27b] is achieved with the Shimura-Tsuji Computer including a BIOS program 301 (red) executing on a processor (not shown) that receives data from a hinge-rotation sensor 202 (blue) and gravity sensor 203 (green) to determine a display mode. EX-1005, ¶¶68-73, FIG. 14 (annotated); EX-1012, ¶282.

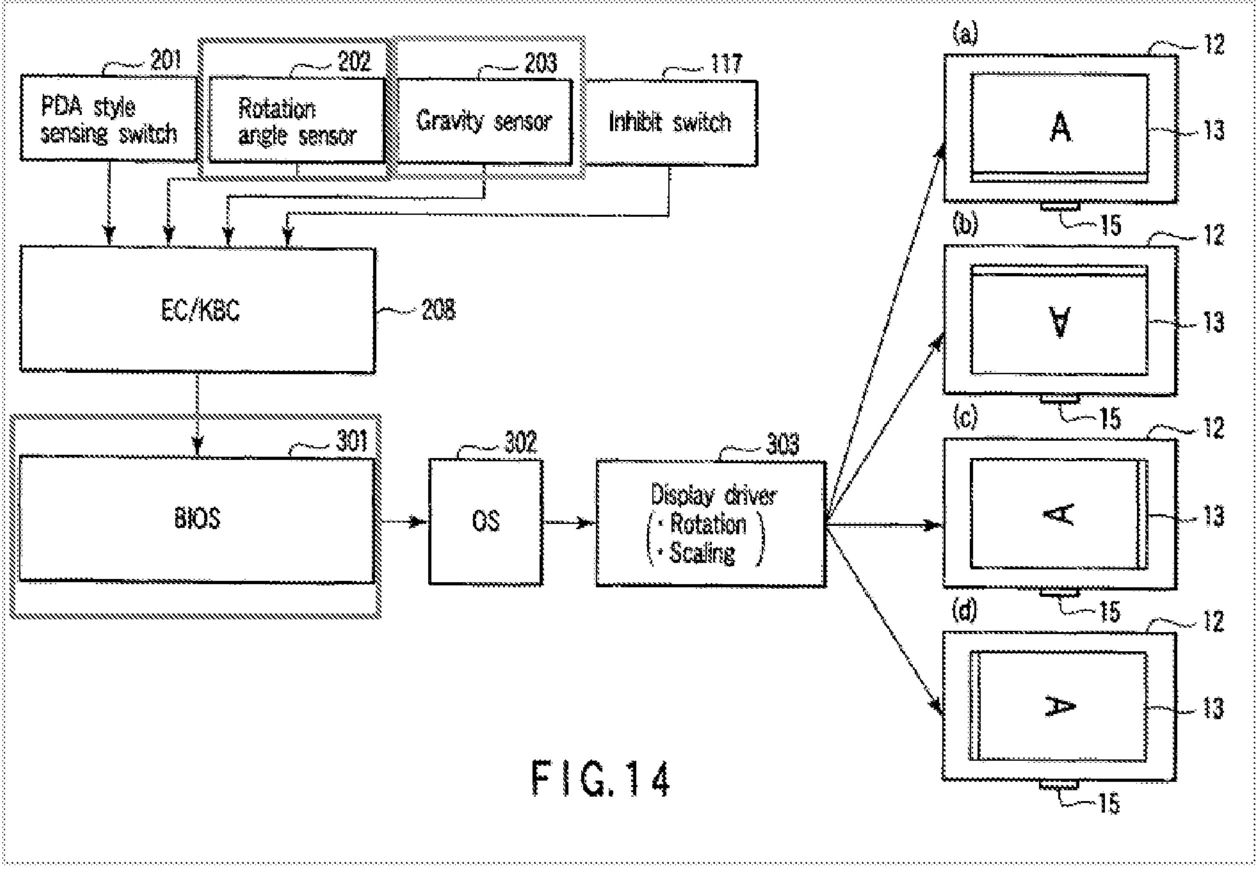

201
PDA style sensing switch
202
Rotation angle sensor
203
Gravity sensor
117
Inhibit switch
EC/KBC
208
301
BIOS
302
OS
303
Display driver
· Rotation
· Scaling
(a)
(b)
(c)
(d)
A
12
13
15

FIG. 14

A processor executing the BIOS program 301 in the Shimura-Tsuji Computer includes hardware (e.g., central processing unit) and related software configured to automatically orient the displayed content in response to a physical configuration of the computer device, or its equivalent. EX-1012, ¶283.

d. Limitation [27c1]

Shimura discloses [27c1]. *See* VIII.A.1; VIII.B.3.f; EX-1012, ¶284.

e. Limitation [27c2]

The Shimura-Tsuji-Aldrich combination discloses [27c2] and renders it obvious. *See* VIII.B.2; VIII.B.3.g; EX-1012, ¶285.

f. Limitation [27c3]

The Shimura-Tsuji-Aldrich combination discloses [27c3] and renders it obvious. *See* VIII.B.2; VIII.B.3.h; EX-1012, ¶286.

g. Limitation [27d]

Shimura in combination with Aldrich discloses [27d] and renders it obvious. *See* VIII.B.2; VIII.B.3.d; EX-1012, ¶¶287-289.

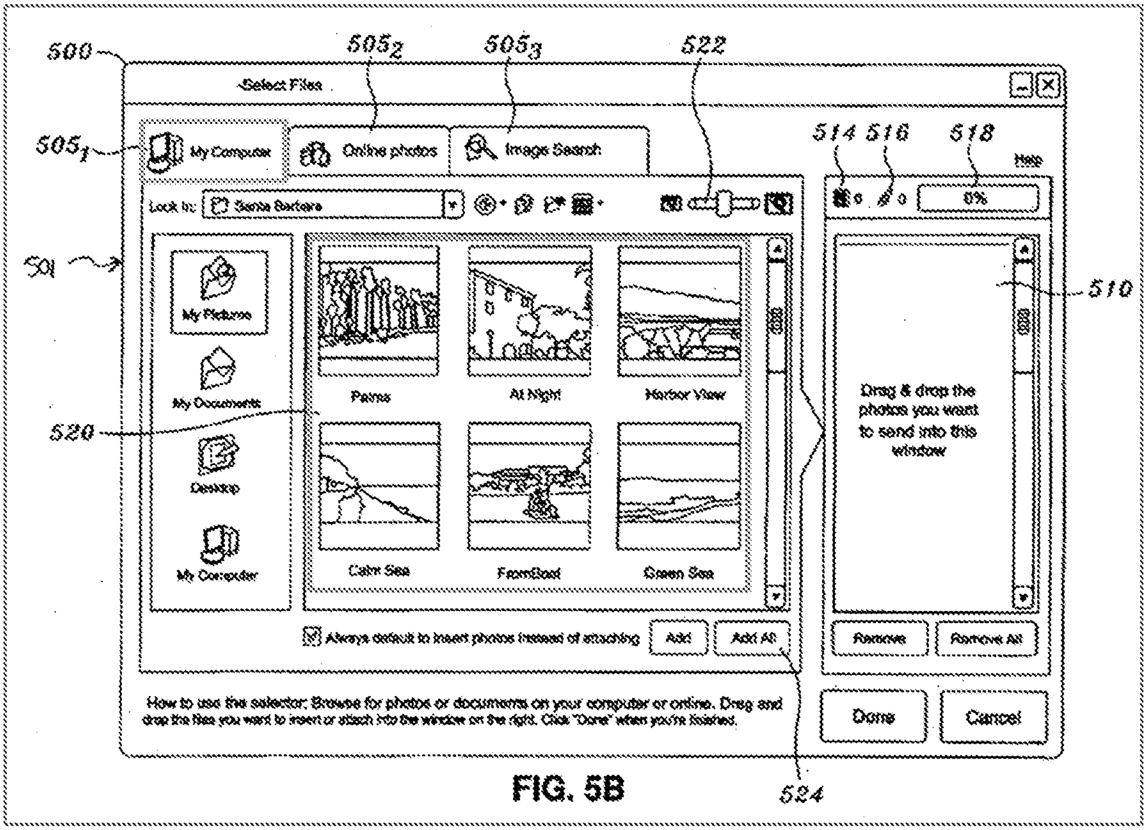
This combination discloses the function of [27d] (VII.A) by disclosing manipulating the displayed content (e.g., Aldrich's image files) based on a user setting the display reverse switch 106 between a normal view or an inverted view. EX-1004, ¶12; EX-1012, ¶288.

This combination discloses the corresponding structure for [27d] (VII.A) through Shimura's display control circuit 107, Shimura's electronic circuit, and Aldrich's GUI 500. EX-1004, ¶¶11-12; EX-1006, ¶¶46-50; EX-1012, ¶289. A POSITA would have understood Shimura's display control circuit 107, Shimura's electronic circuit, and Aldrich's GUI 500 to include hardware (e.g., CPU and memory) and related software configured to control the orientation of the displayed content (e.g., Aldrich's image files) based on the user's manual selection, or its equivalents. EX-1012, ¶289.

h. Limitation [27e]

Aldrich discloses [27e]. *See* VIII.A.3; VIII.B.3.i; EX-1012, ¶¶290-292.

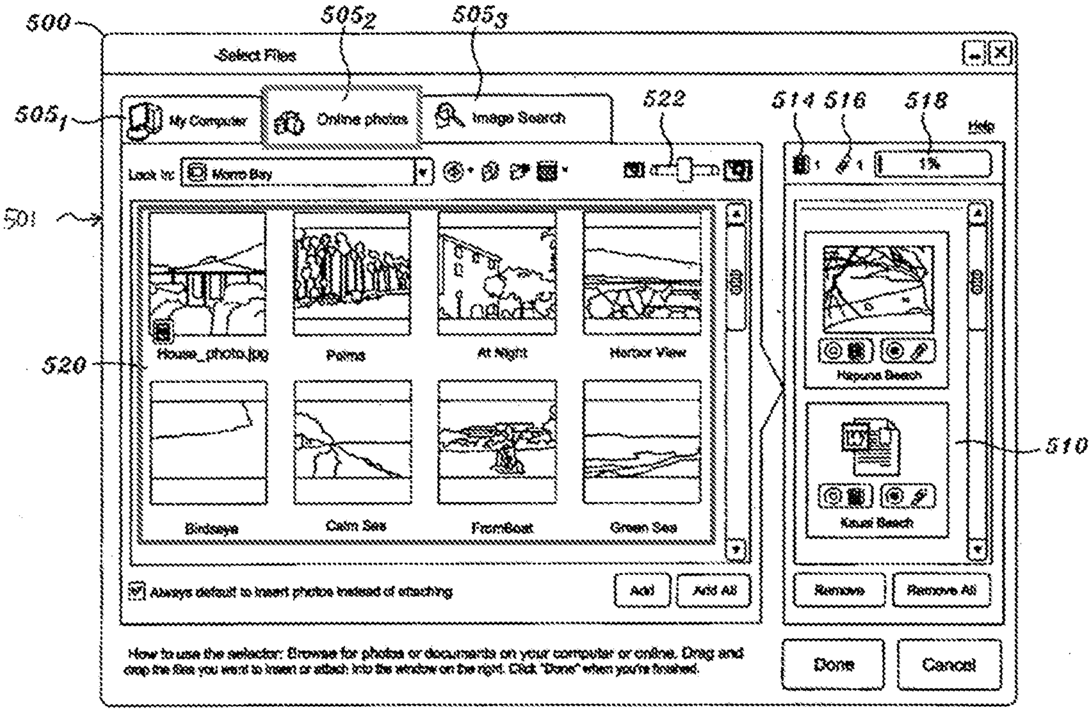
Aldrich discloses one embodiment where the file selection interface, including the code to run GUI 500, is stored on a user computer. EX-1006, ¶¶44-46. A POSITA would have understood that the code for Aldrich's file selection interface links the My Computer (blue) and Online Photos (red) tabs with the corresponding libraries, since selecting one of these tabs populates the display panel 520 (green and purple respectively) of GUI 500 with corresponding photos. *Id.*, ¶¶48, 51, 58, FIGs. 5B & 5F (annotated); EX-1012, ¶291.


500
505₂
505₃
522
Select Files
505₁
My Computer
Online photos
Image Search
514 516
518
Help
Look in: Santa Barbara
0%
501
My Pictures
My Documents
Desktop
My Computer
Palms
At Night
Harbor View
Calm Sea
FromBoat
Green Sea
520
510
Always default to insert photos instead of attaching
Add
Add All
Remove
Remove All
Done
Cancel
524

Drag & drop the photos you want to send into this window

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5B


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look In: Morro Bay
1%
501
House_photo.jpg
Palms
At Night
Harbor View
520
Hapuna Beach
510
Birdseye
Calm Sea
FromBoat
Green Sea
Kauai Beach
☑ Always default to insert photos instead of attaching
Add
Add All
Remove
Remove All
Done
Cancel

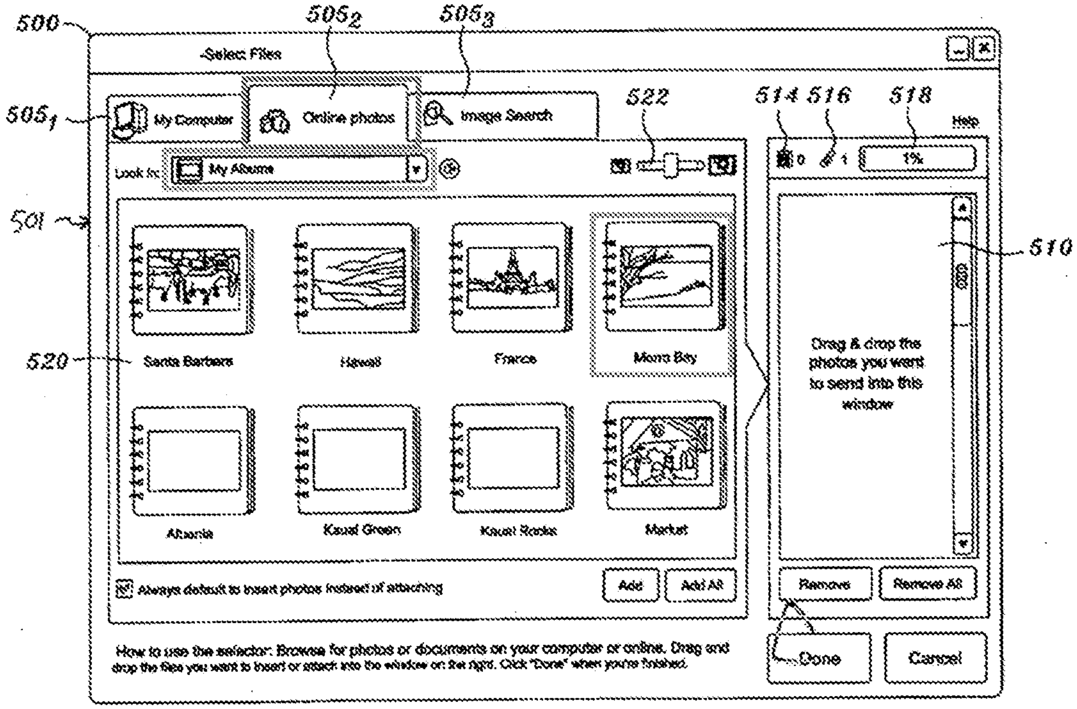
How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

Since the file selection interface can be integrated in the operating system and/or the Internet browser, a POSITA would have understood that "an association between at least one of a plurality of visual representations and digital media content" is stored in a storage component. EX-1012, ¶292.

i. Limitation [27f]

Aldrich discloses the two functions of [27f]. *See* VII.C.2; VIII.A.3; VIII.B.3.j; VIII.B.3.k; EX-1012, ¶¶293-294. Clicking or selecting the thumbnail (e.g., Morro Bay; green in FIG. 5E (annotated)) would execute the claimed "association" and transition the display to GUI 500, including photos (purple) within an album (e.g., Morro Bay album; FIG. 5F (annotated)). EX-1006, ¶48.

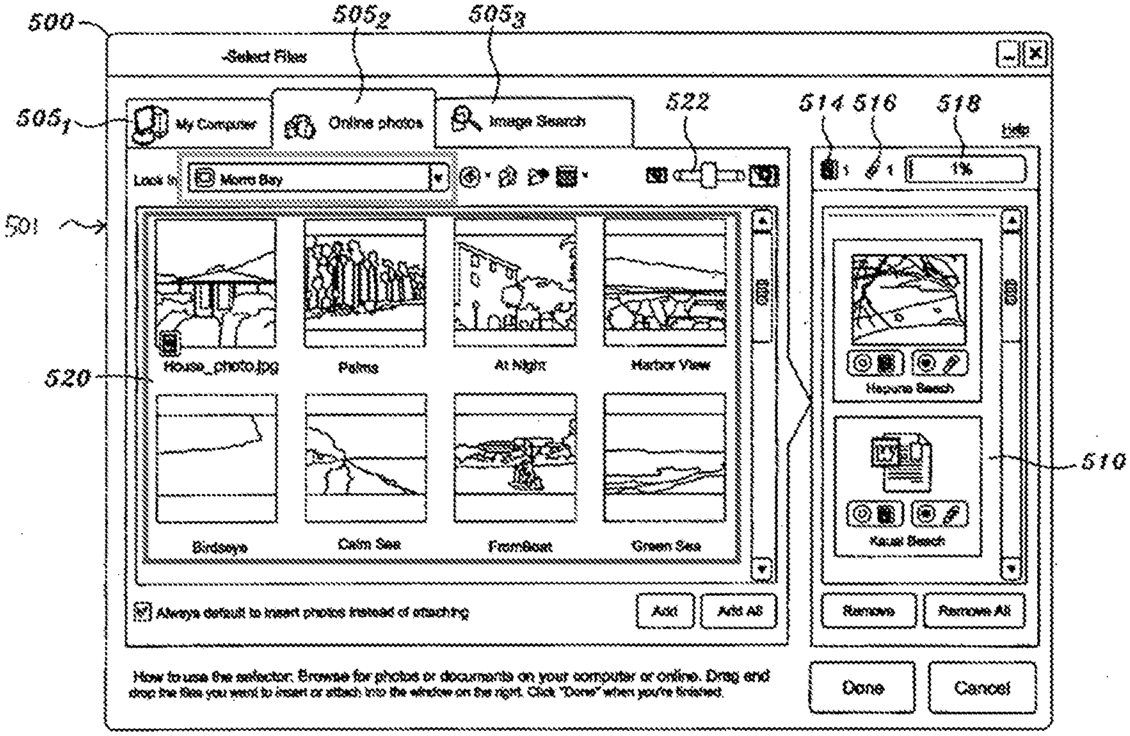

500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in:
My Albums
0
1
1%
501
510
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Rocks
Market
Add
Add All
Remove
Remove All
Done
Cancel

Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5E


500
505₂
505₃
Select Files
505₁
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in:
Morro Bay
1
1
1%
501
520
510
House_photo.jpg
Palms
At Night
Harbor View
Birdseye
Calm Sea
FromBoat
Green Sea
Hapuna Beach
Kauai Beach
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5F

Aldrich discloses the corresponding structure of [27f]. *See* VII.C.2; EX-1012, ¶294. A POSITA would have known that the above-described functionality would be implemented in Aldrich's hardware (e.g., CPU 204) and related software (e.g., GUI 500) configured to implement GUI elements that allow a user to transition between different views of the digital media content (e.g., populating image files based on a selected album), or its equivalent. EX-1012, ¶294.

j. Limitation [27g]

Aldrich discloses [27g]. *See* VIII.A.3; VIII.B.3.l; EX-1012, ¶¶295.

Accordingly, the Shimura-Tsuji-Aldrich combination renders obvious Claim 27. *See* VIII.B.2; EX-1012, ¶¶278-296.

C. Ground 2: Shimura in view of Tsuji, Aldrich, and Biggs renders Claim 5 obvious.

1. Combination of Shimura, Tsuji, Aldrich, and Biggs (hereafter "Shimura-Tsuji-Aldrich-Biggs combination")

A POSITA would have been motivated to combine Aldrich with Tsuji and Shimura (VIII.B.2) and Biggs with the foregoing for several reasons. Aldrich and Biggs are contemporaneous references directed toward complementary solutions to highly analogous problems in the same field of endeavor. EX-1012, ¶297. They are directed toward sharing image files and using an email interface to share the image files. EX-1006, Title, Abstract; EX-1007, Abstract.

Aldrich discloses various links between thumbnails and image files. *See* VIII.B.3.i; VIII.B.3.j; EX-1012, ¶298. A POSITA would have known that such links would be stored in some location. EX-1006, ¶¶46-53; EX-1012, ¶298. Biggs discloses that these links can be stored in a remote data store under an account related to the user's name and email address (i.e., user profile). EX-1007, ¶¶30-31, 34, 41-43; EX-1012, ¶298.

There would have been motivation to combine, and a reasonable expectation of success in combining, Biggs with Shimura, Tsuji, and Aldrich because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415–21; EX-1012, ¶299. Biggs taught the well-known concept that click-links could be stored in a user profile. EX-1012, ¶299. Application of this teaching to Shimura, Tsuji, and Aldrich would have yielded a predictable GUI capable of storing links between a visual representation (e.g., a thumbnail) and digital media content in a user profile (e.g., a remote data store under an account related to the user's name and email address). *Id.*

Thus, the POSITA would have been motivated to combine the above teachings to arrive at the Shimura-Tsuji-Aldrich-Biggs Computing System capable of storing links between a thumbnail and image files in a remote data store under an account related to the user's name and email address. *Id.*, ¶300.

2. Claim 5

Biggs discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich-Biggs combination renders the claim obvious. *See* VIII.A.4; VIII.C.1; EX-1012, ¶¶301-302.

Biggs discloses adding "click-links 405 to each thumbnail pointing back to its related screen size image 204 in the Pmail data store 7." EX-1007, ¶43. Pmail data store 7 is a remote data store associated with remote Pmail server 5. *Id.*, ¶30. Biggs clarifies that Pmail data store 7 is associated with an "account related to the sender's name and email address." *Id.*, ¶42. Based on this and Aldrich's disclosure of a remote storage account, EX-1006, ¶48, a POSITA would have known to store Aldrich's links between the thumbnails and image files in Aldrich's remote storage account associated with the user. EX-1012, ¶302. A POSITA would have understood that storing the click-link in Biggs's "account related to the sender's name and email address," (i.e., a user profile) discloses "storing the association … [in] a user profile" because "user profiles" and "user accounts" are used interchangeably.[2]

---

[2] User profiles were well-known in the art prior to the Critical Date, as shown by the following exemplary references: EX-1024, ("local user profile" "roaming user

D. Ground 3: Shimura in view of Tsuji, Aldrich, and Chao renders Claims 9 and 18-19 obvious.

1. Combination of Shimura, Tsuji, Aldrich, and Chao (hereafter "Shimura-Tsuji-Aldrich-Chao combination")

A POSITA would have been motivated to combine Aldrich with Tsuji and Shimura (VIII.B.2) and Chao with the foregoing for several reasons. Aldrich and Chao are contemporaneous references directed toward complementary solutions to highly analogous problems in the same field of endeavor. EX-1012, ¶303. They are directed toward sharing image files and using a GUI to view and manage the image files. EX-1006, Title, Abstract; EX-1008, Abstract. Aldrich discloses a GUI 500 where different albums can be viewed in an album view (EX-1006, ¶¶46-53, FIG. 5E), but does not disclose a timeline view.

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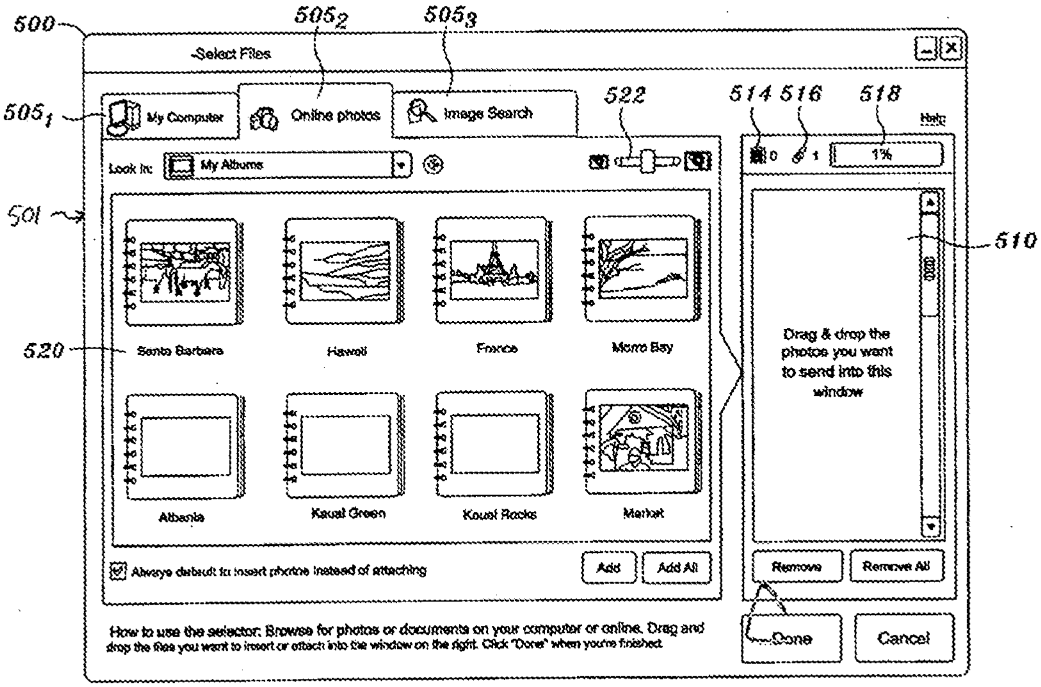
profile", "user profile", "user account", "mandatory user profile"); EX-1025, 187, 776, EX-1026, *passim*; EX-1027, *passim*.


500
505_2
505_3
505_1
Select Files
My Computer
Online photos
Image Search
522
514
516
518
Help
Look In:
My Albums
0
1
1%
501
510
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Rocks
Market
Add
Add All
Remove
Remove All
Done
Cancel

Drag & drop the photos you want to send into this window

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

FIG. 5E

Chao, however, discloses such a timeline view (FIG. 20 below) and an album view, and a way to switch between those views. EX-1008, 12:63-65, 15:7-22.

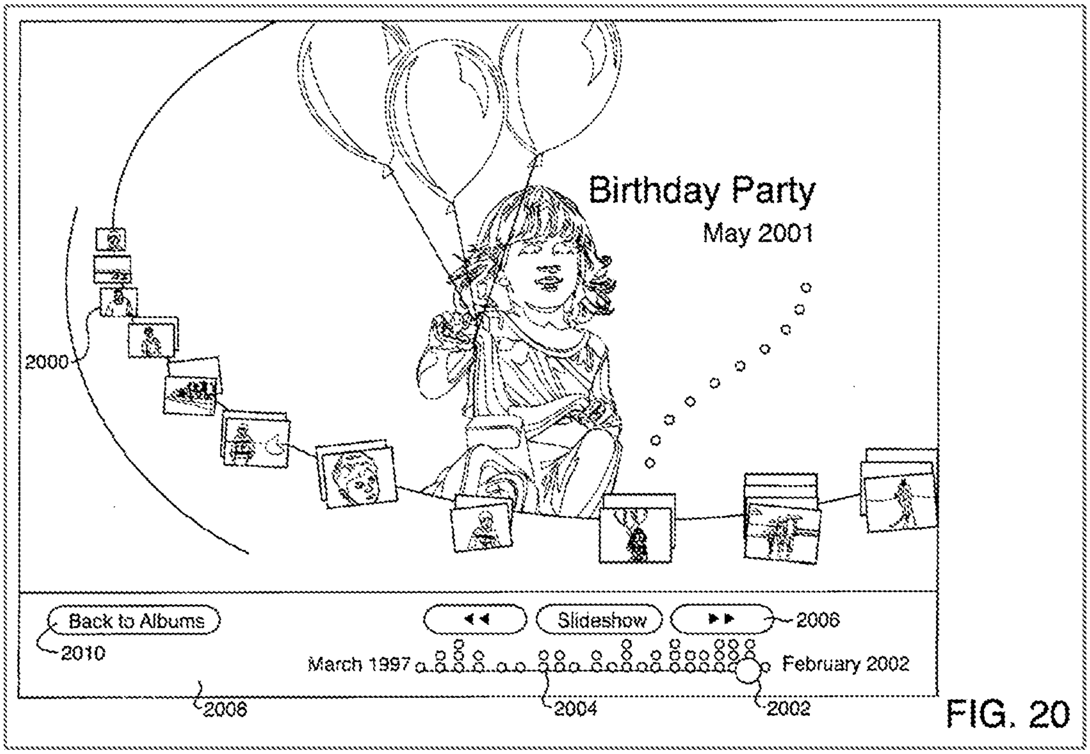

Birthday Party
May 2001
2000
Back to Albums
2010
Slideshow
2006
March 1997
February 2002
2008
2004
2002

FIG. 20

Chao discloses a main screen with display area 810 displaying different albums (*Id.*, 12:56-60, 13:5-9, FIG. 8 (below, annotated)), similar to the albums in Aldrich's display panel 520 (EX-1006, ¶¶56-57, FIG 5E (above)).

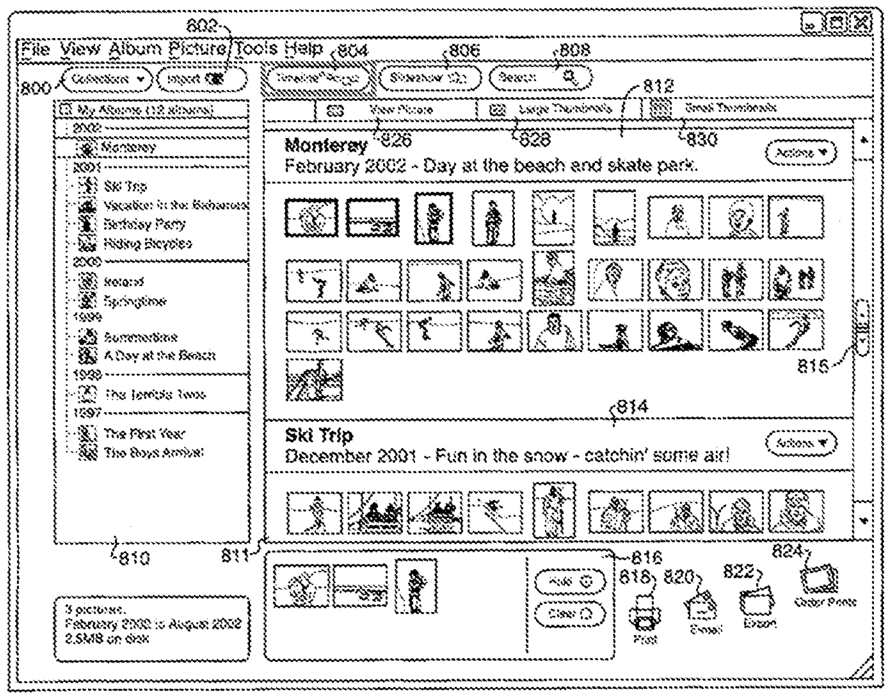
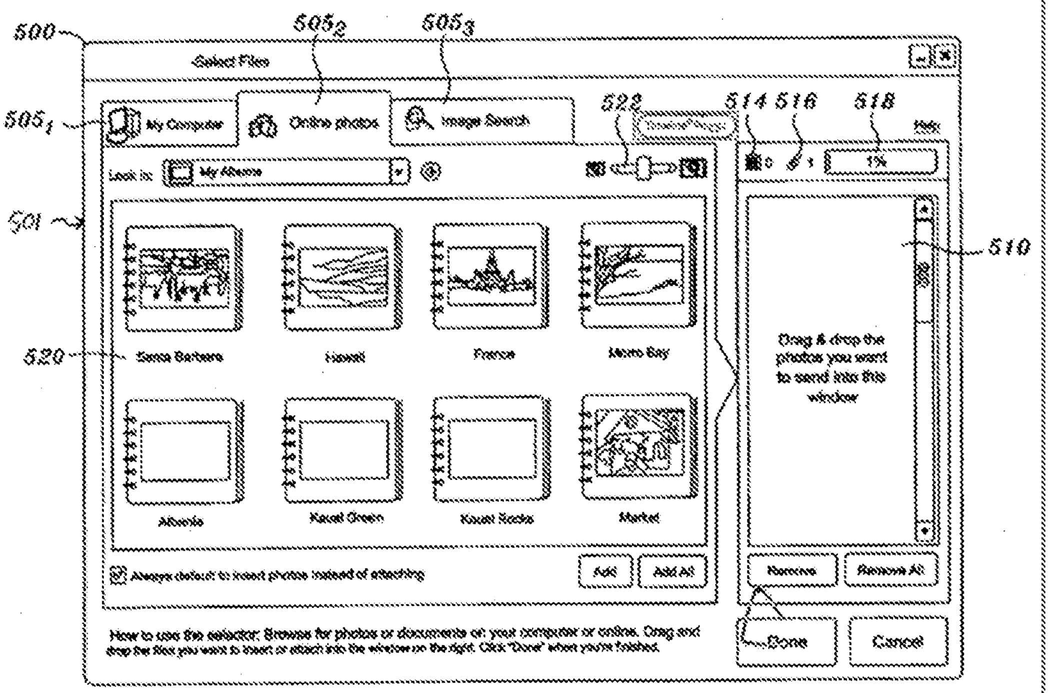

802
File View Album Picture Tools Help
804
806
808
800
Collections
Import
Timeline
Slideshow
Search
812
My Albums (12 albums)
2002
Monterey
2001
Ski Trip
Vacation in the Bahamas
Birthday Party
Riding Bicycles
2000
Roland
Springtime
1999
Summertime
A Day at the Beach
1998
The Terrible Twos
1997
The First Year
The Boys Arrive!
View Picture
Large Thumbnails
Small Thumbnails
826
828
830
Monterey
February 2002 - Day at the beach and skate park.
Actions
815
814
Ski Trip
December 2001 - Fun in the snow - catchin' some air!
Actions
810
811
816
818
820
822
824
Add
Clear
Print
Email
Export
Order Prints
3 pictures.
February 2002 to August 2002
2.5MB on disk

FIG. 8

Chao's main screen has a timeline button 804 (red) to transition the displayed content to a timeline view. EX-1008, 12:63-65, FIG. 20 (above, annotated). A POSITA would have been motivated to incorporate Chao's timeline button 804 (red) into Aldrich's GUI 500, to be able to view the photos by time "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." EX-1008, 5:54-56; EX-1006, Modified FIG. 5E; EX-1012, ¶306.


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514 516
518
Help
Look in:
My Albums
501
510
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Rocks
Market
Add
Add All
Remove
Remove All
Done
Cancel
1%

Drag & drop the photos you want to send into this window

☒ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

Modified FIG. 5E

There would have been motivation to combine, and a reasonable expectation of success in combining, Chao with Shimura, Tsuji, and Aldrich because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415–21; EX-1012, ¶307. Chao taught the well-known concept of a timeline view, and a button to transition the displayed content from the album view to the timeline view. EX-1012, ¶307. Application of this teaching to Shimura, Tsuji, and Aldrich would have yielded a predictable GUI capable of transitioning between the album and timeline views by selecting a button. *Id.*

Thus, the POSITA would have been motivated to combine the above teachings to arrive at the Shimura-Tsuji-Aldrich-Chao Computing System capable of displaying album and timeline views, and including a virtual button to transition between the album and timeline views. *Id.*, ¶¶303-308.

2. Claim 9

Chao discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich-Chao combination renders the claim obvious. *See* VIII.A.5; VIII.D.1; EX-1012, ¶¶309-312.

Chao discloses a header and a body. EX-1008, 12:56-65, FIG. 8 (annotated); EX-1012, ¶310. Chao further discloses the "toggle element" (e.g., timeline button 804).

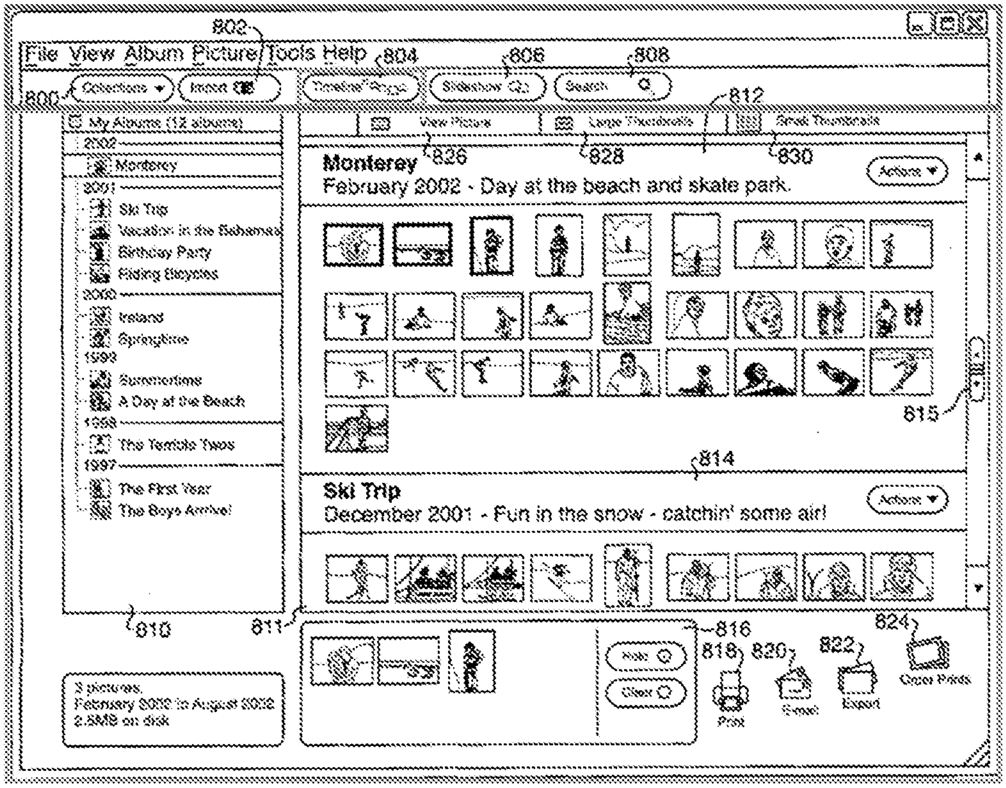

802
File View Album Picture Tools Help
804
806
808
800
Collections
Timeline
Slideshow
Search
812
My Albums (12 albums)
View Picture
Large Thumbnails
Small Thumbnails
826
828
830
2002
Monterey
2001
Ski Trip
Vacation in the Bahamas
Birthday Party
Riding Bicycles
2000
Ireland
Springtime
1999
Summertime
A Day at the Beach
1998
The Terrible Twos
1997
The First Year
The Boys Arrive!
Monterey
February 2002 - Day at the beach and skate park.
Actions
815
814
Ski Trip
December 2001 - Fun in the snow - catchin' some air!
Actions
810
811
816
818
820
822
824
3 pictures
February 2002 to August 2002
2.5MB on disk
Hide
Clear
Print
E-mail
Export
Order Prints

FIG. 8

Chao discloses "Timeline button 804 [green] allows a user to display archived images" in a timeline view. EX-1008, 12:63-65. Selecting timeline button 804 "transitions the computing device display between the album view [FIG. 8 above] and the timeline view [FIG. 20 below] upon selection by a user." EX-1012, ¶311

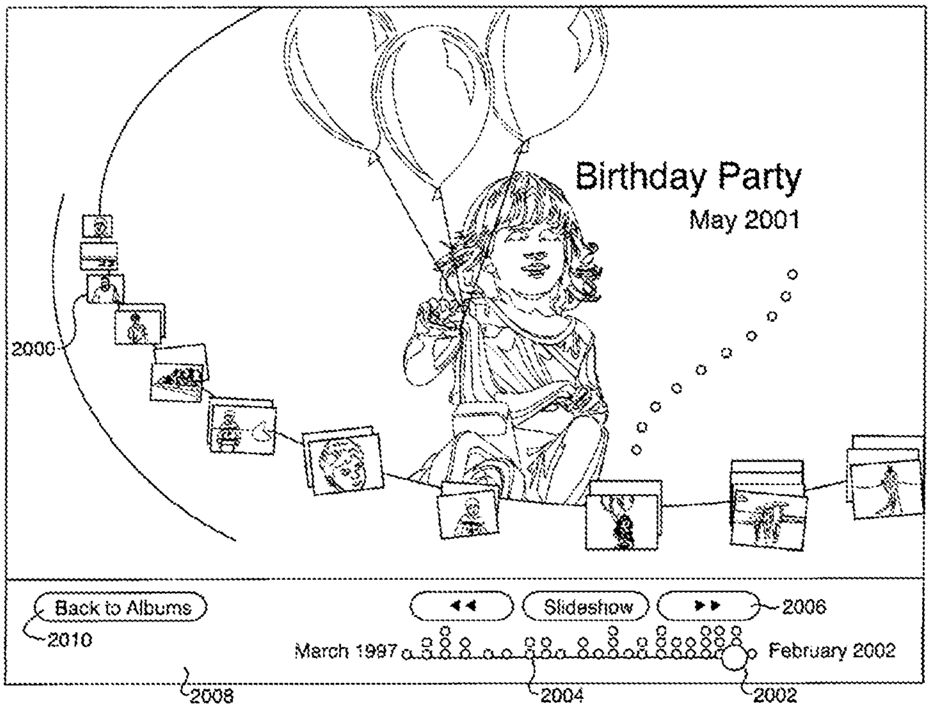
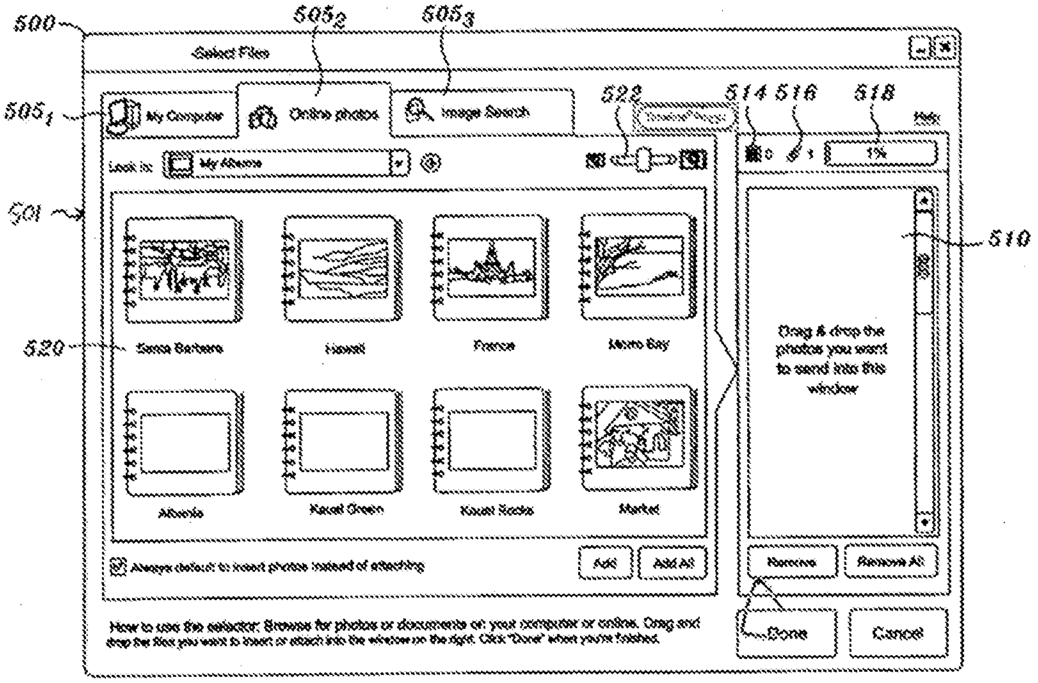

Birthday Party
May 2001
2000
Back to Albums
2010
◂◂
Slideshow
▸▸
2006
March 1997
February 2002
2008
2004
2002

FIG. 20

A POSITA would have been motivated to incorporate Chao's timeline button 804 (red) into Aldrich's GUI 500 (Modified FIG. 5E of Aldrich below), so that a user can more easily identify images to embed/attach in an email based on date rather than user-created albums. *Id.*, ¶312.


500
505_2
505_3
Select Files
505_1
My Computer
Online photos
Image Search
522
514
516
518
Help
Look in:
My Albums
1%
501
510
Drag & drop the photos you want to send into this window
520
Santa Barbara
Hawaii
France
Morro Bay
Albania
Kauai Green
Kauai Socks
Market
Add
Add All
Remove
Remove All
Done
Cancel

☑ Always default to insert photos instead of attaching

How to use the selector: Browse for photos or documents on your computer or online. Drag and drop the files you want to insert or attach into the window on the right. Click "Done" when you're finished.

Modified FIG. 5E

3. Claim 18

a. Limitation [18a]

Chao discloses [18a], by disclosing a "time view." *See* VIII.A.5; EX-1008, 15:7-11, FIG. 20; EX-1012, ¶¶313-314.

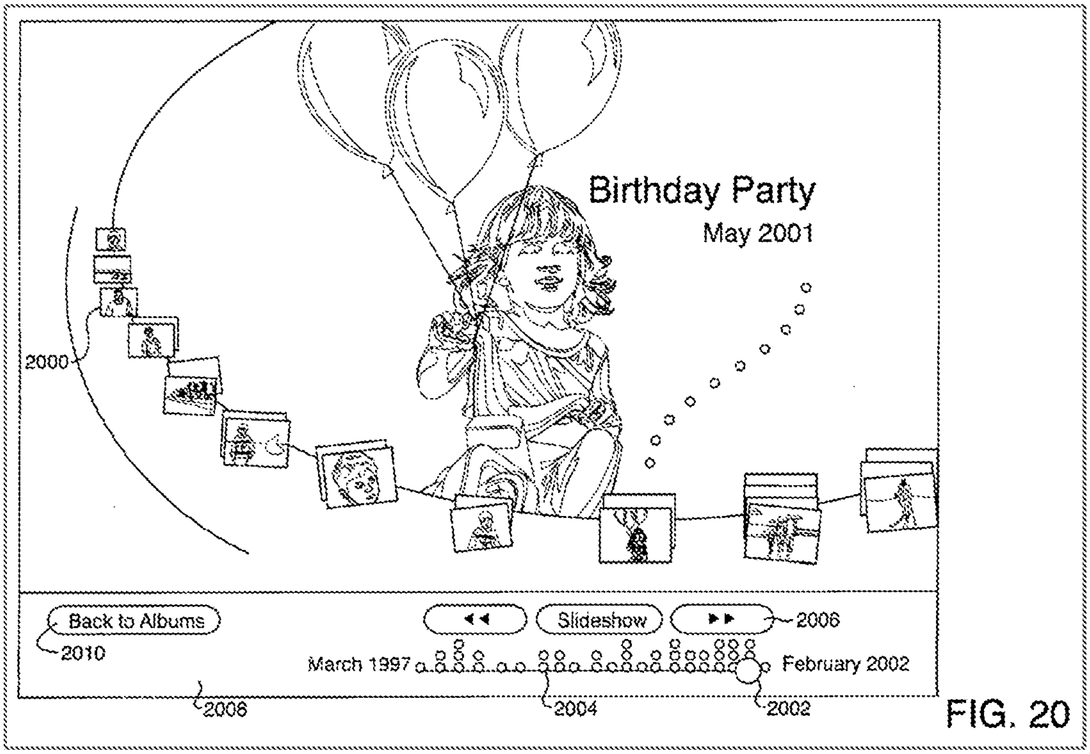

Birthday Party
May 2001
2000
Back to Albums
2010
Slideshow
2006
March 1997
February 2002
2008
2004
2002

FIG. 20

A POSITA would have been motivated to incorporate this time view with Aldrich's GUI 500. *See* VIII.D.1; EX-1012, ¶314.

b. Limitation [18b]

Chao discloses [18b]. *See* VIII.A.5; EX-1012, ¶¶315-317.

Chao discloses "a timeline metaphor for accessing and displaying archived images." EX-1008, 15:7-9, FIG. 20 (annotated).

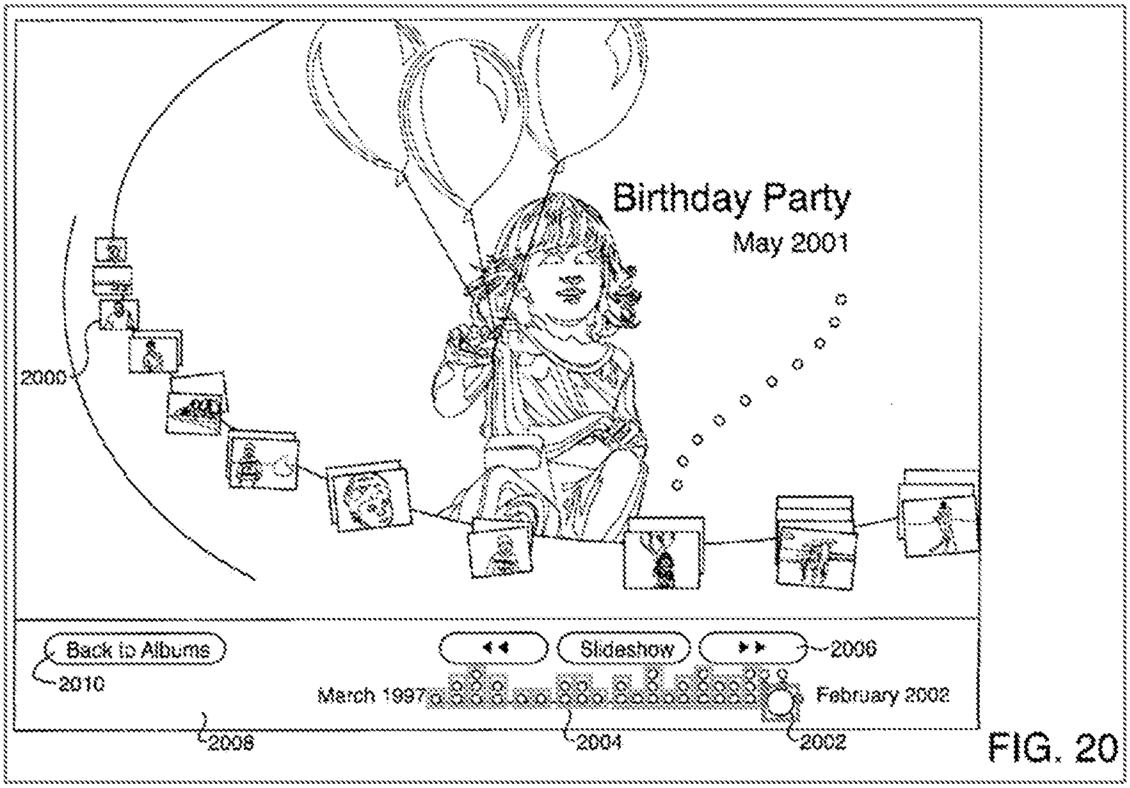

Birthday Party
May 2001
2000
Back to Albums
2010
◄◄
Slideshow
►►
2006
March 1997
February 2002
2008
2004
2002

FIG. 20

Timeline 2000 includes scrubber 2004 (red) that "indicates the number of image albums associated with various time periods within the displayed range (March 1997 to February 2002 in this example)." *Id.*, 15:14-17. The number of circles (blue) indicate the number of albums at each date ("organization segments"), thereby disclosing "the organization segments providing a visual indication of a number of digital media content items in each segment." EX-1012, ¶317.

Accordingly, the Shimura-Tsuji-Aldrich-Chao combination renders obvious Claim 18. *See* VIII.D.1; EX-1012, ¶¶313-318.

4. Claim 19

Chao discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich-Chao combination renders the claim obvious. *See* VIII.A.5; VIII.D.1; EX-1012, ¶¶319-320.

Chao discloses "employ[ing] an interactive device, such as a mouse, to move along the timeline, thereby searching through time for images of interest." EX-1008, 15:11-13. E.g., a user may use slide 2002 (red) to shift timeline 2000. *Id.*, 15:14, FIG. 20 (annotated).

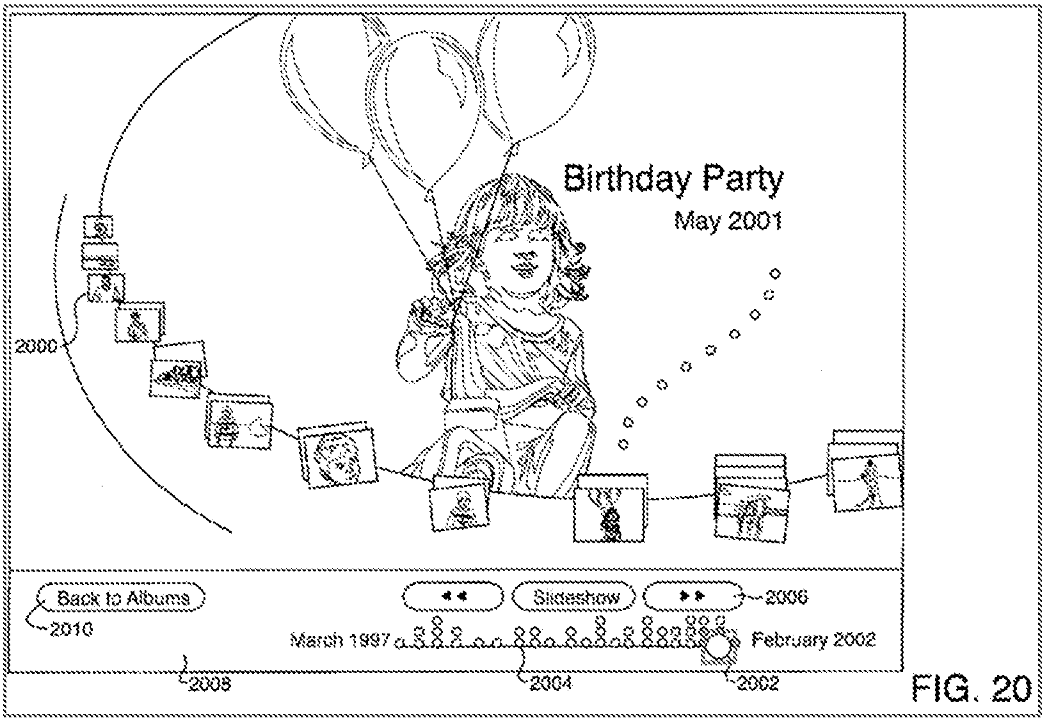

Birthday Party
May 2001
2000
Back to Albums
2010
◀◀
Slideshow
▶▶
2006
March 1997
February 2002
2008
2004
2002

FIG. 20

E. Ground 4: Shimura in view of Tsuji, Aldrich, and Kurtz renders Claim 22 obvious.

1. Combination of Shimura, Tsuji, Aldrich, and Kurtz (hereafter "Shimura-Tsuji-Aldrich-Kurtz combination")

A POSITA would have been motivated to combine Aldrich with Tsuji and Shimura (VIII.B.2) and Kurtz with the foregoing for several reasons. Aldrich and Kurtz are contemporaneous references directed toward complementary solutions to highly analogous problems in the same field of endeavor. EX-1012, ¶321. They are directed toward editing image files. EX-1006, ¶61; EX-1009, ¶¶7, 9. Aldrich discloses various options a user can perform on photos before sending them (e.g., editing, saving, previewing, etc.), but does not explicitly disclose what kinds of edits can be made. EX-1006, ¶61. Kurtz, however, discloses editing metadata of images. EX-1009, ¶36.

Kurtz discloses features of conventional technology, such as an image browser where a user can view photos and photo details like "dimensions, the date and time it was taken, and the name of the camera that took it." *Id.*, ¶7. Kurtz describes the need for an improved user experience that "enables users to readily locate an item based on the metadata associated with that item" and "which allow[s] users to enter and edit metadata associated with items of various types within a shell browser without the need to invoke an application program." *Id.*, ¶8. This would have provided motivation for a POSITA to incorporate Kurtz's disclosure into Aldrich, especially given Aldrich's disclosure that photos can be edited before sending. EX-1012, ¶322.

There would have been motivation to combine, and a reasonable expectation of success in combining, Kurtz with Shimura, Tsuji, and Aldrich because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415–21; EX-1012, ¶323. Kurtz taught the well-known concept of editing metadata of image files, and application of this teaching to Shimura, Tsuji, and Aldrich would have yielded a predictable GUI capable of editing photo metadata.[3] EX-1012, ¶323.

Thus, the POSITA would have been motivated to combine the above teachings to arrive at the Shimura-Tsuji-Aldrich-Kurtz Computing System to edit the metadata of image files. *Id.*, ¶¶321-324.

2. Claim 22

Kurtz discloses the additional limitation of this claim, and the Shimura-Tsuji-Aldrich-Kurtz combination renders the claim obvious. *See* VIII.A.6; VIII.E.1; EX-1012, ¶¶325-326.

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[3] Editing metadata was well-known. EX-1028, 117; EX-1029, Abstract, 3:25; EX-1030, ¶¶10, 15; EX-1031, Title, Abstract.

Kurtz discloses "user modification of metadata," specifically a window 200 with an edit control 208 that "presents the user with the option of making edits to the metadata." EX-1009, Abstract, ¶36. "A user can also view a photo's details, such as its dimensions, the date and time it was taken, and the name of the camera that took it." *Id.*, ¶7. The date and time are examples of metadata that can be edited in Kurtz. EX-1012, ¶326.

F. Ground 5: Shimura in view of Tsuji, Aldrich, and Choi renders Claim 20 obvious.

1. Combination of Shimura, Tsuji, Aldrich, and Choi (hereafter "Shimura-Tsuji-Aldrich-Choi combination")

A POSITA would have been motivated to combine Aldrich with Tsuji and Shimura (VIII.B.2) and Choi with the foregoing for several reasons. Aldrich and Choi are contemporaneous references directed toward complementary solutions to highly analogous problems in the same field of endeavor. EX-1012, ¶327. They are directed toward sharing image files. EX-1006, ¶61; EX-1010, 2:5-14, 36-43. Aldrich discloses sending links to remotely stored photos or thumbnails via email, but does not explicitly disclose details of the remote storage account storing the photos. EX-1006, ¶61. Choi, however, discloses such details of a photo hosting site with various levels of sharing. EX-1010, Abstract.

Choi discloses different users having different levels of access to an album: (1) a viewer level to view the album photos, (2) a contributor level to view and add photos, and (3) a manager level to view and add photos, share the album with other users, and assign various levels of sharing to users. *Id.*, 5:48-61. The album creator may receive the highest level of control, which includes deleting the album, changing other users' level of sharing, and removing album access for users. *Id.*, 5:61-65. A POSITA would have been motivated to combine Choi with Aldrich to detail a user interface of a remote photo storage account. EX-1012, ¶328. E.g., any user selecting a link or linked thumbnail of Aldrich may be redirected to Choi's photo hosting site and presented with an interface from FIGs. 2 and 3, which include a status icon (red) indicating changes to the album and/or photos. EX-1010, 7:40-42, 9:15-25, 47-52.

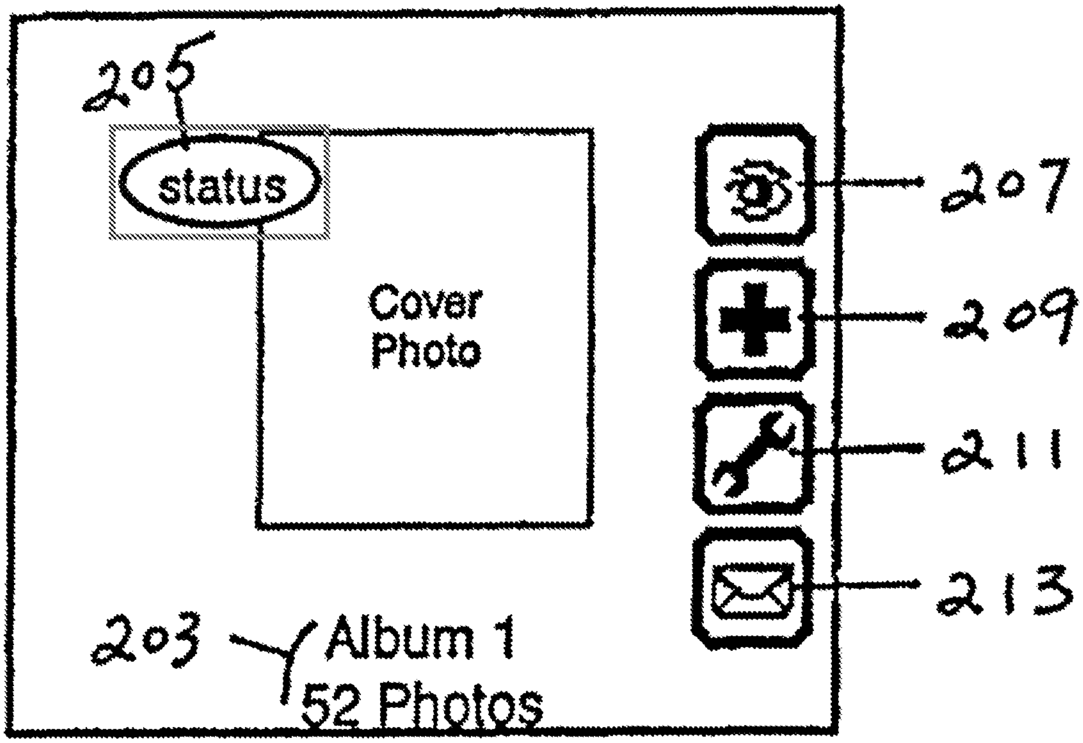
205
status
Cover Photo
207
209
211
213
203
Album 1
52 Photos

Figure 2

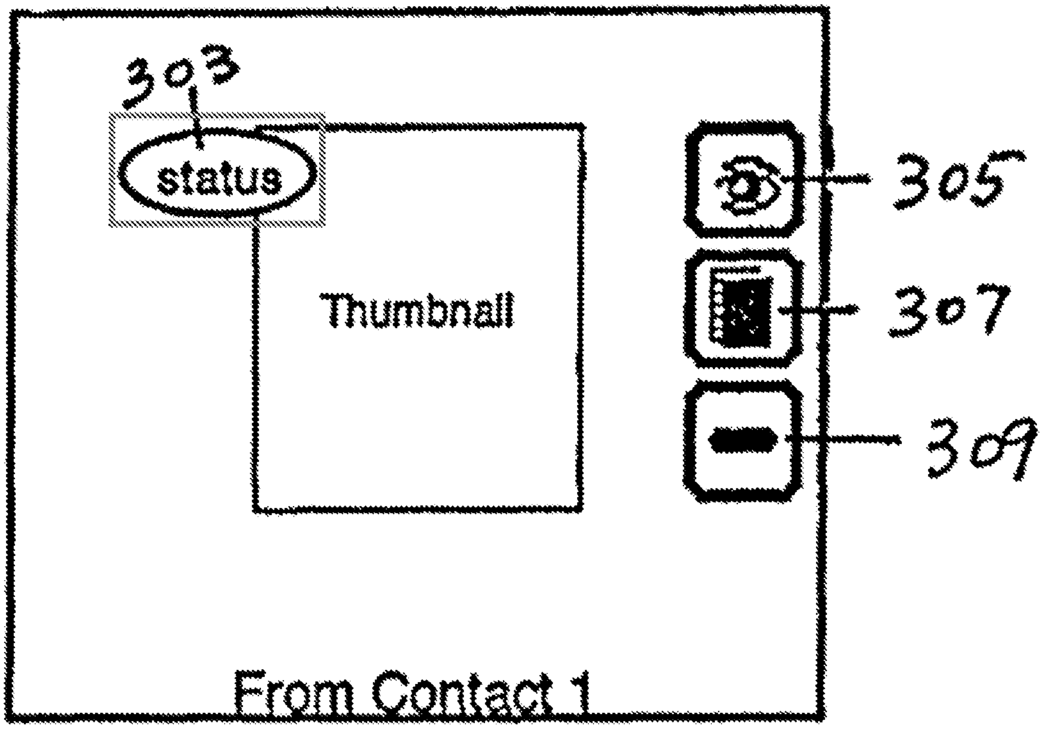

Figure 3

In FIG. 2 above, the user is presented with a home page 101 that includes, among other elements, "status icon 205 [red] indicating if the album has been recently updated, for example, without limitation, recently created or recently having photos added." *Id.*, 9:18-25. In FIG. 3 above, the user is presented with a photo viewer page 135 that includes "status icon 303 [red] … displayed in the upper left corner to indicate if the photo has been recently added or modified." *Id.*, 9:47-52.

There would have been motivation to combine, and a reasonable expectation of success in combining, Choi with Shimura, Tsuji, and Aldrich because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415–21; EX-1012, ¶330. Choi taught the concept of presenting a status icon indicating changes to an album/photo to multiple users in a GUI, and application of this teaching to Shimura, Tsuji, and Aldrich would have yielded a predictable photo hosting environment capable of notifying other users of changes made to an album and/or photo. EX-1012, ¶330.

Thus, the POSITA would have been motivated to combine the above teachings to arrive at the Shimura-Tsuji-Aldrich-Choi Computing System using the Choi photo hosting site to notify other users of changes made to an album and/or photo. *Id.*, ¶¶327-331.

2. Claim 20

a. Limitation [20a]

Aldrich discloses GUI 500 to add image files to queue 510 to embed photos to send to another user. EX-1006, ¶50; VIII.A.3. This discloses [20a], by "permit[ting] the user to share the at least one visual representation [thumbnail of a photo album cover], including any associated digital media content [full sized photos in the album] with another user." EX-1012, ¶332.

b. Limitation [20b]

Choi discloses [20b]. *See* VIII.A.7; EX-1012, ¶¶333-334.

The '888 Patent describes that various files are stored remotely. *See* VIII.C.2; EX-1001, 20:12-14, 35-43, 63-67. Choi discloses "send[ing] digital photo files as emails or email attachments to the intended recipients. In this method, photos are uploaded to an email server and recipients download the photos to their computer to view the photos. The photos are stored in the email servers." EX-1010, 1:37-41.

c. Limitation [20c]

Choi discloses [20c]. *See* VIII.A.7; EX-1012, ¶¶335-337.

The '888 Patent describes that when "a person shares an album with the user via a registered online hosting service, and subsequently updates the shared album to include new items, the new items may be automatically added to the user's digital media library." EX-1010, 20:49-53.

Choi discloses status icon 205 "indicating if the album has been recently updated, for example, without limitation, recently created or recently having **photos added**." *Id.*, 9:21-25 (emphasis added). The status icon can "be present for all viewers." *Id.*, 9:62. Therefore, the photo-hosting site of Choi updates the album for all viewers based on a first user's changes to the photos since the status icon is "present for all viewers," thereby "updating any associated digital media automatically for the another user." EX-1012, ¶337.

d. Limitation [20d]

Choi discloses status icon 205 that identifies whether "the album has been recently updated, for example, without limitation, recently created or recently having photos added." EX-1010, 9:21-25; *see* VIII.A.7, VIII.F.2.c. Therefore, Choi discloses [20d] by disclosing "at least one of addition of digital media content associated with the at least one visual representation." EX-1012, ¶338.

Accordingly, the Shimura-Tsuji-Aldrich-Choi combination renders obvious Claim 20. *See* VIII.F.1; EX-1012, ¶¶332-339.

G. Ground 6: Shimura in view of Tsuji, Aldrich, Choi, and Manolis renders Claims 17 and 21 obvious.

1. Combination of Shimura, Tsuji, Aldrich, Choi, and Manolis (hereafter "Shimura-Tsuji-Aldrich-Choi-Manolis combination")

A POSITA would have been motivated to combine Choi with Tsuji, Shimura, and Aldrich (VIII.F.1) and Manolis with the foregoing for several reasons. Aldrich, Choi, and Manolis are contemporaneous references directed toward complementary solutions to highly analogous problems in the same field of endeavor. EX-1012, ¶340. All are directed toward sharing image files. EX-1006, ¶61; EX-1010, 2:5-14, 36-43; EX-1011, 4:60-63. Aldrich and Manolis are directed toward using email to share image files, and allow the user to add multiple photos to share. EX-1006, Abstract, ¶¶48-50; EX-1011, 9:52-63. While Aldrich discloses sharing photos stored on a remote storage account, it does not disclose how the recipient of the shared photos accesses them. EX-1006, ¶48. Manolis, however, discloses that relevant information (e.g., URL, Sign In name, password, etc.) is sent along with the email and related shared photos. EX-1011, 9:52-63.

Manolis discloses a Share Photos envelope 2401 that "hold[s] images that are to be made accessible online to the specified share recipient." *Id.*, 9:48-50. After selecting the recipient, the user can create a subject and message for the email. *Id.*, 9:52-54. When the email is sent with the shared photos, information (URL, Sign In name, password, etc.) is sent along with the email to the recipient. *Id.*, 9:55-57. A POSITA would have known to send this information so that the recipient would be able to access the remotely stored photo. EX-1012, ¶341.

There would have been motivation to combine, and a reasonable expectation of success in combining, Manolis with Shimura, Tsuji, Aldrich, and Choi because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415–21; EX-1012, ¶342. Manolis taught the well-known concept of including remote service settings (access information to a remote storage account), and application of this teaching to Shimura, Tsuji, Aldrich, and Choi would have yielded a predictable email environment capable of providing a recipient access to the remotely stored photos.[4] EX-1012, ¶342.

Thus, the POSITA would have been motivated to combine the above teachings to arrive at the Shimura-Tsuji-Aldrich-Choi-Manolis Computing System using the information of Manolis to provide a recipient access to the remotely stored photos. *Id.*, ¶¶340-343.

---

[4] Including remote service settings was well-known in the art. EX-1032, Section 4.1; EX-1033, ¶¶43-45, 87; EX-1034, ¶¶29, 51; EX-1035, 1:27, 7:25-30.

