example, if the contact area of the thumb is elliptical, the change in the orientation of an axis of the ellipse may be detected (e.g., from contact ellipse 706-R in Figure 7A to contact ellipse 708-R in Figure 7B, as shown on an enlarged portion of touch screen 112 in Figure 7C). In some embodiments, at least some of a user's other fingers (i.e., fingers other than thumb 704-R) support the device 100 by contacting the backside of the device.

[00120] In some embodiments, the first sense of rotation is a counterclockwise rotation. For example, thumb 704-R is initially on the upper right side of touch screen 112 (rather than the lower right side in Figure 7A), and the device is rotated clockwise, then the sense of rotation detected by the touch screen 112 will be counterclockwise for the thumb.

[00121] In some embodiments, in response to detecting the rotation of the thumb, the first application 702 is displayed (806) in a landscape orientation. In some embodiments, in response to detecting the rotation of the thumb and simultaneously detecting at least one finger on the side of the device opposite the touch screen display, the first application 702 is displayed in a landscape orientation.

[00122] In some embodiments, the thumb rotation gesture is used to override automatic changes in portrait/landscape orientation based on analysis of data from accelerometers 168 until a predetermined condition is met. In some embodiments, any changes in orientation of the device that are detected after the rotation of the thumb is detected are disregarded until the device displays a second application different from the first application. In some embodiments, any changes in orientation of the device that are detected after the rotation of the thumb is detected are disregarded until the device is put in a locked state or turned off. In some embodiments, any changes in orientation of the device that are detected after the rotation of the thumb is detected are disregarded for a predetermined time period.

[00123] In some embodiments, rotation of the thumb is detected (808) within a predetermined range of angles near 90° in a second sense of rotation that is opposite the first sense of rotation on the touch screen display. In response to detecting the rotation of the thumb in the second sense of rotation, the first application is displayed (810) in a portrait orientation.

[00124] In some embodiments, any changes in orientation of the device that are detected after the rotation of the thumb in the first sense is detected are disregarded until the rotation of the thumb in the second sense is detected.

[00125] A graphical user interface on a portable multifunction device with a touch screen display comprises an application that is displayed in either a first orientation or a second orientation, the second orientation being 90° from the first orientation. In some embodiments, in response to detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display, the display of the application changes from the first orientation to the second orientation. In some embodiments, in response to detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display and simultaneously detecting at least one finger on a side of the device opposite the touch screen display, the display of the application changes from the first orientation to the second orientation.

[00126] The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A computer-implemented method, comprising:

at a portable multifunction device with a touch screen display,

displaying information on the touch screen display in a portrait orientation;

detecting simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display;

in response to detecting the simultaneous rotation of the two thumbs in the first sense of rotation, displaying the information in a landscape orientation;

detecting simultaneous rotation of the two thumbs in a second sense of rotation that is opposite the first sense of rotation; and

in response to detecting the simultaneous rotation of the two thumbs in the second sense of rotation, displaying the information in a portrait orientation.

2. A computer-implemented method, comprising:

at a portable multifunction device with a touch screen display,

displaying a first application on the touch screen display in a portrait orientation;

detecting simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display; and

in response to detecting the simultaneous rotation of the two thumbs in the first sense of rotation, displaying the first application in a landscape orientation.

3. The computer-implemented method of claim 2, wherein the first sense of rotation is a clockwise rotation.

4. The computer-implemented method of claim 2, wherein the first sense of rotation is a counterclockwise rotation.

5. The computer-implemented method of claim 2, wherein the first application is a browser, a photo manager, a music player, or a video player.

6. The computer-implemented method of claim 2, including disregarding any changes in orientation of the device that are detected after the simultaneous rotation of the two

thumbs is detected until the device displays a second application different from the first application.

7. The computer-implemented method of claim 2, including disregarding any changes in orientation of the device that are detected after the simultaneous rotation of the two thumbs is detected until the device is put in a locked state or turned off.

8. The computer-implemented method of claim 2, including disregarding, for a predetermined time period, any changes in orientation of the device that are detected after the simultaneous rotation of the two thumbs is detected.

9. The computer-implemented method of claim 2, including:

detecting simultaneous rotation of the two thumbs in a second sense of rotation that is opposite the first sense of rotation on the touch screen display; and

in response to detecting the simultaneous rotation of the two thumbs in the second sense of rotation, displaying the first application in a portrait orientation.

10. The computer-implemented method of claim 9, including disregarding any changes in orientation of the device that are detected after the simultaneous rotation of the two thumbs in the first sense is detected until the simultaneous rotation of the two thumbs in the second sense is detected.

11. A graphical user interface on a portable multifunction device with a touch screen display, comprising:

an application that is displayed in either a first orientation or a second orientation, the second orientation being 90° from the first orientation,

wherein:

in response to detecting simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display, the display of the application changes from the first orientation to the second orientation.

12. A portable multifunction device, comprising:

a touch screen display;

one or more processors;

memory; and

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one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the programs including:

instructions for displaying a first application on the touch screen display in a portrait orientation;

instructions for detecting simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display; and

instructions for displaying the first application in a landscape orientation in response to detecting the simultaneous rotation of the two thumbs in the first sense of rotation.

13. A computer-program product, comprising:

a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising instructions, which when executed by a portable multifunction device with a touch screen display, cause the device to:

display a first application on the touch screen display in a portrait orientation;

detect simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display; and

display the first application in a landscape orientation in response to detecting the simultaneous rotation of the two thumbs in the first sense of rotation.

14. A portable multifunction device with a touch screen display, comprising:

means for displaying a first application on the touch screen display in a portrait orientation;

means for detecting simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display; and

means for displaying the first application in a landscape orientation in response to detecting the simultaneous rotation of the two thumbs in the first sense of rotation.

15. A computer-implemented method, comprising:

at a portable multifunction device with a touch screen display,

displaying a first application on the touch screen display in a portrait orientation;

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detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display; and

in response to detecting the rotation of the thumb, displaying the first application in a landscape orientation.

16. The computer-implemented method of claim 15, wherein predetermined range of angles is between 85° and 95°.

17. The computer-implemented method of claim 15, wherein predetermined range of angles is between 80° and 100°.

18. The computer-implemented method of claim 15, wherein predetermined range of angles is between 75° and 105°.

19. The computer-implemented method of claim 15, wherein predetermined range of angles is between 70° and 110°.

20. The computer-implemented method of claim 15, including:

detecting a rotation of the thumb within a predetermined range of angles near 90° in a second sense of rotation on the touch screen display, wherein the second sense of rotation is opposite the first sense of rotation; and

in response to detecting the rotation of the thumb in the second sense of rotation, displaying the first application in a portrait orientation.

21. A graphical user interface on a portable multifunction device with a touch screen display, comprising:

an application that is displayed in either a first orientation or a second orientation, the second orientation being 90° from the first orientation,

wherein:

in response to detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display, the display of the application changes from the first orientation to the second orientation.

22. A portable multifunction device, comprising:

a touch screen display;

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one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the programs including:

instructions for displaying a first application on the touch screen display in a portrait orientation;

instructions for detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display; and

instructions for displaying the first application in a landscape orientation in response to detecting the rotation of the thumb.

23. A computer-program product, comprising:

a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising instructions, which when executed by a portable multifunction device with a touch screen display, cause the device to:

display a first application on the touch screen display in a portrait orientation;

detect a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display; and

display the first application in a landscape orientation in response to detecting the rotation of the thumb.

24. A portable multifunction device with a touch screen display, comprising:

means for displaying a first application on the touch screen display in a portrait orientation;

means for detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display; and

means for displaying the first application in a landscape orientation in response to detecting the rotation of the thumb.

25. A computer-implemented method, comprising:

at a portable multifunction device with a touch screen display,

displaying a first application on the touch screen display in a portrait orientation;

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detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display;

simultaneously detecting at least one finger on a side of the device opposite the touch screen display; and

in response to detecting the rotation of the thumb and simultaneously detecting at least one finger on the side of the device opposite the touch screen display, displaying the first application in a landscape orientation.

26. A graphical user interface on a portable multifunction device with a touch screen display, comprising:

an application that is displayed in either a first orientation or a second orientation, the second orientation being 90° from the first orientation,

wherein:

in response to detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display and simultaneously detecting at least one finger on a side of the device opposite the touch screen display, the display of the application changes from the first orientation to the second orientation.

27. A portable multifunction device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the programs including:

instructions for displaying a first application on the touch screen display in a portrait orientation;

instructions for detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display; and

instructions for simultaneously detecting at least one finger on a side of the device opposite the touch screen display; and

instructions for displaying the first application in a landscape orientation in response to detecting the rotation of the thumb and simultaneously detecting at least one finger on the side of the device opposite the touch screen display.

28. A computer-program product, comprising:

a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising instructions, which when executed by a portable multifunction device with a touch screen display, cause the device to:

display a first application on the touch screen display in a portrait orientation;

detect a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display;

simultaneously detect at least one finger on a side of the device opposite the touch screen display; and

display the first application in a landscape orientation in response to detecting the rotation of the thumb and simultaneously detecting at least one finger on the side of the device opposite the touch screen display.

29. A portable multifunction device with a touch screen display, comprising:

means for displaying a first application on the touch screen display in a portrait orientation;

means for detecting a rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display;

means for simultaneously detecting at least one finger on a side of the device opposite the touch screen display; and

means for displaying the first application in a landscape orientation in response to detecting the rotation of the thumb and simultaneously detecting at least one finger on the side of the device opposite the touch screen display.

Screen Rotation Gestures on a Portable Multifunction Device

ABSTRACT

In accordance with some embodiments, a computer-implemented method performed at a portable multifunction device with a touch screen display includes displaying information on the touch screen display in a portrait orientation. The method also includes detecting simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display, and in response to detecting the simultaneous rotation of the two thumbs in the first sense of rotation, displaying the information in a landscape orientation. In some embodiments, the method further includes detecting simultaneous rotation of the two thumbs in a second sense of rotation that is opposite the first sense of rotation, and in response to detecting the simultaneous rotation of the two thumbs in the second sense of rotation, displaying the information in a portrait orientation.

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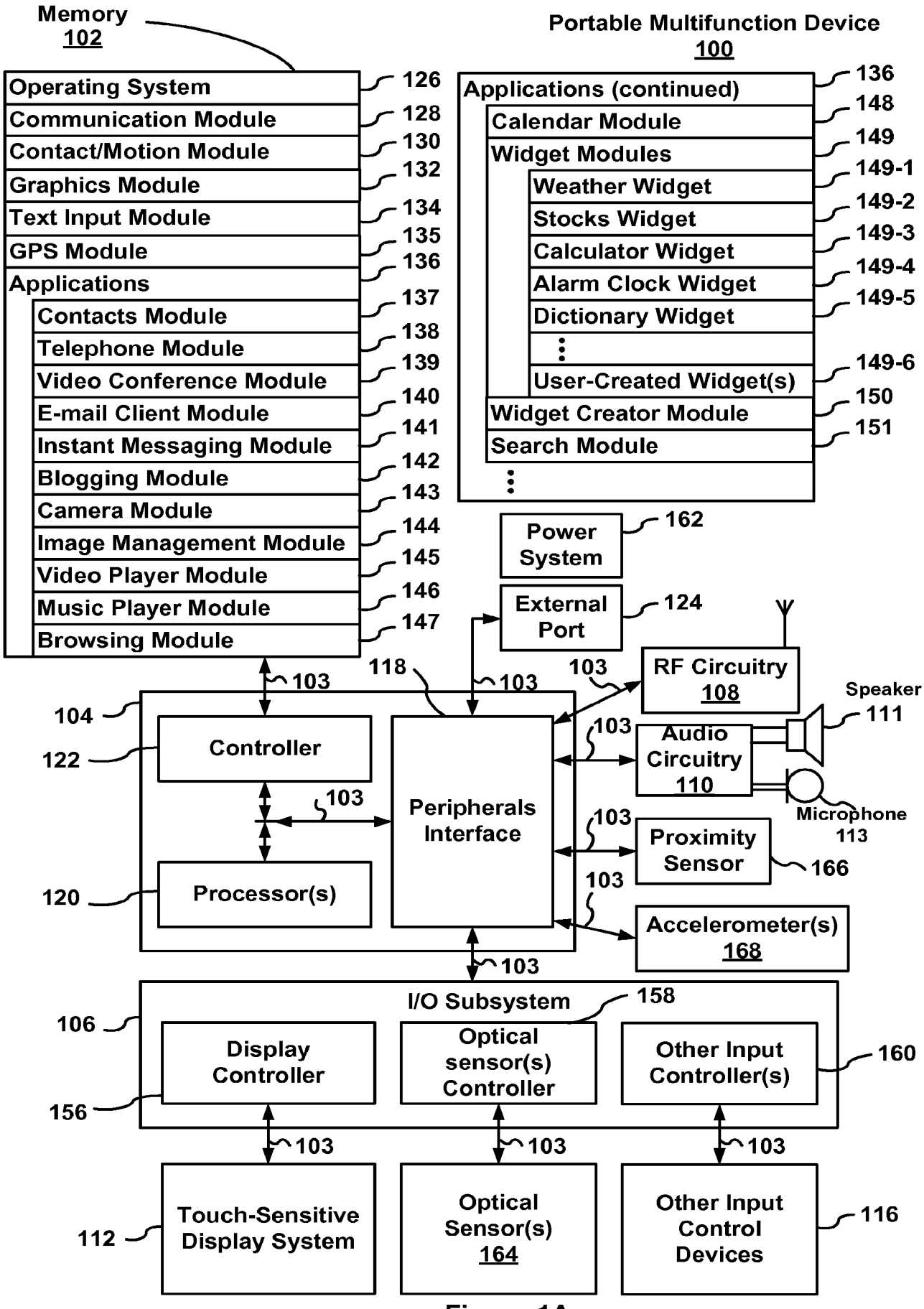

Memory
102
Portable Multifunction Device
100
Operating System
126
Communication Module
128
Contact/Motion Module
130
Graphics Module
132
Text Input Module
134
GPS Module
135
Applications
136
Contacts Module
137
Telephone Module
138
Video Conference Module
139
E-mail Client Module
140
Instant Messaging Module
141
Blogging Module
142
Camera Module
143
Image Management Module
144
Video Player Module
145
Music Player Module
146
Browsing Module
147
Applications (continued)
136
Calendar Module
148
Widget Modules
149
Weather Widget
149-1
Stocks Widget
149-2
Calculator Widget
149-3
Alarm Clock Widget
149-4
Dictionary Widget
149-5
User-Created Widget(s)
149-6
Widget Creator Module
150
Search Module
151
Power System
162
External Port
124
RF Circuitry
108
Speaker
111
Audio Circuitry
110
Microphone
113
Proximity Sensor
166
Accelerometer(s)
168
103
118
104
122
Controller
Peripherals Interface
120
Processor(s)
I/O Subsystem
158
106
Display Controller
Optical sensor(s) Controller
Other Input Controller(s)
160
156
Touch-Sensitive Display System
112
Optical Sensor(s)
164
Other Input Control Devices
116

Figure 1A

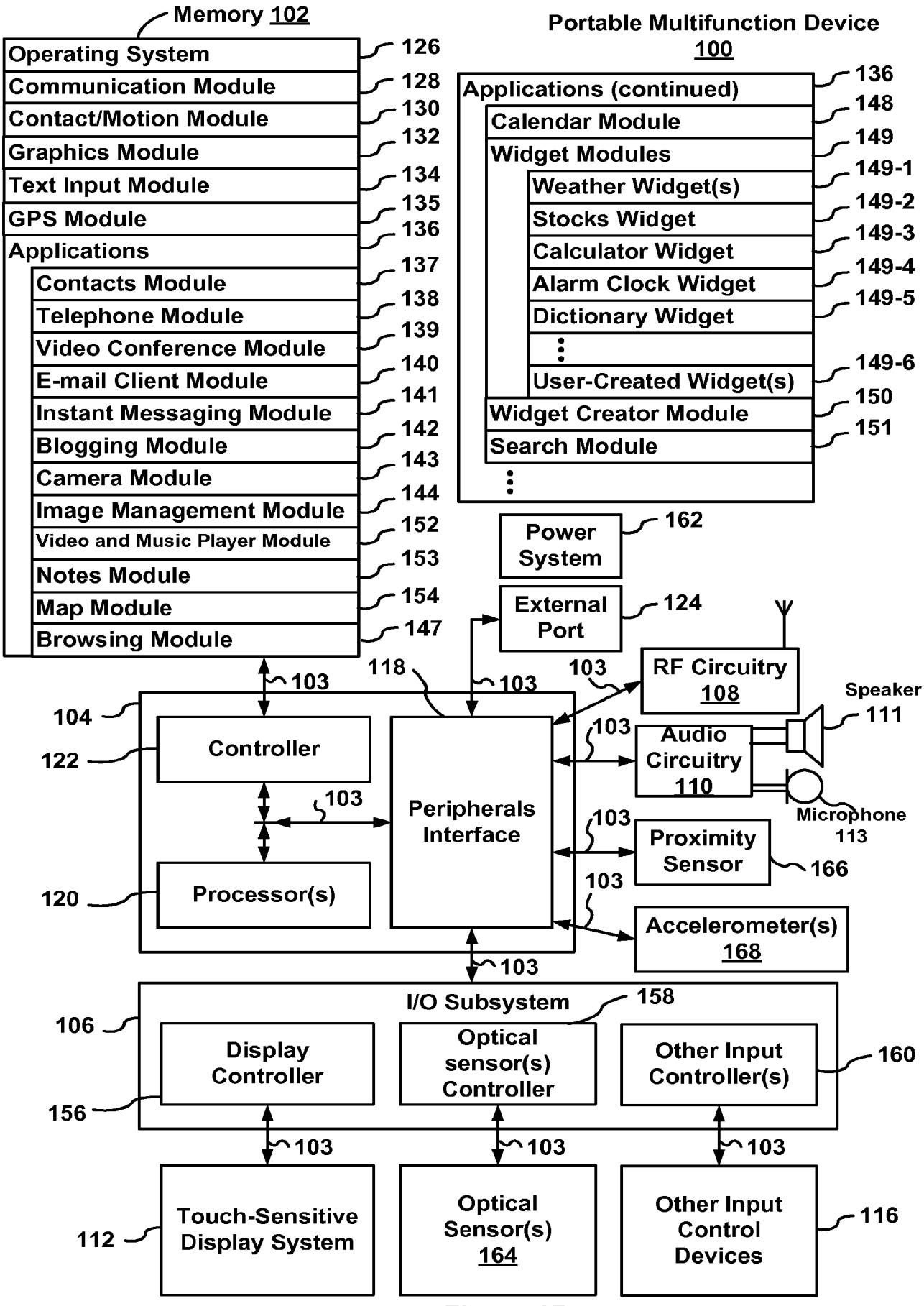

Memory 102
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Video Conference Module
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E-mail Client Module
140
Instant Messaging Module
141
Blogging Module
142
Camera Module
143
Image Management Module
144
Video and Music Player Module
152
Notes Module
153
Map Module
154
Browsing Module
147
Portable Multifunction Device
100
Applications (continued)
136
Calendar Module
148
Widget Modules
149
Weather Widget(s)
149-1
Stocks Widget
149-2
Calculator Widget
149-3
Alarm Clock Widget
149-4
Dictionary Widget
149-5
User-Created Widget(s)
149-6
Widget Creator Module
150
Search Module
151
Power System
162
External Port
124
RF Circuitry 108
Speaker 111
Audio Circuitry 110
Microphone 113
Proximity Sensor
166
Accelerometer(s) 168
Peripherals Interface
Controller
122
Processor(s)
120
104
118
103
I/O Subsystem
158
106
Display Controller
Optical sensor(s) Controller
Other Input Controller(s)
160
156
Touch-Sensitive Display System
112
Optical Sensor(s) 164
Other Input Control Devices
116

Figure 1B

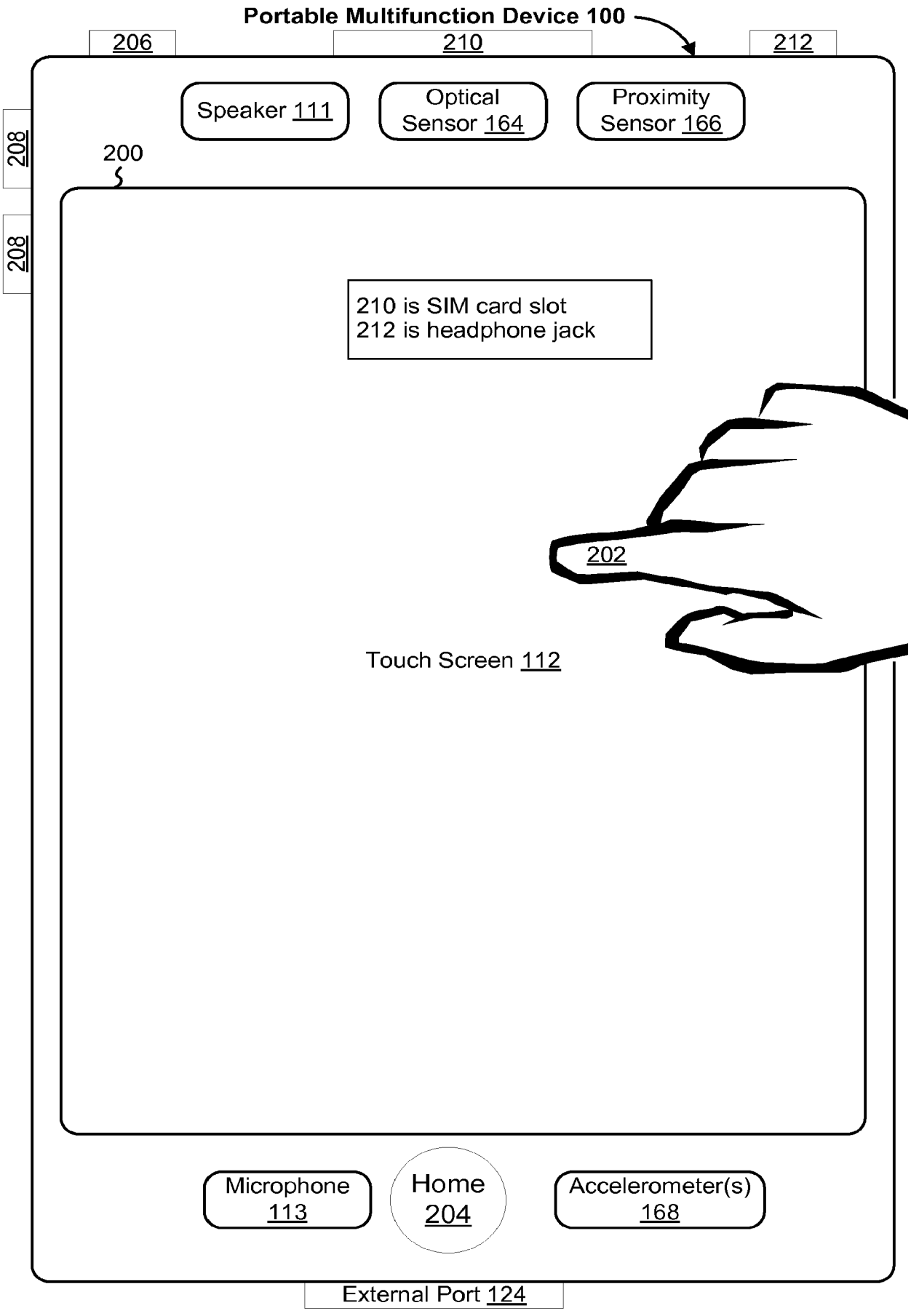

Portable Multifunction Device 100
206
210
212
Speaker 111
Optical Sensor 164
Proximity Sensor 166
208
200
208
210 is SIM card slot
212 is headphone jack
202
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168
External Port 124

Figure 2

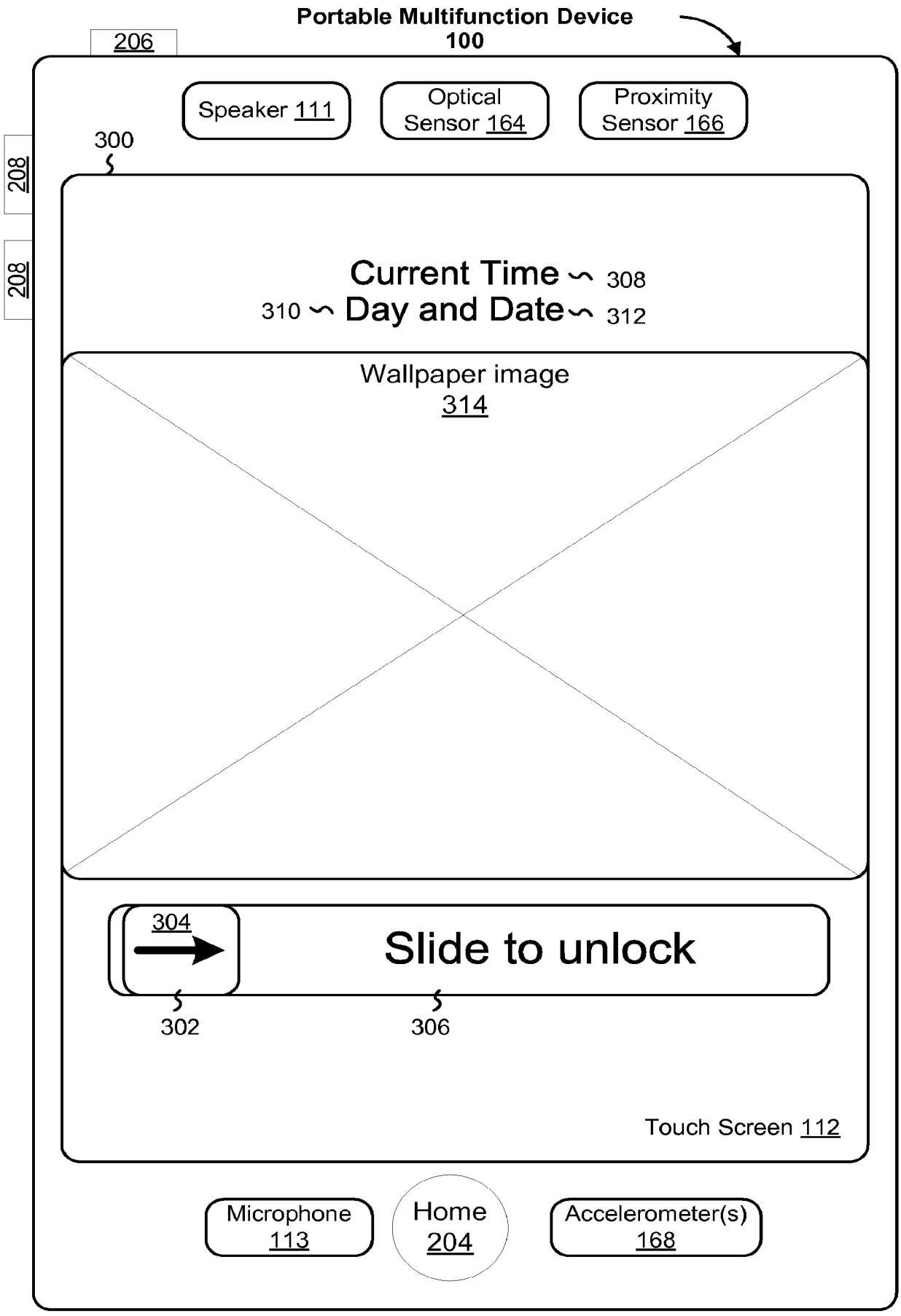

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
300
208
208
Current Time 308
310 Day and Date 312
Wallpaper image
314
304
Slide to unlock
302
306
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168

Figure 3

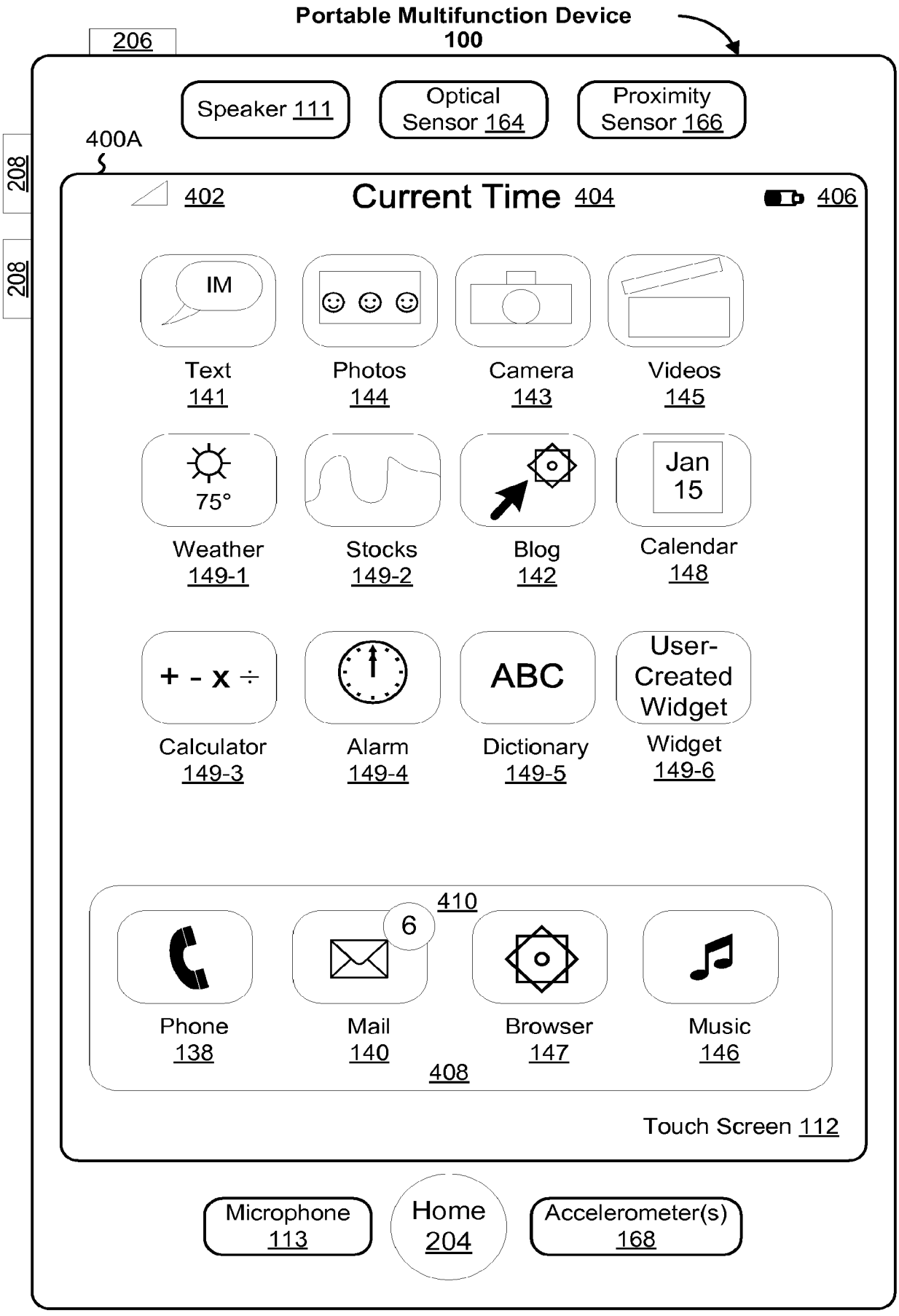

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
400A
208
208
402
Current Time 404
406
IM
Text 141
Photos 144
Camera 143
Videos 145
75°
Weather 149-1
Stocks 149-2
Blog 142
Jan 15
Calendar 148
+ - x ÷
Calculator 149-3
Alarm 149-4
ABC
Dictionary 149-5
User-Created Widget
Widget 149-6
410
6
Phone 138
Mail 140
Browser 147
Music 146
408
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168

Figure 4A

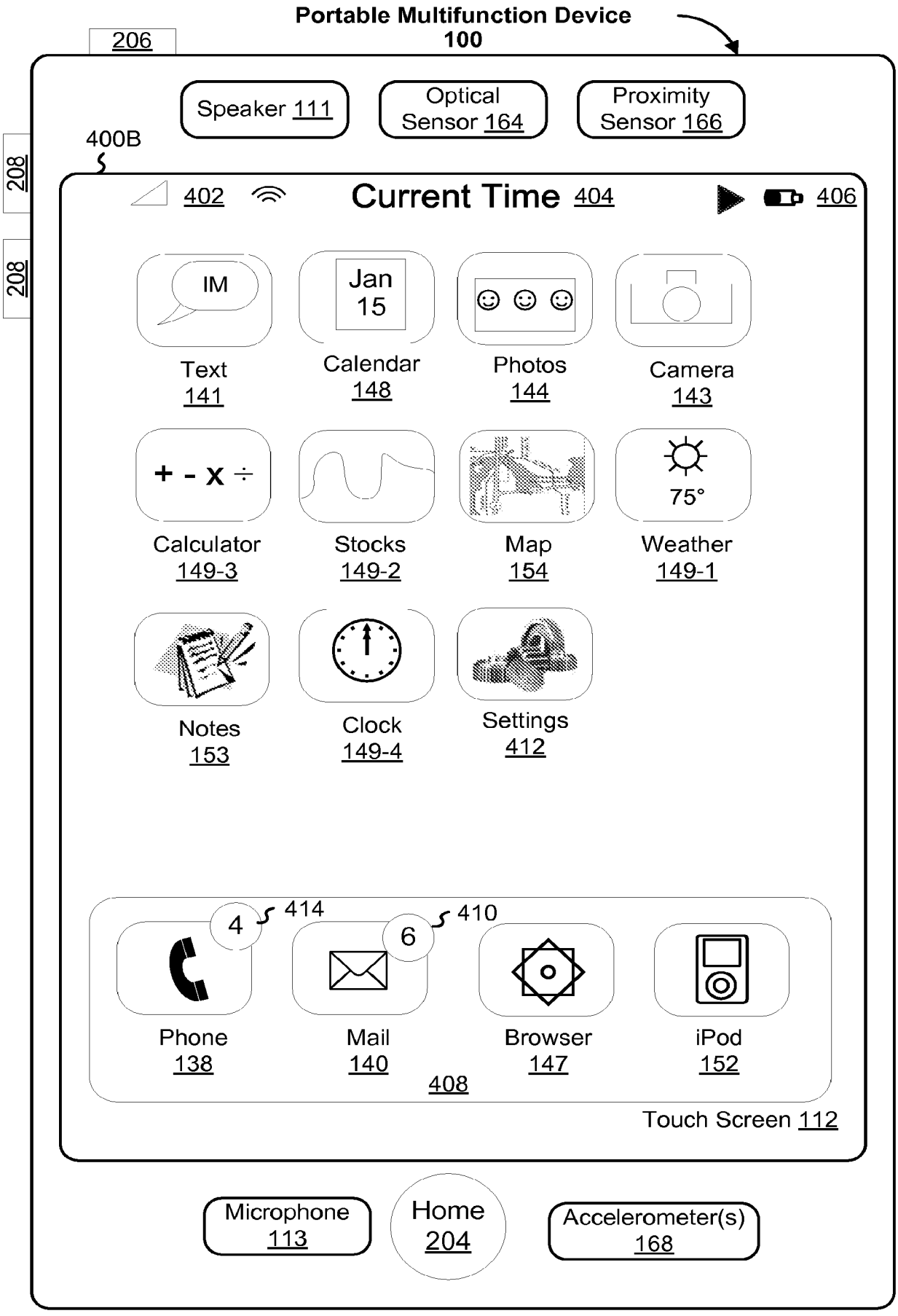

Portable Multifunction Device
100
206
Speaker 111
Optical Sensor 164
Proximity Sensor 166
400B
208
208
402
Current Time 404
406
IM
Text 141
Jan 15
Calendar 148
Photos 144
Camera 143
+ - x ÷
Calculator 149-3
Stocks 149-2
Map 154
75°
Weather 149-1
Notes 153
Clock 149-4
Settings 412
4
414
6
410
Phone 138
Mail 140
Browser 147
iPod 152
408
Touch Screen 112
Microphone 113
Home 204
Accelerometer(s) 168