2. Claim 17

a. Limitation [17a]

The GUI 500 of Aldrich is used to share files, such as image files, with another user by aggregating all the files a user wants to send in queue 510. *See* VIII.A.3, VIII.B.11, VIII.F.2.a; EX-1006, ¶50. A POSITA would have understood that this discloses "a share operation," and thereby discloses [17a]. EX-1012, ¶344.

b. Limitation [17b]

The '888 Patent describes that state entries "reflect[] any edits made to the referenced digital media content." EX-1001, 4:21-22, 6:52-53, 9:10-12, 49:26-30. Choi discloses identifying such state entries, by disclosing an exemplary album on home page 101. EX-1010, 7:40-42, 9:15-25, 47-52, FIG. 2 (annotated); VIII.A.7.

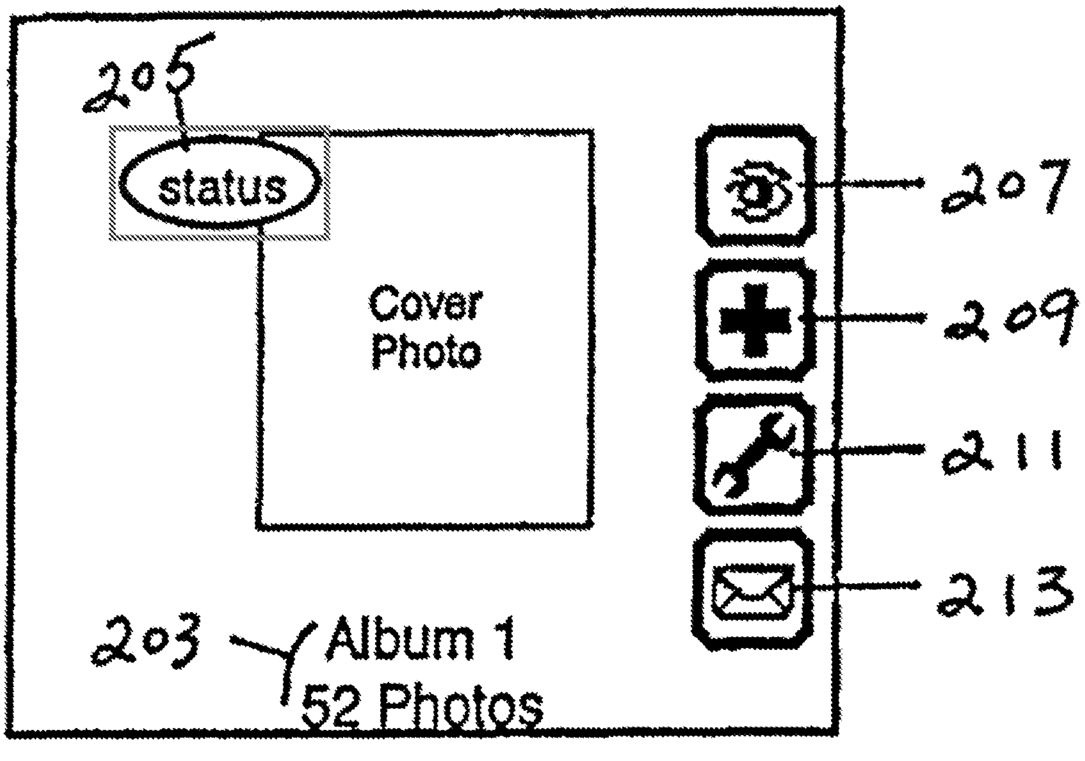
205
status
Cover Photo
207
209
211
213
203
Album 1
52 Photos

Figure 2

On home page 101 there is "a status icon 205 [red] indicating if the album has been recently updated, for example, without limitation, recently created or recently having photos added." *Id.*, 9:21-25. Choi also discloses status icon 303 (red) that identifies whether an individual "photo has been recently added or modified." *Id.*, 9:50-52; FIG. 3 (annotated).

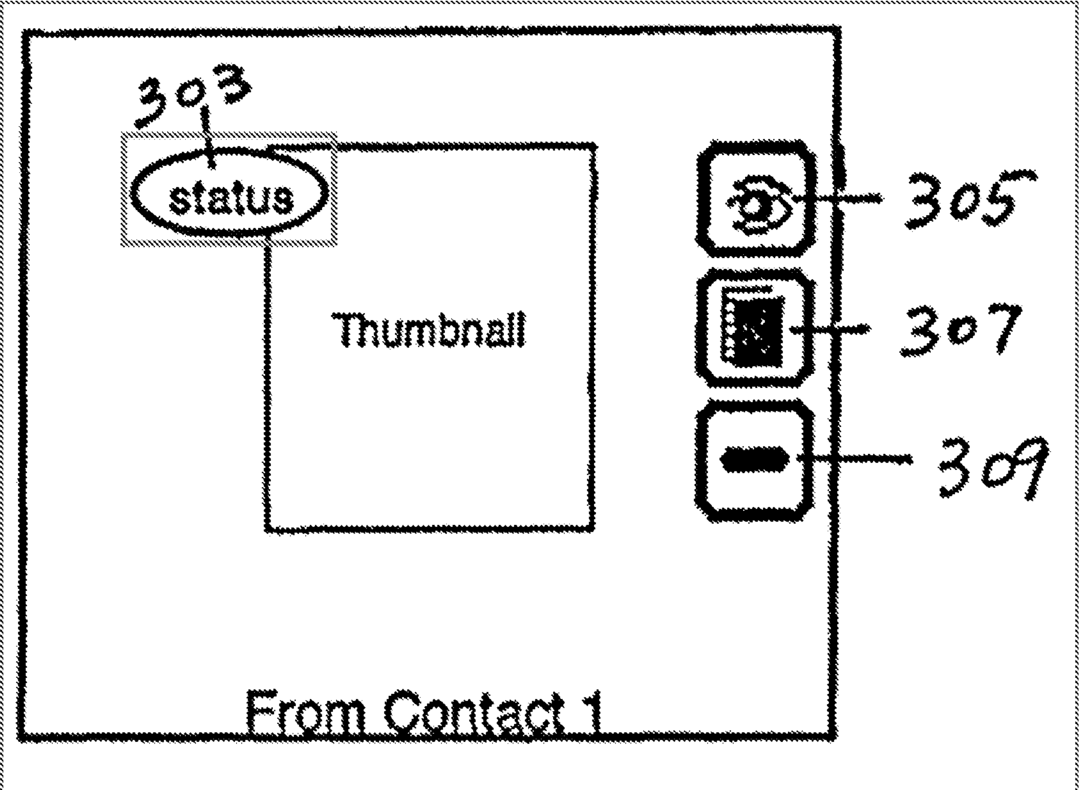

Figure 3

A POSITA would have understood that the status icon of Choi "identif[ies] any state entries [edits made to the photos] for the plurality of digital media content." EX-1012, ¶347.

c. Limitation [17c]

Manolis discloses [17c], by disclosing "information (URL, Sign In name, password, etc.) for accessing the shared images." EX-1011, 9:56-57; *see* VIII.A.8. The information is "identified" in order to be sent along with the email. EX-1012, ¶348.

d. Limitation [17d]

Aldrich in combination with Choi and Manolis discloses [17d] and renders it obvious. Aldrich discloses "transmitting a visual representation [thumbnail of album cover photo] associated with the plurality of digital media content [photos] … to another streamlined device user," by disclosing sending embedded and/or attached image files to other users. EX-1006, Abstract, ¶¶57-58. A POSITA would have understood that an email server would receive the request to send an email with embedded/attached photos, and the email server would transmit the email to the other user. EX-1012, ¶349.

Choi discloses "transmitting … any state settings … to another streamlined device user," by disclosing status icons 205 and 303 that can indicate if an album was updated (e.g., photos added) or individual photos were recently added or modified. EX-1010, 9:21-25, 50-52. The status icon can "be present for all viewers." *Id.*, 9:62. A POSITA would have understood that in Choi, if the album's creator makes any changes to the album, the photo hosting site (remote server) would transmit a notification indicating the changes to other users via the status icons. EX-1012, ¶350.

Manolis discloses "transmitting … any remote service settings … to another streamlined device user," by disclosing that an email with the attached photos is sent "along with information (URL, Sign In name, password, etc.) for accessing the shared images." EX-1011, 9:55-57.

Accordingly, the Shimura-Tsuji-Aldrich-Choi-Manolis combination renders obvious Claim 17. *See* VIII.G.1; EX-1012, ¶¶344-352.

3. Claim 21

a. Limitation [21a]

Aldrich discloses [21a]. *See* VIII.A.3; VIII.F.2.a; EX-1012, ¶353.

b. Limitation [21b]

Aldrich in combination with Choi and Manolis discloses [21b] and renders it obvious. *See* VIII.G.1; VIII.G.2.d; EX-1012, ¶354.

Accordingly, the Shimura-Tsuji-Aldrich-Choi-Manolis combination renders obvious Claim 21. *See* VIII.G.1; EX-1012, ¶¶353-355.

Respectfully submitted,

Dated: April 27, 2021

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Counsel for Petitioner

CERTIFICATION UNDER 37 C.F.R. § 42.24(D)

I certify that the foregoing complies with the type-volume limitation of 37 C.F.R. § 42.24 and contains 13,968 words based on the word count indicated by the word-processing system used to prepare the paper, and excluding those portions exempted by § 42.24(a).

Date: April 27, 2021

/s/ Martin R. Bader
Martin R. Bader
Registration No.: 54,736

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§42.6(e) and 42.105(a), the undersigned hereby certifies that the foregoing **PETITION FOR INTER PARTES REVIEW UNDER 35 U.S.C. §311 ET SEQ. AND 37 C.F.R. §42.100 ET SEQ. (CLAIMS 1-20 OF U.S. PATENT NO. 8,612,888)**, including all exhibits and supporting evidence, was served in its entirety on April 27, 2021, by electronic mail pursuant to written agreement, upon counsel for the Patent Owner, the WOLF GREENFIELD & SACKS, P.C. firm, to the following individuals and email addresses:

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Exhibit 1031

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571-272-7822

Paper: 6
Entered: October 21, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO (UNITED STATES) INC.,
Petitioner,

v.

LITL LLC,
Patent Owner.

IPR2021-00822
Patent 8,624,844 B2

Before MICHELLE N. ANKENBRAND, GARTH D. BAER, and BRIAN D. RANGE, *Administrative Patent Judges*.

BAER, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Lenovo (United States) Inc. ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 1–16 and 18–22 of U.S. Patent No. 8,624,844 B2 (Ex. 1001, "the '844 patent"). LiTL LLC ("Patent Owner") filed a Preliminary Response. Paper 5 ("Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." As discussed below, we determine that Petitioner does not show a reasonable likelihood of prevailing with respect to the challenged claims. Accordingly, we deny institution of an *inter partes* review.

II. BACKGROUND

A. Related Matters

The parties identify the following as a related matter: *LiTL LLC v. Lenovo (United States), Inc. and Lenovo (Beijing) Limited*, 1:20-cv-00689-RGA (D. Del.). Pet. 2; Paper 4, 1. Patent Owner also identifies the following as related matters: IPR2021-00681, IPR2021-00786, IPR2021-00800, and IPR2021-00821. Paper 4, 2.

B. The '844 Patent (Ex. 1001)

The '844 patent is titled "Portable Computer with Multiple Display Configurations." Ex. 1001, code (54). The computer system of the '844 patent describes different profiles to customize the graphical user interface in different modes, including a laptop mode in which the portable computer has a conventional laptop appearance, with the display inclined at a viewing angle from the base (*id.* at 6:26–28); an easel mode in which the base of the computer and its display stand upright forming an inverted "V," and the display and keyboard are on opposite sides (*id.* at 7:48–61); and a frame mode in which the display and base are at a similar orientation and angle as in easel mode, but with the base lying flat on a surface and the keyboard facing down (*id.* at 16:3–13).

Figure 17 of the '844 patent, reproduced below, illustrates a portable computer in laptop mode. *Id.* at 5:13–15.

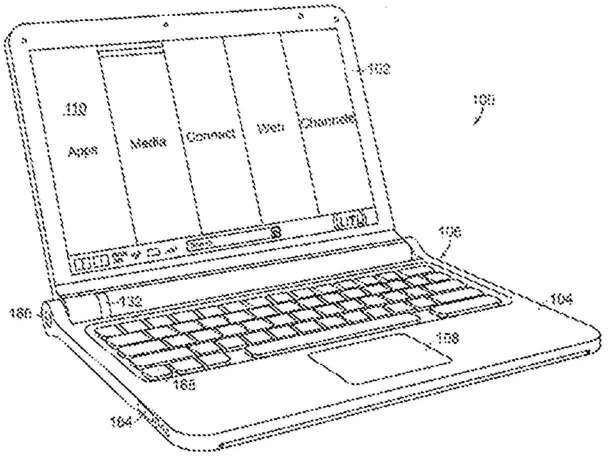


FIG. 17

Figure 4 of the '844 patent, reproduced below, illustrates the portable computer in easel mode. *Id.* at 4:47–48.

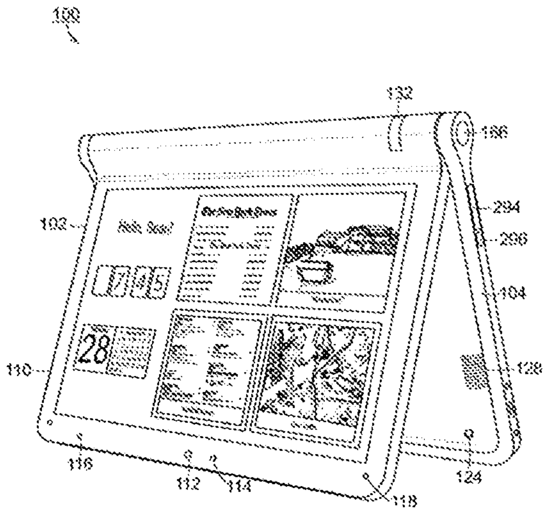

100
132
186
294
296
102
104
128
110
124
116
112
114
118

FIG. 4

Figure 26 of the ’844 patent, reproduced below, illustrates the portable computer configured into frame mode. *Id.* at 5:35–37.

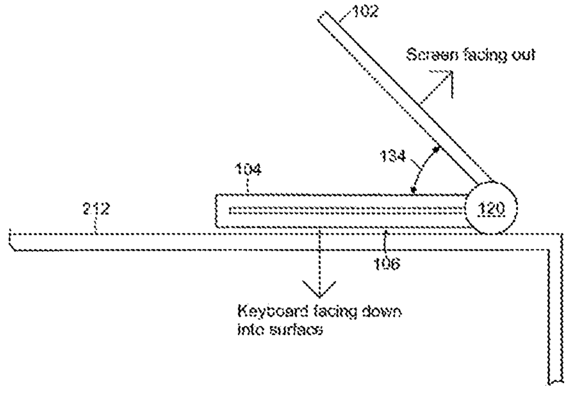

102
Screen facing out
134
104
212
120
106
Keyboard facing down into surface

FIG. 26

The ’844 patent explains that the display’s orientation can change based on the different modes or in response to a user’s input. *Id.* at 2:42–44.

C. Challenged Claims

Among challenged claims 1–16 and 18–22, claims 1, 10, and 18 are independent. Claim 1 is exemplary of the claimed subject matter and is reproduced as follows:

> 1. A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode wherein transitions between the plurality of display modes allows an operator to interact with a single display screen in each of the plurality of display modes, the portable computer comprising:
>
> a base including a keyboard;
>
> a main display component rotatably coupled to the base such that the main display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the main display component and the base to transition between at least the laptop mode and the easel mode, the main display component including the single display screen, wherein the transition between the laptop mode and the easel mode allows the operator to operate the portable computer while viewing the single display screen in each of the plurality of display modes, wherein
>
> the laptop mode is configured to display to a user on the main display component a first content mode having a first content display orientation with the main display component oriented towards the user and the keyboard oriented to receive input from the user;
>
> the easel mode is configured to display to the user on the main display component a second content mode having a second content display orientation with the main display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other, and wherein the portable computer is operable in the easel mode to enable the user to interact with displayed content without interacting with the keyboard; and
>
> a navigation control disposed at least partially within the base and rotatable about the longitudinal axis, the navigation control configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the single display screen wherein the plurality of modes

> includes a frame [mode[1]] in which the main display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard faces the substantially horizontal surface.

Ex. 1001, 17:9–51.

D. *Asserted Grounds of Unpatentability*

Petitioner asserts the challenged claims are unpatentable based on the following grounds:

Claim(s) Challenged	35 U.S.C. §[2]	Reference(s)/Basis
1, 3–5, 7–10, 13–16	103	Shimura,[3] Tsuji,[4] Pogue[5]
6	103	Shimura, Tsuji, Pogue, Escamilla[6]
2	103	Shimura, Tsuji, Pogue, Escamilla, Yeh[7]
18, 22	103	Shimura, Tsuji, Pogue, Lin[8]

---

[1] Original claim 1 recites a "frame" not a "frame mode." Ex. 1001, 17:47. On April 1, 2014, the Office issued a Certificate of Correction that inserts the word "mode" after the word "frame" in claim 1. *Id.* at Certificate of Correction.

[2] The Leahy-Smith America Invents Act ("AIA") amended 35 U.S.C. § 103. *See* Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011). As the application that issued as the '844 patent was filed before the effective date of the relevant amendments, the pre-AIA version of § 103 applies.

[3] JP1994-242853 (H6-242853), published September 2, 1994 (Ex. 1003). We refer to the Certified English translation (Ex. 1004, "Shimura").

[4] US 2005/0062715 A1, published Mar. 24, 2005 (Ex. 1005, "Tsuji").

[5] Windows XP Home Edition: The Missing Manual (2d ed.) (David Pogue, Pogue Press, LLC & O'Reilly Media, Inc. 2004) (Ex. 1006, "Pogue").

[6] US 6,724,365 B1, Apr. 20, 2004 (Ex. 1007, "Escamilla").

[7] US 6,396,419 B1, May 28, 2002 (Ex. 1008, "Yeh").

[8] US 2007/0013682 A1, published Jan. 18, 2007 (Ex. 1009, "Lin").

Claim(s) Challenged	35 U.S.C. §[2]	Reference(s)/Basis
11, 12, 19, 21	103	Shimura, Tsuji, Pogue, Escamilla, Lin

Pet. 3–4. Petitioner supports the asserted grounds with the Declaration of Jean Renard Ward. Ex. 1010.

III. DISCUSSION

A. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art (“POSITA”)

> would have had at least a Bachelor’s degree in Electrical Engineering, Computer Engineering, or Computer Science, plus two to three years of work experience in designing hardware and/or software aspects of the User Interface (UI) for portable computing devices; the POSITA would also be familiar with designs of the user interface employed and displayed by the operating system and its organization of content and functionality. Alternatively, the POSITA would have received a graduate degree such as a Master’s or PhD degree with at least one year of work experience related to hardware and/or software design aspects of the UI for portable computing devices; the POSITA would also be familiar with designs of the user interface employed and displayed by the operating system and its organization of content and functionality.

Pet. 15–16 (citing Ex. 1010 ¶ 26).

Patent Owner does not dispute Petitioner’s asserted level of ordinary skill in the art. *See generally* Prelim. Resp.

We find, based on the current record, that Petitioner’s contention is reasonable. For purposes of this Decision, we adopt the level of ordinary skill in the art Petitioner proposes.

B. Claim Construction

Petitioner proposes a claim construction for "content mode," as well as several related terms, i.e., "first content mode," "second content mode," and "mode(s) of content." Pet. 16–18. We determine we need not explicitly construe those terms to determine whether to institute an *inter partes* review. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

We determine, however, that construction is necessary for "frame mode." Claim 1 recites, among other things, "[a] portable computer configurable between a plurality of display modes . . . wherein the plurality of modes includes a frame mode in which the main display component is orientated towards the operator, the base contacts a substantially horizontal surface, and the keyboard faces the substantially horizontal surface." Ex. 1001, 17:9–51; *see id.* at Certificate of Correction. Independent claims 10 and 18 have similar "frame mode" limitations. *Id.* at 18:65–19:2, 20:25–29. The '844 patent explains that frame mode is "illustrated in FIG. 26." *Id.* at 16:2–3. Figure 26 is reproduced below.

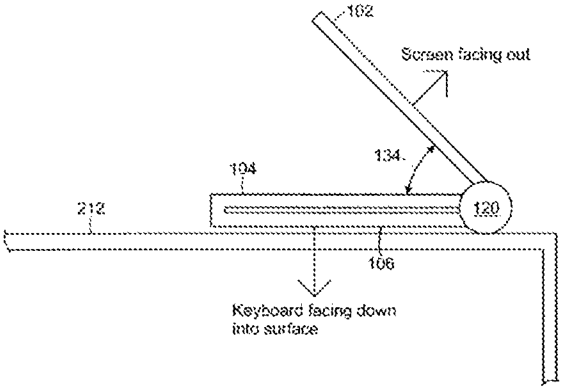

102
Screen facing out
134
104
212
120
106
Keyboard facing down into surface

FIG. 26

Figure 26 and the accompanying text characterize frame mode as having the keyboard face down on a surface with the screen face up, and the base and display components forming a non-zero angle 134, similar to easel mode's inverted "V." *See id.* at 16:6–13.

Frame mode is distinct from "tablet mode," which the '844 patent acknowledges was known in the art. *See id.* at 1:32–55 (citing U.S. Patent Nos. 6,771,494 (Ex. 2009) and 6,266,236 ("the '236 patent") (Ex. 2010)). In tablet mode, the display is "rotated and folded against the base." *Id.* at 1:43–46. Tablet mode is depicted, for example, in the '236 patent's Figure 2, which is reproduced below.

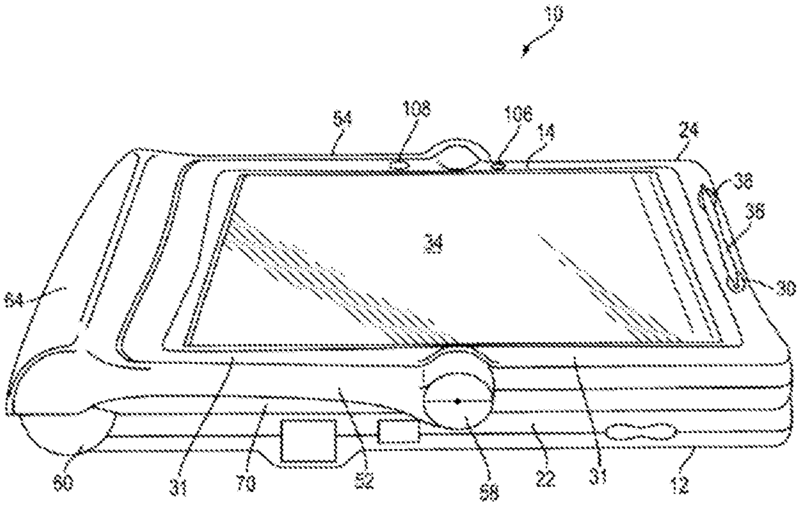

10
54
108
106
14
24
38
36
30
34
64
60
31
70
52
58
22
31
12

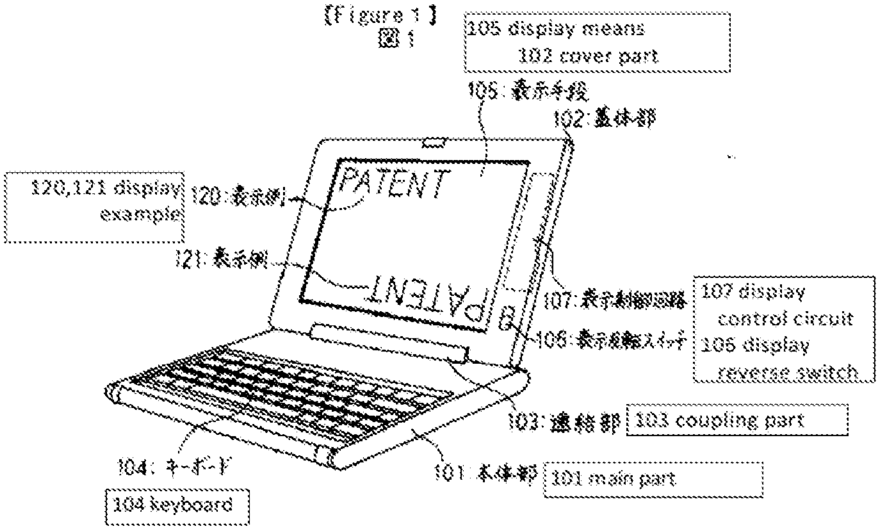
Figure 2

"[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Philips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005). Consistent with the '844 patent's specification, for purposes of this Decision, we construe "frame mode" as having the keyboard face down on a surface with the screen face up, and the base and display components forming a non-zero angle. Frame mode is distinct from "tablet mode," where the display is flush against the base.

C. *Analysis*

1. *Overview of Shimura (Exs. 1003 and 1004)*

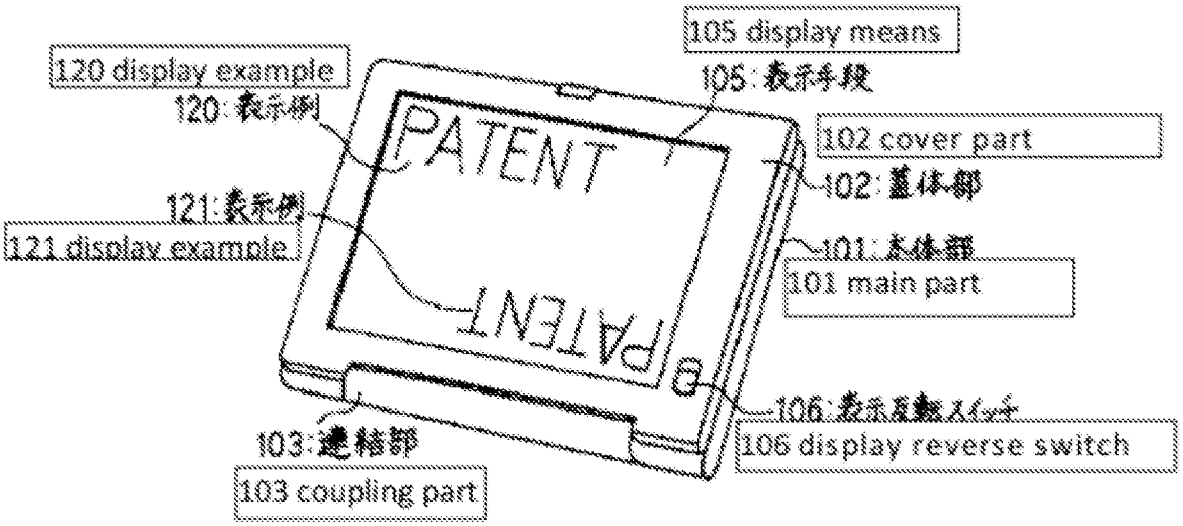
All grounds rely on Shimura. Shimura is a Japanese patent application publication (Ex. 1003), for which Petitioner provided a certified English translation (Ex. 1004). Shimura relates to a personal computer that "can adopt a mode suitable for a user environment centered on a pen input operation and a mouse input operation while retaining a mode which can use a keyboard." Ex. 1004, code (57). Figure 1 of Shimura, reproduced below, illustrates an example of the personal computer. *Id.*


[Figure 1]
図1
105 display means
102 cover part
105：表示手段
102：蓋体部
120,121 display example
120：表示例
121：表示例
PATENT
PATENT
107：表示制御回路
107 display control circuit
106：表示反転スイッチ
106 display reverse switch
103：連結部
103 coupling part
101：本体部
101 main part
104：キーボード
104 keyboard

As shown in Figure 1, the personal computer includes main part 101 provided with keyboard 104 on the front; cover part 102 provided with display 105 on the front; and coupling mechanism 103, which enables the opening and closing of computer parts 101 and 102 and is used to couple one end of main part 101 and one end of cover part 102 with display 105 such that cover part 102 faces main part 101. *Id.* Coupling mechanism 103 is structured so that it can also open cover part 102 so that the orientation of cover part 102 exceeds 180° relative to main part 101. *Id.* Figure 4 of Shimura, reproduced below, shows an inclined view of the personal computer, with main part 101 rotated nearly 360° with respect to cover part 102. *Id.* ¶¶ 16–17, Fig. 4.

[Figure 4]

図4

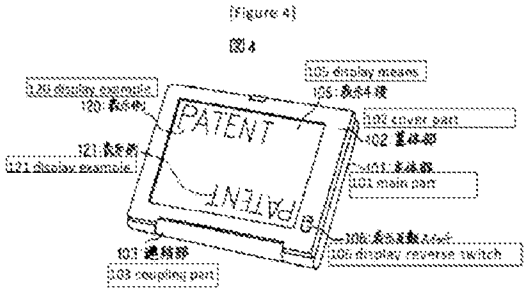

105 display means
105：表示手段
120 display example
120：表示例
102 cover part
102：蓋体部
PATENT
121：表示例
121 display example
101：本体部
101 main part
PATENT
106：表示反転スイッチ
106 display reverse switch
103：連結部
103 coupling part

As shown in Figure 4, coupling mechanism 103 enables the rotation of cover part 102 with respect to main part 101. *Id.* ¶¶ 12–13. Coupling mechanism 103 is fastened by hinges to main part 101 and cover part 102. *Id.* ¶ 12.

2. *Obviousness Analysis*

Based on the present record, Petitioner does not demonstrate a reasonable likelihood of showing the asserted prior art would have rendered obvious the subject matter of challenged claims 1–16 and 18–22. Independent claims 1, 10, and 18 require a "frame mode in which the main display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard faces the substantially horizontal surface." Ex. 1001, 17:47–51, 18:66–19:2, 20:27–30, Certificate of Correction. For all of its asserted grounds, Petitioner relies on Shimura's Figure 4 for teaching the claimed "frame mode." Pet. 57, 87, 102. We agree with Patent Owner that Shimura's Figure 4 does not disclose or suggest a frame mode. *See* Prelim. Resp. 27–32.

Shimura's Figure 4 (reproduced below, left) depicts the device's display folded against the base—i.e., tablet mode—rather than in a frame mode where the base and display components form a non-zero angle similar to easel mode's inverted "V," as depicted in the '844 patent's Figure 26 (reproduced below, right).


[Figure 4]
図4
105 display means
105:表示手段
120 display example
120:表示例
102 cover part
102:蓋体部
121:表示例
121 display example
101:本体部
101 main part
PATENT
PATENT
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part

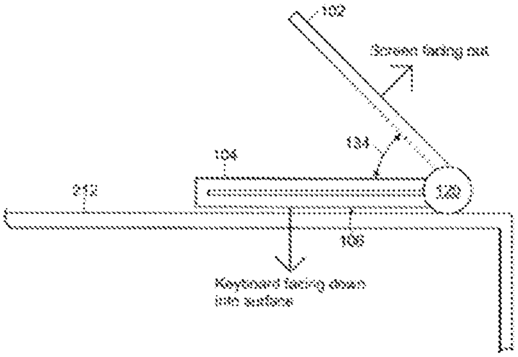

102
Screen facing out
104
134
212
120
106
Keyboard facing down
into surface

FIG. 26

Although, as Petitioner notes, Shimura teaches that its computer can be configured to any angle between 0° to 360°, *see* Pet. 22 n.1 (citing Ex. 1004

¶¶ 8, 10, 17), that too does not disclose frame mode. This is so because, as Patent Owner explains, beyond the required opening angle, frame mode additionally requires a hinge that "must support the display to prevent it from collapsing into tablet mode." Prelim. Resp. 31. Petitioner points to nothing in Shimura that would indicate its hinge could support the display in frame mode. *See* Pet. 22, 41–42, 46–47, 53, 57, 59, 70. Thus, on the current record, Petitioner has not made a sufficient showing that the asserted combinations of Shimura and other references teach or suggest the claimed plurality of modes including a "frame mode" as required in all the challenged claims.

IV. CONCLUSION

For the reasons above, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that at least one of the challenged claims is unpatentable.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied, and we do not institute an *inter partes* review of any claim of the '844 patent based on a ground asserted in the Petition.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO (UNITED STATES) INC.
Petitioner

v.

LITL LLC
Patent Owner

IPR Case No. IPR2021-00822
U.S. Patent No. 8,624,844

PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. §311 *ET SEQ.* AND 37 C.F.R. §42.100 *ET SEQ.* (CLAIMS 1-16 and 18-22 OF U.S. PATENT NO. 8,624,844)

EXHIBIT LIST

EXHIBIT	DESCRIPTION
1001	U.S. Pat. No. 8,624,844 ("the '844 Patent")
1002	Prosecution History of the '844 Patent
1003	JP 1994-242853 to Shimura
1004	Certified English translation of JP 1994-242853 ("Shimura")
1005	U.S. Pub. No. 2005/0062715 to Tsuji et al. ("Tsuji")
1006	Windows XP Home Edition: The Missing Manual, 2nd Edition ("Pogue")
1007	U.S. Pat. No. 6,724,365 to Escamilla et al. ("Escamilla")
1008	U.S. Pat. No. 6,396,419 to Yeh ("Yeh")
1009	U.S. Pub. No. 2007/0013682 to Lin et al. ("Lin")
1010	Declaration of Jean Renard Ward
1011	Curriculum Vitae of Jean Ward
1012	Claim Listing
1013	Family Diagram of Modified Shimura Computers
1014	U.S. Pub. No. US 2005/0122318 to Tonouchi ("Tonouchi")
1015	U.S. Pat. No. 7,061,472 ("'472 Schweizer")
1016	Panasonic-CF-19-laptop_manual (CF-19)
1017	Dell Latitude XT Tablet
1018	Hardy, Lenovo ThinkPad X61 Tablet PC Review (2007) ("Lenovo")

EXHIBIT	DESCRIPTION
1019	Clifford & Gomez, Measuring Tilt with Low-g Accelerometers (2005) ("Freescale")
1020	U.S. Pub. No. 2006/0034042 to Hisano et al. ("Hisano")
1021	JP 2002-258982 to Kiyoyuki
1022	Certified English translation of JP 2002-258982 ("Kiyoyuki ")
1023	JP 1996-179851 to Shigeo
1024	Certified English translation of JP 1996-179851 ("Shigeo")
1025	DE 1031455A1 to Schweizer
1026	Certified English translation of DE 1031455A1 ("Schweizer")
1027	U.S. Pat. No. 6,493,216 to Lin ("Lin")
1028	U.S. Pat. No. 8,151,105 to Park et al. ("Park")
1029	Ride, MIT's $100 Laptop (2005) ("MIT")
1030	U.S. Pat. No. 5,559,670 to Flint et al. ("Flint")
1031	Panasonic CF-T8 Operating Instructions
1032	Motion Computing M1400 Tablet PC User Guide
1033	Motion Computing M1400 Tablet PC Addendum
1034	HP Compaq Tablet PC TC1100 QuickSpecs ("Compaq")
1035	Sony Vaio VGN-UX280P (UX Series MicroPC) Spec Sheet
1036	U.S. Pub. No. 2006/0082554 to Caine et al. ("Caine")
1037	U.S. Pat. No. 5,436,954 to Nishiyama et al. ("Nishiyama")
1038	U.S. Pub. No. 2007/0013674 to Woolley ("Woolley ")

EXHIBIT	DESCRIPTION
1039	JP 2001-298514 to Toba
1040	USPTO English translation of JP 2001-298514 ("USPTO Toba")
1041	EPO English translation of JP 2001-298514 ("EPO Toba")
1042	Intentionally left blank
1043	Intentionally left blank
1044	Intentionally left blank
1045	Intentionally left blank
1046	Intentionally left blank
1047	ThinkPad X61 Tablet Service and Troubleshooting Guide ("Lenovo Service Guide")
1048	Microsoft Computer Dictionary Fifth Edition ("Microsoft Dictionary")
1049	Dell Latitude XT Quick Reference Guide ("Dell Quick Reference")
1050	Dell Latitude XT User's Guide ("Dell User's Guide")
1051	Declaration of Michael Hopkins
1052	Declaration of Liliana Nunez

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Docketed Cases

LiTL LLC v. Lenovo (United States), Inc. and Lenovo (Beijing) Limited.
Case No. 1:20-cv-00689 (D. Del.)..2

Federal: Statutes, Rules, Regulations, Constitutional Provisions

35 U.S.C.
§ 102(a).. 18, 23, 27, 34, 36, 38
§ 102(b).. 18, 23, 27, 34, 36, 38
§ 102(e)..23, 34, 36, 38
§ 325(d)...4, 5, 7, 8

37 C.F.R.
    § 42.8(b)(1) 1
    § 42.8(b)(2) 2
    § 42.100..16, 112
    83 Fed. Reg. No. 197, 51340 (Oct. 11, 2018) 16

I. INTRODUCTION

The 21 challenged claims are directed to a portable computer with multiple display modes and related features, all of which were well-known before the priority date. This portable computer is configurable between various display modes, including a laptop, easel, and frame mode. But these modes, and portable computers configurable to transition between them, were all well-known before the priority date. Related claimed features include a plurality of content modes, a navigation control configured to control an operating parameter and displayed content, a hinge assembly, detection of the display mode based on a rotation sensor, and automatic rotation of displayed content based on a detected display mode. But likewise, these and other claimed features were also all well-known before the priority date.

As explained below, five prior art references—Shimura, Tsuji, Pogue, Escamilla, Yeh, and Lin—in various combinations render obvious all 21 challenged claims. This petition requests that the Board find unpatentable and cancel all challenged claims.

II. MANDATORY NOTICES UNDER 37 C.F.R. §42.8

A. Real Parties-In-Interest (§42.8 (b)(1))

Pursuant to 37 C.F.R. § 42.8(b)(1), Lenovo (United States) Inc. ("Petitioner") is a real party-in-interest. Petitioner is an indirect wholly-owned subsidiary of Lenovo Group Limited. Because Lenovo (Beijing) Limited has been named as a defendant in the "related matter" identified pursuant to 37 C.F.R. § 42.8(b)(2) (i.e., *LiTL LLC v. Lenovo (United States), Inc. and Lenovo (Beijing) Limited.*, Case No. 1:20-cv-00689 (D. Del.)), Lenovo (Beijing) Limited is also a real party-in-interest.

B. Related Matters (§42.8 (b)(2))

The patent at issue, U.S. Patent No. 8,624,844 ("'844 Patent"), is the subject of the following district court proceeding: *LiTL LLC v. Lenovo (United States) Inc. and Lenovo (Beijing) Limited*, Case No. 1:20-cv-00689 (D. Del.).

C. Lead and Backup Counsel (§42.8 (b)(3))

Petitioner appoints Martin Bader (Reg. No. 54,736) of Sheppard, Mullin, Richter & Hampton LLP as Lead Counsel, and appoints Nam Kim (Reg. No. 64,160), Mike Kim (Reg. No. 72,867), and Michael Hopkins (Reg. No. 75,019) of the same firm as Back-Up Counsel. An appropriate Power of Attorney is filed concurrently herewith.

D. Service Information (§42.8 (b)(4))

Service of any documents to Counsel can be made via hand delivery to Sheppard Mullin Richter & Hampton LLP, 12275 El Camino Real, Suite 100, San Diego, California 92130. Petitioner consents to service by e-mail at LegalTm-LNV-LTL@sheppardmullin.com.

III. FEE FOR *IPR* (37 C.F.R. §42.15(a) and §42.103)

Petitioner has paid the required fees. The Office is authorized to charge any fee deficiency, or credit any overpayment, to Deposit Account No. 50-4561.

IV. REQUIREMENTS FOR *IPR* UNDER 37 C.F.R. §42.104

A. Grounds for Standing (§42.104(a))

Petitioner certifies that the '844 Patent is available for IPR and that the Petitioner is not barred or estopped from requesting IPR challenging the claims of the '844 Patent.

B. Identification of Challenged Claims (§42.104(b)(1))

This Petition challenges the validity of claims 1-16 and 18-22 of the '844 Patent ("Challenged Claims").

C. Grounds of Challenge (§42.104(b)(2))

The Grounds of unpatentability presented in this Petition are as follows.

Ground	Basis	References	Challenged Claim
1	§103	Obvious over Shimura in view of Tsuji, in further view of Pogue	1, 3-5, 7-10, and 13-16
2	§103	Obvious over Shimura in view of Tsuji and Pogue, in further view of Escamilla	6
3	§103	Obvious over Shimura in view of Tsuji and Pogue, in further view of Escamilla and Yeh	2
4	§103	Obvious over Shimura in view of Tsuji and Pogue, in further view of Lin	18 and 22
5	§103	Obvious over Shimura in view of Tsuji and Pogue, in further view of Escamilla and Lin	11, 12, 19, and 21

6	§103	Obvious over Shimura in view of Tsuji Pogue, Escamilla, and Lin, in further view of Yeh	20

The '844 Patent issued from U.S. Application No. 12/170,951, filed July 10, 2008, and claims priority to U.S. Provisional Application No. 61/041,365, filed April 1, 2008. Without conceding valid priority entitlement, for purposes of this Petition only, it is assumed that April 1, 2008 marks the earliest effective priority date (the "Critical Date") of the '844 Patent.

V. PROPOSED GROUNDS SHOULD NOT BE DENIED INSTITUTION ON ANY DISCRETIONARY GROUND

The Board should decline to exercise its discretion to deny institution under 35 U.S.C. § 325(d). The Section 325(d) analysis follows a two-part framework. *Amazon.com, Inc. v. VB Assets, LLC*, IPR2020-01346, slip op. at 6-7 (P.T.A.B. Feb. 4, 2021) (Paper 7). The Board first determines "whether the art or arguments presented in the Petition are the same or substantially the same as those previously presented to the Office." *Id.* If the answer is no, the inquiry ends there. But if the answer is yes, the Board then determines "whether the petitioner has demonstrated a material error by the Office in its prior consideration of that art or arguments." *Id.* Here, none of the six references relied upon were previously "presented to the Office." And even if any of them were, the Office would have made a "material error" by failing to consider the impact of its teachings on the patentability of the claims.

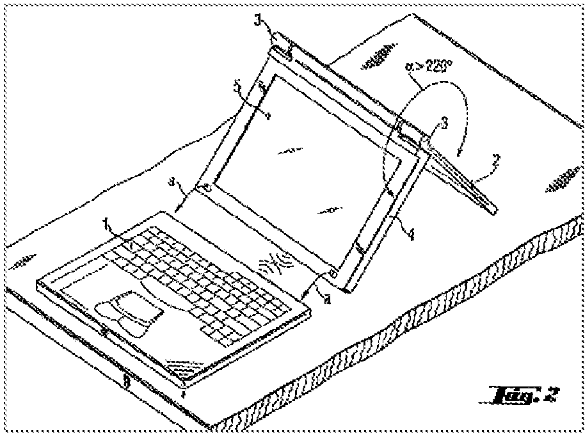
A. The Six References Were Not "Presented to the Office"

Of the six references relied upon in Petitioner's grounds for unpatentability, five were neither cited during prosecution nor relied upon or discussed by the Examiner in any Office Action. Therefore, those five references were not "presented to the Office" under Section 325(d).

Nor was the remaining reference, Shimura, "presented to the Office." This reference was merely cited in an information disclosure statement ("IDS") and not relied upon or substantively considered by the Examiner in any way. EX-1002, 112. The PTAB has "consistently held that a reference that was neither applied against the claims nor discussed by the Examiner does not weigh in favor of exercising our discretion under § 325(d)." *Solvay USA Inc. v. WorldSource Enterprises,* LLC, PGR2019-00046, slip op. at 14 (P.T.A.B. Aug. 13, 2019) (Paper 7). This includes "[m]ere citation in an IDS." *Id.* In particular, "mere citation to a reference by the Examiner does not establish that the Examiner substantively considered the merits of" the reference. *Zip Top, LLC v. Stasher, Inc.*, IPR2018-01216, slip op. at 35 (P.T.A.B. Jan. 17, 2019) (Paper 14) (collecting cases).

Additionally, the Shimura-Tsuji Combination, which is part of all six Grounds in this Petition, is not cumulative of the art relied upon by the Examiner. E.g., the Examiner relies on U.S. Pat. No. 7,061,472 ("Schweizer") as disclosure of the various display modes recited in the '844 Patent's independent claims. EX-

1002, 593-598. However, the Examiner later states that "none of cited reference teaches" the "frame mode" limitation from each independent claim. *Id.*, 37. The Shimura-Tsuji combination does disclose this "frame mode" by utilizing a different structure for a different purpose than Schweizer. Schweizer discloses a portable device usable in a "presentation" mode (Fig. 2, below) that allows each user to view one of the two display screens:



EX-1015, Abstract, 2:1-22. Nowhere does Schweizer disclose placing its device in manner where the keyboard is facing the surface on which it rests in a "frame mode" (as disclosed in the Shimura-Tsuji Combination) because the keyboard, which is necessary for operation in the presentation mode, is detached from the display when in the presentation mode, rendering a "frame mode" configuration impossible. *Id.* The Shimura-Tsuji combination, on the other hand, can be placed in such a "frame mode" where a single user or multiple users view the same screen while the keyboard faces the surface. *See* VIII.B.3.j; VIII.B.10.j; VIII.E.2.j. For at least this reason, the Shimura-Tsuji Combination is not cumulative of Schweizer, because "it is solving a problem that is closer to that of the '[844] Patent" using "different structures that serve different purposes." *Oticon Medical AB v. Cochlear Limited*, IPR2019-00975, slip op. at 15-16 (P.T.A.B. Oct. 16, 2019) (Precedential) (Paper 15).

B. Even If a Reference Was "Presented to the Office," the Office Made a Material Error by Overlooking Its Impact

Even if the Board finds that Shimura was previously "presented to the Office" under Section 325(d) (it was not), the Board should still decline to exercise its discretion to deny institution. This is because the Examiner overlooked specific Shimura's teachings as well as the Shimura-Tsuji combination that disclosed the "frame mode." The foregoing would constitute a "material error" by the Patent Office, even assuming that Shimura was "presented to the Office."

Where "the same or substantially the same art or arguments were previously presented to the Office," the Board must then consider "'whether the petitioner has demonstrated a material error by the Office' in its prior consideration of that art or arguments." *Amazon.com*, at 7 (Paper 7) (citation omitted). This "material error may include misapprehending or overlooking specific teachings of the relevant prior art where those teachings impact patentability of the challenged claims." *Cellco P'ship v. Huawei Device Co., Ltd.*, IPR2020-01117, slip op. at 12 (PTAB Feb. 3, 2021) (Paper 10). Here, Shimura was merely cited in an IDS during prosecution, and was not relied upon or substantively considered by the Examiner in any way. Thus, the Examiner overlooked Shimura's specific teachings that impact the patentability of the claims challenged in this Petition. *Id.* Moreover, Shimura was not the basis for any rejection. The "fact that [the references in the Petition were] not the basis of rejection weighs strongly against exercising [the Board's] discretion to deny institution under 35 U.S.C. § 325(d)." *Id.*

Furthermore, the Examiner did not consider at least the Shimura-Tsuji combination. *Id.* at 14 (declining to exercise discretion under Section 325(d) to deny petition where "[reference] [is] cited and discussed during prosecution" but "the combination of [that reference and another reference] as asserted in the Petition has not been substantively evaluated by the Office"); *Amazon.com*, at 9 (Paper 7). As explained above, this combination discloses the very "frame mode" the Examiner believed the art not to disclose.

VI. RELEVANT INFORMATION CONCERNING THE '844 PATENT

A. Overview of the '844 Patent

The '844 Patent is directed to a "portable computer that is configurable between a plurality of display modes including a laptop mode (in which the portable computer has a conventional laptop appearance) and an easel mode in which the base of the computer and its display component stand vertically forming an inverted 'V.'" EX-1001, Abstract. The portable computer 100 is configurable into the plurality of display modes (e.g., FIGs. 1, 4, and 26, below, corresponding to a laptop mode, an easel mode, and a frame mode) based on a hinge assembly (e.g., FIGs. 7B and 10 below) rotatably coupling the display component 102 to the base 104 of the computer 100. *Id.*, Abstract.

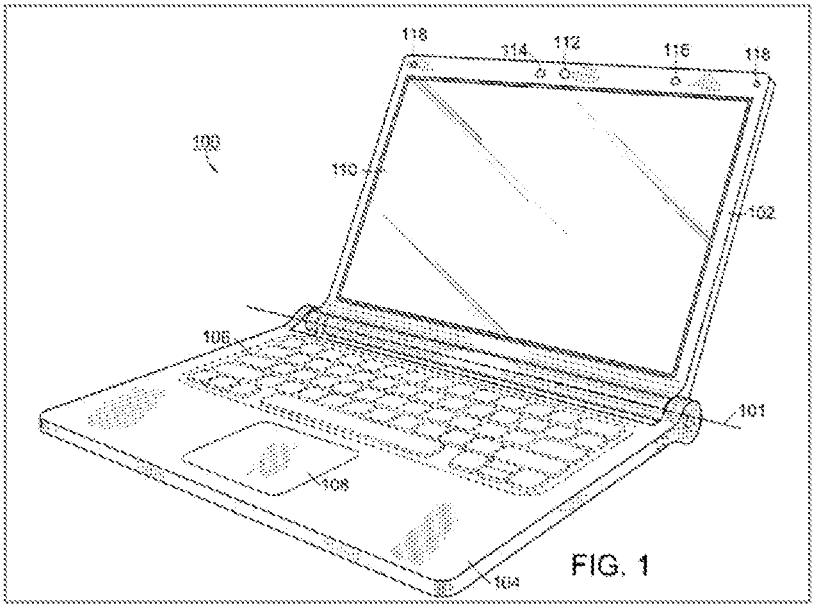

118
114
112
116
118
100
110
102
106
101
108
104

FIG. 1

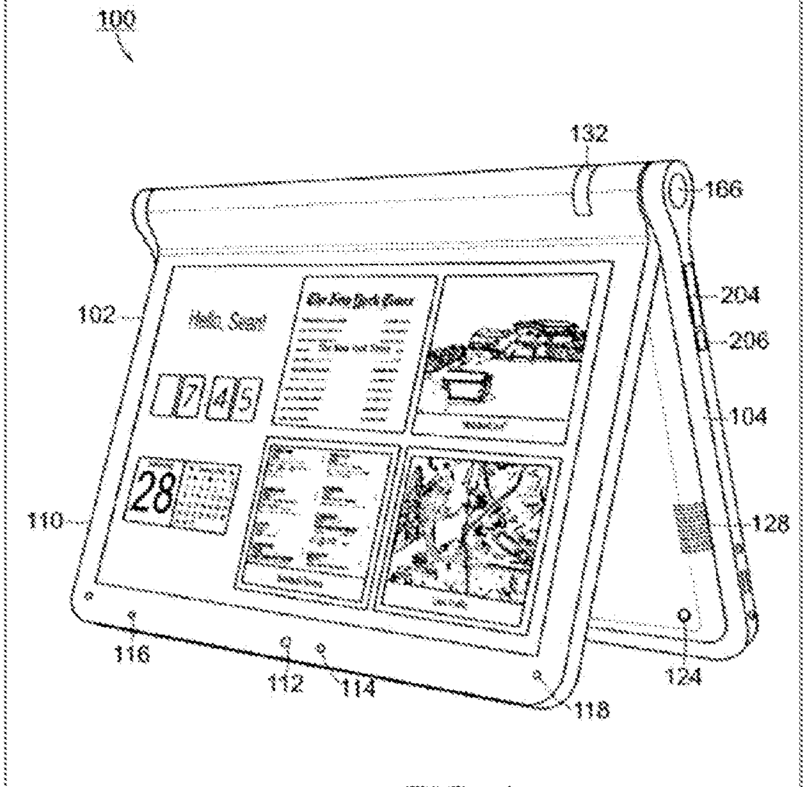

Hello, Sean

FIG. 4

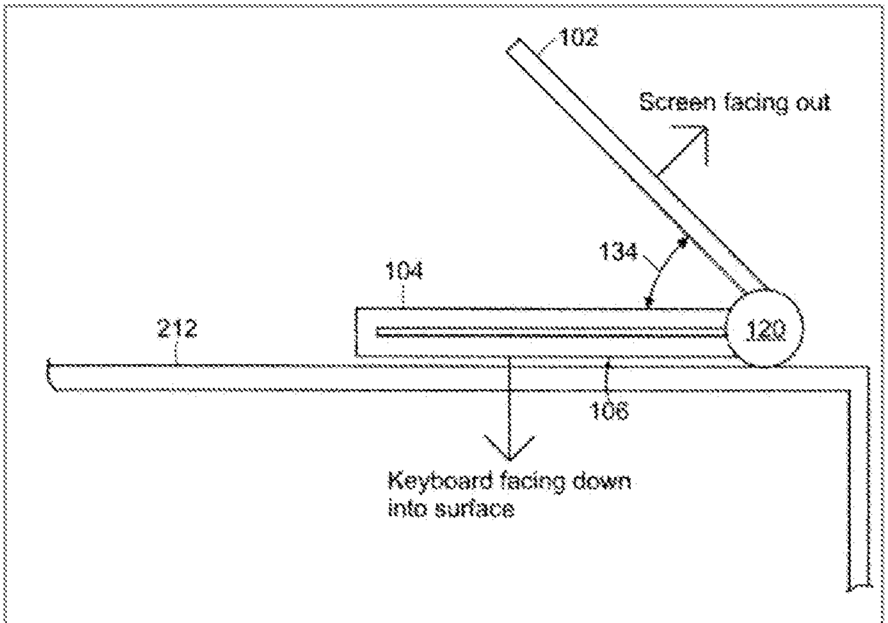

Screen facing out
Keyboard facing down
into surface

FIG. 26

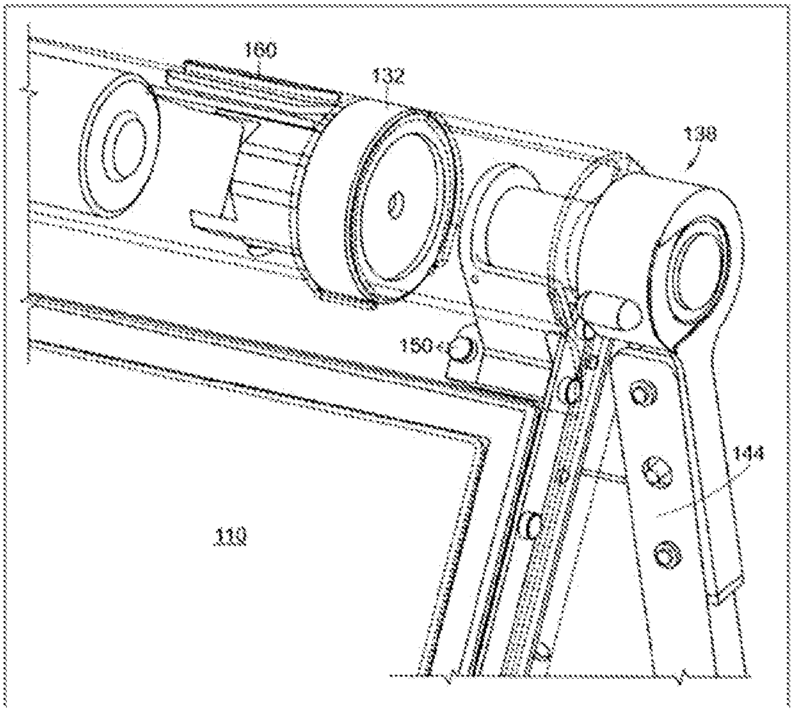

160
132
138
150
144
110

FIG. 7B

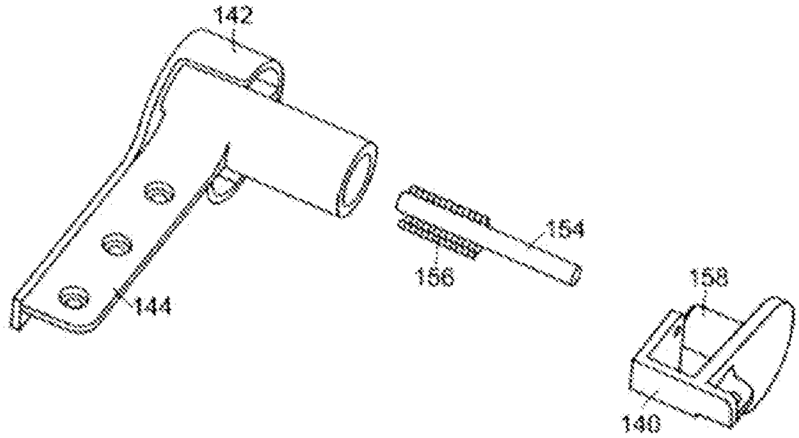

142
154
156
144
158
140

FIG. 10

The displayed content of the portable computer of the '844 Patent can be rotated by 180° so that the displayed content is oriented properly for an intended user. *Id.*, 8:7-16, 16:27-50. The 180° rotation of the displayed content may be manual or automated. *Id.*, 16:27-50. E.g., in an embodiment where the rotation is automated, the portable computer uses an orientation (or mode) sensor that detects whether the portable computer is in a laptop mode or an easel mode and adjusts the display accordingly. *Id.*, 8:17-20. The orientation (or mode) sensor may be located in the hinge assembly 138 and "may be used to determine a precise relative orientation[, such as an angle,] of the base component 104 with respect to the display component 102 . . . to determine [a given display mode.]" *Id.*, 8:26-31, 58-61. In some embodiments, the orientation sensor may be located in a display component 102 or base 104 and may include an accelerometer "whose output is fed to the computer operating system (or to dedicated logic circuitry) which then triggers a display inversion as appropriate between the two modes." *Id.*, 8:31-34.

The '844 Patent also discloses "software and/or hardware protection . . . provided for the keyboard to prevent keys from being pressed (or to prevent the portable computer from responding to pressed keys) when the portable computer is in the frame mode." *Id.*, 16:14-17.

Moreover, the '844 Patent discloses integrated navigation hardware that "allows a user to easily and comfortable [sic] control various features and functions of the portable computer, and to manipulate content displayed on the portable computer." *Id.*, 10:55-58. The navigation hardware may include a scroll wheel, navigation buttons 166, 168, or conventional tools (e.g., touchpad 108, track ball, mouse, or other peripherals) to "control, adjust and/or select various functionality of the portable computer." *Id.*, 10:60-61, 11:2-10, 15-19, 22-24, 40-44, 12:17-21. Navigation button 166 may be implemented on a side of the base, and navigation button 168 may be implemented as part of the keyboard 106, as illustrated in FIG. 17 of the '844 Patent below.

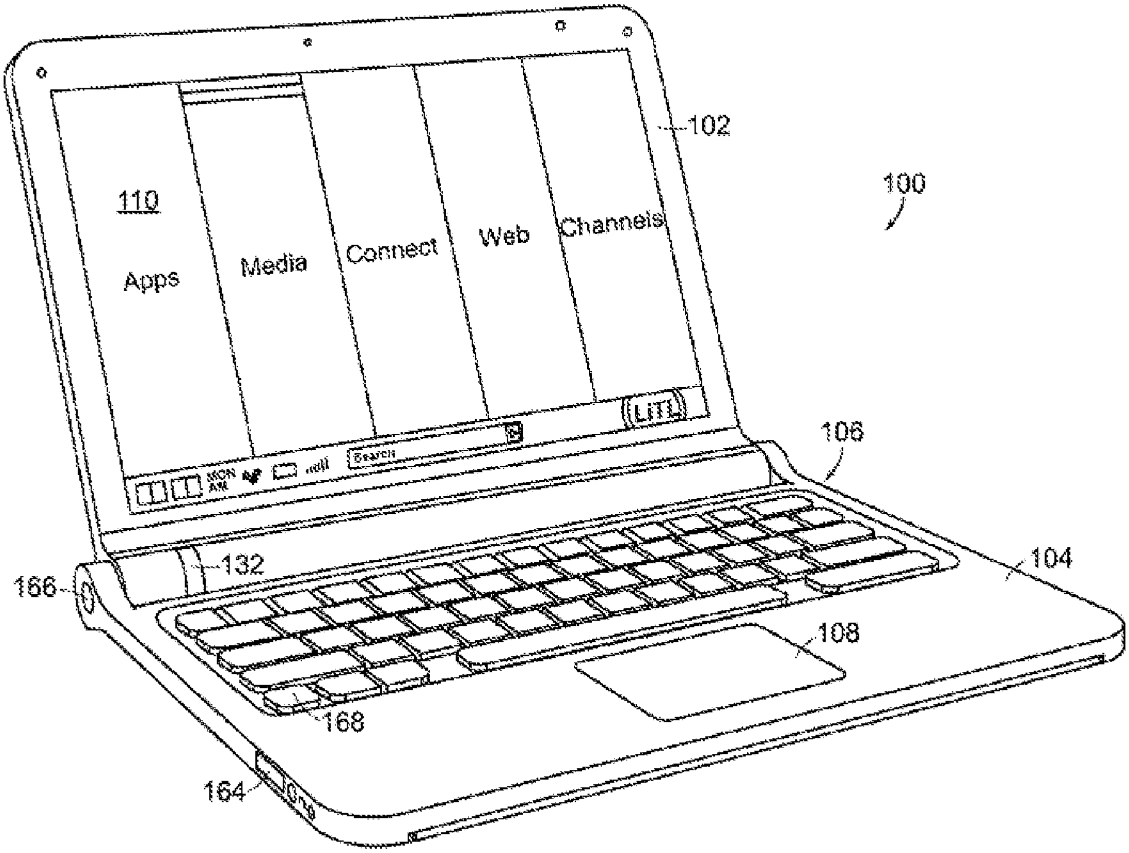

102
100
110
Apps
Media
Connect
Web
Channels
LITL
Search
MON
AM
106
104
132
166
108
168
164

FIG. 17

In one example, navigation hardware is used to control operating parameters of the portable computer and content displayed on the display screen by "permit[ting] the user to adjust a volume of sound produced by the portable computer. In another example, the screen is configured to display at least one of a plurality of modes of content, and the scroll wheel is configured to permit the user to select a mode of content for display by the portable computer." *Id.*, 3:36-41.

The '844 Patent also describes content modes ("the modes of content") that include media 172a, connect 172b, web 172c, and applications 172d. *Id.*, 11:35-38. "[T]he media mode 172a may provide access to a medial [sic] player to play, view, search and organize media, such as music, video, photos, etc." *Id.*, 44-46. "The connect mode 172b may provide access to features such as, for example, email, Voice-over-IP instant messaging, etc." *Id.*, 46-48. "[T]he web mode 172c may provide access to internet browsing and searching." *Id.*, 49-50. "The application mode 172d may provide access to, for example, computer applications or programs, such as word processor, spreadsheet, calculator, etc." *Id.*, 50-52.

Challenged Claim 1 is representative. *Id.*, 17:10-38. As shown below, however, at the Critical Date, portable computers that used a navigation control and were configurable into a plurality of display modes, including the laptop, easel, and frame modes, were well-known in the art. EX-1010, ¶54.

B. Prosecution History of the '844 Patent

The '844 Patent was allowed after several Office Actions and claim amendments. EX-1002, *passim*. In the last Office Action before allowance, dated June 7, 2012, the Examiner rejected all pending independent claims as being unpatentable over U.S. Patent No. 7,061,472 to Schweizer in view of U.S. Pat. No.

5,436,954 to Nishiyama. *Id.*, 593-602. Applicant made amendments to the independent claims that led to allowance, and the amendments to the independent claims are generally related to the following claim features: (1) the laptop mode, (2) the easel mode, (3) interacting with the displayed content in the easel mode without interacting with the keyboard, (4) interacting with the single display screen, and (5) the navigation control. *Id.*, 73-76.

Additionally, the Examiner provided final amendments to the independent claims. *Id.*, 36. These amendments that led to allowance generally relate to the frame mode. *Id.*

However, as demonstrated below, all of these features (along with the rest of the features in the Challenged Claims) were squarely within the prior art, including the prior art relied upon in this Petition.

C. Level of Ordinary Skill in the Art

A person of ordinary skill in the art ("POSITA") would have had at least a Bachelor's degree in Electrical Engineering, Computer Engineering, or Computer Science, plus two to three years of work experience in designing hardware and/or software aspects of the User Interface (UI) for portable computing devices; the POSITA would also be familiar with designs of the user interface employed and displayed by the operating system and its organization of content and functionality. Alternatively, the POSITA would have received a graduate degree such as a

Master's or PhD degree with at least one year of work experience related to hardware and/or software design aspects of the UI for portable computing devices; the POSITA would also be familiar with designs of the user interface employed and displayed by the operating system and its organization of content and functionality. EX-1010, ¶26.

D. Claim Listing

EX-1012 is a claim listing that enumerates each claim element.

VII. CLAIM CONSTRUCTION OF CONTENT MODE—37 C.F.R. §42.104 (b)(3)

The claim construction standard defined in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) applies to this proceeding. 83 Fed. Reg. No. 197, 51340 (Oct. 11, 2018); 37 C.F.R. 42.100. Words in a claim are given their plain meaning, which is the meaning understood by a POSITA after reading the entire patent. *Phillips*, 415 F.3d at 1312-1313.

Petitioner proposes that only the terms below in the Challenged Claims require express construction for purposes of the current validity challenges. Petitioner reserves the right to respond to any constructions that LiTL may offer or that the Board may adopt. Petitioner is not waiving any arguments concerning indefiniteness or claim scope that may be raised in other proceedings.

"Content mode" refers to the use of "first content mode" ([1c], Claim 8, [10c3], and [18d]), "second content mode" ([1d1], [10d1], and [18e1]), "modes of content" ([4a], [4b], [14a], and [14b]), and "mode of content" (Claim 6). The '844 Patent describes "information, programs, features and applications may be grouped into the various modes of content 172." EX-1001, 11:39-40. In the mode of content, the user may "select particular functions, features or applications within that mode." *Id.*, 12:34-35. E.g., FIG. 11 (below) depicts a block diagram of a "'home' screen 170 that displays a plurality of modes of content 172" that, when selected, allow "the user [to] access the content organized within that mode." *Id.*, 11:29-30, 40-44.

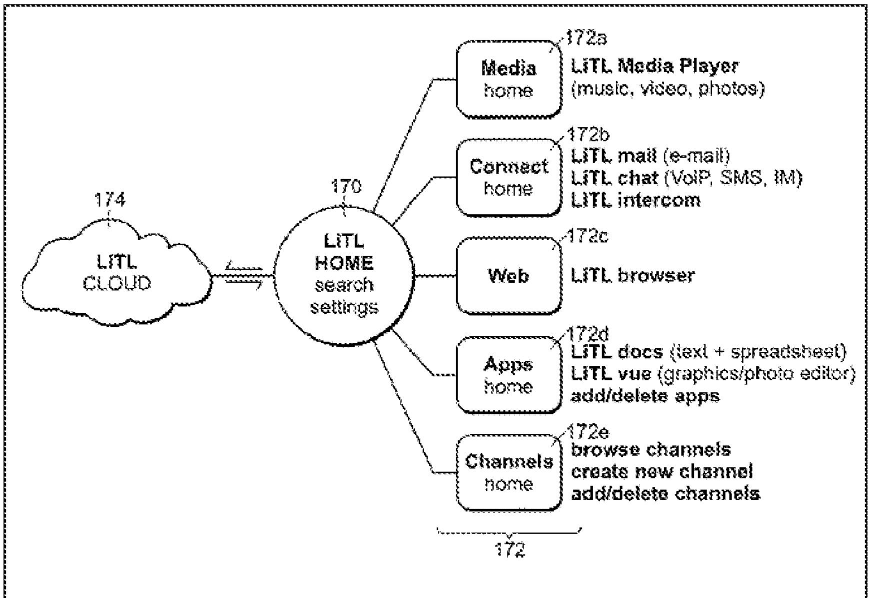

174
LiTL CLOUD
170
LiTL HOME search settings
172a
Media home
LiTL Media Player (music, video, photos)
172b
Connect home
LiTL mail (e-mail)
LiTL chat (VoIP, SMS, IM)
LiTL intercom
172c
Web
LiTL browser
172d
Apps home
LiTL docs (text + spreadsheet)
LiTL vue (graphics/photo editor)
add/delete apps
172e
Channels home
browse channels
create new channel
add/delete channels
172

FIG. 11

These modes of content "may be displayed as a series of bars across the display screen 110" (FIG. 12 below), "a 'desktop' and icon configuration [not shown] a 'dashboard' type display [FIG. 13 below]," or "another configuration, as would be recognized by those skilled in the art." *Id.*, 12:6-8, 11-17.

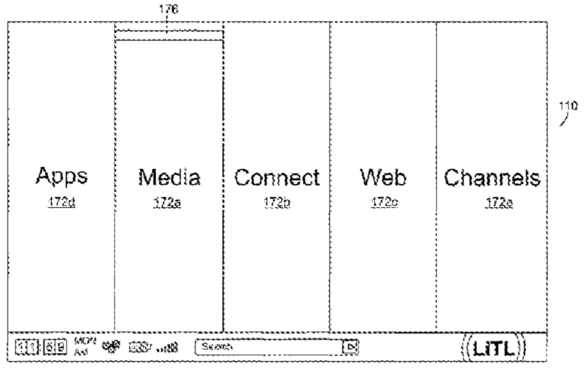

176
110
Apps
172d
Media
172a
Connect
172b
Web
172c
Channels
172a
Search
LiTL

FIG. 12

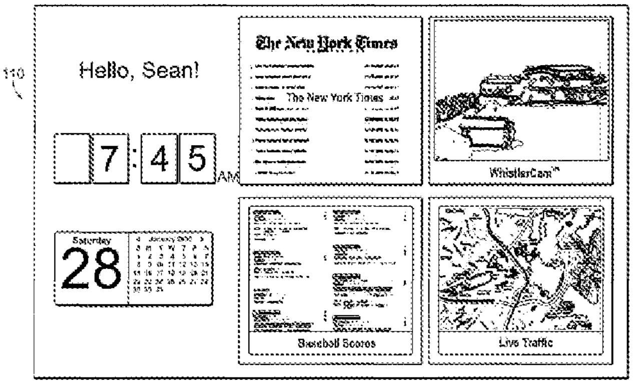

110
Hello, Sean!
7:45 AM
Saturday
28
The New York Times
WhistlerCam
Baseball Scores
Live Traffic

FIG. 13

For purposes of this Petition only, the “first content mode,” the “second content mode,” modes of content," and "mode of content" are each construed as "user selectable element(s) displayed on a user interface that, when selected, allows the user to access the content organized therein.” Petitioner's construction is consistent with the claim language, specification, and prosecution history of the '844 Patent. *See* VII; EX-1002, *passim*.

VIII. PRECISE REASONS FOR RELIEF REQUESTED

A. Summary of the Prior Art Applied in This Petition

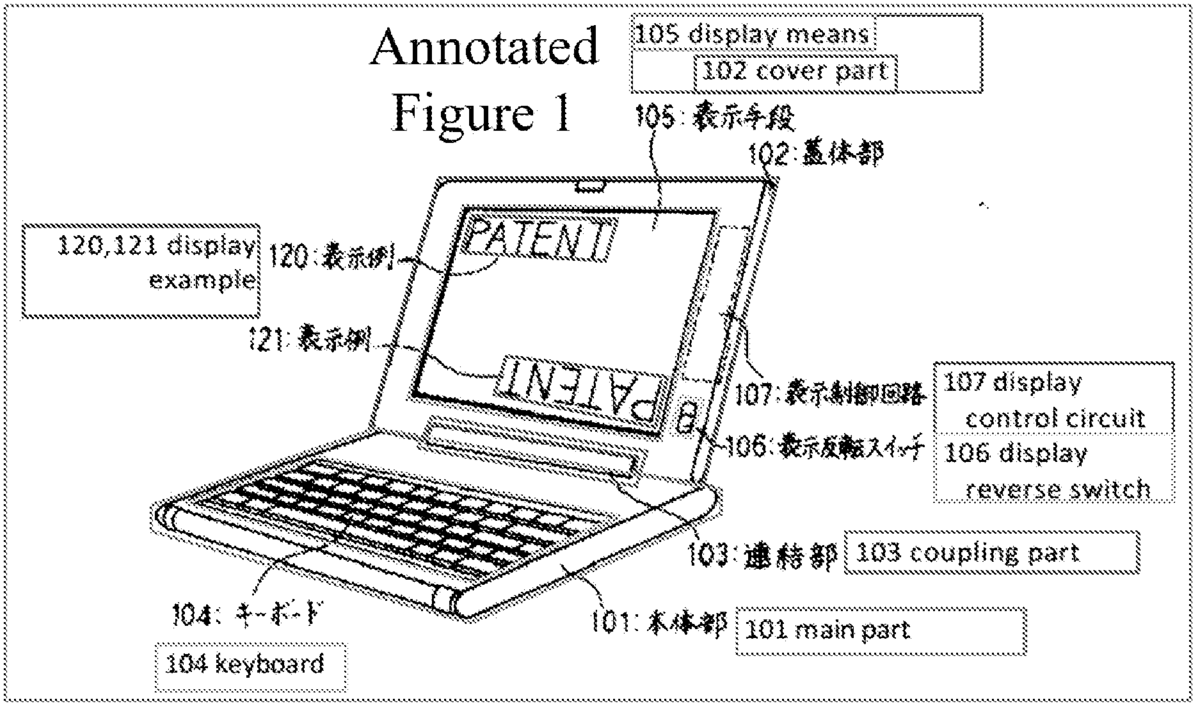
1. Overview of Shimura

Shimura published as Japanese Patent No. 1994-242853 on September 2, 1994, from an application filed on February 15, 1993. Shimura therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (b). The Shimura reference was published in Japanese (EX-1003), and a certified English translation is provided herein (EX-1004, reference hereinafter will be made to the certified English translation for simplicity).

Shimura is directed to a portable "computer which can adopt a mode suitable for a user environment." EX-1004, Abstract. The portable computer includes:

- main part 101 (dark green below in Annotated Figure 1 of Shimura) with keyboard 104 (light green);
- cover part 102 (dark blue) with display means 105 (light blue);
- coupling part 103 (red) fastening the main part 101 to the cover part 102;
- display reverse switch 106 (orange) to set the display to a normal view or an inverted view (i.e., the displayed content is turned upside down); and
- display elements 120, 121 (dark red).

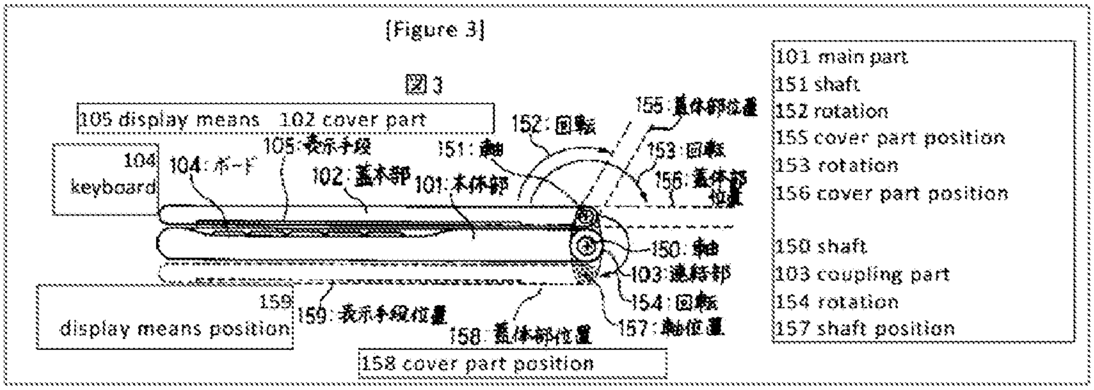
Id., Abstract, ¶¶10-12, 17.

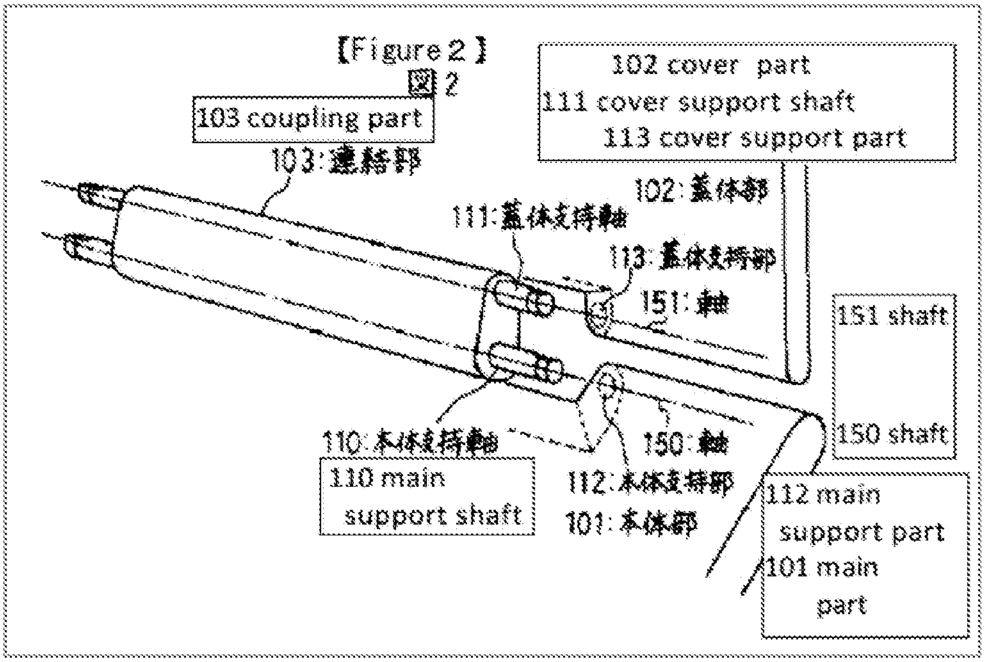


Annotated Figure 1

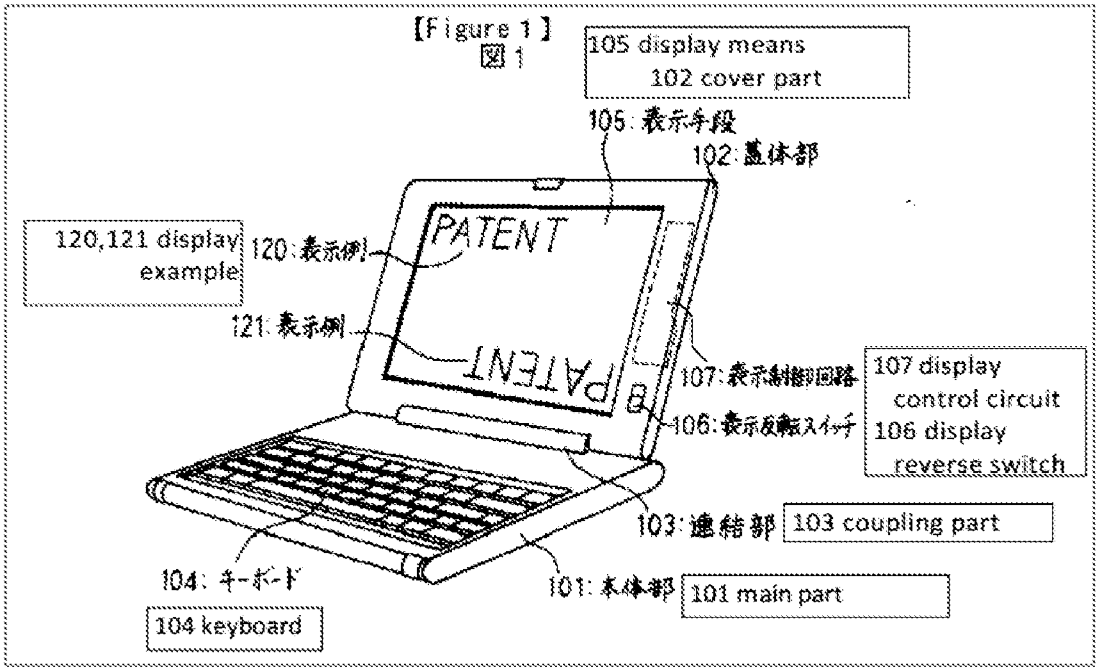
105 display means
102 cover part
105:表示手段
102:蓋体部
120,121 display example
120:表示例
121:表示例
PATENT
PATENT
B
107:表示制御回路
107 display control circuit
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part
104:キーボード
104 keyboard
101:本体部
101 main part

The coupling part 103 allows the cover part 102 to be rotated up to 360° about the main part 101 into various display modes, as illustrated in Figure 3 below. *Id.*, ¶¶11-17. The coupling part 103 may include two shafts 150, 151, which facilitates rotation of the cover part 102 about the main part 101, as illustrated in Figure 2 below. *Id.*, ¶¶13-14. The coupling part 103 includes main support part 112 of the main part 101 and cover support part 113 of the cover part 102. *Id.*, ¶13.


[Figure 3]
図3
105 display means 102 cover part
104 keyboard
104:ボード
105:表示手段
102:蓋体部
101:本体部
151:軸
152:回転
155:蓋体部位置
153:回転
156:蓋体部位置
150:軸
103:連結部
154:回転
157:軸位置
159 display means position
159:表示手段位置
158:蓋体部位置
158 cover part position
101 main part
151 shaft
152 rotation
155 cover part position
153 rotation
156 cover part position
150 shaft
103 coupling part
154 rotation
157 shaft position


【Figure 2】
図2
103 coupling part
103:連結部
102 cover part
111 cover support shaft
113 cover support part
102:蓋体部
111:蓋体支持軸
113:蓋体支持部
151:軸
151 shaft
150 shaft
110:本体支持軸
110 main support shaft
150:軸
112:本体支持部
101:本体部
112 main support part
101 main part

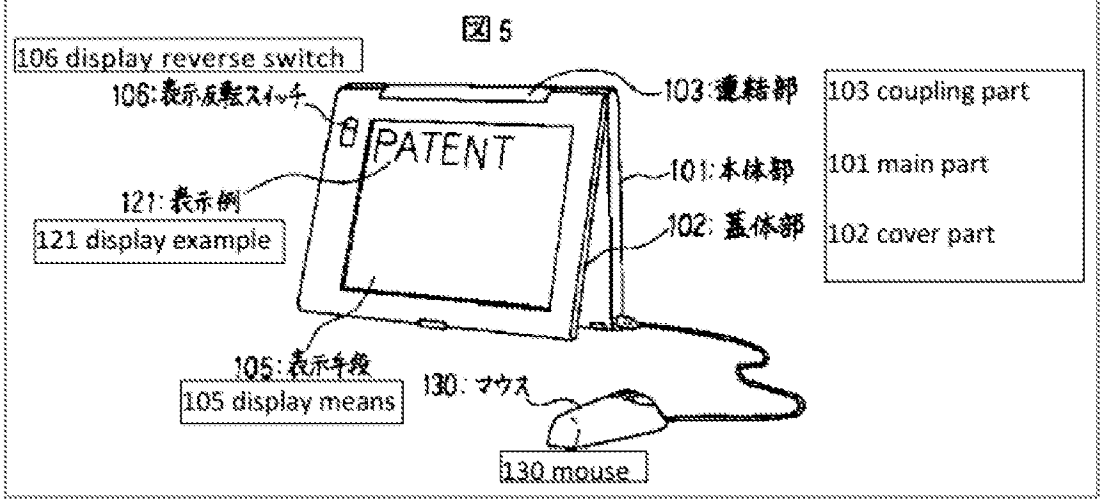
In a first display mode, which corresponds to the laptop mode of the '844 Patent, the keyboard 104 is facing upward and the display means 105 is facing the user, as illustrated in Figure 1 below. EX-1004, ¶¶11, 14; EX-1010, ¶134.


【Figure 1】
図1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
PATENT
B
107: 表示制御回路
106: 表示反転スイッチ
107 display control circuit
106 display reverse switch
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

In a second display mode, which corresponds to the easel mode of the '844 Patent, the cover part is rotated 340° about the main part 101 such that the display means 105 is facing the user and the keyboard 104 is facing away from the user, and the user may be limited to interacting with the operating environment using a mouse 130, as illustrated in Figure 5 below. EX-1004, ¶¶14-16; EX-1010, ¶135.

[Figure 5]

図 5


106 display reverse switch
106:表示反転スイッチ
103:連結部
103 coupling part
PATENT
101:本体部
101 main part
121:表示例
121 display example
102:蓋体部
102 cover part
105:表示手段
105 display means
130:マウス
130 mouse

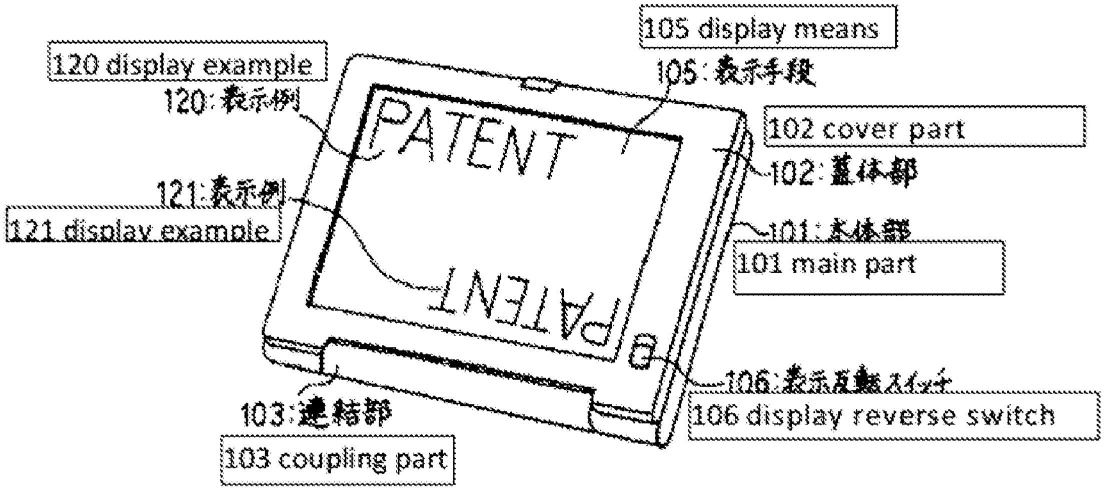
In a third display mode, which corresponds to the frame mode of the '844 Patent, the keyboard 104 and the display means 105 are facing away from each other, as illustrated in Figure 4 below. EX-1004, ¶17.[1]

---

[1] The '844 Patent describes that in frame mode, "the keyboard 106 [is] 'face down' on the surface 212 and the display 110 [is] facing upward." EX-1001, 16:1-5. Likewise, Shimura's Figure 4 shows the keyboard face down on a surface and the display facing upward. EX-1004, ¶¶16, 18. Shimura further discloses that the portable computer can be configured to any angle between 0° to 360°, such as 340°. *Id.*, ¶¶8, 10, 17.

[Figure 4]

図4


105 display means
105:表示手段
120 display example
120:表示例
102 cover part
102:蓋体部
PATENT
121:表示例
121 display example
101:本体部
101 main part
PATENT
B
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part

Shimura also discloses a "second switching means" that can be set to invalidate input from the keyboard. *Id.*, ¶8. The input invalidation functionality can be used in a frame mode, as depicted in Shimura's Figure 4 (above), where data may be mistakenly inputted from the keyboard on the back of the display means 105. *Id.*, ¶18. Shimura also discloses that the input invalidation functionality operates automatically based on an angle of the cover part 102 compared to main part 101. *Id.*, ¶¶18, 19.

2. Overview of Tsuji

Tsuji published on March 24, 2005 and claims priority to a Japanese application filed on September 19, 2003. Tsuji therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Referring to FIGS. 1 and 5 below, Tsuji discloses portable computer 1 including computer main body 11. EX-1005, ¶30. Tsuji's display unit 12 is "implemented as a touch screen device that is capable of recognizing a position indicated by a stylus (pen) or a user's finger." *Id.*, ¶31; FIGS. 1 and 5 below. The portable computer 1 can be configured into a PC style, as illustrated in FIG. 1 below, and a PDA style, as illustrated in FIG. 5 below. *Id.*, ¶34.

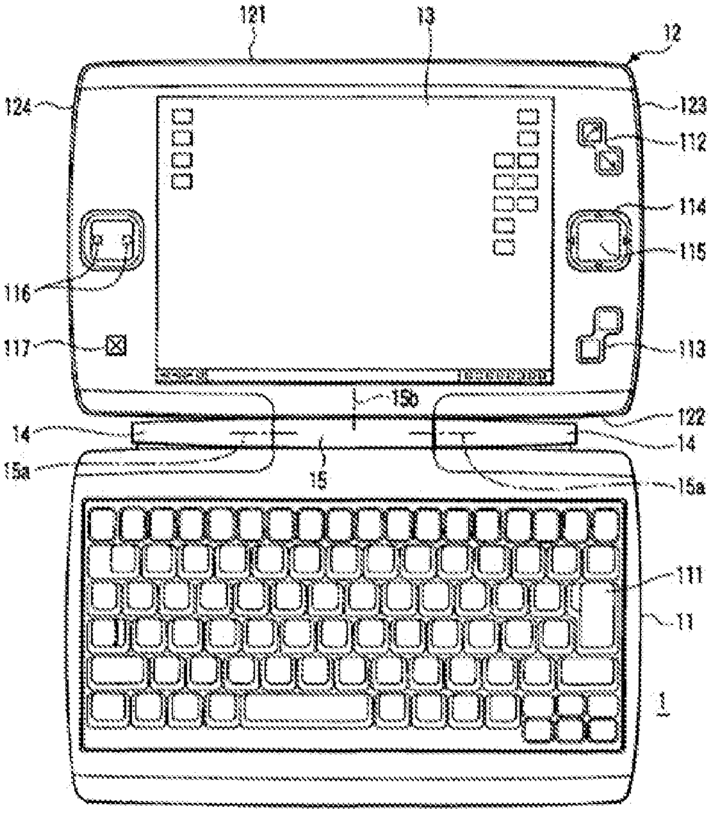

121
13
12
124
123
112
114
115
116
117
113
15b
122
14
14
15a
15
15a
111
11
1

FIG. 1

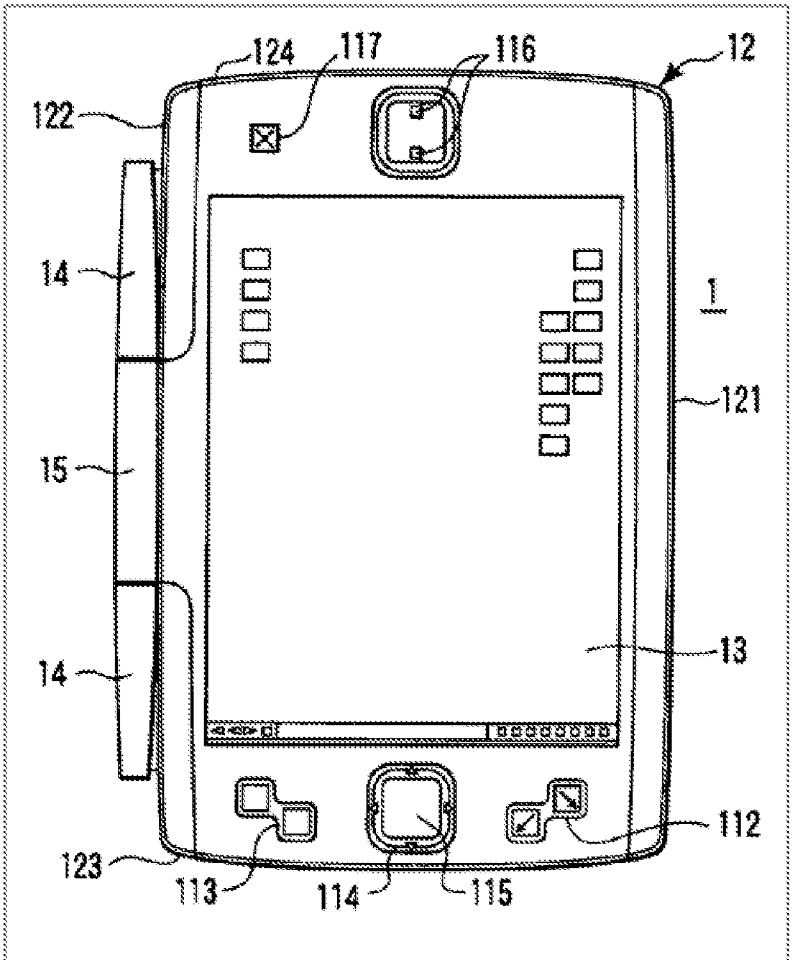


FIG.5

A display driver 303 in the portable computer 1 "performs an operation for rotating a screen image displayed on the LCD 13 and a scaling operation for varying the aspect ratio in response to an instruction from the BIOS 301." *Id.*, ¶70. The BIOS 301 relies on gravity sensor 203 and/or rotation angle sensor 202, illustrated in FIG. 10 below, to orient the display unit 12 (i.e., rotate the screen image). *Id.*, ¶¶48, 50-51, 74, 77.

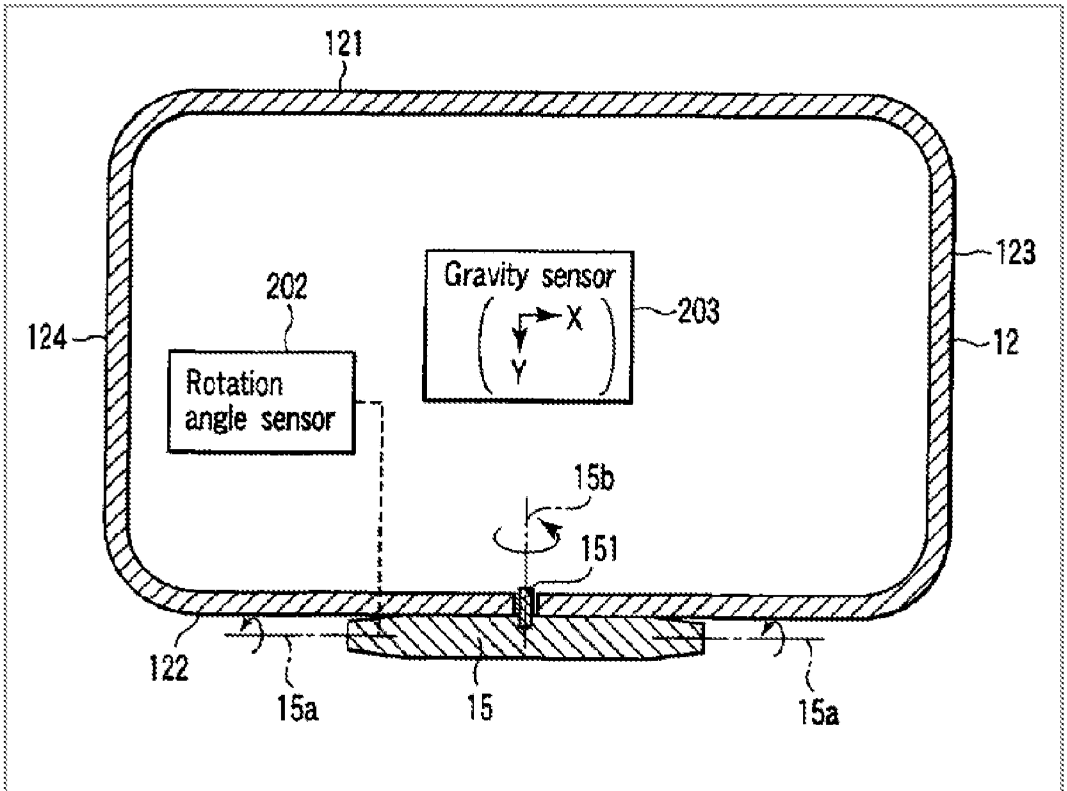

121
123
124
202
Rotation angle sensor
Gravity sensor
X
Y
203
12
15b
151
122
15a
15
15a

FIG. 10

Tsuji also discloses key switches 118 and 119 referred to as a R (right) button and a L (left) button illustrated in FIG. 4 below. *Id.*, ¶38 ("Any given function can programmably be assigned to each of the R and L button switches 118 and 119.").

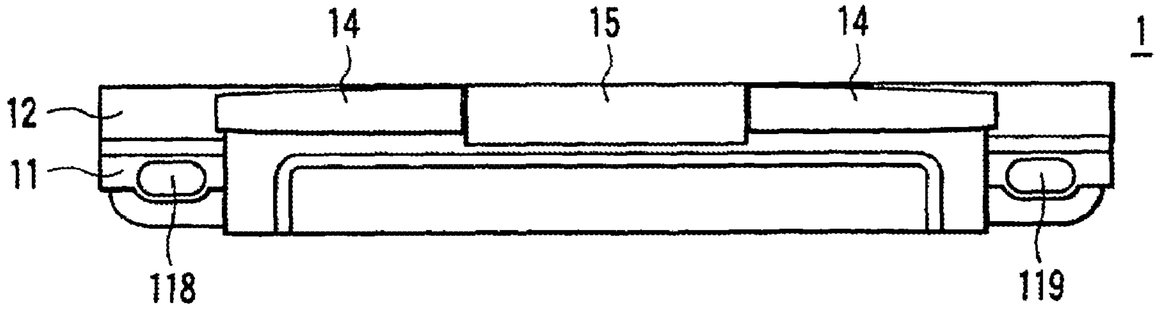

14
15
14
1
12
11
118
119

FIG. 4

E.g., Tsuji discloses Shift, Ctrl, Alt, Enter, Esc, and arrow keys on the keyboard 11 that can be assigned to the R and L buttons 118 and 119. *Id.*, ¶¶42-45. The R and L buttons "are exposed regardless of whether the computer 1 is used in a PC style or a PDA style." *Id.*, ¶39. Tsuji discloses "a key assignment changing function [that] automatically chang[es] a function assigned to each of the R and L button[s] . . . 118 and 119 according to [a given display mode]." *Id.*, ¶46.

3. Overview of Pogue[2]

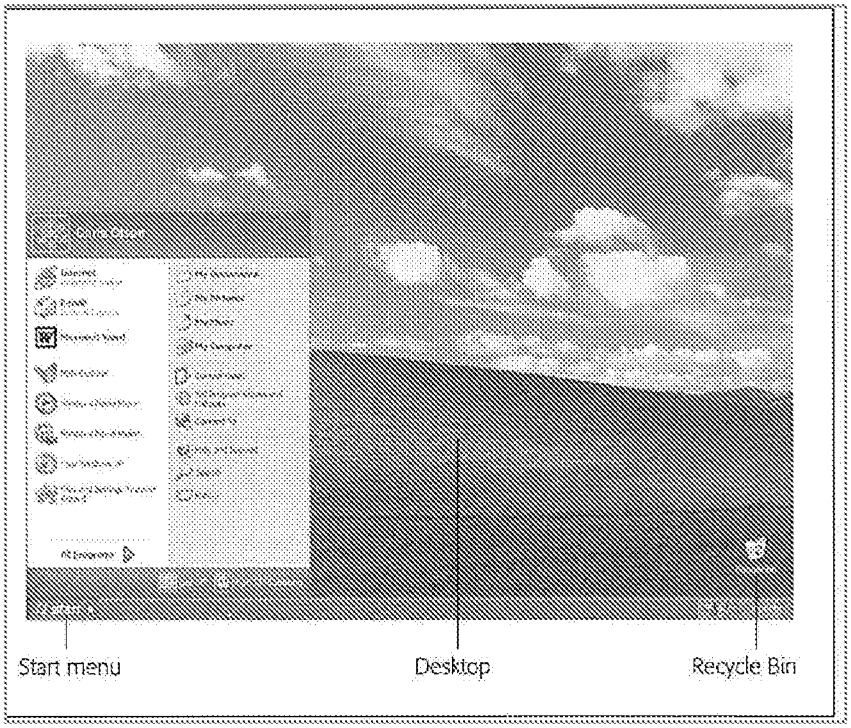
Pogue is a printed publication and is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (b). Pogue bears a marking "Copyright © 2004 Pogue Press, LLC," has an ISBN Number, and a statement that it was "Published by O'Reilly Media, Inc." in the United States. EX-1006, 5; *FLIR Sys., Inc. v. Leak Surveys, Inc.*, IPR2014-00411, slip op. at 18-19 (PTAB Sept. 5, 2014) (Paper 9). Pogue's listing on amazon.com contains user reviews from as early as January 2005, and archived webpages indicate Pogue was available to purchase on various websites prior to the Critical Date. EX-1051, ¶¶2-4; *CIM Maintenance Inc. v. P&RO Solutions Group, Inc.*, IPR2017-00516, slip op. at 18-20 (PTAB June 22, 2017) (Paper 8); *Workspot, Inc. v. Citrix Systems, Inc.*, IPR2019-01002, slip op. at 17-21

---

[2] All citations to Pogue are to the pages of the reference itself, not the stamped EX-1006 page numbers.

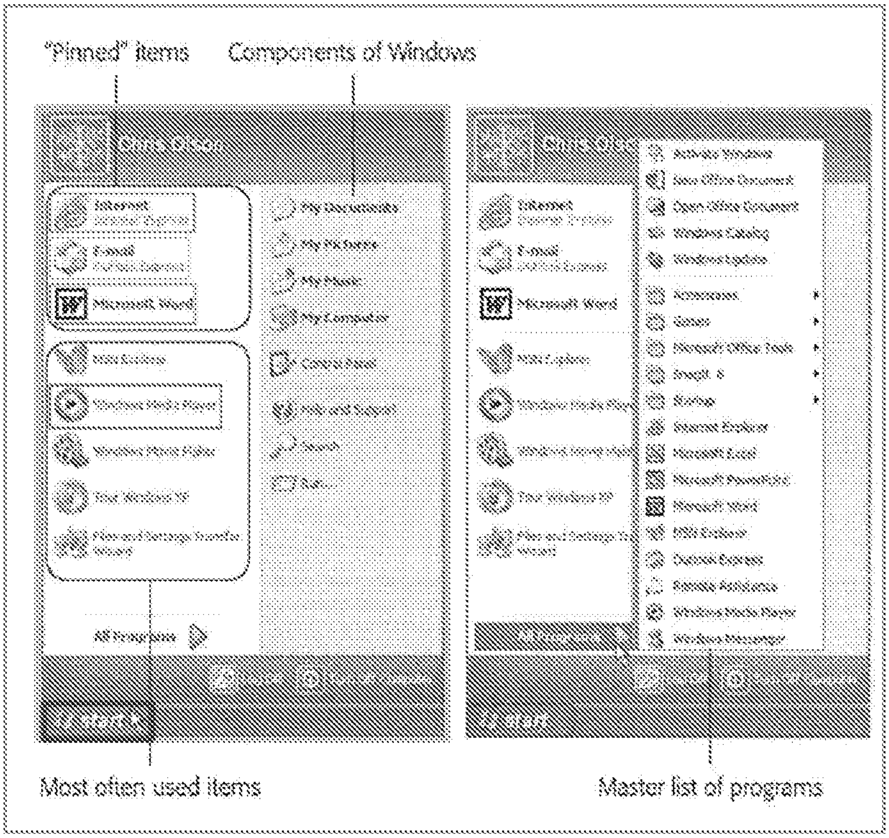
(PTAB Nov. 20, 2019) (Paper 12). Pogue was cataloged by at least one library as early as October 2005. EX-1052, ¶2. As confirmed by the publisher, Pogue was available online to "subscribers, individuals, and libraries" as early as January 11, 2005. EX-1051, ¶5.

Pogue is meant "to serve as the manual that should have accompanied Windows XP" and includes "step-by-step instructions for using almost every Windows feature." EX-1006, 2. "Windows is an operating system, the software that controls your computer," and Windows XP is one version of the Windows operating system. *Id.*, 1, 5. "Every application on your machine, as well as every document you create, is represented on the screen by an icon." *Id.*, 5. E.g., the "[d]esktop[] covers everything you see on the screen when you turn on a Windows XP computer: icons, windows, menus, scroll bars, the Recycle Bin, shortcuts, the Start menu, shortcut menus, and so on."

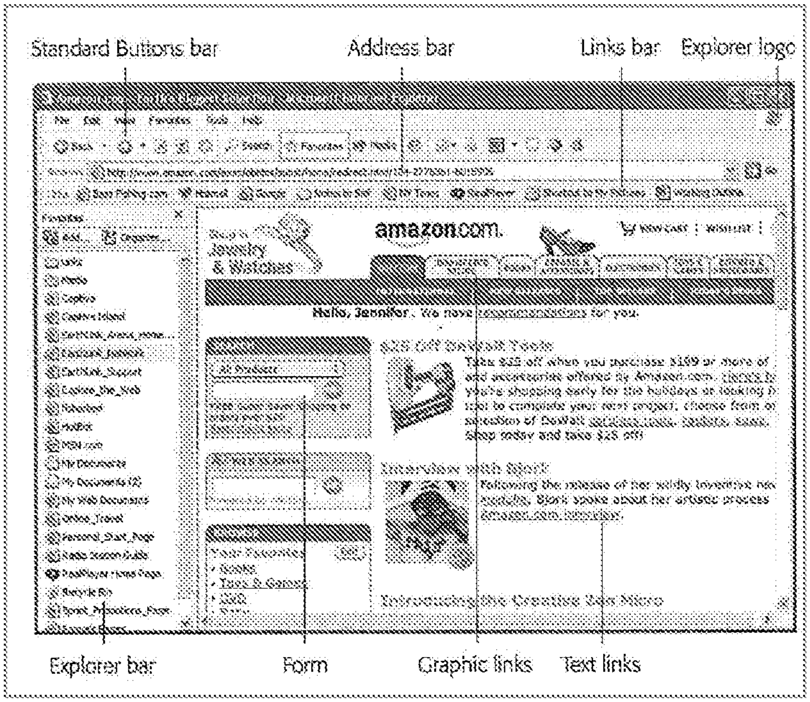


Id., 3, 23, FIG. 2-2.

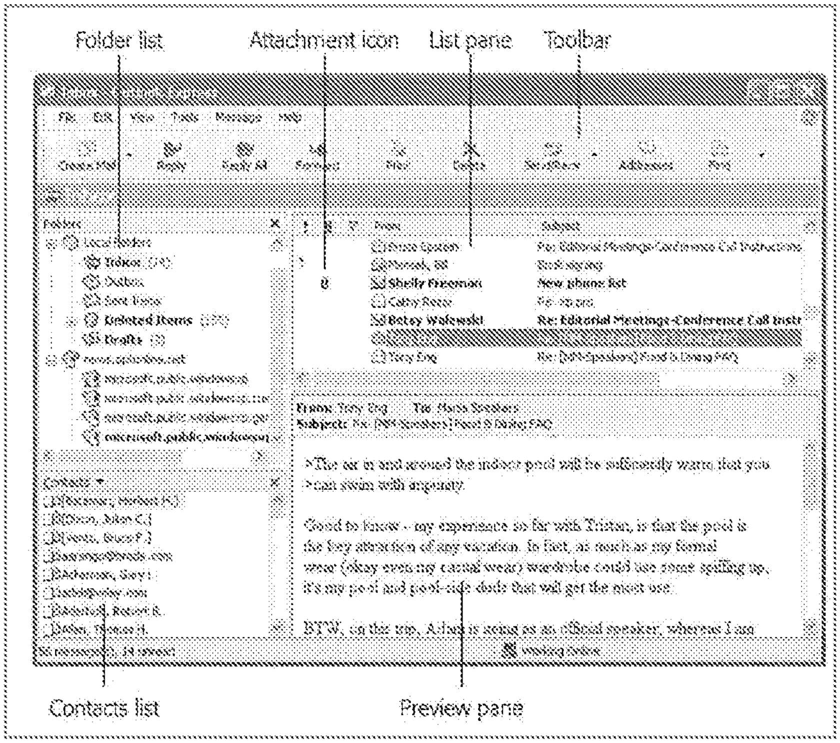
In order to quickly access the Start menu (light green in Figure 2-3 below) and make it visible, a user can click the Start button (purple) or press the Windows logo key or Ctrl+Esc. *Id.*, 25. In the Start menu, the user has access to "Internet" (dark green), "E-mail" (orange), "Microsoft Word" (blue), and "Windows Media Player" (red). *Id.*, 23-25.


"Pinned" items
Components of Windows
Most often used items
Master list of programs

Clicking on the Internet icon opens Internet Explorer to navigate the web. *Id.*, 337-338. After opening Internet Explorer, a web interface is displayed, which includes a standard buttons bar, an address bar, a links bar, an explorer logo, and an explorer bar. *Id.*, Figure 11-1 (below).


Standard Buttons bar
Address bar
Links bar
Explorer logo
Explorer bar
Form
Graphic links
Text links

Clicking on the E-mail icon opens Outlook Express "that lets you receive and send email messages." *Id.*, 373. After opening Outlook express, an email interface is displayed, including a folder list, an attachment icon, a list pane, a toolbar, a contacts list, and a preview pane. *Id.*, 375, Figure 12-1 (below).



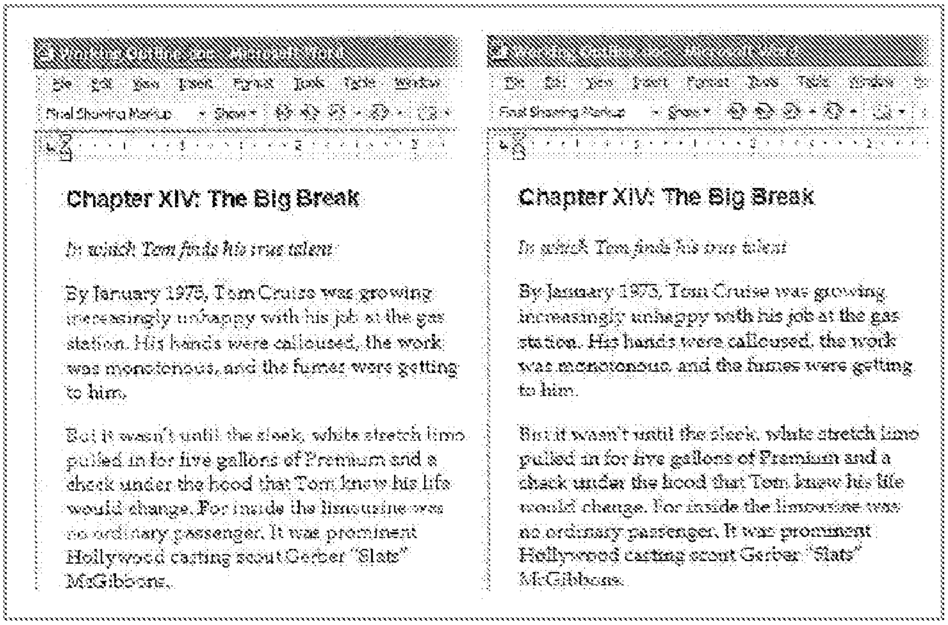
From: Tony Eng To: Hara Speakers
Subject: Re: [NW Speakers] Food & Diving FAQ

>The air in and around the indoor pool will be sufficiently warm that you
>can swim with impunity.

Good to know – my experience so far with Tristan, is that the pool is the key attraction of any vacation. In fact, as much as my formal wear (okay even my casual wear) wardrobe could use some spiffing up, it's my pool and pool-side duds that will get the most use.

BTW, on the trip, Adam is going as an official speaker, whereas I am

Clicking on the Microsoft Word icon opens a word processing interface. *Id.*, 4, 6, 31, Figure 8-12 (below).



Chapter XIV: The Big Break

In which Tom finds his true talent

By January 1973, Tom Cruise was growing increasingly unhappy with his job at the gas station. His hands were calloused, the work was monotonous, and the fumes were getting to him.

But it wasn't until the sleek, white stretch limo pulled in for five gallons of Premium and a check under the hood that Tom knew his life would change. For inside the limousine was no ordinary passenger. It was prominent Hollywood casting scout Gerber "Slats" McGibbons.

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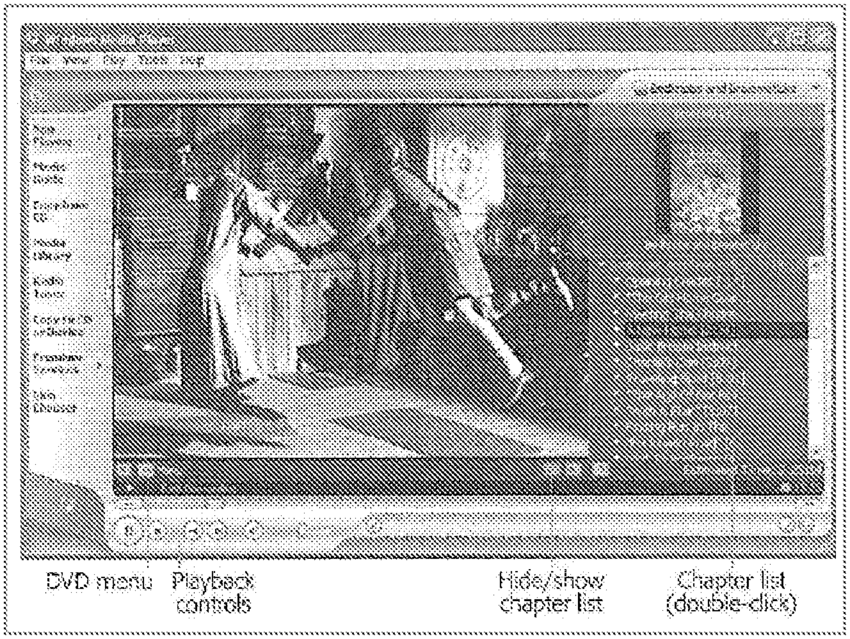
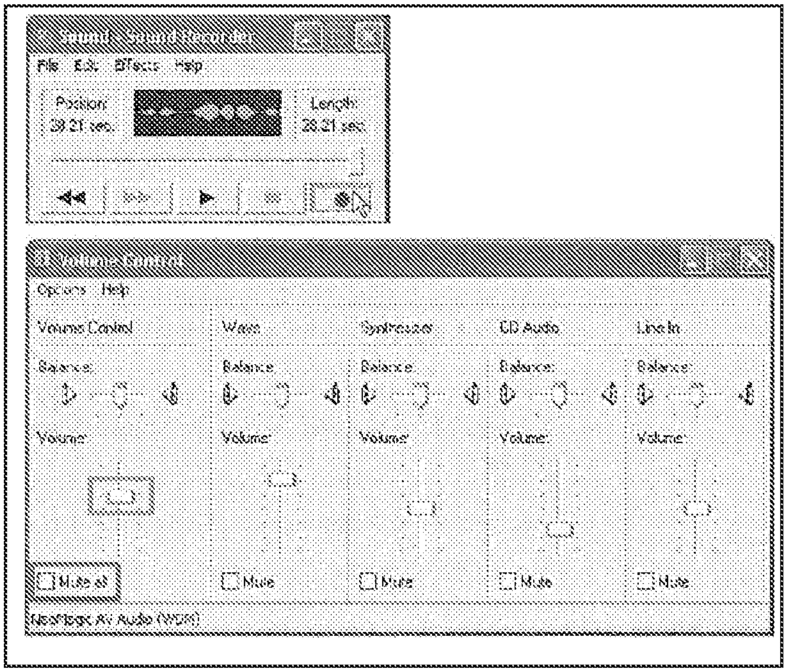
But it wasn't until the sleek, white stretch limo pulled in for five gallons of Premium and a check under the hood that Tom knew his life would change. For inside the limousine was no ordinary passenger. It was prominent Hollywood casting scout Gerber "Slats" McGibbons.

Clicking on the Windows Media Player icon opens Windows Media Player, "which lets you play movies, listen to distant radio stations over the Internet, burn music CDs, and transfer music files to your portable MP3 player." *Id.*, 4, 13, 26. When playing a movie in Windows Media Player, the original window size may be "relatively small." *Id.*, 227. It is recommended to enlarge the window to fill the screen. *Id.*, 228. The Windows Media Player may include a media interface, which includes a DVD menu, playback controls, hide/show chapter list, and chapter list. *Id.*, Figure 7-13 (below).



Windows XP also includes a volume control interface where a user can drag the volume bar (blue in Figure 7-14 below) or press "Mute all" (red), among other features of the volume control interface. *Id.*, 229-231.


Sound - Sound Recorder
File
Edit
Effects
Help
Position:
28.21 sec.
Length:
28.21 sec.
Volume Control
Options
Help
Volume Control
Wave
Synthesizer
CD Audio
Line In
Balance:
Volume:
☐ Mute all
☐ Mute
NeoMagic AV Audio (WDM)

Windows XP's hardware requirements include a computer with 233 MHz processor clock speed, 64 MB of RAM, 1.5 GB of free hard disk space, 800 x 600 resolution video adapter and monitor, a CD-ROM or DVD drive, and a keyboard and compatible pointing device. *Id.*, 558. Pogue also discloses various well-known input devices for computers, including a keyboard, a trackpad, and a mouse. *Id.*, 273-274.

4. Overview of Escamilla

Escamilla issued as a U.S. patent on April 20, 2004 from a U.S. patent application filed on September 22, 2000. Escamilla therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Escamilla is directed to a multi-function scroll device (red) in a portable computer that is bi-directionally rotatable relative to the exterior surface. EX-1007, Abstract, 1:66-2:2, FIG. 3.

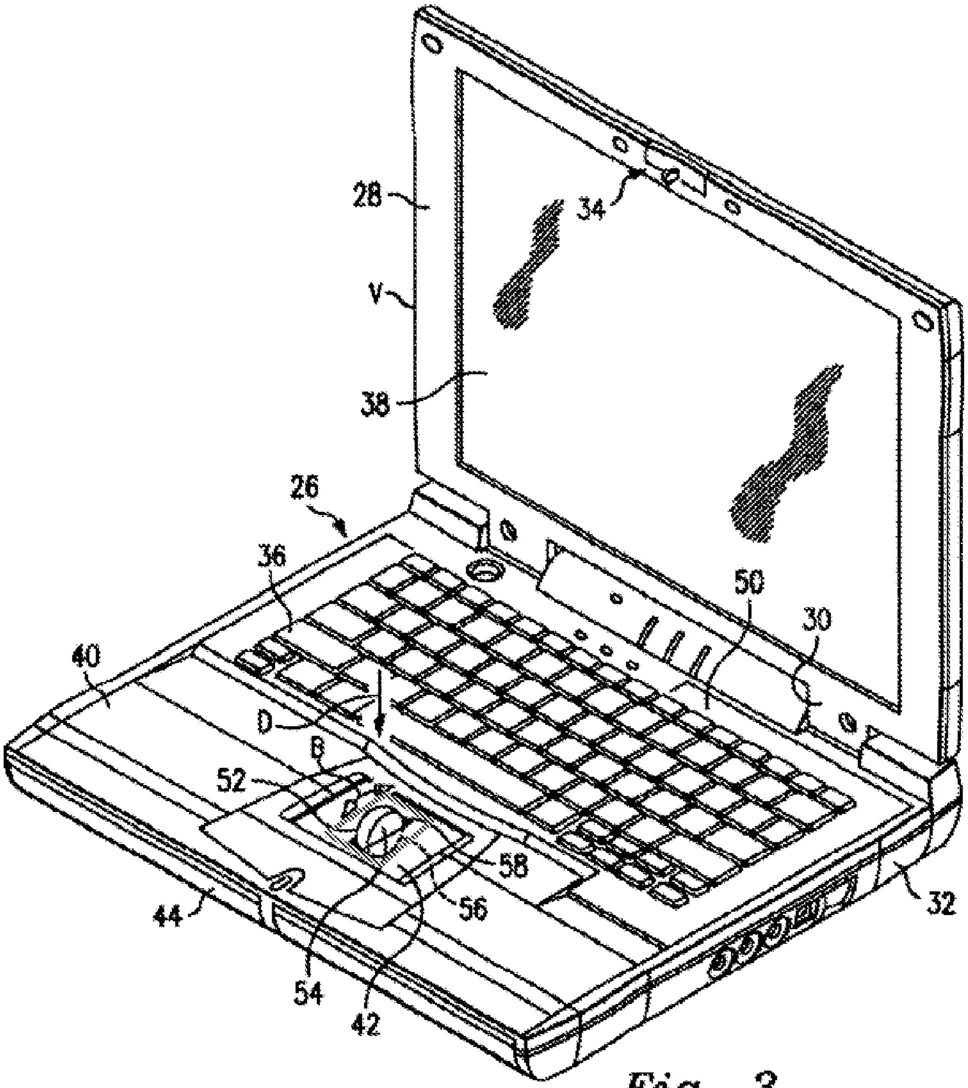


Fig. 3

In the background section, Escamilla discusses that portable laptop computers do not have an integrated multi-function scrolling device, which can be used to pan, zoom, horizontal scroll, vertical scroll, and autoscroll. *Id.*, 1:10-11, 14-35. As shown above in FIG. 3, Escamilla integrates multi-function scroll member 52 into the base of the portable computer. *Id.*, 3:5-18.

5. Overview of Yeh

Yeh issued as a U.S. patent on May 28, 2002 from a U.S. patent application filed on March 11, 2000. Yeh therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Yeh is directed to a volume control knob for use with a laptop computer. EX-1008, Abstract. The volume control knob can be rotated clockwise, as illustrated in FIG. 6 below, to increase the volume and rotated counterclockwise, as illustrated in FIG. 7 below, to decrease the volume. *Id.*, 3:1-7.

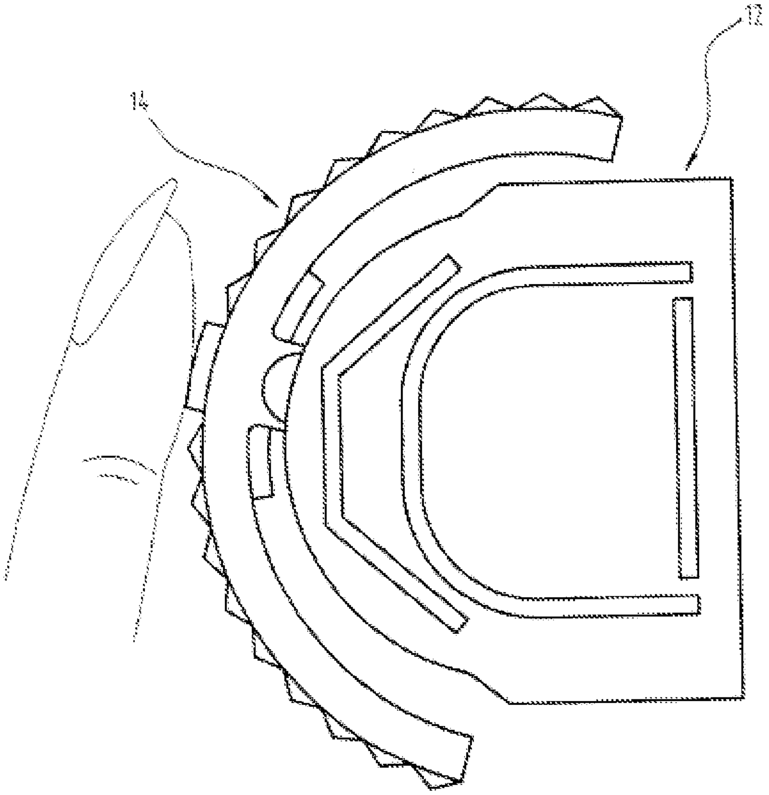


Fig. 6

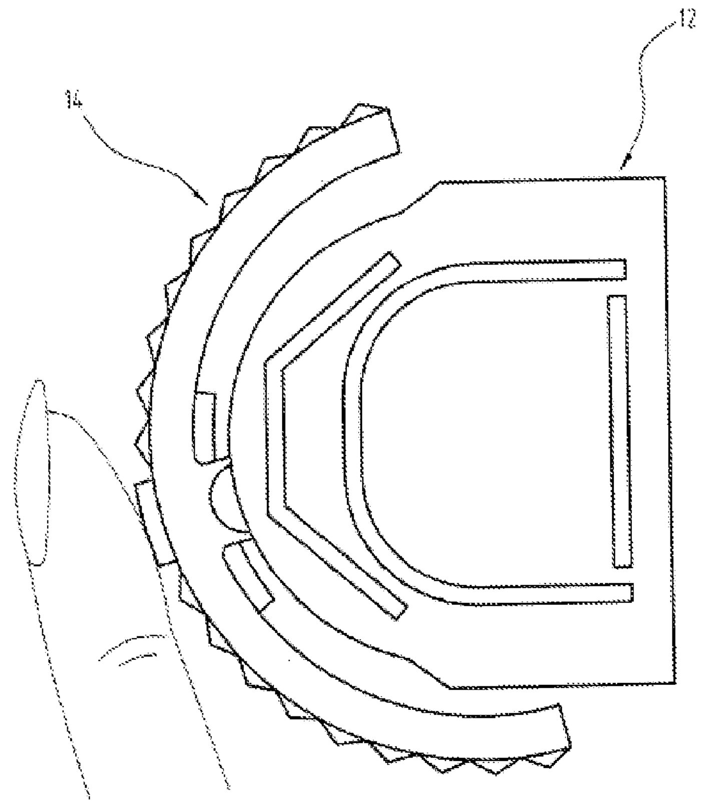


Fig. 7

6. Overview of Lin

Lin published on January 18, 2007 from a U.S. patent application filed on July 5, 2006. Lin therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

Lin is directed to a rotary knob (red) disposed in pivot portion 230 (blue) of portable computer 200. EX-1009, Abstract, ¶28, FIG. 2.

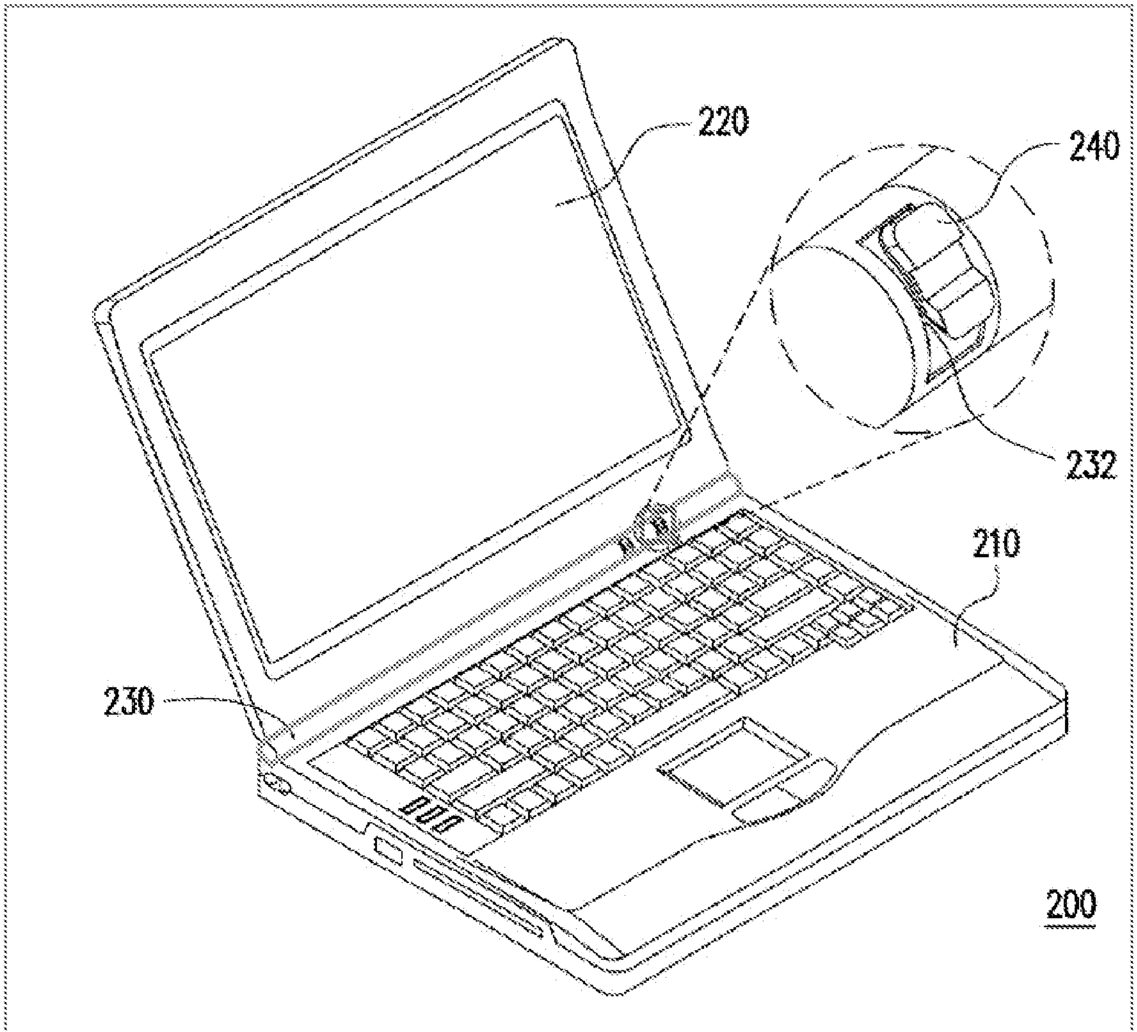


FIG. 2

The rotary knob can be used to activate a desired function of the portable computer. *Id.*, ¶¶9, 28.

7. Family Diagram

EX-1013 is a diagram depicting different modified Portable Computers of Shimura used in the Grounds below.

B. Ground 1: Shimura in view of Tsuji and Pogue renders Claims 1, 3-5, 7-10, and 13-16 obvious.

1. Combination of Shimura and Tsuji (hereafter "Shimura-Tsuji combination")

A POSITA would have been motivated to combine Shimura with Tsuji for several reasons. EX-1010, ¶¶161-78. They both:

- are contemporaneous patents directed toward complementary solutions to highly analogous problems in the same field of endeavor;
- are directed toward a portable computer that can be used in various display modes and displayed content orientations (EX-1004, ¶¶10-17, Figures 1, 3, 4, 5; EX-1005, ¶¶34, 51, FIGs. 1, 5-8); and
- discuss display modes where the keyboard is inoperable and/or inaccessible (EX-1004, ¶¶8, 18, 19; EX-1005, ¶¶32, 45; EX-1010, ¶161);

While Shimura discloses receiving pen input, EX-1004, Abstract, ¶¶4, 5, 9, 11, 16, 20, it does not explicitly disclose receiving finger input; Tsuji, however, explicitly discloses that a touch screen receiving input from a stylus and finger. EX-1005, ¶31.

a. Incorporating Tsuji's Touch Screen into the Shimura Computer

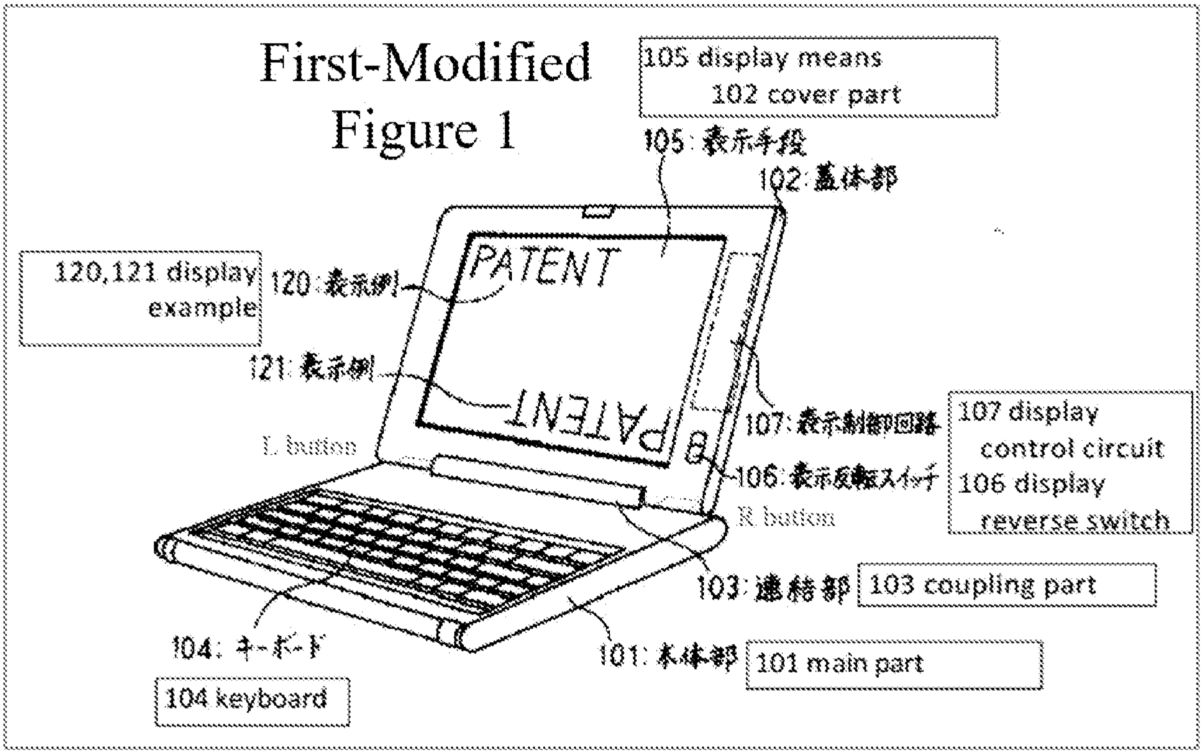
A POSITA would have been motivated to incorporate Tsuji's touch screen, capable of both finger and stylus inputs, into the Shimura Computer because such a display was well-known and would provide an input device (e.g., a finger) that would not require an external peripheral device (e.g., a mouse, or stylus). There is additional motivation to incorporate Tsuji's touch-sensitive display because the keyboard is not always accessible or operable in all of the display modes of the Shimura Computer. Thus, a display capable of receiving input from a finger would improve a user's interaction with the Shimura Computer. EX-1010, ¶163.

A POSITA would have understood that the Shimura Computer incorporating Tsuji's touch screen includes other well-known portable computer components. E.g., Tsuji discloses that the computer main body 11 includes a CPU (central processing unit). EX-1005, ¶¶30, 63. While such a CPU is not explicitly disclosed in Shimura, a POSITA would have known that the Shimura Computer must include such a well-known standard component of a portable computer. EX-1010, ¶164.

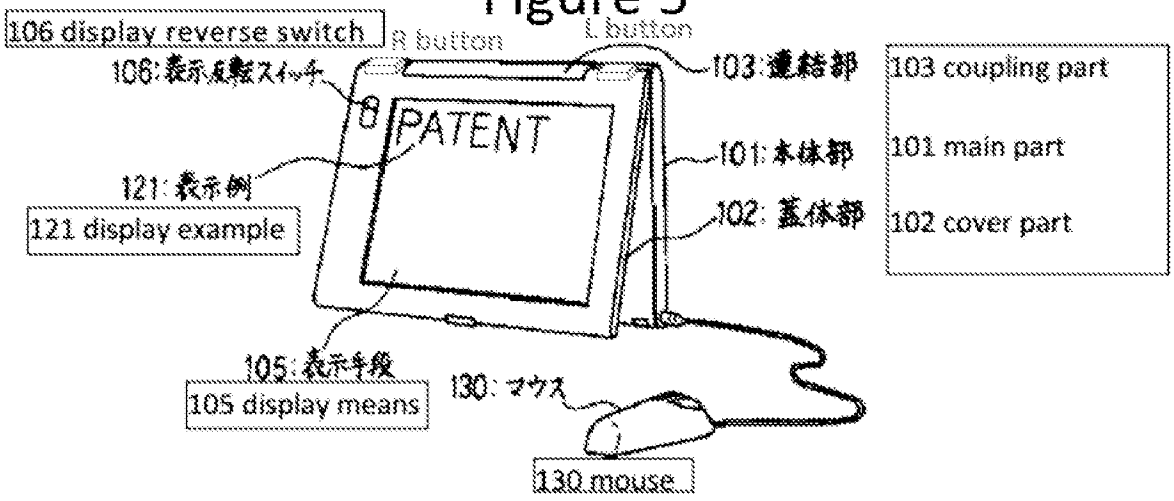
b. Further Incorporating Tsuji's R and L Buttons into the Shimura Computer

A POSITA would have been motivated to further incorporate Tsuji's R and L buttons 118 and 119 into the Shimura Computer, to improve the user operability of the portable computer, regardless of the display mode. Tsuji provides express motivation for the proposed modification. EX-1005, ¶39 ("The R and L button switches 118 and 119 are exposed regardless of whether the computer 1 is used in a PC style or a PDA style."). With the integrated R and L buttons, as illustrated in First-Modified Figure 1 of Shimura below (i.e., a laptop mode), First-Modified

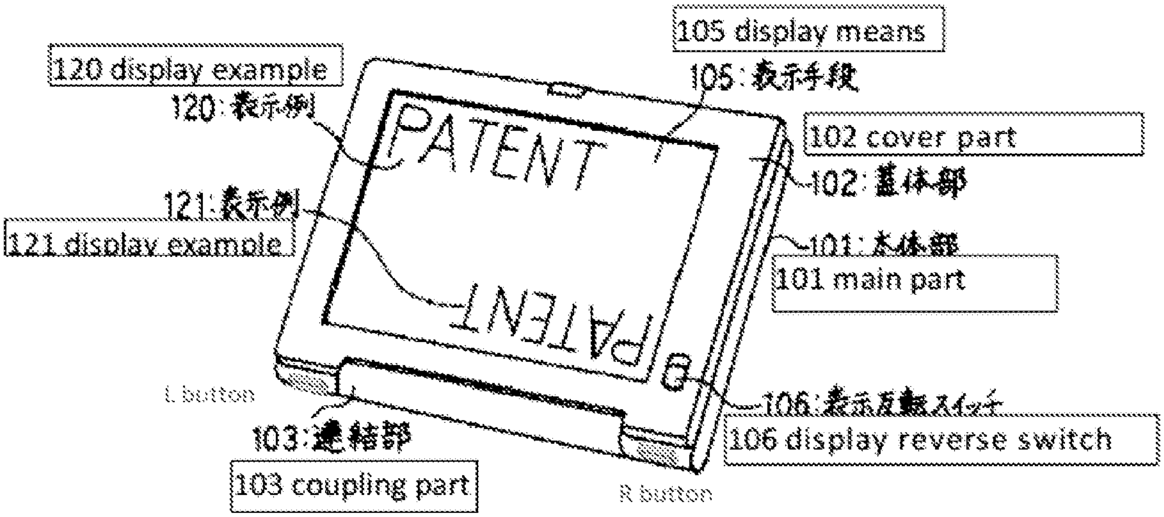
Figure 5 below (an easel mode), and First-Modified Figure 4 below (a frame mode), a user would be able to navigate the contents and/or interface of the Shimura Computer in these display modes. *Id.* Tsuji's R and L buttons 118 and 119 can be programmed to perform any given function, including standard well-known keyboard keys (e.g., Shift, Ctrl, Alt, Enter, Esc, and arrow keys), and any other known function of a portable computer. EX-1005, ¶¶38-46. Using such buttons to control operating parameters of the portable computer and content displayed were well-known in the art before the Critical Date. EX-1004; EX-1005; EX-1005; EX-1010, ¶165. EX-1017; EX-1036; EX-1037; EX-1038; EX-1039.