Figure 4B

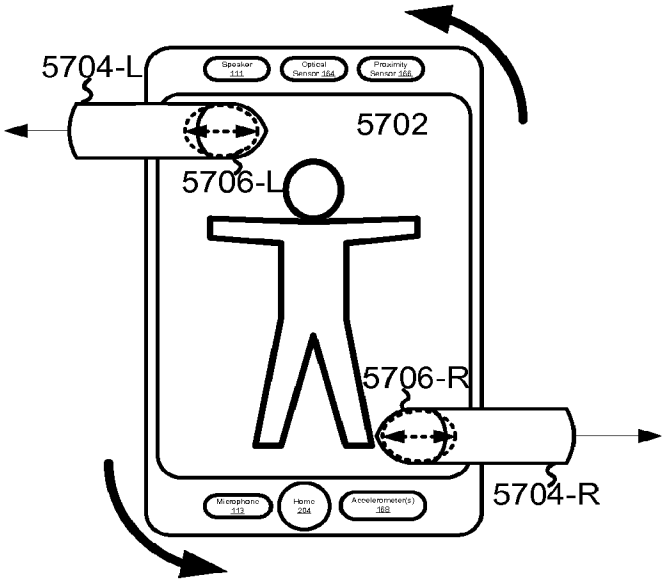


Figure 5A

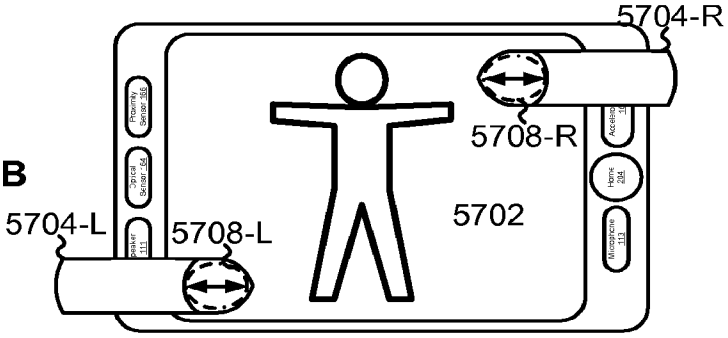


Figure 5B

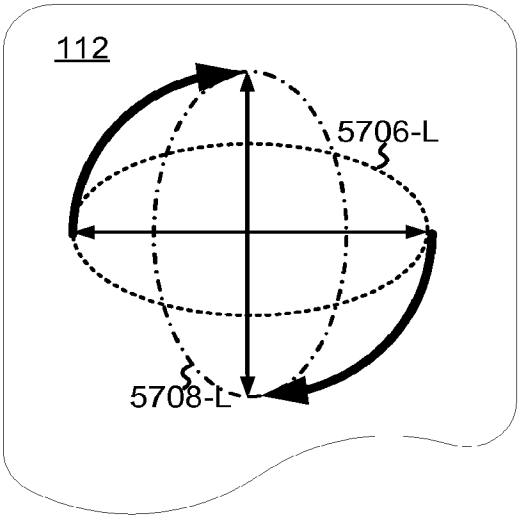


Figure 5C

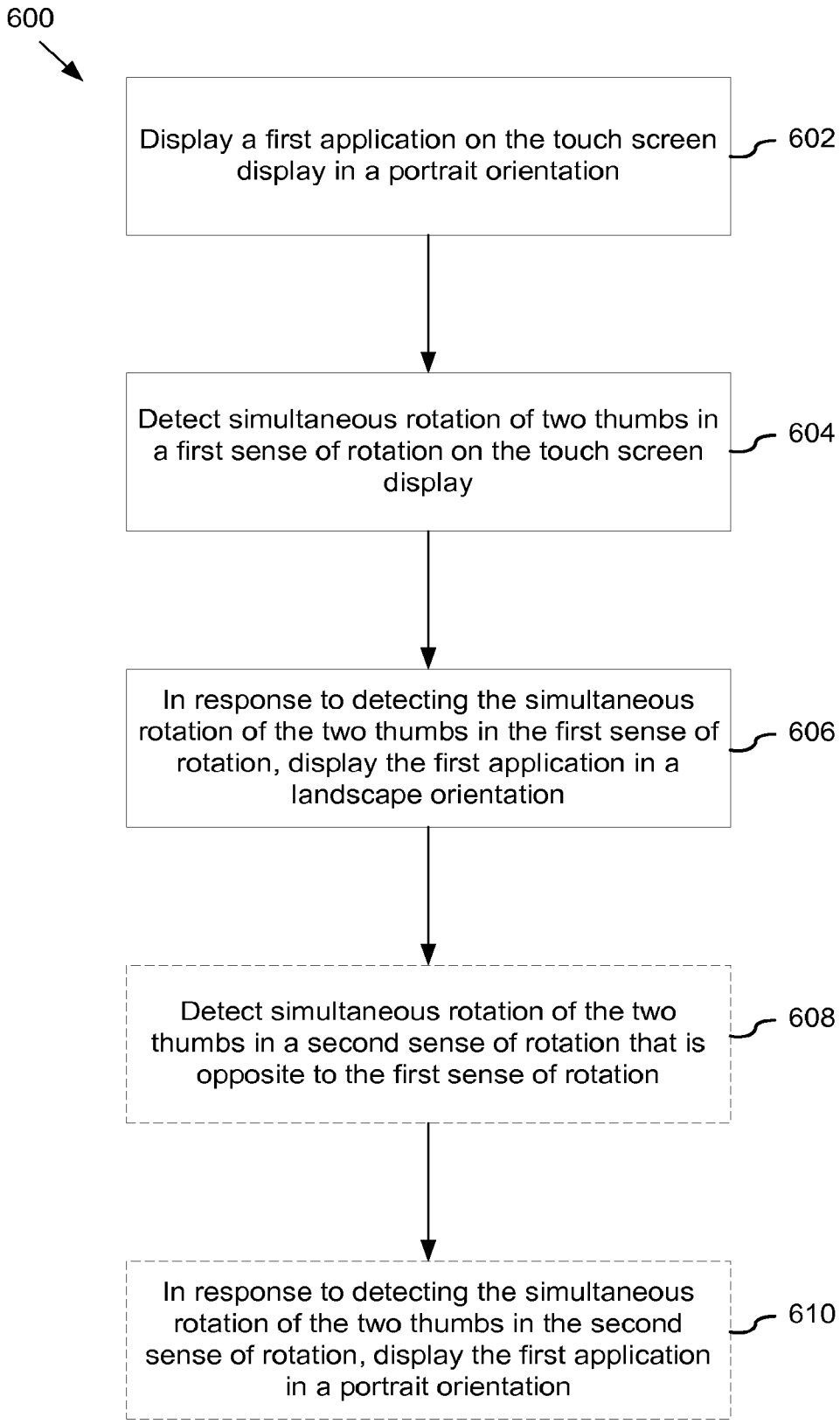

600
Display a first application on the touch screen display in a portrait orientation
602
Detect simultaneous rotation of two thumbs in a first sense of rotation on the touch screen display
604
In response to detecting the simultaneous rotation of the two thumbs in the first sense of rotation, display the first application in a landscape orientation
606
Detect simultaneous rotation of the two thumbs in a second sense of rotation that is opposite to the first sense of rotation
608
In response to detecting the simultaneous rotation of the two thumbs in the second sense of rotation, display the first application in a portrait orientation
610

Figure 6

Figure 7A

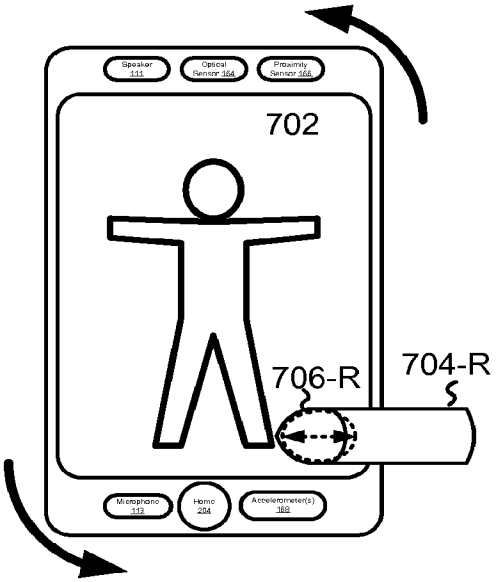


Figure 7B

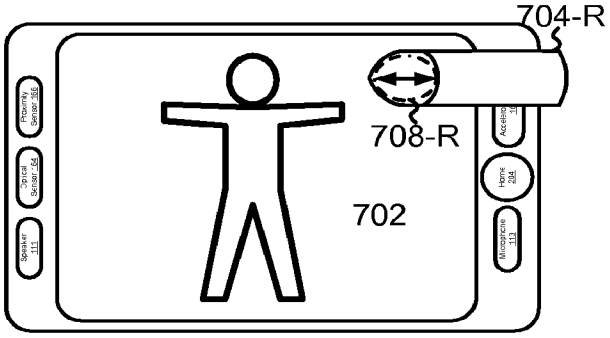
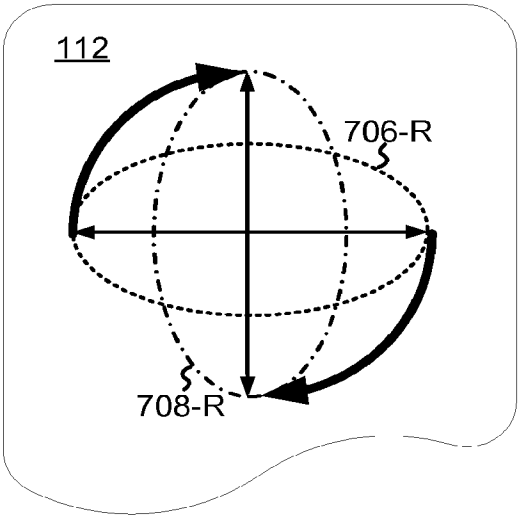


Figure 7C



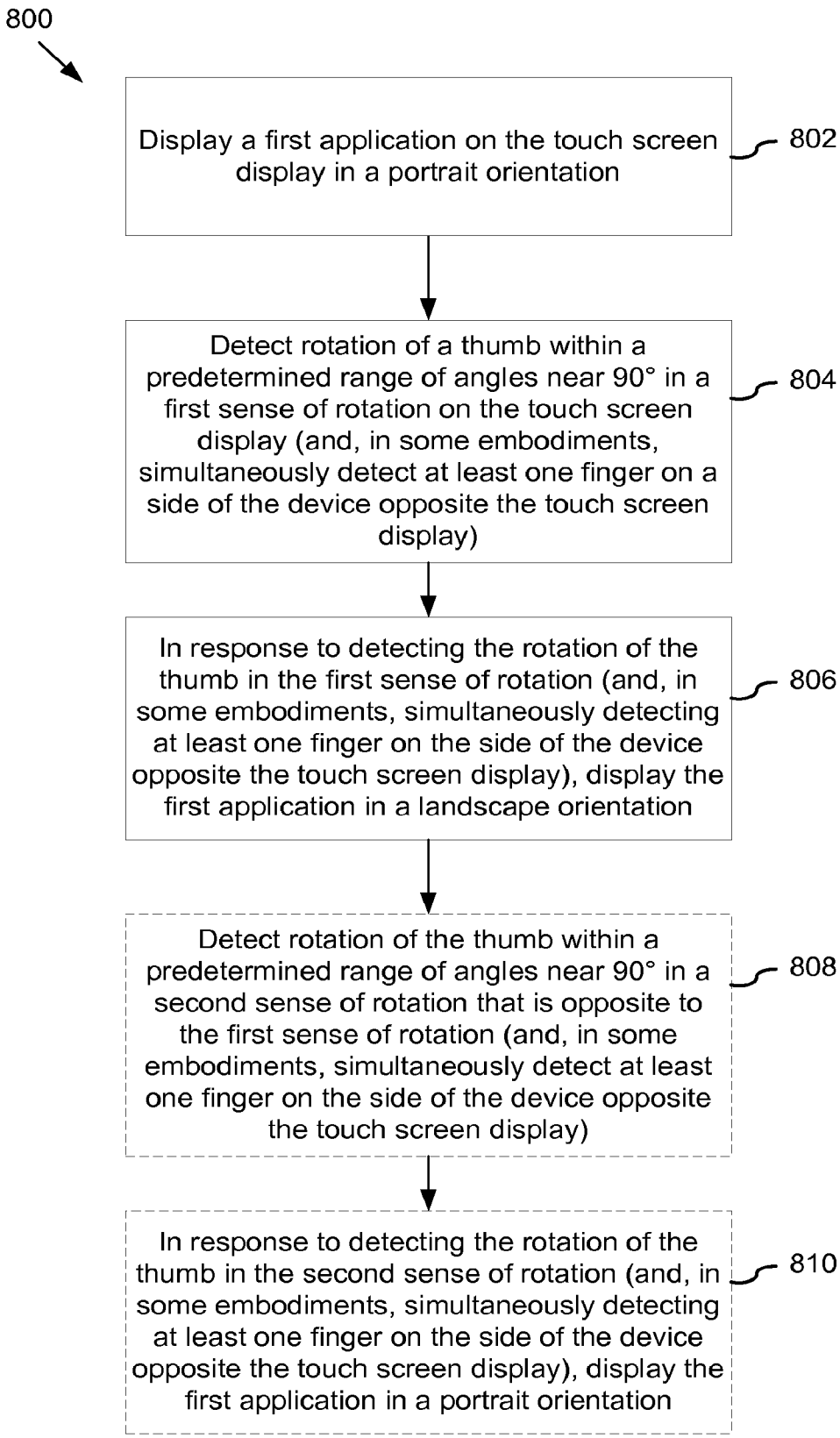

800
Display a first application on the touch screen display in a portrait orientation
802
Detect rotation of a thumb within a predetermined range of angles near 90° in a first sense of rotation on the touch screen display (and, in some embodiments, simultaneously detect at least one finger on a side of the device opposite the touch screen display)
804
In response to detecting the rotation of the thumb in the first sense of rotation (and, in some embodiments, simultaneously detecting at least one finger on the side of the device opposite the touch screen display), display the first application in a landscape orientation
806
Detect rotation of the thumb within a predetermined range of angles near 90° in a second sense of rotation that is opposite to the first sense of rotation (and, in some embodiments, simultaneously detect at least one finger on the side of the device opposite the touch screen display)
808
In response to detecting the rotation of the thumb in the second sense of rotation (and, in some embodiments, simultaneously detecting at least one finger on the side of the device opposite the touch screen display), display the first application in a portrait orientation
810

Figure 8

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Screen Rotation Gestures on a Portable Multifunction Device
First Named Inventor/Applicant Name:	Bas Ording
Filer:	Gary Scott Williams/Beverly Gemello
Attorney Docket Number:	P3940USp1/63266-5022PR

Filed as Large Entity

Provisional Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Provisional application filing	1005	1	200	200
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**200**

Electronic Acknowledgement Receipt

EFS ID:	1923721
Application Number:	60946970
International Application Number:	
Confirmation Number:	6816
Title of Invention:	Screen Rotation Gestures on a Portable Multifunction Device
First Named Inventor/Applicant Name:	Bas Ording
Customer Number:	61725
Filer:	Gary Scott Williams/Beverly Gemello
Filer Authorized By:	Gary Scott Williams
Attorney Docket Number:	P3940USp1/63266-5022PR
Receipt Date:	28-JUN-2007
Filing Date:	
Time Stamp:	22:41:04
Application Type:	Provisional

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	$200
RAM confirmation Number	3613
Deposit Account	500310

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)

1		63266-5022PR_ApplicationAsFiled.pdf	541636	yes	51

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Transmittal of New Application	1	1
Specification	2	33
Claims	34	40
Abstract	41	41
Drawings	42	51

Warnings:

Information:

2	Fee Worksheet (PTO-06)	fee-info.pdf	8134	no	2

Warnings:

Information:

Total Files Size (in bytes):	549770

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
60/946,970	06/28/2007		200	P3940USP1/63266-5022PR		

CONFIRMATION NO. 6816

61725
MORGAN LEWIS & BOCKIUS LLP/ APPLE COMPUTER INC.
2 PALO ALTO SQUARE
3000 EL CAMINO REAL
PALO ALTO, CA94306

FILING RECEIPT

Date Mailed: 07/24/2007

Receipt is acknowledged of this provisional patent application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Bas Ording, San Francisco, CA;
Brett Alten, Cupertino, CA;

Power of Attorney:
Gary Williams--31066

If Required, Foreign Filing License Granted: 07/17/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US60/946,970**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

Title

Screen Rotation Gestures on a Portable Multifunction Device

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Exhibit 1030

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
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Zip Top, LLC v. Stasher, Inc.
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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
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HP Inc. - Exhibit 1005 - Page 5650

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.

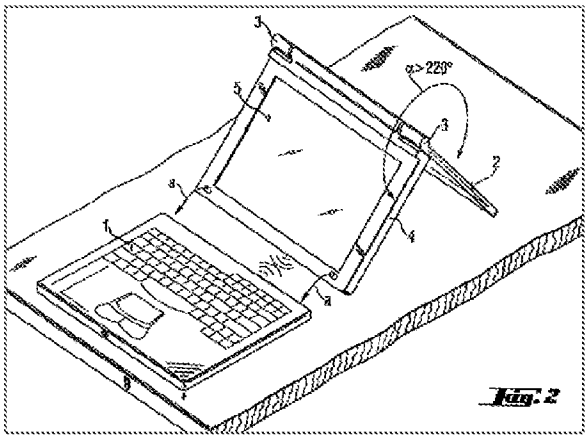
A. The Six References Were Not "Presented to the Office"

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.

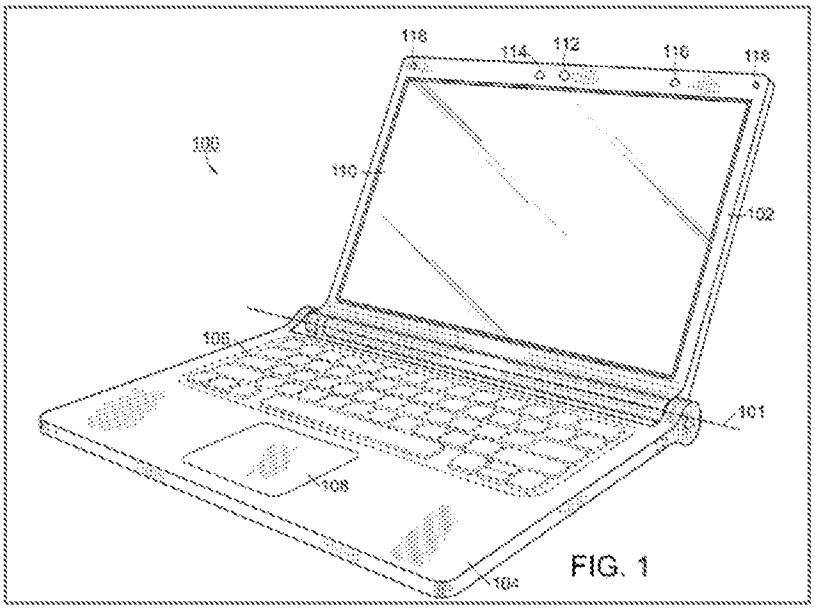


FIG. 1

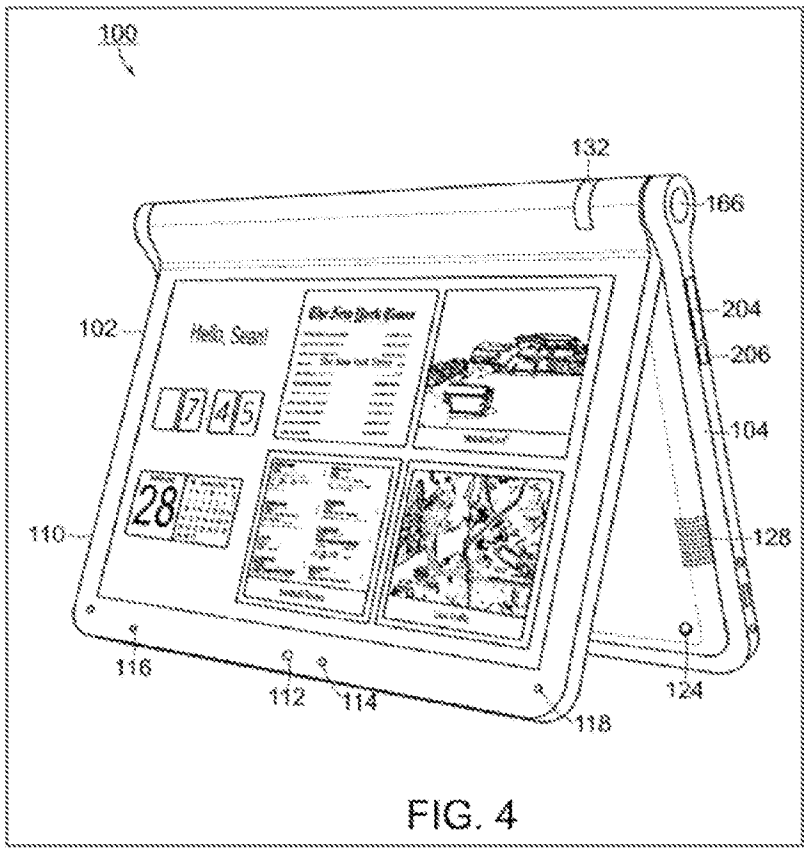

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FIG. 4

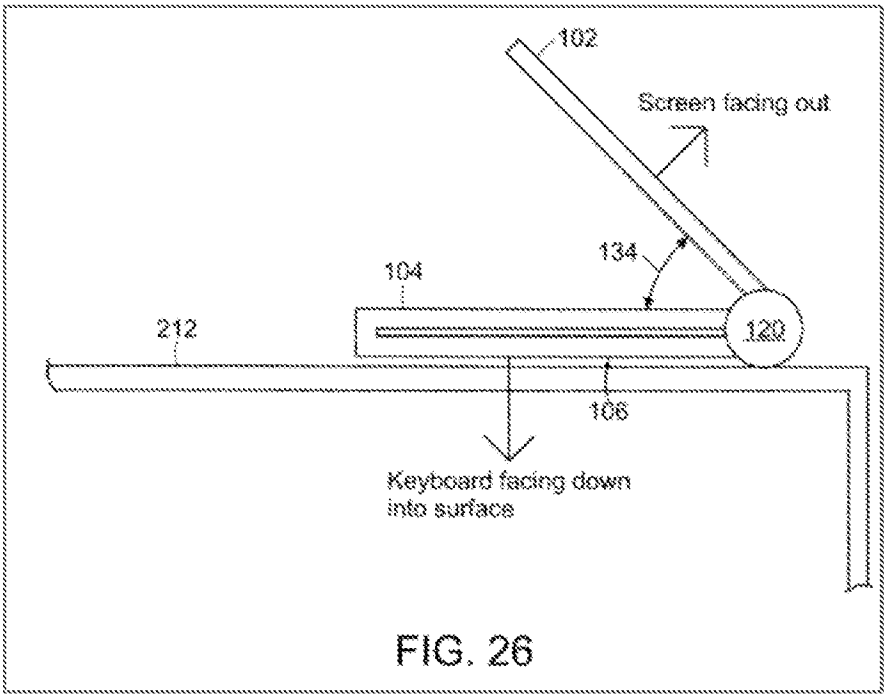

102
Screen facing out
134
104
212
120
106
Keyboard facing down
into surface

FIG. 26

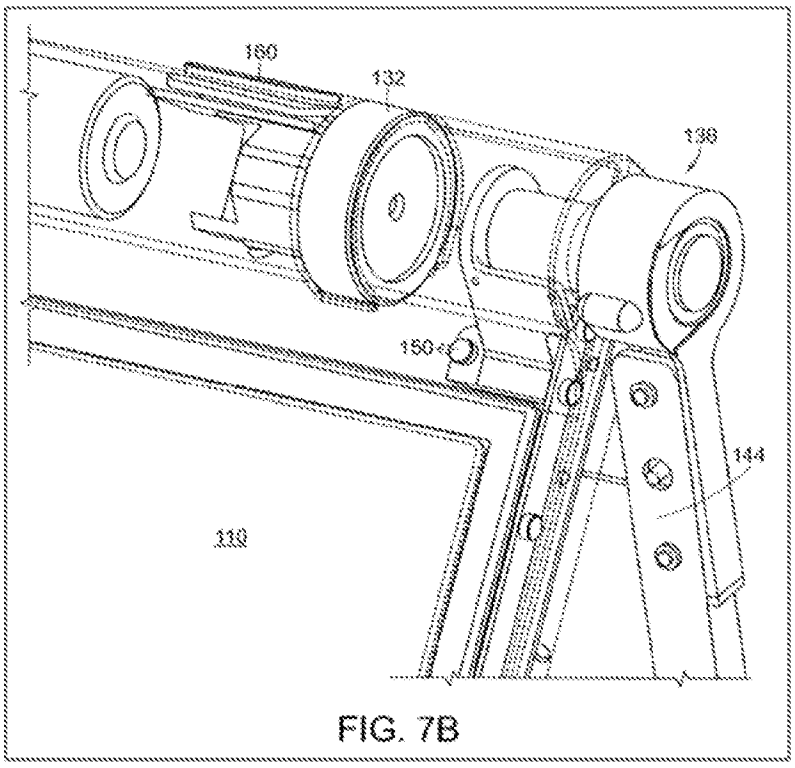


FIG. 7B

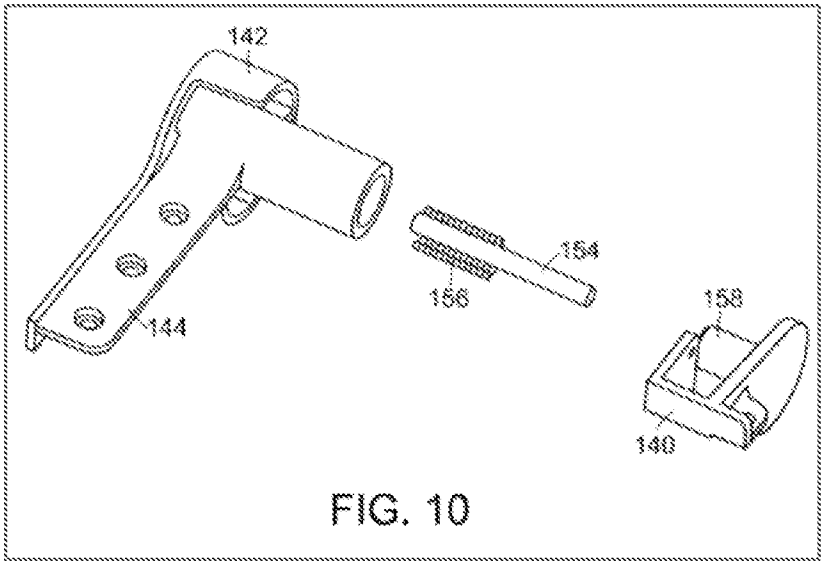


FIG. 10

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.

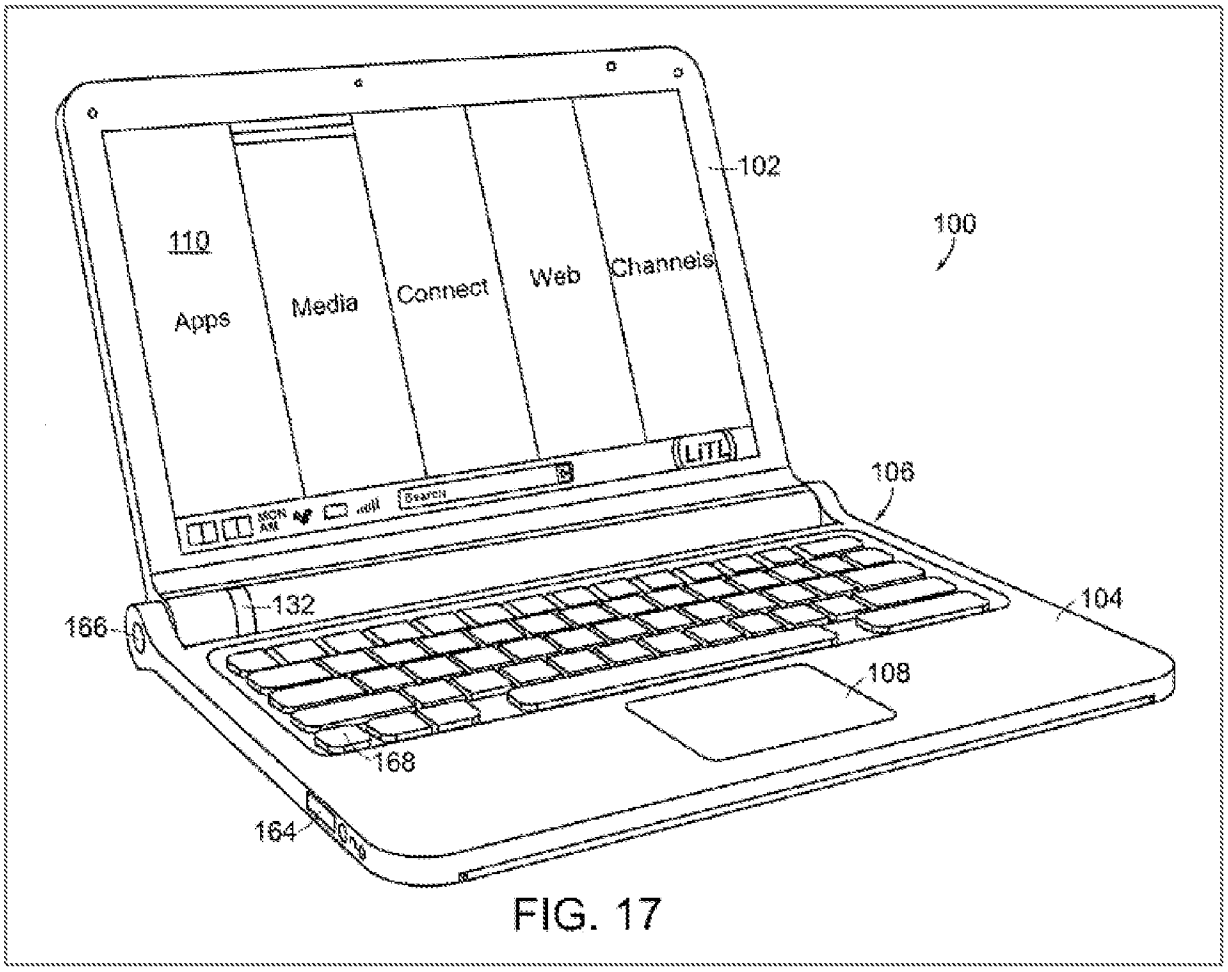


FIG. 17

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.

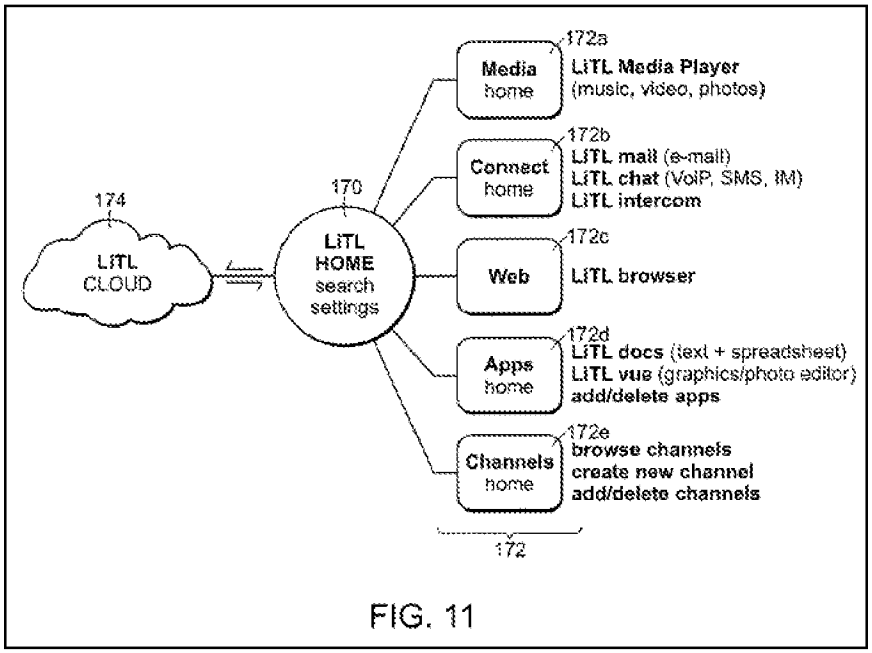


FIG. 11

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.

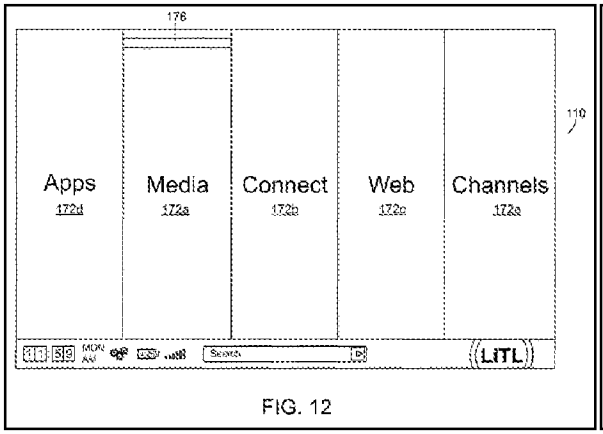


FIG. 12

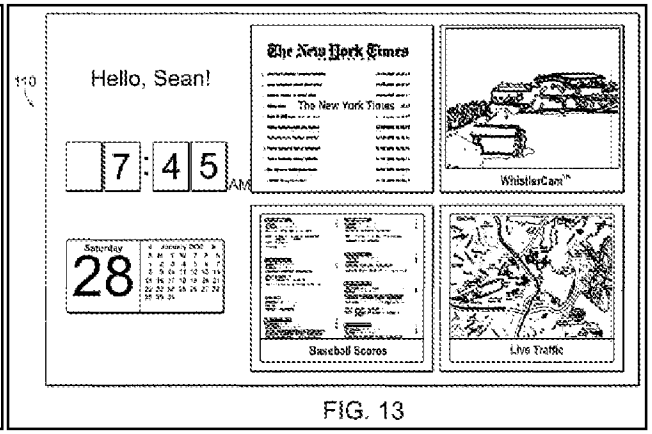


FIG. 13

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

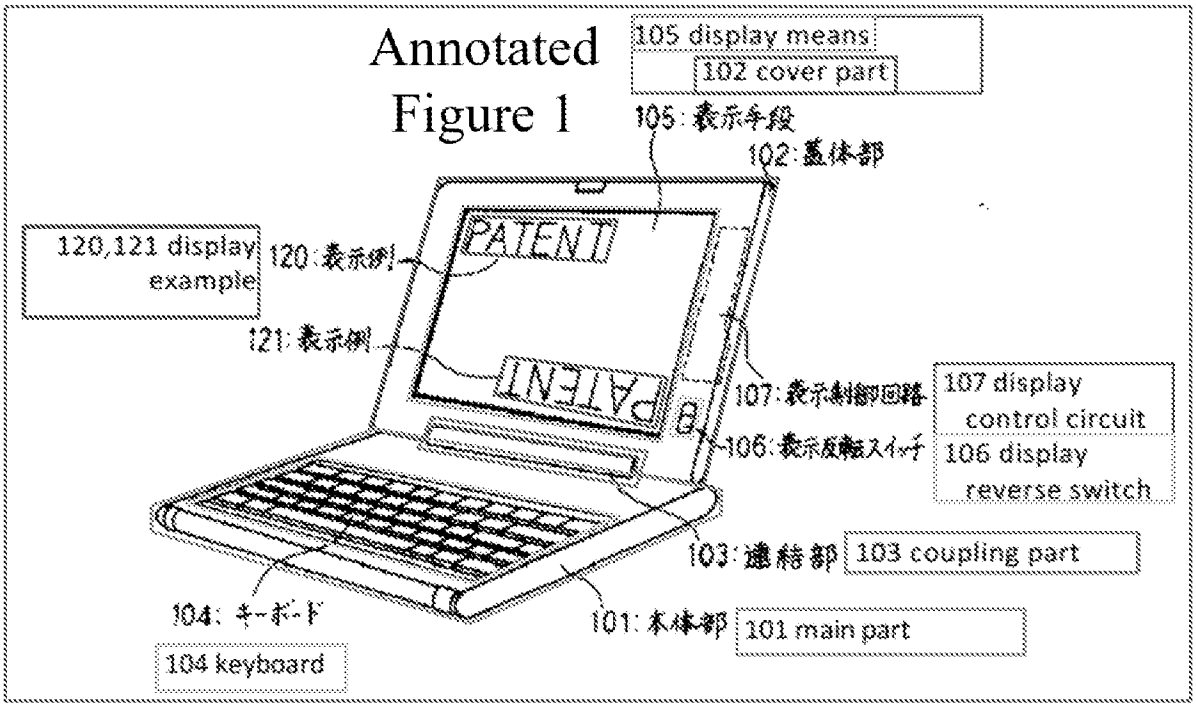
1. Overview of Shimura

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:

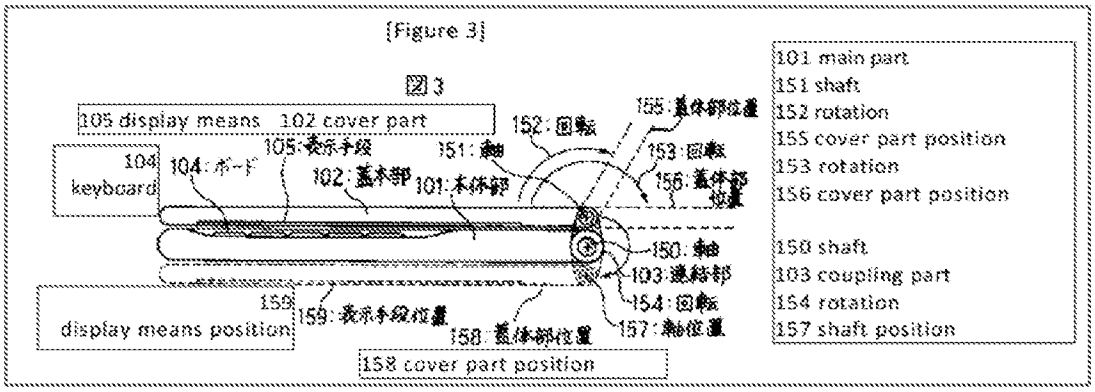
- main part 101 (dark green below in Annotated Figure 1 of Shimura) with keyboard 104 (light green);
- cover part 102 (dark blue) with display means 105 (light blue);
- coupling part 103 (red) fastening the main part 101 to the cover part 102;
- display reverse switch 106 (orange) to set the display 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.