First-Modified Figure 1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
PATENT
121: 表示例
PATENT
B
L button
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
R button
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

First-Modified
Figure 5


106 display reverse switch
R button
L button
106:表示反転スイッチ
103:連結部
103 coupling part
101:本体部
101 main part
102:蓋体部
102 cover part
PATENT
121:表示例
121 display example
105:表示手段
105 display means
130:マウス
130 mouse

First-Modified
Figure 4

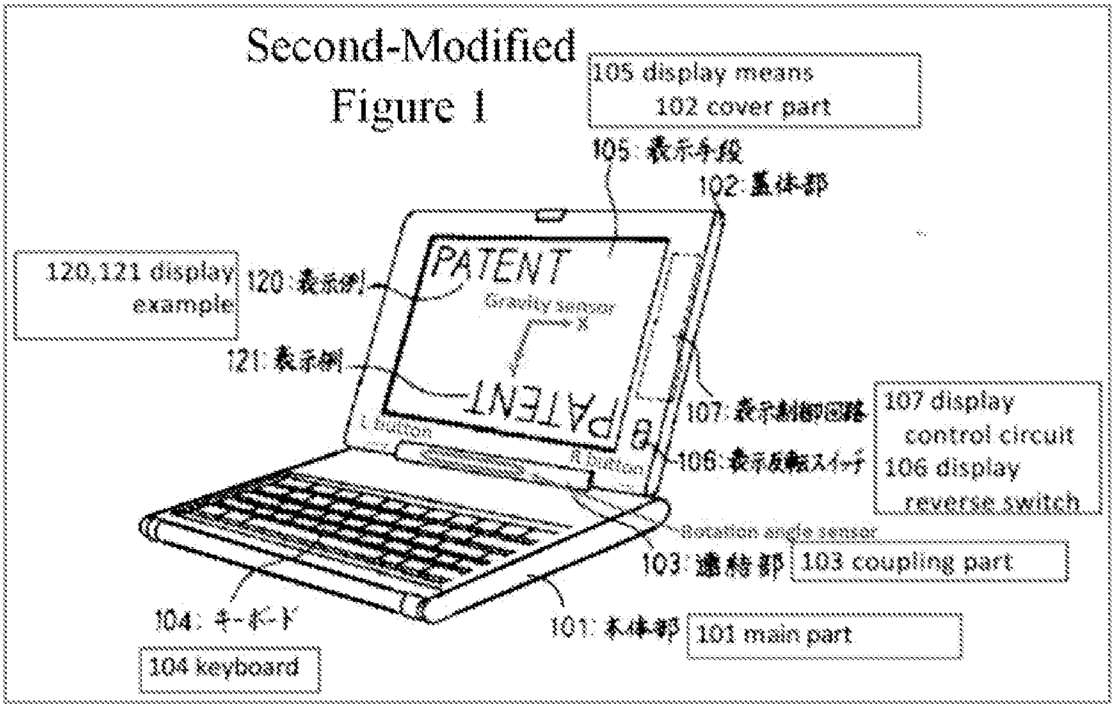

105 display means
120 display example
105:表示手段
120:表示例
102 cover part
102:蓋体部
PATENT
121:表示例
121 display example
101:本体部
101 main part
PATENT
L button
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part
R button

c. Further Incorporating Tsuji's Rotation Angle and Gravity Sensors into the Shimura Computer

A POSITA would have been motivated to further incorporate Tsuji's rotation angle and gravity sensors, illustrated in FIG. 10, into the Shimura Computer to improve operability and/or usability by providing the option of automatically controlling the orientation of the displayed content based on the sensor(s). EX-1005, ¶¶58-60; EX-1010, ¶166.

Specifically, Tsuji discloses the rotation angle sensor 202 sensing whether a rotation angle is greater than a specific rotation angle, and the gravity sensor 203 "sensing which orientation the display unit main body is located in relative to the orientation of the force of gravity." EX-1005, ¶¶58-59. Based on this disclosure, a POSITA would have been motivated to implement the combination of the rotation angle sensor 202 and the gravity sensor 203 in the Shimura Computer to enable it to distinguish between various display modes (e.g., the laptop, easel, and frame modes). E.g., as detailed below, even when the easel and frame modes have the same rotation angle such that the output of the rotation angle sensor 202 would be the same, the output of the gravity sensor 203 would be different in those two modes and this difference can be used to distinguish between them. EX-1010, ¶167.

Also based on the above disclosure of Tsuji, a POSITA would have been motivated to implement Tsuji's rotation angle sensor in the hinge of the Shimura Computer, and Tsuji's gravity sensor in the cover part 102 of the Shimura Computer, as illustrated in Second-Modified Figure 1 of Shimura below. EX-1010, ¶168.



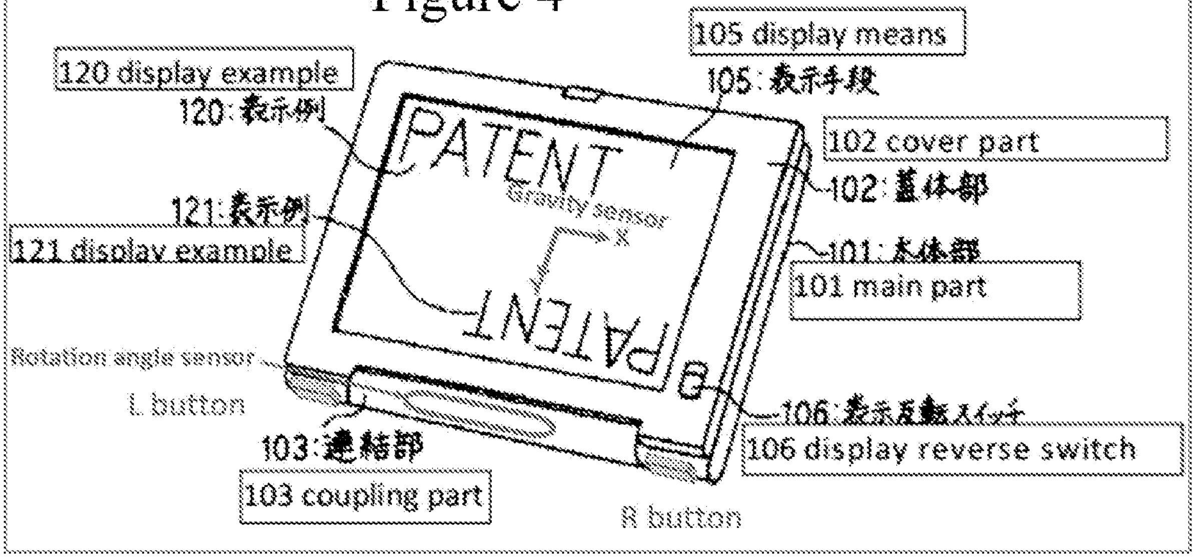
Second-Modified Figure 1

105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
Gravity sensor
X
Y
PATENT
B
L Button
R Button
107: 表示制御回路
106: 表示反転スイッチ
107 display control circuit
106 display reverse switch
Rotation angle sensor
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

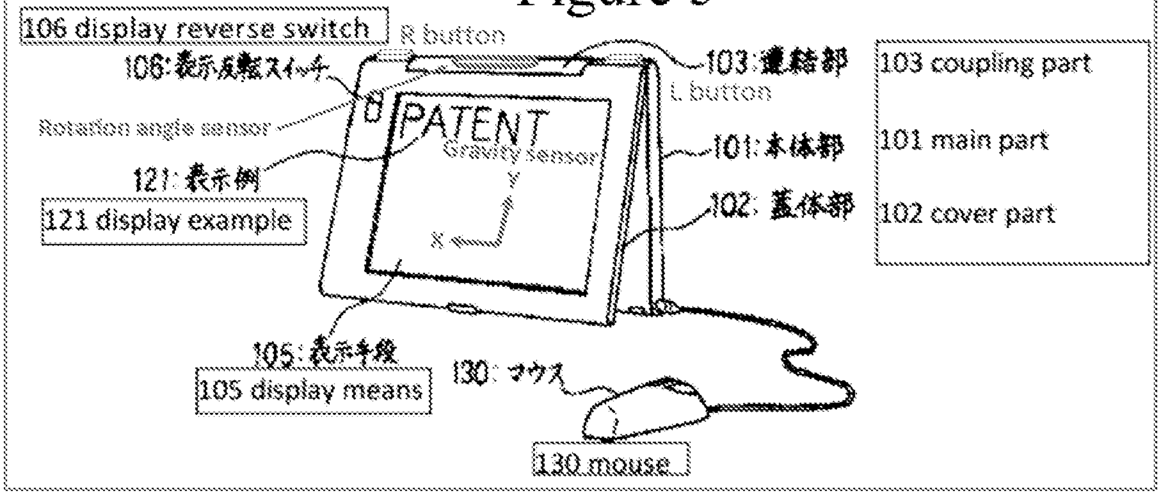
The output of the rotation angle sensor indicates the amount of rotation of the display component (102) relative to the base (101). EX-1010, ¶169. The output of the gravity sensor indicates the X-component and the Y-component of gravity in the plane of the display component (102). *Id.* In the illustrated laptop mode example below, the output of the gravity sensor would indicate the Y-component of gravity in the plane of the display component (102) pointing towards the hinge (103). *Id.*

By monitoring the Y-component of gravity in the plane of the display component, illustrated in Second-Modified Figures 4 and 5 of Shimura below, the easel and frame modes can be distinguished. *Id.*, ¶90.

Second-Modified
Figure 4


120 display example
120:表示例
105 display means
105:表示手段
102 cover part
102:蓋体部
PATENT
Gravity sensor
X
Y
121:表示例
121 display example
101:本体部
101 main part
PATENT
Rotation angle sensor
L button
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part
R button

Second-Modified
Figure 5


106 display reverse switch
R button
106:表示反転スイッチ
103:連結部
103 coupling part
L button
Rotation angle sensor
PATENT
Gravity sensor
Y
X
101:本体部
101 main part
121:表示例
121 display example
102:蓋体部
102 cover part
105:表示手段
105 display means
130:マウス
130 mouse

Exemplary logic for determining the display mode based on outputs of the rotation angle and gravity sensors is summarized in Table 1 below (*id.*):

Rotation Angle Sensor Rotating Angle	**Gravity Direction (Y-Component)**	**Display Mode**
Between 0° and 180°	Not used	Laptop mode
>180°	Away from the hinge	Easel mode

	assembly	
>270°[3]	Towards the hinge assembly, or none	Frame mode[4]

Table 1

Additionally, accelerometers configured to detect the direction of gravity were well-known and commercially available at the Critical Date. EX-1010, ¶172. E.g., an application note by Freescale Semiconductor, Inc. indicates that the company manufactured MMA6200Q and MMA7260Q series accelerometers that can measure the tilt of an object. EX-1019, 1, 4. Figures 2-4 from the application note demonstrate the tilt is "a static measurement where gravity is the acceleration being measured." *Id.*

In fact, the application note identifies image rotation in a portable device as one of the applications of the accelerometers. *Id.* So a POSITA would have known to use such a commercially available accelerometer and to use it as a gravity sensor. EX-1010, ¶173.

Shimura's modified display control circuit 107 and modified electronic circuit receiving the outputs of Tsuji's rotation angle sensor 202 and gravity sensor 203 orient the displayed content between at least a normal view and an inverted view. E.g., the displayed content would be oriented in a normal view in the laptop mode and frame mode and an inverted view in the easel mode. In a laptop mode, where the rotation angle sensor is less than 180°, the displayed content is in a normal view. In an easel mode, where the rotation angle sensor is greater than 180°, and the output of the gravity sensor indicates the Y-component of gravity in the plane of the cover part 102 points away from the hinge assembly, the displayed content is in an inverted view. Otherwise, the displayed content would appear upside-down to the user. Finally, in a frame mode, where the rotation angle sensor is greater than 270°, and the output of the gravity sensor indicates the Y-component of gravity in the plane of the cover part 102 points toward the hinge assembly or is zero, the displayed content is in a normal view. EX-1010, ¶174. Otherwise the displayed content would appear upside-down to the user. Automatically controlling the orientation of displayed content in different display modes of a portable computing device based on a rotation angle sensor and/or an accelerometer (e.g., a gravity sensor) was well-known at the Critical Date. EX-1005; EX-1010, ¶174; EX-1018; EX-1020; EX-1022, EX-1024. Moreover, it was well-known to configure a portable computing device into multiple display modes. EX-1004; EX-1005; EX-1010, ¶174; EX-1014; EX-1018; EX-1020; EX-1022, EX-1024; EX-1026; EX-1027; EX-1028; EX-1029; EX-1030.

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[3] *See* n.1.

[4] This assumes that the surface on which the base rests (e.g., a desktop) is horizontal/flat with respect to the Earth.

d. Combining Tsuji with Shimura to Arrive at the Shimura-Tsuji Computer

It would have been obvious to incorporate Tsuji's:

- touch-sensitive display into Shimura's display component;
- R and L buttons 118 and 119 into the main part 101 of the Shimura Computer; and
- automatic display-orientation control feature used to process the sensor(s)'s outputs into Shimura's modified display control circuit 107 and modified electronic circuit.

The resulting system will be hereafter referred to as the "Shimura-Tsuji Computer." EX-1010, ¶175.

There would have been motivation to combine, and a reasonable expectation of success in combining, Tsuji with Shimura because the combination is merely a combination of well-known prior art elements according to known methods to yield predictable results. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415-21 (2007). That is, Tsuji taught the well-known prior art concept of:

- a touch-sensitive display that can receive input from a finger;
- integrating input devices (i.e., R and L buttons) that are accessible in multiple display modes; and
- automatically controlling the orientation of the displayed content in different display modes based on the rotation angle and gravity sensors.

Application of these teachings to Shimura would have yielded a predictable portable computer with the above three known prior art concepts. EX-1010, ¶177.

For all the reasons identified in VIII.B.1, the POSITA would have been motivated to arrive at the Shimura-Tsuji Computer by adding or otherwise integrating into the Shimura Computer:

- an improved touch-sensitive display that is not limited to pens, but can also receive input from a finger, as in Tsuji;
- R and L buttons, as in Tsuji, so a user could interact with the portable computer in multiple display modes; and
- Tsuji's sensor(s) to improve operability and/or usability by automatically controlling the orientation of the displayed content in different display modes.

EX-1010, ¶¶161-78.

2. Combination of Shimura, Tsuji, and Pogue (hereafter "Shimura-Tsuji-Pogue combination")

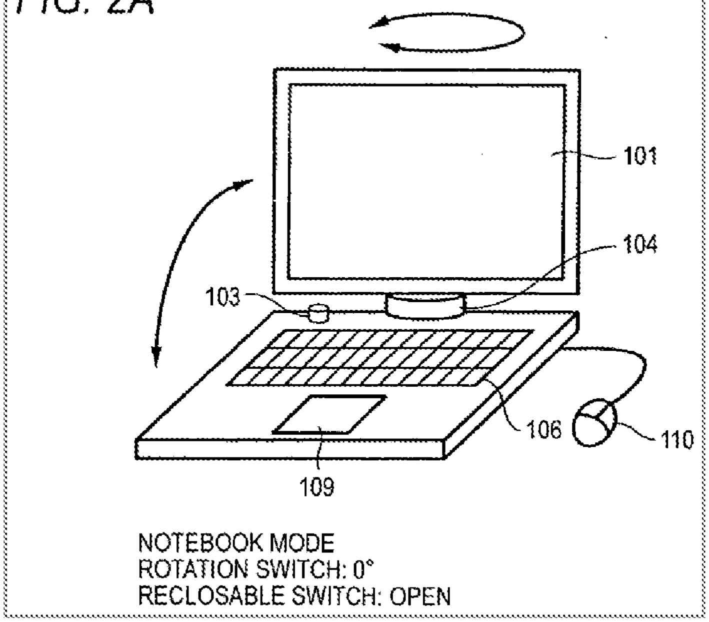
A POSITA would have been motivated to combine Tsuji with Shimura (VIII.B.1), and combine Pogue with the foregoing for several reasons. EX-1010, ¶¶179-97.

The hardware requirements to run Windows XP include a 233 MHz processor clock speed, 64 MB of RAM, 1.5 GB of free hard disk space, 800x600 resolution video adapter and monitor, a CD-ROM or DVD drive, and a keyboard and compatible pointing device. *See* VIII.A.3; EX-1006, 558. Multiple computers at the Critical Date would have met at least these requirements. EX-1016, EX-1017; EX-1018; EX-1031; EX-1032; EX-1033; EX-1034; EX-1035. As an example, the Panasonic CF-19 series laptop, Dell Latitude XT laptop,, and Lenovo Thinkpad X61 laptop—all from before the Critical Date—each met these hardware requirements and was able to run on Windows XP. EX-1016, EX-1017; EX-1018. While Shimura and Tsuji disclose hardware components and related circuitry, they do not expressly disclose an operating system; Pogue expressly discloses Windows XP, one example of a well-known operating system at the Critical Date. EX-1006, 1, 5. Moreover, Pogue provides disclosure of well-known standard components of portable computers, including a trackpad. EX-1006, 274; EX-1010, ¶180. A POSITA would have known to implement the trackpad on an upper surface of the base 101, as was well-known at the time. EX-1010, ¶180; EX-1014, ¶25 (disclosing a convertible notebook PC including, among other components, touch-pad 108 integrated into a top surface of the base, as illustrated in FIG. 2A below).[5]

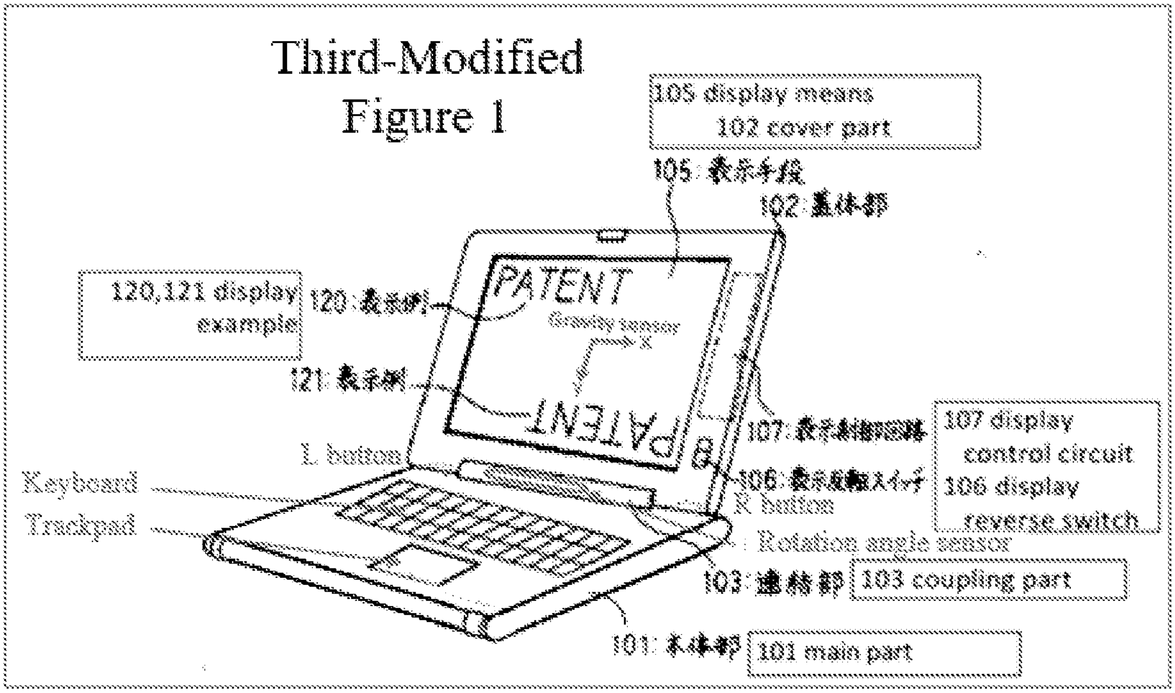
---

[5] The touch-pad appears to be labeled in FIG. 2A as 109. This is understood as a typographical error and should be labeled as touch-pad 108. EX-1010, ¶100.

FIG. 2A

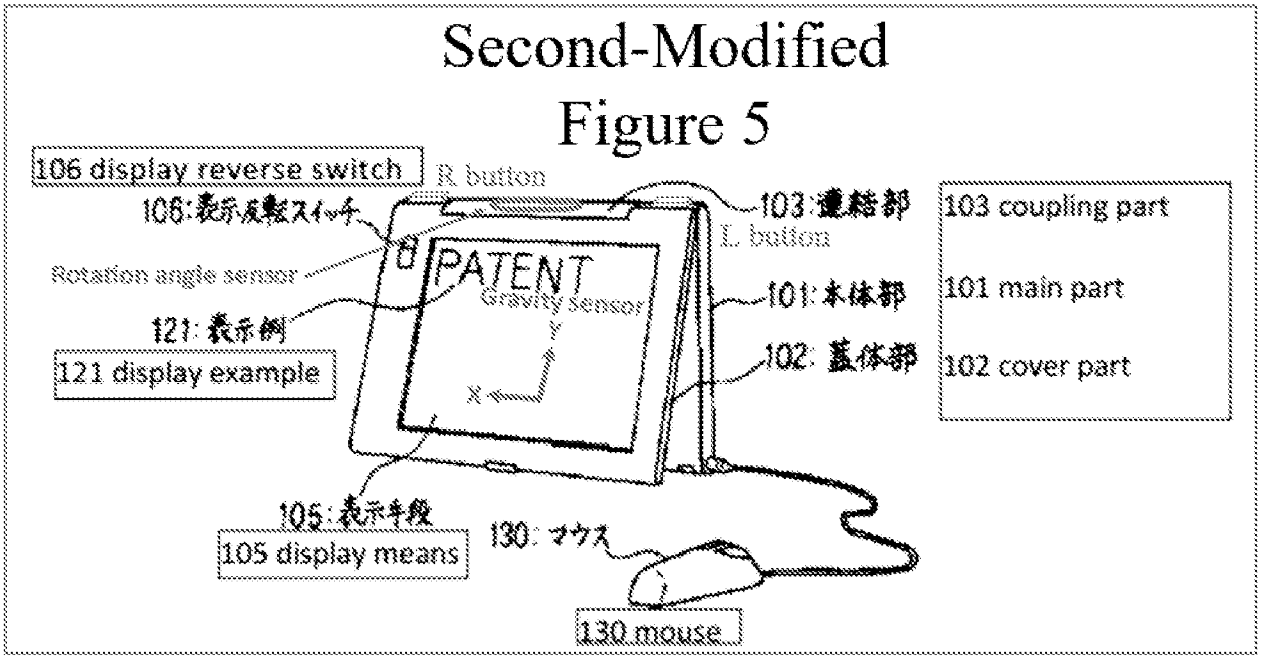

101
104
103
106
110
109
NOTEBOOK MODE
ROTATION SWITCH: 0°
RECLOSABLE SWITCH: OPEN

The resulting system, as illustrated in Third-Modified Figure 1 of Shimura, including Windows XP and Pogue's trackpad disposed into an upper surface of main part 101, will be hereafter referred to as the "Shimura-Tsuji-Pogue Computer." EX-1010, ¶181.

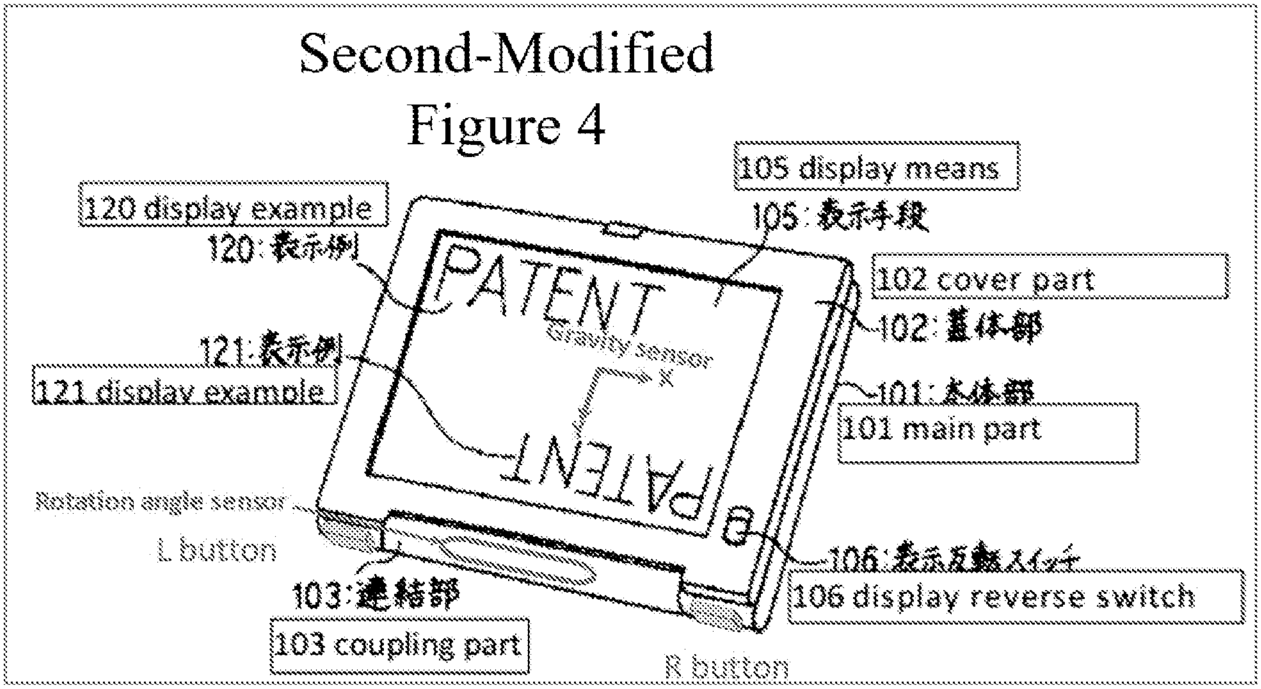

Third-Modified Figure 1

105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
Gravity sensor
PATENT
B
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
L button
R button
Keyboard
Trackpad
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

Second-Modified Figure 5 of Shimura below illustrates the same system in the easel mode.


Second-Modified
Figure 5
106 display reverse switch
R button
106:表示反転スイッチ
103:連結部
103 coupling part
L button
Rotation angle sensor
PATENT
Gravity sensor
Y
X
121:表示例
121 display example
101:本体部
101 main part
102:蓋体部
102 cover part
105:表示手段
105 display means
130:マウス
130 mouse

Second-Modified Figure 4 of Shimura below illustrates the same system in the frame mode.


Second-Modified
Figure 4
105 display means
105:表示手段
120 display example
120:表示例
PATENT
102 cover part
102:蓋体部
121:表示例
121 display example
Gravity sensor
X
101:本体部
101 main part
PATENT
Rotation angle sensor
L button
106:表示反転スイッチ
106 display reverse switch
103:連結部
103 coupling part
R button

In Windows XP, a user can access the Start menu via a Start menu button (e.g., pressing the Windows logo key or Ctrl+Esc on the keyboard, or clicking the Start menu button on the desktop). EX-1006, 25. Keyboards at the Critical Date, such as the Panasonic CF-19 series laptop, Dell Latitude XT laptop, and Lenovo Thinkpad X61 laptop, had a Windows logo key, a Ctrl key, and an Esc key, as well as arrow keys, an Enter key, and other standard well-known keys. EX-1010, ¶184.

Tsuji also provides express disclosure that "***[a]ny given function*** can programmably be assigned to each of the R and L button switches 118 and 119." *See* VIII.A.2; EX-1005, ¶38 (emphasis added). As such, a POSITA would have been motivated to program the R or L button to the Start menu button (e.g., a Windows logo key or Ctrl+Esc functionality) so that a user would be able to easily access the Start menu in all display modes by pressing the programmed R or L button. From the Start menu, a user would be able to select and open a content mode, such as the "Internet," E-mail," "Windows Media Player," and "Microsoft Word" modes using the touch screen, programmed R and L buttons, or keyboard of the Shimura-Tsuji-Pogue Computer. EX-1010, ¶185.

Pogue discloses accessing various content modes. EX-1010, ¶186. The "content mode" terms each means "user selectable element(s) displayed on a user interface that, when selected, allows the user to access the content organized therein" which includes media, channel, connect, application, and web content modes. *See* VII; EX-1001, 11:44-52, FIGs. 11, 12.

Pogue discloses the user selecting "Internet Explorer" on the graphical user interface (GUI) to navigate the web using a web interface and access online content. EX-1006, 337-38, Figure 11-1. Thus, Pogue's "Internet Explorer," like the web mode 172c of the '844 Patent, discloses a first content mode. EX-1010, ¶188.

Pogue also discloses the user selecting Windows Media Player on the GUI, "which lets you play movies, listen to distant radio stations over the Internet, burn music CDs, and transfer music files to your portable MP3 player" via a media interface, thereby providing access to media content. EX-1006, 13, 227-228, Figure 7-13. Thus, Pogue's "Windows Media Player," like the media mode 172a of the '844 Patent, discloses a second content mode. EX-1010, ¶190.

Pogue also discloses the user selecting Outlook Express on the GUI "that lets you receive and send email messages" via an email interface, thereby providing access to emails. EX-1006, 373-375, Figure 12-1. Thus, Pogue's "Outlook Express," like the connect mode 172b of the '844 Patent, discloses a third content mode. EX-1010, ¶192.

Pogue discloses the user selecting Microsoft Word on the GUI, which includes a word processing interface, thereby providing access to Word documents. EX-1006, 31, 266, Figure 8-12. Thus, Pogue's "Microsoft Word," like the applications mode 172d of the '844 Patent, discloses a fourth content mode. EX-1010, ¶194.

Various content modes identified in the '844 Patent and Pogue are summarized in Table 2 below:

'844 Patent	Pogue
Web mode 172c	Internet (Internet Explorer)
Media mode 172a	Windows Media Player
Connect mode 172b	Email (Outlook Express)
Applications mode 172d	Microsoft Word

Table 2

There would have been motivation to combine, and a reasonable expectation of success in combining, Pogue with Shimura and Tsuji because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415-21. That is, Pogue taught the well-known Windows XP operating system and various content modes, and application of this teaching to Shimura and Tsuji would have yielded a predictable portable computer with Tsuji's R or L button programmed to access Pogue's Start menu. EX-1010, ¶196.

Thus, the POSITA would have been motivated to combine the teachings of Shimura and Tsuji with Pogue's teachings to arrive at the Shimura-Tsuji-Pogue Computer using the Windows XP operating system that utilizes the R or L button programmed to access Pogue's Start menu and various content modes therein. EX-1010, ¶¶179-97.

3. Claim 1

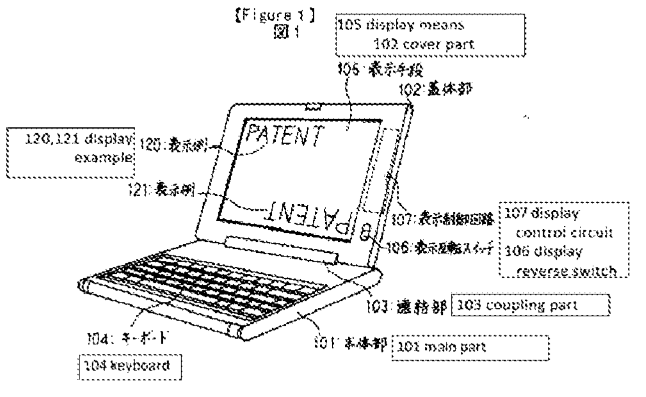
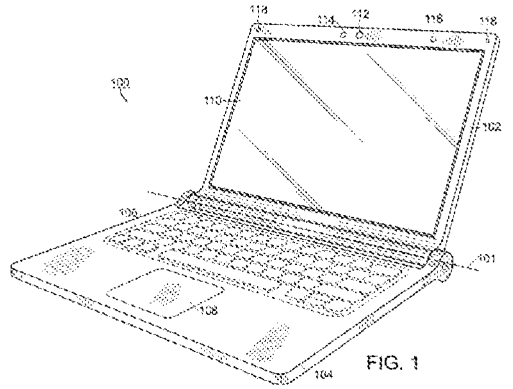
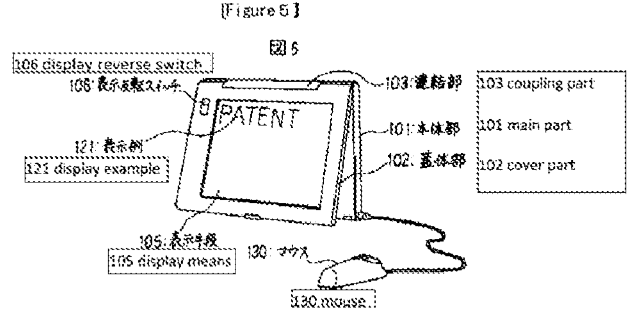
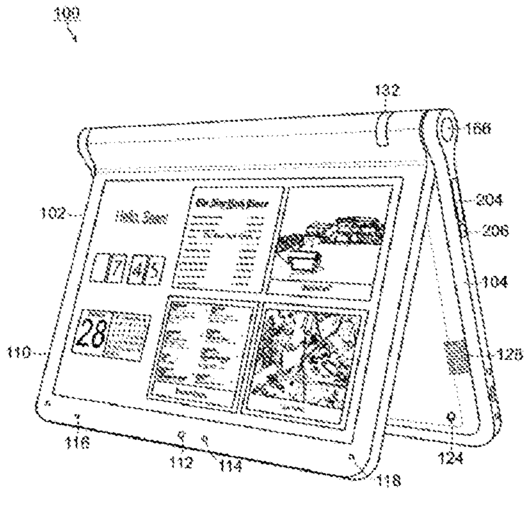
a. Limitation [1pre]

The Shimura-Tsuji combination discloses [1pre] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; EX-1010, ¶¶198-200.

Shimura discloses a portable computer, configurable into various display modes. As summarized in Table 3 below, a POSITA would have understood that:

- Shimura's Figure 1 discloses the claimed "laptop mode" of the '844 Patent (FIG. 1);
- Shimura's Figure 5 discloses the claimed "easel mode" of the '844 Patent (FIG. 4); and
- Shimura's Figure 4 discloses the claimed "frame mode" of the '844 Patent (FIG. 26).

EX-1010, ¶199.

Shimura	'844 Patent
Laptop mode	
 [Figure 1] 図1 105 display means 102 cover part 105 表示手段 102 蓋体部 120,121 display example 120 表示例 PATENT 121 表示例 107 表示制御回路 107 display control circuit 106 表示反転スイッチ 106 display reverse switch 103 連結部 103 coupling part 104 キーボード 104 keyboard 101 本体部 101 main part	 118 114 112 116 118 100 110 102 106 101 108 104 FIG. 1
Easel mode	
 [Figure 5] 図5 106 display reverse switch 106 表示反転スイッチ PATENT 121 表示例 121 display example 103 連結部 103 coupling part 101 本体部 101 main part 102 蓋体部 102 cover part 105 表示手段 105 display means 130 マウス 130 mouse	 100 132 166 102 204 206 104 110 128 116 112 114 124 118 FIG. 4

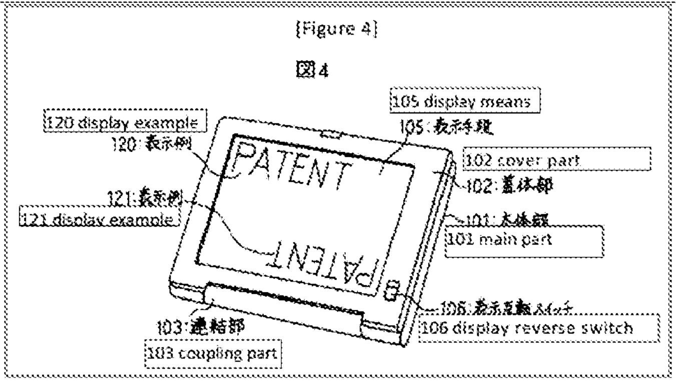
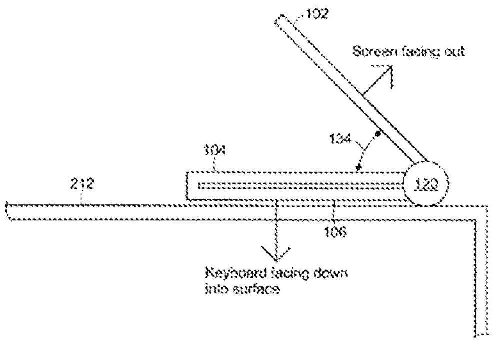
Frame mode	
 [Figure 4] 図4 105 display means 105:表示手段 120 display example 120:表示例 PATENT 121:表示例 121 display example 102 cover part 102:蓋体部 101:本体部 101 main part PATENT B 106:表示反転スイッチ 106 display reverse switch 103:連結部 103 coupling part	 102 Screen facing out 134 104 212 120 106 Keyboard facing down into surface FIG. 26

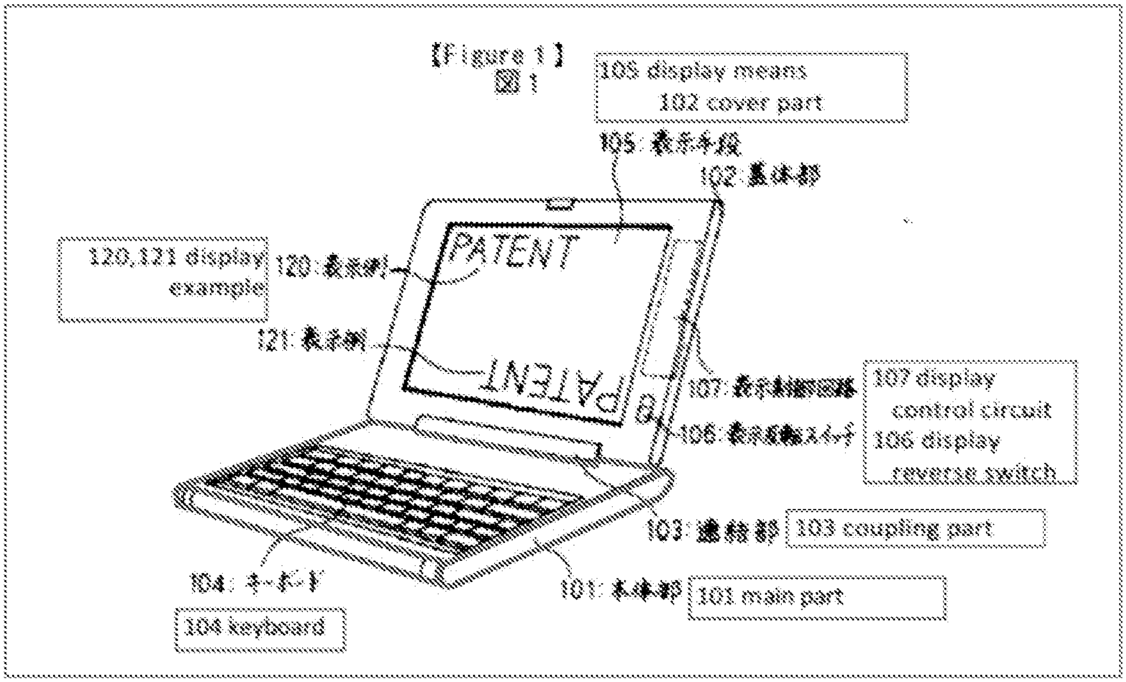
Table 3

A POSITA would have been motivated to combine Tsuji's teachings with Shimura's teachings to arrive at the Shimura-Tsuji Computer capable of transitioning between the plurality of display modes. *See* VIII.B.1.a. This computer has, as explicitly disclosed by Tsuji, a touch-sensitive display in the cover part 102 capable of receiving input from a stylus pen or finger to "allow an operator to interact with a single display screen in each of the plurality of display modes." EX-1005, ¶31; EX-1010, ¶200.

b. Limitation [1a]

Shimura discloses [1a]. *See* VIII.A.1; EX-1010, ¶¶201-02.

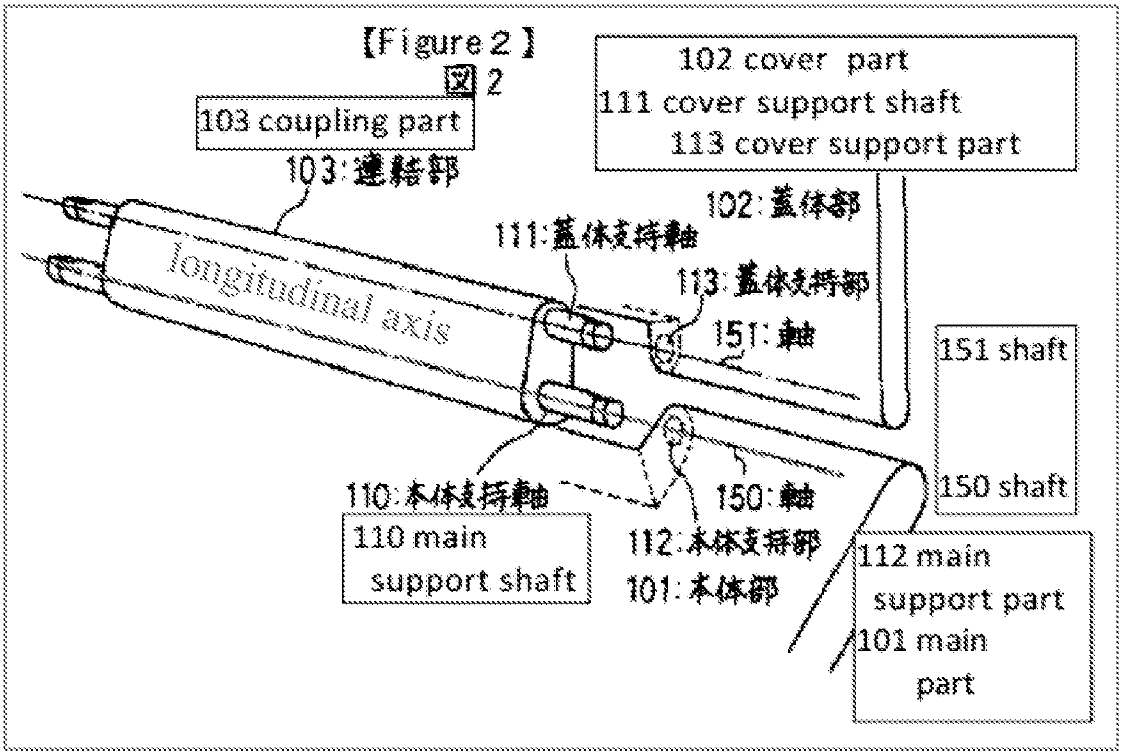
Shimura's Figure 1 below shows the claimed "base" (Shimura's main part 101 in red) including the claimed "keyboard" (Shimura's keyboard 104).

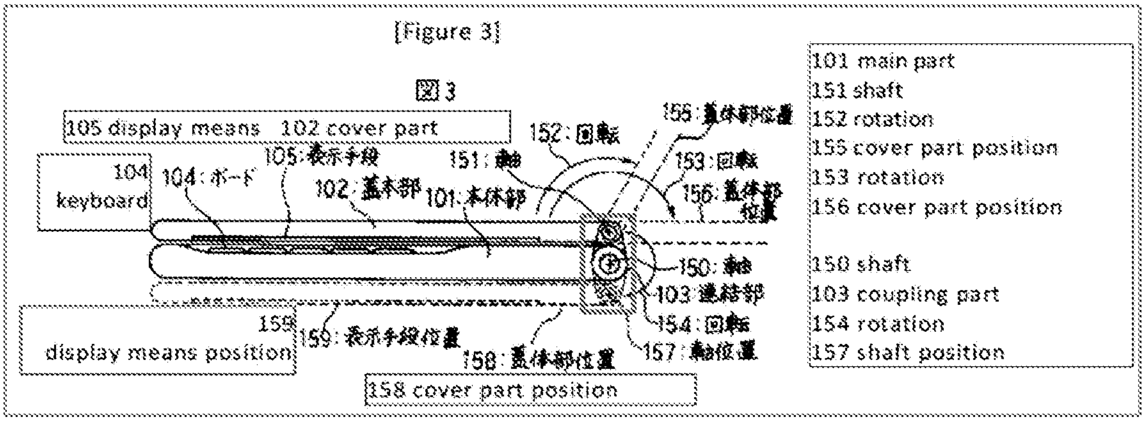

[Figure 1]
図1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例1
121: 表示例
PATENT
PATENT
B
107: 表示制御回路
106: 表示反転スイッチ
107 display control circuit
106 display reverse switch
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

c. Limitation [1b1]

Shimura discloses [1b1]. *See* VIII.A.1; EX-1010, ¶¶203-04.

The Shimura Computer discloses "a main display component [Shimura's cover part 102] rotatably coupled to the base [Shimura's main part 101] such that the main display component [102] and the base [101] are rotatable with respect to one another about a longitudinal axis [Shimura's support shaft 110]" to transition between the plurality of display modes (e.g., laptop and easel modes). EX-1004, ¶¶12-13, Figures 2, 3 (below). The Shimura Computer further discloses that Shimura's support shaft 110 "run[s] along an interface between the main display component [102] and the base [101]." EX-1010, ¶204.

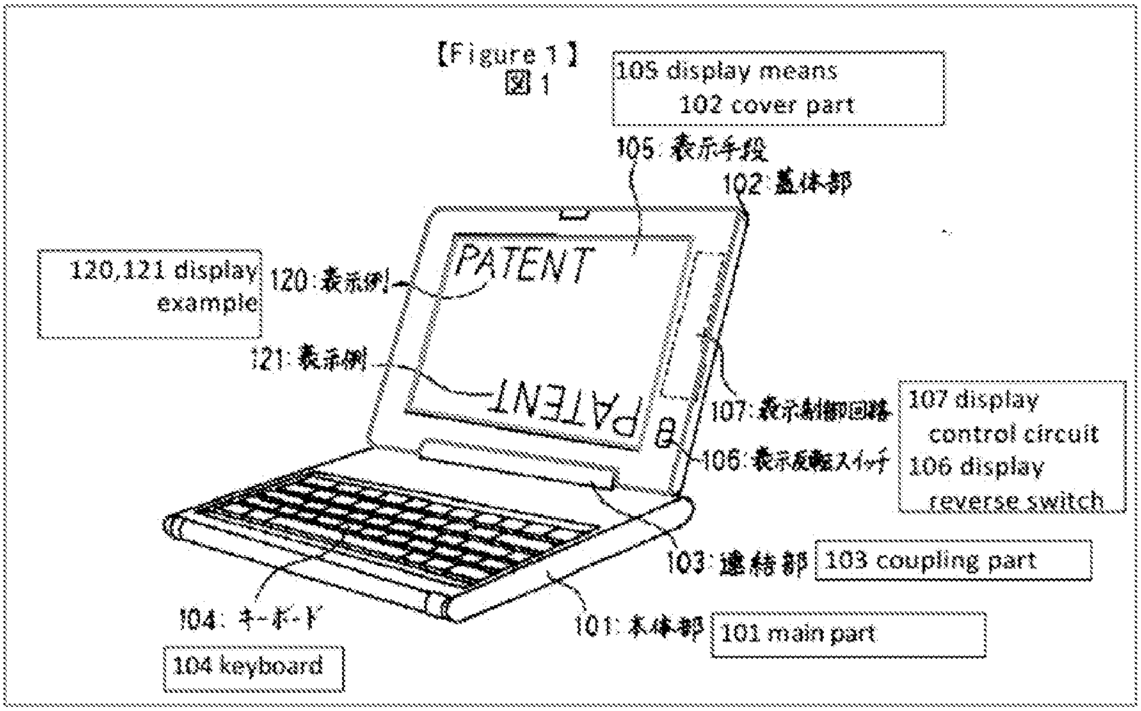

【Figure 2】
図2
103 coupling part
103:連結部
102 cover part
111 cover support shaft
113 cover support part
102:蓋体部
111:蓋体支持軸
113:蓋体支持部
151:軸
151 shaft
150 shaft
longitudinal axis
110:本体支持軸
110 main support shaft
150:軸
112:本体支持部
101:本体部
112 main support part
101 main part


[Figure 3]
図3
105 display means 102 cover part
104 keyboard
104:ボード
105:表示手段
102:蓋本部
101:本体部
151:軸
152:回転
155:蓋体部位置
153:回転
156:蓋体部位置
150:軸
103:連結部
154:回転
157:軸位置
158:蓋体部位置
159:表示手段位置
159 display means position
158 cover part position
101 main part
151 shaft
152 rotation
155 cover part position
153 rotation
156 cover part position
150 shaft
103 coupling part
154 rotation
157 shaft position

d. Limitation [1b2]

The Shimura-Tsuji combination discloses [1b2] and renders it obvious. *See* VIII.B.1.a; VIII.B.3.a; EX-1010, ¶¶205-06.

As illustrated in Shimura's Figure 1 below, Shimura discloses "the main display component [102 red]," and Tsuji discloses "the single display screen [Tsuji's touch-sensitive display blue]." EX-1010, ¶206.


【Figure 1】
図1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
PATENT
B
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

e. Limitation [1b3]

The Shimura-Tsuji combination discloses [1b3] and renders it obvious. *See* VIII.B.1.a; VIII.B.1.c; VIII.B.3.a; EX-1010, ¶¶207-08.

Shimura discloses display modes (i.e., laptop and easel modes) where the display component (102) is facing the operator (i.e., "while [the operator] view[s] the single display screen in each of the plurality of display modes"). *See* VIII.A.1; VIII.B.3.a. The Shimura-Tsuji Computer discloses a portable computer capable of transitioning between the plurality of display modes and having a touch-sensitive display that "allows the operator to operate the portable computer" in the laptop and easel modes. *See* VIII.B.1.a; EX-1010, ¶208.

f. Limitation [1c]

The Shimura-Tsuji-Pogue combination discloses [1c] and renders it obvious. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; EX-1010, ¶¶209-12.

The "first content mode" means "a user selectable element displayed on a user interface that, when selected, allows the user to access the content organized therein," which includes at least a web content mode. *See* VII; EX-1001, 11:49-50.

Pogue discloses "a first content mode" (i.e., "Internet Explorer" used to navigate the web using a web interface) corresponding to the web mode of the '844 Patent. *See* VIII.B.2; EX-1001, 11:49-50; EX-1006, 337-38, Figure 11-1.

When the Shimura-Tsuji-Pogue Computer is configured in the laptop mode (i.e., the cover part and keyboard of the Shimura-Tsuji-Pogue Computer face the user), the orientation of the displayed content is in a normal view. *See* VIII.B.2; EX-1004, ¶¶11, 14. When the user opens Internet Explorer in the laptop mode, the displayed content would be in a normal view. *See* VIII.B.1.b. Thus, the Shimura-Tsuji-Pogue Computer "display[s] to a user on the main display component [102] a first content mode [Pogue's Internet Explorer] having a first content display orientation [normal view] with the main display component [102] oriented towards the user and the keyboard [104] oriented to receive input from the user." EX-1010, ¶212.

g. Limitation [1d1]

The Shimura-Tsuji-Pogue combination discloses [1d1] and renders it obvious. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; EX-1010, ¶¶213-16.

The "second content mode" means "a user selectable element displayed on a user interface that, when selected, allows the user to access the content organized therein," which includes at least a media mode. *See* VII; EX-1001, 11:44-46.

Pogue discloses "a second content mode" (i.e., "Windows Media Player" to display a media interface where a user can watch a movie) corresponding to the media mode of the '844 Patent. *See* VIII.B.2; EX-1006, 227-28, Figure 7-13. In an easel mode, it would be convenient to watch a video using Windows Media Player because there is no distraction of a keyboard and it takes up less real estate on a surface. EX-1010, ¶215.

When the Shimura-Tsuji-Pogue Computer is configured in the easel mode (i.e., the cover part 102 faces the user, and the keyboard faces away from the user), the orientation of the displayed content is in an inverted view. *See* VIII.B.1; VIII.B.3.a; EX-1004, ¶¶11, 14. When the user opens Windows Media Player in the easel mode, the displayed content would be in an inverted view. *See* VIII.B.1.b. Thus, the Shimura-Tsuji-Pogue Computer "display[s] to a user on the main display component [102] a second content mode [Pogue's Windows Media Player] having a second content display orientation [inverted view] with the main display component [102] oriented towards the user and the keyboard [104] oriented away from the user." EX-1010, ¶216.

h. Limitation [1d2]

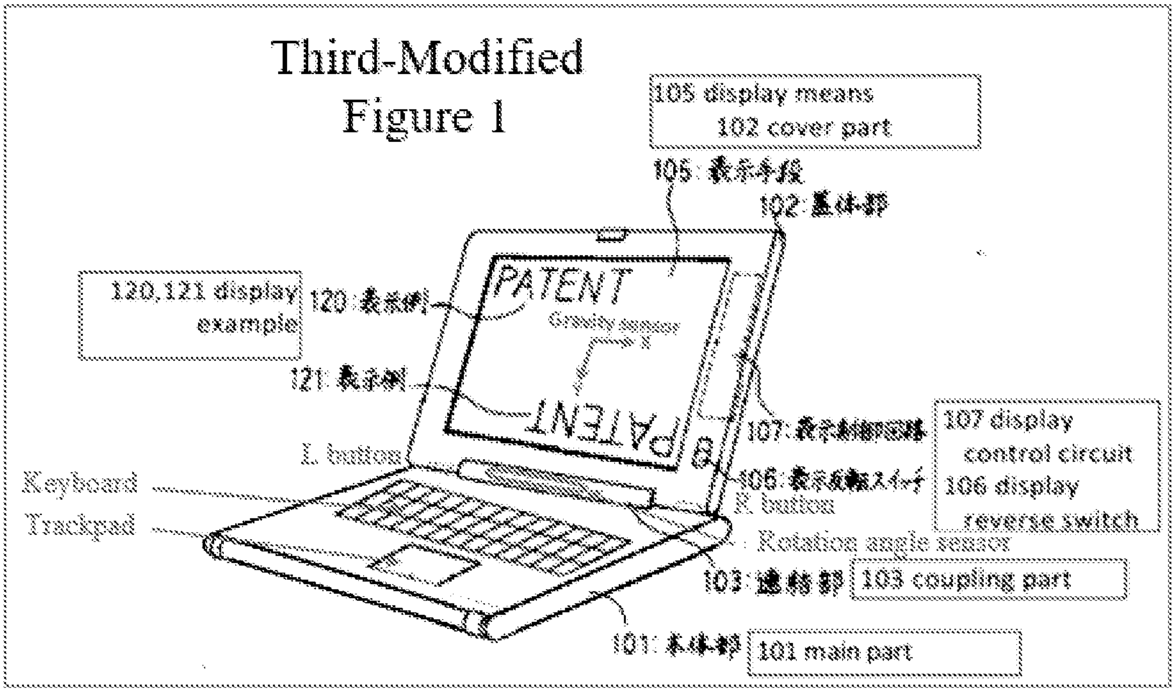
The Shimura-Tsuji-Pogue combination discloses [1d2] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.a (discussion of touch-sensitive display); EX-1010, ¶¶217-18.

The Shimura-Tsuji-Pogue Computer in the easel mode would be configured to display a video using Windows Media Player. *See* VIII.B.3.g Using the touch screen of the Shimura-Tsuji-Pogue Computer would allow a user to play, pause, or affect playback of the video by touching the playback controls (FIG. 7-13). EX-1010, ¶218.

i. Limitation [1e1]

The Shimura-Tsuji-Pogue combination discloses [1e1] and renders it obvious. *See* VIII.A.3; VIII.B.2; EX-1010, ¶¶219-31.

The Shimura-Tsuji-Pogue Computer includes a trackpad disposed on the upper surface of the base. *See* VIII.B.2; Third-Modified Figure 1 of Shimura (below).

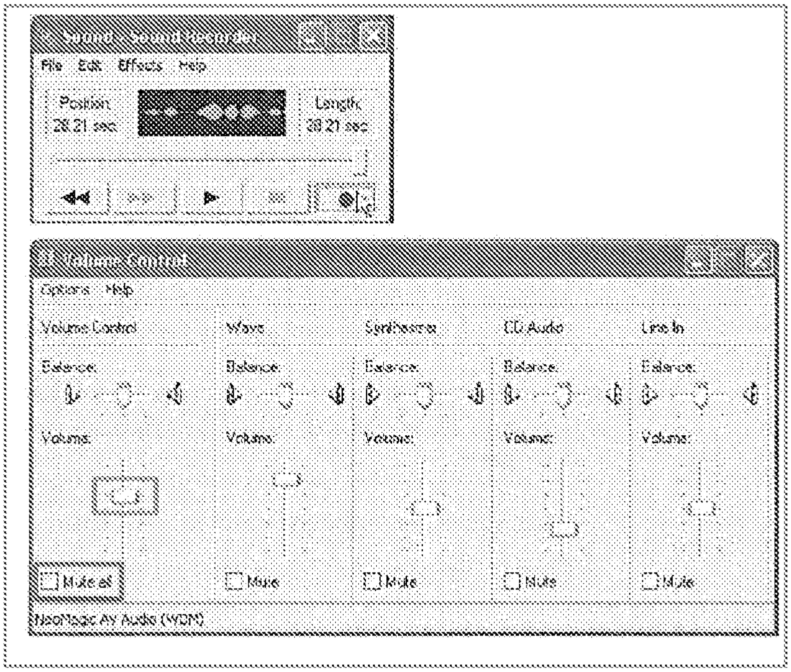


Third-Modified Figure 1

105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
Gravity sensor
PATENT
B
L button
Keyboard
Trackpad
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

The trackpad of the Shimura-Tsuji-Pogue Computer is the "navigation control [1] disposed at least partially within the base and [2] rotatable about the longitudinal axis" because (1) the trackpad is disposed within the main part 101 of the Shimura-Tsuji-Pogue Computer that (2) can be rotated about the main support shaft 110 of the coupling part 103 of the Shimura-Tsuji-Pogue Computer.

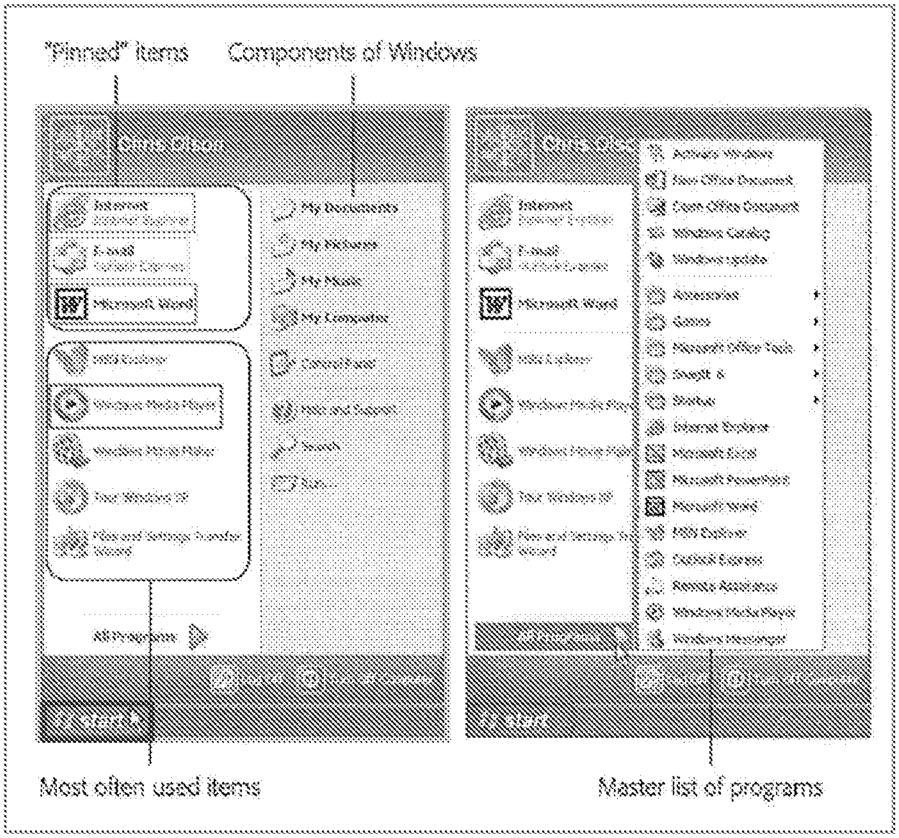
Moreover, the trackpad of the Shimura-Tsuji-Pogue Computer can be used to control various features of the portable computer via a software-driven graphical user interface. EX-1010, ¶222. One example is controlling the volume by, e.g., dragging the volume bar (blue) up or clicking "Mute all" (red) illustrated in Figure 7-14 below. EX-1006, 229-31.



Sound - Sound Recorder
File Edit Effects Help
Position:
28.21 sec.
Length:
28.21 sec.
Volume Control
Options Help
Volume Control
Wave
Synthesizer
CD Audio
Line In
Balance:
Volume:
☐ Mute all
☐ Mute
NeoMagic AV Audio (WDM)

In this example, the trackpad of the Shimura-Tsuji-Pogue Computer "control[s] at least one of operating parameters of the portable computer" because the '844 Patent describes one example of controlling an operating parameter as "adjust[ing] a volume of sound produced by the portable computer." EX-1001, 3:36-38; EX-1010, ¶223.

The trackpad of the Shimura-Tsuji-Pogue Computer can also be used to press Pogue's Start menu button (purple in Figure 2-3 below) that opens the Start menu (light green) that lists at least "Internet" (dark green), "E-mail" (orange), "Microsoft Word" (blue), and "Windows Media Player" (red). EX-1006, 24-25. EX-1010, ¶224.



In this example, the trackpad of the Shimura-Tsuji-Pogue Computer "control[s] . . . content displayed on the single display screen" because the '844 Patent describes one example of controlling displayed content as "display[ing] at least one of a plurality of modes of content." EX-1001, 3:36-38; EX-1010, ¶225.

Thus, the trackpad of the Shimura-Tsuji-Pogue Computer in each of the above-described examples discloses the claimed "navigation control." EX-1010, ¶226.

Alternatively, Pogue discloses a user using the Start menu button (e.g.,, pressing Windows logo key or Ctrl+Esc) on the keyboard to open the Start menu (illustrated in Figure 2-3 above) that lists at least "Internet," E-mail," "Windows

Media Player," and "Microsoft Word." EX-1006, 24-25. A POSITA would have known to implement the Start menu button in the keyboard of the Shimura-Tsuji-Pogue Computer, which is "disposed at least partially within the base [101] and rotatable about the longitudinal axis [main support shaft 110]." EX-1010, ¶227.

Thus, the Start menu button on the keyboard of the Shimura-Tsuji-Pogue Computer "control[s] . . . content displayed on the single display screen" because the '844 Patent describes one example of controlling displayed content as "display[ing] at least one of a plurality of modes of content." EX-1001, 3:36-38; EX-1010, ¶228.

The keyboard of the Shimura-Tsuji-Pogue Computer includes arrow keys, as disclosed in Tsuji. *See* VIII.A.2; VIII.B.1.b. With the Start menu open, a user would be able to use the arrow keys on the keyboard to select for display one of the modes of content (e.g., "Internet," E-mail," "Windows Media Player," and "Microsoft Word"). EX-1005, ¶¶23-26, 43; EX-1010, ¶229.

In this example, the arrow keys of the Shimura-Tsuji-Pogue Computer "control at least one of operating parameters of the portable computer" because the '844 Patent describes one example of controlling an operating parameter as "select[ing] a mode of content for display by the portable computer." EX-1001, 3:38-41; EX-1010, ¶230.

Thus, the Start menu button and the arrow keys on the keyboard of the Shimura-Tsuji-Pogue Computer in the above-described examples disclose the claimed "navigation control." EX-1010, ¶231.

j. Limitation [1e2]

Shimura discloses [1e2]. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; VIII.B.3.a; EX-1010, ¶¶232-34.

When the Shimura-Tsuji-Pogue Computer is configured in the frame mode, with the cover part 102 facing up toward the user and the keyboard 104 facing down toward a desk, the orientation of the displayed content is in a normal view. *See* VIII.B.1; VIII.B.3.a; EX-1004, ¶¶11, 14, Figure 4. In this configuration, the keyboard 104 faces "a substantially horizontal surface" of the desk on which the portable computer is placed. EX-1010, ¶234.

Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 1. EX-1010, ¶¶198-235.

4. Claim 3

The Shimura-Tsuji-Pogue combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.3; VIII.B.2; EX-1010, ¶¶236-37.

The Shimura-Tsuji-Pogue Computer discloses "a first navigation button [a Windows logo key on the keyboard 104] disposed on . . . the base [101]." *See*

VIII.B.2; VIII.B.3.i. Pogue's Start menu discloses the claimed "selected content displayed on the screen" because a user selects this displayed content by pressing, e.g., the Windows logo key. EX-1006, 25. Opening the Start menu using the Windows logo key "permit[s] the user to manipulate selected content," e.g., highlight, drag and drop, or launch a content mode such as Microsoft Word, "via an input device," e.g., trackpad, touch screen, keyboard, mouse, etc. EX-1010, ¶237.

5. Claim 4

a. Limitation [4a]

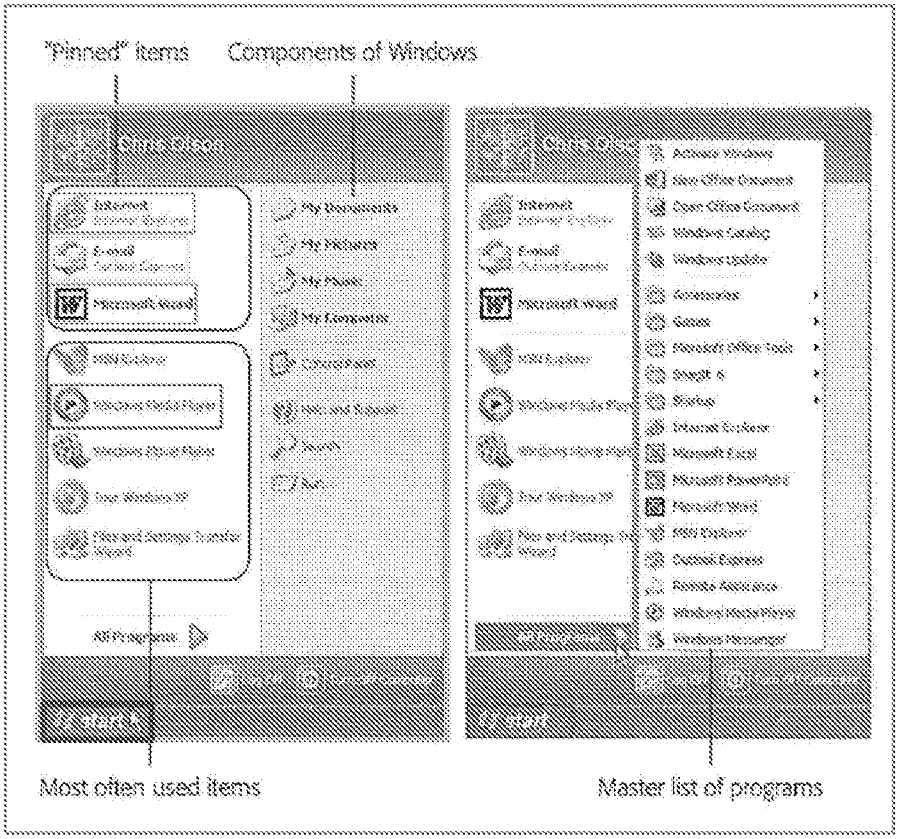
Pogue discloses [4a]. *See* VIII.A.3; VIII.B.3.f; VIII.B.3.g; EX-1010, ¶¶238-43.

The "modes of content" means "user selectable elements displayed on a user interface that, when selected, allows the user to access the content organized therein," which includes media, connect, application, and web content modes. *See* VII; EX-1001, 11:44-52.

Pogue discloses various "modes of content" (i.e., "Internet Explorer" corresponding to the web mode of the '844 Patent, "Outlook Express " corresponding to the connect mode of the '844 Patent, "Windows Media Player" corresponding to the media mode of the '844 Patent, and "Microsoft Word" corresponding to the applications mode of the '844 Patent. *See* VIII.B.2; EX-1001, 11:49-50; EX-1006, 3, 4, 23-25, 337-38.

The '844 Patent describes a "home screen" as a user interface that "displays a plurality of modes of content 172." EX-1001, 11:35-38.

Pogue's Start menu button (purple in Figure 2-3 below) that opens the Start menu (light green) lists at least "Internet" (dark green), "E-mail" (orange), "Microsoft Word" (blue), and "Windows Media Player" (red). EX-1006, 23-25, 274, 550.


"Pinned" items
Components of Windows
Most often used items
Master list of programs

The Start menu can be opened via the keyboard or another input device (e.g., touch screen, trackpad, mouse, etc.). *Id.*. Thus, Pogue's Start menu, like the home screen of the '844 Patent, discloses multiple modes of content, summarized in Table 2, reproduced again below:

'844 Patent	**Pogue**
Web mode 172c	Internet (Internet Explorer)
Media mode 172a	Windows Media Player
Connect mode 172b	Email (Outlook Express)
Applications mode 172d	Microsoft Word

Table 2

EX-1010, ¶243.

b. Limitation [4b]

The Shimura-Tsuji-Pogue combination discloses [4b] and renders it obvious. *See* VIII.A.3; VIII.B.2; VIII.B.4; VIII.B.5.a; EX-1010, ¶¶244-45.

The Shimura-Tsuji-Pogue Computer discloses "the [first] navigation button," i.e., a Windows logo key on the keyboard 104. *See* VIII.B.2. Opening the Start menu using the Windows logo key "permit[s] the user to select for display one of the plurality of modes of content," e.g., highlight or launch a content mode such as Microsoft Word, "via an input device," e.g., trackpad, touch screen, keyboard, mouse, etc." EX-1010, ¶245.

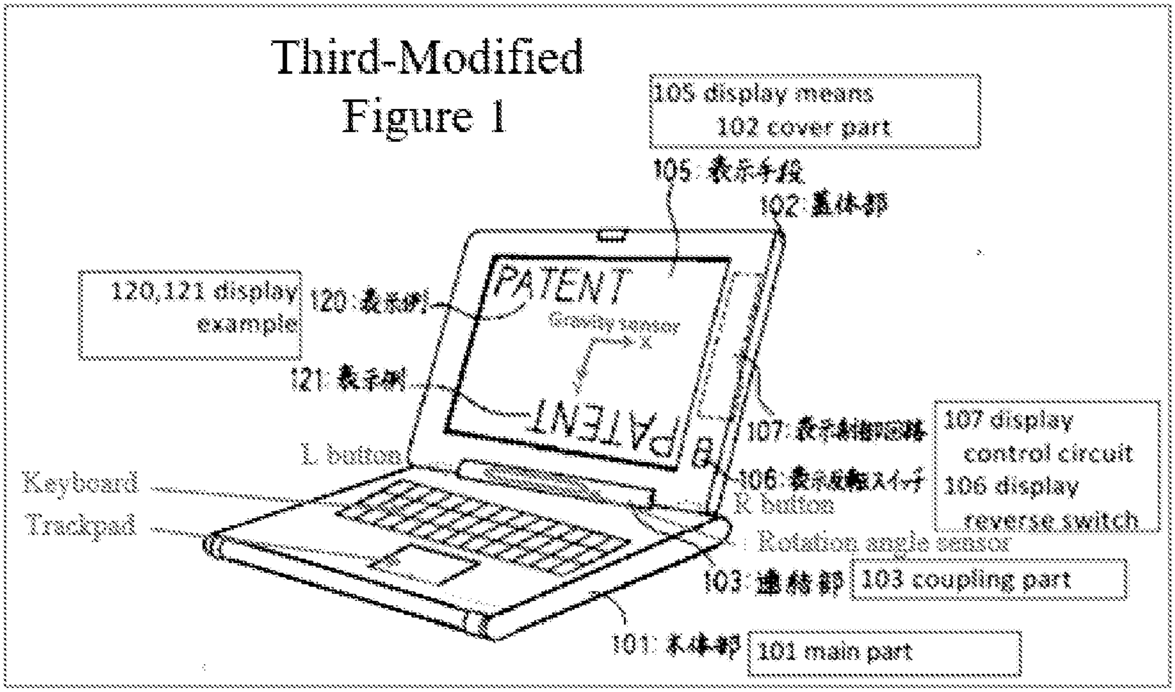
Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 4. *Id.*, ¶¶238-246.

6. Claim 5

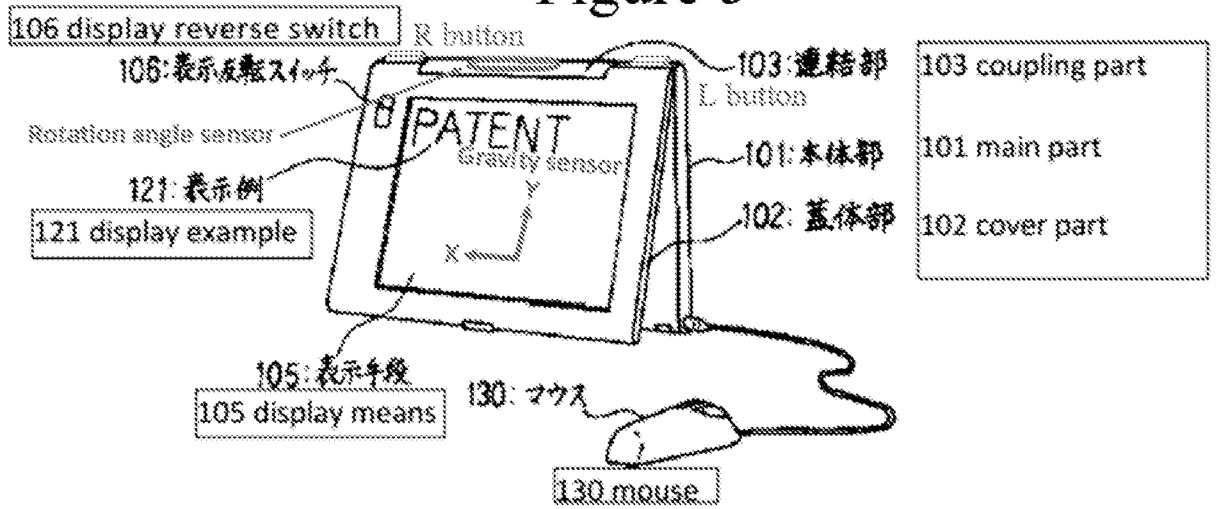
a. Limitation [5a]

The Shimura-Tsuji-Pogue combination discloses [5a] and renders it obvious. *See* VIII.A.2; VIII.B.1.b; EX-1010, ¶¶247-51.

Tsuji discloses R and L buttons 118 and 119 integrated into the base of the Shimura-Tsuji-Pogue Computer, as illustrated in Third-Modified Figure 1 of Shimura and Second-Modified Figure 5 of Shimura below. *See* VIII.B.1.b; EX-1005, ¶38; EX-1010, ¶248.


Third-Modified Figure 1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
Gravity sensor
X
PATENT
B
107: 表示制御回路
107 display control circuit
L button
Keyboard
Trackpad
106: 表示反転スイッチ
106 display reverse switch
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

Second-Modified
Figure 5


106 display reverse switch
R button
106:表示反転スイッチ
103:連結部
103 coupling part
L button
Rotation angle sensor
PATENT
Gravity sensor
Y
X
101:本体部
101 main part
121:表示例
121 display example
102:蓋体部
102 cover part
105:表示手段
105 display means
130:マウス
130 mouse

The R or L button can be programmed with any given function, including arrow keys (e.g., up, down, left, and right directions), used to navigate around the display screen. *See* VIII.A.2; VIII.B.1.b; EX-1005, ¶¶39-46. Such a programmed R or L button discloses the claimed "second navigation button." EX-1010, ¶249.

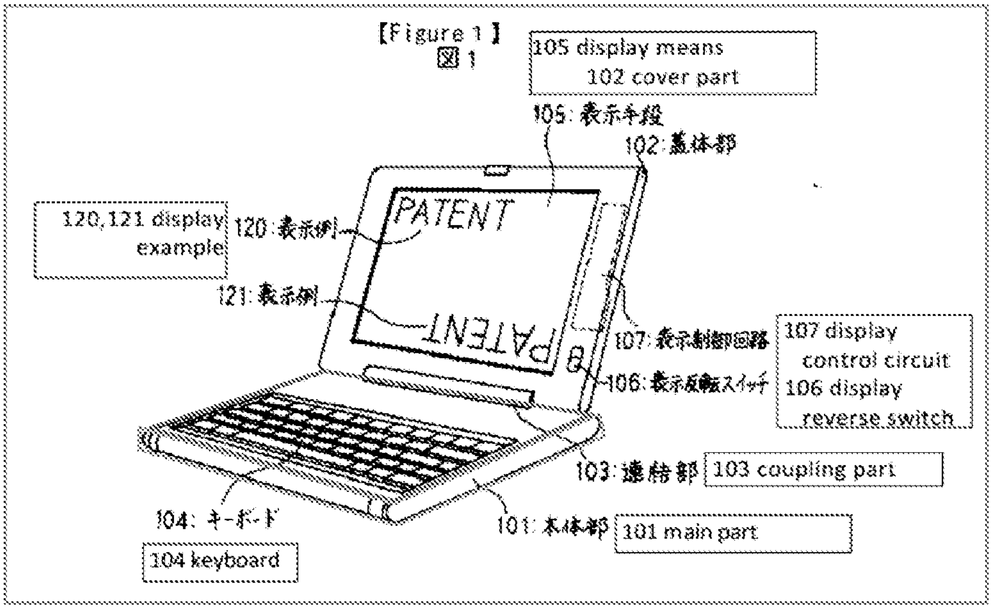
Alternatively, the R or L button can be programmed with another function, including (1) the display inversion functionality disclosed in Shimura by the display reverse switch 106 and disclosed in Tsuji by using the rotation angle sensor and the gravity sensor and (2) Pogue's Start menu button. *Id.*, ¶250.

The R or L button programmed with any one of these functions discloses the claimed "second navigation button." *Id.*, ¶¶251.

b. Limitation [5b]

The Shimura-Tsuji-Pogue combination discloses [5b] and renders it obvious. *See* VIII.A.1; VIII.A.3; VIII.B.2; VIII.B.4; EX-1010, ¶¶252-53.

The Shimura Computer includes the base (101) with the keyboard (104) disposed on a first surface (i.e., upper surface in red), which is understood to be a major surface. Figure 1 (below). The base (102) also includes a second surface (i.e., lateral surface in blue), which is understood to be a minor surface. *Id.* Thus, the Shimura-Tsuji-Pogue Computer discloses "the first navigation button [Windows logo key of keyboard 104] is disposed on a major surface [first surface] of the base [101]." EX-1010, ¶253.


【Figure 1】
図1

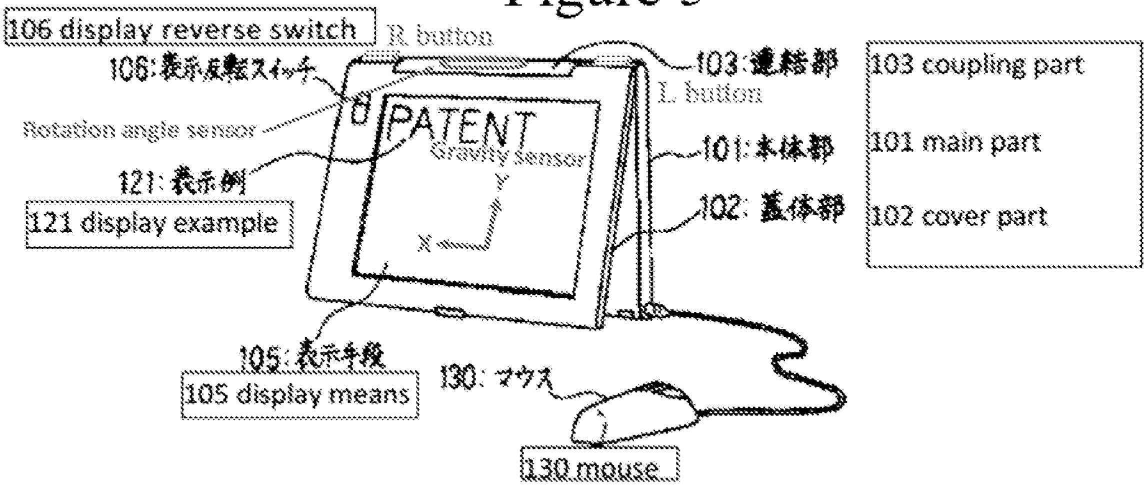
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
PATENT
B
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
103: 連結部
103 coupling part
104: キーボード
104 keyboard
101: 本体部
101 main part

c. Limitation [5c]

The Shimura-Tsuji-Pogue combination discloses [5c] and renders it obvious. *See* VIII.A.2; VIII.B.1.b; VIII.B.6.a-VIII.B.6.b; EX-1010, ¶¶254-55.

The programmed R or L button of the Shimura-Tsuji-Pogue Computer discloses "the second navigation button . . . disposed on a minor surface of the base [101]." EX-1004, Second-Modified Figure 5.

Second-Modified Figure 5


106 display reverse switch
R button
106:表示反転スイッチ
Rotation angle sensor
121:表示例
121 display example
PATENT
Gravity sensor
Y
X
103:連結部
L button
101:本体部
102:蓋体部
103 coupling part
101 main part
102 cover part
105:表示手段
105 display means
130:マウス
130 mouse

Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 5. *See* EX-1010, ¶¶247-56.

7. Claim 7

a. Limitation [7a]

Shimura discloses [7a]. *See* VIII.A.1; EX-1010, ¶¶257-58.

In the laptop mode, as illustrated in Shimura's FIG. 1 below, the hinge rotation angle is less than 180° from the closed mode. EX-1004, ¶¶11-14, FIG. 1; EX-1010, ¶258.

b. Limitation [7b]

Shimura discloses [7b]. *See* VIII.A.1; VIII.B.7.a; EX-1010, ¶¶259-61.

In the easel mode, as illustrated in Shimura's FIG. 5, the hinge rotation angle is more than 180° from the closed mode. EX-1004, ¶¶14-17; EX-1010, ¶260.

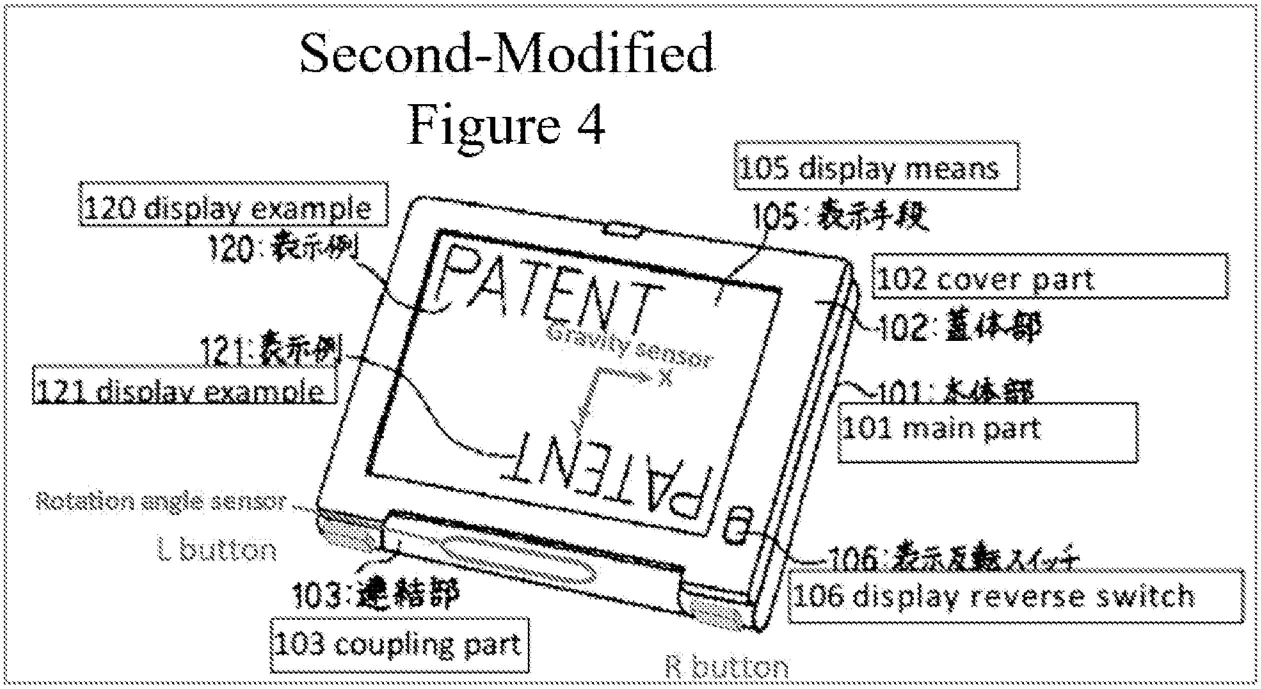
Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 7. *See* EX-1010, ¶¶257-61.

8. Claim 8

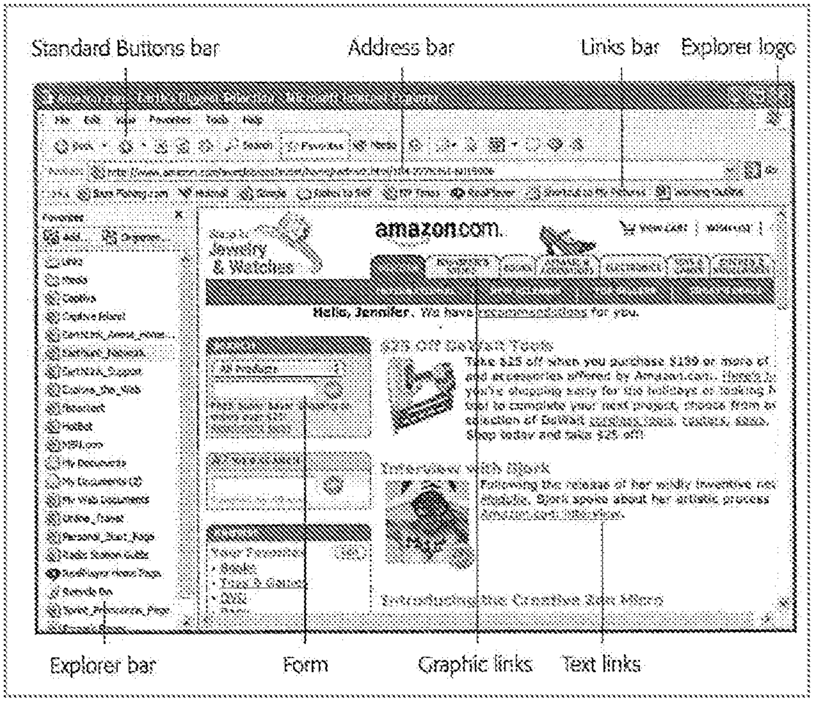
The Shimura-Tsuji-Pogue combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; EX-1010, ¶¶262-66.

Pogue discloses "first content mode" means "a user selectable element displayed on a user interface that, when selected, allows the user to access the content organized therein," which includes at least a web content mode. *See* VIII.B.3.f; VII; EX-1001, 11:49-50.

The Shimura-Tsuji-Pogue Computer discloses the frame mode in a first content display orientation (i.e., a normal view). *See* VIII.B.1.b; VIII.B.3.j; EX-1004, ¶8, Second-Modified Figure 4; EX-1010, ¶264.


Second-Modified Figure 4
105 display means
105:表示手段
120 display example
120:表示例
102 cover part
102:蓋体部
121:表示例
121 display example
PATENT
Gravity sensor
X
101:本体部
101 main part
PATENT
Rotation angle sensor
L button
106:表示反転スイッチ
103:連結部
106 display reverse switch
103 coupling part
R button

Also, Pogue discloses "a first content mode." *See* VIII.B.2; VIII.B.3.f; EX-1006, 337-38, FIG. 11-1 below; EX-1010, ¶265.


Standard Buttons bar
Address bar
Links bar
Explorer logo
amazon.com
Explorer bar
Form
Graphic links
Text links

When the user opens Internet Explorer in the frame mode, the displayed content would be in a normal view. *See* VIII.B.1.b. Thus, the Shimura-Tsuji-Pogue Computer "display[s] to a user on the main display component [102] the first content mode [Pogue's Internet Explorer] having the first content display orientation [normal view]." EX-1010, ¶266.

9. Claim 9

Shimura discloses the additional limitation of this claim, and the Shimura-Tsuji-Pogue combination renders the claim obvious. *See* VIII.A.1; VIII.B.2; EX-1010, ¶¶267-68.

Shimura discloses a "second switching means" to invalidate input from the keyboard. EX-1004, ¶8. The second switching means can be set so that input to the keyboard is invalidated. *Id.* The input invalidation may be used in a frame mode. EX-1004, ¶¶8, 18 ("A switching means . . . should be set in place to invalidate input from the keyboard to prevent this."), Figure 4. The input invalidation functionality may operate automatically based on an angle of the cover part 102 relative to the main part 101. *Id.*, ¶¶18, 19. Shimura's input invalidation discloses "prevent[ing] the portable computer from responding to keyboard input when the portable computer is in the frame mode." EX-1010, ¶268.

10. Claim 10

a. Limitation [10pre]

The Shimura-Tsuji combination discloses [10pre] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.a; EX-1010, ¶269.

b. Limitation [10a]

Shimura discloses [10a]. *See* VIII.A.1; VIII.B.3.b, EX-1010, ¶270.

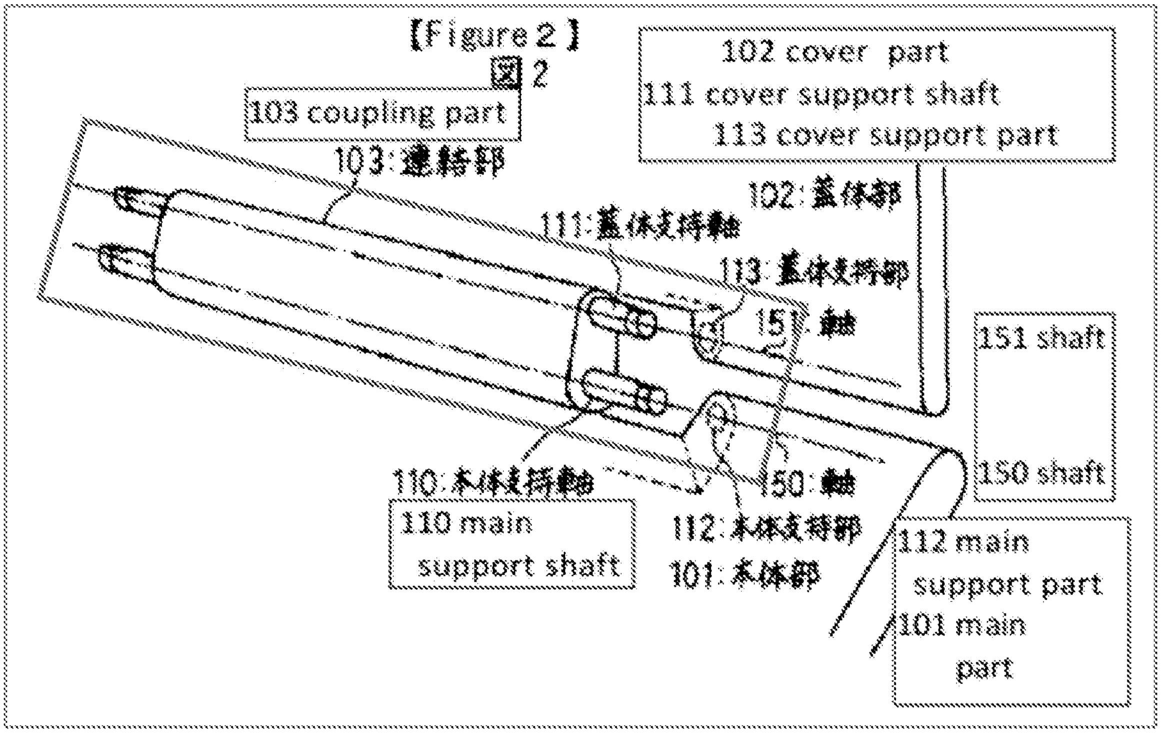
c. Limitation [10b]

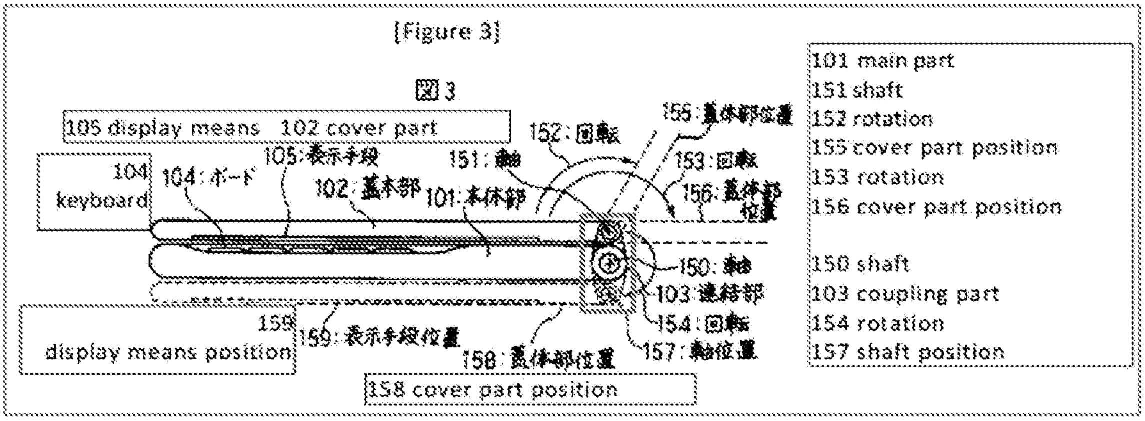
The Shimura-Tsuji combination discloses [10b] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.a; VIII.B.3.c; VIII.B.3.d; EX-1010, ¶271.

d. Limitation [10c1]

Shimura discloses [10c1]. *See* VIII.A.1; EX-1010, ¶¶272-75.

The Shimura Computer discloses the claimed "hinge assembly" (coupling part 103 red) that "defines an axis of rotation [main support shaft 110] about which both the base [101] and the main display component [102] are rotatable" to transition between the plurality of display modes. EX-1004, ¶¶12-13, Figures 2 & 3 (below); EX-1010, ¶273.


【Figure 2】
図 2
103 coupling part
103:連結部
102 cover part
111 cover support shaft
113 cover support part
102:蓋体部
111:蓋体支持軸
113:蓋体支持部
151:軸
151 shaft
150 shaft
110:本体支持軸
110 main support shaft
150:軸
112:本体支持部
101:本体部
112 main support part
101 main part


[Figure 3]
図 3
105 display means 102 cover part
104 keyboard
104:ボード
105:表示手段
102:蓋本部
101:本体部
151:軸
152:回転
155:蓋体部位置
153:回転
156:蓋体部位置
150:軸
103:連結部
154:回転
157:軸位置
159 display means position
159:表示手段位置
158:蓋体部位置
158 cover part position
101 main part
151 shaft
152 rotation
155 cover part position
153 rotation
156 cover part position
150 shaft
103 coupling part
154 rotation
157 shaft position

The Shimura Computer can be configured into the laptop and easel modes, as illustrated in Shimura's Figures 1 and 5. *See* VIII.B.3.a; EX-1010, ¶274.

The hinge assembly 103 includes main support shaft 110 and cover support shaft 111 that would be placed inside, respectively, the main support part 112 of the main 101 and the cover support part 113 of the cover part 102. EX-1010, ¶275.

Thus, the "hinge assembly" (103) is "at least partially housed within the base" (101) and the "main display component" (102). *Id.*

e. Limitation [10c2]

The Shimura-Tsuji combination discloses [10c2] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.e; EX-1010, ¶276.

f. Limitation [10c3]

The Shimura-Tsuji-Pogue combination discloses [10c3] and renders it obvious. *See* VIII.A.1; VIII.A.3; VIII.B.1.a; VIII.B.2; VIII.B.3.f; EX-1010, ¶277.

g. Limitation [10d1]

The Shimura-Tsuji-Pogue combination discloses [10d1] and renders it obvious. *See* VIII.A.1; VIII.A.3; VIII.B.1.a; VIII.B.2; VIII.B.3.g; EX-1010, ¶278.

h. Limitation [10d2]

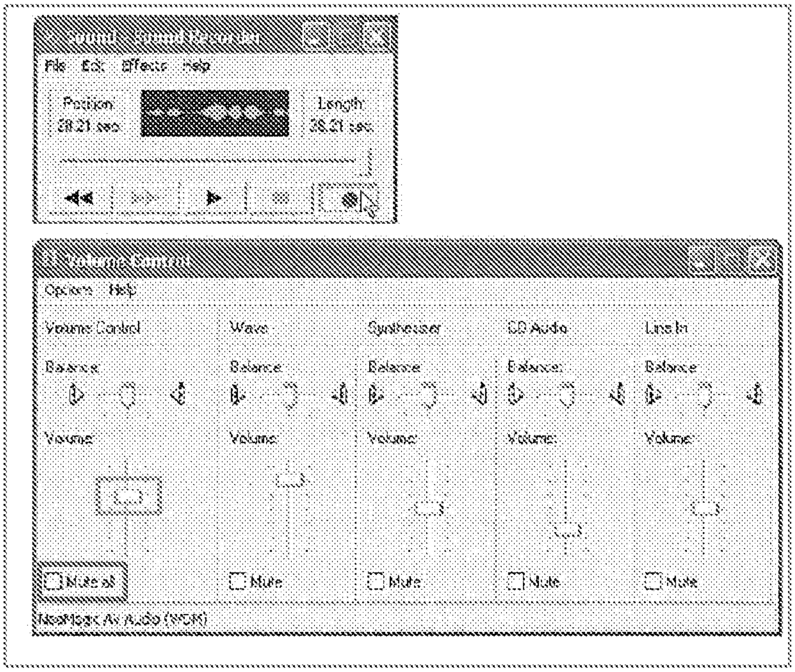
The Shimura-Tsuji combination discloses [10d2] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.h; EX-1010, ¶279.

i. Limitation [10e1]

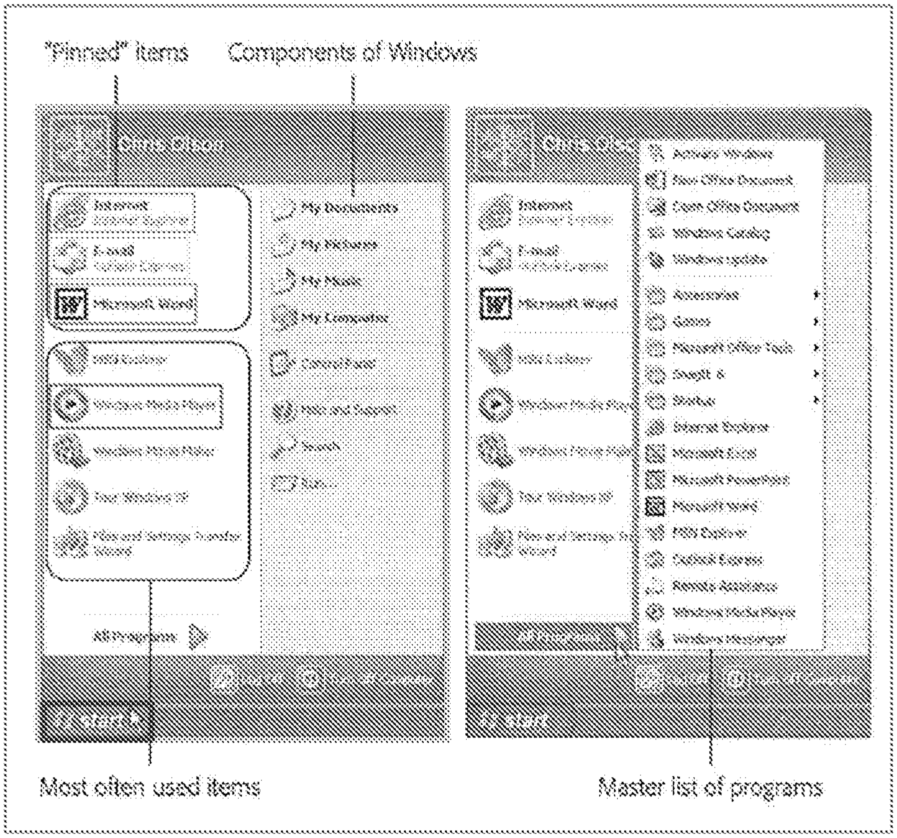
Shimura and the Shimura-Tsuji-Pogue combination each disclose [10e1] and the Shimura-Tsuji-Pogue combination renders it obvious. *See* VIII.A.1; VIII.B.1.a-VIII.B.1.b; VIII.B.2; EX-1010, ¶¶280-87.

(1) Touch screen as the navigation control

The Shimura-Tsuji-Pogue Computer includes a touch screen. *See* VIII.B.1.a. This touch screen is the "navigation control accessible in each of the plurality of display modes" because it can be accessed in the laptop, easel, and frame modes. Moreover, it can be used to control the volume by, e.g., dragging the volume bar (blue) up or pressing "Mute all" (red), disclosing "manipulat[ing] at least one of operating parameters of the portable computer." *See* VIII.B.3.i; EX-1006, 229-31, FIG. 7-14 below; EX-1010, ¶281.


Sound - Sound Recorder
File Edit Effects Help
Position: 28.21 sec
Length: 28.21 sec
Volume Control
Options Help
Volume Control
Wave
Synthesizer
CD Audio
Line In
Balance:
Volume:
☐ Mute all
☐ Mute
NeoMagic AV Audio (WDM)

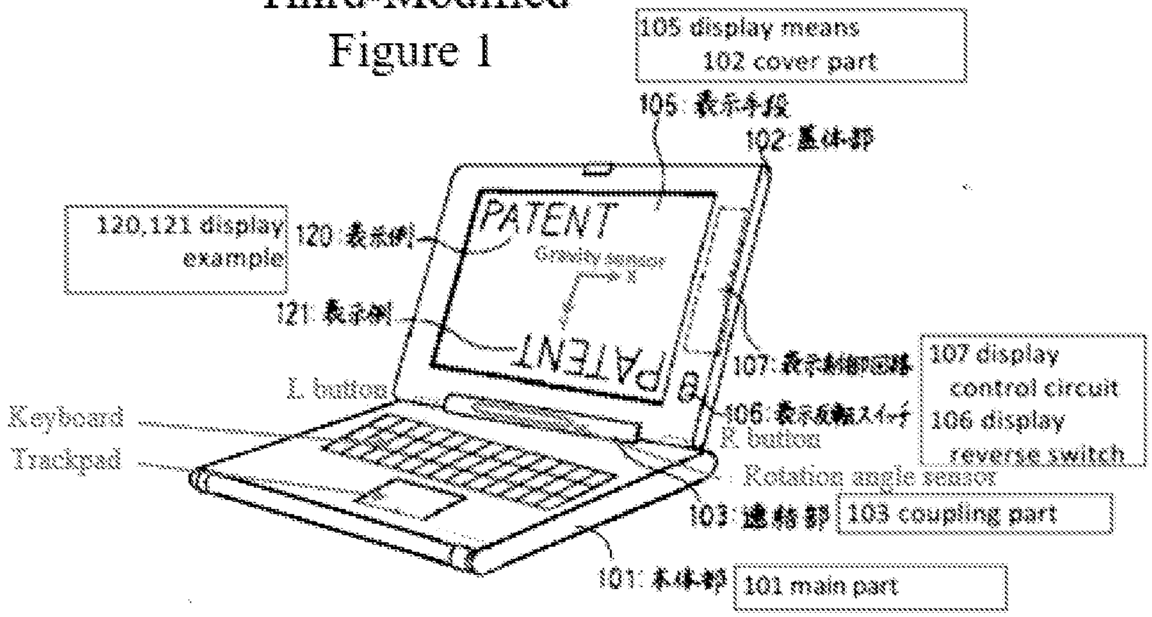
The touch screen of the Shimura-Tsuji-Pogue Computer can also be used to press Pogue's Start menu button (purple in Figure 2-3 below) that opens the Start menu (light green) that lists at least "Internet" (dark green), "E-mail" (orange), "Microsoft Word" (blue), and "Windows Media Player" (red). *See* VIII.B.3.i; EX-1006, 24-25.


"Pinned" items
Components of Windows
Most often used items
Master list of programs

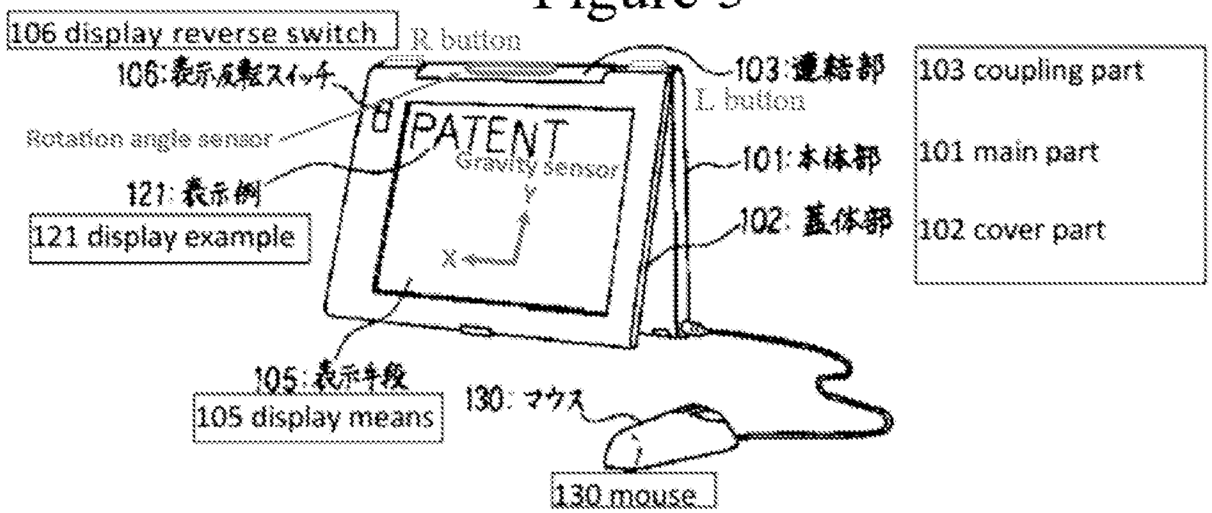
(2) Programmed R and L buttons as the navigation control

Alternatively, the programmed R and L buttons 118 and 119 of the Shimura-Tsuji-Pogue Computer are integrated into a side of the base of portable computer 1. *See* VIII.B.1.b; VIII.B.6.a; EX-1005, ¶38; EX-1010, ¶283; Third-Modified Figure 1 & Second-Modified Figure 5 of Shimura (below).

Third-Modified
Figure 1


105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
Gravity sensor
PATENT
L button
Keyboard
Trackpad
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

Second-Modified
Figure 5


106 display reverse switch
R button
106: 表示反転スイッチ
Rotation angle sensor
121: 表示例
121 display example
PATENT
Gravity sensor
Y
X
103: 連結部
L button
101: 本体部
102: 蓋体部
103 coupling part
101 main part
102 cover part
105: 表示手段
105 display means
130: マウス
130 mouse

The R and L buttons can be programmed with any given function, including arrow keys (e.g., up, down, left, and right directions) and an enter key used to navigate around the display screen and select content on the display screen, as well as Pogue's Start menu button to open the Start menu. *See* VIII.A.2; VIII.B.1.b;

EX-1005, ¶¶43, 45. The R and L buttons are accessible in the laptop, easel, and frame modes. EX-1005, ¶¶43, 45. A user would be able to press an L button programmed to operate as the Start menu button, and press the R button to move down through the list of functionalities presented by the Start menu, thereby "manipulat[ing] at least one of operating parameters of the portable computer and the content displayed on the single display screen." *See* VIII.B.3.i; EX-1010, ¶284.

(3) Display reverse switch as the navigation control

Alternatively, Shimura discloses the display reverse switch 106 to orient the displayed content. EX-1004, ¶12. The display reverse switch 106 is accessible in the laptop, easel, and frame modes. *See* VIII.A.1; EX-1010, ¶285; Shimura's Figures 1, 4, 5.

Inverting the displayed content discloses "manipulat[ing] at least one of operating parameters of the portable computer and the content displayed on the single display screen." EX-1010, ¶286.

Thus, each of the touch screen, the R and L buttons, and the display reverse switch in the above-described examples discloses the claimed "navigation control." *Id.*, ¶¶207.

j. Limitation [10e2]

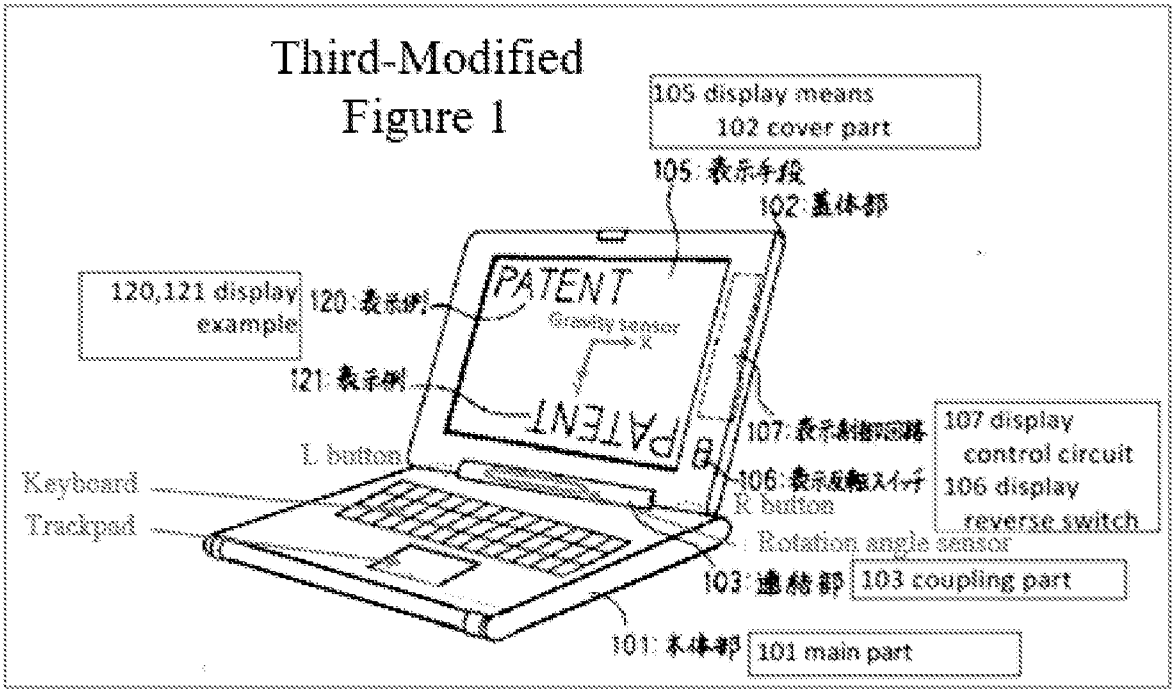
Shimura discloses [10e2]. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; VIII.B.3.j; EX-1010, ¶288.

Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 10. EX-1010, ¶¶269-89.

11. Claim 13

The Shimura-Tsuji combination discloses the additional limitation of this claim, and the Shimura-Tsuji-Pogue combination renders the claim obvious. *See* VIII.A.1; VIII.B.1.b; VIII.B.2; EX-1010, ¶¶290-93.

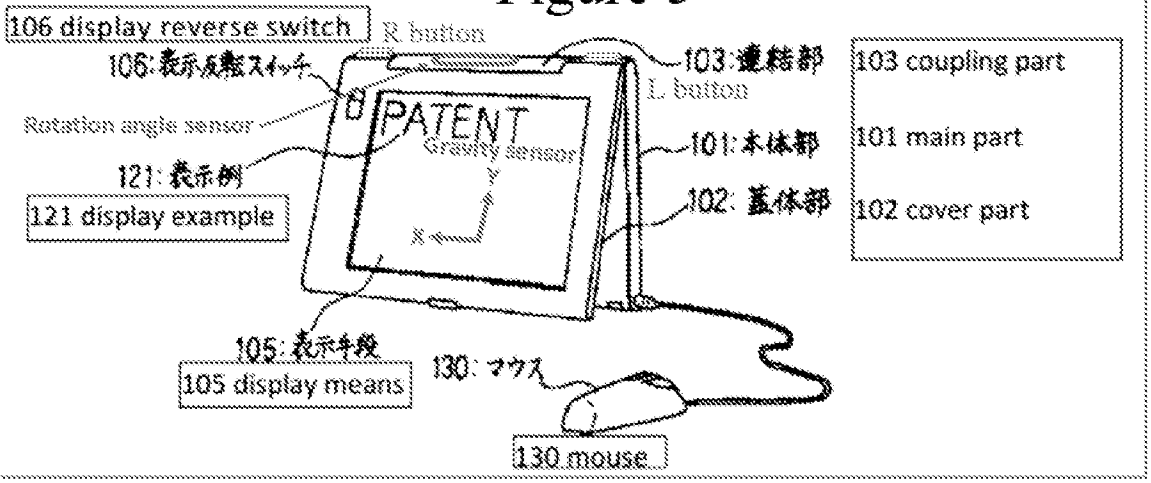
Tsuji discloses R and L buttons 118 and 119 integrated into a side of the base of portable computer 1 that is accessible in the laptop and easel modes, as illustrated in the Third-Modified Figure 1 of Shimura and the Second-Modified Figure 5 of Shimura below. EX-1005, ¶38; EX-1010, ¶291.



Third-Modified Figure 1

105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
PATENT
Gravity sensor
X
121: 表示例
PATENT
B
L button
Keyboard
Trackpad
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

Second-Modified
Figure 5


106 display reverse switch
R button
106:表示反転スイッチ
103:連結部
103 coupling part
L button
Rotation angle sensor
PATENT
Gravity sensor
Y
X
101:本体部
101 main part
121:表示例
121 display example
102:蓋体部
102 cover part
105:表示手段
105 display means
130:マウス
130 mouse

The R or L button can be programmed with any given function, including arrow keys (e.g., up, down, left, and right directions) used to navigate around the display screen and select content on the display screen. *See*VIII.A.2; VIII.B.1.b; EX-1005, ¶¶39-45; EX-1010, ¶292. Thus, Tsuji discloses "a first navigation button [i.e., the R or L button programmed to be a down arrow key] user-accessible in each of the laptop mode and the easel mode [i.e., a back side of the base 101]."

Pogue's Start menu discloses the claimed "selected content displayed on the screen" because a user selects this displayed content by pressing, e.g., the Windows logo key via the touch screen of the Shimura-Tsuji-Pogue Computer. EX-1006, 25. With the Start menu open, a user would be able to use the programmed R button or L button to select for display one of the modes of content (e.g., "Internet," E-mail," "Windows Media Player," and "Microsoft Word"). Activating the R or L button programmed to be the down arrow key discloses manipulating the "selected content displayed on the screen." *See* VIII.B.3.i; EX-1005, ¶¶35, 43; EX-1010, ¶293.

12. Claim 14

a. Limitation [14a]

Pogue discloses [14a]. *See* VIII.A.2-VIII.A.3; VIII.B.1.a; VIII.B.2; VIII.B.3.f; VIII.B.3.g; VIII.B.5.a; EX-1010, ¶294.

b. Limitation [14b]

The Shimura-Tsuji-Pogue combination discloses [14b] and renders it obvious. *See* VIII.A.2-VIII.A.3; VIII.B.1.a; VIII.B.2; VIII.B.5.b; EX-1010, ¶¶295-96.

Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 14. EX-1010, ¶¶295-96.

13. Claim 15

The Shimura-Tsuji-Pogue combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.2-VIII.A.3; VIII.B.2; EX-1010, ¶¶297-98.

The Shimura-Tsuji-Pogue Computer discloses various keys (e.g., arrow keys, Windows logo key, etc.) on the keyboard 104 and a trackpad on the same surface as the keyboard 104. *See* VIII.B.4. The keyboard 104 and the trackpad are not accessible in the easel mode. EX-1004, ¶17 ("At this time, keyboard 104 is completely on the back side when seen by the user."), Figure 5; EX-1010, ¶298.

14. Claim 16

The Shimura-Tsuji combination discloses the additional limitation of this claim, and the Shimura-Tsuji-Pogue combination renders it obvious. *See* VIII.A.1-VIII.A.2; VIII.B.1.c; VIII.B.2; EX-1010, ¶¶299-300.

Tsuji's rotation angle sensor and gravity sensor can be used to determine the display mode (i.e., physical orientation of the portable computer) and corresponding orientation of the displayed content. *See* Table 1; VIII.B.1.

C. Ground 2: Shimura in view of Tsuji, Pogue, and Escamilla renders Claim 6 obvious.

1. Combination of Shimura, Tsuji, Pogue, and Escamilla (hereafter "Shimura-Tsuji-Pogue-Escamilla combination")

A POSITA would have been motivated to combine Pogue with Shimura and Tsuji (VIII.B.2), and to combine Escamilla with the foregoing for several reasons. EX-1010, ¶¶301-05.

A scroll wheel was not explicitly disclosed in Shimura, Tsuji, or Pogue. However, a scroll wheel was a standard component that found uses in various electronic devices including portable computers. Such a scroll wheel (red) is explicitly disclosed in Escamilla. EX-1007, Abstract, 3:1-7, FIG. 3 (below); EX-1010, ¶302.

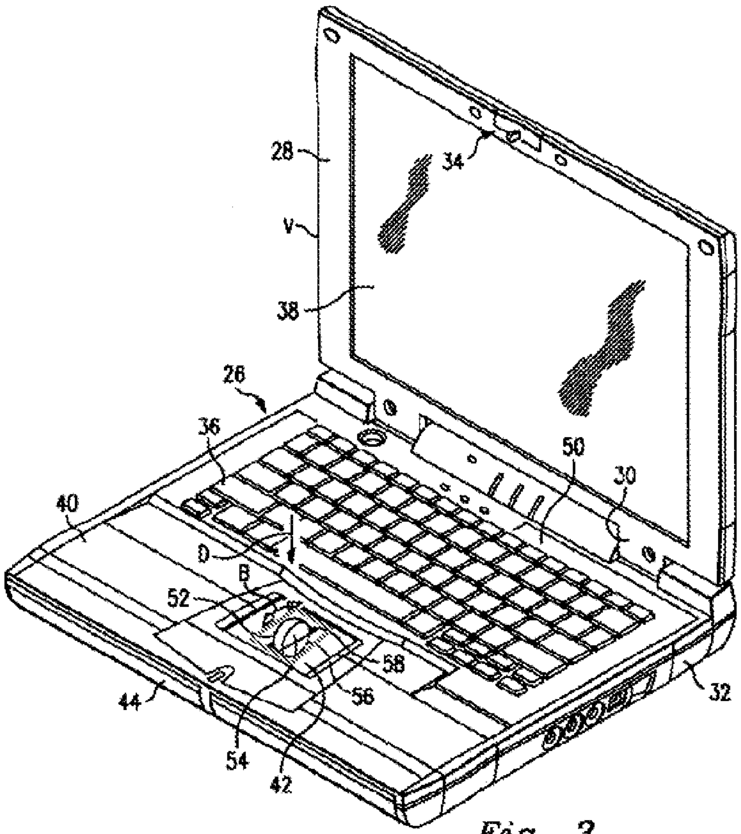
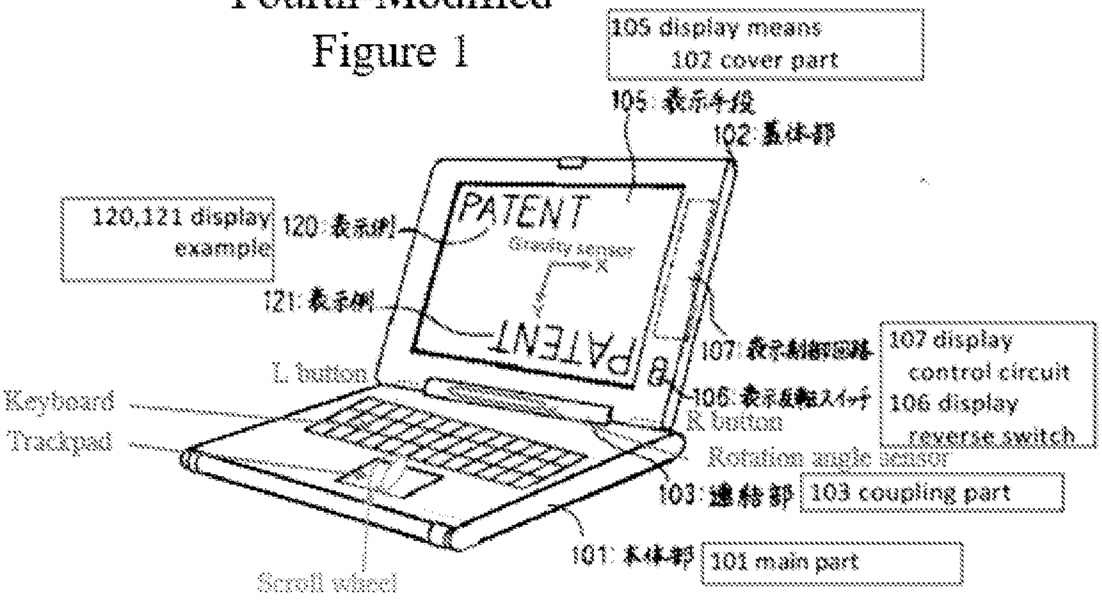

28
34
V
38
26
36
50
30
40
D
B
52
58
56
44
54
42
32

Fig. 3

Thus, a POSITA would have been motivated to incorporate Escamilla's standard scroll wheel (blue) into the Shimura-Tsuji-Pogue Computer to arrive at the "Shimura-Tsuji-Pogue-Escamilla Computer," as illustrated in Fourth-Modified Figure 1 of Shimura. EX-1010, ¶303.

Fourth-Modified
Figure 1


105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
PATENT
Gravity sensor
X
121: 表示例
PATENT
B
107: 表示制御回路
107 display control circuit
L button
Keyboard
106: 表示反転スイッチ
106 display reverse switch
R button
Trackpad
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part
Scroll wheel

There would have been motivation to combine, and a reasonable expectation of success in combining, Escamilla with Shimura, Tsuji, and Pogue because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415-21. That is, Escamilla taught a scroll wheel integrated into a portable computer, and application of this teaching to Shimura, Tsuji, and Pogue would have yielded a predictable portable computer with Escamilla's multi-functional scroll wheel integrated into the base of the portable computer. EX-1010, ¶304.

Thus, the POSITA would have been motivated to combine the teachings of Shimura, Tsuji, and Pogue with Escamilla's teachings to arrive at the Shimura-Tsuji-Pogue-Escamilla Computer that implements Escamilla's scroll wheel into the portable computer. EX-1010, ¶¶301-05.

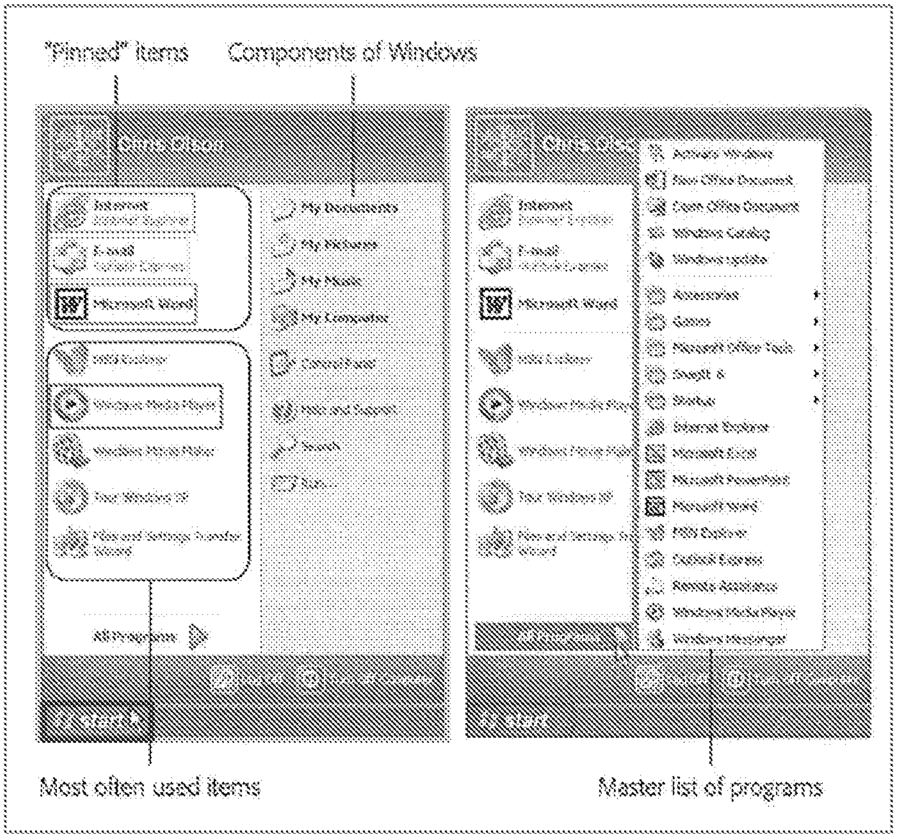
2. Claim 6

The Shimura-Tsuji-Pogue-Escamilla combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4-VIII.A.5; VIII.C.1; VIII.D.1; EX-1010, ¶¶306-10.

Escamilla discloses that the scroll wheel can provide functionality similar to a wheel on a mouse, including a scroll function to scroll up and down. EX-1007, 1:20-27; EX-1010, ¶307.

The "mode of content" means "a user selectable element displayed on a user interface that, when selected, allows the user to access the content organized therein," which includes at least one of media, connect, application, and web content modes. See VII; EX-1001, 11:44-52; EX-1010, ¶308.

Pogue discloses clicking on a Start button (purple in Figure 2-3 below) to open a Start menu (light green). *See* VIII.A.3; VIII.B.2; EX-1006, 25. In the Start menu, the user has access to "Internet" (dark green), "E-mail" (orange), "Microsoft Word" (blue), and "Windows Media Player" (red), which correspond to different modes of content. *See* VIII.B.5.a; VIII.A.3; VIII.B.2; EX-1006, 23-25; EX-1010, ¶309.


"Pinned" items
Components of Windows
Internet
E-mail
Microsoft Word
My Documents
My Pictures
My Music
My Computer
Control Panel
Help and Support
Search
Run...
All Programs
Windows Catalog
Windows Update
Accessories
Games
Startup
Internet Explorer
Microsoft Excel
Microsoft PowerPoint
Microsoft Word
Outlook Express
Remote Assistance
Windows Media Player
Windows Messenger
Most often used items
Master list of programs

With the Start menu opened using the Windows logo key, a user could use the scroll wheel to "permit the user to select a mode of content for display," e.g., scroll through or highlight a content mode such as Microsoft Word. EX-1010, ¶310.

D. Ground 3: Shimura in view of Tsuji, Pogue, Escamilla, and Yeh renders Claim 2 obvious.

1. Combination of Shimura, Tsuji, Pogue, Escamilla, and Yeh (hereafter "Shimura-Tsuji-Pogue-Escamilla-Yeh combination")

A POSITA would have been motivated to combine Escamilla with Shimura, Tsuji, and Pogue (VIII.C.1), and to combine Yeh with the foregoing for several reasons. EX-1010, ¶¶311-14.

Escamilla discloses that the scroll wheel is a multi-function input device without providing explicit disclosure that one such function is volume control. EX-1007, 1:66-2:2. However, Yeh disclosed this function as to a control knob: where clockwise rotation increases the volume and counterclockwise rotation decreases the volume. EX-1008, Abstract, 3:1-7. Thus, a POSITA would have been motivated to program the function disclosed in Yeh into the multi-function scroll wheel of the Shimura-Tsuji-Pogue-Escamilla Computer to arrive at the "Shimura-Tsuji-Pogue-Escamilla-Yeh Computer" capable of controlling the volume with the scroll wheel. EX-1010, ¶312.

There would have been motivation to combine, and a reasonable expectation of success in combining, Yeh with Shimura, Tsuji, Pogue, and Escamilla because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415-21. That is, Yeh taught the use of a scroll wheel for controlling volume ("volume control knob"). Application of this teaching to Shimura, Tsuji, Pogue, and Escamilla would have yielded a predictable portable computer with Escamilla's scroll wheel capable of controlling the volume by rotating the scroll wheel. EX-1010, ¶313.

Thus, the POSITA would have been motivated to combine the teachings of Shimura, Tsuji, Pogue, and Escamilla with Yeh's teachings to arrive at the

Shimura-Tsuji-Pogue-Escamilla-Yeh Computer that implements Yeh's volume control functionality into Escamilla's scroll wheel. *Id.*, ¶¶234.

2. Claim 2

The Shimura-Tsuji-Pogue-Escamilla-Yeh combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4-VIII.A.5; VIII.C.1; VIII.D.1; EX-1010, ¶¶315-16.

A POSITA would have been motivated to incorporate Yeh's volume control functionality into Escamilla's multi-function scroll wheel. *See* VIII.D.1; EX-1007, 1:66-2:2; EX-1008, Abstract, 3:1-7; EX-1010, ¶316.

E. Ground 4: Shimura in view of Tsuji, Pogue, and Lin renders Claims 18 and 22 obvious.

1. Combination of Shimura, Tsuji, Pogue, and Lin (hereafter "Shimura-Tsuji-Pogue-Lin combination")

A POSITA would have been motivated to combine Pogue with Shimura and Tsuji (VIII.C.1), and to combine Lin with the foregoing for several reasons. EX-1010, ¶¶317-24.

A rotary knob was not explicitly disclosed in Shimura, Tsuji, or Pogue. However, a rotary knob was a standard component used in various electronic devices, including portable computers, such as the rotary knob (red) explicitly disclosed in Lin. EX-1008, Abstract, ¶28, FIG. 2 (below); EX-1010, ¶318.

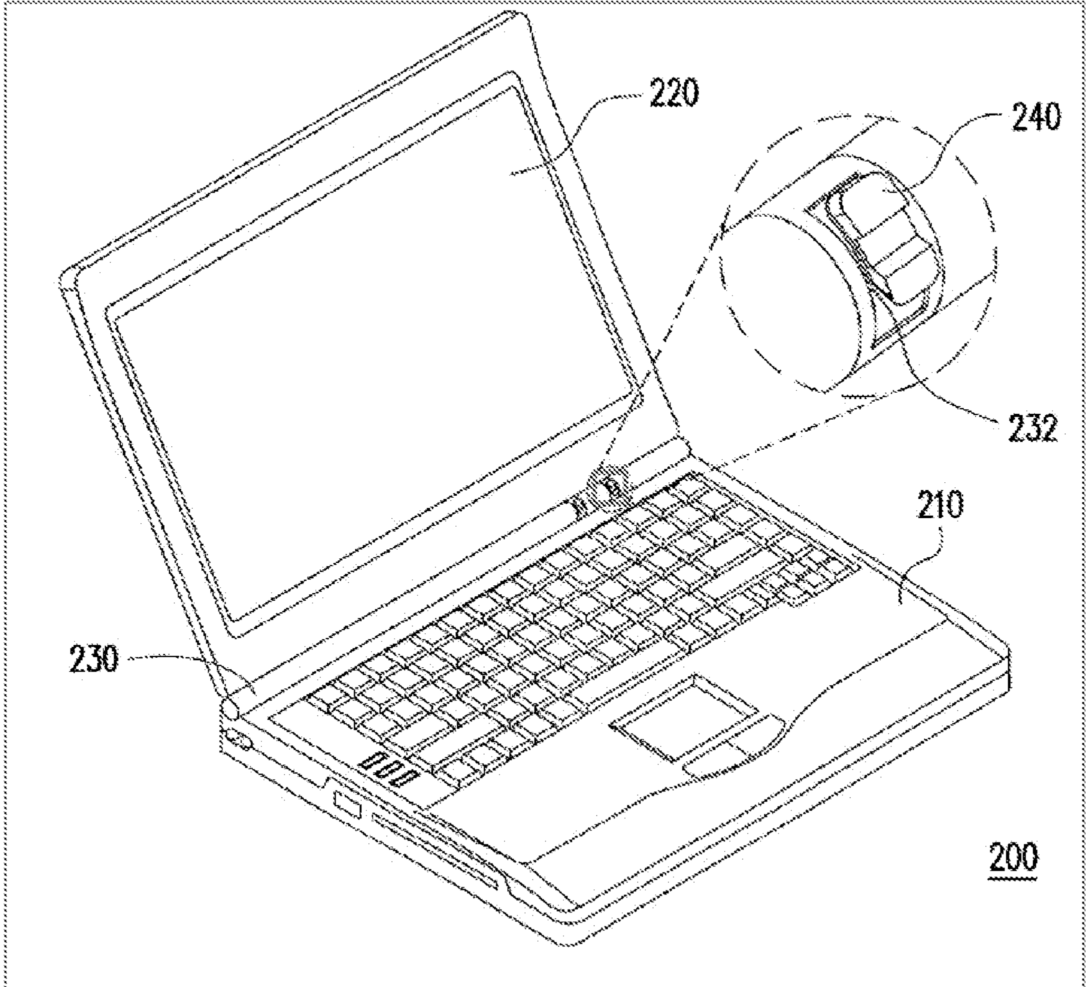


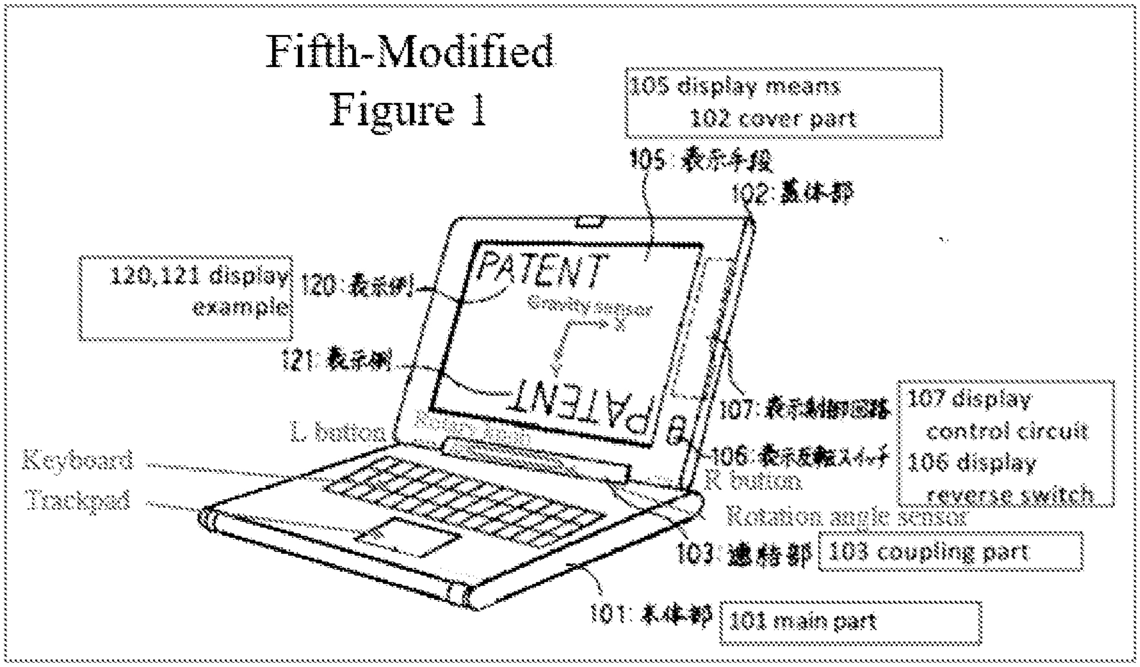
FIG. 2

Lin discloses that the rotary knob can be used to activate a desired function of the portable computer. EX-1009, ¶¶8, 28. Tsuji teaches various functions of a portable computer, such as up and down arrow keys of a keyboard. *See* VIII.A.2; VIII.B.1; EX-1005, ¶¶38-46. Given this, a POSITA would have been motivated to associate at least the functions of Tsuji's up and down arrow keys with Lin's rotary knob, such that moving the rotary knob up moves the displayed content up, and moving the rotary knob down moves the displayed content down. EX-1010, ¶319.

Moreover, the POSITA would have been motivated to incorporate Lin's rotary knob, disposed in the hinge assembly, into the portable computer so that "the available space inside the upper chassis of the main body is increased." EX-1009, ¶28; EX-1010, ¶320.

Additionally, the POSITA would have been motivated to incorporate Lin's rotary knob, disposed on the hinge assembly, into the portable computer so that it could be accessed in the various display modes, including in those display modes where the keyboard is not accessible (e.g., easel and frame modes). EX-1010, ¶321.

Thus, a POSITA would have been motivated to incorporate the Lin's standard rotary knob into the Shimura-Tsuji-Pogue Computer to arrive at the "Shimura-Tsuji-Pogue-Lin Computer" with the rotary knob (blue). EX-1010, ¶322; Fifth-Modified Figure 1 of Shimura (below).


Fifth-Modified Figure 1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例1
PATENT
Gravity sensor
121: 表示例
PATENT
B
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
L button
Rotary knob
Keyboard
Trackpad
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

There would have been motivation to combine, and a reasonable expectation of success in combining, Lin with Shimura, Tsuji, and Pogue because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415-21. I.e., Lin taught a rotary knob integrated into a hinge assembly, and application of this teaching to Shimura, Tsuji, and Pogue would have yielded a predictable portable computer with Lin's rotary knob integrated into the base of the portable computer. EX-1010, ¶323.

Thus, the POSITA would have been motivated to combine the teachings of Shimura, Tsuji, and Pogue with Lin's teachings to arrive at the Shimura-Tsuji-Pogue-Lin Computer that implements Lin's rotary knob into the portable computer. EX-1010, ¶¶317-24.

2. Claim 18

a. Limitation [18pre]

The Shimura-Tsuji combination discloses [18pre] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.a; EX-1010, ¶325.

b. Limitation [18a]

Shimura discloses [18a]. *See* VIII.A.1; VIII.B.3.b, EX-1010, ¶326.

c. Limitation [18b]

The Shimura-Tsuji combination discloses [18b] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.a; VIII.B.3.c-VIII.B.3.d; EX-1010, ¶327.

d. Limitation [18c1]

Shimura discloses [18c1]. *See* VIII.A.1; VIII.B.3.c; VIII.B.10.d; EX-1010, ¶328.

e. Limitation [18c2]

The Shimura-Tsuji combination discloses [18c2] and renders it obvious. *See* VIII.B.1.a; VIII.B.1.c; VIII.B.3.a; VIII.B.3.e; EX-1010, ¶329.

f. Limitation [18d]

The Shimura-Tsuji-Pogue combination discloses [18d] and renders it obvious. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; VIII.B.3.f; EX-1010, ¶330.

g. Limitation [18e1]

The Shimura-Tsuji-Pogue combination discloses [18e1] and renders it obvious. *See* VIII.A.1; VIII.A.3; VIII.B.1.a; VIII.B.2; VIII.B.3.g; EX-1010, ¶331.

h. Limitation [18e2]

The Shimura-Tsuji combination discloses [18e2] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.h; EX-1010, ¶332.

i. Limitation [18f1]

The Shimura-Tsuji-Pogue-Lin combination discloses [18f1] and renders it obvious. EX-1010, ¶¶333-34.