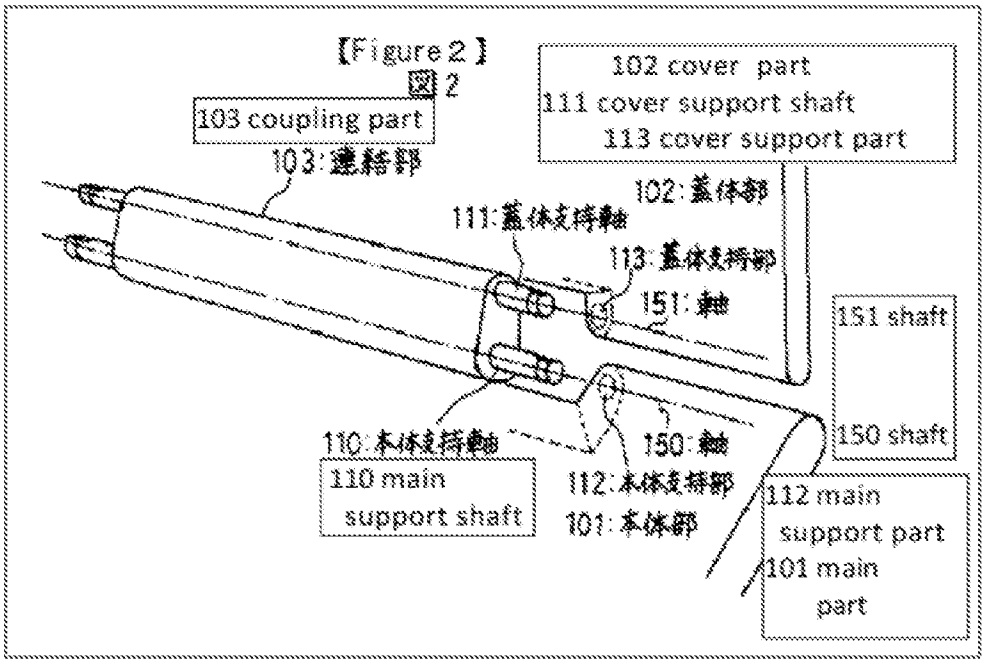


The coupling part 103 allows the cover part 102 to be rotated up to 360° about the main part 101 into various display modes, as illustrated in Figure 3 below. *Id.*, ¶¶11-17. The coupling part 103 may include two shafts 150, 151, which facilitates rotation of the cover part 102 about the main part 101,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

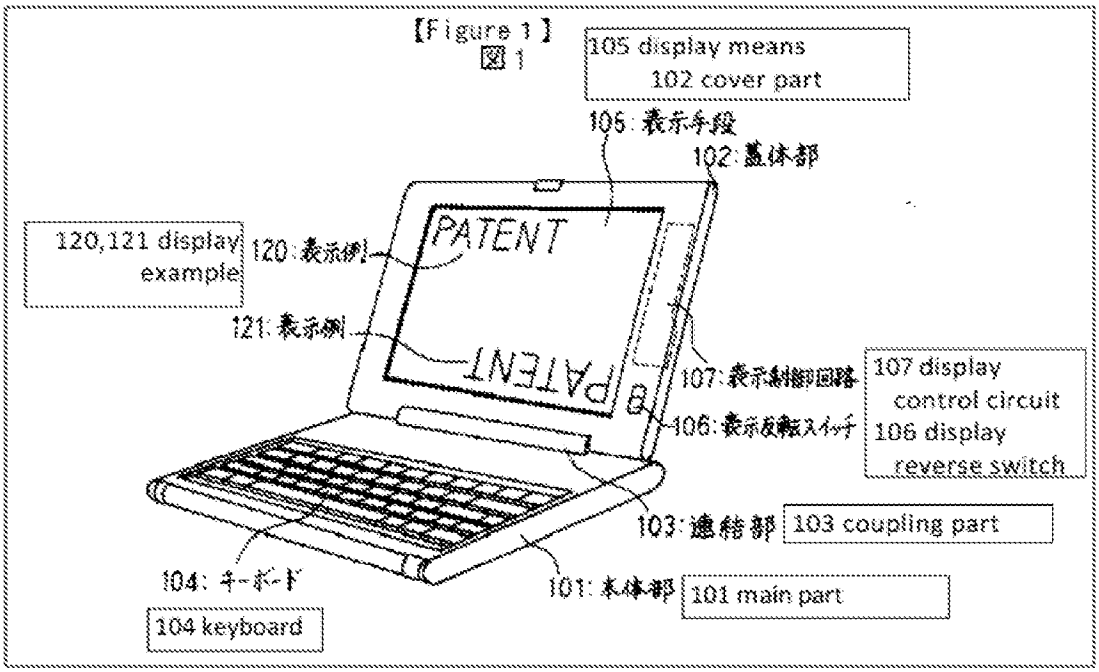
[Figure 3]



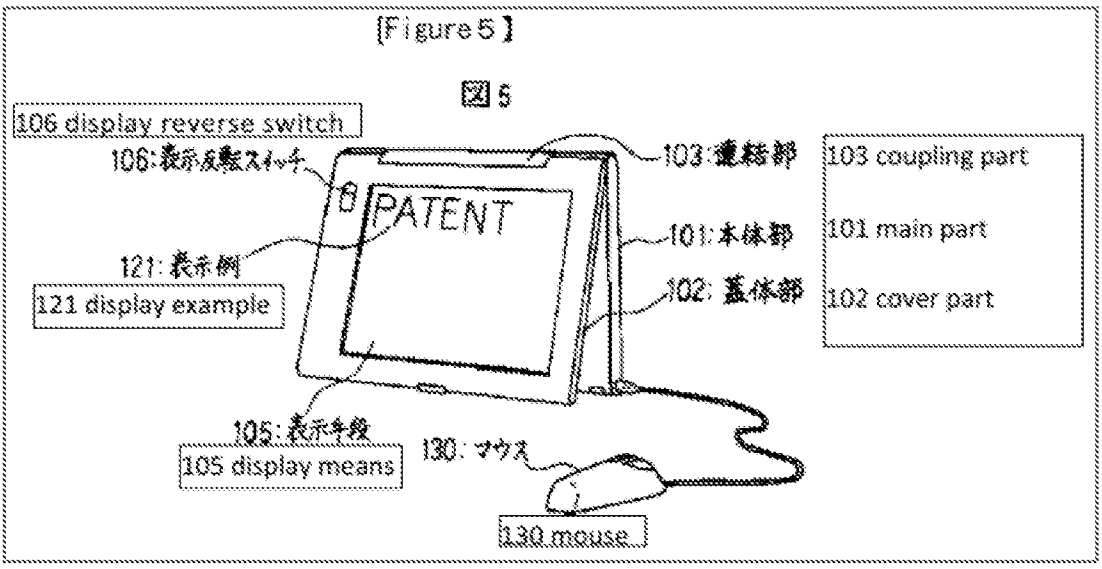
【Figure 2】



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.

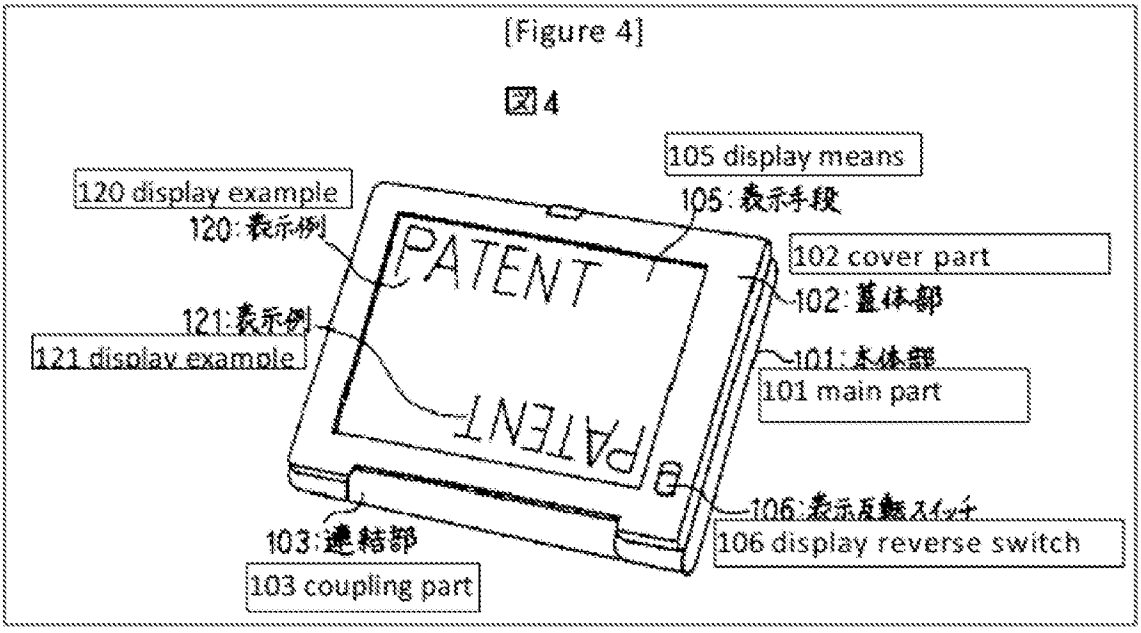


In a second display mode, which corresponds to the easel mode of the '844 Patent, the cover part is rotated 340° about the main part 101 such that the display means 105 is facing the user and the keyboard 104 is facing away from the user, and the user may be limited to interacting with the operating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



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.



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.

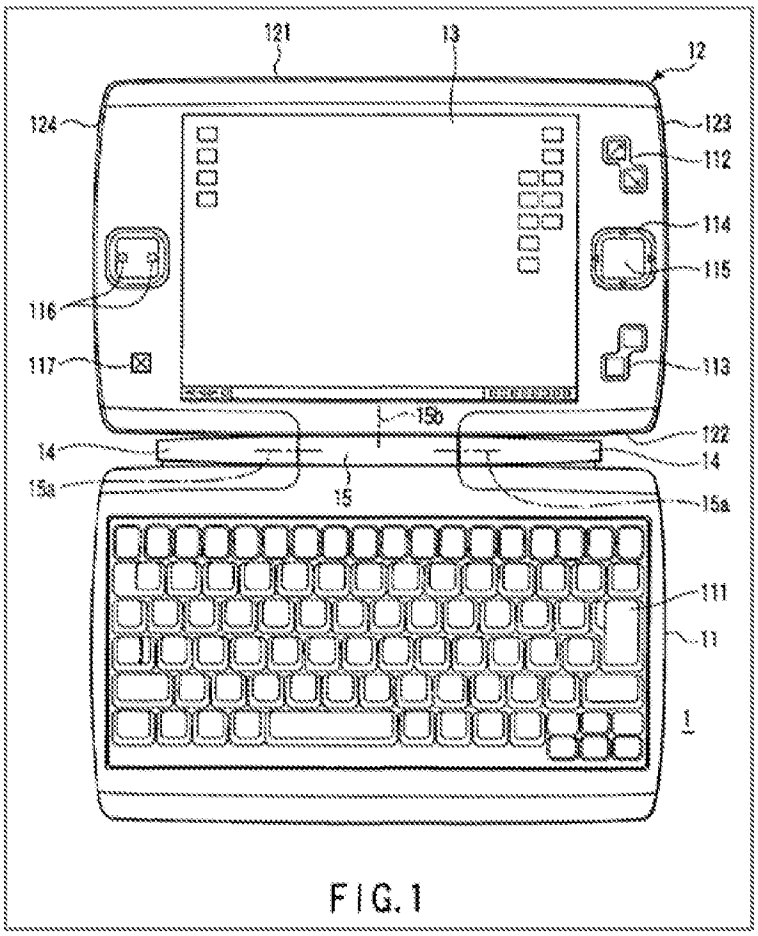


FIG. 1

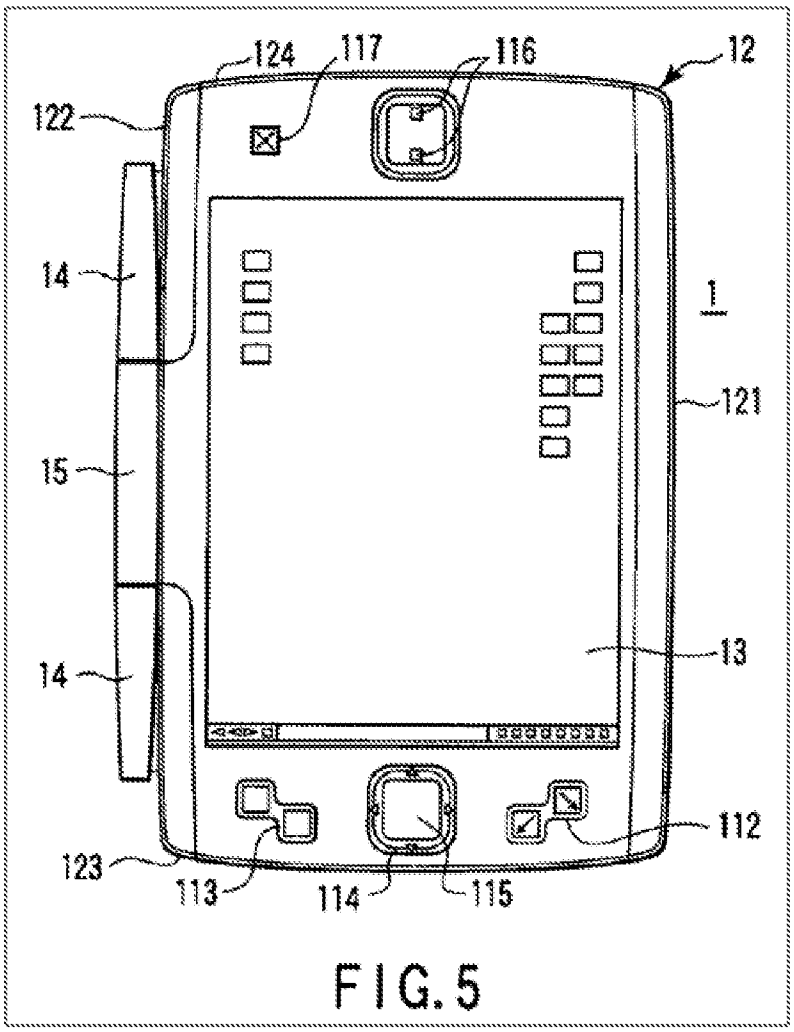


FIG. 5

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.

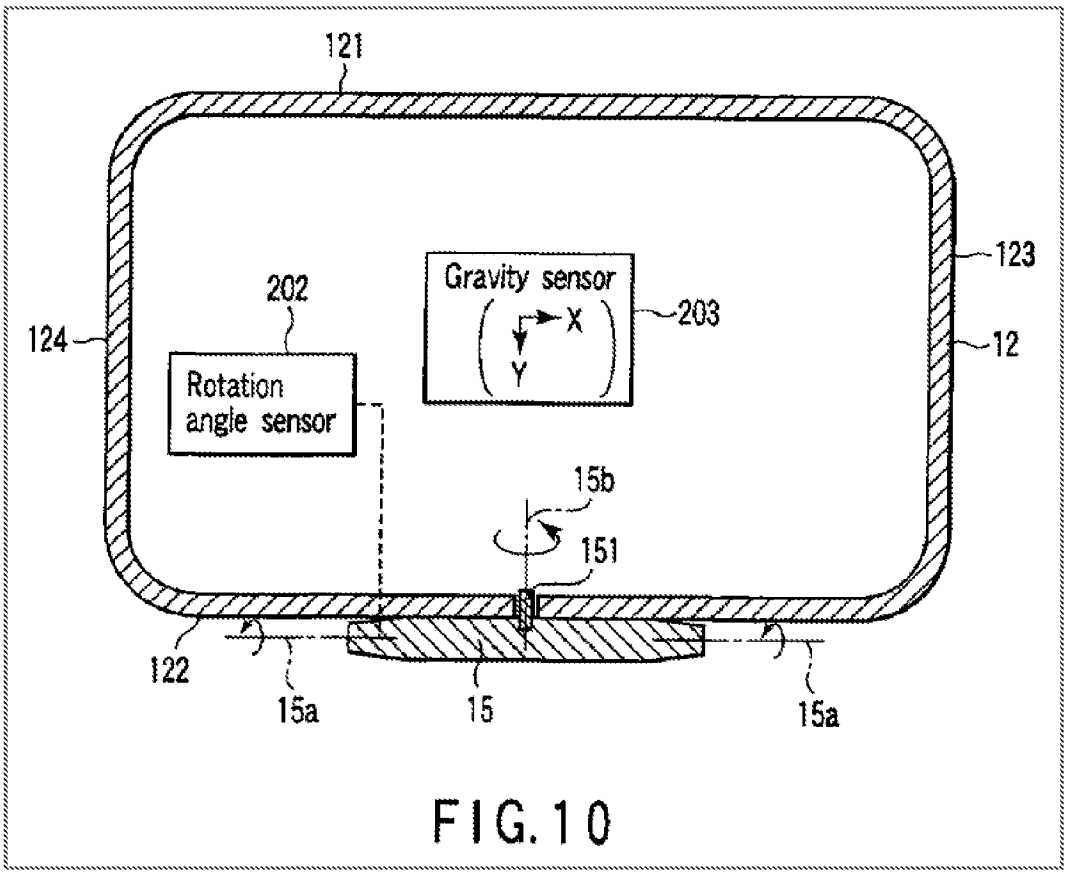


FIG. 10

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.").

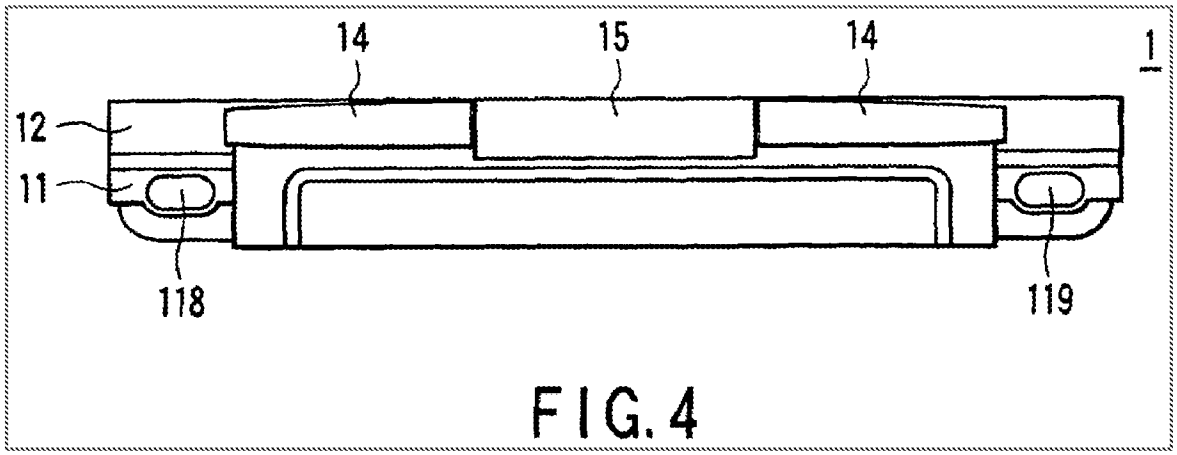


FIG. 4

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]

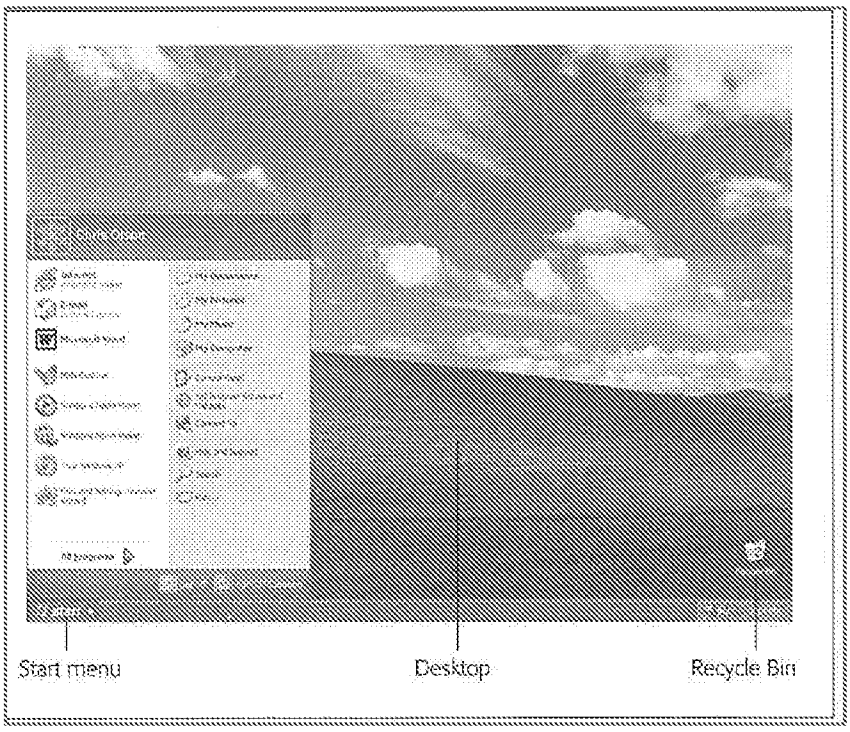
Pogue is a printed publication and is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (b). Pogue bears a marking "Copyright © 2004 Pogue Press, LLC," has an ISBN Number, and a statement that it was "Published by O'Reilly Media, Inc." in the United States. EX-1006, 5; *FLIR Sys., Inc. v. Leak 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

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

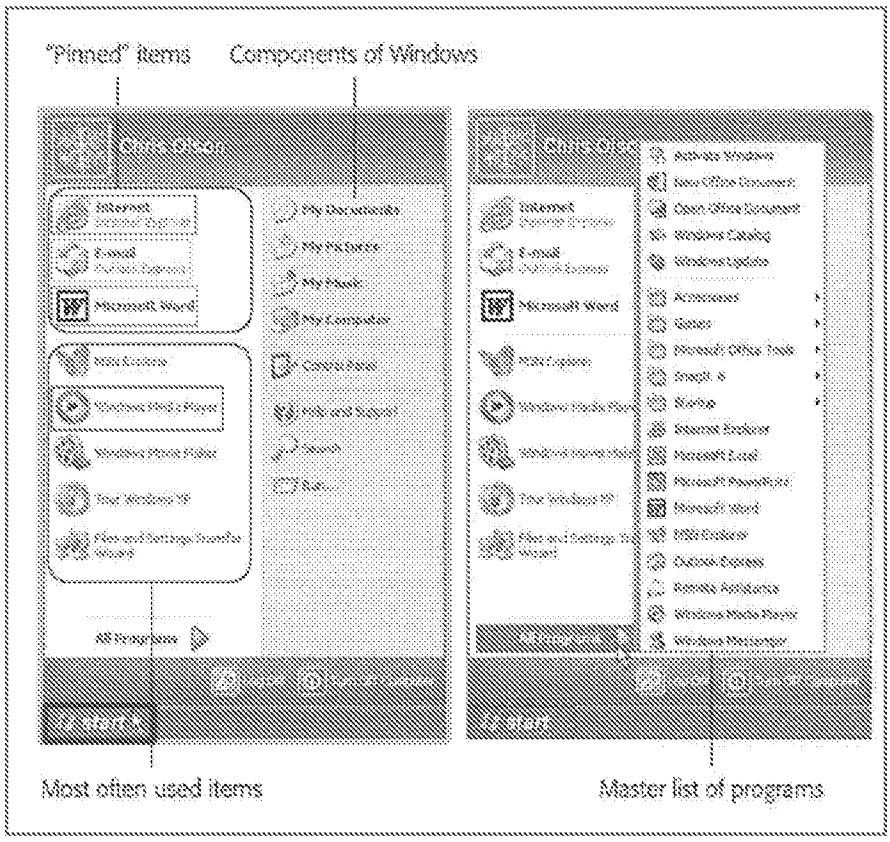
(PTAB Nov. 20, 2019) (Paper 12). Pogue was cataloged by at least one library as early as October 2005. EX-1052, ¶2. As confirmed by the publisher, Pogue was available online to "subscribers, individuals, and libraries" as early as January 11, 2005. EX-1051, ¶5.

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."

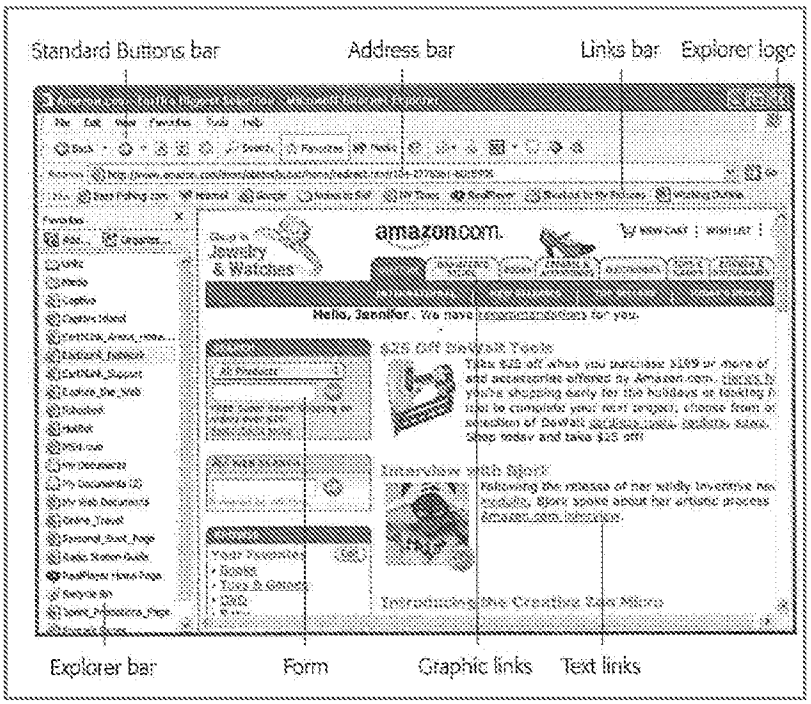


Id., 3, 23, FIG. 2-2.

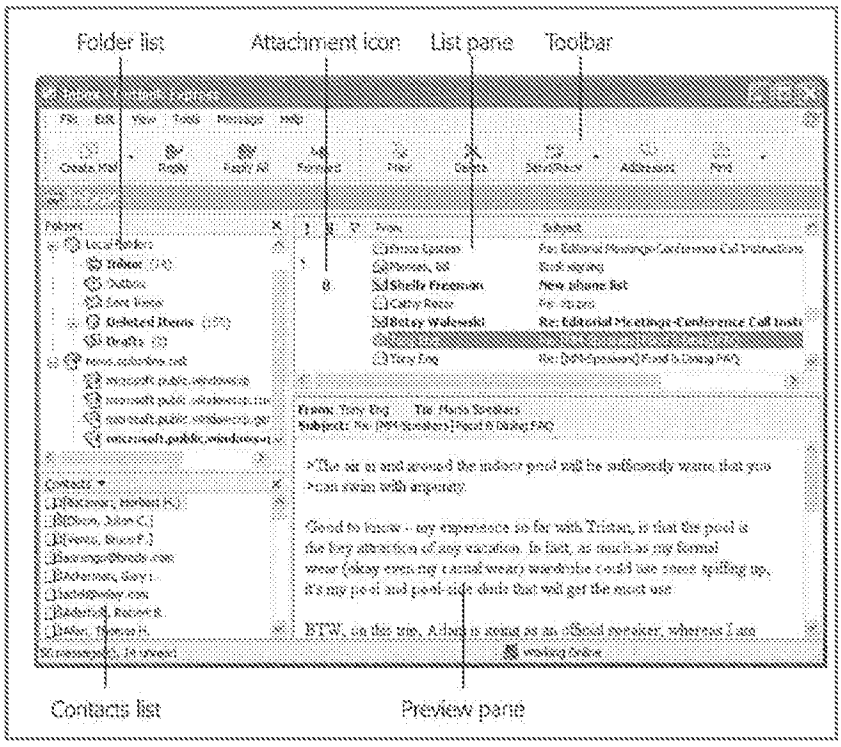
In order to quickly access the Start menu (light green in Figure 2-3 below) and make it visible, a user can click the Start button (purple) or press the Windows logo key or Ctrl+Esc. *Id.*, 25. In the Start menu, the user has access to "Internet" (dark green), "E-mail" (orange), "Microsoft Word" (blue),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



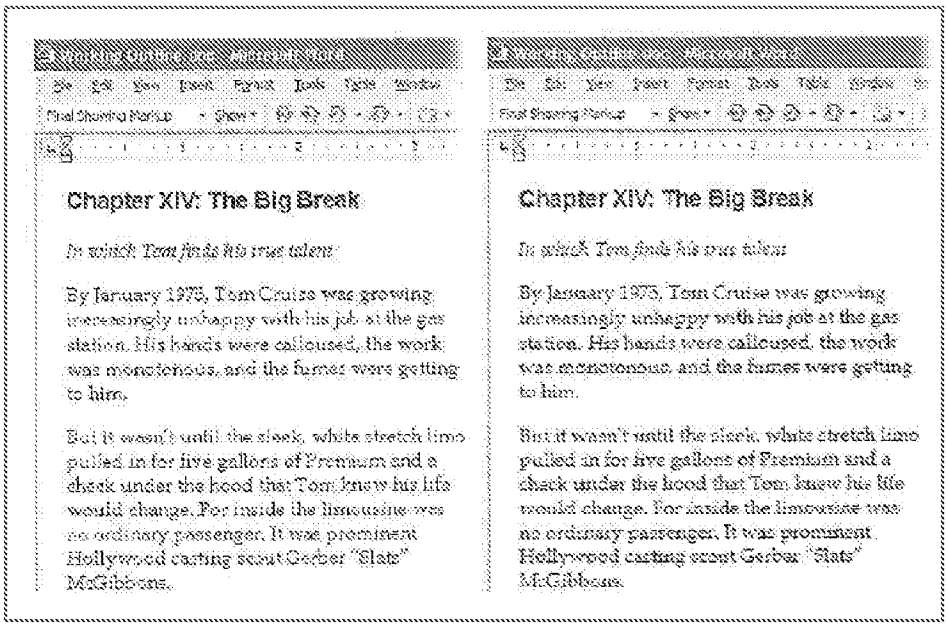
Clicking on the Internet icon opens Internet Explorer to navigate the web. *Id.*, 337-338. After opening Internet Explorer, a web interface is displayed, which includes a standard buttons bar, an address bar, a links bar, an explorer logo, and an explorer bar. *Id.*, Figure 11-1 (below).



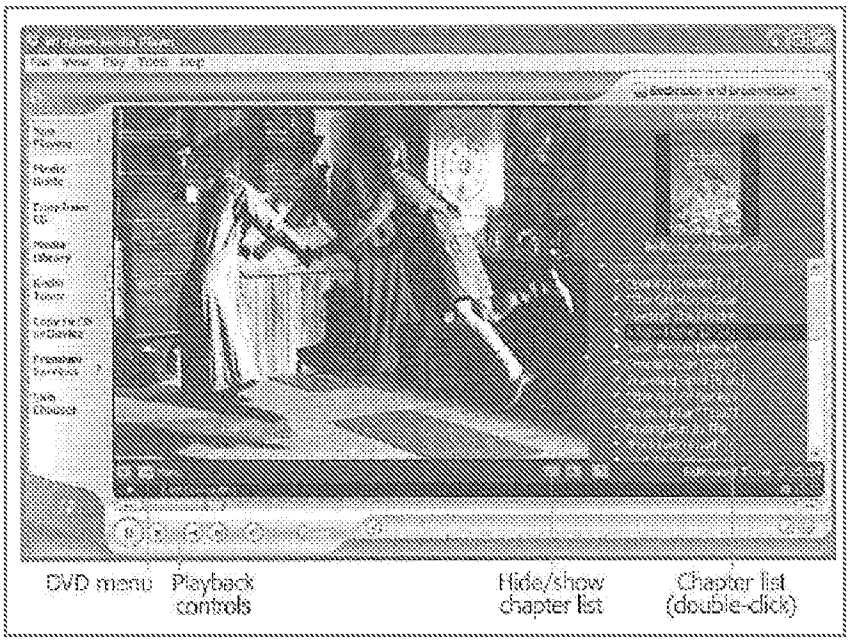
Clicking on the E-mail icon opens Outlook Express "that lets you receive and send email messages." *Id.*, 373. After opening Outlook express, an email interface is displayed, including a folder list, an attachment icon, a list pane, a toolbar, a contacts list, and a preview pane. *Id.*, 375, Figure 12-1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



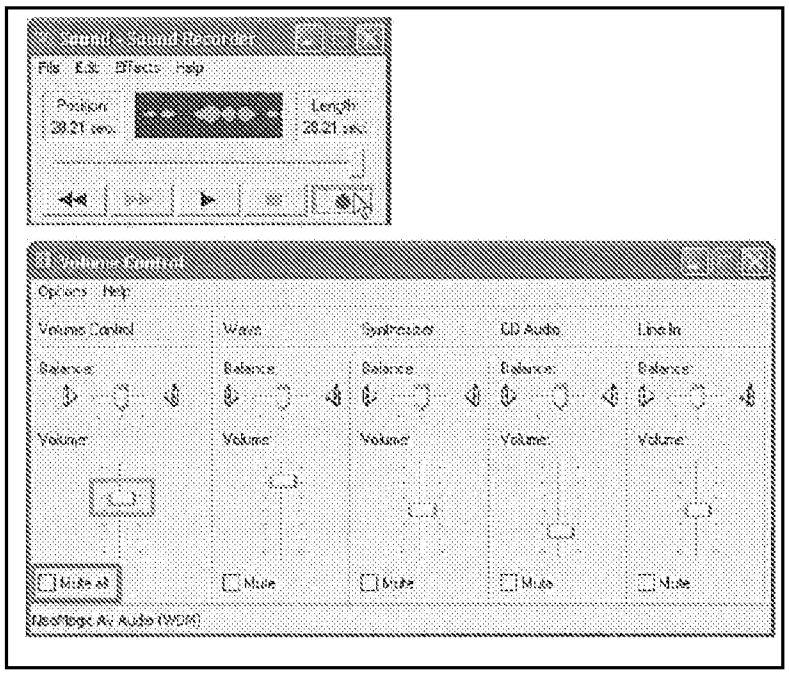
Clicking on the Microsoft Word icon opens a word processing interface. *Id.*, 4, 6, 31, Figure 8-12 (below).



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.



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.

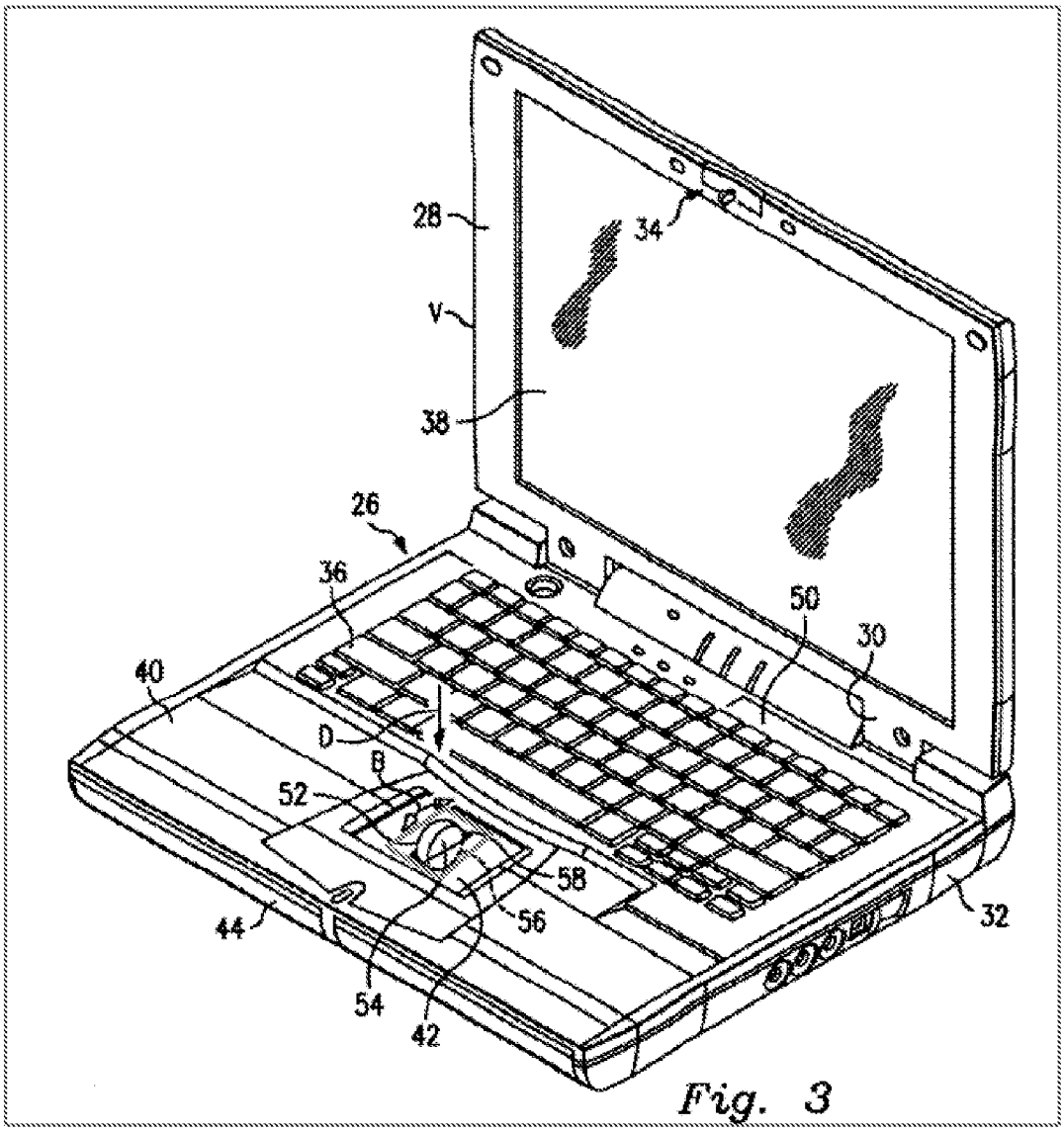


Fig. 3

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.

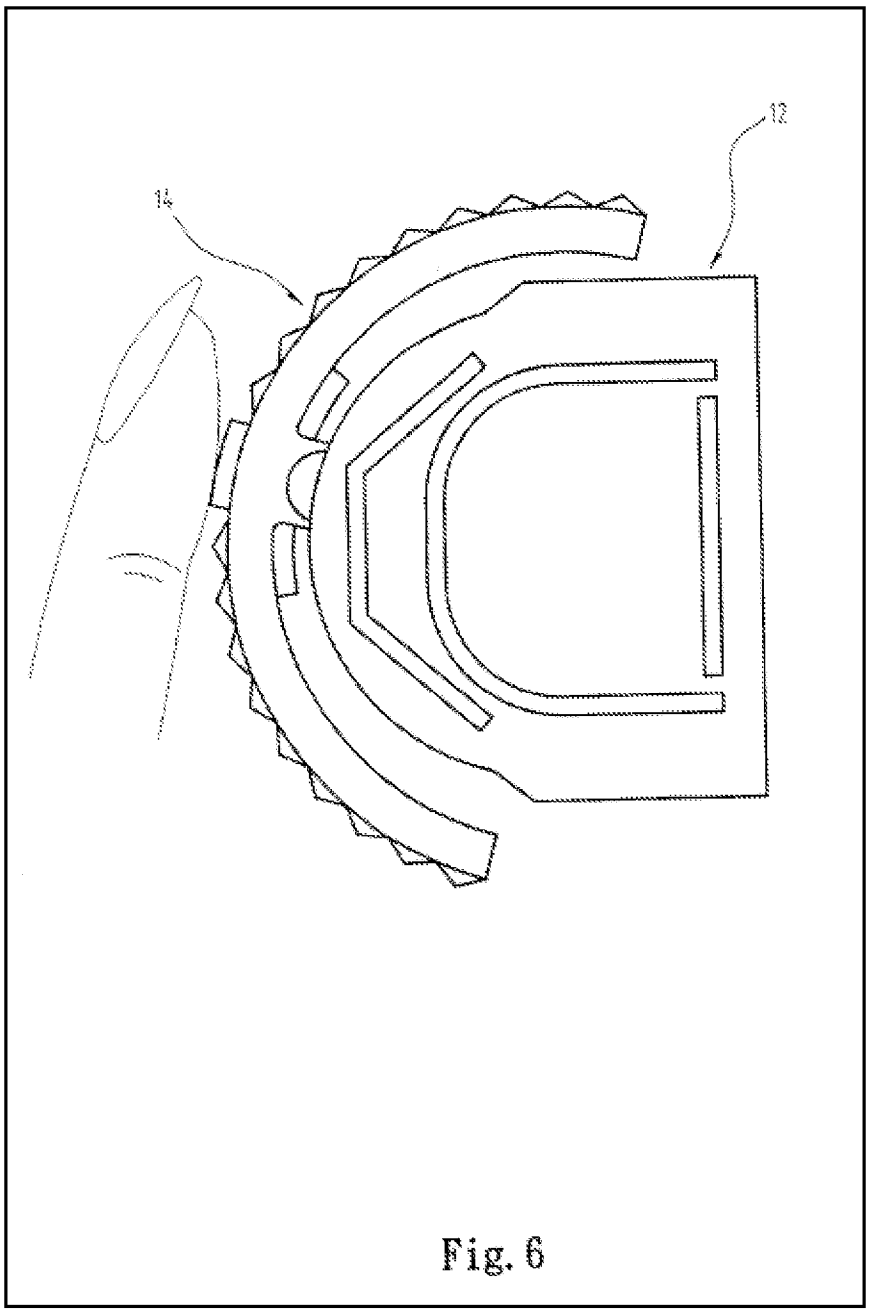


Fig. 6

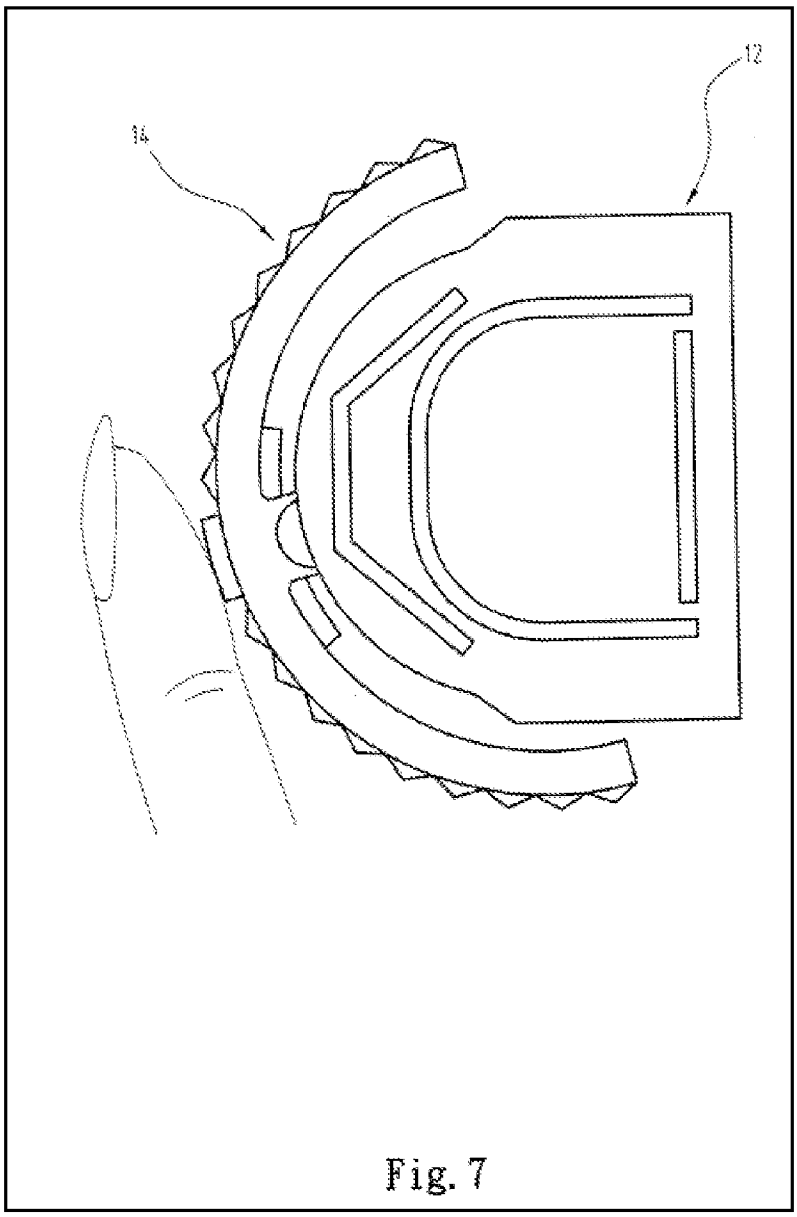


Fig. 7

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.

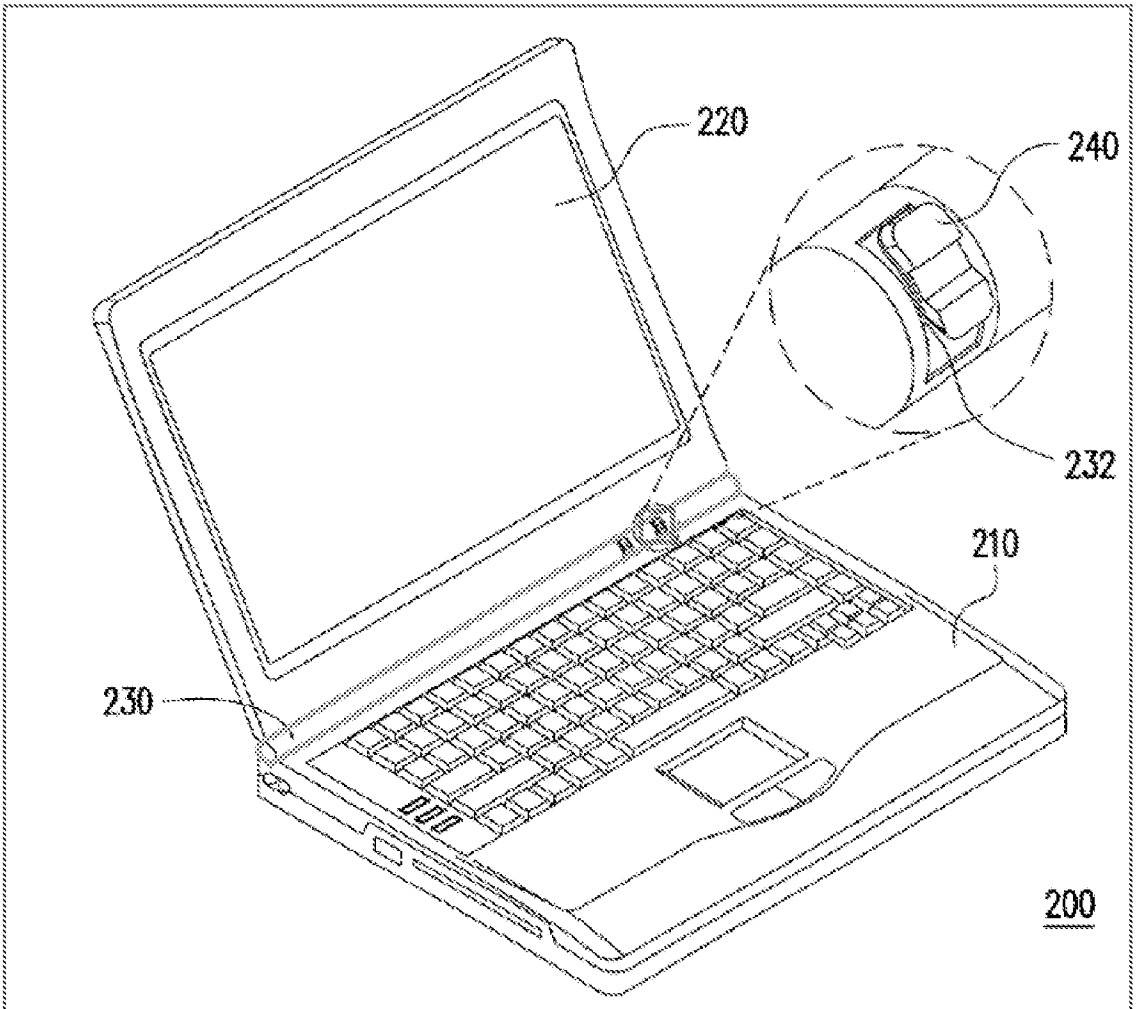


FIG. 2

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

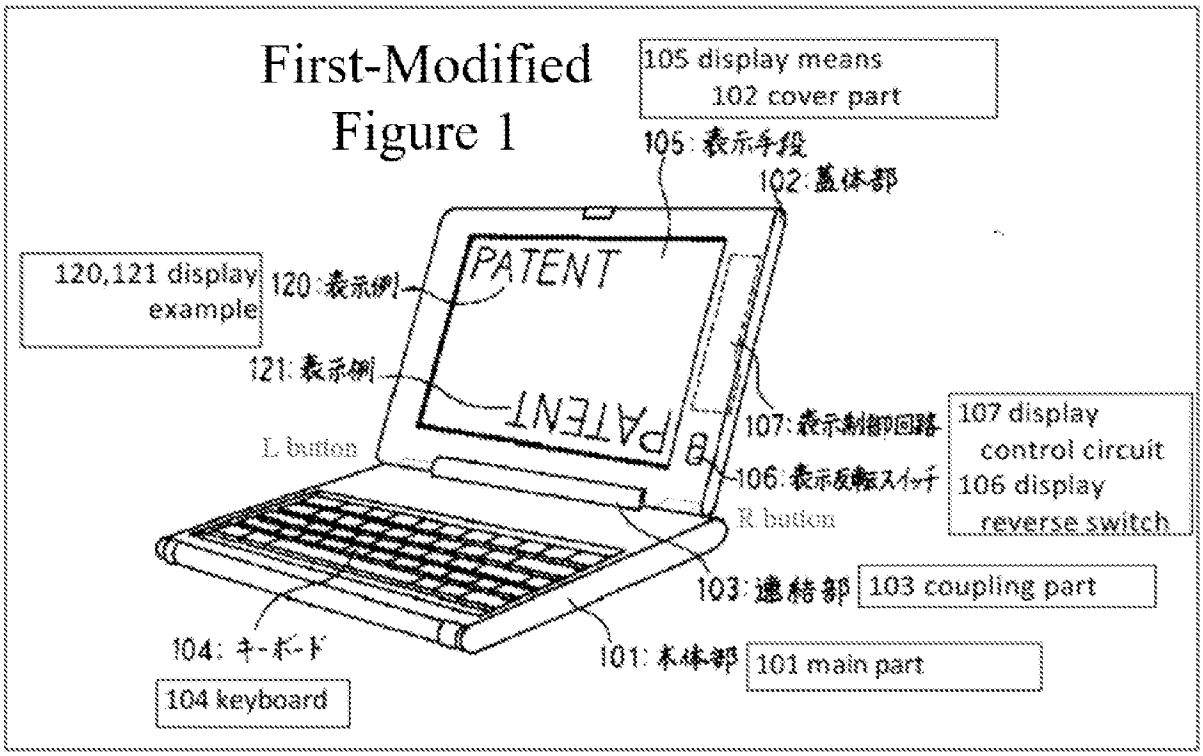
would not require an external peripheral device (e.g., a mouse, or stylus). There is additional motivation to incorporate Tsuji's touch-sensitive display because the keyboard is not always accessible or operable in all of the display modes of the Shimura Computer. Thus, a display capable of receiving input from a finger would improve a user's interaction with the Shimura Computer. EX-1010, ¶163.

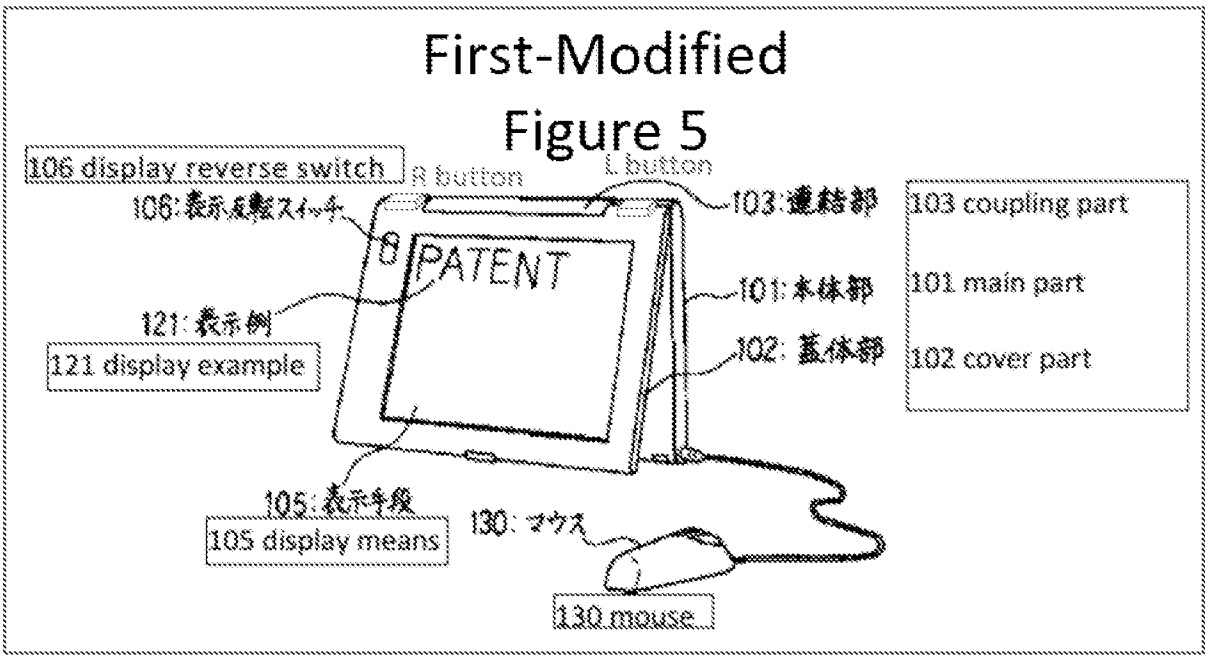
A POSITA would have understood that the Shimura Computer incorporating Tsuji's touch screen includes other well-known portable computer components. E.g., Tsuji discloses that the computer main body 11 includes a CPU (central processing unit). EX-1005, ¶¶30, 63. While such a CPU is not explicitly disclosed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

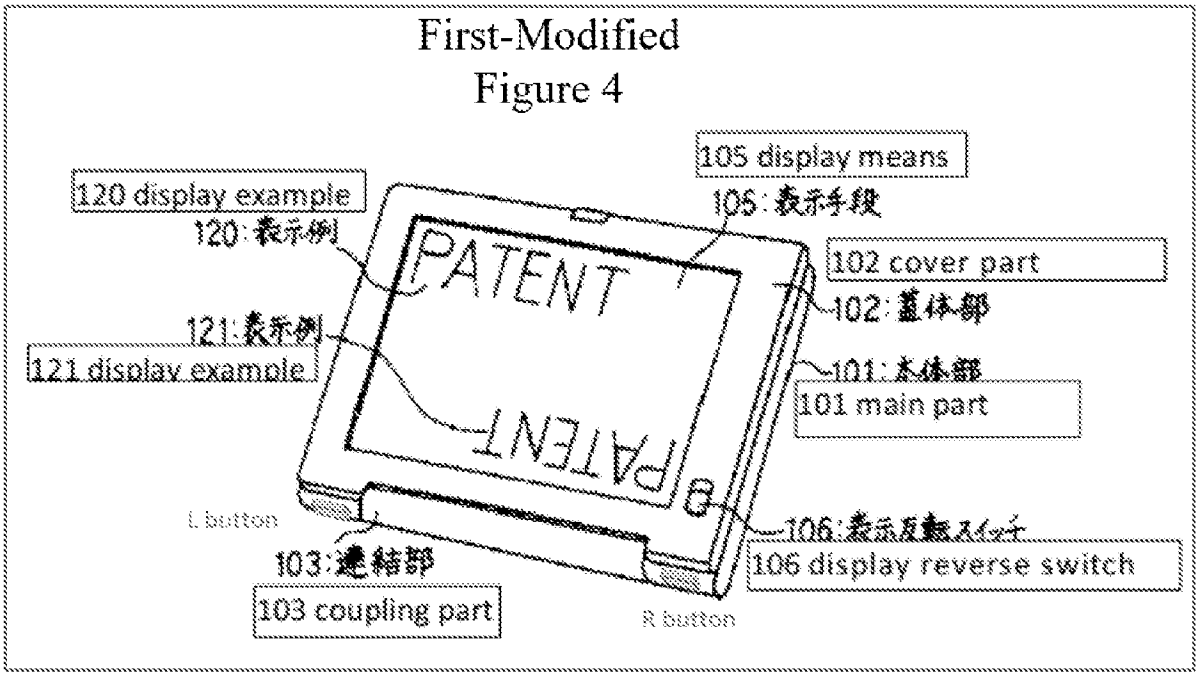
b. Further Incorporating Tsuji's R and L Buttons into the Shimura Computer

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.







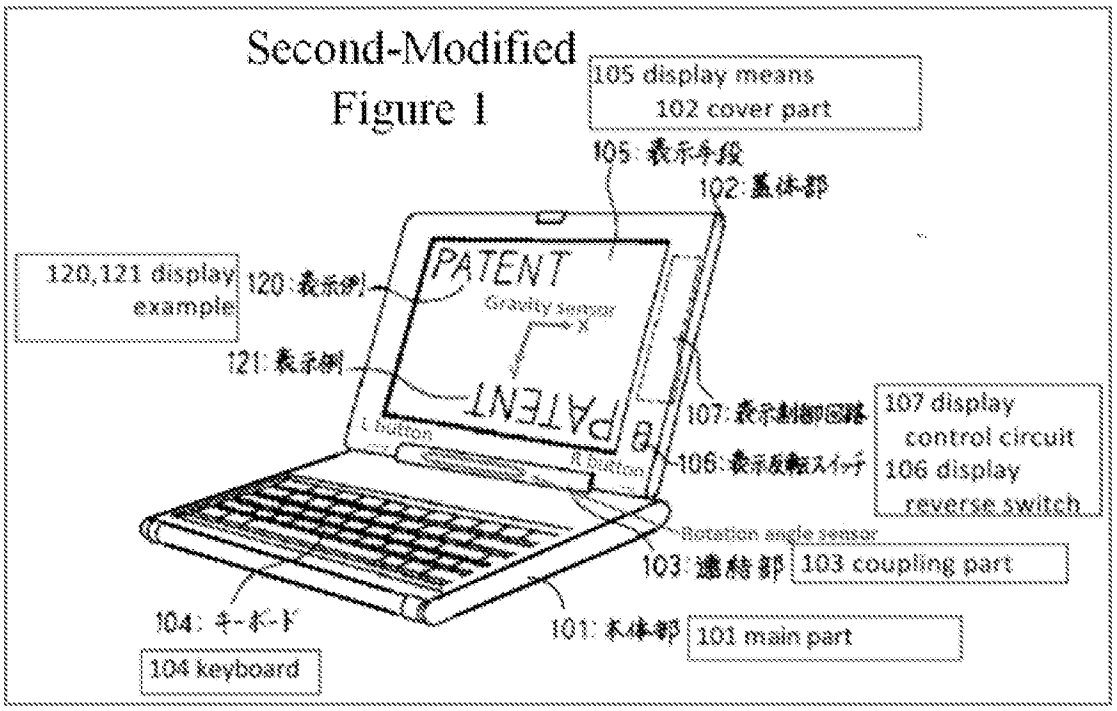
c. Further Incorporating Tsuji's Rotation Angle and Gravity Sensors into the Shimura Computer

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.

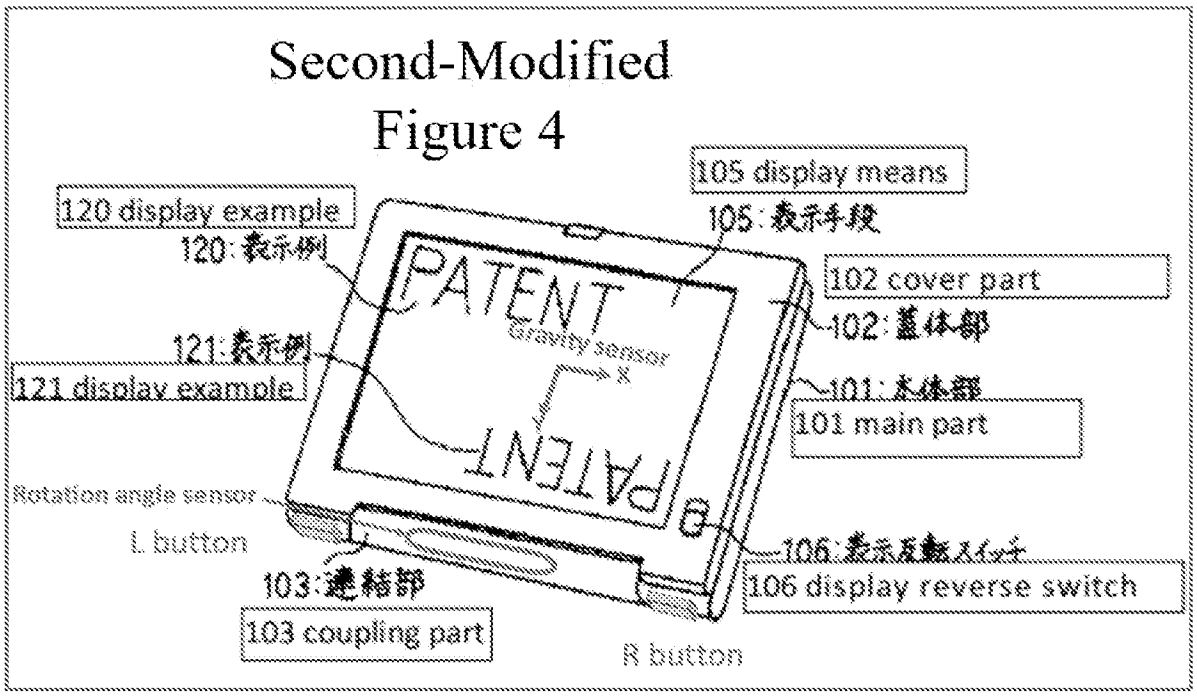
Specifically, Tsuji discloses the rotation angle sensor 202 sensing whether a rotation angle is greater than a specific rotation angle, and the gravity sensor 203 "sensing which orientation the display unit main body is located in relative to the orientation of the force of gravity." EX-1005, ¶¶58-59. 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.

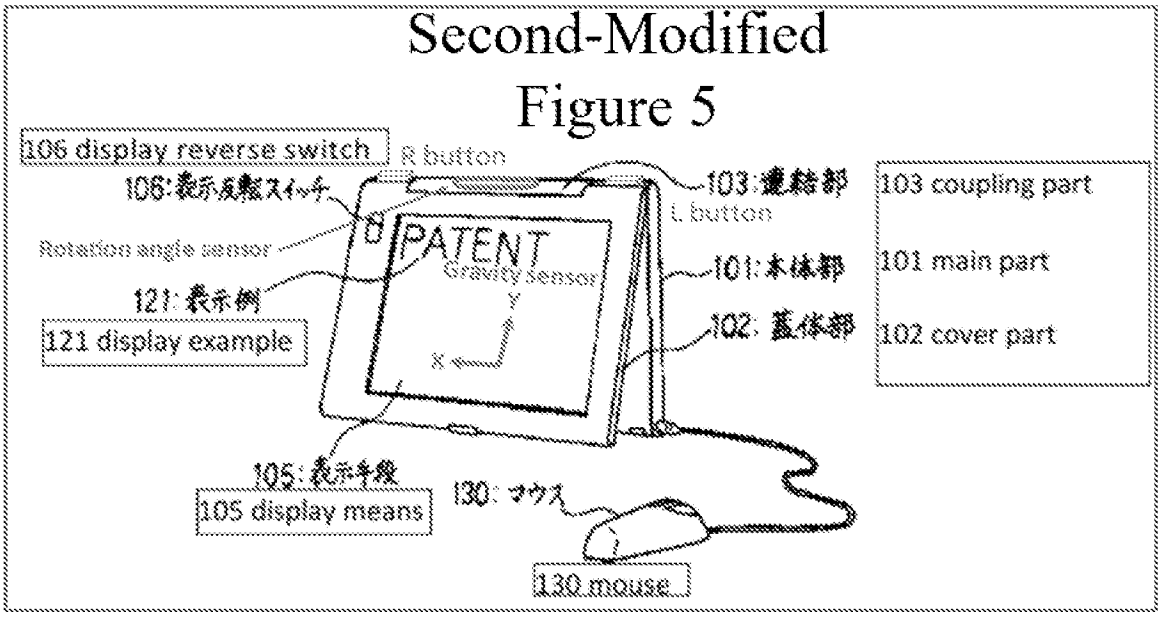
Also based on the above disclosure of Tsuji, a POSITA would have been motivated to implement Tsuji's rotation angle sensor in the hinge of the Shimura Computer, and Tsuji's gravity sensor in the cover part 102 of the Shimura Computer, as illustrated in Second-Modified Figure 1 of Shimura below. EX-1010,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



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.





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

---

[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.

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.

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.

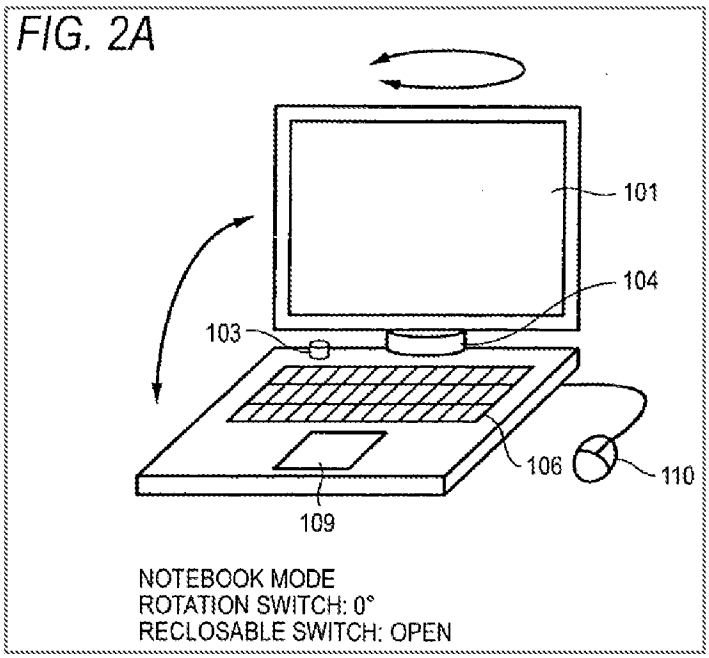
2. Combination of Shimura, Tsuji, and Pogue (hereafter "Shimura-Tsuji-Pogue combination")

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.

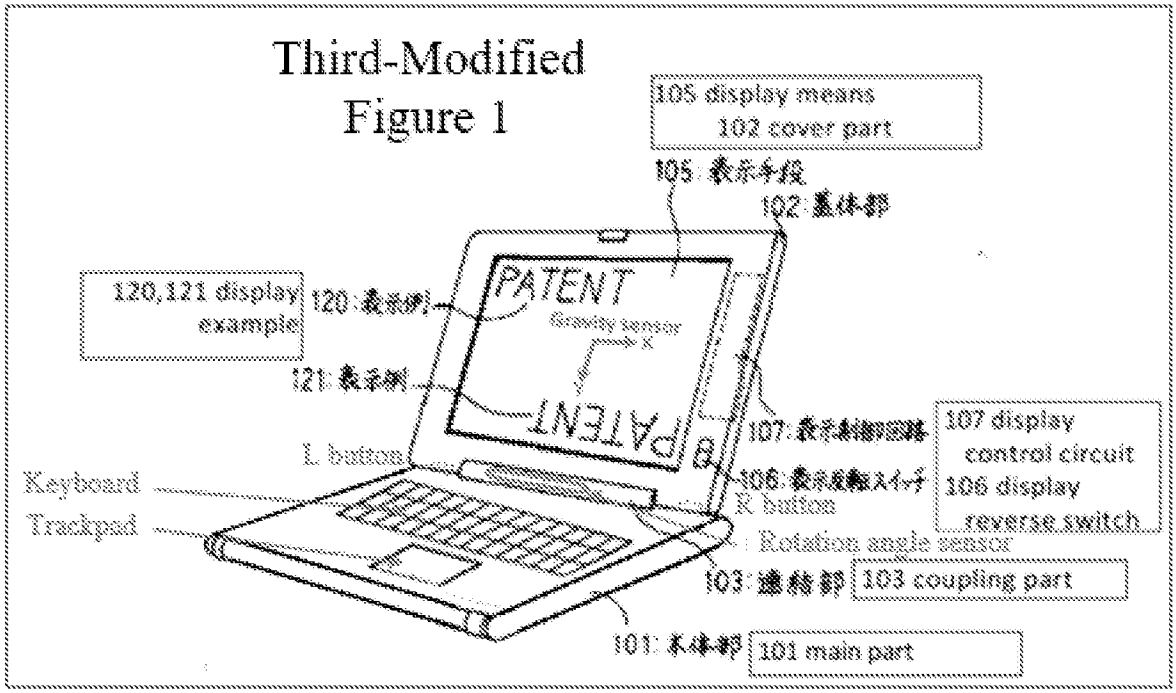
The hardware requirements to run Windows XP include a 233 MHz processor clock speed, 64 MB of RAM, 1.5 GB of free hard disk space, 800x600 resolution video adapter and monitor, a CD-ROM or DVD drive, and a keyboard

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.