Lin discloses a rotary knob integrated into the hinge assembly, which is "at least partially about the longitudinal axis." *See* VIII.E.1; EX-1008, ¶28. Lin's rotary knob is used to activate a function. Given Tsuji's teaching of various functions of a portable computer, including up and down arrow keys, a POSITA would have been motivated to program the rotary knob to perform at least the up and down arrow key functions such that moving the rotary knob up moves the displayed content up and moving the rotary knob down moves the displayed content down. *See* VIII.E.1. Thus, Lin's rotary knob discloses the claimed "navigation control." EX-1010, ¶334.

j. Limitation [18f2]

Shimura discloses [18f2]. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; VIII.B.3.a; VIII.B.3.j; EX-1010, ¶335.

Accordingly, the Shimura-Tsuji-Pogue-Lin combination renders obvious Claim 18. EX-1010, ¶¶325-36.

3. Claim 22

The Shimura-Tsuji-Pogue combination discloses the additional limitation of this claim, and the Shimura-Tsuji-Pogue-Lin combination renders the claim obvious. *See* VIII.A.1; VIII.B.1.a-VIII.B.1.b; VIII.B.2; VIII.B.4-VIII.B.5.b; VIII.B.6.a-VIII.B.6.c; EX-1010, ¶337.

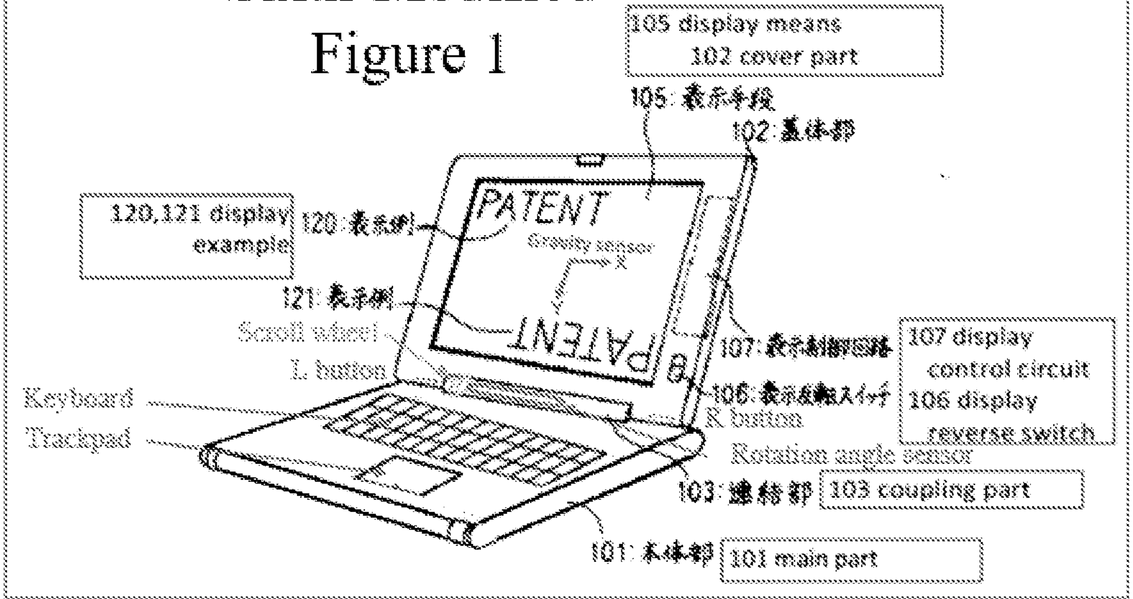
F. Ground 5: Shimura in view of Tsuji, Pogue, Escamilla, and Lin renders Claims 11, 12, 19, and 21 obvious.

1. Combination of Shimura, Tsuji, Pogue, Escamilla, and Lin (hereafter "Shimura-Tsuji-Pogue-Escamilla-Lin combination")

A POSITA would have been motivated to combine Escamilla with Shimura, Tsuji, and Pogue (VIII.C.1), and to combine Lin with the foregoing for several reasons. EX-1010, ¶¶338-41.

In one embodiment, Escamilla discloses the scroll wheel is mounted on a base of a computer. EX-1007, 2:1-2. However, Lin disclosed a rotary knob disposed in pivot portion 230 of the main body 210. EX-1009, ¶28. Thus, a POSITA would have known that implementing Escamilla's scroll wheel into a location that was accessible in all modes, such as Lin's pivot portion 230, was an obvious design choice for a portable computer with multiple display modes. The resulting system will be hereafter referred to as the "Shimura-Tsuji-Pogue-Escamilla-Lin Computer" with the scroll wheel (blue) implemented at least partially in the hinge assembly. EX-1010, ¶339; Sixth-Modified Figure 1 of Shimura (below).

Sixth-Modified
Figure 1


105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
PATENT
Gravity sensor
121: 表示例
Scroll wheel
L button
Keyboard
Trackpad
PATENT
8
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

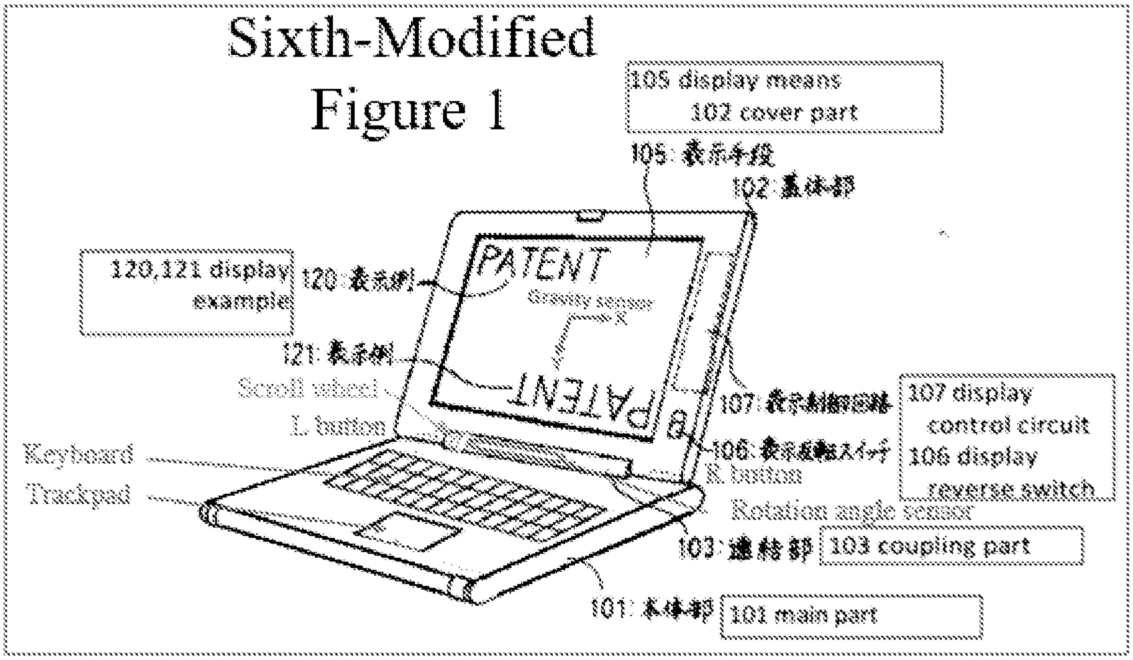
There would have been motivation to combine, and a reasonable expectation of success in combining, Lin with Shimura, Tsuji, Pogue, and Escamilla because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415-21. I.e., Lin taught implementing a scroll wheel into a hinge assembly, and application of this teaching to Shimura, Tsuji, Pogue, and Escamilla would have yielded a predictable portable computer with Escamilla's scroll wheel disposed within the hinge assembly of the portable computer. EX-1010, ¶340.

Thus, the POSITA would have been motivated to combine the teachings of Shimura, Tsuji, Pogue, and Escamilla with Lin's teachings to arrive at the Shimura-Tsuji-Pogue-Escamilla-Lin Computer that implements Escamilla's scroll wheel into the hinge assembly of the portable computer. *Id.*, ¶¶338-41.

2. Claim 11

The Shimura-Tsuji-Pogue-Escamilla-Lin combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4; VIII.A.6; VIII.C.1; VIII.F.1; EX-1010, ¶¶342-43.

The Shimura-Tsuji-Pogue-Escamilla-Lin Computer discloses a scroll wheel (blue) implemented in the hinge assembly. *See* VIII.F.1; Sixth-Modified Figure 1 of Shimura (below); EX-1010, ¶343.


Sixth-Modified
Figure 1
105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
PATENT
Gravity sensor
121: 表示例
Scroll wheel
L button
Keyboard
Trackpad
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B
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

3. Claim 12

The Shimura-Tsuji-Pogue-Escamilla-Lin combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4; VIII.A.6; VIII.C.1; VIII.F.1; EX-1010, ¶¶344-46.

Tsuji discloses automatically changing the function of the R and L buttons 118 and 119 based on a current display mode. *See* VIII.A.2; EX-1005, ¶46.

Given Tsuji's disclosure, a POSITA would have been motivated to program the multi-function scroll wheel of the Shimura-Tsuji-Pogue-Escamilla-Lin Computer to change a default action in the different display modes. E.g., the scroll wheel could scroll up and down in the laptop mode while reviewing and editing a document, and increase and decrease volume in the easel mode while consuming media (e.g., video). EX-1007, 1:20-30; EX-1010, ¶346.

4. Claim 19

The Shimura-Tsuji-Pogue-Escamilla-Lin combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4; VIII.A.6; VIII.C.1; VIII.F.1; EX-1010, ¶¶347-48.

Escamilla discloses that the scroll wheel can provide functionality similar to a wheel on a mouse, including a scroll function to scroll up and down. EX-1007, 1:20-27. With the Start menu using the Windows logo key, a user could use the scroll wheel to "permit a user to manipulate the content displayed on the screen [e.g., scroll through or highlight the modes of content (e.g., "Internet," "Windows Media Player," "Email," and "Microsoft Word")]." EX-1010, ¶348.

5. Claim 21

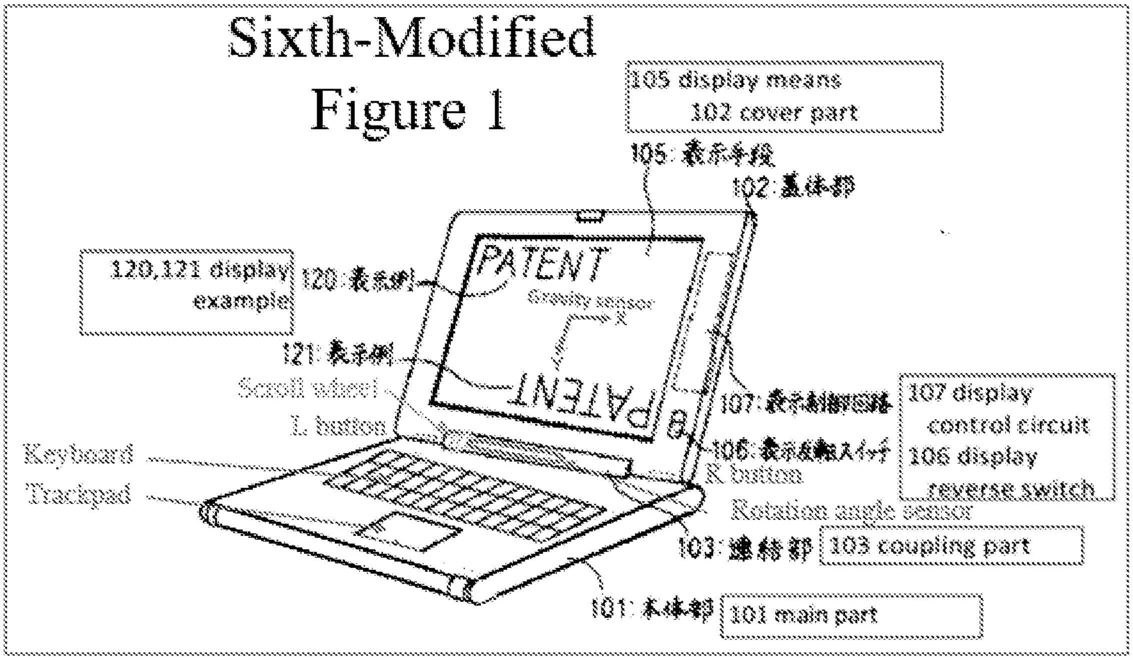
The Shimura-Tsuji-Pogue-Escamilla-Lin combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4; VIII.A.6; VIII.C.1; VIII.F.1-VIII.F.2; EX-1010, ¶349.

G. Ground 6: Shimura in view of Tsuji, Pogue, Escamilla, Lin, and Yeh renders Claim 20 obvious.

1. Combination of Shimura, Tsuji, Pogue, Escamilla, Lin, and Yeh (hereafter "Shimura-Tsuji-Pogue-Escamilla-Lin-Yeh combination")

A POSITA would have been motivated to combine Lin with Shimura, Tsuji, Pogue, and Escamilla (VIII.F.1), and to combine Yeh with the foregoing for several reasons. EX-1010, ¶¶350-54.

Lin discloses implementing the multi-function scroll wheel (blue) at least partially in the hinge assembly. *See* VIII.F.1; Sixth-Modified Figure 1 of Shimura (below).



Sixth-Modified Figure 1

105 display means
102 cover part
105: 表示手段
102: 蓋体部
120,121 display example
120: 表示例
121: 表示例
PATENT
Gravity sensor
PATENT
B
Scroll wheel
L button
Keyboard
Trackpad
107: 表示制御回路
107 display control circuit
106: 表示反転スイッチ
106 display reverse switch
R button
Rotation angle sensor
103: 連結部
103 coupling part
101: 本体部
101 main part

Escamilla also discloses that the scroll wheel is a multi-function input device, but without providing explicit disclosure that one such function is volume control. EX-1007, 1:66-2:2. However, Yeh disclosed this function as to a control knob: where clockwise rotation increases the volume and counterclockwise rotation decreases the volume. EX-1008, Abstract, 3:1-7. Thus, a POSITA would have been motivated to program the function disclosed in Yeh into the multi-function scroll wheel of the Shimura-Tsuji-Pogue-Escamilla-Lin Computer to arrive at the "Shimura-Tsuji-Pogue-Escamilla-Lin-Yeh Computer" capable of controlling the volume with the scroll wheel implemented at least partially in the hinge assembly. EX-1010, ¶352.

There would have been motivation to combine, and a reasonable expectation of success in combining, Yeh with Shimura, Tsuji, Pogue, Escamilla, and Lin because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415-21. I.e, Yeh taught volume control functionality, and application of this teaching to Shimura, Tsuji, Pogue, Escamilla, and Lin would have yielded a predictable portable computer with Escamilla's scroll wheel capable of controlling the volume by being rotated. EX-1010, ¶353.

Thus, the POSITA would have been motivated to combine the teachings of Shimura, Tsuji, Pogue, Escamilla, and Lin with Yeh's teachings to arrive at the Shimura-Tsuji-Pogue-Escamilla-Lin-Yeh Computer that implements Yeh's volume control functionality into Escamilla's scroll wheel implemented at least partially in the hinge assembly. EX-1010, ¶¶350-54.

2. Claim 20

The Shimura-Tsuji-Pogue-Escamilla-Lin-Yeh combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4-VIII.A.5; VIII.C.1-VIII.D.2; VIII.F.1; VIII.G.1; EX-1010, ¶355.

Respectfully submitted,

Dated: May 4, 2021

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Counsel for Petitioner

CERTIFICATION UNDER 37 C.F.R. § 42.24(D)

I certify that the foregoing complies with the type-volume limitation of 37 C.F.R. § 42.24 and contains 13,947 words based on the word count indicated by the word-processing system used to prepare the paper, and excluding those portions exempted by § 42.24(a).

Date: May 4, 2021 /Martin R. Bader/
Martin R. Bader
Registration No.: 54,736

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§42.6(e) and 42.105(a), the undersigned hereby certifies that the foregoing **PETITION FOR INTER PARTES REVIEW UNDER 35 U.S.C. §311 ET SEQ. AND 37 C.F.R. §42.100 ET SEQ. (CLAIMS 1-9 AND 11-32 OF U.S. PATENT NO. 8,624,844)**, including all exhibits and supporting evidence, was served in its entirety on May 4, 2021, by electronic mail pursuant to written agreement, upon counsel for the Patent Owner, the WOLF GREENFIELD & SACKS, P.C. firm, to the following individuals and email addresses:

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Counsel for Petitioner

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

LITL LLC,
Patent Owner.

PTAB Case No. IPR2021-01011
Patent No. 8,577,957

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,577,957

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  B. Overview of challenge and relief requested 4

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  A. The '957 Patent 5

  B. Challenged Claims of the '957 Patent 7

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IX. OBVIOUSNESS OF THE CHALLENGED CLAIMS 13

  A. Ground 1: Ray and Wormald 13

    1. Claim 1 13

      a. 1[pre]: "A computer implemented method for interpreting on-line executable operations into streamlined operations, the method comprising:" 13

      b. 1[a]: "receiving, by a computer system, electronic content through a communication interface, wherein the electronic content is hosted online by a server system;" 15

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c. 1[b]: "presenting, by the computer system, the electronic content to a user of the computer system through a graphical user interface;" 18

d. 1[c]: "receiving, by the computer system, selection of at least one executable operation provided within the electronic content through the graphical user interface, wherein the at least one executable operation includes an executable operation hosted by the server system;" 20

e. 1[d]: "determining that the at least one executable operation includes a local access operation on the computer system;" 22

f. 1[e]: "transforming, based on the determining, the at least one executable operation into a remote access operation, the transforming comprising:" 26

g. 1[f]: "identifying at least one characteristic of the at least one executable operation;" 27

h. 1[g]: "accessing a profile to retrieve information on at least one available remote services responsive to the at least one identified characteristics of the executable operation;" 29

i. 1[h]: "selecting an available remote service from the at least one available remote service;" 32

j. 1[i]: "retrieving the service access information for the selected remote service;" 33

k. 1[j]: "transforming, based on the at least one characteristic of the at least one executable operation and the service access information, the at least one executable operation into the remote access operation to utilize the remote service; and" 35

l. 1[k]: "transmitting the remote access operation to the server system." 36

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(continued)

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2. Claim 2: "The method according to claim 1, wherein the local access operation hosted by the server system is configured to be executed by an operating system on the computer system to request local storage of electronic content on the computer system prior to transformation." 37

3. Claim 3: "The method according to claim 1, wherein the electronic content presented to the user through a graphical user interface includes a web page and the at least one executable operation is contained with the web page." 38

4. Claim 4: "The method according to claim 1, wherein the local access operation includes executable instructions that cause a computer system to download electronic content to local memory including a mass storage device." 40

5. Claim 9: "The method according to claim 1, further comprising: identifying a type of electronic content associated with the local access operation; and selecting a remote service based at least in part on the identification of the type of the electronic content." 40

6. Claim 12: "The method according to claim 10, further comprising associating a computer based operation with a remote service responsive to user selection of the remote service during operation of the computer system." 42

7. Claim 13 43

- **a.** "The method according to claim 1, wherein transforming the at least one executable operation into a remote access operation, in response to identification of the at least one executable operation includes: accessing at least one of a device profile, a remote profile, and a user profile; and" 43

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(continued)

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b. "identifying at least one remote service based on at least one of the requested at least one executable operation and a content type referenced by the executable operation." 45

8. Claim 14: "The method according to claim 13, further comprising: selecting at least one remote service; and redirecting the at least one executable operation to the remote service." 46

9. Claim 16 46

a. "The method according to claim 1, wherein determining that the function that would be performed meets transformation criteria includes accessing a size threshold associated with the at least one executable operation that performs a local access operation" 46

b. "wherein accessing the size threshold includes accessing at least one of a user profile, a device profile, a remote service profile, and a default profile to obtain a file size limitation" 49

10. Claim 18: "The method according to claim 1, wherein selection of the at least one executable operation includes at least one of resolving computer focus within the graphical user interface on the at least one executable operation and hovering a visual pointer in the graphical user interface over a visual indicator of the at least one executable operation." 51

11. Claim 19 52

a. 19[pre]-19[a]: "A streamlined computer device, the device comprising: at least one processor operatively connected to a memory, the processor when executing is configured to cause the device to:" 52

b. 19[b]-19[l] 54

TABLE OF CONTENTS
(continued)

Page

12. Claim 20: "The device according to claim 19, wherein identifying includes: evaluating a function that would be performed by executing the at least one operation, and determining that the function that would be performed meets transformation criteria." 54

13. Claims 21-23, 27, 30-32, 34, and 36 55

B. Ground 2: Ray, Wormald, and Wagner 55

1. Claim 5: "The method according to claim 1, wherein transforming the at least one executable operation into a remote access operation includes redirecting the executable operation into a request for access to remote service hosted by a third party provider." 55

2. Claim 6: "The method according to claim 5, further comprising identifying a remote service stored in at least one of a device profile and a user profile." 58

3. Claim 7 62

a. "The method according to claim 1, further comprising: configuring access to a remote service on the computer system, wherein the act of configuring access to the remote service includes establishing an account name and password for the remote service;" 62

b. "storing the account name and the password as part of at least one of a device profile and a user profile." 64

4. Claim 8 65

a. "The method according to claim 7, wherein configuring access includes defining one or more types of electronic content associated with the remote service;" 65

    - **b.** "and storing the one or more types of electronic content associated with the remote service as part of at least one of a device profile and a user profile." 66
  - **5.** Claim 9 67
  - **6.** Claim 10: "The method according to claim 1, further comprising: providing a remote service profile including at least one type of electronic content associated with at least one remote service; and identifying the at least one type of electronic content associated with the at least one remote service." 69
  - **7.** Claim 11 70
    - **a.** "The method according to claim 10, includes providing a default remote service profile, wherein the default remote service profile is associated with all file content types, and is further associated with a data storage capability;" 70
    - **b.** "and selecting the default profile in response to determining no matches to at least one of the remote service profile, a device profile, and a user profile." 72
  - **8.** Claim 17: "The method according to claim 16, wherein transforming the at least one executable operation into a remote access operation includes: creating a navigational link to content associated with the at least one executable operation; and transmitting the navigational link through an electronic message instead of performing the at least one executable operation, in response to a determination that the size threshold has been exceeded." 73
  - **9.** Claims 24-29 and 35 75
- C. Ground 3: Ray, Wormald, and Li 75

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  1. Claim 15: "The method according to claim 14, wherein selecting at least one remote service includes: displaying a plurality of remote services to the user in an interface; and permitting selection of one of the plurality of remote services by the user through the interface." 75
  2. Claim 33 78

X. CONCLUSION 78

EXHIBIT LIST

Ex. 1001	U.S. Patent No. 8,577,957 to Behar et al. ("the '957 patent")
Ex. 1002	Supporting Declaration of David R. Karger, Ph.D. ("Karger")
Ex. 1003	U.S. Patent No. 8,284,714 B2 ("Ray")
Ex. 1004	U.S. Patent No. 8,145,222 B2 ("Wormald")
Ex. 1005	U.S. Patent No. 8,385,950 B1 ("Wagner")
Ex. 1006	U.S. Pub. No. 2007/0198674 A1 ("Li")
Ex. 1007	Listing of Challenged '957 Patent Claims

I. INTRODUCTION

Pursuant to 35 U.S.C. § 311 and 37 C.F.R. § 42.100, Petitioner Microsoft Corporation requests *inter partes* review ("IPR") of claims 1-36 of U.S. Patent No. 8,577,957 ("the '957 patent" (Ex. 1001)).

The '957 patent describes a device that "transforms" a local operation into a remote operation. The device receives a user's selection within server-provided content—for example, selection of a download link within a web page. Normally, this operation would result in a local access operation: the device would locally download the linked file. Before sending the download request to the server, however, the '957 device accesses a profile to determine if the requested download matches some characteristic, such as a size restriction. If so, the device transforms the download request into a request for the server to provide a remote operation, like storing the requested file on a remote server.

The '957 patent was filed in mid-2009, well after the iPhone had been released and after cloud storage services like Dropbox had been launched. By this time, device makers were well aware of the challenges faced by users of their devices—which typically had limited memory—who wished to use the devices to download Internet content. The concepts recited by the '957 patent claims were thus well known by the time the patent was filed. Qualcomm, for example, filed a patent years earlier that described a system for automatically transforming a request for local delivery of server content into a request for storing that content on another remote device. BlackBerry had filed a patent that similarly described using stored delivery rules relating to file size to determine whether a download request should be transformed into a request for delayed or alternative delivery. Google and Thomson Licensing had similarly filed patent applications on techniques for using stored profile settings to modify user requests for downloads of server-hosted content.

The Patent Office did not have the benefit of considering these references during prosecution. As shown below, all limitations of the challenged claims were known and obvious well before the '957 patent's priority date.

II. MANDATORY NOTICES

A. Real Party-in-Interest

Microsoft Corporation files this Petition because Patent Owner has sued Microsoft's customers for infringing the '957 patent. Microsoft has had sole control over this Petition and is the real party in interest ("RPI") for this Petition. For completeness, Microsoft also identifies its customers Lenovo (United States), Inc. and Lenovo (Beijing) Ltd. (collectively, "Lenovo"), which have been named as defendants in a pending litigation involving the '957 patent, as additional RPIs for this Petition.

B. Related Matters

LiTL is asserting the '957 patent against Lenovo in a district court lawsuit captioned *LiTL LLC v. Lenovo (United States), Inc. and Lenovo (Beijing) Ltd.*, No. 1:20-cv-00689-RGA (D. Del.) ("Litigation").

C. Counsel and service information

Lead counsel: Christina J. McCullough (Reg No. 58,720).

Back-up counsel: Patrick J. McKeever (Reg No. 66,019), Jassiem N. Moore (Reg. No. 79,521).

These attorneys can be reached by mail at Perkins Coie LLP, 1201 Third Avenue, Suite 4900, Seattle, Washington 98101-3099; by phone at (206) 359-8000; by fax at (206) 359-9000; and at the following email for service and all communications:

Microsoft-LITLTeam@PerkinsCoie.com

Microsoft consents to electronic service. Microsoft has executed and is concurrently filing Powers of Attorney appointing the above-named counsel.

III. REQUIREMENTS FOR *INTER PARTES* REVIEW

A. Standing

The '957 patent is available for IPR and Microsoft is not barred from requesting review.

B. Overview of challenge and relief requested

Pursuant to Rules 42.22(a)(1) and 42.104(b)(1)-(2), Petitioner requests cancellation of claims 1-36 of the '957 patent under Pre-AIA 35 U.S.C. § 103 on the following grounds:

Ground	**Basis for Obviousness**	**Challenged Claims** *(* indicates independent)*
1	Ray in view of Wormald	1*, 2-4, 9, 12-14, 16, 18, 19*, 20-23, 27, 30-32, 34, 36
2	Ray in view of Wormald and Wagner	5-11, 17, 24-29, 35
3	Ray in view of Wormald and Li	15, 33

This Petition, supported by the declaration of Dr. David R. Karger ("Karger" (Ex. 1002)), demonstrates that there is a reasonable likelihood that Petitioner will prevail with respect to cancellation of at least one challenged claim. *See* 35 U.S.C. § 314(a).

IV. THE BOARD SHOULD NOT DENY INSTITUTION FOR DISCRETIONARY REASONS

A discretionary denial would be inappropriate. Section 325 does not apply, because this is the first petition filed against the '957 patent by any party, and it raises prior art not cited or considered during prosecution to support entirely new arguments.

Section 314 likewise does not support denial based on the district court proceedings. Microsoft is not currently a party to the district court case. Additionally, the district court case has had no meaningful case activity to date; defendants have filed motions on the pleadings, and the court has not ruled on those motions or scheduled the initial scheduling conference. No discovery has occurred. Thus, neither the parties nor the district court have invested substantially in that case. Further, there is no conflict between the projected timelines for this IPR and the district court case. The case is just beginning, and no trial date has been set. Additionally, this Petition challenges all claims of the '957 patent, whereas the complaint in the district court case identifies only claim 19, making this IPR an efficient use of the Board's resources.

V. DESCRIPTION OF THE '957 PATENT

A. The '957 Patent

The '957 patent describes a "streamlined" computer device which may lack a hard drive. '957 patent at 57:18-25. To compensate for limited local storage, "traditional features such a[s] download, have been configured to operate differently ...." *Id.* at 57:25-27. Rather than simply "cause a streamlined device to download content ... , a download link is interpreted by the device, which initiates a process of handling download links." *Id.* at 57:28-31. The device may process a download link by "accessing a third party provider of remote storage" and storing the content remotely. *Id.* at 57:31-33.

A user may select "executable operations" in "online … content" (*e.g.*, a web page). *Id.* at 60:19-20; *see also id.* at 58:54-55 ("Example electronic content includes web pages and other online resources."), 61:28-30. In response to the user's selection, "the computer system determines if the executable operation ***requires local access***." *Id.* at 60:20-22 (emphasis added). The patent gives the example of "a download operation that would cause a conventional computer system to store a file on a local mass storage device such as a hard drive." *Id.* at 60:22-26; *see also id.* at 60:44-47 ("the executable operation that requests local access to storage … may include a ... save operation"); *id.* at 61:5-10 (discussing executable "operations that require a large memory block of nonvolatile storage").

If indeed the "executable operation requires local storage, a streamlined computer device transforms the executable operation's local access request into a remote access operation." *Id.* at 60:26-29. The "remote access operation" can be remote storage via a third party provider. *Id.* at 57:28-33, 57:39-44. The '957 patent mentions as examples photo-management service providers Flickr and Shutterfly, social media service providers Facebook and MySpace, and generic storage provider Dropbox. *Id.* at 57:41-51, 58:25-37; 59:65-67.

Customized "configuration files" or "profiles" may be used to supply information relating to a user's interaction with different remote storage services. *Id.* at 57:39-58:14. When a user attempts to download a file, the profile is used to identify a remote service to be used for remotely storing the requested file. *Id.* at 61:31-44, 58:15-35. A particular remote service may be selected based on the type of file selected for download. *Id.* at 61:31-35, 58:15-16-32, 60:30-43.

B. Challenged Claims of the '957 Patent

The '957 patent recites largely parallel sets of method claims (claims 1-18) and device claims (claims 19-36). This Petition challenges claims 1-36. Exhibit 1007 provides a full listing of the challenged claims.

C. Priority Date

Although the '957 patent purports to claim priority to applications filed on April 1, 2008, the subject matter of the challenged claims corresponds to matter that was first added when the '957 patent application was filed, on April 1, 2009. Karger ¶ 46. Accordingly, the challenged claims are not entitled to a priority date any earlier than April 1, 2009.[1]

VI. CLAIM CONSTRUCTION

In an IPR proceeding, the challenged claims are construed "in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." 37 C.F.R.

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[1] The references relied upon in this Petition qualify as prior art even if this earlier priority date were applied.

§ 42.100(b). At this time, Petitioner does not believe express construction of any term is necessary to resolve the invalidity challenges set forth in this Petition. *See Vivid Techs. v. Am. Sci. & Eng'g*, 200 F.3d 795, 803 (Fed. Cir. 1999).

VII. LEVEL OF ORDINARY SKILL IN THE ART

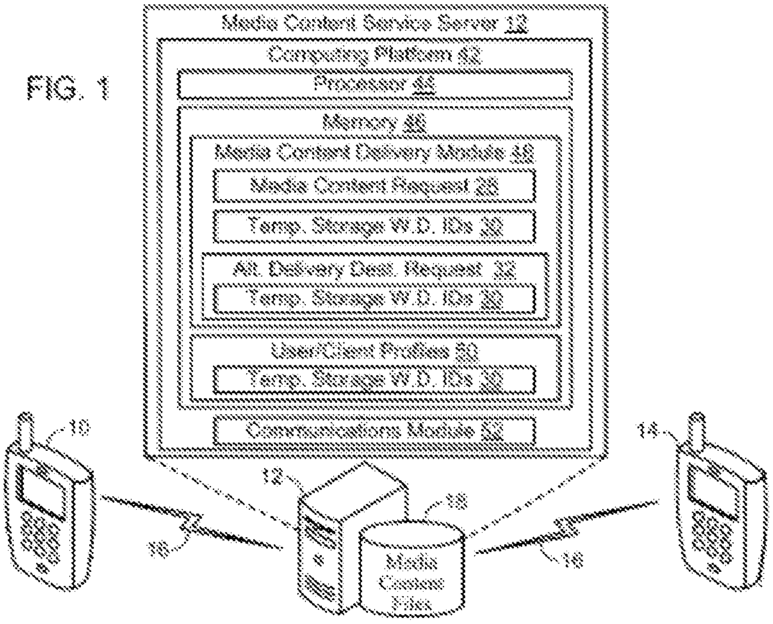
As of the priority date of the '957 patent, a POSITA would have had a bachelor's degree in computer science, computer engineering, or a similar field and two years of experience developing software including some client/server and/or Internet-based software. Karger ¶ 26. This description is approximate and additional experience could make up for less education and vice versa. *Id.*

VIII. OVERVIEW OF THE PRIOR ART RELIED UPON IN THIS PETITION

Like the '957 patent, each of Ray, Wormald, Wagner, and Li discloses improved processes for handling downloads of files (*e.g.*, media files) by transforming a request for a local download into a different operation handled by a remote server, based on characteristics such as file size, file type, and signal strength.

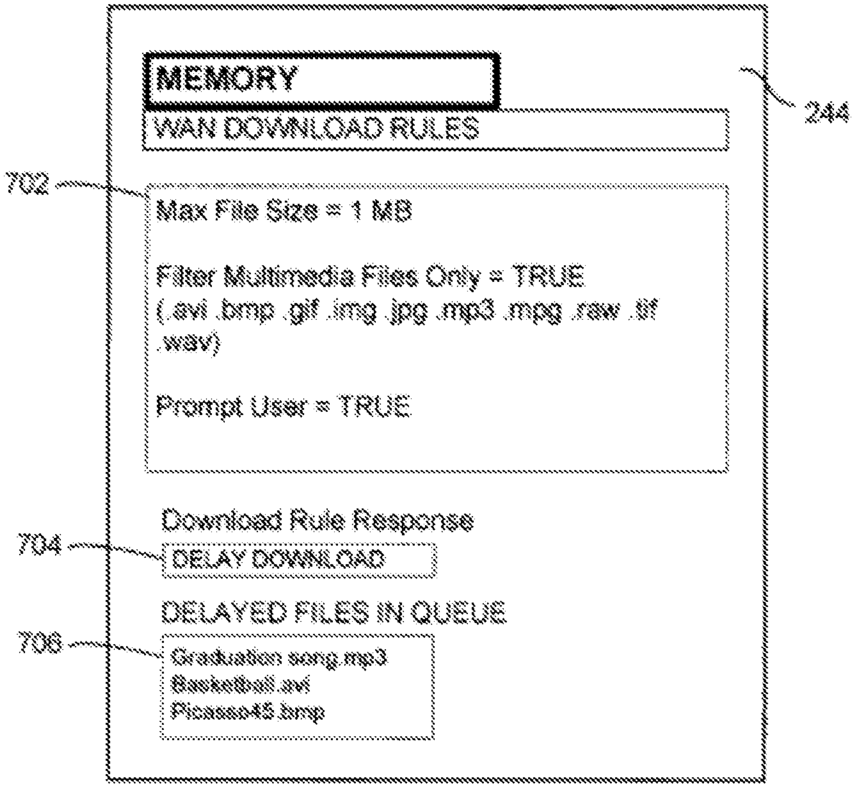
Ray (Ex. 1003) is a Qualcomm patent that describes a remote storage method for media files selected for download by a user. Ray describes a computer device that allows a user to download a file from a content server using a web browser. Ray at 21:52-60, 10:43-49. When the user requests download of the file, the requesting device determines whether it has sufficient storage and a strong enough signal to receive the download locally. *Id.* at 10:62-11:31, 14:31-15:42, 21:61-22:25. If not, the requesting device instructs the content server to deliver the file to a remote storage device. *Id.* at 8:42-44; 9:6-9; 10:36-53; 13:52-14:30. Figure 1 of Ray (excerpted below) illustrates a system including requesting device 10, media content server 12, and storage device 14:

FIG. 1


Media Content Service Server 12
Computing Platform 42
Processor 44
Memory 46
Media Content Delivery Module 48
Media Content Request 28
Temp. Storage W.D. IDs 30
Alt. Delivery Dest. Request 32
Temp. Storage W.D. IDs 30
User/Client Profiles 50
Temp. Storage W.D. IDs 30
Communications Module 52
10
14
12
18
16
16
Media Content Files

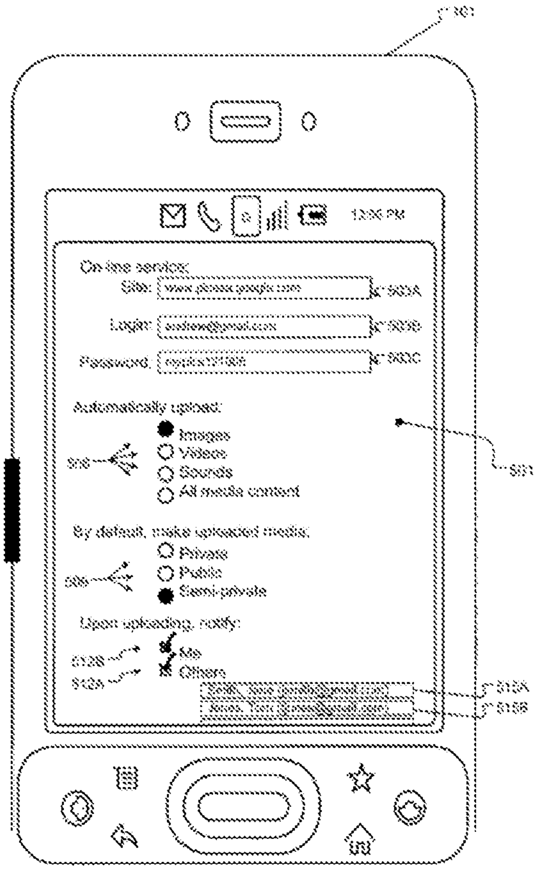
Ray was filed January 25, 2007, and issued October 9, 2012, and is prior art under at least Pre-AIA § 102(e).

Wormald (Ex. 1004) is a BlackBerry (Research in Motion Ltd.) patent that describes another method for improved downloading of files to mobile devices from web pages, such as audio files downloaded from "an online music store." Wormald at 17:3-34. Wormald describes mobile devices that allow users to configure rules for when and how files (*e.g.*, large and/or media files) should be downloaded. *Id.* at 22:9-23:3. For example, a user can specify that files larger than 1 MB or files of certain types be delayed until a WiFi connection is available. *Id.* When a user requests download of a file, a determination is made whether the download rules apply based on the size and/or type of requested file. *Id.* at 12:58-13:22. Wormald further describes storing data objects (profiles) with download rules configured by the user. *Id.*, Fig. 7:


MEMORY
WAN DOWNLOAD RULES
244
702
Max File Size = 1 MB
Filter Multimedia Files Only = TRUE
(.avi .bmp .gif .img .jpg .mp3 .mpg .raw .tif .wav)
Prompt User = TRUE
Download Rule Response
704
DELAY DOWNLOAD
DELAYED FILES IN QUEUE
706
Graduation song.mp3
Basketball.avi
Picasso45.bmp

Wormald was filed on October 2, 2007, and issued March 27, 2012, and is prior art under at least pre-AIA § 102(e).

Wagner (Ex. 1005) is a Google patent that describes techniques for storing and sharing media content using a remote online service provider. Wagner, Abstract. Wagner discloses that a user configures a mobile device with various preferences for uploading media to online service providers (*e.g.*, Picasa, Flickr, Facebook). *Id.* at 5:63-6:13, 5:22:28. Preference information for each online service provider may identify specific types of content to be stored and made available to other users by that provider. *Id.* at 5:63-6:2, 12:62-13:9, Fig. 5 (showing configuration tool that provides settings for online service provider Picasa, including selected content types 506):



On-line service:
Site: www.picasa.google.com
Login: [illegible]
Password: [illegible]

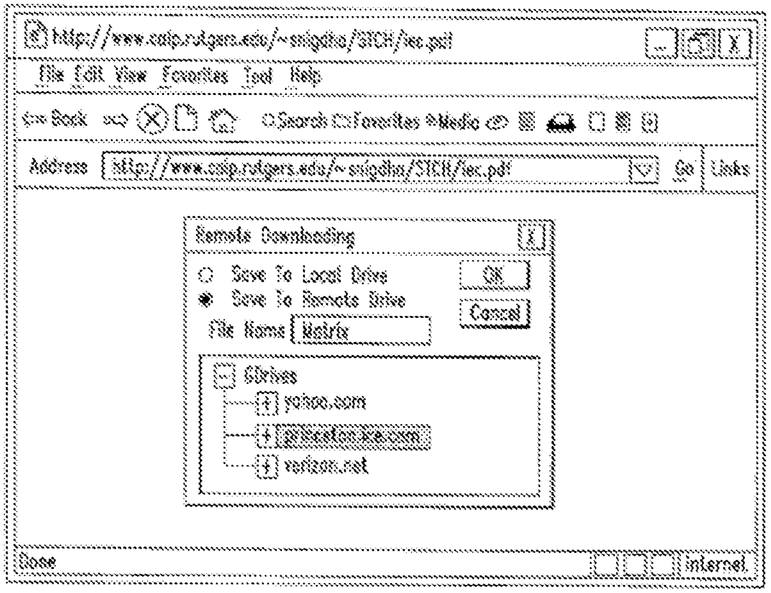
Automatically upload:
● Images
○ Videos
○ Sounds
○ All media content

By default, make uploaded media:
○ Private
○ Public
● Semi-private

Upon uploading, notify:
☑ Me
☑ Others

Wagner was filed on November 9, 2007, and issued on February 26, 2013, and is prior art under at least pre-AIA § 102(e).

Li (Ex. 1006) is a Thomson Licensing published patent application that describes a remote site downloading system in which a user's computer selects a file hosted on a content server to be downloaded to a remote "geographic drive." Li, Abstract, [0003]. The local computer includes a browser plug-in that enables the user to choose where—locally or remotely—files are stored. *Id.*, [0005], [0031]-[0032]. The plug-in provides a user interface through which the user selects from among multiple remote drives. *Id.*, [0032], Fig. 9:



○ Save To Local Drive
● Save To Remote Drive
File Name Matrix

http://www.caip.rutgers.edu/~snigdha/STCH/iec.pdf
File Edit View Favorites Tool Help
Back
Search Favorites Media
Address
Go
Links
Remote Downloading
OK
Cancel
GDrives
yahoo.com
verizon.net
Done
Internet

Li was published on August 23, 2007, and is prior art under at least pre-AIA §§ 102(a) and (b).

None of the prior art references discussed in this Petition was before the Patent Office during prosecution of the '957 patent.

IX. OBVIOUSNESS OF THE CHALLENGED CLAIMS

A. Ground 1: Ray and Wormald

1. Claim 1

a. 1[pre]: "A computer implemented method for interpreting on-line executable operations into streamlined operations, the method comprising:"

The language in the preamble does not recite essential structure or steps, nor does it provide antecedent basis for any terms in the claim body; instead, the claim body defines a "structurally complete" alleged invention. *Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1236 (Fed. Cir. 2017). Thus, the claim 1 preamble is not limiting. Karger ¶ 66.

To the extent the preamble is limiting, Ray discloses it. The '957 patent describes a method for interpreting a download operation selected within online content (an "on-line executable operation") into a "streamlined" remote storage operation. *See* '957 patent at 60:11-40 (describing a "process for interpreting online executable operations into streamlined operations" as "transforming a download request to a local mass storage device into a storage request to a remote service"). Ray similarly discloses a method for interpreting an operation for downloading online content to a first wireless communication device into an operation for remotely storing the content on a separate temporary storage device. Ray at 12:35-39, 9:61-64, 10:38-49, 21:48-52. This method is implemented by a "computerized, communication device" (*id*. at 12:39-41) that includes "Computer Platform 20":

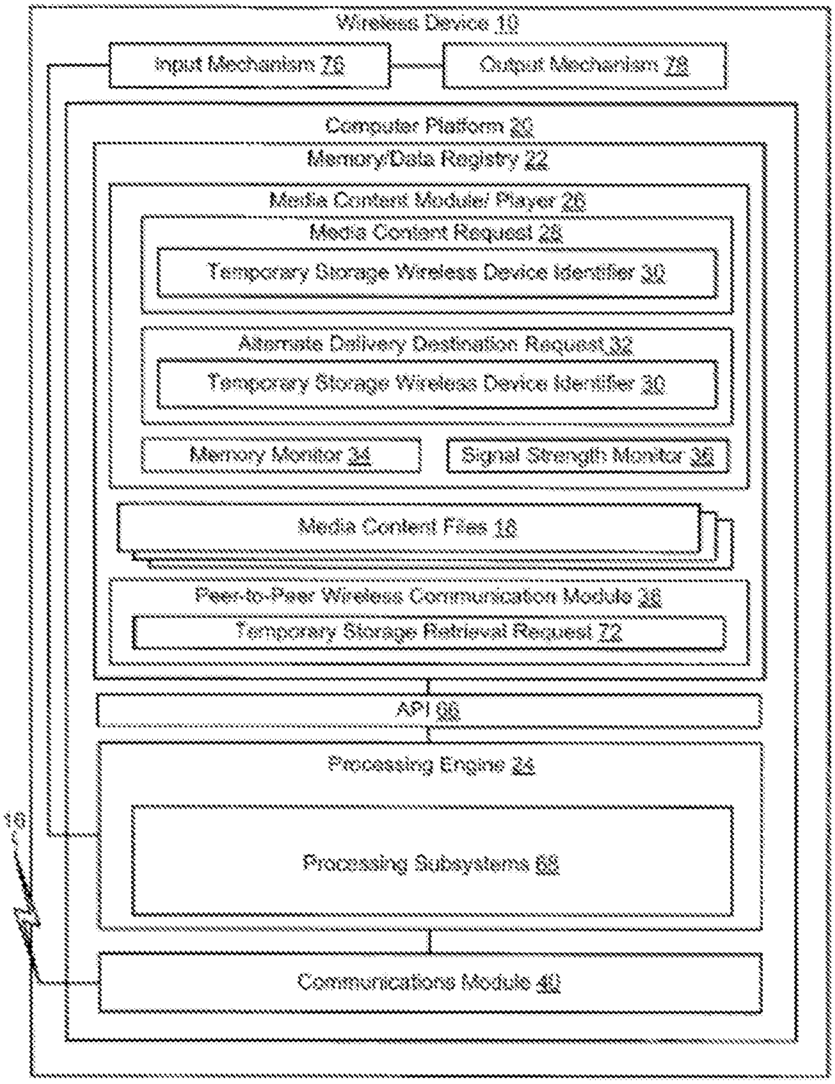

Wireless Device 10
Input Mechanism 76
Output Mechanism 78
Computer Platform 20
Memory/Data Registry 22
Media Content Module/ Player 26
Media Content Request 28
Temporary Storage Wireless Device Identifier 30
Alternate Delivery Destination Request 32
Temporary Storage Wireless Device Identifier 30
Memory Monitor 34
Signal Strength Monitor 36
Media Content Files 18
Peer-to-Peer Wireless Communication Module 38
Temporary Storage Retrieval Request 72
API 66
Processing Engine 24
16
Processing Subsystems 68
Communications Module 40

FIG. 2

Id., Fig. 2; *id.*, Fig. 1 (wireless device 10 that includes "Computing Platform 20"), 12:49-54. Karger ¶¶ 67-70.

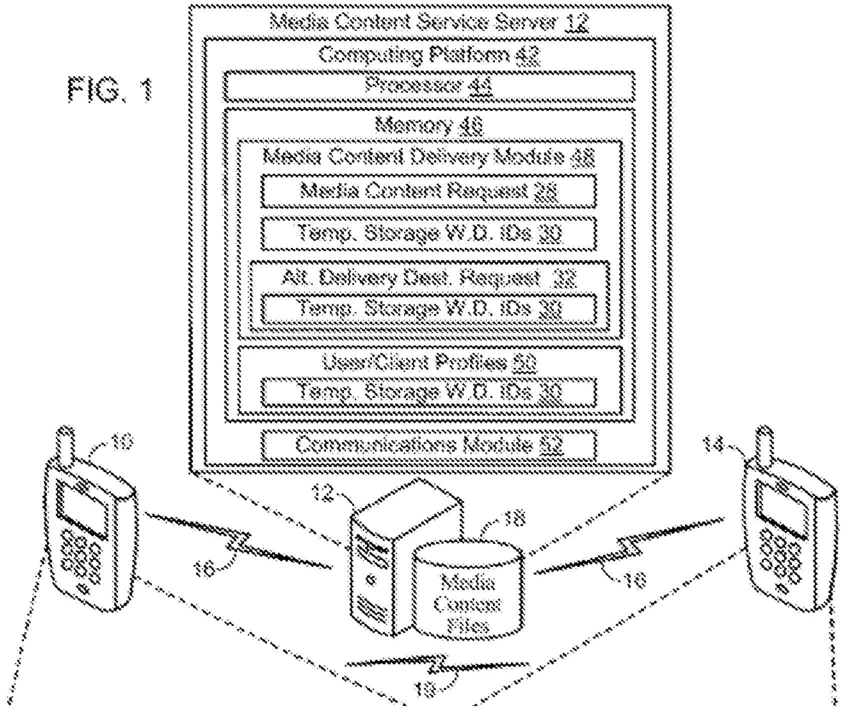
Ray therefore discloses a "computer implemented method for interpreting on-line executable operations," *i.e.*, download of online content, "into streamlined operations," *i.e.*, remote storage of the content.

b. 1[a]: "receiving, by a computer system, electronic content through a communication interface, wherein the electronic content is hosted online by a server system;"

Ray and Wormald render obvious a "computer system" (a wireless communication device) that receives "electronic content … hosted online by a server system" (web pages hosted by a server) through a "communication interface" (communications module within the wireless communication device).

Ray discloses a wireless communication device 10, which Ray terms a "requesting device," that is connected to a media content server 12 and a temporary storage device 14 via wireless network 16:

FIG. 1


Media Content Service Server 12
Computing Platform 42
Processor 44
Memory 46
Media Content Delivery Module 48
Media Content Request 28
Temp. Storage W.D. IDs 30
Alt. Delivery Dest. Request 32
Temp. Storage W.D. IDs 30
User/Client Profiles 50
Temp. Storage W.D. IDs 30
Communications Module 52
10
14
12
18
Media Content Files
16
16
18

Ray at Fig. 1 (excerpted) & 9:50-57. Requesting device 10 includes communication module 40 that "enables communications … between the communication device and the wireless network 16," including "communication … between first [requesting] wireless communication device 10 and the network device 12." *Id.* at 15:43-51, Figs. 1 & 2 ("Communications Module 40"). The requesting device uses "an Internet browser application" to access a "media service content provider site" and then "send[s] a request for a media content file." *Id.* at 21:56-60. Karger ¶¶ 72-74.

Wormald discloses receiving web pages ("electronic content") that are hosted online by a server system. Wormald describes Internet/Web server 134 and content servers 136 which host web pages. Wormald at 5:41-55; 3:36-40 (HTML documents may be received from content server 136 or Web server 134). User mobile devices make requests for HTML documents hosted by the content servers. *Id.* at 7:11-18; 11:67-12:3 ("a downloaded web page"). Media files are embedded in or linked from the HTML pages. *Id.* at 16:55-60; 17:58-67 ("hypermedia files having one or more embedded or linked audio files, video files"). Wormald describes a use case in which "[a] user accesses an online music store via a Web browser," browses information about media, and then "mak[es] a selection for download, for example after purchasing an album for download." *Id.* at 17:3-34. Karger ¶¶ 75-77.

A POSITA would have found it obvious to combine these teachings from Wormald with Ray, such that Ray's requesting device would request and receive web pages from media content service server 12, at least because web pages would facilitate the user's selection of specific media files hosted at the "media service content provider site" (Ray at 21:58-59). Karger ¶ 78. To a POSITA, Ray's disclosure–that the requesting device uses a web browser to connect to media content service server 12 and uses HTTP to request media content files—would have strongly suggested that media content service server 12 *is* a web server. *Id.* Additionally, the phrase "media service content provider site" suggests to a POSITA a web site. *Id.* A POSITA would have known it would be advantageous for Ray's downloading method to handle media downloads initiated from web pages (*e.g.*, a web page for an "online music store," Wormald at 17:7-8) because web pages provided a simple and commonly used approach for making media files available for download over networks including the Internet. *Id.*, ¶ 79. Indeed, the types of web-based interactions described by Wormald were commonplace well before the alleged invention. *Id.*

A POSITA would have had a reasonable expectation of success in making this combination, because Ray's requesting device includes a web browser that connects to the media service content provider site to request media content files. Ray at 21:56-60. The proposed combination would simply use Ray's existing browser application for its intended and established function of accessing web pages, and would be well within a POSITA's skill. Karger ¶ 80. In addition, conventional HTTP / web server software could be used on media content service server 12 to host web pages and provide them to Ray's requesting devices. *Id.*

c. 1[b]: "presenting, by the computer system, the electronic content to a user of the computer system through a graphical user interface;"

Ray and Wormald render obvious that the "computer system" (a requesting device) "present[s] … electronic content to a user through a graphical user interface." Ray's requesting device includes "output mechanism 78 for generating information for consumption by the user," which includes a display. Ray at 15:55-65 & Fig. 2 ("Output Mechanism 78"); 15:60 ("a touch-screen display"); 13:21-32 ("user interface" processing subsystem); 21:56-60 (web browser); 13:37-44 ("media content module/player 26"). Given these disclosures, a POSITA would understand Ray's requesting device to include a graphical user interface. Karger ¶ 82.

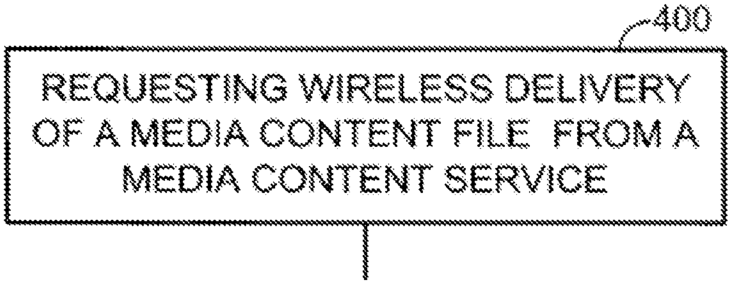
As discussed for claim 1[a], Ray discloses using a web browser to connect to a media service content provider site, and Wormald discloses downloading files linked within web pages ("electronic content"). Wormald discloses that "a downloaded Web page may be further processed by a browser application … and output to the display 242." Wormald at 11:67-12:3. Wormald describes "brows[ing] albums, songs, prices, and other information about media for sale in the online music store." *Id.* at 17:3-34. Karger ¶ 83.

A POSITA would have found it obvious to combine Wormald's teaching—of presenting web pages to a user—with Ray for the reasons discussed for claim 1[a], and with a similar effect: Ray's requesting device would present web pages to the user via a web browser and the user would use the web browser's GUI to request particular media files linked in the presented web pages for delivery. Karger ¶ 84. A POSITA would have had a reasonable expectation of success in making this combination, because Ray's requesting device includes a web browser that is used to request media files from the content provider site. Ray at 21:56-60, 10:43-49. The proposed combination would simply use Ray's existing web browser application for its intended and established function of displaying web pages and would be well within a POSITA's skill. Karger ¶ 84.

d. 1[c]: "receiving, by the computer system, selection of at least one executable operation provided within the electronic content through the graphical user interface, wherein the at least one executable operation includes an executable operation hosted by the server system;"

Ray and Wormald render obvious that the requesting device receives "selection of at least one executable operation" (a downloading operation), "wherein the at least one executable operation includes an executable operation hosted by the server system" (where the downloading operation is for downloading content hosted by the server).

Ray suggests that a user selects delivery of a specific media file hosted by the media content server. Ray at 21:52-56 ("[T]he first wireless communication [device] requests wireless delivery of a media content file from a media content service.") & Fig. 8 (excerpted):


400
REQUESTING WIRELESS DELIVERY OF A MEDIA CONTENT FILE FROM A MEDIA CONTENT SERVICE

Id. at 10:34-49; 13:38-40. Ray further discloses using a web browser to request a media file. *Id.* at 21:56-60. Karger ¶ 86.

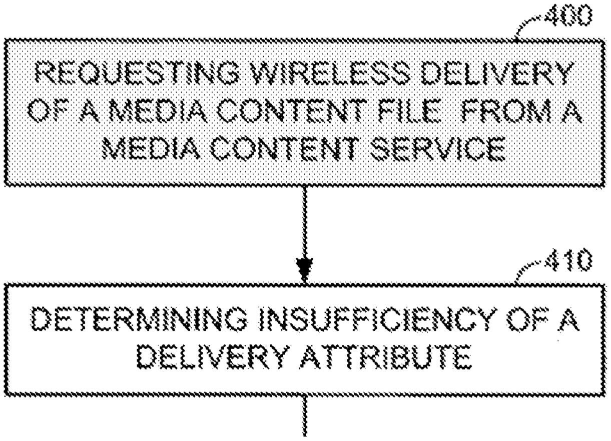
Wormald discloses that the mobile communication device receives "selection of at least one executable operation" (a download operation) that is "provided within the electronic content through the graphical user interface" (via links to media hosted by an online server system in a web page presented in a Web browser). Wormald discloses that after the mobile device presents media files to a user "via a Web browser or standalone application," the user "browse[s] albums, songs, … and other information about media for sale in the online music store." Wormald at 17:7-9, 17:16-17. The user then makes a "selection for downloading" via the browser, for example after "purchasing an album for download." *Id.* at 17:19-20; *see also id.* at 12:58-61 (a download request "is received from a user via respective user input"). Wormald teaches that user-requested files may comprise "linked data files within a … Web page" or other hypermedia document. *Id.* at 16:55-59. Karger ¶¶ 87-89.

A POSITA would have found it obvious to combine Wormald's teaching—of receiving user selections of file download operations via selectable links within web pages presented through a Web browser user interface—with Ray for the reasons discussed for claim 1[b], and with a similar effect: Ray's requesting device would present media files hosted by a server to a user via a Web browser, and the user would use the Web browser's user interface to select particular files for delivery. A POSITA would have understood that hyperlinks within web pages enabled the download of data files, as this technique had been widely used since the early days of the World Wide Web. Karger ¶ 90; *id.*, Appx. F (HTML reference book from 2000) at 168 ("You normally use the anchor tag (<a>) to link external multimedia elements to the current document. Just like other link elements selected by the user, the browser downloads the multimedia object …."). And a POSITA would have had a reasonable expectation of success in making this combination, because Ray's requesting device includes a web browser that requests media files from the content provider site. Ray at 21:56-60, 10:43-49. The proposed combination would simply use Ray's existing browser application in an expected and conventional way, with the predictable results of receiving a user's selection of a hyperlink to a media file. Karger ¶ 91. Adding a hyperlink that references a media file within a web page would have been well within a POSITA's skill. *Id.*

e. 1[d]: "determining that the at least one executable operation includes a local access operation on the computer system;"

Ray and Wormald render obvious that the requesting device "determin[es] that the at least one executable operation" (a downloading operation) includes "a local access operation on the computer system" (local storage of the requested files).

Ray discloses that the requesting device receives a user's request to download a media file hosted by the media content server:


400
REQUESTING WIRELESS DELIVERY OF A MEDIA CONTENT FILE FROM A MEDIA CONTENT SERVICE
410
DETERMINING INSUFFICIENCY OF A DELIVERY ATTRIBUTE

Ray at Fig. 8 (excerpted, emphasis added); *id.* at 21:52-54 ("At Event 400, the first wireless communication [device] requests wireless delivery of a media content file from a media content service."), 21:48-49 ("requesting media file content at a first wireless communication device"). The user makes the delivery request via a web browser. *Id.* at 21:56-60. The requesting device evaluates the sufficiency of delivery/download attributes relating to available memory and signal strength to determine if "current delivery/download of the media content" is prohibited. *Id.* at 21:61-22:25. Karger ¶ 93.

A POSITA would have understood Ray's teaching of checking the available local memory and comparing it to the file size (*see* Ray at 11:2-15) as indicating, or at least rendering obvious, that the wireless device determines that the user's "delivery/download" request includes a local storage operation. Specifically, unless the requesting device determined that the requested file would be stored locally, there would be no reason to check available memory and compare that to the size of the requested file. Karger ¶ 94. The '957 patent teaches that determining that a user is attempting to download a file to local storage is determining that a selected operation includes a local access operation. The '957 patent indicates that file download operations include local access operations because "a download operation … cause[s] a conventional computer system to store a file on a local mass storage device such as a hard drive." '957 patent at 60:23-26. Notably, the '957 patent itself does not describe any particular approach for determining that an operation selected by the user includes a download operation. Karger ¶ 94.

Additionally, Wormald discloses that the user device determines that a user's selection is a request to locally download a file: the device identifies "a request to download data ***to the mobile communication device*** … via a respective user input on the mobile communication device." Wormald at 12:58-61 (emphasis added). Like Ray, Wormald discloses that the request is made via a Web browser. *Id.* at 12:48-52. Further, Wormald discloses that the device determines whether the user has requested local download of a specific type of file—a media file—by comparing the file extension of the requested file to a list of media file extensions.

Wormald at 13:13-22; 17:50-18:41; Fig. 3 (step 304); Fig. 4 (step 402).[2] Karger ¶ 95.

To the extent Ray alone does not teach claim 1[d] or render it obvious, a POSITA would have found it obvious to combine Wormald's teaching—of analyzing a user's request to determine that it is a request to locally download a media file—with Ray, such that Ray's wireless device 10 performs this determination upon receiving a user's request for delivery of a particular file. A POSITA would have viewed Wormald as providing a teaching, suggestion, or motivation to make this combination because Wormald teaches that media files are typically large files that are appropriate for alternative delivery techniques, and Ray is concerned with determining when a requested file is too large to be downloaded locally. Wormald at 3:47-57, 13:13-36; Ray at 11:2-15; Karger ¶ 96. A POSITA would also have recognized this as simply combining prior art elements (Wormald's teaching of determining that a user's request includes locally downloading a media file and Ray's teaching of using a web browser to receive a user's request for delivery of a media file) according to known methods (Wormald's method of comparing the requested file's extension to a list of media file types) to yield predictable results (determining that a user's request includes locally downloading a media file). Karger ¶ 96. A POSITA would have had a reasonable expectation of success in making this combination because both Ray and Wormald disclose accepting user requests via a Web browser, and it would have been well within a POSITA's skill to implement Wormald's file extension comparison in substantially the same manner using the Web browser of Ray's device. Karger ¶ 97.

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[2] Like the '957 patent, Wormald's special downloading process for data files does not interfere with locally downloading and displaying basic HTML files. Wormald at 19:54-62. Karger ¶ 95.

f. 1[e]: "transforming, based on the determining, the at least one executable operation into a remote access operation, the transforming comprising:"

Ray discloses "transforming … the at least one executable operation" (a downloading operation) "into a remote access operation" (remote storage operation) based on determining that the at least one executable operation includes a local access operation (local storage of the media file).

Ray discloses that when a user requests download of a media file—which may be determined as described by Wormald, as discussed for claim 1[d]—the requesting device determines whether one or more delivery/download attributes prohibit local delivery of the file to the requesting device. Ray at 21:61-22:25; 11:2-9; 11:15-19. If the available local memory and/or current signal strength are not sufficient to receive the download, the requesting device transforms the download request into a remote storage request by "notify[ing] the network device 12 that delivery of the file to the temporary storage device is required." *Id.* at 11:11-15, 11:23-26; *id.* at 22:26-41. The request to "deliver[] the file to [a] temporary storage device" is a request for "a remote access operation," as recited by claim 1[e]. Karger ¶¶ 98-100.

g. 1[f]: "identifying at least one characteristic of the at least one executable operation;"

Ray discloses that the requesting device identifies "at least one characteristic" (the required storage size and/or signal strength) of "the at least one executable operation" (downloading operation).

Ray discloses that the requesting device monitors "delivery attributes" that affect file delivery and download operations. Ray at 10:62-67 ("The first wireless device 10 … monitor[s] delivery attributes associated with the first wireless communication device. Delivery attributes are defined herein as characteristics that affect the delivery/download of content."); *id.* at 10:18-21 ("delivery attributes may include … any other attribute that affects delivery/download"). The requesting device determines if it "is capable of delivery/download of the requested media content" by determining "the current available memory capacity of the first wireless communication device and compar[ing] the available memory to the requested media file storage size." *Id.* at 11:2-7. Additionally, the requesting device "determine[s] the current wireless network signal strength …

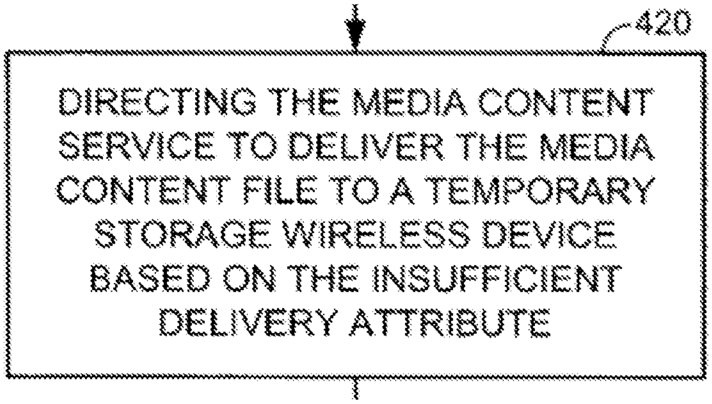
and compare[s] the signal strength to [a] delivery signal strength threshold." *Id.* at 11:15-19; *id.* at 22:12-18. Karger ¶¶ 101-103.

A POSITA would understand both the "requested media file storage size" and "delivery signal strength threshold" to be characteristics of the executable operation, *i.e.*, the downloading operation: specifically, how much memory would be required to locally store the requested file and the minimum signal strength required to successfully download the file. Karger ¶ 104.

h. 1[g]: "accessing a profile to retrieve information on at least one available remote services responsive to the at least one identified characteristics of the executable operation;"

Ray discloses "retriev[ing] information on at least one available remote service[]" (a temporary storage device that performs a remote storage service) and doing so "responsive to the at least one identified characteristics of the executable operation" (storage size or signal strength requirements of the delivery operation).

When the requesting device determines that it does not have sufficient local storage or signal strength to download the requested media file (*i.e.*, a determination "responsive to the … identified characteristics of the executable operation"), the requesting device identifies an alternative temporary storage device for storing the file ("information on at least one available remote service[]"). Ray at 22:26-32 ("… Directing the media content service to deliver the media content file to a temporary storage device may include identifying a temporary storage wireless device."); *id.* at 11:11-15, 11:23-26, Fig. 8 (excerpted):


420
DIRECTING THE MEDIA CONTENT SERVICE TO DELIVER THE MEDIA CONTENT FILE TO A TEMPORARY STORAGE WIRELESS DEVICE BASED ON THE INSUFFICIENT DELIVERY ATTRIBUTE

Ray's temporary storage devices provide remote storage services. *Id.* at 8:43-45 ("[T]he temporary storage wireless communication device[] acts [as] a server for the wireless devices that rely on the device for storage."), 9:57-64, 12:10-34 (describing components of temporary storage device that receive and store media files "for the benefit of" the requesting device), 17:31-18:57 (describing how temporary storage device is "operable for storing media files on behalf of another wireless device"), Fig. 4. Karger ¶¶ 106-107.

Ray also discloses that the requesting device retrieves temporary storage device identifier information. The temporary storage devices used by a requesting device may be "predefined by the user" or requests for remote storage may include "one or more predetermined identifiers associated with one or more predetermined temporary storage device[s]." Ray at 13:62-64, 14:25-30. Predetermined identifiers associated with temporary storage devices include "IP address or the like." *Id.* at 22:32-36. Karger ¶ 108.

Wormald discloses "accessing a profile" (a data object) that contains information on download rules that specify how media files should be downloaded. Wormald at 14:26-34. Download rules may specify one or more alternative communication mediums (*e.g.*, one or more WiFi networks) that must be used to carry out the download. *Id.* at 14:35-44; *id.* at 22:59-61. "The download rules 276 are typically stored in memory of the mobile communication device 201, typically as part of download preferences stored in memory ….” *Id.* at 15:7-10; *see also id.* at 23:4-23, Fig. 7 (exemplary data object storing download preference information). Because the download rules are configured by the user and govern how media files requested by that user should be downloaded, a POSITA would have considered the data object that stores information relating to download rules to be a "profile" as claimed. Karger ¶¶ 109-111. Wormald's data object with download settings and rules is exactly the kind of profile the '957 patent contemplates.

A POSITA would have found it obvious to incorporate Wormald's teaching, of storing download settings configured by the user in a data object (profile) on the user's device, into Ray. In particular, it would have been obvious for the requesting device to store the predefined identifiers for the temporary storage devices (*see* Ray at 14:25-30) in a data object ("profile") on the requesting device. As discussed, Ray discloses that the user specifies particular temporary storage devices to be used for a remote storage operation, and also that the requesting device directs the content server to deliver media files to particular temporary storage devices by sending identifiers for those devices to the content server. Because the requesting device needs the temporary storage device identifier data to direct the content server, storing that data on the requesting device, as taught by Wormald, would have been obvious. Karger ¶ 112. A POSITA also would have recognized that Ray's identifiers of temporary storage devices are analogous to Wormald's download rule information, in that they represent alternative ways of delivering a requested media file. Karger ¶ 113. Accordingly, it would have been obvious to for Ray's requesting device to store temporary storage device identification data in the same manner as Wormald's storage of information relating to download rules—in a profile on the user device. Additionally, Ray's disclosure that the requesting device would have to be "authorized" to store content to the temporary storage device (Ray at 9:38-42) would have suggested to a POSITA the need for a profile. Karger ¶ 114.