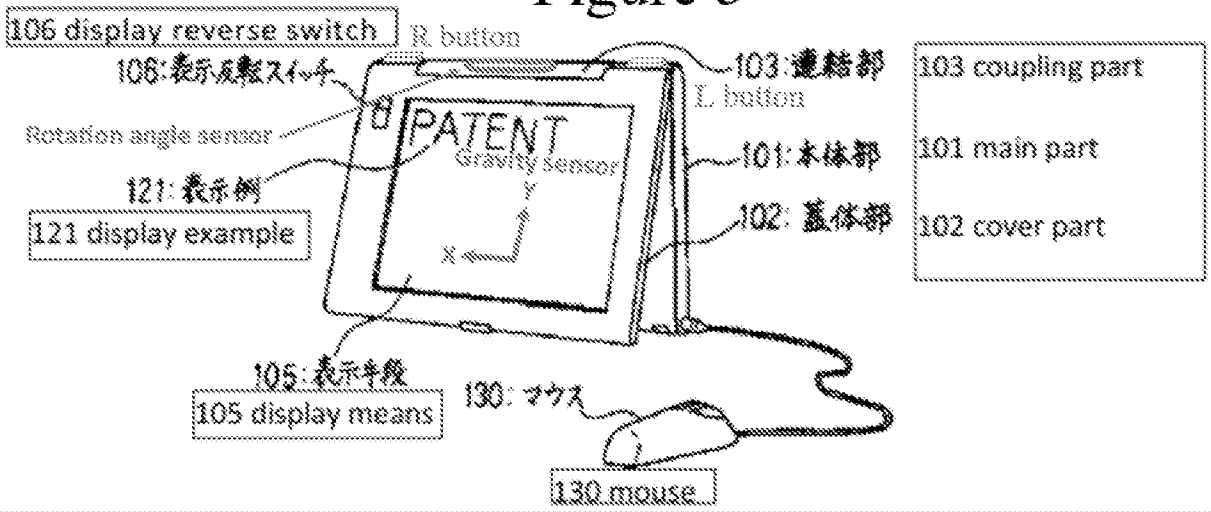


The resulting system, as illustrated in Third-Modified Figure 1 of Shimura, including Windows XP and Pogue's trackpad disposed into an upper surface of main part 101, will be hereafter referred to as the "Shimura-Tsuji-Pogue Computer." EX-1010, ¶181.



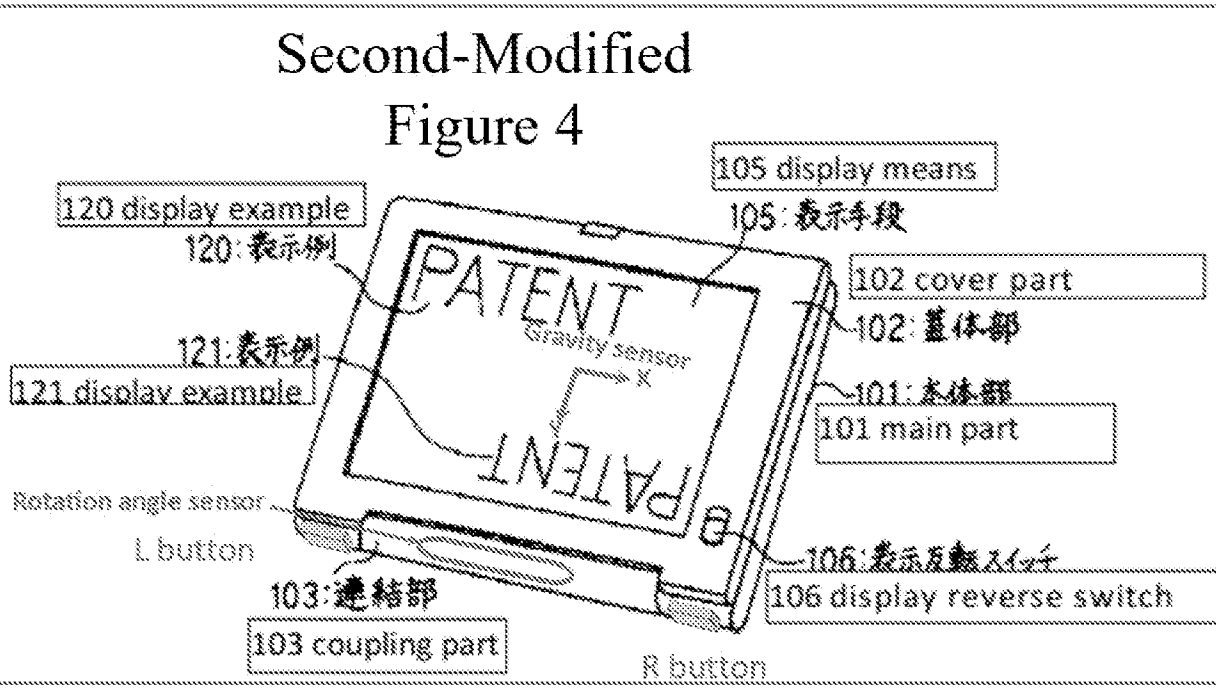
Second-Modified Figure 5 of Shimura below illustrates the same system in the easel mode.

Second-Modified Figure 5



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

Second-Modified Figure 4



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

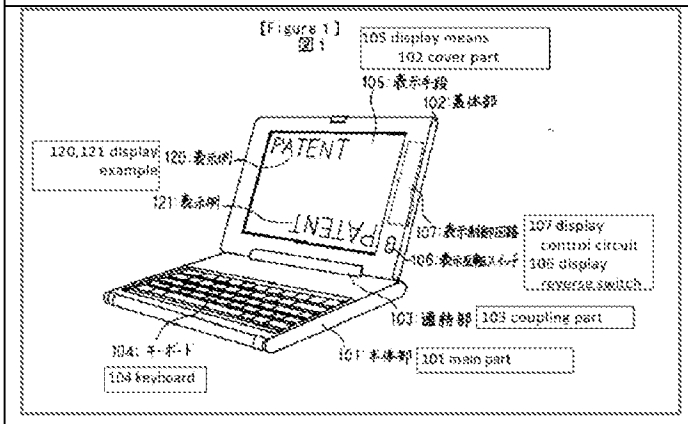
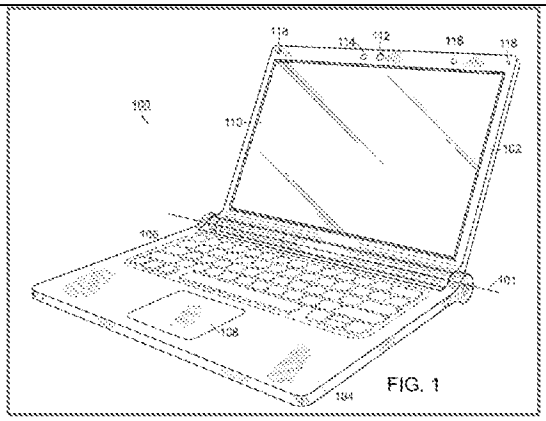
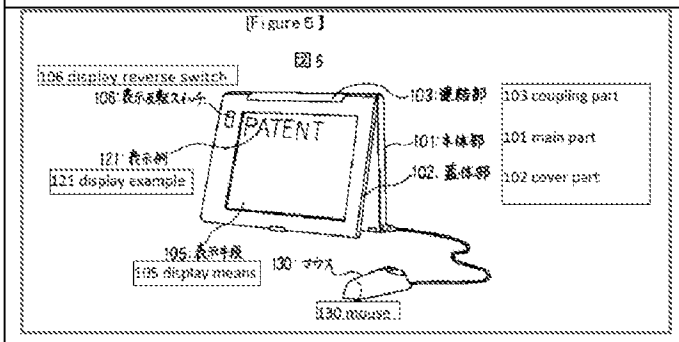
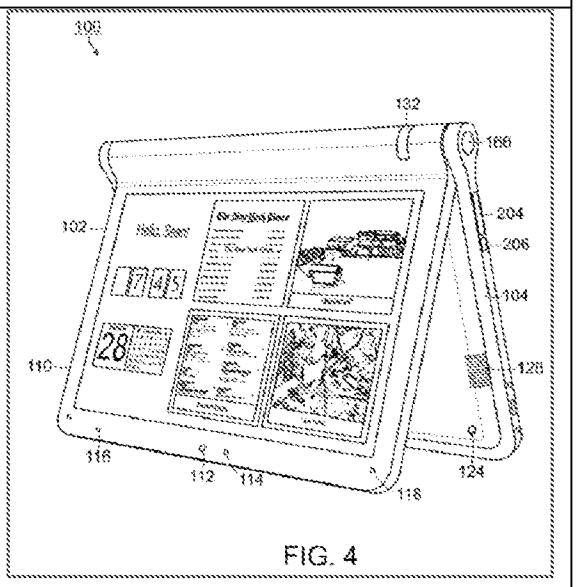
a. Limitation [1pre]

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	
	
Easel mode	
	

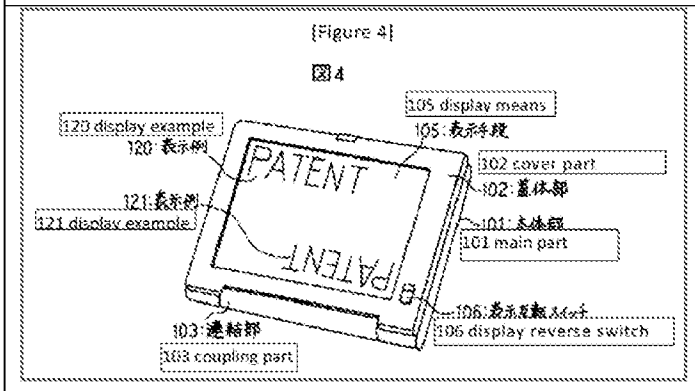
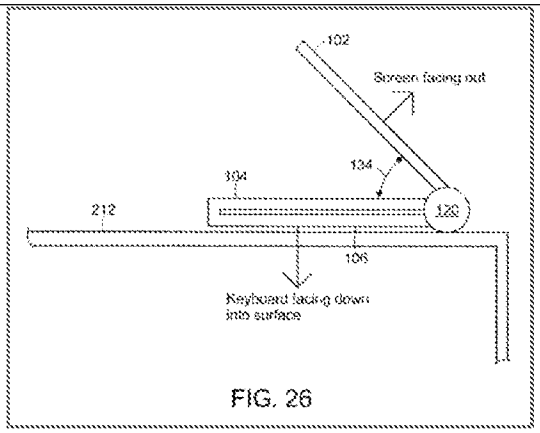
Frame mode	
	

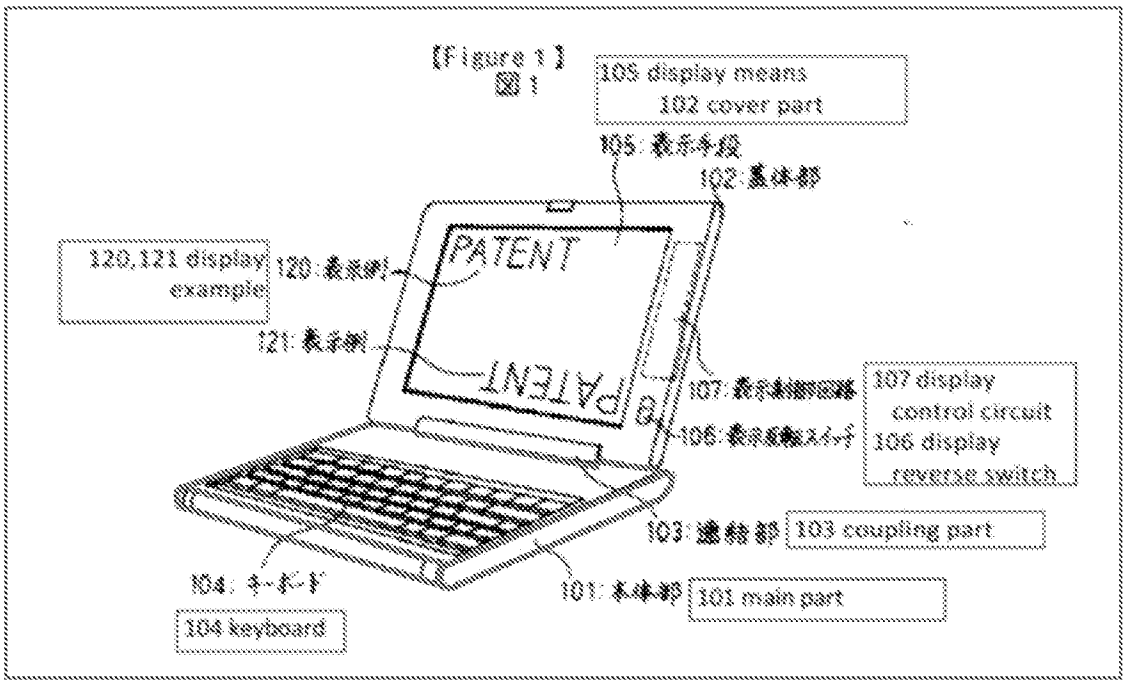
Table 3

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.

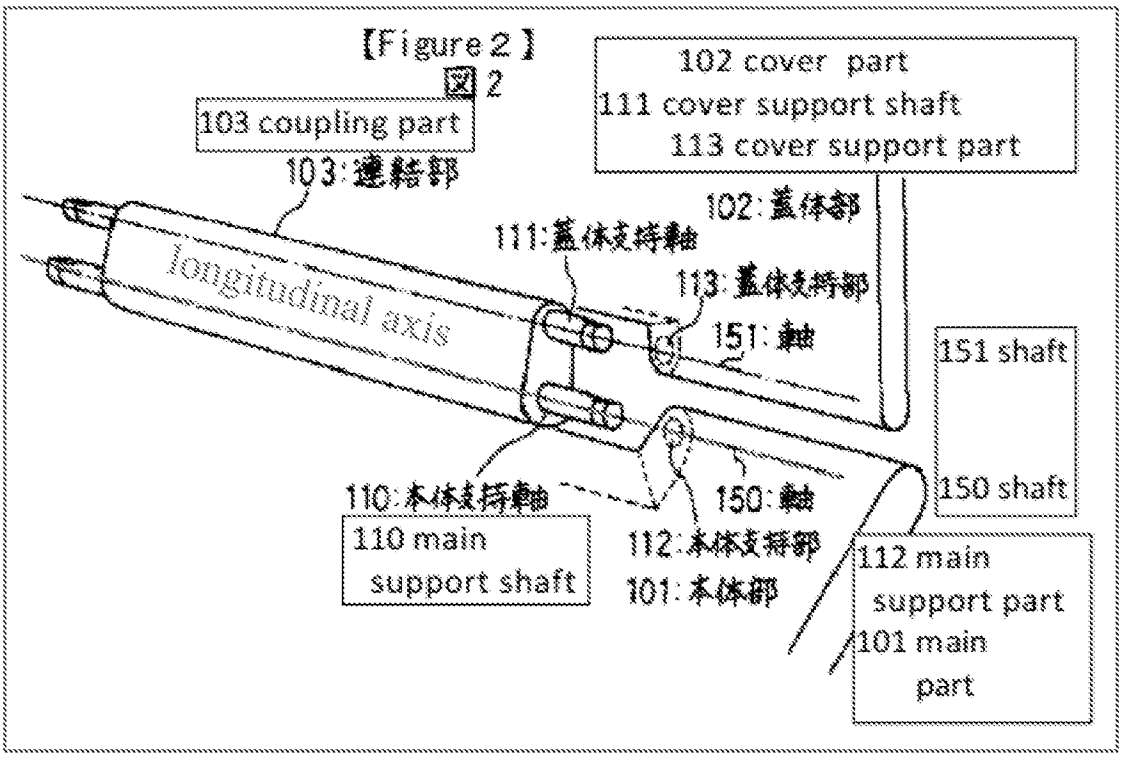
Shimura's Figure 1 below shows the claimed "base" (Shimura's main part 101 in red) including the claimed "keyboard" (Shimura's keyboard 104).

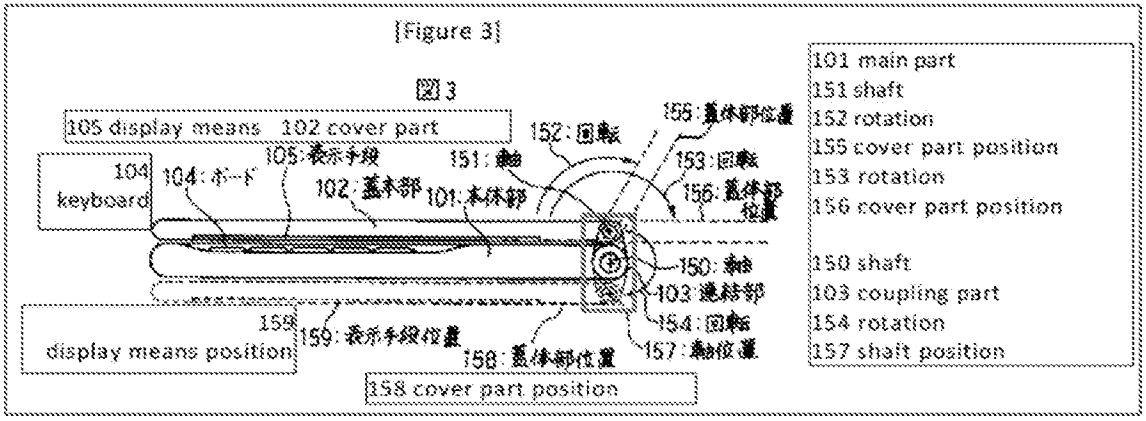


c. Limitation [1b1]

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.

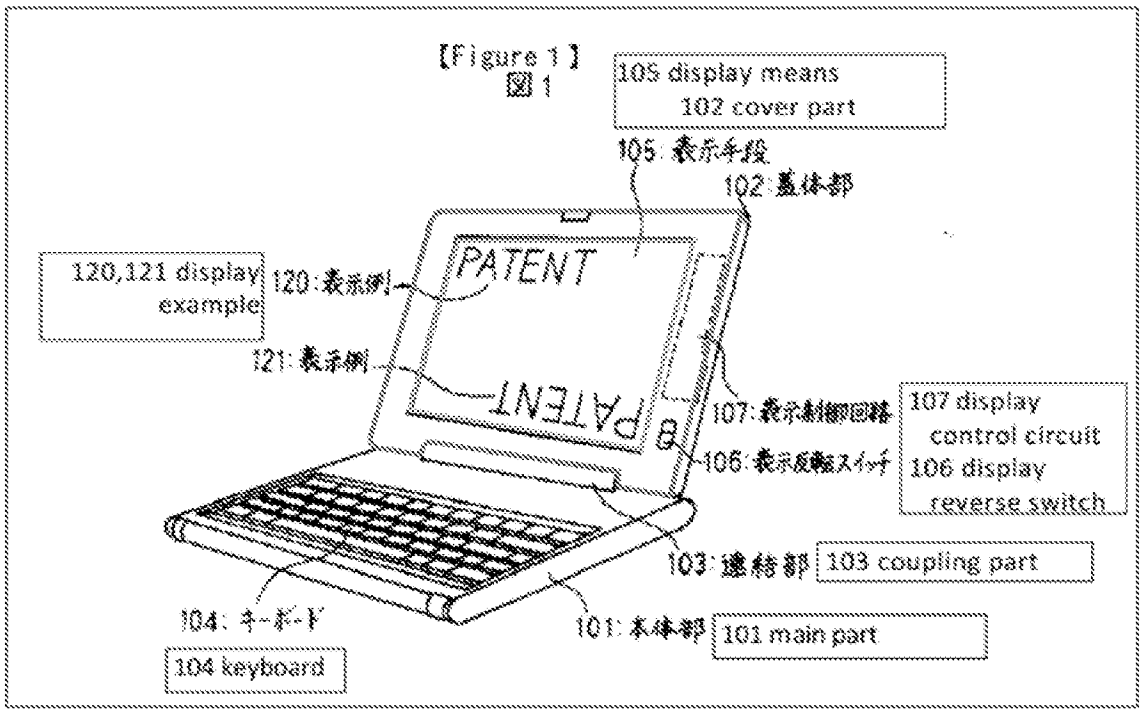




d. Limitation [1b2]

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.



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]

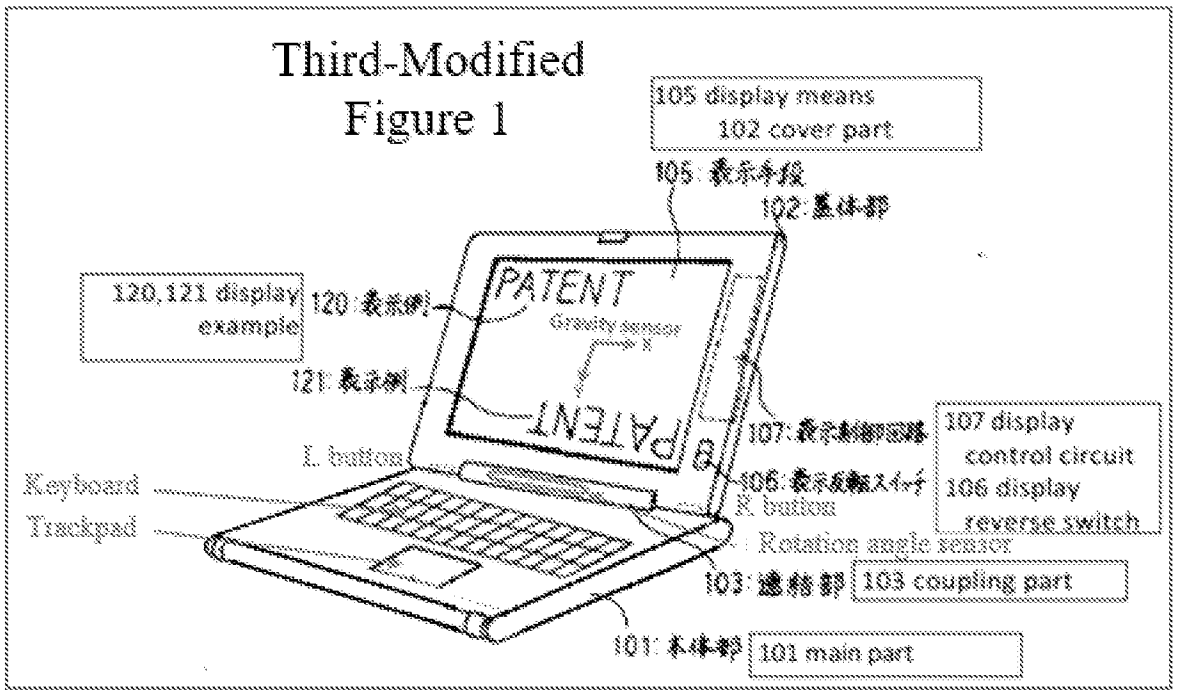
The Shimura-Tsuji-Pogue combination discloses [1d2] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.a (discussion of touch-sensitive display); EX-1010, ¶¶217-18.

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]

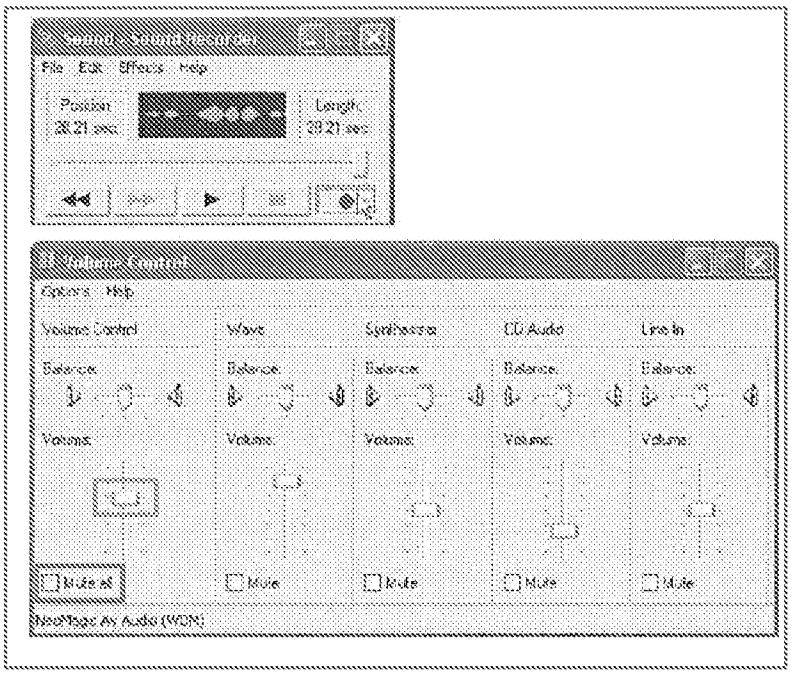
The Shimura-Tsuji-Pogue combination discloses [1e1] and renders it obvious. *See* VIII.A.3; VIII.B.2; EX-1010, ¶¶219-31.

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).



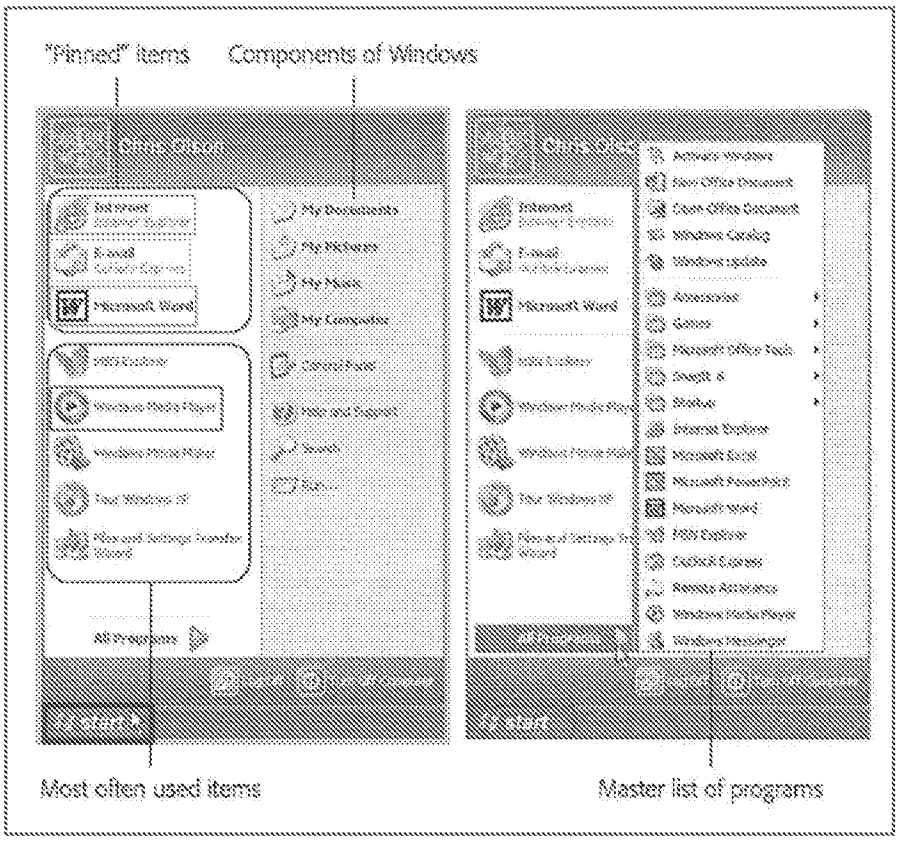
The trackpad of the Shimura-Tsuji-Pogue Computer is the "navigation control [1] disposed at least partially within the base and [2] rotatable about the longitudinal axis" because (1) the trackpad is disposed within the main part 101 of the Shimura-Tsuji-Pogue Computer that (2) can be rotated about the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



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. <u>Claim 3</u>

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.

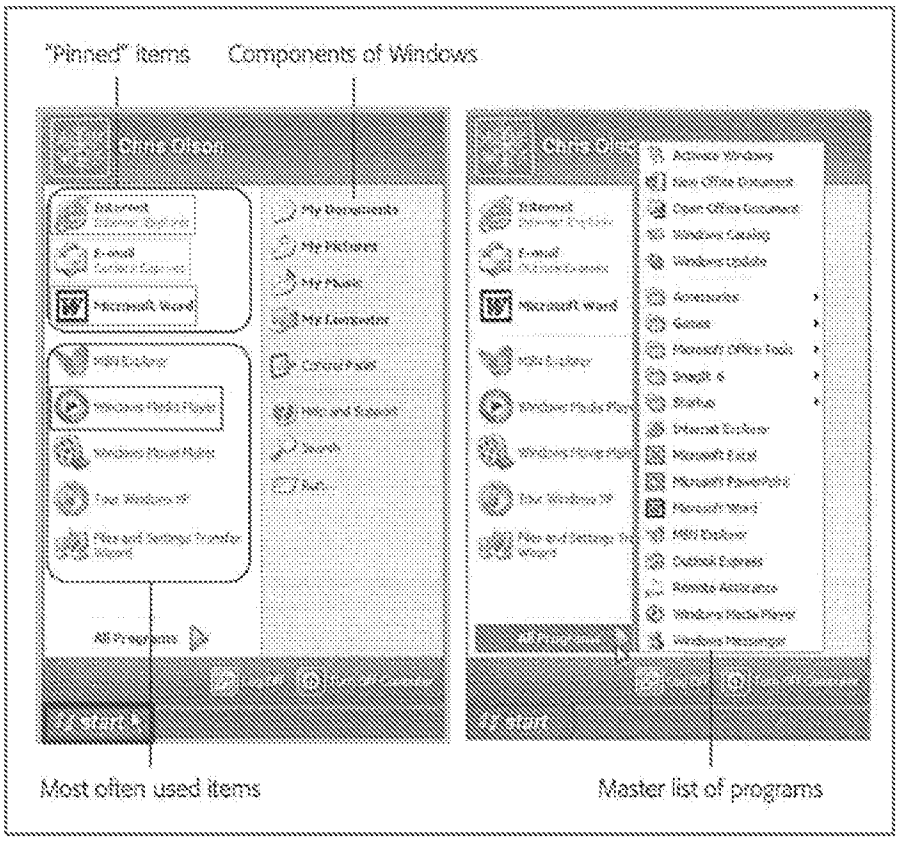
The "modes of content" means "user selectable elements displayed on a user interface that, when selected, allows the user to access the content organized therein," which includes media, connect, application, and web content modes. *See* VII; EX-1001, 11:44-52.

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.



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.

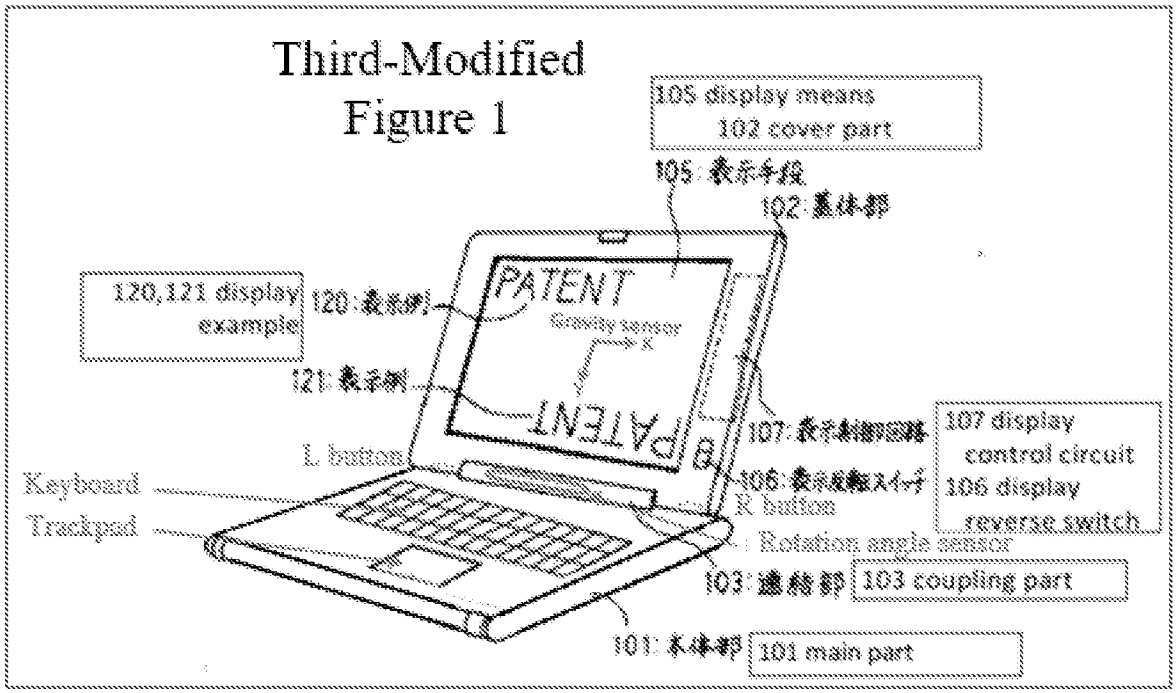
Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 4. *Id.*, ¶¶238-246.

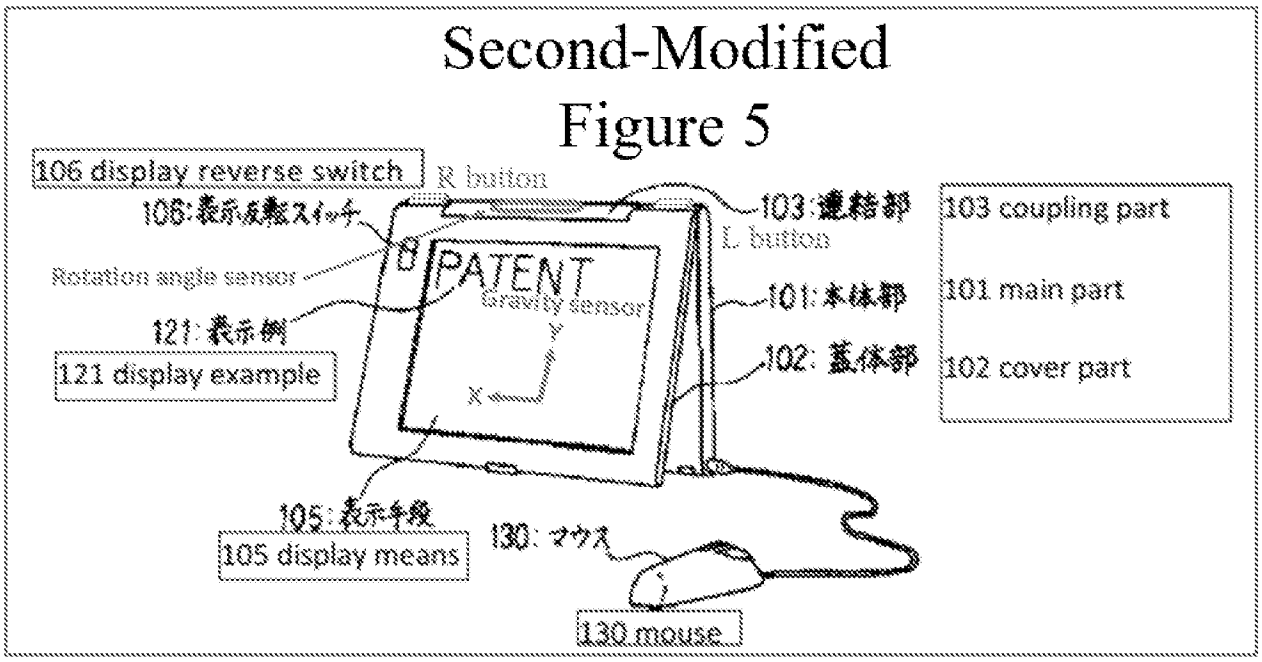
6. <u>Claim 5</u>

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.





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.