And a POSITA would have had a reasonable expectation of success in making this combination, because storing temporary storage device identifiers (*e.g.*, IP addresses) in a data object for subsequent lookup, as taught by Wormald, could be accomplished using any number of conventional data structures, and would have been well within a POSITA's skill. Karger ¶ 115.

i. 1[h]: "selecting an available remote service from the at least one available remote service;"

Ray discloses "selecting an available remote service" (selecting a temporary storage device that performs a remote storage service). As described for limitation 1[g], Ray's requesting device selects a temporary storage device and directs the media content server to store the requested media file at that other device. Ray at 22:26-32; *id.* at 11:11-15, 11:23-26, Fig. 8 (step 420), Fig. 1 ("Temporary Storage

Device" 14). Ray discloses that the temporary storage device "acts as a server for the wireless devices that rely on the device for storage." *Id.* at 8:43-45. Karger at ¶¶ 116-118.

j. 1[i]: "retrieving the service access information for the selected remote service;"

Ray discloses that the requesting device retrieves "service access information" (the device identifier for a remote storage device) for "the selected remote service" (selected temporary storage device).

The requesting device specifies "a temporary storage wireless communication device identifier 30, which provides notification to the network device of a specific temporary storage wireless device, such as device 16, to direct delivery/download of the media content file." Ray at 10:38-43. This device identifier includes the IP address of the temporary storage device: "the request [to the media content server] may include a header file that includes the temporary storage identifier 30, in the form of an Internet Protocol (IP) address of the wireless device that will serve as the temporary storage device." *Id.* at 10:43-49; *id.* at 22:29-34 (wireless communication device "identif[ies] a temporary storage wireless device … via inclusion [o]f a device identifier, such as an IP address or the like"). A POSITA would have understood that an IP address for the temporary storage device would be used by the media content server in transmitting the requested file to the temporary storage device. Karger ¶ 120.

A POSITA would have understood that the requesting device "retrieves" the temporary storage device identifier from internal memory. Ray discloses that the identifier "included in the alternate delivery destination request 32 may be one or more predetermined identifiers associated with one or more predetermined temporary storage device[s]," and depicts the "Temp[orary] Storage [Wireless Device] ID" as being internal to memory 22 within the requesting device. Ray at 14:25-28 & Figs. 1, 2 (annotations added):

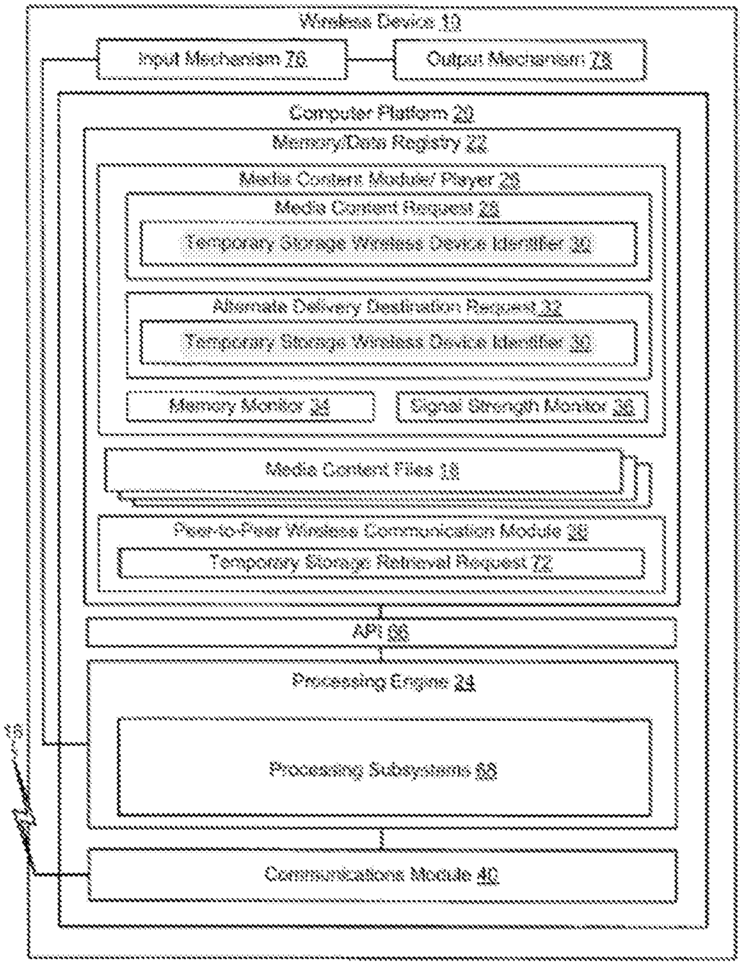

Wireless Device 10
Input Mechanism 76
Output Mechanism 78
Computer Platform 20
Memory/Data Registry 22
Media Content Module/ Player 26
Media Content Request 28
Temporary Storage Wireless Device Identifier 30
Alternate Delivery Destination Request 32
Temporary Storage Wireless Device Identifier 30
Memory Monitor 34
Signal Strength Monitor 36
Media Content Files 18
Peer-to-Peer Wireless Communication Module 38
Temporary Storage Retrieval Request 72
API 56
Processing Engine 24
Processing Subsystems 58
Communications Module 40
16

FIG. 2

Karger ¶ 121. At a minimum, a POSITA would have found it obvious to retrieve an identifier for a temporary storage device from a profile, as disclosed by Wormald and for the reasons described for claim 1[g]. Karger ¶ 122.

k. 1[j]: "transforming, based on the at least one characteristic of the at least one executable operation and the service access information, the at least one executable operation into the remote access operation to utilize the remote service; and"

Ray discloses that the requesting device "transform[s] the at least one executable operation" (a download operation) into "the remote access operation to utilize the remote service" (remote storage at a temporary storage device) based on "the at least one characteristic of the at least one executable operation" (required storage or signal strength for content delivery) and "the service access information" (identifier of the temporary storage device).

Based on determining that it lacks sufficient local storage or signal strength to download the requested media file, and after identifying the IP address (or other device identifier) of a temporary storage device, the requesting device transforms the request for delivery of a selected media file to a request for the file to be remotely stored on the specified temporary storage device:

> [T]he first wireless communication device directs the media content service to deliver the media content file to a temporary storage wireless communication device based on the insufficiency of the delivery attribute.

> Directing the media content service to deliver the media content file to a temporary storage device may include identifying a temporary storage wireless device … via inclusion [o]f a device identifier, such as an IP address or the like … [T]he direction may occur via a specific correspondence, such as a media content request, an alternate delivery destination request or the like.

Ray at 22:26-41; *id.* at 10:38-43, 21:48-52. Karger ¶¶ 123-124.

l. 1[k]: "transmitting the remote access operation to the server system."

Ray discloses that the requesting device "transmit[s] the remote access operation" (remote storage operation of the media file) to "the server system" (media content server 12).

"[T]he first wireless communication device directs the media content service to deliver the media content file to a temporary storage wireless communication device … [T]he direction may occur via a specific correspondence, such as a media content request, an alternate delivery destination request or the like." Ray at 22:26-41; *id.* at 10:36-38 ("The media content requests are wirelessly communicated to network device 12 via communication module 40."). For example, the requesting device may transmit an http request to the media content server 12 that includes the "Internet Protocol (IP) address of the wireless device that will serve as the temporary storage device." *Id*. at 10:43-49. Karger ¶¶ 125-126.

2. Claim 2: "The method according to claim 1, wherein the local access operation hosted by the server system is configured to be executed by an operating system on the computer system to request local storage of electronic content on the computer system prior to transformation."

Ray discloses that the local access operation (local storage of the requested files, *supra* claim 1[d]) is "configured to be executed by an operating system on the computer system" (an operating system on requesting device 10).

Requesting device 10 is "any type of computerized, communication device, such as … [a] portable computer" and a "desktop computer." Ray at 12:35-54. The device includes "firmware [and/or] software … that enable the functionality of the communication device 10 …." *Id.* at 13:14-18; 13:24-31 (describing processing subsystems for core device functionality). A POSITA would understand the disclosed portable and desktop computers to include an operating system that executes operations performed by the device including downloading and storage operations. Karger ¶¶ 128-130.

Ray discloses that if there is sufficient local storage available on the requesting device (*i.e.*, "prior to transformation" of the local access operation to a remote storage operation), the device executes the local download operation. Ray at 11:2-11. Ray further discloses an additional use case in which the requesting device requests wireless delivery of media files and the media content server attempts to deliver the files, but direct delivery is "prevented due to insufficiency of a delivery attribute." *Id.* at 21:52-54, 21:66-22:2, 10:57-61.[3] The requesting device will *then* "direct[] the media content service to deliver the media content file to a temporary storage … device" (*id.* at 22:26-29), *i.e.*, transform the local access operation into a remote service operation. Both of these scenarios indicate that, prior to any transformation, the requesting device is configured to request local storage of the selected content. Karger ¶¶ 131-132.

3. Claim 3: "The method according to claim 1, wherein the electronic content presented to the user through a graphical user interface includes a web page and the at least one executable operation is contained with the web page."

As described for claim 1[b]-[c], Wormald discloses that electronic content is presented to a user via a Web browser that renders a web page. Wormald at 19:42-

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[3] A POSITA would have understood this additional functionality to be present in the same requesting device because the disclosure corresponding to Figures 1 and 8 describes different aspects of requesting device 10—and at a minimum, a POSITA would have found it obvious to include this functionality within a single requesting device to provide a user with additional, complementary operations. Karger ¶ 132.

53, 17:42-45, Fig. 4. Wormald discloses that the user's selection of an executable operation (a downloading operation) includes selection of linked data file contained with a web page: "the requested data comprises one or more data files, which may be embedded or ***linked data files within a Hypertext Markup Language (HTML) document (e.g. Web page)*** or other hypermedia document." *Id.* at 16:55-59 (emphasis added); 12:58-61; 17:17-23. Karger ¶ 134. A POSITA would have found it obvious to incorporate this teaching from Wormald into Ray for the same reasons described for claims 1[b]-1[c]. *Id.*, ¶ 135.

4. Claim 4: "The method according to claim 1, wherein the local access operation includes executable instructions that cause a computer system to download electronic content to local memory including a mass storage device."

Ray discloses that the requesting device includes a local memory that comprises a hard disk or flash memory (both examples of a "mass storage device"). Ray at 12:58-65; Karger ¶ 136. In determining whether it can locally store the requested media content, the requesting device "determine[s] [its] current available memory capacity" and requests delivery of a file if "sufficient memory currently exists." Ray at 11:2-11. A POSITA would understand this disclosure to indicate that the local storage operation ("local access operation") includes executable instructions that cause the requesting device to download requested media content to its local memory, such as instructions executed by processing engine 24 to implement the download. *Id.*, Fig. 2 (showing "Memory" 22 storing "Media Content Files 18"); Karger ¶¶ 137-138.

5. Claim 9: "The method according to claim 1, further comprising: identifying a type of electronic content associated with the local access operation; and selecting a remote service based at least in part on the identification of the type of the electronic content."

As discussed for claim 1[d], Wormald discloses that the user device determines whether the file extension of data that the user has requested for download matches a predetermined list of file types ("identifying a type of electronic content associated with the local access operation"). Wormald at 13:13-22; 17:50-18:41; Fig. 3 (step 304); Fig. 4 (step 402). The device compares the "file type of the requested data … against a list of predetermined media file types," which include various "audio file types" and "video file types." *Id.* at 17:54-58, 18:9-22. Karger ¶ 139.

A POSITA would have found it obvious to incorporate this teaching from Wormald into Ray, such that Ray's requesting device selected a remote service (a temporary storage device that performs a remote storage service) based in part on the determination that requested content was a certain type of media file. Wormald discloses that locally downloading certain types of media content files may present "challenges relating to bandwidth bottlenecks" and "large data charges from … cellular carriers" due to the files' size. Wormald at 1:27-37. A POSITA would have viewed this disclosure as providing a teaching, suggestion, or motivation to modify the operation of Ray's requesting device such that it determines the type of content being requested (*see supra* claim 1[c]) and selects a remote storage operation based in part on this determination, to avoid bandwidth and cost issues associated with certain types of media file types that are typically large in size. Karger

¶ 140. Indeed, incorporation of this teaching into Ray would have involved applying a known technique (Wormald's technique of determining the type of content being requested) to a known device ready for improvement (Ray's requesting device, which may have limited storage capability) to yield predictable results (providing the requesting device with a way to identify requests for large content and redirect to a remote storage location). Karger ¶ 144.

Incorporating this teaching would have had the additional benefit of streamlining Ray's operation, in that the determination of file type could replace the determination of sufficient local memory, thus simplifying operation. Karger ¶ 141. A POSITA would have had a reasonable expectation of success in modifying Ray's requesting device in this way, because it is already configured to analyze and process media files (*supra* claim 1[c]) and the proposed modification would have involved trivial implementation changes. Karger ¶¶ 143-144.

6. Claim 12: "The method according to claim 10, further comprising associating a computer based operation with a remote service responsive to user selection of the remote service during operation of the computer system."

Ray discloses that the user of the requesting device may manually select the temporary storage device for providing a remote storage operation ("user selection of the remote service during operation of the computer system"). Specifically, a user may manually add the identifier of a predetermined temporary storage device to an alternate delivery destination request. Ray at 14:4-8, 14:25-30; 14:1-3 ("the media content module/player 26 may be configured to include the identifier based on device user discretion"). In response to the user's selection of a particular temporary storage device, the requesting device associates a remote storage operation ("computer based operation") with the selected temporary storage device by creating and sending to the media content server an alternate delivery destination request that causes the media server to redirect content to the temporary storage device. *Id.* at 10:52-61, 14:8-16, 17:4-30; Karger ¶¶ 145-146. Claim 12 is also obvious if interpreted to cover the initial selection of the remote service during configuration prior to any download, because the user can predefine the temporary storage devices to be used. Ray at 13:62-64; 14:25-30; Karger ¶ 147.

7. Claim 13

a. "The method according to claim 1, wherein transforming the at least one executable operation into a remote access operation, in response to identification of the at least one executable operation includes: accessing at least one of a device profile, a remote profile, and a user profile; and"

Ray discloses that the requesting device "transform[s] the at least one executable operation into a remote access operation." *See supra* claim 1[j]. Wormald discloses accessing a data object 702 with download rules configured for a particular device—for example, the maximum file size that may be downloaded under certain communication mediums and allowed file extension types. Wormald at 22:34-49, 23:4-12, Fig. 6 (showing user interface 600 used to associate file size and media type information with the device). Wormald's Figure 7 illustrates data object 702 that contains file size and type information associated with a particular device:

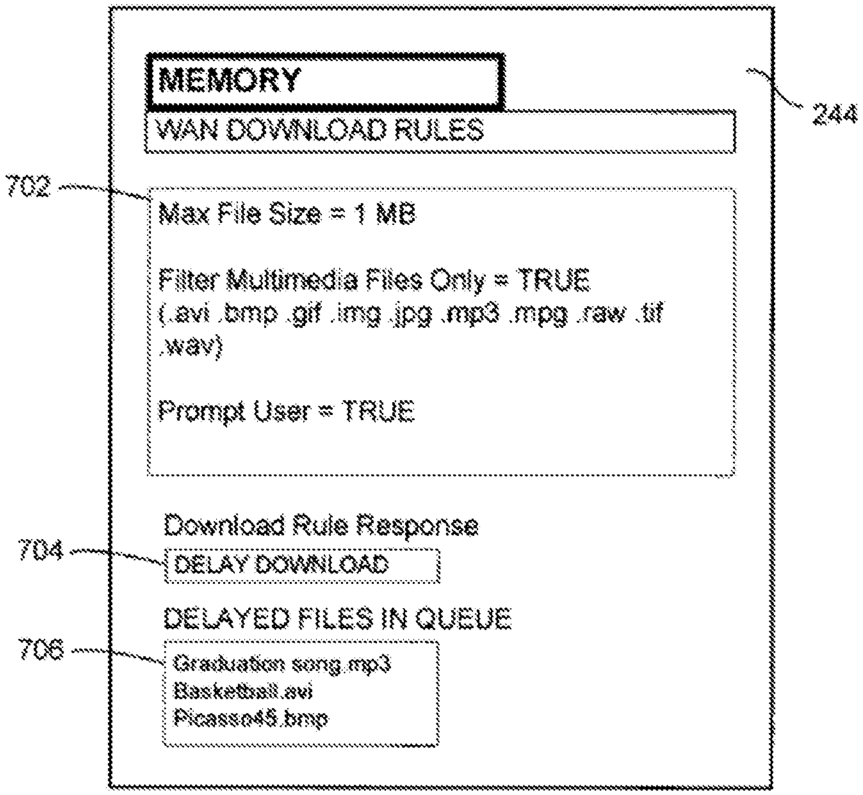

MEMORY
WAN DOWNLOAD RULES
244
702
Max File Size = 1 MB
Filter Multimedia Files Only = TRUE
(.avi .bmp .gif .img .jpg .mp3 .mpg .raw .tif .wav)
Prompt User = TRUE
Download Rule Response
704
DELAY DOWNLOAD
DELAYED FILES IN QUEUE
706
Graduation song.mp3
Basketball.avi
Picasso45.bmp

FIG. 7

A POSITA would understand data object 702 to be at least one of a "device profile" or a "user profile," depending on whether the settings are associated with all device users or a particular user of the device. Karger ¶¶ 148-151.

b. "identifying at least one remote service based on at least one of the requested at least one executable operation and a content type referenced by the executable operation."

Ray discloses "identifying at least one remote service" (a temporary storage device that performs a remote storage service) based on the requested download of a media content file that would require more storage than is available at the requesting device ("at least one of the requested at least one executable operation"), as described for claim 1[j]. Karger ¶ 152.

Additionally, the combination of Ray and Wormald renders this limitation obvious for the reasons discussed for claim 9. Wormald discloses determining that content selected for download (the "executable operation") is a specific type of content that indicates a large file, such as certain types of media content or some other predetermined file type ("based on at least one of … a content type referenced by the executable operation"). *Supra* claim 9. A POSITA would have found it obvious to incorporate this teaching from Wormald into Ray, such that Ray's requesting device selected a remote storage operation at a temporary storage device ("identifying at least one remote service") based in part on identifying the requested content as being a certain type of large file, for the reasons discussed for claim 9. Karger ¶ 153.

8. Claim 14: "The method according to claim 13, further comprising: selecting at least one remote service; and redirecting the at least one executable operation to the remote service."

Ray discloses selecting a temporary storage device to remotely store requested content ("selecting at least one remote service"). Ray at 22:26-32, 8:43-45, 11:11-15, 11:23-26, Figs. 1 & 8; *supra* claim 1[h]; Karger ¶¶ 154, 116-118.

Ray further discloses redirecting a user's content download request (the "at least one executable operation") to the temporary storage device performing the remote storage operation by "direct[ing] the media content service to deliver the [requested] media content file to [the] temporary storage wireless communication device." Ray at 22:26-41; *id.* at 10:36-38, 10:43-49; *supra* claim 1[k]; Karger ¶¶ 155; 125-126.

9. Claim 16

a. "The method according to claim 1, wherein determining that the function that would be performed meets transformation criteria includes accessing a size threshold associated with the at least one executable operation that performs a local access operation"

Ray discloses that the requesting device "determin[es] that the function that would be performed meets transformation criteria" (determines that the requested download of media content should be transformed to a remote storage operation) by "accessing a size threshold" (amount of available local memory) "associated with the at least one executable operation that performs a local access operation" (associated with a local download of the requested content).

Ray's requesting device includes software that recognizes a user's selection of a download operation and considers delivery attributes in response to that selection. Ray at 21:52-54, 21:61-22:25, 10:62-11:4, 14:31-15:26. Delivery attributes are "characteristics that affect the delivery/download of content" (*id.* at 10:65-67) and are therefore "associated with the … executable operation" of locally downloading content. Karger ¶¶ 157-158. Delivery attributes include criteria relating to the amount of memory required to download specific content. Ray at 11:2-15.

If the available local memory is "insufficient" for downloading the requested content, the requesting device sends the media server a request for remote storage instead of a request to locally download the content. *Id.* at 11:11-15 ("If … insufficient memory currently exists at the first wireless communication device the device may notify the network device 12 that delivery of the file to the temporary storage device is required."). A POSITA would understand Ray's disclosure of determining whether the requesting device has an "insufficient" amount of available memory to be "accessing a size threshold," as recited by claim 16—specifically, the threshold size of available local memory considered sufficient to download the requested content. *Id.* at 11:7-15; Karger ¶ 159.

Wormald discloses that a mobile device "access[es] a size threshold associated with the at least one executable operation that performs a local access operation" (accessing download rules associated with a download operation for large files). Wormald discloses that a mobile device determines that a requested file is larger than a "predetermined size threshold (e.g., x MB)." Wormald at 18:49-50, 19:17-35, Fig. 4 (annotations added):

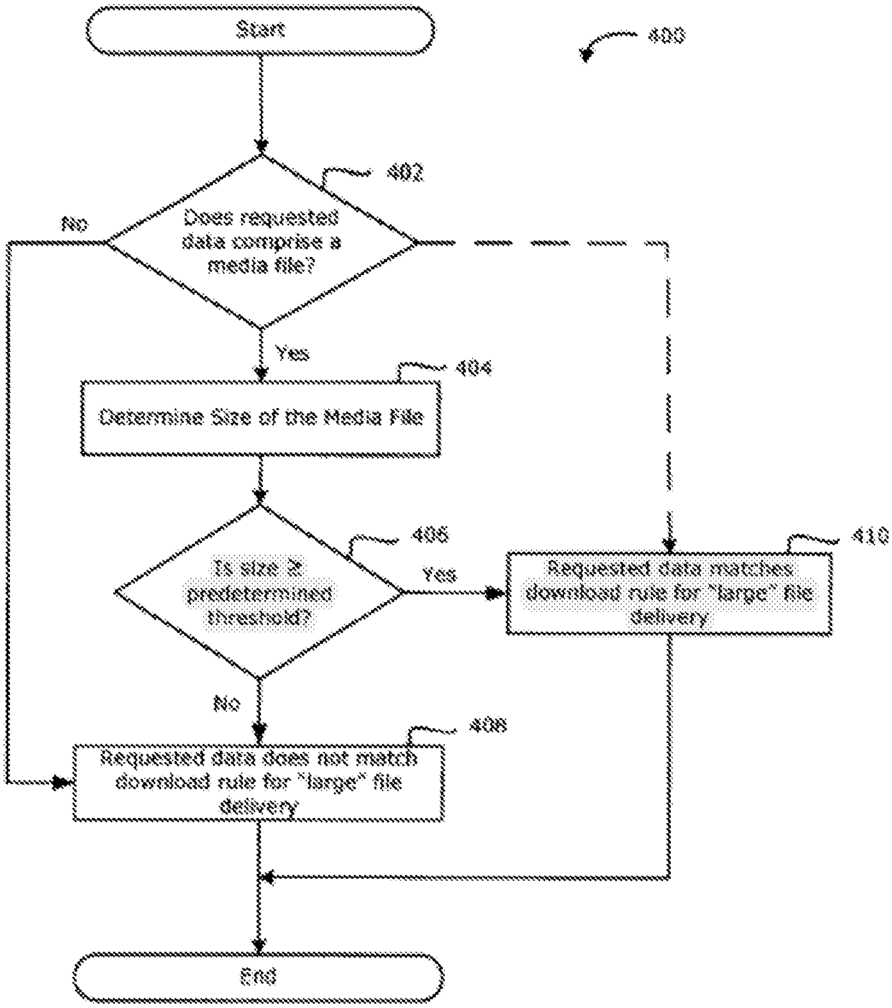

Start
400
402
Does requested data comprise a media file?
No
Yes
404
Determine Size of the Media File
406
Is size ≥ predetermined threshold?
Yes
No
410
Requested data matches download rule for "large" file delivery
408
Requested data does not match download rule for "large" file delivery
End

FIG. 4

Karger ¶ 160.

A POSITA would have found it obvious to incorporate Wormald's teaching of comparing "the determined size of [a] media file … against a predetermined size threshold" (*id.* at 19:18-19) into Ray, such that Ray's requesting device compares the size of requested media content to a predetermined size threshold. Karger ¶ 161. Wormald discloses that a predetermined size threshold protects users from the high data transmission costs and bandwidth challenges resulting from downloading a large file, particularly over wireless connections (Ray at 1:15-20, 1:27-47), and a POSITA would have recognized this disclosure as providing a teaching, suggestion, or motivation to make this combination. Karger ¶ 161. A POSITA would also have had a reasonable expectation of success in making the combination because Ray already discloses comparing requested file size to available memory, and it would have been trivial to modify this comparison such that the requested file size was compared instead to a predetermined size threshold, as disclosed by Wormald. Karger ¶ 162.

b. "wherein accessing the size threshold includes accessing at least one of a user profile, a device profile, a remote service profile, and a default profile to obtain a file size limitation"

As described for claim 1[g], Wormald discloses accessing a data object 702 stored on the mobile device to obtain information on the device's configuration, including a "maximum file size." Wormald at 23:4-20 & Fig. 7 (annotation added):

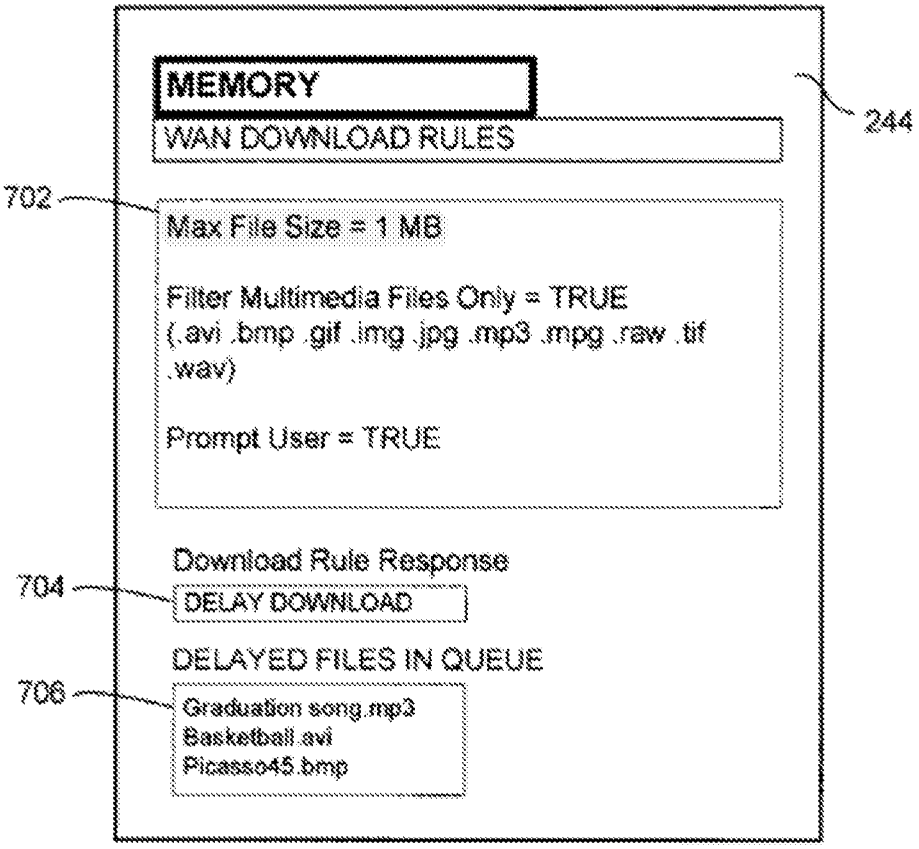

MEMORY
WAN DOWNLOAD RULES
244
702
Max File Size = 1 MB
Filter Multimedia Files Only = TRUE
(.avi .bmp .gif .img .jpg .mp3 .mpg .raw .tif .wav)
Prompt User = TRUE
Download Rule Response
704
DELAY DOWNLOAD
DELAYED FILES IN QUEUE
706
Graduation song.mp3
Basketball.avi
Picasso45.bmp

FIG. 7

A POSITA would have understood data object 702 as being either a "device profile" or "user profile," in that it stores settings governing how downloads for the device or a user are handled, and the "max file size" threshold as being a "file size limitation." Karger ¶ 163.

10. Claim 18: "The method according to claim 1, wherein selection of the at least one executable operation includes at least one of resolving computer focus within the graphical user interface on the at least one executable operation and hovering a visual pointer in the graphical user interface over a visual indicator of the at least one executable operation."

A POSITA would understand computer focus to include the acts of activating or selecting an element of a graphical user interface. Karger ¶ 164. The '957 patent describes "focus" broadly as including any indication by the computer system of a displayed graphical element. *E.g.*, '957 patent at 32:13-49. For example, the '957 patent describes computer focus as including "tabbing through" displayed elements and "clicking on a visual object." '957 patent at 32:23-24, 32:33-38, 32:47-49. Karger ¶ 164.

As described for claim 1[c], Ray and Wormald render obvious the selection of a download link embedded in a web page. *Supra* claim 1[c]. A POSITA would have known that selection of a hyperlink would involve focusing on the hyperlink by either hovering and selecting it via the mouse or tabbing to it. Karger ¶ 165. Tabbing to hyperlinks has been supported since HTML 4.0 (1997) and popular browsers like Internet Explorer have supported tabbing for just as long. *Id.*

11. Claim 19

a. 19[pre]-19[a]: "A streamlined computer device, the device comprising: at least one processor operatively connected to a memory, the processor when executing is configured to cause the device to:"

As described for claim 1[pre], Ray discloses a "computer device" (the requesting device) that is "streamlined" in that it translates a local download operation into a remote storage operation in response to certain criteria. *Supra* claim 1[pre]; Ray at 12:35-39, 9:61-64, 10:38-49, 12:39-41, 12:49-54, 21:48-52, Figs. 1-2.

Ray's requesting device includes a "processor" (processing engine 24) "operatively connected to a memory" (memory/data registry 22):

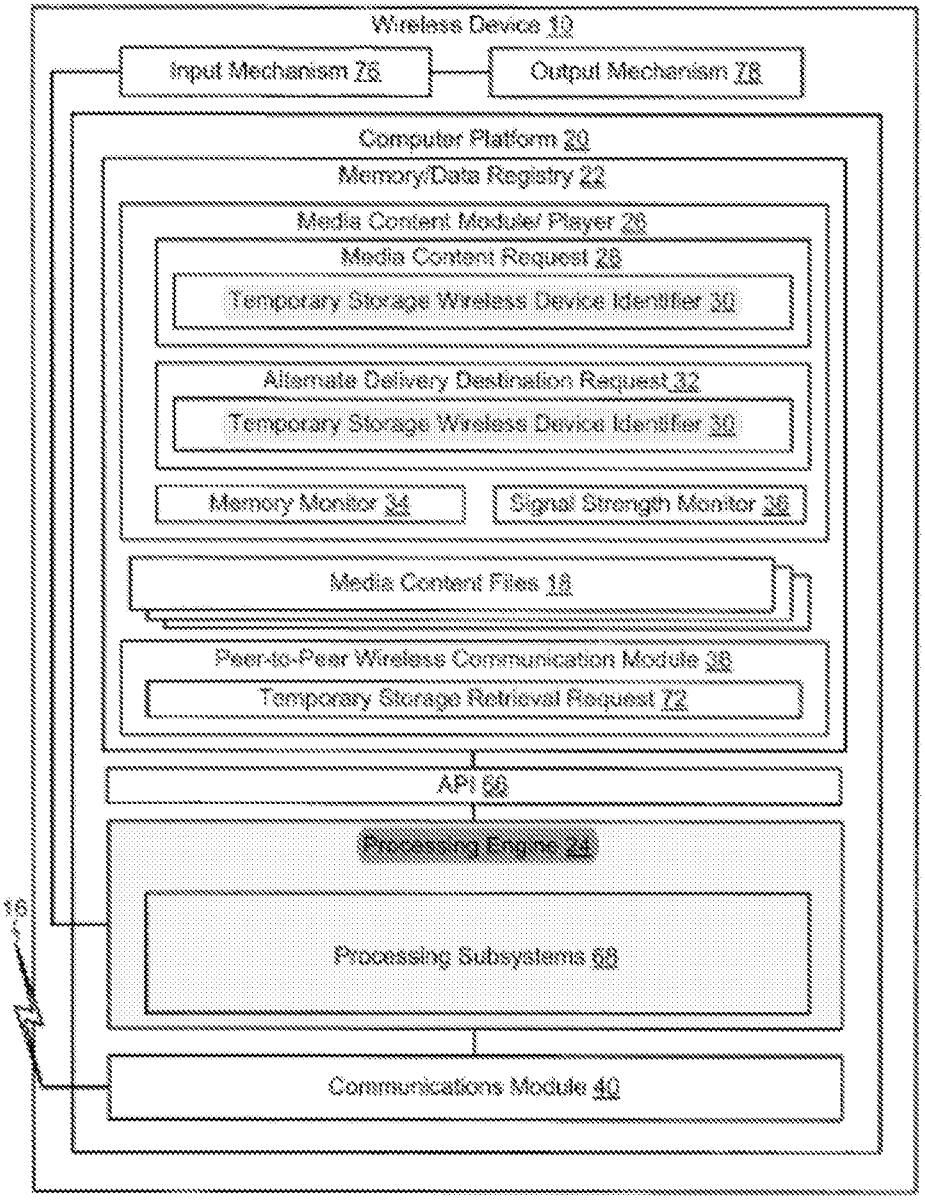

Wireless Device 10
Input Mechanism 76
Output Mechanism 78
Computer Platform 20
Memory/Data Registry 22
Media Content Module/ Player 26
Media Content Request 28
Temporary Storage Wireless Device Identifier 30
Alternate Delivery Destination Request 32
Temporary Storage Wireless Device Identifier 30
Memory Monitor 34
Signal Strength Monitor 36
Media Content Files 18
Peer-to-Peer Wireless Communication Module 38
Temporary Storage Retrieval Request 72
API 58
Processing Engine 24
Processing Subsystems 68
16
Communications Module 40

FIG. 2

Ray, Fig. 2 (annotations added); *id.* at 12:66-13:8 ("… processing engine 24, which may be a[] … processor … [and] interfaces with any resident programs … stored in the data registry 22"), *id.* at 10:31-34, 12:58-13:6, 24:22-41. Karger ¶ 168.

b. 19[b]-19[l]

The remaining limitations of claim 19 recite limitations that are substantively similar to the limitations of claim 1. *See* Ex. 1007. The Ray-Wormald combination renders limitations 19[b]-19[l] obvious for the same reasons described for limitations 1[a]-1[k], respectively. Karger ¶ 169.

12. Claim 20: "The device according to claim 19, wherein identifying includes: evaluating a function that would be performed by executing the at least one operation, and determining that the function that would be performed meets transformation criteria."

Ray discloses that identifying at least one characteristic of the at least one executable operation (download of media content, *see supra* claim 1[f]) includes evaluating a "function that would be performed" (a local download operation) by executing that operation. Specifically, Ray's requesting device evaluates the amount of available memory and signal strength that the local download operation would require. Ray at 11:2-19, 22:12-18. Karger ¶ 170.

The requesting device further determines that the function that would be performed "meets transformation criteria," by determining whether the amount of available memory and signal strength required for locally downloading the requested content is greater than the memory and signal strength available. Ray at 11:2-19, 22:12-18. A POSITA would recognize these as "transformation criteria," because the requesting device transforms a local download request into a request for remote storage of the content if the device capabilities are insufficient with respect to either criterion. Ray at 22:18-41, 10:15-21, 10:62-11:26; Karger ¶ 171.

13. Claims 21-23, 27, 30-32, 34, and 36

Claims 21-23, 27, 30-32, 34, and 36 recite limitations that are substantively similar to the limitations of claims 2-4, 9, 12-14, 16, and 18. *See* Ex. 1007. The Ray-Wormald combination renders claims 21-23, 27, 30-32, 34, and 36 obvious for the same reasons provided for claims 2-4, 9, 12-14, 16, and 18, respectively. Karger ¶ 172.

B. Ground 2: Ray, Wormald, and Wagner

1. Claim 5: "The method according to claim 1, wherein transforming the at least one executable operation into a remote access operation includes redirecting the executable operation into a request for access to remote service hosted by a third party provider."

Ray discloses that transforming the executable operation into a remote access operation (transforming the download into a remote storage operation, *see supra* claim 1[j]) includes "redirecting the executable operation" (download of media content) into a request for "access to [a] remote service" (the remote storage of content by a temporary storage device). Ray's requesting device transforms a request for download of selected media content into a request for the content server to store the selected content on a remote temporary storage device. *Supra* claim 1[j]; Ray at 11:2-26, 22:26-41. The temporary storage device acts as "a mobile server that temporarily stores media content for a community of first wireless devices 10" (*id.* at 9:57-60, 12:30-34) and thus qualifies as a "remote service." Karger ¶¶ 173-174, 107.

Wagner discloses that this remote service can be "hosted by a third party provider." Wagner discloses techniques for automatically uploading content from a device to a third-party online service provider. Wagner, Abstract. Users "open user accounts on … online service providers" and use these online service providers to "store uploaded content and share that content with other designated users or with the general public." *Id.* at 1:26-29. These online service providers include third-party providers such as Flickr and other photo- and media-hosting services. *Id.* at 1:17-26 (content "may be … transferred to external equipment for display or other processing. External equipment may include ***various online service providers for sharing media content*** … such as image-, audio-, or video-sharing service providers (e.g., PICASA™, FLICKR™, PHOTOBUCKET, MYSPACE.COM, FACEBOOK, YOUTUBE, etc.).") (emphasis added); *id.* at 5:23-28. These are precisely the types of "remote service[s] hosted by a third party provider" that the '957 patent contemplates. *E.g.*, '957 patent at 18:55-56. Karger ¶ 175.

A POSITA would have found it obvious to incorporate Wagner's teaching of using third-party providers, akin to Flickr, Picasa, and YouTube media-sharing sites, into the Ray-Wormald combination described for claim 1, to provide remote storage services such as those Ray describes. Karger ¶¶ 176-183. Wagner teaches that these third party providers allow users to easily and widely share content with other users or the public and provide significant organizational functionality such as folder structures and sorting and filtering abilities. Wagner at 1:26-33, 5:22-25. A POSITA would also have recognized that third party providers provided substantial amounts of available storage, often far more than a user-controlled or personal storage device would have provided. Karger ¶ 178. A POSITA would have had a reasonable expectation of success in making this combination because such third-party providers were well known, user-friendly, and widely accessible as of the priority date. Karger ¶ 179. Indeed, the '957 patent points to third party providers such as Flickr, Dropbox, and Shutterfly as being known third party providers configurable by users. *E.g.*, '957 patent at 59:15-19, 59:65-67.

Further, while Wagner's disclosure primarily describes uploading operations (*e.g.*, automatically uploading photos and other content from a mobile device to an online service provider), Wagner discloses that the same functionality is incorporated into a plug-in for a web browser. *Id.* at 18:30-37. A POSITA would have understood this disclosure to provide a teaching, suggestion, or motivation to extend Wagner's automatic remote storage functionality to content accessed via a web browser. Karger ¶ 180. Additionally, Wagner makes clear that content can be similarly downloaded from the online service provider—by the user, other users with accounts at the same content provider, or the general public. Wagner at 1:26-

29, 5:38-41, 8:18-44, 13:6-9; Karger ¶ 181. Thus, a POSITA would have found it obvious to combine the third-party providers taught by Wagner with the Ray-Wormald combination. Karger ¶¶ 176-183.

2. Claim 6: "The method according to claim 5, further comprising identifying a remote service stored in at least one of a device profile and a user profile."

Wagner discloses "identifying a remote service" (a remote storage service provided by an online service provider such as Picasa or Flickr) "stored in at least one of a device profile and a user profile" (stored as user account information).

Wagner describes a process of automatically storing media content from a device with an online service provider. Wagner at 10:41-45. The device can be "initially configured" to identify a specific online service provider—for example, Picasa—and include "corresponding account information (e.g., a username and password) for the account 122 that is maintained by the online service provider 104 that corresponds to the user 102." *Id.* at 5:55-63, 6:9-13, Fig. 1 (showing remote service provider 104 associated with user 102):

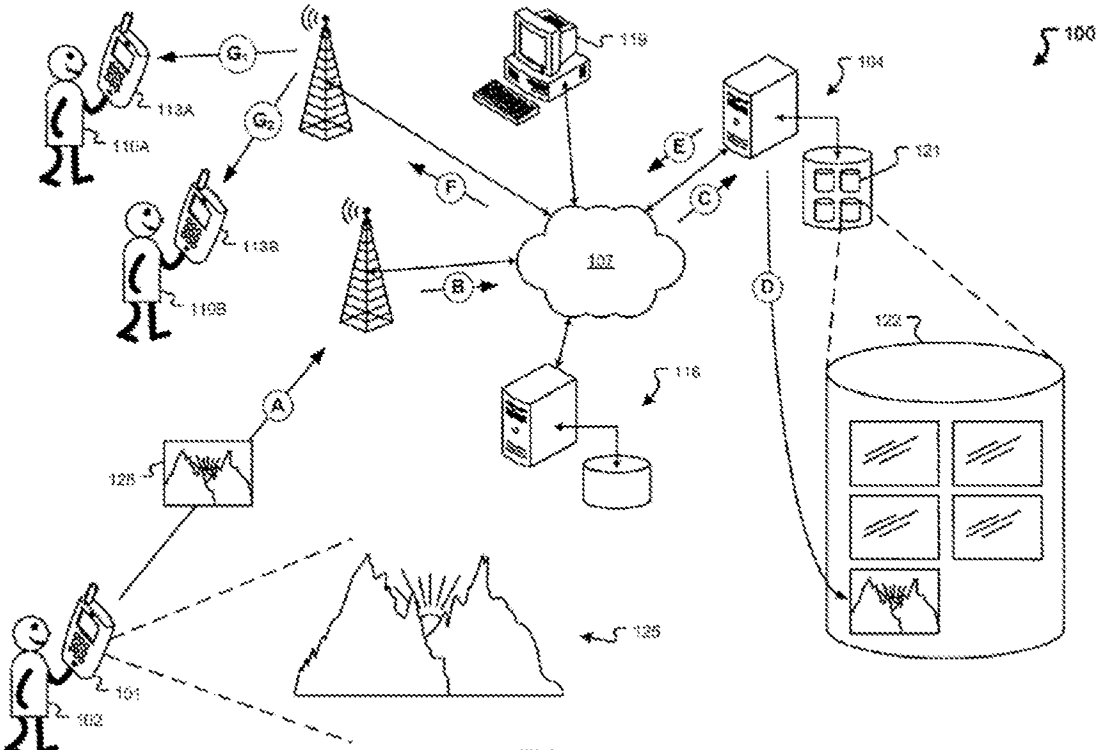
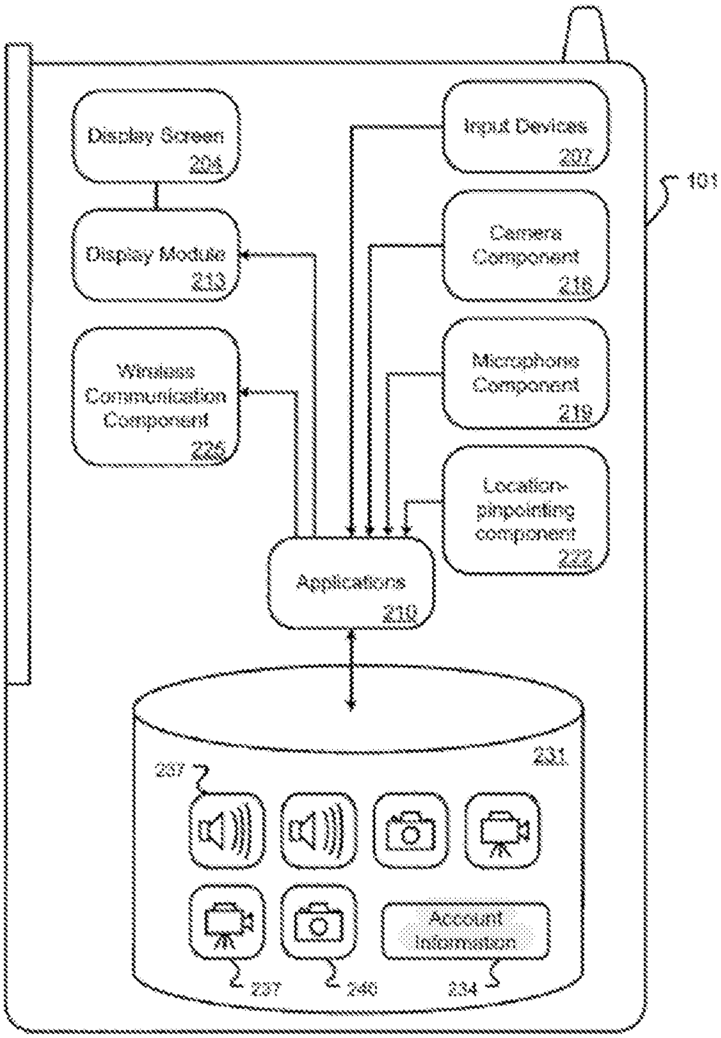

100
G1
G2
113A
110A
113B
110B
119
104
E
C
F
B
D
121
123
116
A
128
126
101
102

FIG. 1

The device stores account information in local memory that associates a user with one or more online service providers. *Id.* at 9:54-10:2 ("the mobile device 101 can include storage 231 for storing account information 234 associated with a user account maintained by an online service provider (e.g., the user account 122 maintained by the online service provider 104 for the user 102–shown in FIG. 1).") & Fig. 2 ("Account Information," annotation added):


Display Screen 204
Display Module 213
Wireless Communication Component 226
Input Devices 207
Camera Component 216
Microphone Component 219
Location-pinpointing component 222
Applications 210
101
231
237
Account Information
237
240
234

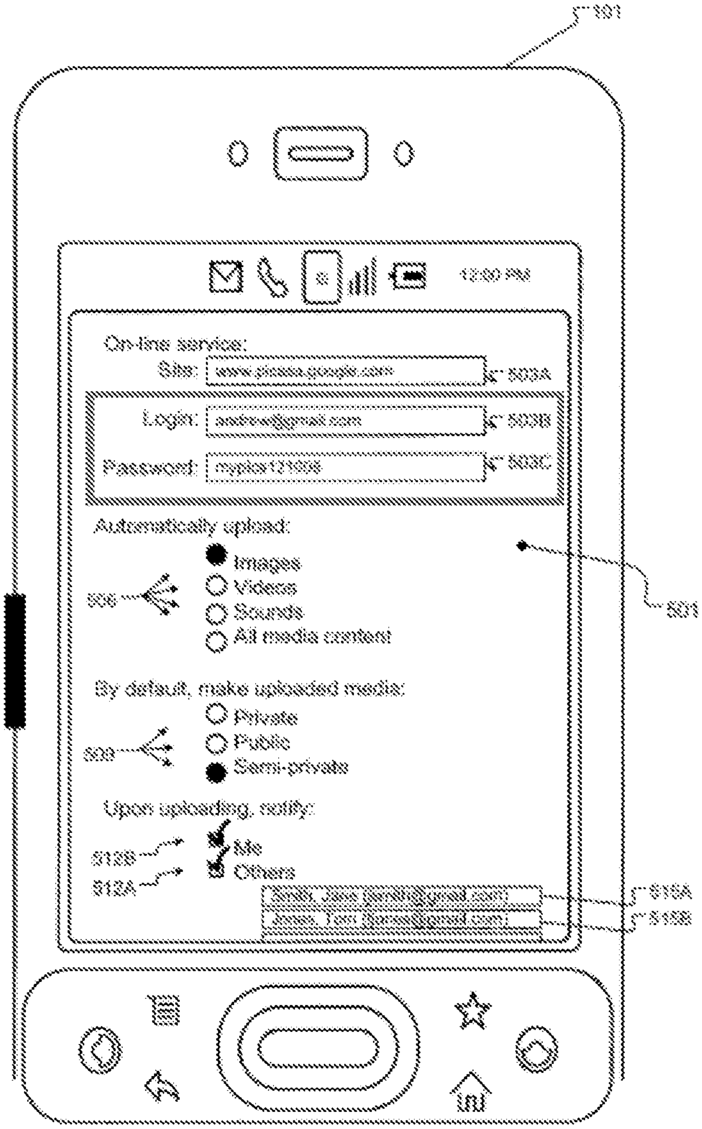
Id., Fig. 1 (user account 122) & 3:25-28 (device includes "memory configured to store a) identifying information corresponding to a user account associated with at least one of the plurality of online service providers"). The '957 patent's "user profile" includes the same kind of information. *E.g.*, '957 patent at 59:63-64 ("Maintain user profile—associate web service providers for a particular user"). A POSITA would have understood this disclosure of stored information corresponding to a user account associated with an online service provider to be a "user profile." Karger ¶¶ 184-186.

A POSITA would have found it obvious to incorporate Wagner's teaching of maintaining user account information (a "user profile") for an online service provider (a "remote service") into the Ray-Wormald combination. Karger ¶¶ 187-188. Wagner teaches that configuring and storing information corresponding to a user's account with an online service provider can streamline interactions between the device and service provider, including by allowing the device and service provider to communicate automatically, without requiring user interaction. Wagner at 6:4-39, 11:18-24. A POSITA would have understood this as providing a teaching, suggestion, or motivation to combine Wagner's teaching with Ray and Wormald, such that Ray's requesting device could access stored information relating to the user's account with a third party provider when making a determination of whether to transform a download operation into a remote storage operation. Karger ¶ 188. A POSITA would have had a reasonable expectation of success in making this combination, because it would have been straightforward to configure the stored information (using a configuration tool, as disclosed by Wagner's Figure 5, or otherwise) and a POSITA would have been familiar with the general concept of a data structure that aggregated user account information. Karger ¶ 189.

3. Claim 7

a. "The method according to claim 1, further comprising: configuring access to a remote service on the computer system, wherein the act of configuring access to the remote service includes establishing an account name and password for the remote service;"

Wagner discloses configuring access to remote storage services provided by online service providers like Flickr and Picasa (each a "remote service"), including by "establishing an account name and password" for each online service provider. Wagner discloses that a user configures a device "to identify the online service provider 104, as well as to store … corresponding account information (e.g., a username and password) for the account 122 that is maintained by the online service provider 104 that corresponds to the user 102." Wagner at 5:58-63. The device includes "configuration tool 501" that "enable[s] a user to specify an online service provider (e.g., the online service provider 104 that is shown in FIG. 1), as well as a corresponding login or username and password." *Id.* at 12:65-13:1 & Fig. 5 (annotation added):



On-line service:
Site: www.picasa.google.com
Login: andrew@gmail.com
Password: mypics121998

Automatically upload:
● Images
○ Videos
○ Sounds
○ All media content

By default, make uploaded media:
○ Private
○ Public
● Semi-private

Upon uploading, notify:
☑ Me
☑ Others
Smith, Jane (jsmith@gmail.com)
Jones, Tom (tjones@gmail.com)

Id. at 10:45-58. A POSITA would have understood Figure 5 as illustrating a way of configuring access to the specified online service provider: Wagner describes it as "an example configuration tool for configuring how captured media content is to be automatically uploaded to an online service provider." *Id.* at 4:4-6. Karger ¶¶ 190-193.

b. "storing the account name and the password as part of at least one of a device profile and a user profile."

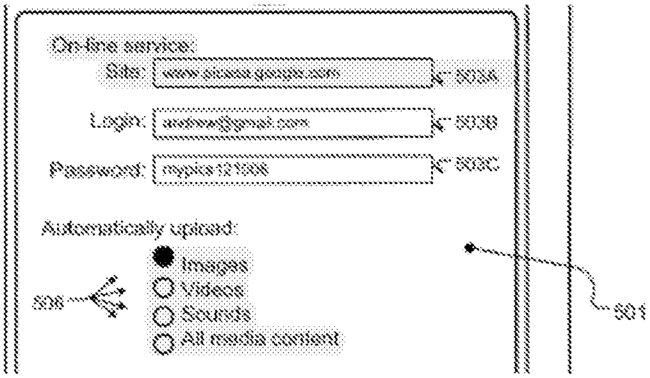
Wagner discloses that the device stores "corresponding account information (e.g., a username and password) for the account 122 that is maintained by the online service provider 104 that corresponds to the user 102." Wagner at 5:56-63; *see also id.* at 4:34-38, 6:31-39, 9:65-10:2, 10:45-55. A POSITA would understand this "corresponding account information" to be a "user profile." Karger ¶ 194. *E.g.*, '957 patent at 59:63-64 ("Maintain user profile—associate web service providers for a particular user").

A POSITA would have found it obvious to incorporate Wagner's teaching of configuring access to a remote service by establishing and storing user account name and password information in a user profile into the Ray-Wormald combination. Karger ¶¶ 195-196. As described for claim 6, a POSITA would have viewed Wagner as providing a teaching, suggestion, or motivation to make this combination based on its disclosure that storing user account data (including password and account name) improves and enables automatic communications, and a POSITA would have had a reasonable expectation of success in doing so because Wagner provides a specific example of a configuration tool for establishing and storing this user information. Karger ¶ 196.

4. Claim 8

a. "The method according to claim 7, wherein configuring access includes defining one or more types of electronic content associated with the remote service;"

Wagner discloses that the device is configured "with various preferences for uploading media content to the online service provider 104 (e.g., preferences related to types of media content to automatically upload …)." Wagner at 5:63-67, 6:7-22. For example, Wagner's configuration tool 501 "enable[s] a user to specify an online service provider" and "to specify ***types of media content*** that should be automatically uploaded (e.g., ***images, video or sounds***, to name a few examples)." Wagner at 12:62-13:6 (emphasis added); *id.* at 7:21-26; *id.*, Fig. 5 (excerpted, annotations added):


On-line service:
Site:
503A
Login:
503B
Password:
503C
Automatically upload:
● Images
○ Videos
○ Sounds
○ All media content
508
501

In the example of Figure 5, configuring access to the remote service provided by Picasa includes defining "images" as the type of electronic content associated with the remote service. Karger ¶¶ 197-198.

b. "and storing the one or more types of electronic content associated with the remote service as part of at least one of a device profile and a user profile."

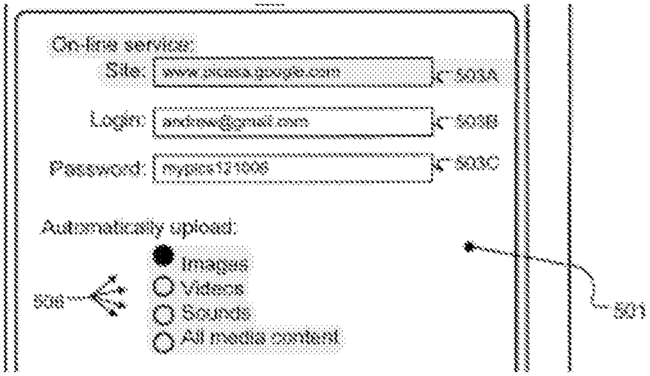
Wagner discloses that the device stores "preferences for uploading media content to the online service provider 104," including "preferences related to types of media content to automatically upload." Wagner at 5:56-67; *id.* at 4:34-40. A POSITA would understand this stored preference information corresponding to a particular user account to comprise a "user profile." Karger ¶ 199.

A POSITA would have found it obvious to incorporate Wagner's teaching of storing types of media content associated with a remote service as part of the user profile information into the Ray-Wormald combination. Karger ¶ 200-201. Wagner teaches that a user could choose to associate only certain types of media content with a particular remote service—for example, digital images and/or video, but not digital audio. Wagner at 7:23-26, Fig. 5 (showing "Images" as associated media type for Picasa service). A POSITA would have understood this as providing a teaching, suggestion, or motivation to combine Wagner's teaching with Ray-Wormald to better configure access to services that are tailored to particular content—for example, by specifying that photo-focused services such as Picasa are not used for audio content—and would have had a reasonable expectation of success in doing so, as described for claim 7. Karger ¶ 201.

5. Claim 9

Claim 9 is obvious over Ray and Wormald for the reasons discussed above. *Supra* claim 9. To the extent claim 9 is interpreted to require selection of one among multiple remote services, claim 9 is obvious over the combination of Ray, Wormald, and Wagner.

Wormald discloses that the user device "identif[ies] a type of electronic content associated with the local access operation" by determining if the file extension of the media file requested for download matches a list of predetermined media file types that are deemed "large" file types. Wormald at 17:37-58, Fig. 4. Wagner teaches configuring user profiles for different online service providers that specify what types of electronic content—including image, video, audio, and general media content—are handled by each respective service provider. *Id.* at 4:34-40, 5:56-67,7:21-26; *supra* claim 8. For example, Wagner's Figure 5 shows a configuration tool that defines a user profile for the remote online service provider Picasa that identifies Picasa as handling "image" types of electronic content. *Id.* at 12:62-13:6, Fig. 5 (annotated):



On-line services:

Site: www.picasa.google.com

Login:

Password:

Automatically upload:

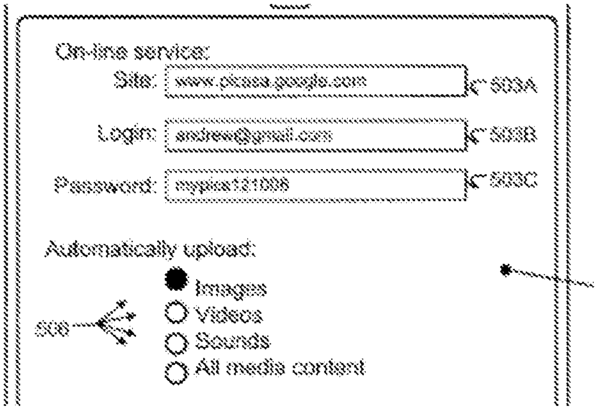
● Images
○ Videos
○ Sounds
○ All media content

The configuration tool of Figure 5 can be used to define configurations for online service providers generally. *Id.* at 12:62-64.

A POSITA would have found it obvious to incorporate this teaching from Wagner into the Ray-Wormald combination, such that Ray's requesting device selects a specific remote service (a remote storage service by an online service provider) based in part on the determination that requested content is a certain type of media file for which that remote service is configured. Karger ¶ 205. This combination would have been the use of a known technique (using an online service such as Picasa to remotely store specific types of media files) to improve similar devices (Ray's requesting device) in the same way (by directing media content to service providers specifically configured to handle that type of content). *Id.* A POSITA would also have understood this to be simply combining prior art elements according to known methods (Ray's request for remote storage of a media file at a remote temporary storage device and Wagner's teaching of using online service providers to remotely store particular types of media content) to obtain predictable results (causing media files to be stored at a remote server based on their file type). *Id.*

6. Claim 10: "The method according to claim 1, further comprising: providing a remote service profile including at least one type of electronic content associated with at least one remote service; and identifying the at least one type of electronic content associated with the at least one remote service."

The specification does not define the generic phrase "remote service profile" in any manner that diverges from the plain claim language. Karger ¶ 206. The claim language indicates that a "remote service profile" refers to, or at least comprises, information associating a remote service with a type of electronic content. A POSITA would recognize Wagner's disclosure of storing information that associates particular types of media content with particular online service providers, as described for claim 8, as "providing a remote service profile." Karger ¶ 207. Also as described for claim 8, Wagner discloses using stored information to identify what types of media content are associated with a particular service provider when determining how to handle particular content ("identifying the at least one type of electronic content associated with the at least one remote service"). *E.g.*, Wagner at 5:63-6:13, 13:3-5, Fig. 5 (excerpted, showing that "images" are identified as types of media associated with the Picasa service):



On-line service:
Site: www.picasa.google.com
Login: andrew@gmail.com
Password: mypics121008

Automatically upload:
● Images
○ Videos
○ Sounds
○ All media content

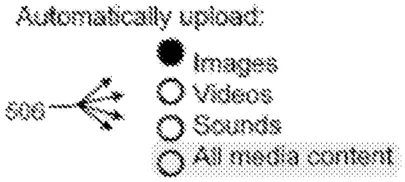
Karger ¶ 208.

Claim 10 is therefore obvious over the Ray-Wormald-Wagner combination for the reasons provided with respect to claim 8. Karger ¶ 209.

7. Claim 11

a. "The method according to claim 10, includes providing a default remote service profile, wherein the default remote service profile is associated with all file content types, and is further associated with a data storage capability;"

As discussed for claim 10, Wagner teaches that configuration tool 501 is used to "provide default handling settings for media content" for a given online service provider. Wagner at 13:48-50. Specifically, configuration tool 501 may be used to input user profile information that associates an online service provider with "all media content." *Id.*, Fig. 5 (excerpted and annotated):



Automatically upload:
● Images
○ Videos
○ Sounds
○ All media content

Wagner further teaches that online service providers are "associated with a data storage capability" for storing content. *Id.* at 1:26-29, 5:47-55; Fig. 1 (showing user storage spaces 121/122 maintained by service provider 104). The combination of Ray-Wormald-Wagner thus teaches "providing a default remote service profile" that is "associated with a data storage capability." Karger ¶ 210.

As discussed *supra* for claims 1[g] and 13, Wormald discloses a data object on the user device that is both a user profile and a device profile, and it would have been obvious to incorporate this teaching into Ray. Wormald at 22:34-49, 23:4-12, Fig. 7 (showing data object 702 associating file size and type information). Wormald additionally teaches that this data object stores information regarding files of "any file extension" and is not restricted to information regarding media content files. *Id.* at 22:46-49. A POSITA would have viewed this disclosure as providing a teaching, suggestion, or motivation to modify the Ray-Wormald-Wagner combination such that the configuration information accommodated "all file content types," not merely media content files, because files other than media files may present the same large-file-size challenges addressed by Ray and Wormald. Karger ¶ 212. Additionally, a POSITA would have recognized this combination to be the use of a known technique (Wagner's technique of specifying default settings for media content) to improve a similar system (a user device that requests remote storage of content) in the same way (by specifying default settings for all content in the same manner as for media content). Karger ¶ 213. A POSITA would have had a reasonable expectation of success because Wagner's configuration tool would have been applicable to "all content" in the same way as for "all media content," and various online service providers (*e.g.*, Dropbox) provided remote storage of content generally. Karger ¶ 214.

b. "and selecting the default profile in response to determining no matches to at least one of the remote service profile, a device profile, and a user profile."

Wagner discloses that users can communicate with "various online service providers for sharing media content." Wagner at 1:17-29, 10:45-55. Users can input configuration information for each online service provider using configuration tool 501 (*id.* at 12:62-13:9), which may be structured to gather preference and configuration information beyond that illustrated in Wagner's Figure 5 (*id.* at 13:23-47). Karger ¶¶ 215-216. A POSITA would have found it obvious to configure narrower settings for preferred online service providers—for example, the settings for Picasa shown in Figure 5—in addition to broader default settings (Wagner at 13:48-50), and to configure the device to select online service providers in an order of priority. Karger ¶ 217. In one scenario, a device could be configured to select Picasa as the online service provider in connection with requests involving "image" content (*see* Wagner at Fig. 5, specifying "images" as the file type for Picasa); but selecting a default settings configured for "all media content" for requests involving audio content. A POSITA would have understood this combination to provide a benefit of allowing a user to automate a preferred sequence of service providers, while ensuring that some default provider would be used if the priority service provider was unavailable or inappropriate for particular content. Karger ¶ 217.

8. Claim 17: "The method according to claim 16, wherein transforming the at least one executable operation into a remote access operation includes: creating a navigational link to content associated with the at least one executable operation; and transmitting the navigational link through an electronic message instead of performing the at least one executable operation, in response to a determination that the size threshold has been exceeded."

Wagner discloses that the online service provider sends users a "link to [] new content" that has been uploaded that enables users to "efficiently access that new content." Wagner at 8:27-44; *id.* at 8:65-9:3 (message to users includes "a direct link to the newly uploaded content," which "enable[s] the users to quickly navigate to the new content"). Karger ¶ 218. This link is sent to users within an electronic message. Wagner at 8:40-44, 8:66-67.

A POSITA would have understood Wagner's disclosure that emailing a link to remotely-stored content allows users to navigate to that specific content "quickly" and "efficiently" (Wagner at 8:42-44, 9:1-3) as providing a teaching, suggestion, or motivation to modify the Ray-Wormald combination such that rather than downloading the file ("… instead of performing the at least one executable operation, in response to a determination that the size threshold has been exceeded"), the requesting device directs the requested file to be remotely stored (*see supra* claim 1[j]) and causes a navigational link for accessing the file to be emailed to the user ("creating a navigational link to content associated with the at least one executable operation; and transmitting the navigational link through an electronic message"). Karger ¶ 219. This functionality would have improved a user's ability to access requested content when sufficient local memory or signal strength at the device becomes available, as Ray describes. Ray at 14:61-15:16, 12:16-20; Karger ¶ 220. Additionally, given that Wagner discloses remotely storing media content with service providers (e.g., Flickr) that provide social media functionality, it would have been obvious to a POSITA that users may wish to take advantage of those features when using such a service. Karger ¶ 221.

Incorporating the technique of emailing a link to remotely-stored content would also have amounted to the use of a known technique (creating and sending a link to remotely stored content via email, as taught by Wagner) to improve a similar device (a user computing device communicating with a remote server) in the same way (by providing a quick and efficient way for a device user to access specific content). Karger ¶ 222. A POSITA would have had a reasonable expectation of success in making this combination, because Ray's temporary storage devices are "media content service servers" (Ray at 9:61-10:8) and as of the priority date, numerous third party providers of media content services (*e.g.*, Picasa, Facebook) provided the functionality of emailing links to remotely stored content. Wagner at 1:21-29; Karger ¶ 223.

9. Claims 24-29 and 35

Claims 24-29 and 35 recite limitations that are substantively similar to the limitations of claims 6-11 and 17. *See* Ex. 1007. The Ray-Wormald-Wagner combination renders claims 24-29 and 35 obvious for the same reasons provided for claims 6-11 and 17, respectively. Karger ¶ 224.

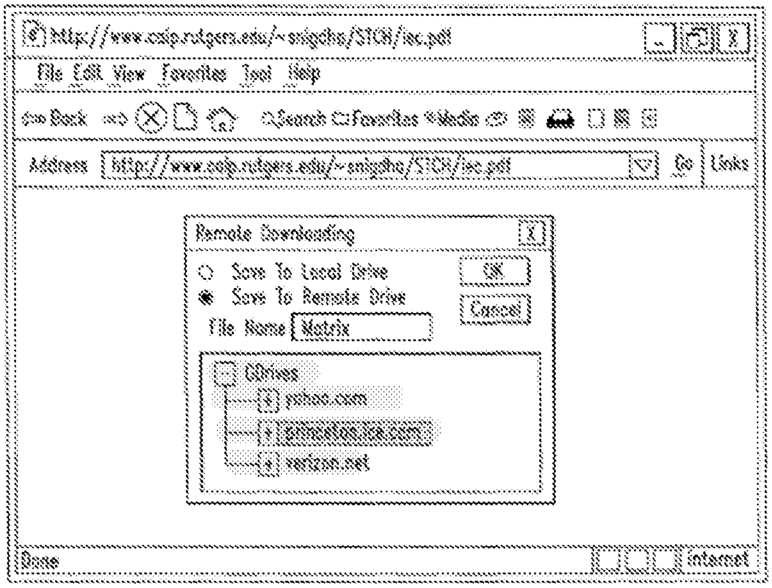
C. Ground 3: Ray, Wormald, and Li

1. Claim 15: "The method according to claim 14, wherein selecting at least one remote service includes: displaying a plurality of remote services to the user in an interface; and permitting selection of one of the plurality of remote services by the user through the interface."

Ray discloses that a requesting device may select from among multiple temporary storage devices for remotely storing requested content ("selecting at least one remote service"). *E.g.*, Ray at 9:61-64 ("second wireless communication devices 16 act as mobile servers that temporarily store media content files requested by the first wireless communication device"). The user selects temporary storage devices to be used for a remote storage operation by "predefining" them or by adding the corresponding device identifier at the time a request for remote storage is made. Ray at 13:62-64 ("temporary storage device(s) will be predefined by the user of the first wireless device"), 14:25-30 (temporary storage device identifiers are predefined or "manually added" ad hoc to a request for remote storage). Thus, Ray discloses "permitting selection of one of [a] plurality of remote services by the user," *i.e.*, selecting one of multiple temporary storage devices for a remote storage operation. Karger ¶ 225.

Li discloses "displaying a plurality of remote services to the user in an interface" and "permitting selection of one of the plurality of remote services by the user through the interface." Li describes techniques for allowing a local computer to cause content from a content server to be downloaded to a drive on a remote computer. Li, Abstract. Li discloses that a user selects one of a plurality of remote drives for performing a remote storage operation through a user interface provided via a web browser:

FIG. 9



http://www.caip.rutgers.edu/~snigdha/STCH/iec.pdf
File Edit View Favorites Tool Help
Back
Search Favorites Media
Address
Go
Links
Remote Downloading
○ Save To Local Drive
OK
Cancel
GDrives
yahoo.com
verizon.net
Done
internet

● Save To Remote Drive

File Name: Matrix

Li, Fig. 9 (annotations added) & *id.*, [0024]; Karger ¶ 226. As shown in Figure 9, a user selects from among a listing of available remote drives (also called "GDrives" or "geographic drives") for the operation of saving to a remote drive. *Id.* at Fig. 9, [0032], [0009], Fig. 5; Karger ¶ 227.