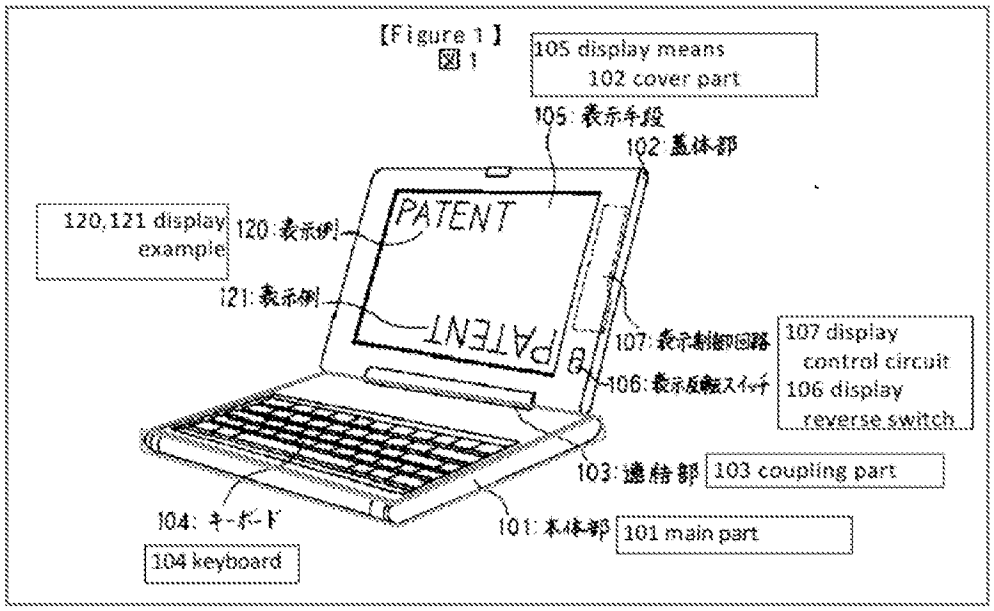
Alternatively, the R or L button can be programmed with another function, including (1) the display inversion functionality disclosed in Shimura by the display reverse switch 106 and disclosed in Tsuji by using the rotation angle sensor and the gravity sensor and (2) Pogue's Start menu button. *Id.*,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

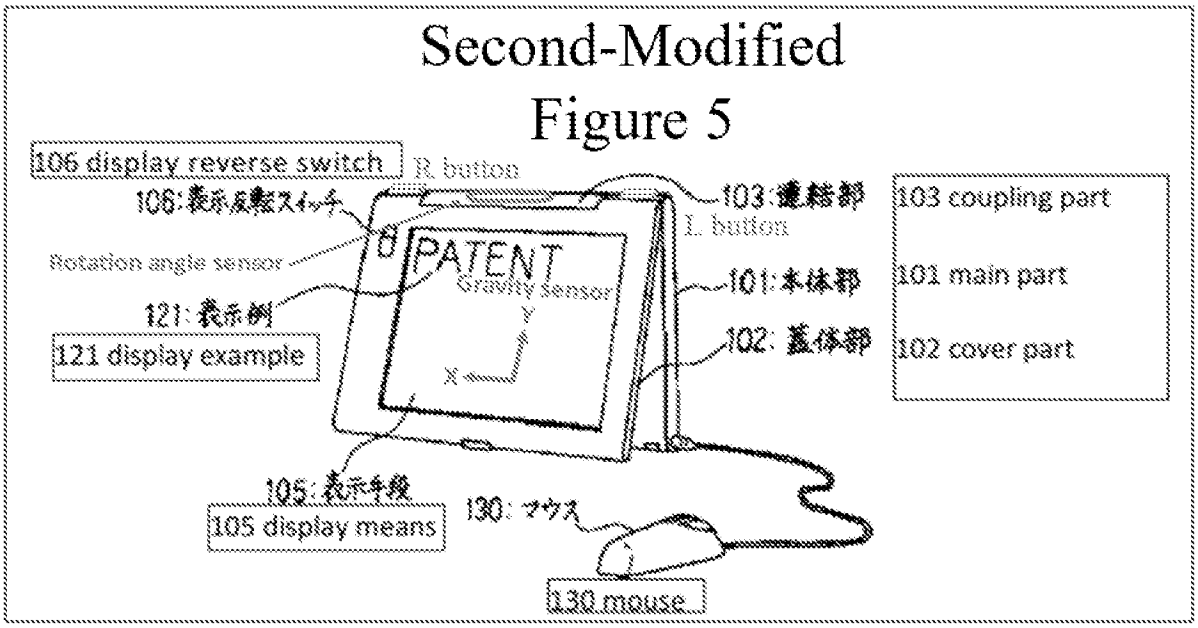
The Shimura Computer includes the base (101) with the keyboard (104) disposed on a first surface (i.e., upper surface in red), which is understood to be a major surface. Figure 1 (below). The base (102) also includes a second surface (i.e., lateral surface in blue), which is understood to be a minor 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.



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.



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.

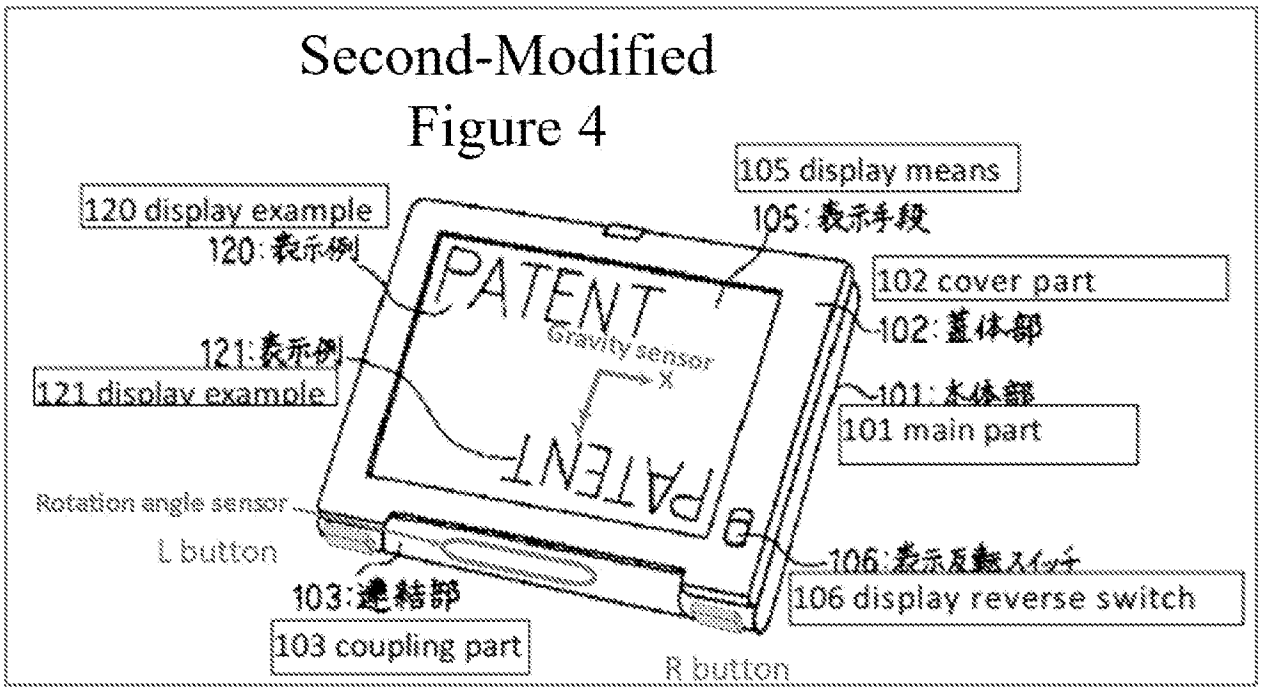
Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 7. *See* EX-1010, ¶¶257-61.

8. Claim 8

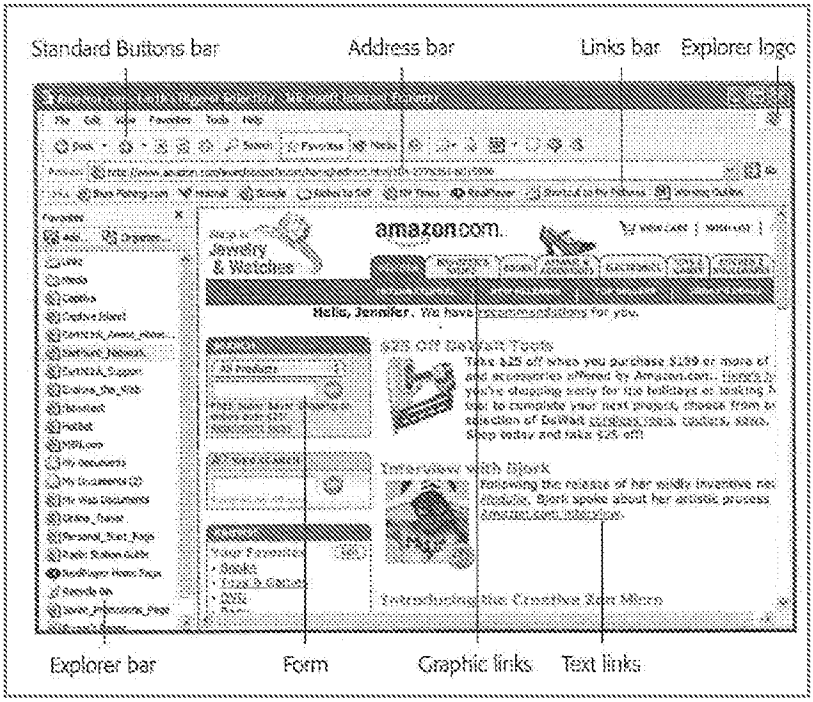
The Shimura-Tsuji-Pogue combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; EX-1010, ¶¶262-66.

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.



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.



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.

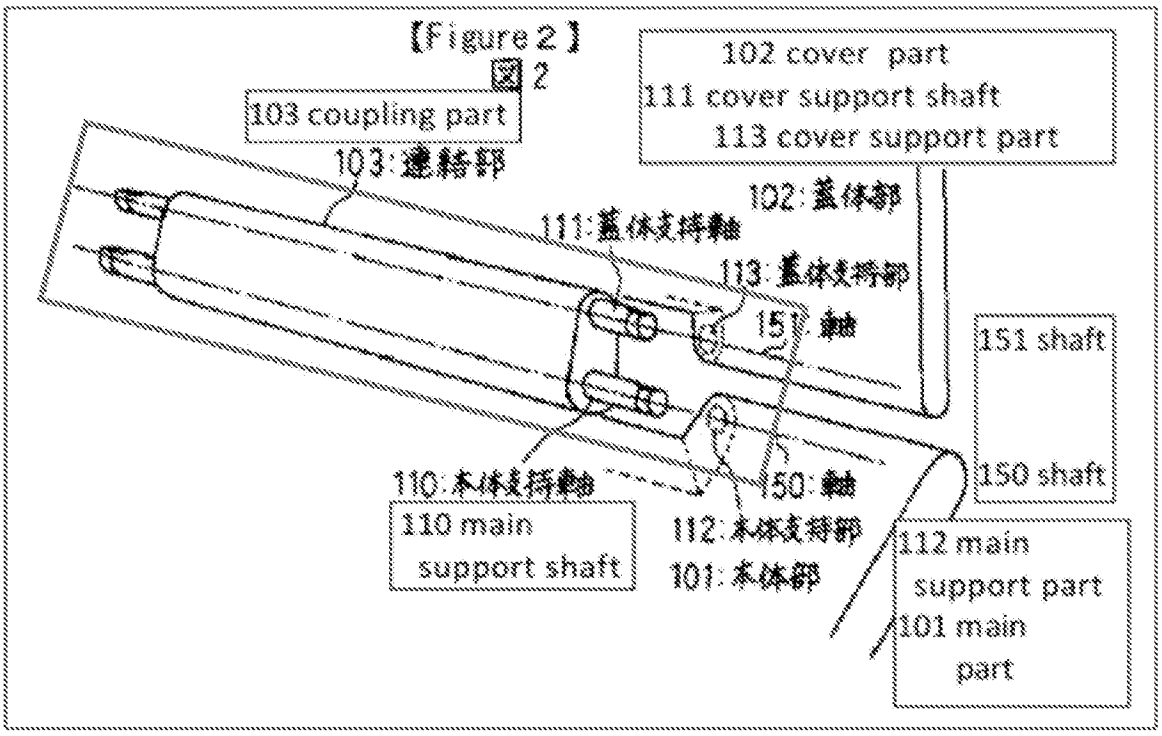
c. Limitation [10b]

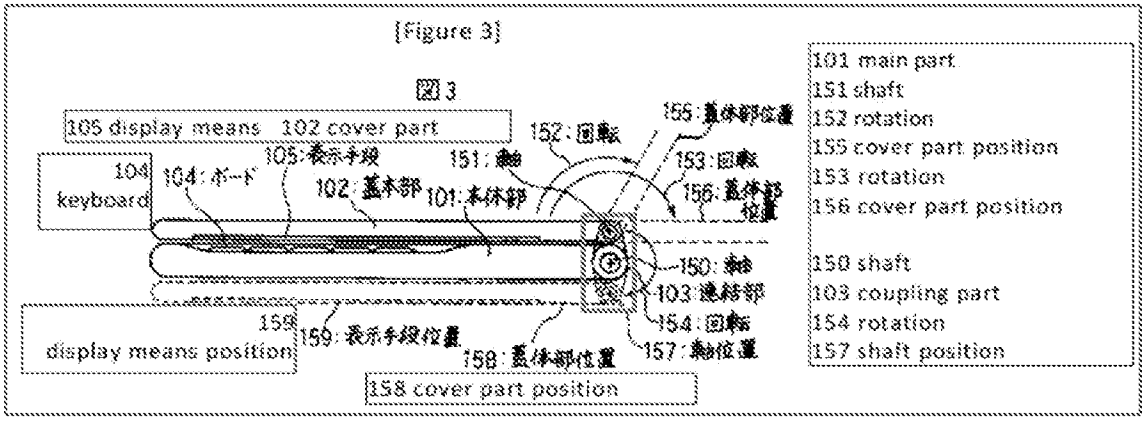
The Shimura-Tsuji combination discloses [10b] and renders it obvious. *See* VIII.A.1; VIII.B.1.a; VIII.B.3.a; VIII.B.3.c; VIII.B.3.d; EX-1010, ¶271.

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.





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.

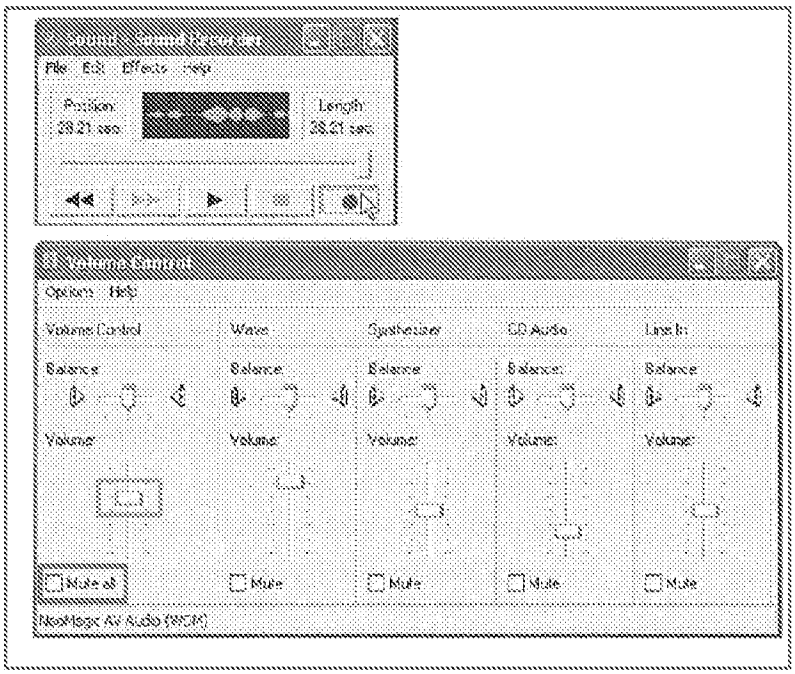
i. Limitation [10e1]

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.

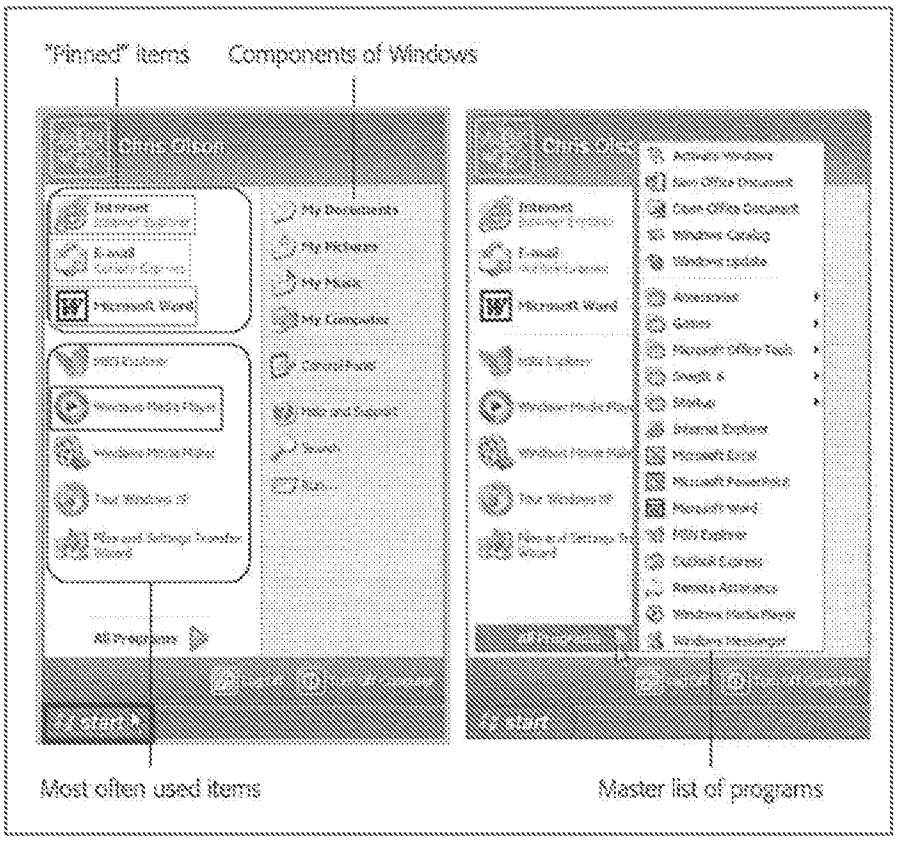
(1) Touch screen as the navigation control

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.



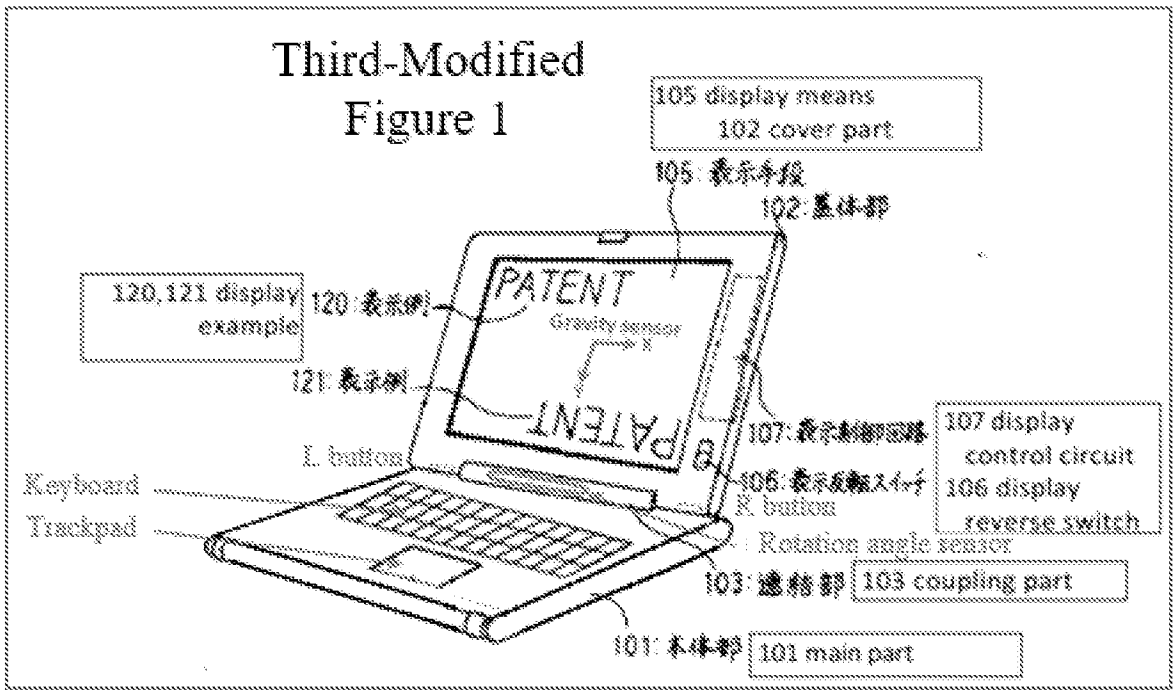
The touch screen of the Shimura-Tsuji-Pogue Computer can also be used to press Pogue's Start menu button (purple in Figure 2-3 below) that opens the Start menu (light green) that lists at least "Internet" (dark green), "E-mail" (orange), "Microsoft Word" (blue), and "Windows Media Player" (red). *See*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



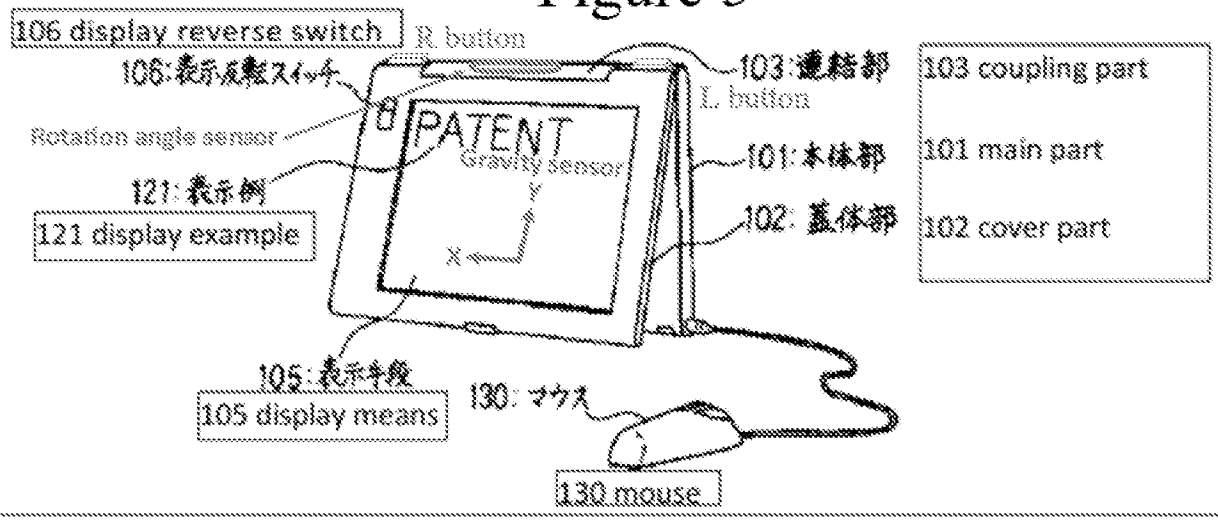
(2) Programmed R and L buttons as the navigation control

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



Second-Modified
Figure 5



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]

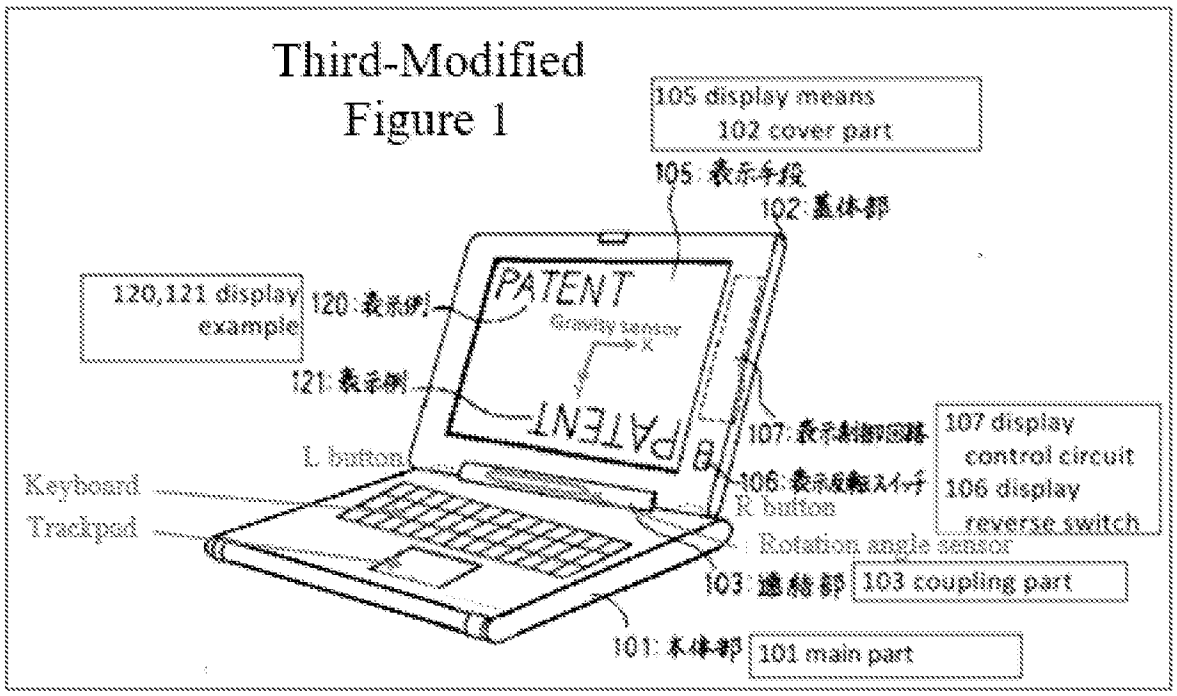
Shimura discloses [10e2]. *See* VIII.A.1; VIII.B.1.c; VIII.B.2; VIII.B.3.j; EX-1010, ¶288.

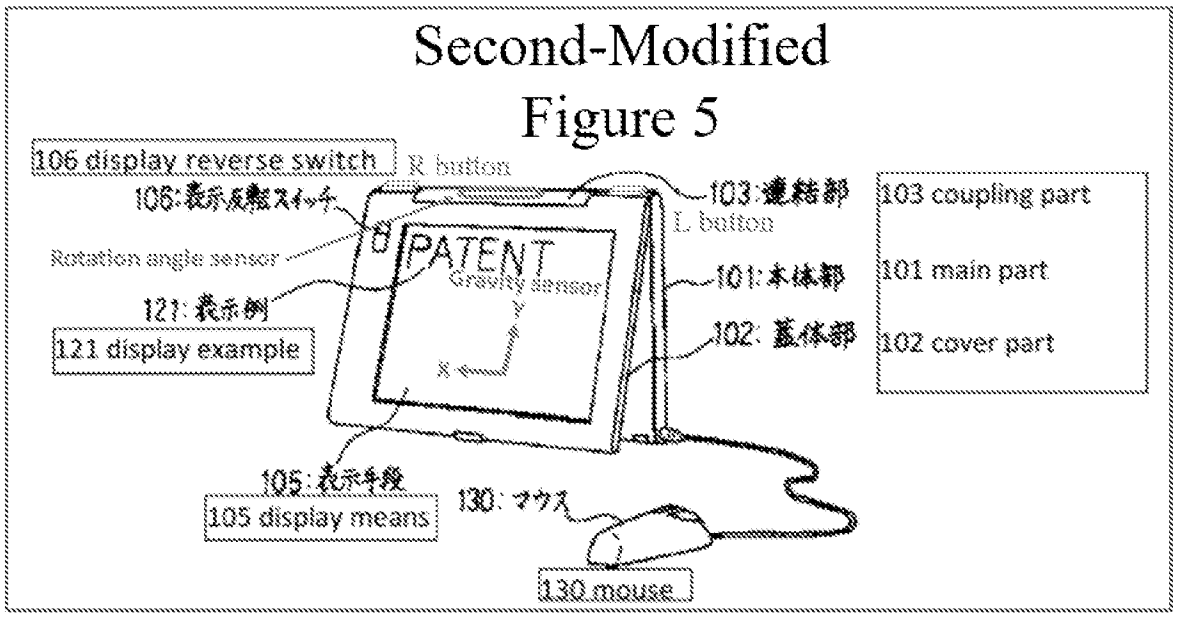
Accordingly, the Shimura-Tsuji-Pogue combination renders obvious Claim 10. EX-1010, ¶¶269-89.

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.





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.

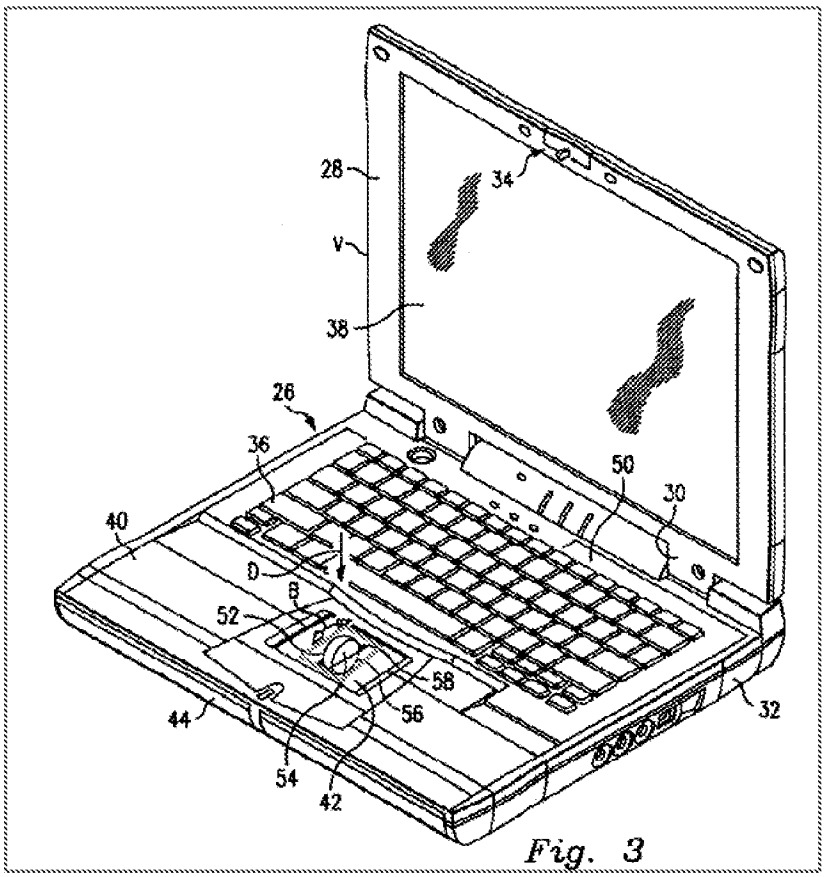
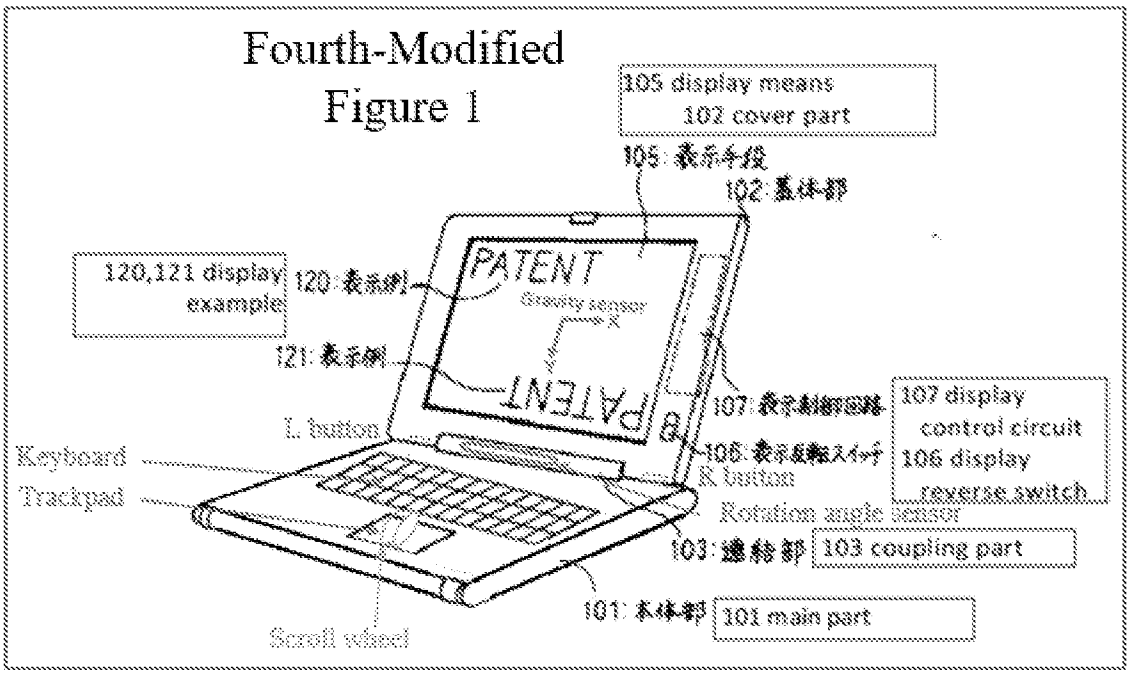


Fig. 3

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.



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.

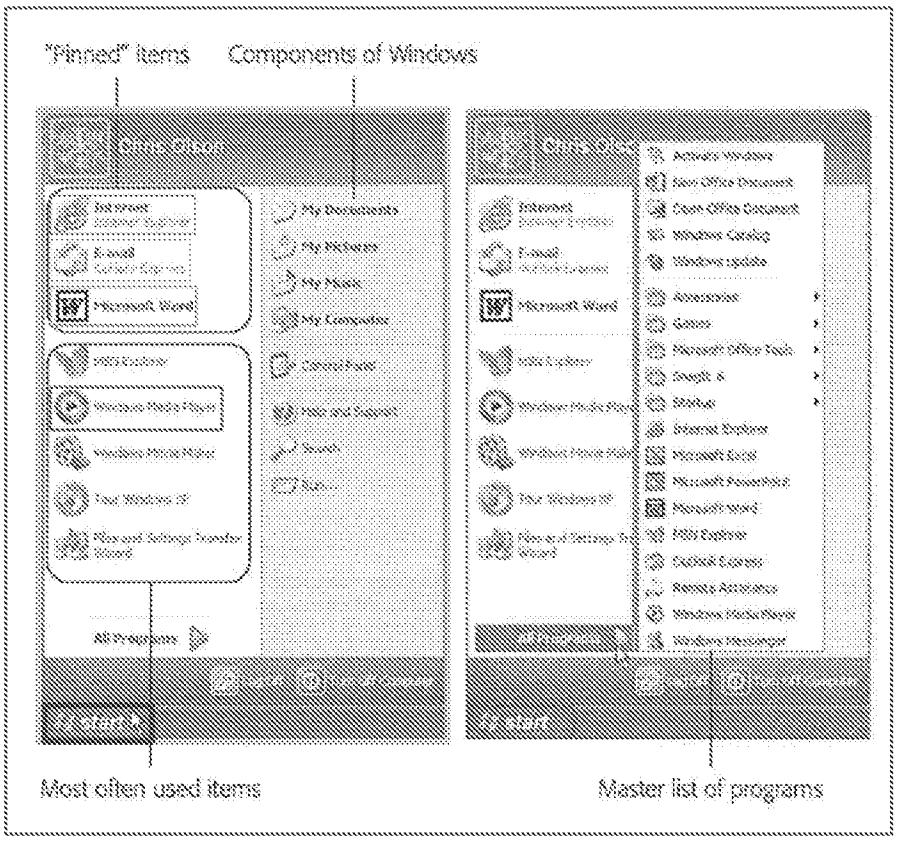
2. Claim 6

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.



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.

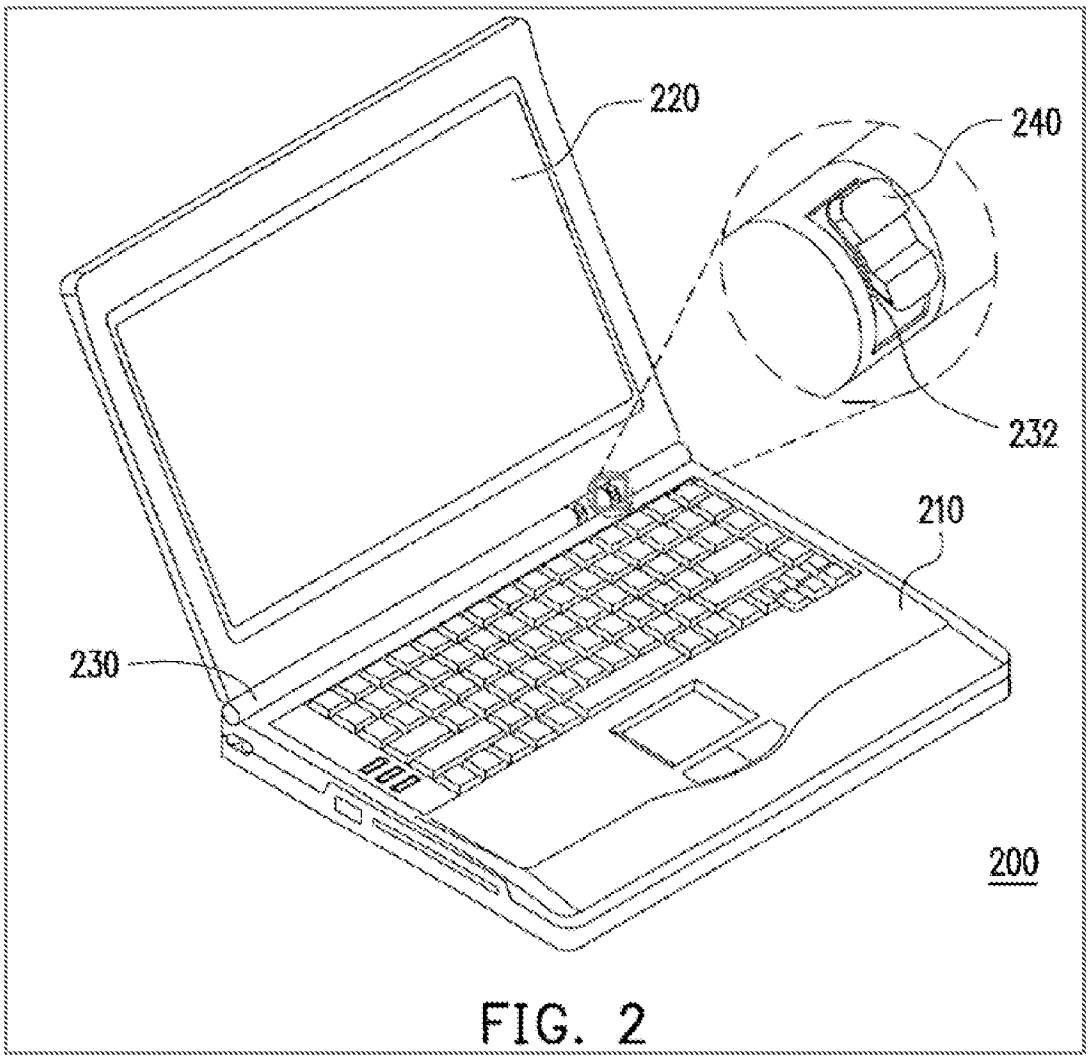


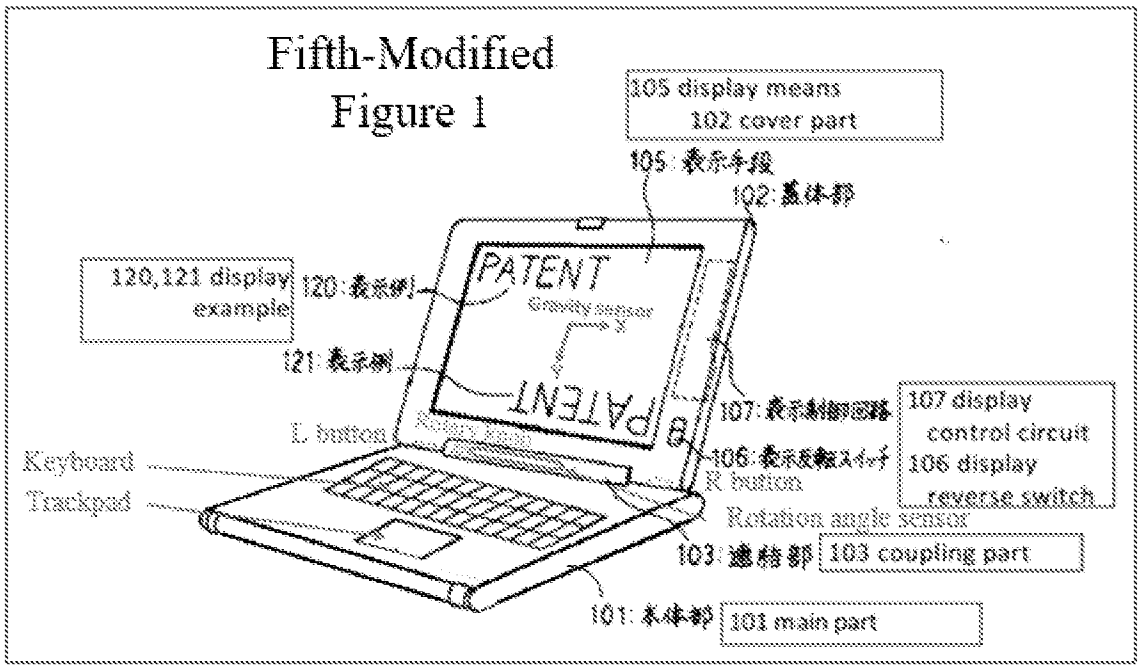
FIG. 2

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).



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

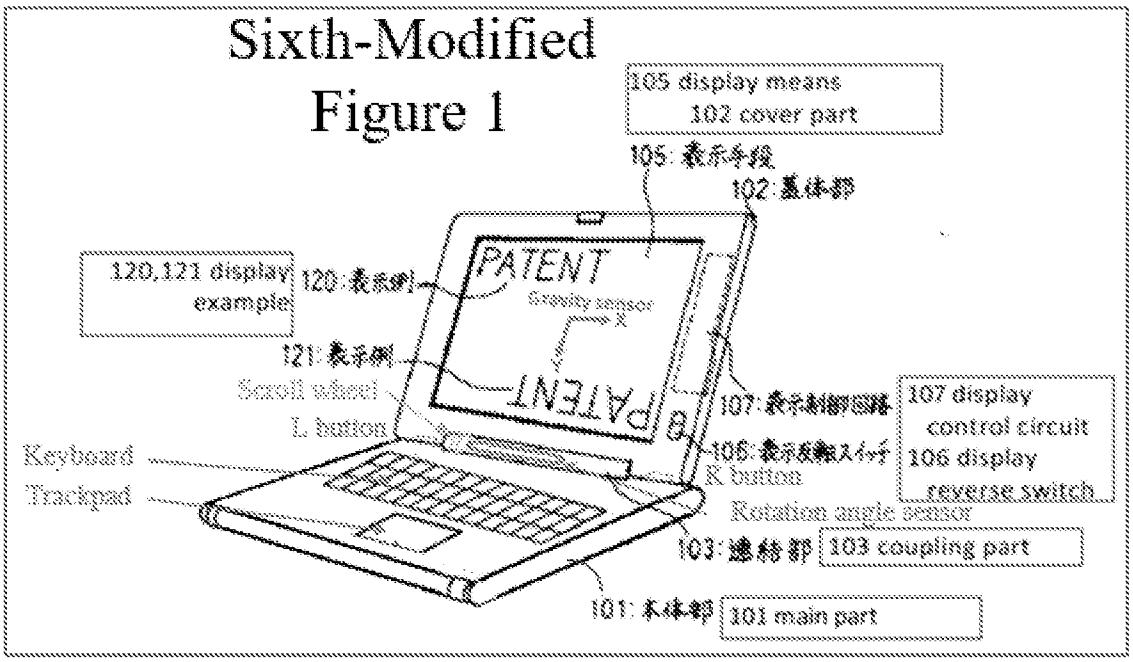
The Shimura-Tsuji-Pogue combination discloses the additional limitation of this claim, and the Shimura-Tsuji-Pogue-Lin combination renders the claim obvious. *See* VIII.A.1; VIII.B.1.a-VIII.B.1.b; VIII.B.2; VIII.B.4-VIII.B.5.b; VIII.B.6.a-VIII.B.6.c; EX-1010, ¶337.

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).



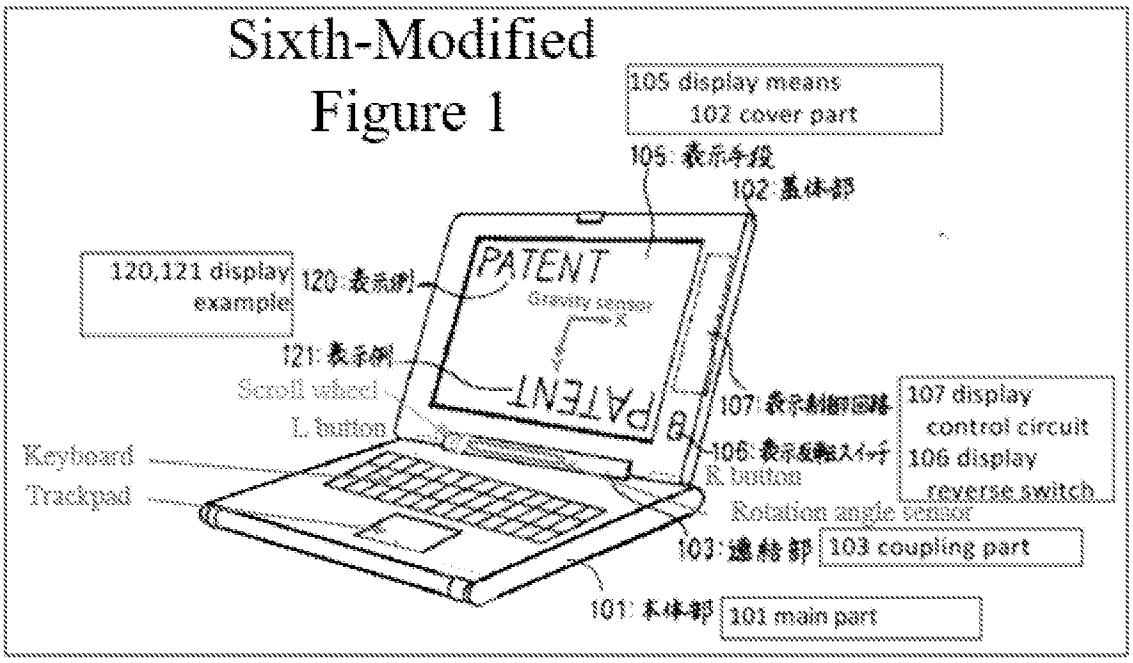
There would have been motivation to combine, and a reasonable expectation of success in combining, Lin with Shimura, Tsuji, Pogue, and Escamilla because prior art elements are merely combined according to known methods to yield predictable results. *See KSR*, 550 U.S. at 415-21. I.e., Lin taught implementing 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.



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

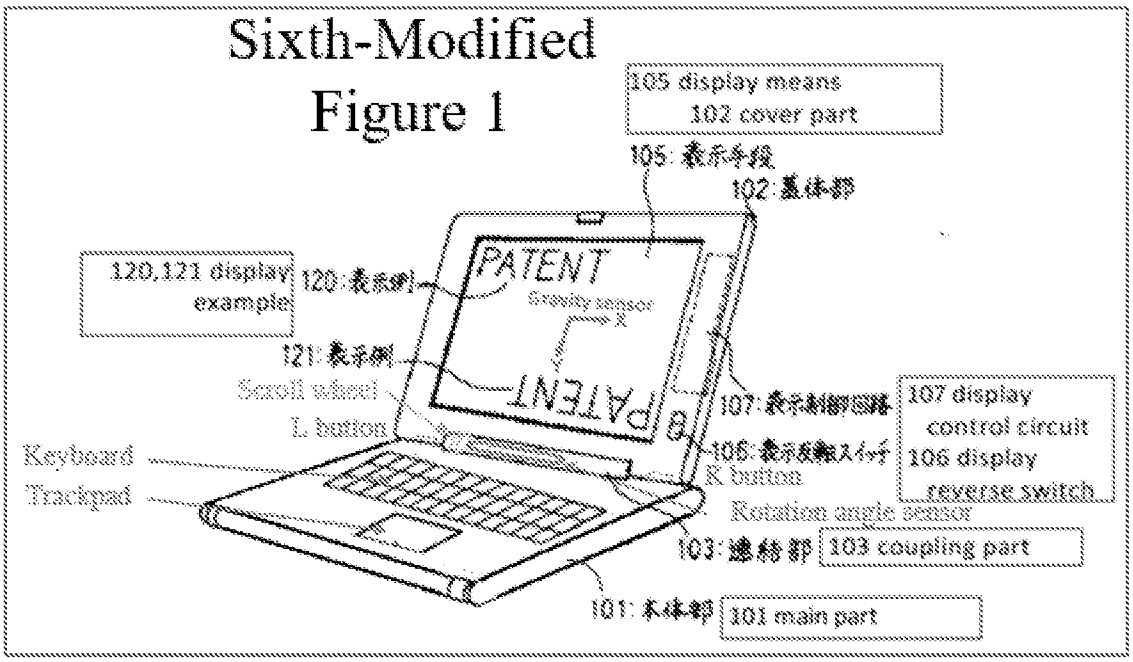
The Shimura-Tsuji-Pogue-Escamilla-Lin combination discloses the additional limitation of this claim and renders the claim obvious. *See* VIII.A.1; VIII.A.4; VIII.A.6; VIII.C.1; VIII.F.1-VIII.F.2; EX-1010, ¶349.

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).



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

/Martin R. Bader/

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HP Inc. - Exhibit 1005 - Page 5760

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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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.

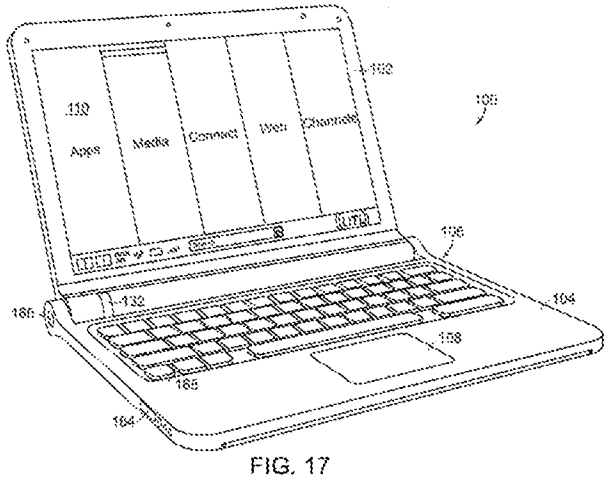


FIG. 17

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

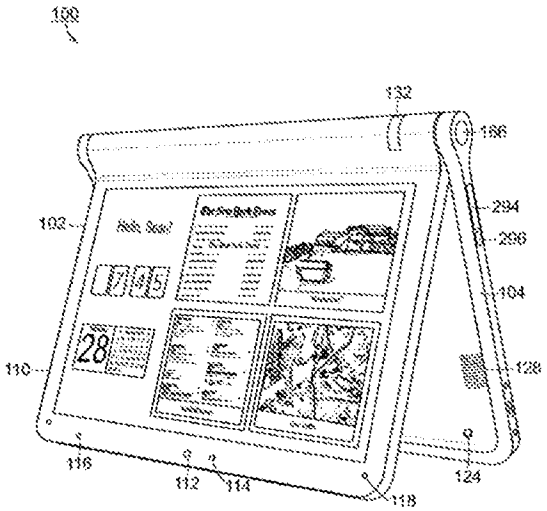


FIG. 4

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

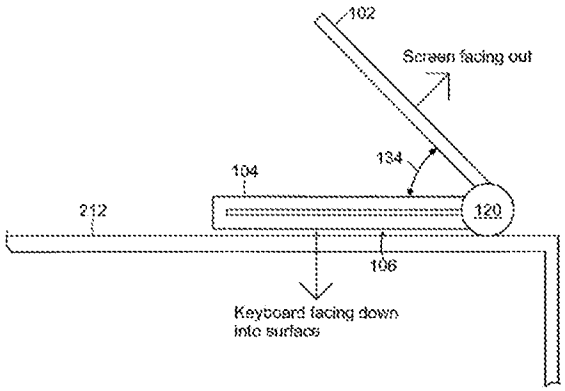


FIG. 26

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.

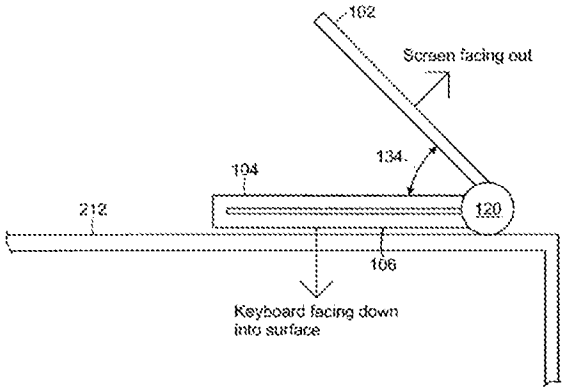


FIG. 26

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.

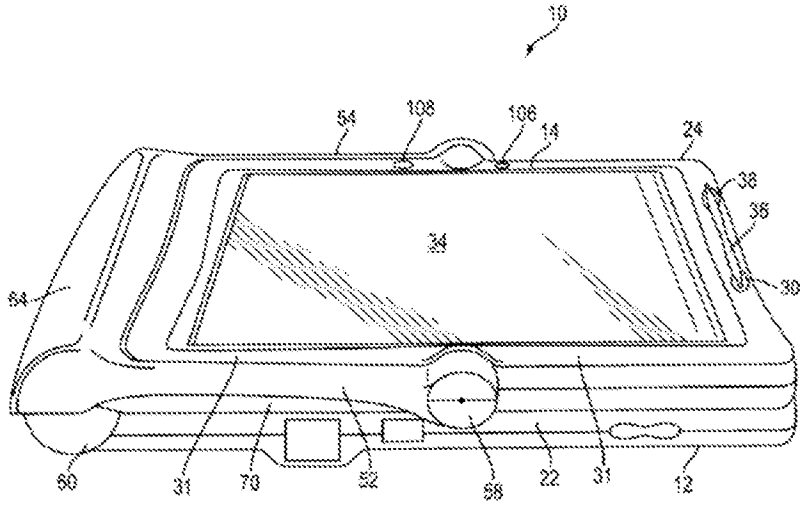


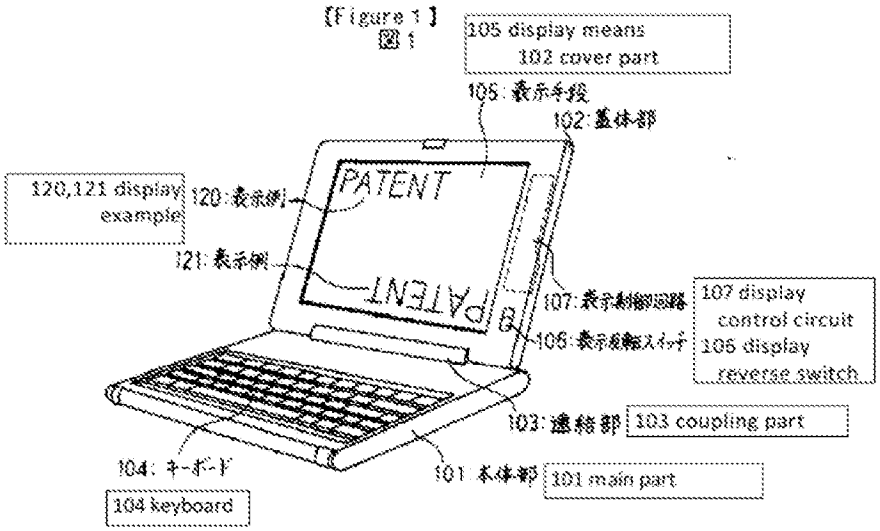
Figure 2

"[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)

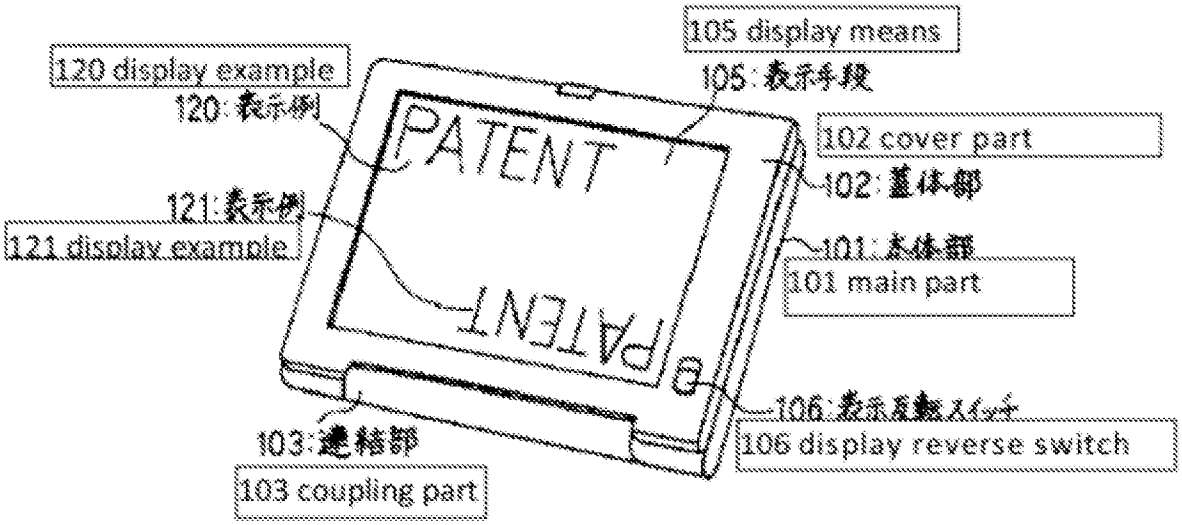
All grounds rely on Shimura. Shimura is a Japanese patent application publication (Ex. 1003), for which Petitioner provided a certified English translation (Ex. 1004). Shimura relates to a personal computer that "can adopt a mode suitable for a user environment centered on a pen input operation and a 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.*



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



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).

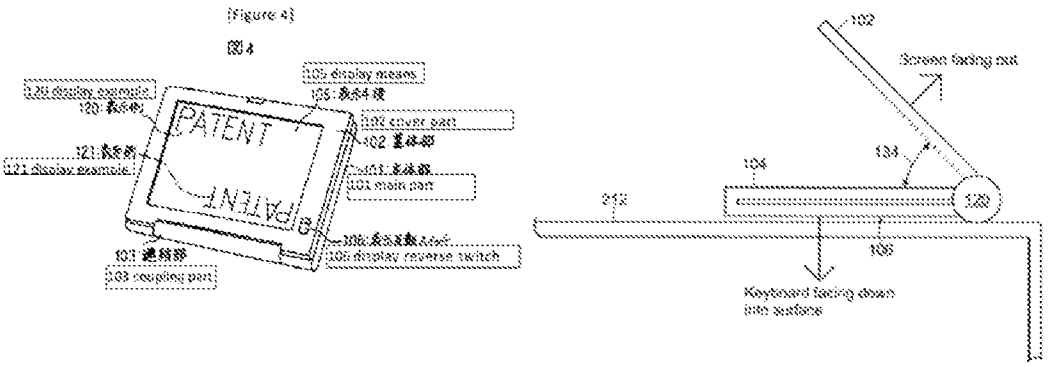


FIG. 26

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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Exhibit 1032

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LITL LLC, Plaintiff, v. LENOVO (UNITED STATES), INC. and LENOVO (BEIJING) LTD. Defendants.	Civil Action No. 1:20-cv-00689-RGA **JURY TRIAL DEMANDED**

FIRST AMENDED COMPLAINT

Pursuant to Federal Rule of Civil Procedure 15(A)(1), Plaintiff LiTL LLC ("Plaintiff" or "LiTL") files this First Amended Complaint, which amends LiTL's complaint for patent infringement (D.I. 1, the "Original Complaint") against Defendants Lenovo (United States), Inc. and Lenovo (Beijing) Ltd. (collectively, "Defendants" or "Lenovo").

INTRODUCTION

1. This is a civil action for patent infringement under the laws of the United States, 35 U.S.C. § 1, *et seq*.

2. Defendants have infringed and continue to infringe, have induced and continue to induce the infringement of one or more claims of U.S. Patent Nos. 8,289,688 ("the '688 patent"); 8,624,844 ("the '844 patent"); 10,289,154 ("the '154 patent"); 9,880,715 ("the '715 patent"); 8,612,888 ("the '888 patent"); and 8,577,957 ("the '957 patent") (collectively, the "Asserted Patents") at least by making, using, selling, offering for sale, and importing into the United States computing devices that infringe one or more claims of each of the Asserted Patents.

3. LiTL is the legal owner by assignment of the entire right, title and interest in and to the Asserted Patents, which were duly and legally issued by the United States Patent and Trademark Office ("USPTO"). LiTL seeks monetary damages and injunctive relief to address ongoing infringement of its valuable patent portfolio.

THE PARTIES

4. Plaintiff LiTL LLC is a Delaware company, having its principal place of business at 501 Boylston Street, Boston, Massachusetts 02116.

5. Defendant Lenovo (United States) Inc. ("Lenovo US") is a corporation organized under the laws of the State of Delaware, with its principal place of business at 1009 Think Place, Building One, Morrisville, North Carolina 27560. Lenovo US is a wholly-owned, indirect subsidiary of Lenovo Group, the ultimate parent corporation.

6. Defendant Lenovo (Beijing) Ltd. ("Lenovo Beijing") is a company organized under the laws of the People's Republic of China, with its principal place of business at No. 6 Chuang Ye Road, Shangdi Information Industry Base, Haidan District, Beijing, China. Lenovo Beijing is a wholly-owned subsidiary of Lenovo Group.

JURISDICTION AND VENUE

7. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. This Court has personal jurisdiction over Lenovo US for at least each of the following reasons. First, Lenovo US appeared in this Court and responded to LiTL's Original Complaint without contesting personal jurisdiction in this Court. (D.I. 10.) Second, Lenovo US is incorporated in this District, and so Lenovo US is at home in this District. Third, Lenovo US

has sold one or more of the Accused Products (defined below) in this District, giving rise to LiTL's claims in this action.

9. This Court has personal jurisdiction over Lenovo Beijing under either Federal Rule of Civil Procedure 4(k)(1) and the Del. Code. Ann. Tit. 3, § 3104 (the "Delaware Long Arm Statute") or under Federal Rule of Civil Procedure 4(k)(2).

10. Lenovo Beijing is the registrant of the https://www.lenovo.com domain (the "Lenovo.com Domain"). On information and belief, Lenovo Beijing registered the Lenovo.com Domain in 2002 and Lenovo Beijing renewed and/or updated its registration of the Lenovo.com Domain in 2020. Lenovo Beijing registered the Lenovo.com Domain with MarkMonitor, Inc. ("MarkMonitor").

11. MarkMonitor is an Accredited Registrar with the Internet Corporation for Assigned Names and Numbers ("ICANN"). https://www.icann.org/registrar-reports/accreditation-qualified-list.html As an Accredited Registrar, MarkMonitor is bound by the terms of the 2013 Registrar Accreditation Agreement ("RAA"). https://www.icann.org/resources/pages/approved-with-specs-2013-09-17-en

12. Under Section 3.7.10 of the RAA, MarkMonitor was required to provide Lenovo Beijing a copy of the Registrants' Benefits and Responsibilities Specification. On information and belief, MarkMonitor provided Lenovo Beijing with a copy of the Registrants' Benefits and Responsibilities Specification.

13. The Registrants' Benefits and Responsibilities Specification states, "You will assume sole responsibility for the registration and use of your domain name." On information and belief, Lenovo Beijing understood when registered and renewing/updating its registration of

the Lenovo.com Domain that it "assume[d] sole responsibility for the registration and use of" the Lenovo.com Domain.

14. MarkMonitor was required, under Section 3.7.7 of the RAA, to require all Registered Name Holdings, including Lenovo Beijing, to enter into a registration agreement with at least the provisions set forth in Subsections 3.7.7.1 through 3.7.7.12 of the RAA. On information and belief, Lenovo Beijing, as a Registered Name Holder, entered into a registration agreement that included provisions equivalent to Subsections 3.7.7.1 through 3.7.7.12 of the RAA.

15. Section 3.7.7.3 states, "[a] Registered Name Holder licensing use of a Registered Name according to this provision shall accept liability for harm caused by wrongful use of the Registered Name, unless it discloses the current contact information provided by the licensee and the identity of the licensee within seven (7) days to a party providing the Registered Name Holder reasonable evidence of actionable harm." If Lenovo US is a licensee of the Lenovo.com Domain in the United States, then Lenovo Beijing was required to "accept liability for harm caused by wrongful use of" of the Lenovo.com Domain, unless it "discloses the current contact information provided by [Lenovo US] and the identity of [Lenovo US] within seven (7) days to a party providing [Lenovo Beijing] reasonable evidence of actionable harm." LiTL provided evidence of actionable harm from sales of the Accused Products through the Lenovo.com Domain in its Original Complaint, and Lenovo Beijing did not provide Lenovo US's identity and contact information to LiTL within 7 days.

16. On information and belief, as the registrant of the Lenovo.com Domain, Lenovo Beijing is solely responsible for what website the Lenovo.com Domain points to in various locations around the world. Lenovo Beijing intends to serve Delaware and the United States

with the Lenovo.com Domain by providing a specific website for those locations that appears when accessing the Lenovo.com Domain from those locations. Lenovo Beijing intends for people in Delaware and the United States to access and use the website that Lenovo.com Domain points to as a place to get information about the Accused Products and to shop for and buy the Accused Products. Both before and after the filing of the Original Complaint, LiTL's counsel was able to access the Accused Products from Lenovo Beijing's Lenovo.com Domain from Delaware. The website for the United States, which includes https://www.lenovo.com/us/en/, may differ in some respects from the website that appears automatically in other countries, but it is still on the Lenovo.com Domain.

17. The Lenovo.com Domain is accessible in Delaware and in the United States. People in Delaware and in the United States have accessed Lenovo.com Domain. The Lenovo.com Domain makes information about each of the Accused Products available to people in the United States and in Delaware, including customer support and warranty status information that is dynamically presented to be specific to a customer's products. People in the United States and Delaware have access to information about each of the Accused Products from the Lenovo.com Domain. Much of the information cited below by LiTL as evidence that Lenovo US and Lenovo Beijing directly or indirectly infringes the Asserted Patents is accessible from the Lenovo.com Domain. People in the United States and in Delaware have accessed that information.

18. All, or nearly all, of the Accused Products are for sale on Lenovo.com Domain, including to people in Delaware and the United States. On information and belief, people in the United States have purchased all of the Accused Products from the Lenovo.com Domain. On information and belief, people in Delaware have purchased all of the Accused Products from the

Lenovo.com Domain. People in the United States have purchased one or more of the Accused Products from the Lenovo.com Domain. People in Delaware have purchased one or more of the Accused Products from Lenovo.com Domain. Nothing on the Lenovo.com Domain indicates that Lenovo Beijing intended to exclude Delaware customers from purchasing the Accused Products from the Lenovo.com Domain.

19. Lenovo Beijing developed and designed one or more of the Accused Products. For example, Lenovo Beijing developed and designed the Yoga A940 All in One Desktop computer ("Yoga A940).

20. On information and belief, the team at Lenovo that developed and designed one or more of the Accused Products included employees of Lenovo Beijing working with and sharing information with other Lenovo employees in the United States. https://news.lenovo.com/labor-of-love-innovation-and-inspiration-behind-lenovos-next-generation-of-yoga/.

21. Lenovo Beijing has developed and designed products. D.I. 28 (Sun Declaration), ¶ 6. Some of the products developed or designed by Lenovo Beijing have been used, offered for sale, or sold in the United States.

22. Lenovo Beijing developed and designed one or more of the Accused Products for use in the United States and Delaware, and to comply with regulations or other legal requirements applicable in those locations. For example, Lenovo Beijing developed and designed one or more of the Accused Products to comply with U.S. Federal Communication Commission ("FCC") requirements and to meet the U.S. Environmental Protection Agency's Energy Star requirements.

23. Lenovo Beijing was involved with developing or designing the Yoga A940.

24. On information and belief, Lenovo Beijing has employed Yang Liu as a "Compliance Engineer" since at least 2015. Yang Liu's job responsibilities include submitting to the U.S. Federal Communication Commission ("FCC") applications for equipment authorization.

25. Yang Liu submitted to the FCC an equipment authorization application for the Yoga A940. That application included a letter dated November 23, 2018, signed by Yang Liu, requesting the FCC to keep confidential certain materials in Lenovo Beijing's application for equipment authorization for the Yoga A940, which authorization is required prior to marketing or importing the Yoga A940 in the United States. Lenovo Beijing's letter to the FCC asserted that the public disclosure of documents containing proprietary information about the Yoga A940 "might be harmful to our company and would give competitor an unfair advantage in the market."

26. Lenovo Beijing intended for one or more of the Accused Products to be imported into, sold, and used in Delaware or in the United States. Lenovo Beijing submitted documents relating to the Yoga A940 to the United States Federal Communication Commission ("FCC"). These documents are dated September 4, 2018 and list "Lenovo (Beijing) limited" as the applicant for certification of conformity under FCC regulations to permit importation and marketing of the Yoga A940. Lenovo Beijing regularly submits to the FCC applications for equipment authorization. Since 2011, Lenovo Beijing has submitted at least 107 applications for equipment authorization to the FCC so that its equipment could be imported into the United States and marketed there.

27. According to Lenovo's 2019/20 Annual Report, Lenovo Beijing's "Principal activities" are "Manufacturing and distribution of IT products and provision of IT services."

https://doc.irasia.com/listco/hk/lenovo/annual/2020/ar2020.pdf On information and belief, the statement in the 2019 Annual Report that Lenovo Beijing that refers to Lenovo Beijing's "Principal activities" as "Manufacturing and distribution of IT products and provision of IT services" was not false.

28. On information and belief, Lenovo Beijing is involved with the manufacture of one or more of the Accused Products. On information and belief, Lenovo Beijing has some or significant control over the manufacture of the one or more of the Accused Products. On information and belief, Lenovo Beijing has quality control over the manufacture of the one or more of the Accused Products. On information and belief, if Lenovo Beijing does not manufacture an Accused Product, a company related to and subject to control and/or influence by Lenovo Beijing, whether direct or indirect, manufactures the Accused Product.

29. On information and belief, Lenovo Beijing is involved with the distribution of one or more of the Accused Products, including importation into the United States and Delaware. On information and belief, Lenovo Beijing has some or significant control over the distribution of the one or more of the Accused Products. On information and belief, if Lenovo Beijing does not distribute an Accused Product, a company related to and subject to control and/or influence by Lenovo Beijing, whether direct or indirect, distributes the Accused Product.

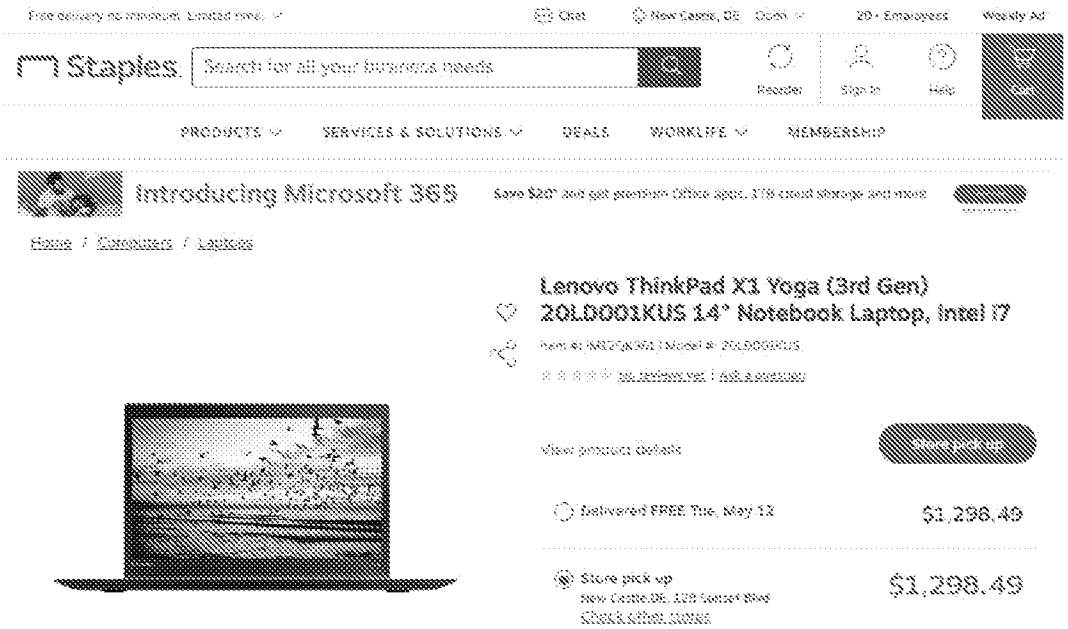
30. Lenovo has established distribution channels for the importation into the United States of the Accused Products and for the distribution within the United States, including to Delaware, of one or more of the Accused Products. Those established distribution channels are used for sales made through Lenovo Beijing's Lenovo.com Domain. On information and belief, Lenovo Beijing uses those established distribution channels for the importation into the United

States of one or more of the Accused Products and for the distribution within the United States, including to Delaware, of one or more of the Accused Products.