A POSITA would have found it obvious to incorporate Li's teaching, of displaying a plurality of remote services for a user to select from via a web browser interface, into Ray-Wormald, such that a user of the requesting device is able to select one of the temporary storage devices via a graphical user interface. A POSITA would have understood Li's Figure 9 interface as providing a teaching, suggestion, or motivation to make this combination, because it would have provided a simple and convenient way for a user to choose a temporary storage device. Karger ¶ 228. A POSITA would also have had a reasonable expectation of success in making this combination, because Li teaches that the interface can be provided as a plug-in to a conventional web browser program (Li, [0005], [0007], [0023]-[0024], [0032]) and Ray's requesting device uses a conventional web browser to request delivery of content from a media content server (Ray at 21:56-60, 10:43-49). Karger ¶ 229.

2. Claim 33

Claim 33 recites limitations similar to those of claim 15. *See* Ex. 1007. The Ray-Wormald-Li combination renders claim 33 obvious for the same reasons provided for claim 15. Karger ¶ 230.

X. CONCLUSION

Petitioner has shown by a preponderance of the evidence that claims 1-36 of the '957 patent are unpatentable. Petitioner requests institution of *inter partes* review and cancellation of these claims.

Dated: May 25, 2021

Respectfully submitted,

/Christina J. McCullough/

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CERTIFICATION OF WORD COUNT UNDER 37 C.F.R. § 42.24(d)

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing *Petition for Inter Partes Review* of U.S. Patent No. 8,577,957 totals 13,988, excluding the parts exempted by 37 C.F.R. § 42.24(a). Accordingly, this Petition is under the word count limit of 14,000 words.

This word count was calculated by using the built-in word-count tool in Microsoft Word 2016, the software used to prepare the document.

Dated: May 25, 2021

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true copy of the foregoing PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,577,957 and supporting materials (Exhibits 1001-1007 and Power of Attorney) have been served this 25th day of May 2021, by FedEx® delivery service on Patent Owner at the correspondence address for the attorney of record for the '957 patent shown in USPTO PAIR:

WOLF GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, MA 02210

and via electronic mail to the attorneys of record for Plaintiff in the concurrent litigation matter:

Eric J. Rutt - erutt@wolfgreenfield.com
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Dated: May 25, 2021

Respectfully submitted,

/ Kate Smith /
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	Yves Behar
Application No.:	90/014,965
Confirmation No.:	3442
Filed:	February 25, 2022
For:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
Examiner:	C. Y. Leung
Art Unit:	3991

Certificate of Electronic Filing under 37 C.F.R. § 1.8
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office's electronic filing system in accordance with 37 C.F.R. § 1.6(a)(4).

Dated: December 9, 2022 Electronic Signature for MacAulay S. Rush: /MacAulay S. Rush/

RESPONSE TO NON-FINAL OFFICE ACTION UNDER 37 CFR 1.111 AND WRITTEN STATEMENT UNDER 37 CFR 1.560(b)

Mail Stop Ex Parte Reexam
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

In response to the non-final Office Action mailed October 12, 2022, the Patent Owner requests reconsideration.

Remarks begin on page 2 of this paper, and include a **Written Statement under 37 C.F.R. § 1.560**.

A copy of the **Interview Agenda** submitted September 13, 2022, is attached as Exhibit A.

A **Declaration of Eric J. Gould Bear under 37 C.F.R. § 1.132** (“Bear”) is attached as Exhibit B; excerpts from U.S. Patent No. 8,624,844 highlighting its use of “content mode(s)” and “mode(s) of content” are attached as Appendix B to the Bear Declaration.

REMARKS

In response to the non-final Office Action mailed October 12, 2022 in connection with the reexamination of U.S. Patent No. 8,624,844 ("'844 Patent"), the Patent Owner LiTL LLC ("LiTL") respectfully requests reconsideration. The Office Action has been carefully considered and its rejections are addressed below. Patent Owner respectfully submits that each originally patented challenged claim should be confirmed.

I. STATUS OF THE CLAIMS

Independent claim 10 and dependent claim 16 are subject to reexamination. No claims have been canceled, added, or amended. As a result, claims 10 and 16 are pending for reexamination. It is respectfully submitted that all outstanding rejections should be withdrawn for the reasons discussed below.

II. CONCURRENT PROCEEDINGS (37 C.F.R. § 1.565(a))

LiTL is aware of the following prior and concurrent proceedings in which the '844 Patent is or was involved.

1. *LiTL LLC v. Lenovo (United States), Inc. et al*, Civ. No. 1-20-cv-00689 (D. Del.) (pending). In this proceeding, the requestor of this Reexamination ("Lenovo") is accused of infringing the '844 Patent.
2. *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00822 (P.T.A.B.) (institution denied). *See* Ex. 1031.

LiTL is aware of the following prior and concurrent proceedings in which patents or applications related to the '844 Patent are or were involved.

Proceeding	Patent / Application	Status
Lenovo (United States) Inc. v. LiTL LLC, IPR2021-00681	8,289,688	Institution denied
Lenovo (United States) Inc. v. LiTL LLC, IPR2021-00822	8,624,844	Institution denied

Proceeding	**Patent / Application**	**Status**
Lenovo (United States) Inc. v. LiTL LLC, IPR2021-00800	10,289,154	Institution denied
Lenovo (United States) Inc. v. LiTL LLC, IPR2021-00821	8,612,888	Institution denied
Lenovo (United States) Inc. v. LiTL LLC, IPR2021-00786	9,880,715	Institution denied
Microsoft Corporation v. LiTL LLC, IPR2021-01011	8,577,957	Institution denied
Ex parte reexamination of 8,289,688	8,289,688 90/014,958	Pending: Reexamination ordered
Ex parte reexamination of 9,880,715	9,880,715 90/014,958	Pending: Non-final action mailed
Ex parte reexamination of 10,289,154	10,289,154 90/015,025	Pending: Reexamination ordered

III. WRITTEN STATEMENT UNDER 37 C.F.R. § 1.560(b)

LiTL thanks Examiner Leung and the Conferees for conducting a video conference interview on November 30, 2022. LiTL was represented at the interview by Gerald Hrycyszyn and Richard Giunta of Wolf Greenfield. Eric Bear, LiTL's expert witness, was present in a listening capacity. LiTL's representatives provided the Examiners with an Interview Agenda (copy attached as Exhibit A) prior to the interview. The arguments LiTL advanced during the interview as reasons warranting favorable action tracked the Interview Agenda, so the Interview Agenda provides a "complete written statement of the reasons presented at the interview as warranting favorable action" as required by 37 C.F.R. § 1.560(b).

During the interview, Examiner Leung recognized the distinction Patent Owner was making between displaying a content mode and displaying functions, features or applications grouped within a content mode. Examiner Leung indicated that in reconsidering the rejection in view of Patent Owner's arguments, she wanted to review how the '844 Patent describes displaying a content mode (or mode of content), to determine whether it consistently refers to displaying a visual representation of the content mode itself (e.g., the bars in Figures 12 and 17) as opposed to displaying functions, features or applications grouped within a content mode. The Examiners are encouraged to do their own independent review of the specification, but Patent Owner is confident that the Examiners will see that the '844 Patent consistently refers to displaying a content mode as requiring the display of some visual representation of the content mode—some "information, such as menus, icons, etc. … on the display screen 110" ('844 Patent, 10:54-65) that represents the content mode.

Additionally, during the interview, Examiner Leung advised LiTL's representatives that the Examiners would reconsider the rejections in view of LiTL's arguments and evidence submitted in this Response, and she asked some questions and offered comments that are summarized in this Response. If the Examiners disagree with anything in LiTL's Written Statement Under 37 C.F.R. § 1.560(b) or other summary of the interview, they are invited to call the undersigned at the telephone number provided below to discuss how the record may be clarified.

IV. DECLARATION OF ERIC J. GOULD BEAR ("BEAR")

To assist the Examiners' understanding of the issues through the perspective of a person of ordinary skill in the art ("POSA"), attached as Exhibit B is a Declaration of Eric J. Gould Bear under 37 C.F.R. § 1.132 ("Bear").

Mr. Bear has been involved in the research, teaching, design, development and manufacturing of graphical user interface ("GUI") technology, as well as other hardware and software user experience ("UX") technologies, for over 35 years. Bear, ¶¶ 12-24. He is the first named inventor on 84 issued U.S. patents in the field, including patents covering real-time communications architectures, auxiliary visual displays for personal computers, methods for navigating content user interfaces, and handheld multi-channel interactive environments. *Id.*, ¶ 13. He has designed touch screen user interfaces for many industry-leading companies and form-factors including universal remote controls (Logitech, Microsoft), mobile phones (Samsung), car dashboards (Ford), blood analyzers (Luminex) and hospital handhelds (Novartis). *Id.*, ¶ 17.

The claims must be interpreted, and the prior art teachings must be understood, from the perspective of a POSA. *See* MPEP §§ 2111 ("the focus of the inquiry regarding the meaning of a claim should be what would be reasonable from the perspective of one of ordinary skill in the art."), 2144.08 ("evidence must be viewed from position of ordinary skill"). Mr. Bear's testimony, corroborated by extensive citation to evidence of record, makes clear that a POSA would not consider claims 10 and 16 to be rendered obvious by the teachings of Lane and Ledbetter. Bear, ¶¶ 10-11, 91-101.

V. THE '844 PATENT

The '844 Patent's inventions were groundbreaking in 2008. *Id.*, ¶¶ 47-62. The commercial embodiment of the '844 Patent earned contemporaneous praise and the inventions of the '844 Patent have become industry standards that are ubiquitous today. *Id.*, ¶ 62. They were anything but in the timeframe relevant to this reexamination. *Id.*

A. Physical Configurations

The '844 Patent describes, and challenged claims 10 and 16 require, a "portable computer configurable between a ***plurality of display modes*** including a laptop mode and an easel mode." '844 Patent, claim 10; *see also* Bear, ¶¶ 63-74. During the interview, Examiner Leung asked about the meaning of the claimed “display modes” – including the “laptop mode” and “easel mode” – and their relationship to the claimed content modes.

The specification is clear that the term “display mode” refers to the particular physical configuration of the portable computer. *See e.g.*, ’844 Patent, 1:59-2:9, 2:19-3:2, 3:46-50; Bear, ¶¶ 75-78. Laptop and easel are two of several display modes the specification discloses, including: a “tablet mode” (’844 Patent, 1:35), “a closed mode, a laptop mode, an easel mode, a flat mode and a frame mode” (*id.*, 2:20-23). Some of these are illustrated in the figures reproduced below. The “portable computer has a conventional laptop appearance” in the “laptop mode,” whereas in the “easel mode” the “base of the computer and its display component stand upright forming an inverted ‘V.’” *Id.*, 1:61-64. “The portable computer may include integrated ‘navigation’ hardware” such as “a scroll wheel 132 that allows a user to control, adjust and/or select various functionality of the portable computer” or navigate “through information, such as menus, icons, etc., displayed on the display screen 110, as discussed … with reference to FIG. 17.” *Id.*, 10:54-65; *see also*, Bear, ¶¶ 75-78.

Closed Mode

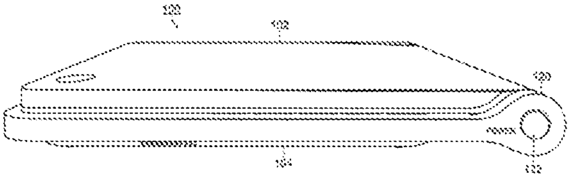
100
102
120
104
132

FIG. 2

Laptop Mode

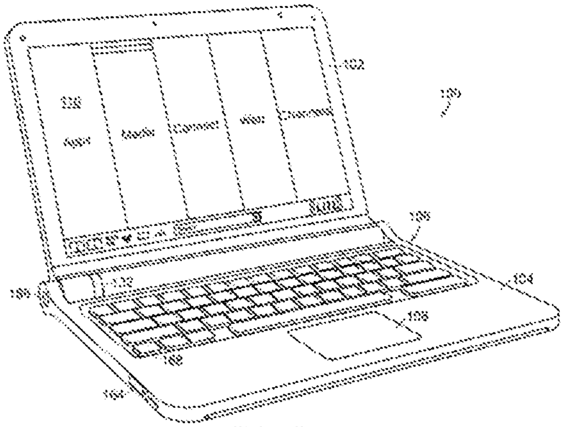
102
100
106
104
108

FIG. 17

Easel Mode

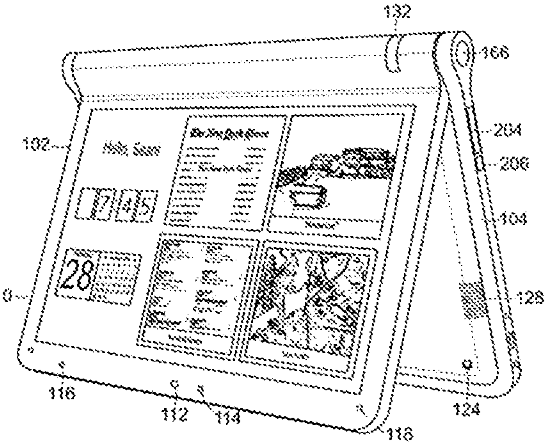
132
166
204
206
104
128
124
118
114
112
116
110
102
28

FIG. 4

Frame Mode

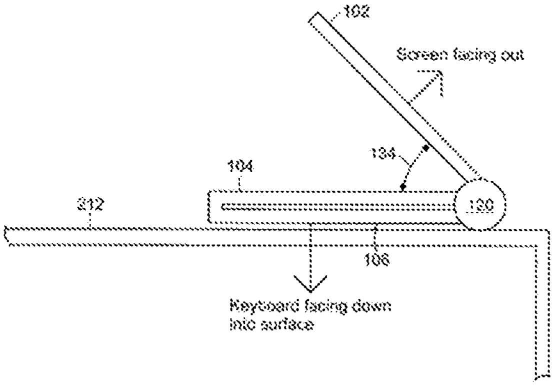
102
Screen facing out
134
104
212
120
106
Keyboard facing down
into surface

FIG. 26

Flat Mode

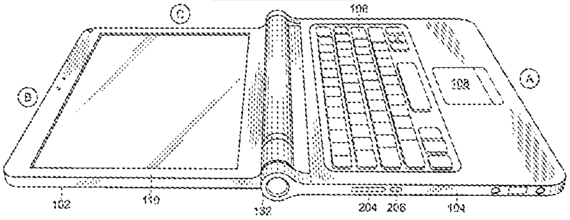
C
106
B
108
A
102
110
132
204
206
104

FIG. 27

As explained below, the terms “content mode(s)” and “mode(s) of content” are used in the ’844 Patent to describe a very different concept than a “display mode.”

B. Streamlined GUI Supporting Hierarchical "Map" Navigation

The '844 Patent describes a "streamlined graphical user interface [GUI] that supports 'map' navigation. The map user interface provides a clear overview of the entire computing environment and searching capability within the environment that may be accessed using" the scroll wheel 132 and/or navigation buttons 166, 168 on the computer's base (see Fig. 17 below). '844 Patent, 11:10-19. "[T]he map mode of navigation is a hierarchical mode that reduces the number of items to select amongst at any stage of navigation, thereby facilitating user access with the scroll wheel 132, and optionally, the navigation button(s) 166, 168." *Id.*, 11:19-24. This "streamlined" GUI is advantageous when the laptop is in a mode (*e.g.*, easel mode) where the keyboard is not readily accessible to the user because the streamlined GUI facilitates navigation using other hardware (*e.g.*, scroll wheel 32). Bear, ¶ 66.

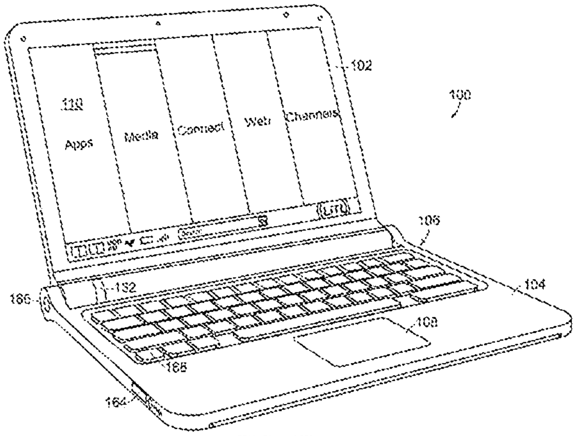

FIG. 17

C. "Content Modes" Support Hierarchical Navigation

The above-discussed hierarchical navigation mode is achieved by using "content modes." "Using the map user interface, ***information, programs, features, functions, applications may be grouped into [] various modes of content 172***." '844 Patent, 11:37-40. Figure 11 shows a user interface home screen 170 that "displays a plurality of modes of content 172." *Id.*, 11:30. Five content modes are shown in FIG. 11: "media 172a, connect 172b, web 172c, applications 172d, and channels 172e." *Id.*, 11:37-38; Bear, ¶ 67.

"[**M]edia content mode** 172a may provide access to a medial [sic] player to play, view, search and organize media such as music, video, photos, etc." '844 Patent, 11:44-46; *see also*, Bear, ¶ 69.

"[C]onnect mode 172b may provide access to features such as, for example, email, voice-over-IP instant messaging, etc." '844 Patent, 11:46-48; *see also*, Bear, ¶ 70.

"[W]eb mode 172c may provide access to internet browsing and searching." '844 Patent, 11:49-50; *see also*, Bear, ¶ 71.

"[A]pplication mode 172d may provide access to, for example, computer applications or programs, such as word processor, spreadsheet, calculator, etc." which may be "web-based services rather than programs or applications." '844 Patent, 11:50-55; *see also*, Bear, ¶ 72.

"[C]hannels mode 172e may provide access to different functionality of the portable computer, with the different functions or features defined as different channels," examples of which include "an alarm clock channel" that displays a clock and can be programmed to set an alarm, a "photo frame channel" that can display one or more preselected images, and a "television channel" configured to stream Internet television. '844 Patent, 11:55-67) ; *see also*, Bear, ¶ 73.

Figures 12 and 17 show those five content modes "***displayed*** as a series of bars across the display screen." '844 Patent, 12:6-7; Bear, ¶ 68.

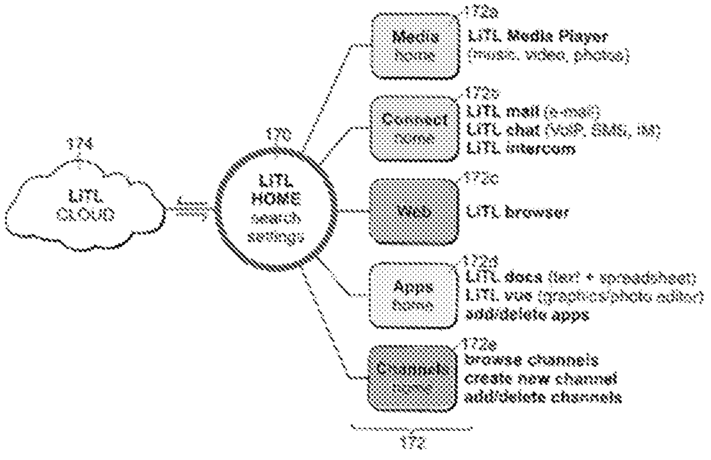
174
LITL CLOUD
170
LITL HOME
search
settings
172a
Media home
LITL Media Player
(music, video, photos)
172b
Connect home
LITL mail (e-mail)
LITL chat (VoIP, SMS, IM)
LITL intercom
172c
Web
LITL browser
172d
Apps home
LITL docs (text + spreadsheet)
LITL vue (graphics/photo editor)
add/delete apps
172e
Channels home
browse channels
create new channel
add/delete channels
172

FIG. 11

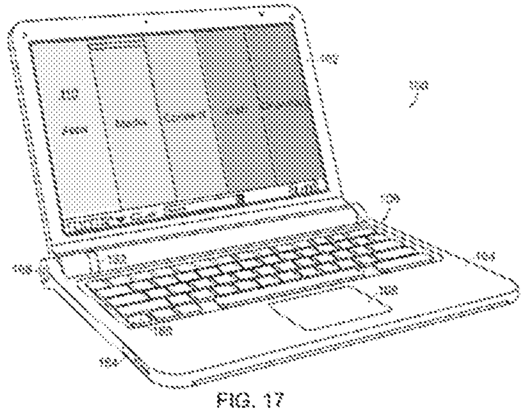
FIG. 17

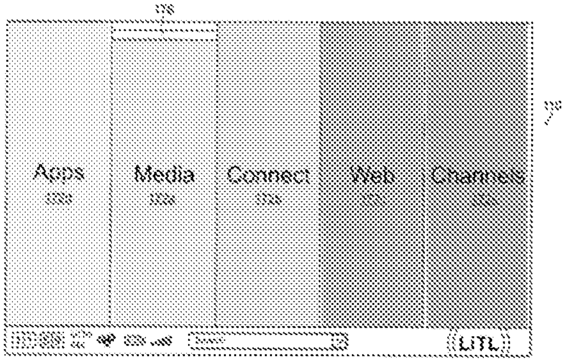
Apps
Media
Connect
Web
Channels
LITL

FIG. 12

Scroll wheel 132 and navigation buttons 166, 168 "may be used to navigate the user interface. … scrolling the scroll wheel may sequentially highlight different ones of the modes of content 172. … A highlighted mode 172 may be selected by pressing the scroll wheel, thereby bringing up a new "page' or screen on the user interface corresponding to the selected mode. Once within a selected mode of content 172, the scroll wheel may similarly be used to select ***particular functions, features or applications*** within that mode." '844 Patent, 12:22-35. For example, if the user initially selected the connect mode 172b, the user can then use the scroll wheel to select among "features such as, for example, email, voice-over-IP instant messaging, etc." *Id.*, 11:46-48. While

Figures 12 and 17 display the different modes of content as a series of bars, other display configurations (*e.g.*, desktop and icon configuration, a dashboard configuration) are possible. *Id.*, 12:6-21; Bear, ¶ 74.

Thus, the specification makes clear that "information, programs, features, functions, [and] applications may be grouped into [] various modes of content 172" ('844 Patent, 11:37-40), and that the content modes can be "***displayed*** as a series of bars across the display screen" (*id.*, 12:6-7) as shown in Figures 12 and 17. Bear, ¶ 75. After a desired content mode is selected from the display, the "***particular functions, features or applications*** within" that content mode can be displayed and a desired function, feature or application can be selected. '844 Patent, 12:22-35; Bear, ¶ 75.

Displaying a content mode requires displaying some "information, such as menus, icons, etc. … on the display screen 110" ('844 Patent, 10:54-65) that represents the content mode, not merely displaying one or more functions, features or applications grouped into a content mode. Bear, ¶¶ 80-91. The challenged claims require the portable computer be configured to "***display to a user . . . a first content mode*** [in the laptop mode] [and] ***a second content mode*** [in the easel mode]." For a "content mode" to be displayed, a visual representation of the content mode must be presented to the user on the display. Bear, ¶ 86.

1. While The Challenged Claims Are Not Limited To A Hierarchical Menu, They Require Display Of The Content Modes

During the interview, Examiner Leung pointed out that the challenged claims do not recite a hierarchical menu as shown in Figures 12 and 17. Patent Owner does not disagree. However, the claims do require that the computer be configured to ***display first and second content modes***. *See* § V.D below. As Patent Owner explained during the interview, the reason Patent Owner highlights the specification's disclosure of the "map" hierarchical navigation in Figures 11, 12 and 17 is that this is one of the few portions of the specification that describes displaying a mode of content. '844 Patent, 11:27-12:54; Bear, ¶ 89; *see also*, § V.C.2 below.

Thus, Patent Owner is not asking the Examiners to read into the claims a requirement that is not there. Rather, Patent Owner is respectfully suggesting that the Examiners must give proper meaning to what the claims do require, i.e., a computer configured to ***display first and second content modes***.

2. The Specification Is Clear That Displaying A "Content Mode"/"Mode Of Content" Is Different Than Displaying Functions, Features Or Applications Within The Content Mode

As explained above, the specification is clear that "information, programs, features, functions, applications may be grouped into [] various modes of content 172." '844 Patent, 11:37-40. Figure 11 shows the organization of a user interface that "displays a plurality of modes of content 172," including "media 172a, connect 172b, web 172c, applications 172d, and channels 172e." *Id.*, 11:30-38; Bear, ¶¶ 82-86. As shown in Fig. 11 below, each content mode 172 is distinct from the applications/features grouped therein – *e.g.*, Connect content mode 172b is distinct from the email, chat and intercom applications/features grouped into that content mode – and it is each ***content mode 172 itself*** (not the grouped applications/features) that is displayed in Figures 12 and 17. This makes clear that it is the content modes themselves that are displayed to the user, which is what the claims require.

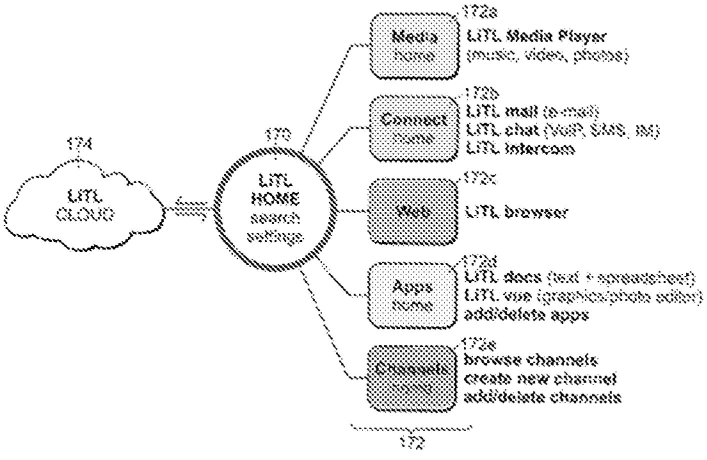
174
LiTL
CLOUD
170
LiTL
HOME
search
settings
172a
Media
home
LiTL Media Player
(music, video, photos)
172b
Connect
home
LiTL mail (e-mail)
LiTL chat (VoIP, SMS, IM)
LiTL intercom
172c
Web
LiTL browser
172d
Apps
home
LiTL docs (text + spreadsheet)
LiTL vue (graphics/photo editor)
add/delete apps
172e
Channels
home
browse channels
create new channel
add/delete channels
172

FIG. 11

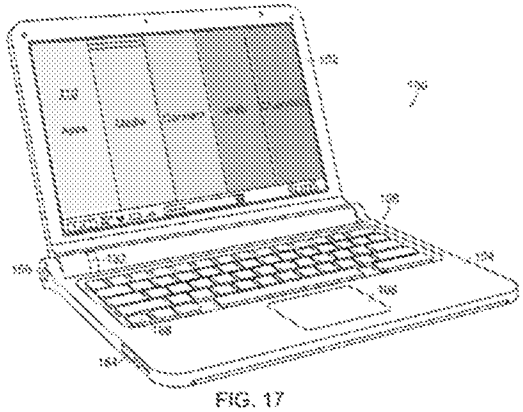

FIG. 17

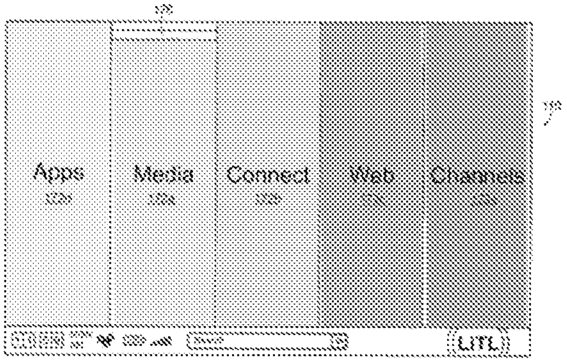
Apps
Media
Connect
Web
Channels
LiTL

FIG. 12

During the interview, Examiner Leung recognized the distinction Patent Owner was making between displaying a content mode and displaying functions, features or applications grouped within a content mode. Examiner Leung indicated that in reconsidering the rejection in view of Patent Owner's arguments, she wanted to review how the '844 Patent describes displaying a content mode (or mode of content), to determine whether it consistently refers to displaying a visual representation of the content mode itself (*e.g.*, the bars in Figures 12 and 17) as opposed to displaying functions, features or applications grouped within a content mode.

To assist the Examiners, in Appendix B to the Bear Declaration, Mr. Bear has sought to identify every use of the term "content mode(s)" or "mode(s) of content" in the '844 Patent, highlighting the terms in yellow and providing the surrounding language from the patent for context. The Examiners are encouraged to do their own independent review of the specification and not rely on Appendix B, but Patent Owner is confident that the Examiners will see that the '844 Patent consistently refers to displaying a content mode as requiring the display of some visual representation of the content mode—some "information, such as menus, icons, etc. … on the display screen 110" ('844 Patent, 10:54-65) that represents the content mode. Bear, ¶ 88. The '844 Patent never refers to the display of a content mode as merely displaying one or more functions, features or applications grouped within a content mode. *Id.*

3. The Office Action Establishes No Known Meaning in the Art for "Content Mode(s)" Or "Mode(s) Of Content"

In the Request, Lenovo did not allege that "content mode(s)" or "mode(s) of content" had an accepted meaning in the art and submitted no evidence establishing a known meaning. The Office Action similarly did not allege that "content mode(s)" or "mode(s) of content" have an accepted meaning in the art and cited no evidence of an established meaning. Bear ¶ 81 (explaining there is no established meaning). Given that there is no established meaning for "content mode" the meaning the specification ascribes to this term, as understood by a POSA, controls. *See* § VI.C.1 below (citing authority); Bear ¶¶ 80-91.

Lenovo and its expert never addressed the proper interpretation of "content mode" in light of the specification. The ***only*** expert testimony in this proceeding about how a POSA would have understood "content mode" or "mode(s) of content" is Mr. Bear's testimony. Mr. Bear explains that when "content mode" is given its proper meaning, the rejections must be withdrawn for the reasons detailed below. Bear ¶¶ 92-102.

D. The Challenged Claims All Require A Computer Configured To Display First And Second Content Modes

Claims 10 and 16 (like every other claim in the '844 Patent) require a "portable computer configurable between a plurality of display modes including a laptop mode and an easel mode … wherein the laptop mode is configured to ***display to a user*** … ***a first content mode*** … [and] the easel mode is configured to ***display to the user*** … ***a second content mode.***"

Thus, every claim requires that the portable computer be configured to group its "information, programs, features, functions, [and] applications" into at least a first and a second content mode, and to ***display to the user*** as information on the computer's display component the first content mode (when the computer is in laptop mode) and the second content mode (when the computer is in easel mode). '844 Patent, 10:62-64, 11:27-40, 12:22-35. The Lane/Ledbetter combination fails to meet these requirements. *See* Bear, ¶¶ 92-102.

VI. THE REJECTIONS SHOULD BE WITHDRAWN FOR ALL CHALLENGED CLAIMS

The Office Action ("OA") rejects claims 10 and 16 as allegedly obvious over Lane and Ledbetter.

A. Summary Of The Argument

The rejections should be withdrawn because the alleged content modes ("software operating modes") in the Lane/Ledbetter combination are never displayed to the user. Instead, the Lane/Ledbetter combination only displays information, programs, features, functions, and applications grouped into the alleged content modes (software operating modes), and the specification is clear that this is not the same thing as displaying the content modes as the claims require.

B. Ledbetter's Alleged Content Modes Are Never Displayed To The User

The Office Action alleges that Ledbetter "teaches different content modes ***displayed*** in different display modes," citing Ledbetter [0023], [0026], and [0057]. OA at 6. The cited Ledbetter paragraphs teach that the computer's monitor arm can be configured in different physical "usage modes" where the monitor arm is positioned in different physical positions. Ledbetter, [0026]. Ledbetter discloses that "the computer providing the content to display can change ***software operating modes*** to match the corresponding monitor position." *Id.*, [0055]. The operating system "loads a corresponding shell user interface and/or other program or programs (e.g., 1386_1) as necessary to configure the computer system user interface display 1388 and running programs to match the current mode." Ledbetter, [0056]; Bear, ¶ 94.

Ledbetter describes four operating modes: (1) a "**media consumption mode** [in which] media player software may be loaded and automatically executed"; (2) a "**tablet mode** [in which] tablet operating system components such as including handwriting recognition software may be loaded and automatically executed"; (3) a "**walk-up mode** [in which] a touch-screen shell program configured to provide convenient access to walk-up types of information (e.g., weather, messages, the internet and so forth)" is loaded; and (4) a "**workstation mode** [in which] typical shortcuts and other information used for working/productivity or other computer usage (e.g., gaming) may be displayed." Ledbetter, [0057]; Bear, ¶ 95.

Thus, Ledbetter discloses that when the computer arm is in different physical configurations ("usage modes"), the computer enters different "software operating modes" (Ledbetter, [0055]) where different programs may be run and/or different information displayed on the display. Bear, ¶ 96.

The Request alleged that Ledbetter's software operating modes "constitute the claimed content modes." Request, 98-99. The Office Action adopts this mapping of the claimed content modes to Ledbetter, alleging that "Ledbetter further teaches different content modes displayed in different display modes," where the Office Action identifies – via italics – the "*media consumption mode*," "*tablet mode*," "*walkup mode*" and "*workstation mode*" as meeting the claimed content modes. OA at 6 (emphasis original).

Even if Ledbetter's "software operating modes" could be considered content modes (which Patent Owner does not concede), the computer being configured to run different software operating modes does not meet the claimed requirement that the computer be configured to ***display*** first and second content modes. Bear, ¶ 97.

The specification makes clear that "information, programs, features, functions, [and] applications may be grouped into [] various modes of content 172" ('844 Patent, 11:37-40), and that the content modes can be "***displayed*** as a series of bars across the display screen" (*id.*, 12:6-7) as shown in FIGs. 12 and 17. Bear, ¶ 98. After a desired content mode is selected from the display, the "***particular functions, features or applications*** within" that content mode can be displayed and a desired function, feature or application can be selected. '844 Patent, 12:22-35; Bear, ¶ 98.

Thus, displaying a content mode requires displaying some "information, such as menus, icons, etc. … on the display screen 110" ('844 Patent, 10:54-65) that represents the content mode like the bars in Figures 12 and 17, not merely displaying one or more functions, features or applications grouped into a content mode. Bear, ¶ 98.

The Lane/Ledbetter combination is not "configured to ***display to a user***" the things – software operating modes – the Office Action alleges are first and second content modes. Thus, the Lane/Ledbetter combination does not meet any challenged claim, because the claims do not simply require first and second content modes, they require that the computer be configured to "display to a user" a visual representation of those content modes. Bear, ¶ 99.

C. Displaying Functions, Features And/Or Applications When Leadbetter's Computer Is In One Of Its Software Operating Modes Does Not Meet The Claims

The only things in Ledbetter that the Office Action alleges are displayed to the user are particular functions, features and/or applications that are displayed when the computer is in a particular software operating modes. Specifically, the Office action identifies "media player software [] loaded and automatically executed" in media consumption mode, "handwriting recognition software [] loaded and automatically executed" in tablet mode, "walk-up types of information (e.g., weather, messages, the internet and so forth) may be loaded" in walk-up mode, and "typical shortcuts and other information used for working/productivity … may be displayed" in workstation mode. OA at 6. The '844 Patent specification refers to these as "***particular functions, features or applications***" that may be grouped within a content mode ('844 Patent, 12:22-35), and makes clear that displaying the "particular functions, features or applications within" a content mode is not the same thing as displaying the content mode itself. *Id.*, 11:37-40, 12:6-7, 12:22-35; Bear, ¶¶ 87-91, 101. Thus, to the extent the Office Action suggests that functions, features and/or applications displayed by Ledbetter when in its display modes could meet the claimed content modes, that would be inconsistent with the specification of the '844 Patent. Bear, ¶ 101.

1. Claim Interpretation – Content Mode Cannot Be Interpreted More Broadly Than The Way It Is Used In The Specification

Despite having already filed (and lost) an IPR petition challenging the '844 patent and filing a 176-page Request challenging just two claims, Lenovo never acknowledged where the specification describes what "content modes" are, and Lenovo cited no evidence of any use of this term in the art that differs from the meaning the specification gives to this term that is coined therein. Similarly, Lenovo's expert never alleged that the term "content mode" had an accepted meaning in the art different than the way the term is used in the specification. *See e.g.*, Ex. 1004, ¶¶ 37-41, 135-148, 163-165, 170-183. Like the Request and Lenovo's expert, the Office Action did not affirmatively construe "content mode."

"[T]he best source for determining the meaning of a claim term" under the broadest reasonable interpretation (BRI) standard "is the specification." MPEP § 2111.01. A claim interpretation under BRI "cannot be divorced from the specification and the record evidence." *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011). The interpretation "must be consistent with the one that those skilled in the art would reach." *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999). Indeed, the claims must be interpreted "in light of the specification as it would be interpreted by one of ordinary skill in the art." MPEP § 2111 (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)).

As a matter of law, when "terms have no plain or established meaning to one of ordinary skill in the art," "they ordinarily cannot be construed broader than the disclosure in the specification." *Indacon, Inc. v. Facebook, Inc.*, 824 F.3d 1352, 1357 (Fed. Cir. 2016); *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) ("[A]bsent such an accepted meaning [in the art], we construe a claim term only as broadly as provided for by the patent itself.”). In such circumstances, the specification must be used to ascertain the meaning and scope of the claim term, even when it is not expressly defined. *Irdeto*, 383 F.3d at 1300 (“Even when guidance is not provided in explicit definitional format, ‘the specification may define claim terms “by implication”’ such that the meaning may be ‘found in or ascertained by a reading of the patent documents.’”).

Because the Office Action and the Request established no accepted meaning in the art for the term “content mode,” the specification’s meaning controls and this term cannot be interpreted more broadly than the specification’s disclosure. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010) (“The broadest-construction rubric … does not give the PTO an unfettered license to interpret claims to embrace anything remotely related to the claimed invention. Rather, claims should always be read in light of the specification and teachings in the underlying patent.”); *In re NTP*, 654 F.3d at 1288 (Even under the “broadest reasonable construction, the construction cannot be divorced from the specification and the record evidence.”); MPEP § 2111 (“The broadest reasonable interpretation does not mean the broadest possible interpretation.” Rather, it “must be consistent with the use of the claim term in the specification”).

2. Displaying Functions, Features And/Or Applications Grouped Within A Content Mode Is Different Than Displaying The Content Mode

The ’844 Patent could not be clearer that there is a difference between a content mode and “the content organized within that mode.” ’844 Patent, 11:40-43; Bear, ¶ 82. A content mode is displayed with other content modes as shown in Figs. 12 and 17. ’844 Patent, 12:6-8 (the different ***modes of content 172 may be displayed … as illustrated in Fig. 12***”); Bear, ¶ 82. The content modes support “hierarchical” navigation (’844 Patent, 11:19-24) not only because they group together “information, programs, features, functions, [and] applications” *(Id.*, 37-40), but because the content groups are ***displayed to the user***. Bear, ¶ 83. "[T]he ***different modes of content 172 may be displayed*** as a series of bars across the display screen 110, as illustrated in Fig. 12." '844 Patent, 12:6-8; *see also*, Fig. 17; Bear, ¶ 83.

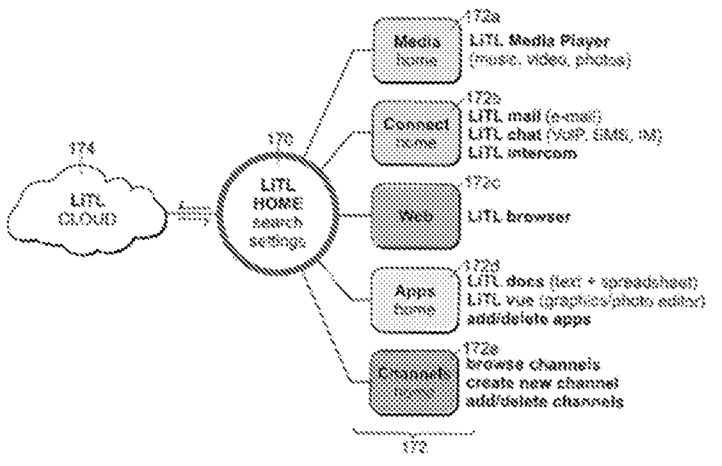
172a
Media home
LITL Media Player (music, video, photos)
172b
Connect home
LITL mail (e-mail)
LITL chat (VoIP, SMS, IM)
LITL intercom
174
LITL CLOUD
170
LITL HOME search settings
172c
Web
LITL browser
172d
Apps home
LITL docs (text + spreadsheet)
LITL vue (graphics/photo editor)
add/delete apps
172e
Channels home
browse channels
create new channel
add/delete channels
172

FIG. 11

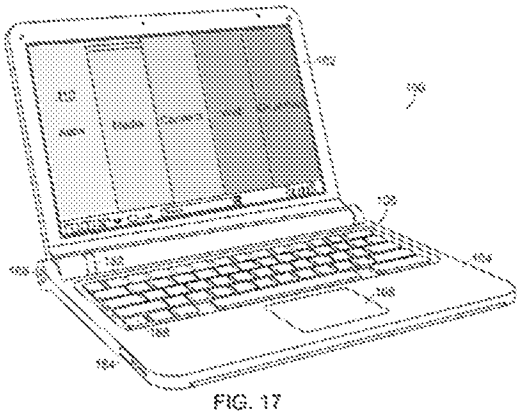

FIG. 17

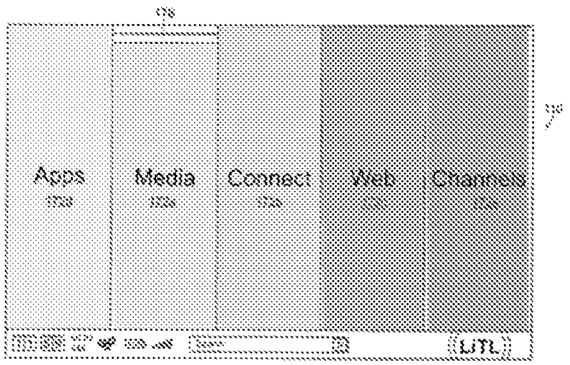
Apps
Media
Connect
Web
Channels
LITL

FIG. 12

The user may "navigate" a user interface that displays one or more content modes, and in one embodiment may "select" a particular content mode by pressing the scroll wheel when the desired content mode is highlighted. '844 Patent, 12:23-29; Bear, ¶ 84. In one embodiment, after the user has selected a particular content mode on the user interface, "a new 'page' or screen on the user interface corresponding to the selected mode" is brought up that displays to the user the "

particular functions, features or applications within that [previously-selected content] mode" so that the user may select a desired function, feature or application. '844 Patent, 12:32-35; Bear, ¶ 84. Thus, according to the specification, displaying a content mode means displaying some "information, such as menus, icons, etc. … on the display screen 110" ('844 Patent, 10:54-65) that represents the content mode, and is distinct from displaying any functions, features and/or applications grouped within that content mode. Bear, ¶ 84.

As noted above, the Office Action relies on Ledbetter's disclosure of "media player software [] loaded and automatically executed" in media consumption mode, "handwriting recognition software [] loaded and automatically executed" in tablet mode, "walk-up types of information (e.g., weather, messages, the internet and so forth) may be loaded" in walk-up mode, and "typical shortcuts and other information used for working/productivity … may be displayed" in workstation mode. OA at 6. The '844 Patent specification refers to these as "***particular functions, features or applications***" that may be grouped within a content mode ('844 Patent, 12:22-35), and makes clear that displaying the "particular functions, features or applications within" a content mode is not the same thing as displaying the content mode itself. *Id.*, 11:37-40, 12:6-7, 12:22-35; *see also*, *e.g.,* Fig. 11 (the LiTL media player is an application program that is displayed separately from the "Media" content mode 172a displayed on Figs. 12 and 17); Bear, ¶¶ 87-91.

D. Conclusion – The Lane/Ledbetter Combination Does Not Disclose Displaying To A User A First Content Mode In A Laptop Mode And A Second Content Mode In An Easel Mode

For the reasons explained above, the Lane/Ledbetter Combination does not display to the user as information on the computer's display component the alleged first content mode (when the computer is in laptop mode) and the alleged second content mode (when the computer is in easel mode) as required by claims 10 and 16. The rejection of claims 10 and 16 should be withdrawn for this reason.

VII. GENERAL COMMENTS ON DEPENDENT CLAIMS

Because dependent claim 16 depends from independent claim 10 that is in condition for allowance, it is unnecessary at this time to argue the further distinguishing features of dependent claim 16. However, Patent Owner does not necessarily concur with the interpretation of claim 16 as set forth in the Office Action, nor that the Lane/Ledbetter Combination meets the additional limitations in claim 16. Patent Owner reserves the right to specifically address the further patentability of dependent claim 16 in the future.

VIII. CONCLUSION

For the foregoing reasons, the rejections should be withdrawn and claims 10 and 16 should be confirmed. If the Examiner believes, after considering this response, that any of the claims are not in condition to be confirmed, the Examiner is requested to call the undersigned at the telephone number listed below to discuss any outstanding issues. If there is a fee occasioned by this response that is not covered by an enclosed payment, please charge any deficiency to Deposit Account No. 23/2825 under Docket No. L2039.70001US10, from which the undersigned is authorized to draw.

Dated: December 9, 2022

Respectfully submitted,
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617.646.8000

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §1.248 and §1.550(f), the undersigned hereby certifies that a copy of this **Response to Non-Final Office Action Under 37 CFR 1.111 and Written Statement Under 37 CFR 1.560(b)**, in Reexamination No.: 90/014,965, including all attachments, exhibits, and documents filed therewith, will be served by first-class mail upon:

KLARQUIST SPARKMAN, LLP
121 SW SALMON STREET
SUITE 1600
PORTLAND, OR 97204

Dated: December 9, 2022

/MacAulay Rush/
MacAulay Rush
Patent Paralegal
WOLF, GREENFIELD & SACKS, P.C.

EXHIBIT A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	Yves Behar
Application No.:	90/014,965
Confirmation No.:	3442
Filed:	February 25, 2022
For:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
Examiner:	C. Y. Leung
Art Unit:	3991

INTERVIEW AGENDA

Patent Owner, LiTL, thanks Examiner Leung and the Conferees for scheduling a video conference interview on November 30, 2022 at 1 pm Eastern to discuss the outstanding Office Action (dated October 12, 2022) in the above-referenced reexamination of Patent No. 8,624,844 ("the '844 Patent"). The arguments and evidence to be discussed during the interview are summarized below.

I. INTRODUCTION

Third Party Requester, Lenovo (United States) Inc. ("Lenovo") filed its Request for *Ex Parte* Reexamination ("Request") seeking a second bite at the apple after its petition seeking *inter partes review* (IPR) of the '844 Patent was denied because Lenovo failed to show any claim unpatentable. The Grounds in Lenovo's reexamination request fared no better and failed to establish unpatentability of a single challenged claim. The Office Action adopts a single one of the Request's grounds and makes a single rejection – claims 10 and 16 are rejected as allegedly being obvious over Lane and Ledbetter.

As explained in more detail below, the Office Action ("OA") relies on Ledbetter to purportedly disclose a laptop mode "configured to ***display*** to a user on the main display component a first content mode" and an easel mode "configured to ***display*** to the user on the main display component a second content mode" as required by claims 10 and 16.[1] OA at 6-7. The Office Action alleges that the claimed content modes are met by Ledbetter's various "software operating modes" ("media consumption mode," "tablet mode," "walk-up mode" and "workstation mode") that correspond to different physical configurations of Ledbetter's computer monitor. Even if these software operating modes were content modes (which Patent Owner does not concede), none of them is "display[ed] to the user." Thus, the Lane/Ledbetter combination fails to disclose a computer configured to "display to a user" a content mode as claimed.

II. '844 PATENT

Before the LiTL Webbook commercialized an embodiment of the '844 Patent, home computers were essentially the same as office computers and home users struggled with complex interfaces designed in pre-web times. LiTL worked for years to develop its Webbook, recruited leading user experience design ("UXD") experts and worked closely with some of the world's leading technology and UXD consultancies. This design effort led to the filing of provisional application no. 61/041,365 on April 1, 2008, to which the '844 Patent claims priority. Ex. 1001, 1.

The inventions described and claimed in the '844 Patent were groundbreaking in 2008. They earned substantial contemporaneous praise and have become industry standards that are ubiquitous today. They were anything but in the timeframe relevant to this reexamination.

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[1] Emphasis added throughout unless otherwise noted.

A. Embodiments

1. Physical Configuration Modes

The ’844 Patent describes, and challenged claims 10 and 16 require, a “portable computer configurable between a plurality of display modes including a laptop mode and an easel mode.” ’844 Patent, claim 10. Laptop and easel are just two of several display modes the specification discloses, including: a “tablet mode” (*id.*, 1:35), “a closed mode, a laptop mode, an easel mode, a flat mode and a frame mode” (*id.*, 2:20-23). Some of these are illustrated in the figures reproduced below. The “portable computer has a conventional laptop appearance” in the “laptop mode,” whereas in the “easel mode” the “base of the computer and its display component stand upright forming an inverted ‘V.’” *Id.*, 1:61-64. “The portable computer may include integrated ‘navigation’ hardware” such as “a scroll wheel 132 that allows a user to control, adjust and/or select various functionality of the portable computer” or navigate “through information, such as menus, icons, etc., displayed on the display screen 110, as discussed … with reference to FIG. 17.” *Id.*, 10:54-65.

Closed Mode

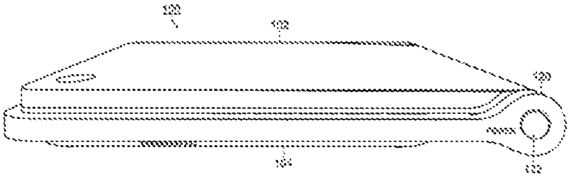
100
102
120
104
132

FIG. 2

Laptop Mode

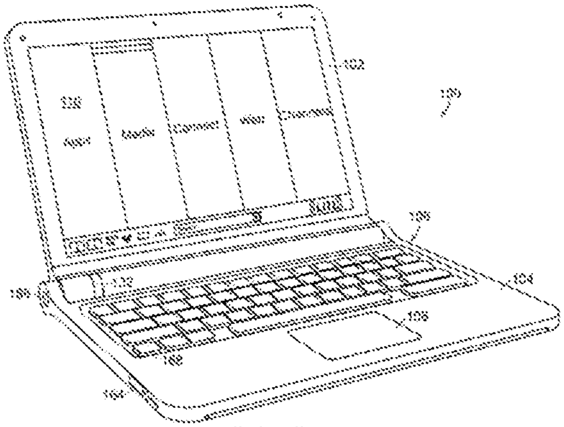
102
100
106
104
108
132
104

FIG. 17

Easel Mode

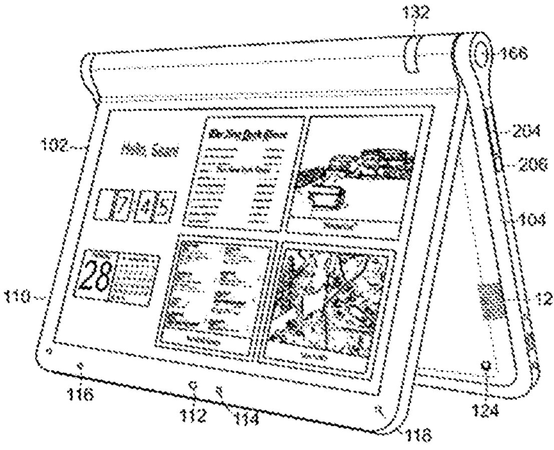
132
166
102
204
206
104
110
28
128
116
112
114
124
118

FIG. 4

Frame Mode

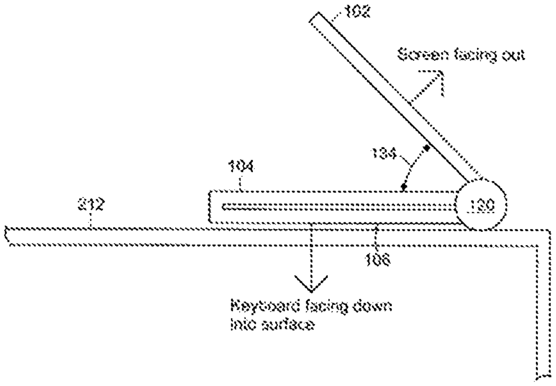
102
Screen facing out
134
104
120
212
106
Keyboard facing down into surface

FIG. 26

Flat Mode

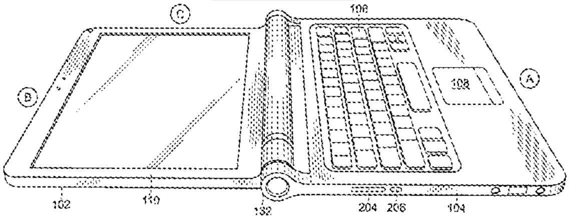
C
106
B
108
A
102
110
132
204
206
104

FIG. 27

2. Streamlined GUI Supporting Hierarchical "Map" Navigation

The '844 Patent describes a "streamlined graphical user interface [GUI] that supports 'map' navigation. The map user interface provides a clear overview of the entire computing environment and searching capability within the environment that may be accessed using" the scroll wheel 132 and/or navigation buttons 166, 168 on the computer's base (see Fig. 17 below). *Id.*, 11:10-19. "[T]he map mode of navigation is a hierarchical mode that reduces the number of items to select amongst at any stage of navigation, thereby facilitating user access with the scroll wheel 132, and optionally, the navigation button(s) 166, 168." *Id.*, 11:19-24. This "streamlined" GUI is advantageous when the laptop is in a mode (*e.g.*, easel mode) where the keyboard is not readily accessible to the user because the streamlined GUI facilitates navigation using other hardware (*e.g.*, scroll wheel 32).

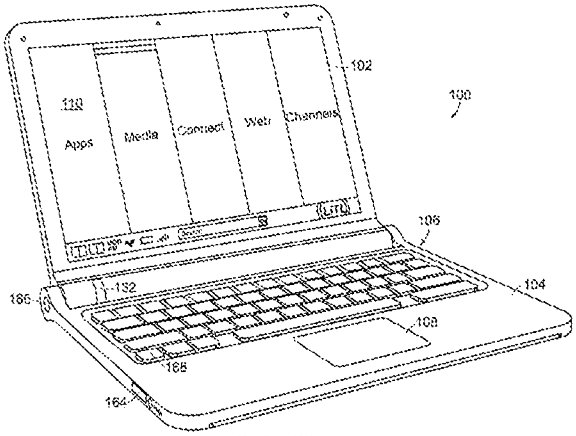

FIG. 17

3. "Content Modes" Support Hierarchical Navigation

The above-discussed hierarchical navigation mode is achieved by using "content modes." "Using the map user interface, ***information, programs, features, functions, applications may be grouped into [] various modes of content*** 172." *Id.*, 11:37-40. Figure 11 shows a user interface home screen 170 that "displays a plurality of modes of content 172." *Id.*, 11:30. "Some or all of the modes of content 172 may access, retrieve and/or store information on the Internet 174." *Id.*, 12:4-5. Five content modes are shown in FIG. 11: "media 172a, connect 172b, web 172c, applications 172d, and channels 172e." *Id.*, 11:37-38.

"[**M]edia content mode** 172a may provide access to a medial player to play, view, search and organize media such as music, video, photos, etc." *Id.*, 11:44-46.

"[C]onnect mode 172b may provide access to features such as, for example, email, voice-over-IP instant messaging, etc." *Id.*, 11:46-48.

"[W]eb mode 172c may provide access to internet browsing and searching." *Id.*, 11:49-50.

"[A]pplication mode 172d may provide access to, for example, computer applications or programs, such as word processor, spreadsheet, calculator, etc." which may be "web-based services rather than programs or applications. *Id.*, 11:50-55.

"[C]hannels mode 172e may provide access to different functionality of the portable computer, with the different functions or features defined as different channels," examples of which include "an alarm clock channel" that displays a clock and can be programmed to set an alarm, a "photo frame channel" that can display one or more preselected images, and a "television channel" configured to stream Internet television. *Id.*, 11:55-67).

FIGs. 12 and 17 show those five content modes "***displayed*** as a series of bars across the display screen." *Id.*, 12:6-7.

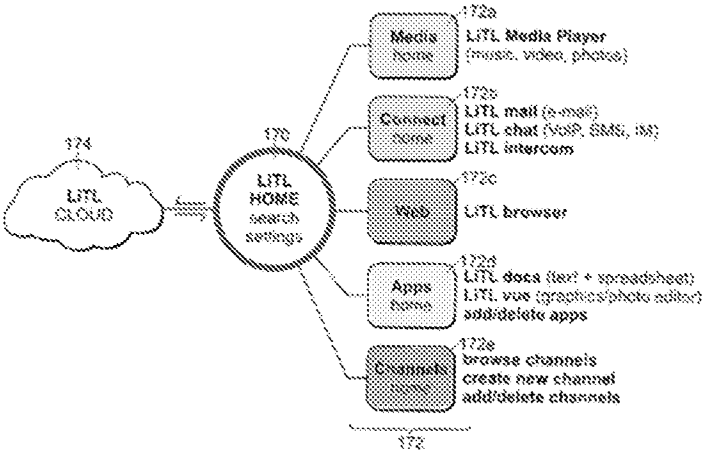
174
LITL
CLOUD
170
LITL
HOME
search
settings
172a
Media
home
LITL Media Player
(music, video, photos)
172b
Connect
home
LITL mail (e-mail)
LITL chat (VoIP, SMS, IM)
LITL intercom
172c
Web
LITL browser
172d
Apps
home
LITL docs (text + spreadsheet)
LITL vue (graphics/photo editor)
add/delete apps
172e
Channels
home
browse channels
create new channel
add/delete channels
172

FIG. 11

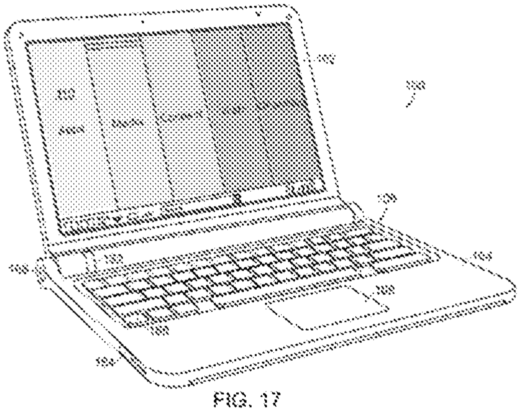

FIG. 17

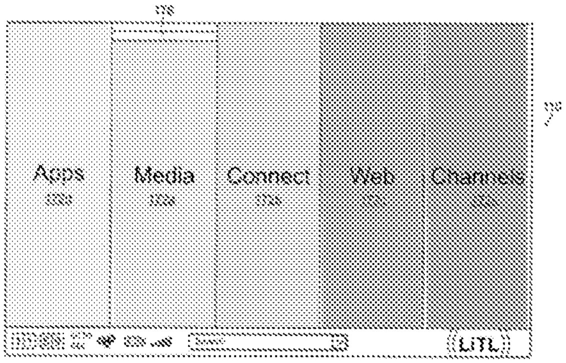
Apps
Media
Connect
Web
Channels
LITL

FIG. 12

Scroll wheel 132 and navigation buttons 166, 168 "may be used to navigate the user interface. … scrolling the scroll wheel may sequentially highlight different ones of the modes of content 172. … A highlighted mode 172 may be selected by pressing the scroll wheel, thereby bringing up a new "page' or screen on the user interface corresponding to the selected mode. Once within a selected mode of content 172, the scroll wheel may similarly be used to select ***particular functions, features or applications*** within that mode." *Id.*, 12:22-35. For example, if the user initially selected the connect mode 172b, the user can then use the scroll wheel to select among "features such as, for example, email, voice-over-IP instant messaging, etc." *Id.*, 11:46-48. While

FIGs. 12 and 17 display the different modes of content as a series of bars, other display configurations (*e.g.*, desktop and icon configuration, a dashboard configuration) are possible. *Id.*, 12:6-21.

B. The Challenged Claims All Require a Computer Configured To Display First and Second Content Modes

Claims 10 and 16 (like every other claim in the '844 Patent) require a "portable computer configurable between a plurality of display modes including a laptop mode and an easel mode … wherein the laptop mode is configured to ***display to a user*** … ***a first content mode*** … [and] the easel mode is configured to ***display to the user*** … ***a second content mode.***"

Thus, every claim requires that the portable computer be configured to group its "information, programs, features, functions, [and] applications" into at least a first and a second content mode, and to ***display to the user*** as information on the computer's display component the first content mode (when the computer is in laptop mode) and the second content mode (when the computer is in easel mode). *Id.*, 10:62-64, 11:27-40, 12:22-35. The Lane/Ledbetter combination fails to meet these requirements.

III. The Lane/Ledbetter Combination Fails to Meet Any Challenged Claim

A. Ledbetter's Alleged Content Modes Are Never Displayed to the User

The Office Action alleges that Ledbetter "teaches different content modes ***displayed*** in different display modes," citing Ledbetter [0023], [0026], and [0057]. OA at 6. The cited Ledbetter paragraphs teach that the computer's monitor arm can be configured in different physical "usage modes" where the monitor arm is positioned in different physical positions. Ledbetter, [0026]. Ledbetter discloses that "the computer providing the content to display can change ***software operating modes*** to match the corresponding monitor position." *Id.*, [0055]. The operating system "loads a corresponding shell user interface and/or other program or programs (e.g., 1386_1) as necessary to configure the computer system user interface display 1388 and running programs to match the current mode." Ledbetter, [0056].

Ledbetter describes four operating modes: (1) a "**media consumption mode** [in which] media player software may be loaded and automatically executed"; (2) a "**tablet mode** [in which] tablet operating system components such as including handwriting recognition software may be loaded and automatically executed"; (3) a "**walk-up mode** [in which] a touch-screen shell program configured to provide convenient access to walk-up types of information (e.g., weather, messages, the internet and so forth)" is loaded; and (4) a "**workstation mode** [in which] typical shortcuts and other information used for working/productivity or other computer usage (e.g., gaming) may be displayed." Ledbetter, [0057].

Thus, Ledbetter discloses that when the computer arm is in different physical configurations ("usage modes"), the computer enters different "software operating modes" (*id.*, [0055]) where different programs may be run and/or different information displayed on the display.

The Request alleged that Ledbetter's software operating modes "constitute the claimed content modes." Request, 98-99. The Office Action adopts this mapping of the claimed content modes to Ledbetter, alleging that "Ledbetter further teaches different content modes displayed in different display modes," where the Office Action identifies – via italics – the "*media consumption mode*," "*tablet mode*," "*walkup mode*" and "*workstation mode*" as meeting the claimed content modes. OA at 6 (emphasis original).

Even if Ledbetter's "software operating modes" could be considered content modes (which Patent Owner does not concede), the computer being configured to run different software operating modes does not meet the claimed requirement that the computer be configured to ***display*** first and second content modes. The specification makes clear that "information, programs, features, functions, [and] applications may be grouped into [] various modes of content 172" (*id.*, 11:37-40), and that the content modes can be "***displayed*** as a series of bars across the display screen" (*id.*, 12:6-7) as shown in FIGs. 12 and 17. After a desired content mode is selected from the display, the "***particular functions, features or applications*** within" that content mode can be displayed and a desired function, feature or application can be selected. *Id.*, 12:22-35. Thus, displaying a content mode requires displaying some "information, such as menus, icons, etc. … on the display screen 110" ('844 Patent, 10:54-65) that represents the content mode, not merely displaying one or more functions, features or applications grouped into a content mode.

Thus, the Lane/Ledbetter combination is not "configured to ***display to a user***" the things – software operating modes – the Office Action alleges are first and second content modes. Thus, the Lane/Ledbetter combination does not meet any challenged claim, because the claims do not simply require first and second content modes, they require that the computer be configured to "display to a user" those content modes.

B. Displaying Functions, Features and/or Applications When Leadbetter's Computer Is In One of Its Software Operating Modes Does Not Meet The Claims

The only things in Ledbetter that the Office Action alleges are displayed to the user are particular functions, features and/or applications that are displayed when the computer is in a particular software operating modes. Specifically, the Office action identifies "media player software [] loaded and automatically executed" in media consumption mode, "handwriting recognition software [] loaded and automatically executed" in tablet mode, "walk-up types of information (e.g., weather, messages, the internet and so forth) may be loaded" in walk-up mode, and "typical shortcuts and other information used for working/productivity … may be displayed" in workstation mode. OA at 6. The '844 Patent specification refers to these as "***particular functions, features or applications***" that may be grouped within a content mode ('844 Patent, 12:22-35), and makes clear that displaying the "particular functions, features or applications within" a content mode is not the same thing as displaying the content mode itself. *Id.*, 11:37-40, 12:6-7, 12:22-35. Thus, to the extent the Office Action suggests that functions, features and/or applications displayed by Ledbetter when in its display modes could meet the claimed content modes, that would be inconsistent with the specification of the '844 Patent.

1. Claim Interpretation – Content Mode Cannot Be Interpreted More Broadly Than The Way It is Used in the Specification

Despite having already filed (and lost) an IPR petition challenging the '844 patent and filing a 176-page Request challenging just two claims, Lenovo never acknowledged where the specification describes what "content modes" are, and Lenovo cited no evidence of any use of this term in the art that differs from the meaning the specification gives to this term that is coined therein. Like the Request, the Office Action did not affirmatively construe "content mode."

"[T]he best source for determining the meaning of a claim term" under the broadest reasonable interpretation (BRI) standard "is the specification." MPEP § 2111.01. A claim interpretation under BRI "cannot be divorced from the specification and the record evidence." *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011). The interpretation "must be consistent with the one that those skilled in the art would reach." *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999). Indeed, the claims must be interpreted "in light of the specification as it would be interpreted by one of ordinary skill in the art." MPEP § 2111 (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)).

As a matter of law, when "terms have no plain or established meaning to one of ordinary skill in the art," "they ordinarily cannot be construed broader than the disclosure in the specification." *Indacon, Inc. v. Facebook, Inc.*, 824 F.3d 1352, 1357 (Fed. Cir. 2016); *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) ("[A]bsent such an accepted meaning [in the art], we construe a claim term only as broadly as provided for by the patent itself."). In such circumstances, the specification must be used to ascertain the meaning and scope of the claim term, even when it is not expressly defined. *Irdeto*, 383 F.3d at 1300 ("Even when guidance is not provided in explicit definitional format, 'the specification may define claim terms "by implication"' such that the meaning may be 'found in or ascertained by a reading of the patent documents.'").

Because the Office Action established no accepted meaning in the art for the term "content mode," the specification's meaning controls and this term cannot be interpreted more broadly than the specification's disclosure. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010) ("The broadest-construction rubric … does not give the PTO an unfettered license to interpret claims to embrace anything remotely related to the claimed invention. Rather, claims should always be read in light of the specification and teachings in the underlying patent."); *In re NTP*, 654 F.3d at 1288 (Even under the "broadest reasonable construction, the construction cannot be divorced from the specification and the record evidence."); MPEP § 2111 ("The broadest reasonable interpretation does not mean the broadest possible interpretation." Rather, it "must be consistent with the use of the claim term in the specification").

2. Displaying Functions, Features and/or Applications Grouped Within a Content Mode is Different than Displaying the Content Mode

The '844 Patent could not be clearer that there is a difference between a content mode and "the content organized within that mode." '844 Patent, 11:40-43. A content mode is displayed with other content modes as shown in Figs. 12 and 17. *Id.*, 12:6-8 (the different ***modes of content 172 may be displayed … as illustrated in Fig. 12***"). The content modes support "hierarchical" navigation ('844 Patent, 11:19-24) not only because they group together "information, programs, features, functions, [and] applications" *(Id.*, 37-40), but because the content groups are ***displayed to the user***. "[T]he ***different modes of content 172 may be displayed*** as a series of bars across the display screen 110, as illustrated in Fig. 12." '844 Patent, 12:6-8; *see also* Fig. 17.

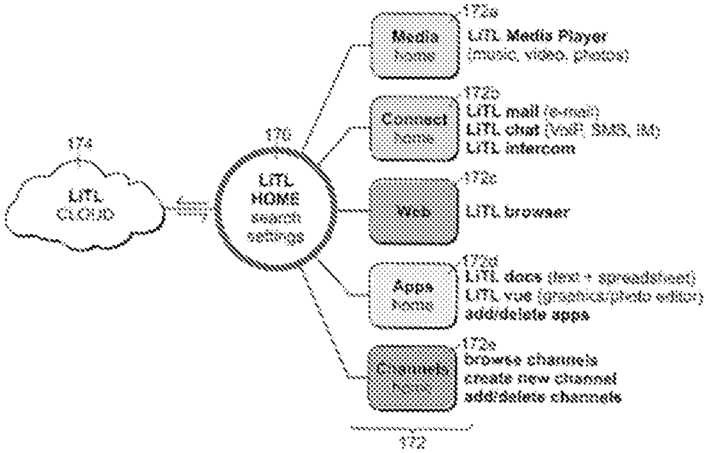
174
LiTL
CLOUD
176
LiTL
HOME
search
settings
172a
Media
home
LiTL Media Player
(music, video, photos)
172b
Connect
home
LiTL mail (e-mail)
LiTL chat (VoIP, SMS, IM)
LiTL intercom
172c
Web
LiTL browser
172d
Apps
home
LiTL docs (text + spreadsheet)
LiTL vue (graphics/photo editor)
add/delete apps
172e
Channels
home
browse channels
create new channel
add/delete channels
172

FIG. 11

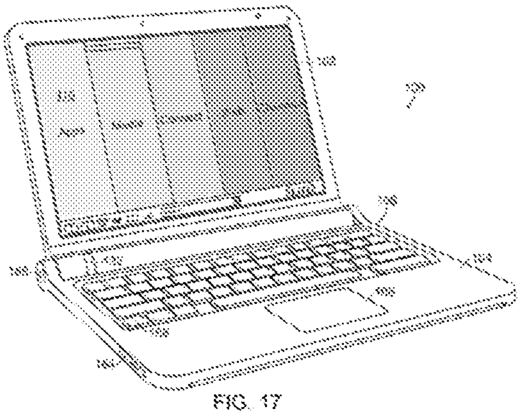

FIG. 17