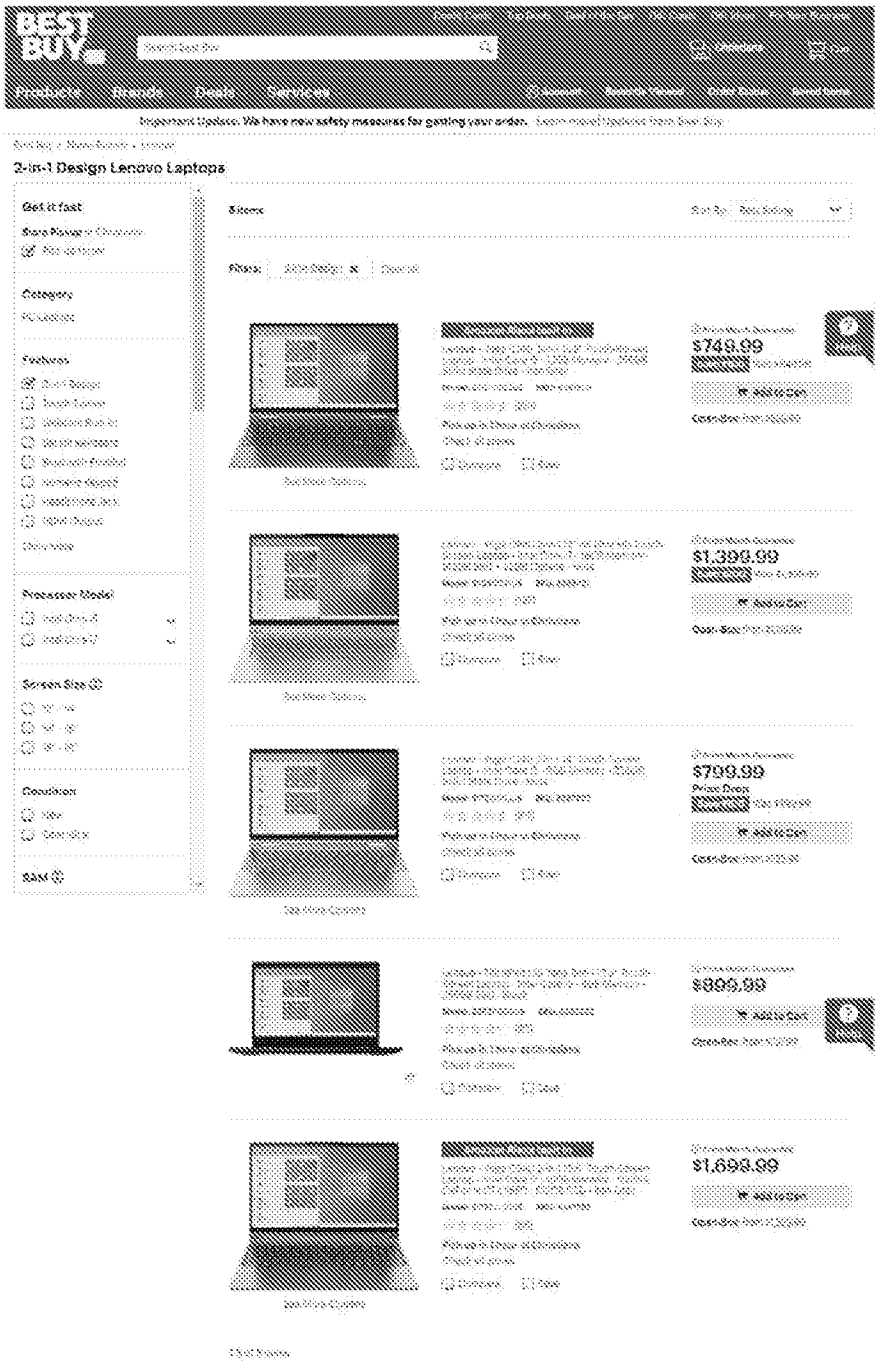
31. For example, a customer accessed the Lenovo.com Domain while in Delaware, used the Lenovo.com Domain to purchase a Yoga A940, and had the computer delivered to Wilmington, Delaware on November 30, 2020.

32. As further examples of the distribution channels that Lenovo has established, information accessible through Lenovo.com Domain states that, in addition to being available for purchase on www.lenovo.com, one or more of the Accused Products are available for purchase from retailers including Best Buy, Costco, Office Depot, Staples, and Walmart, each of which has locations in Delaware. https://www.lenovo.com/us/en/landingpage/reseller-locator/

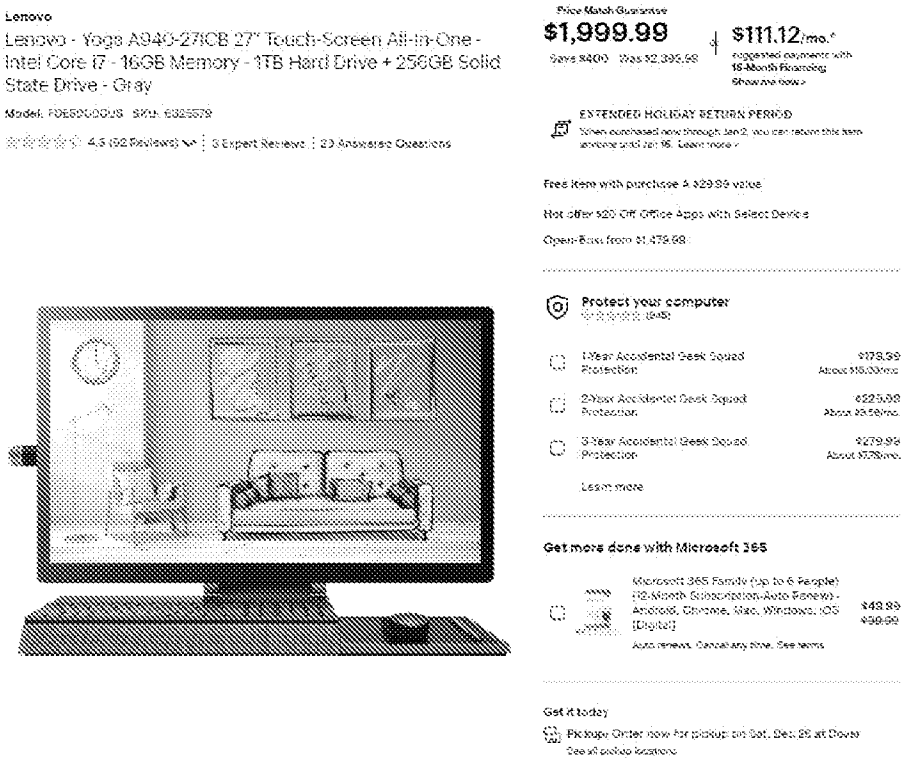
33. For example, Staples offers for sale the 3rd Generation ThinkPad X1 Yoga, an Accused Product, which can be picked up in a Staples store located in New Castle, Delaware, as depicted in the screenshot of Staples' website below.

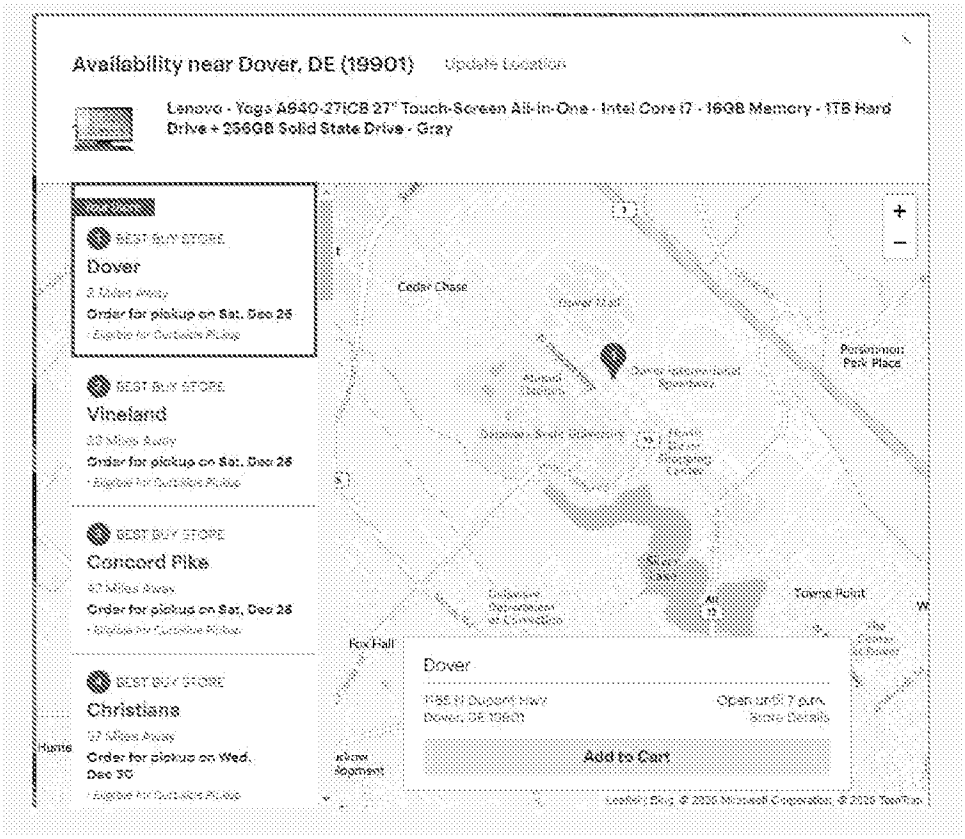


34. For example, a Best Buy located at Christiana Fashion Center in Newark, Delaware offers for sale the following Accused Devices: Yoga C740 (15 inch); Yoga C940 (14 inch); Yoga C740 (14 inch); ThinkPad L13 Yoga (13 inch); Yoga C940 (15 inch), as depicted in the screenshot of Best Buy's website below.



35. Best Buy stores located at 1165 N. Dupont Highway, Dover, DE 19901 and 2700 Fashion Center Blvd, Newark, DE 19702 offer the accused Lenovo Yoga A940 for sale and provide the option of curbside pickup at these Delaware locations:



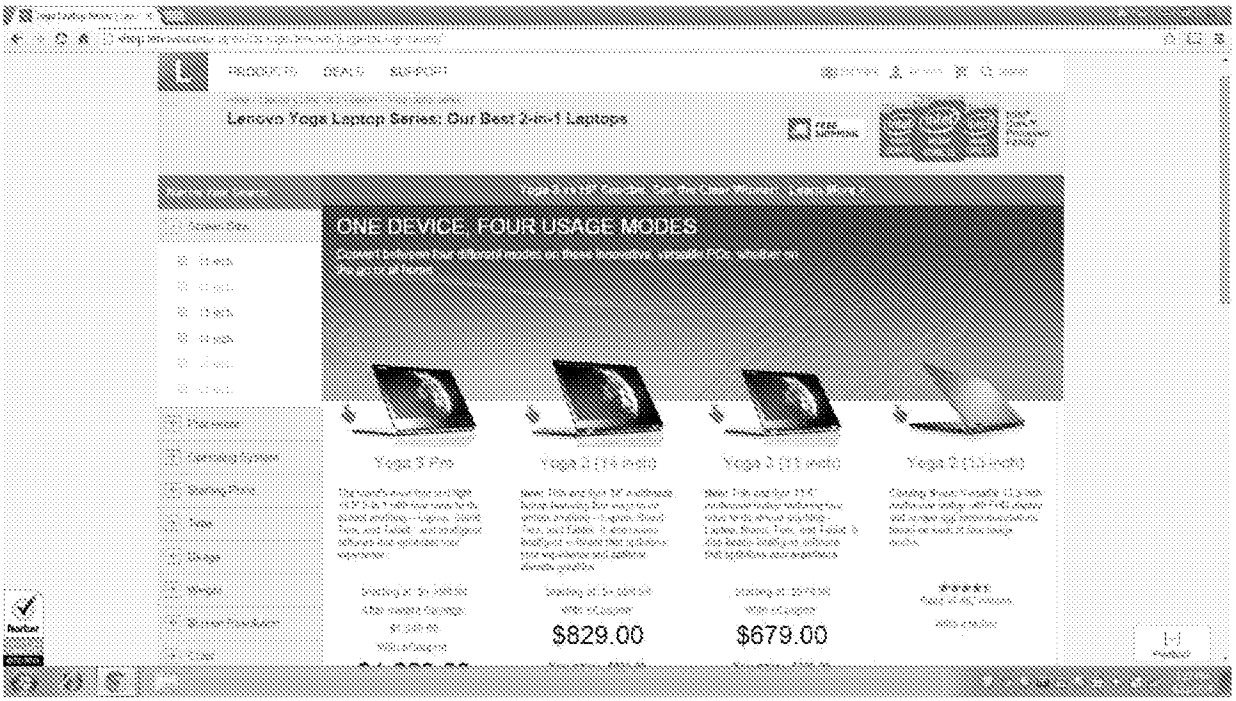


36. Lenovo Beijing owns numerous trademark registrations that Lenovo Beijing uses in connection with sales and offers for sale of the Accused Products within the United States.

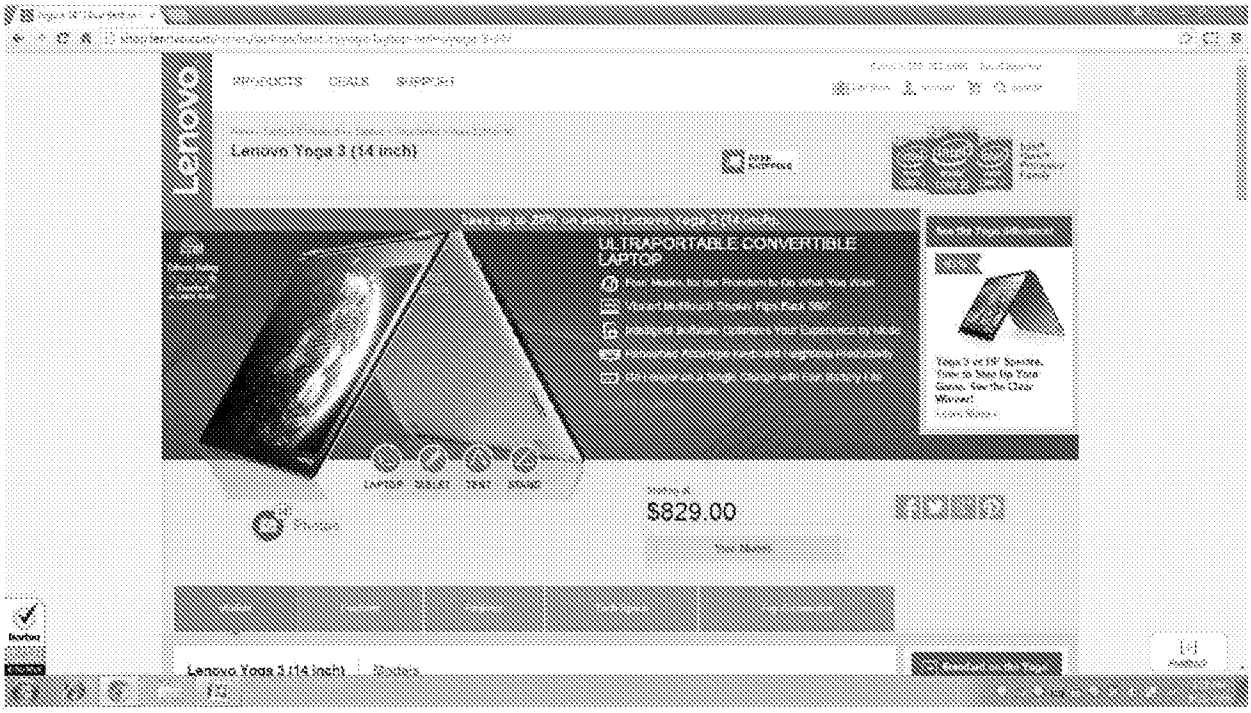
37. Lenovo Beijing owns U.S. Registration No. 4,822,390 to the mark YOGA for goods that include "computers" and "portable computers." When prosecuting the application that matured into the YOGA registration, the applicant Lenovo Beijing filed a Statement of Use on August 21, 2015, which included the statement: "The mark was first used by the applicant, or the applicant's related company, licensee, or predecessor in interest at least as early as 10/00/2012, and first used in commerce at least as early as 10/00/2012, and is now in use in such commerce. The applicant is submitting one specimen for the class showing the mark as used in commerce on or in connection with any item in the class, consisting of a(n) screen-shots of Applicant's website showing sale of the products." Lenovo Beijing submitted to the Trademark Office the two screenshots reproduced below.

https://tsdr.uspto.gov/documentviewer?caseId=sn85585622&docId=SOU20150824165248#docIndex=4&page=1

38. The first screenshot submitted by Lenovo Beijing shows the website https://www.lenovo.com/us/en/pc-nfe/?s_tnt=133500%3A1%3A0&adobe_mc_sdid=SDID%3D0DE8A22765823A5D-54865DF655F16C62%7CMCORGID%3DF6171253512D2B8C0A490D45%40AdobeOrg%7CTS%3D1609357172&adobe_mc_ref=https%3A%2F%2Fwww.lenovo.com%2Fus%2Fen%2F, which touts the four usage modes of the Yoga 3 Pro, Yoga 3 (14 inch), Yoga 3 (11 inch) and Yoga 2 (13 inch), each of which are included in the Accused Products defined below:

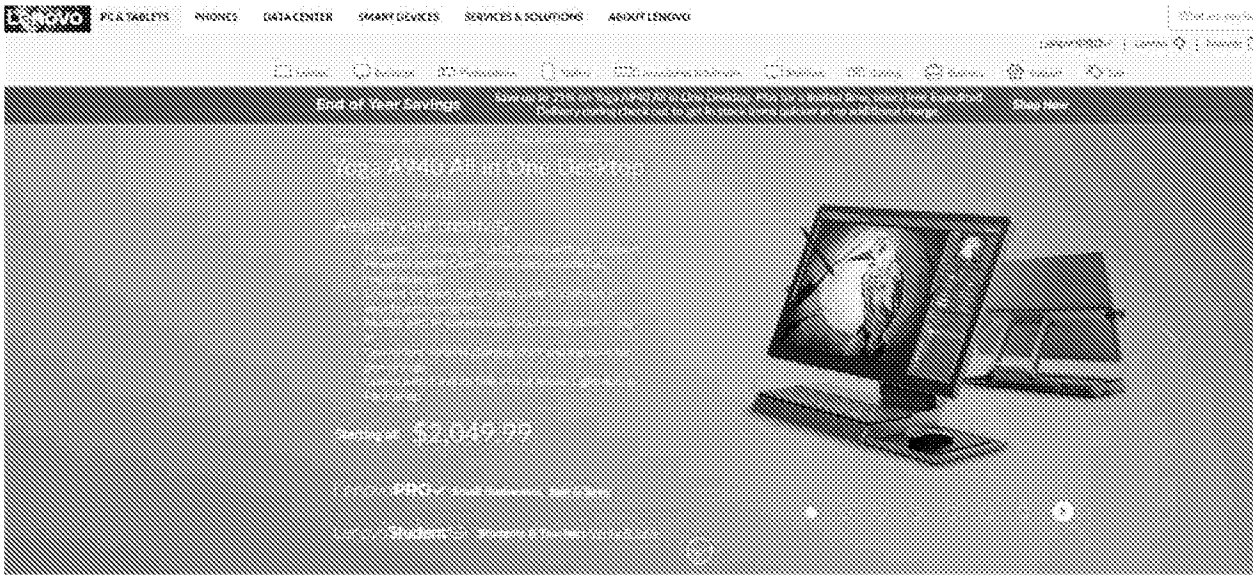


39. The second screenshot submitted by Lenovo Beijing shows the website https://www.lenovo.com/us/en/pc-nfe/?s_tnt=133500%3A1%3A0&adobe_mc_sdid=SDID%3D0E717C6A62B94068-219E7A964456AC62%7CMCORGID%3DF6171253512D2B8C0A490D45%40AdobeOrg%7CTS%3D1609357248&adobe_mc_ref=https%3A%2F%2Fwww.lenovo.com%2Fus%2Fen%2F, which offers to sell the Yoga 3 (14 inch) for $829.00 and includes "Free Shipping." The website touts "Four Modes for the Freedom to Do What You Want" and lists "Laptop," "Tablet," "Tent" and "Stand" beneath an image of the Lenovo Yoga 3 operating in tent mode:

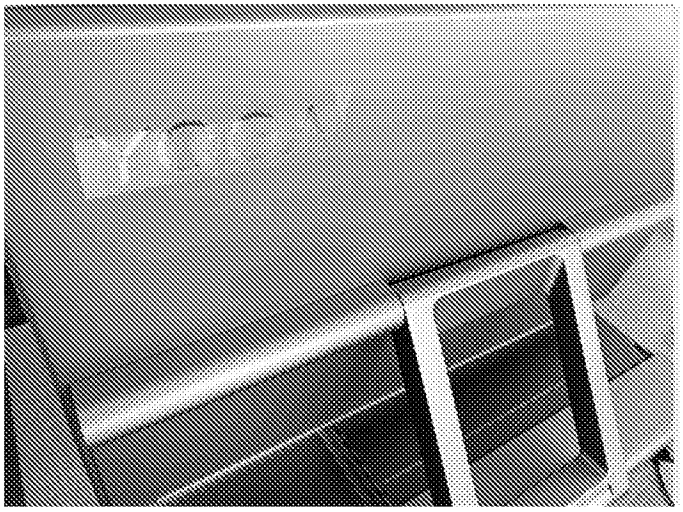


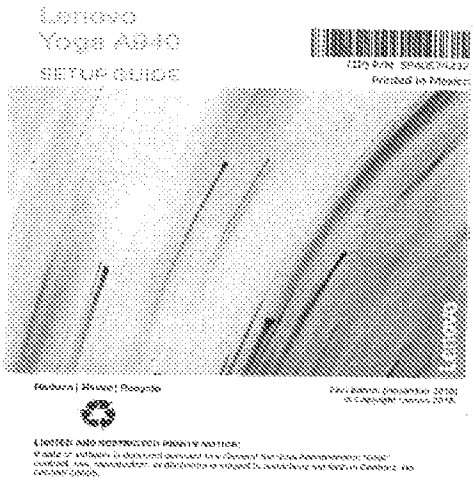
40. The Statement of Use submitted by Lenovo Beijing included a declaration that stated that "the applicant is the owner of the mark sought to be registered; the mark is in use in commerce; for a trademark or service mark application, the applicant is using the mark in commerce on or in connection with all the goods/services in the application or notice of allowance."

41. Lenovo Beijing uses the YOGA mark in its advertising of the Yoga A940 on the Lenovo.com Domain:



42. Lenovo Beijing uses its YOGA trademark on the back of the screen on the A940 in addition to materials that come with the Yoga A940, such as the setup guide seen below:

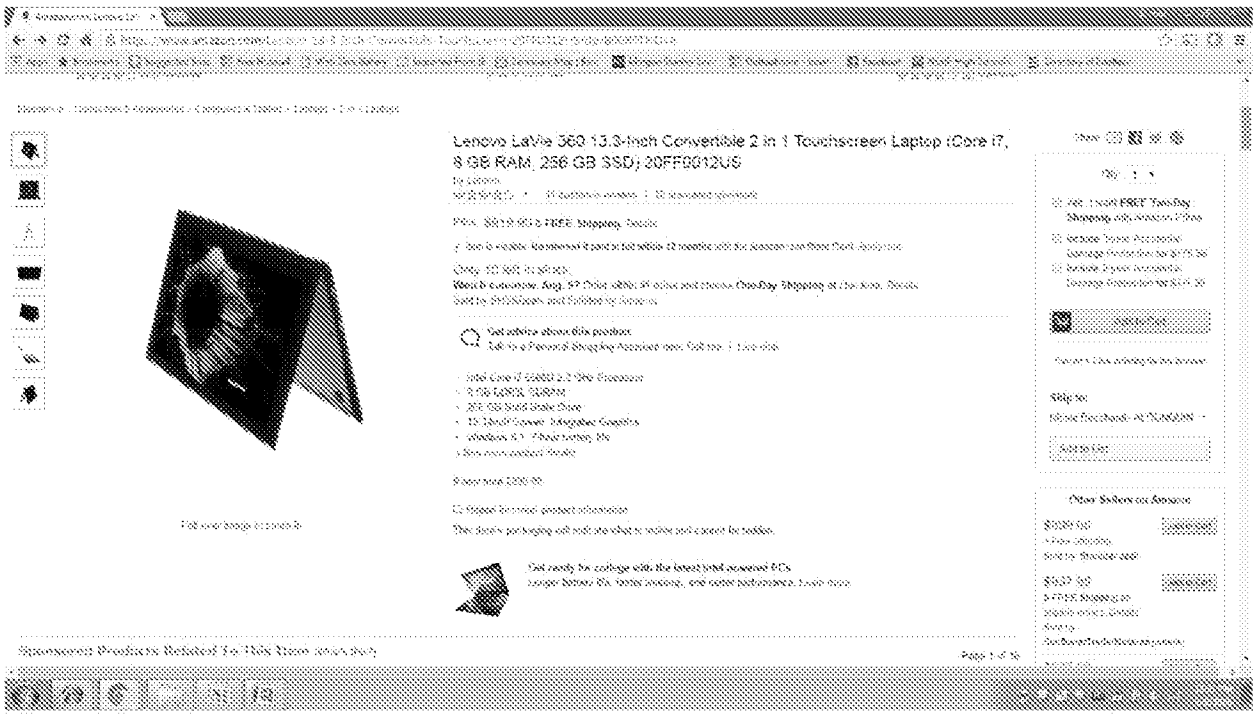




43. Lenovo Beijing's Lenovo.com Domain began touting the Yoga A940 using the YOGA and LENOVO marks in January 2019. https://news.lenovo.com/pressroom/press-releases/lenovo-yoga-smartest-consumer-computers-yet/; https://news.lenovo.com/lenovo-unboxed-yoga-a940-all-in-one-pc/

44. The Accused Products represent a significant portion of the personal computers that use the YOGA trademark that are advertised as available for sales from the Lenovo.com Domain. Lenovo Beijing's ownership of the YOGA mark in the United States illustrates its intent to use the mark in commerce in the United States.

45. On March 4, 2015, Lenovo Beijing submitted an application for U.S. Serial No. 86553493 to the mark LENOVO LAVIE for goods that include "laptop computers." On August 9, 2016, applicant Lenovo Beijing submitted a Statement of Use, which included the statement: "The mark was first used by the applicant, or the applicant's related company, licensee, or predecessor in interest at least as early as 05/00/2015, and first used in commerce at least as early as 05/00/2015, and is now in use in such commerce. The applicant is submitting one specimen for the class showing the mark as used in commerce on or in connection with any item in the class, consisting of a(n) screen shot of websites showing product for sale." Lenovo Beijing submitted to the Trademark Office a screenshot of the website www.amazon.com/Lenovo-13-3-Inch-Convertible-Touchscreen-20FF0012US/dp/B00X0THDY4, which offers to sell for $919.00 the Lenovo LaVie 360, which is included in the Accused Products defined below. The website includes an image of the Lenovo LaVie 360 operating in tent mode, and identifies Lenovo as the seller:



http://tsdr.uspto.gov/documentviewer?caseId=sn86553493&docId=SOU20160810165541#docIndex=4&page=1

46. The Statement of Use submitted by Lenovo Beijing in connection with the LENOVO LAVIE mark included a declaration stating that "the applicant is the owner of the mark sought to be registered; the mark is in use in commerce; for a trademark or service mark application, the applicant is using the mark in commerce on or in connection with all the goods/services in the application or notice of allowance."

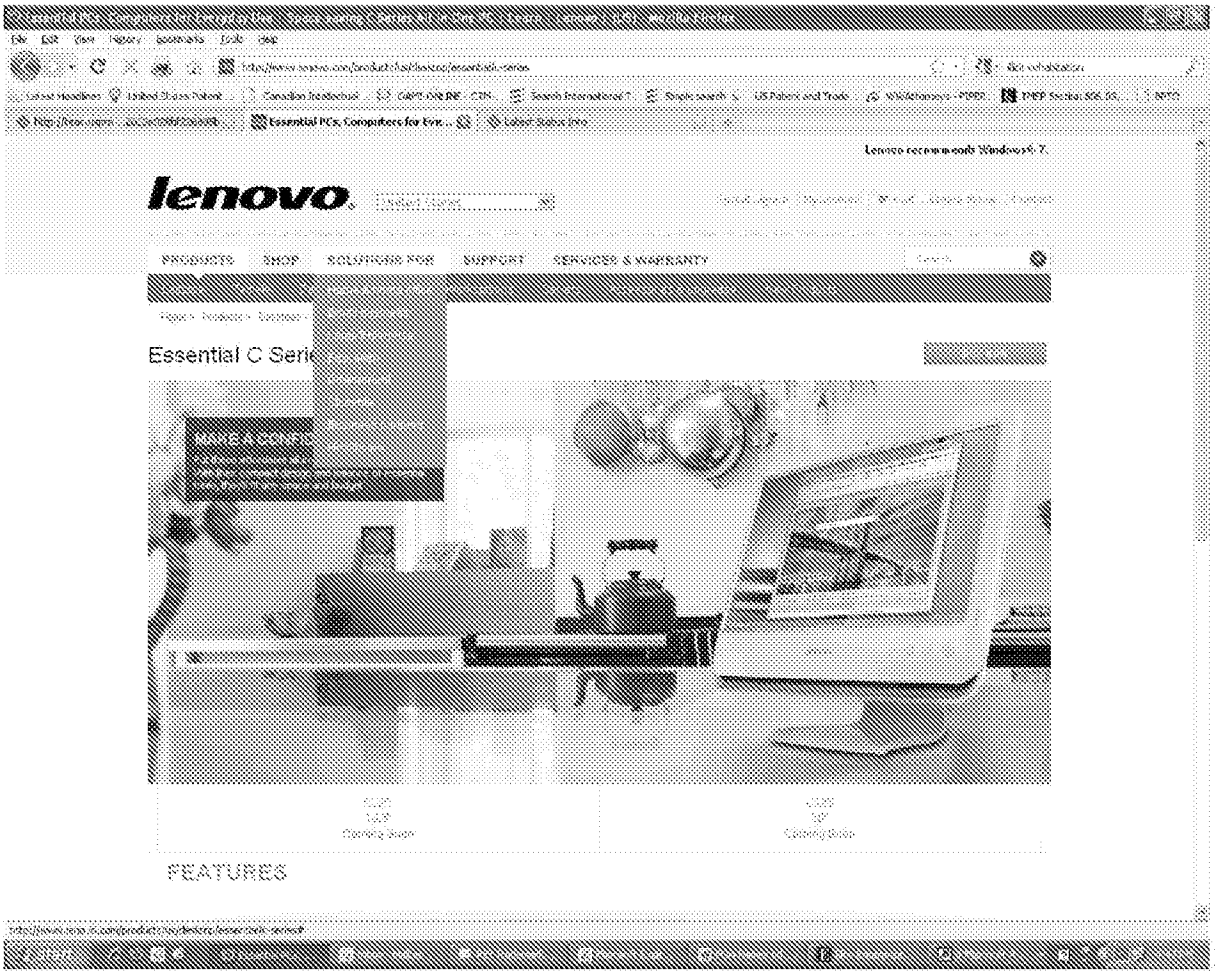
47. Lenovo Beijing owns U.S. Registration No. 3,149,377 to the mark LENOVO for goods that include "computers" and "notebook computers" and for services that include "installation, maintenance and repair of computer hardware."

48. On October 13, 2011, Lenovo Beijing submitted a Declaration of Use that included the following declaration: "The mark is in use in commerce on or in connection with the goods and/or services identified above, as evidenced by the attached specimen(s) showing the

mark as used in commerce."

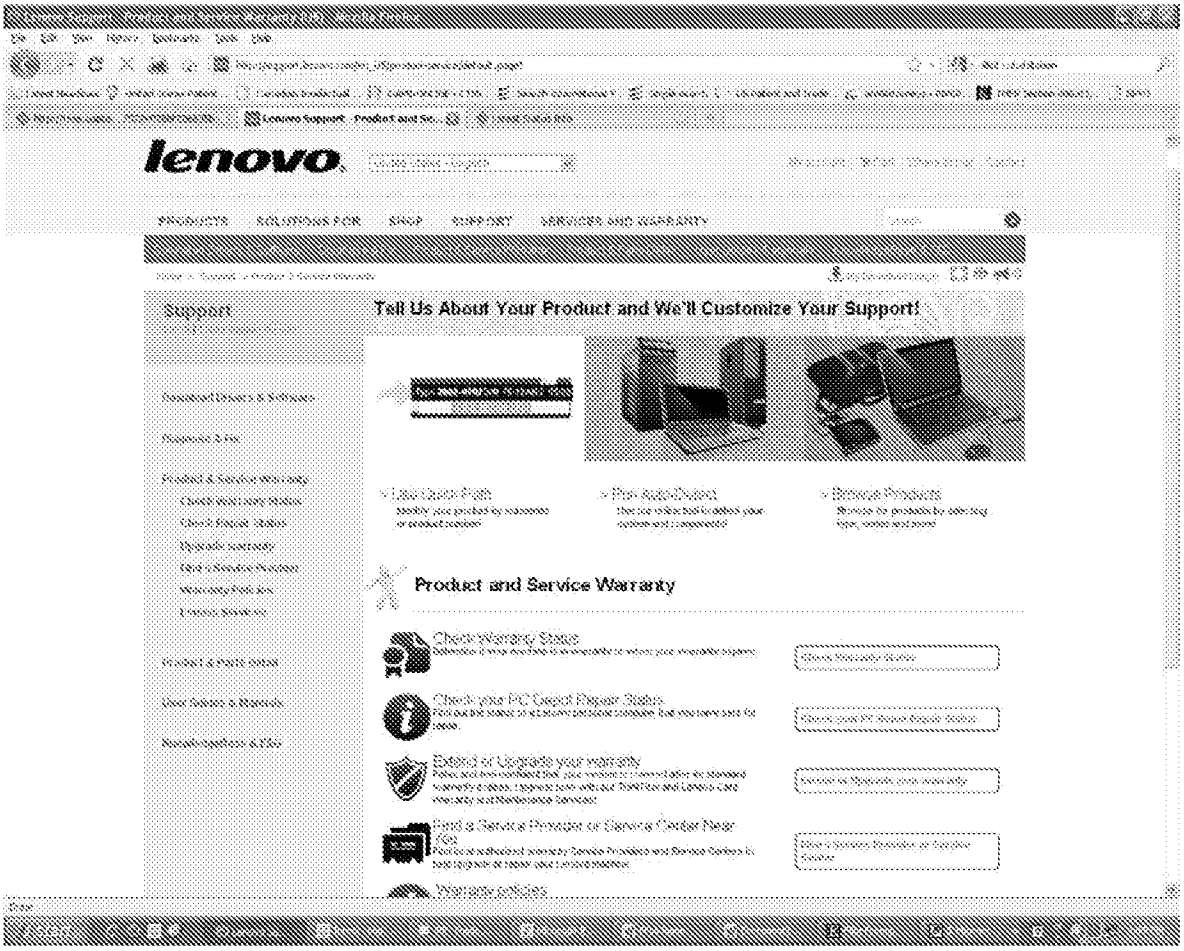
http://tsdr.uspto.gov/documentviewer?caseId=sn78217242&docId=81520111014155540#docIndex=6&page=1

49. Lenovo Beijing submitted a specimen on October 13, 2011 that included a screenshot of the Lenovo.com Domain, www.lenovo.com/products/us/desktop/essential/c-series, which advertised products to be offered for sale in the United States:

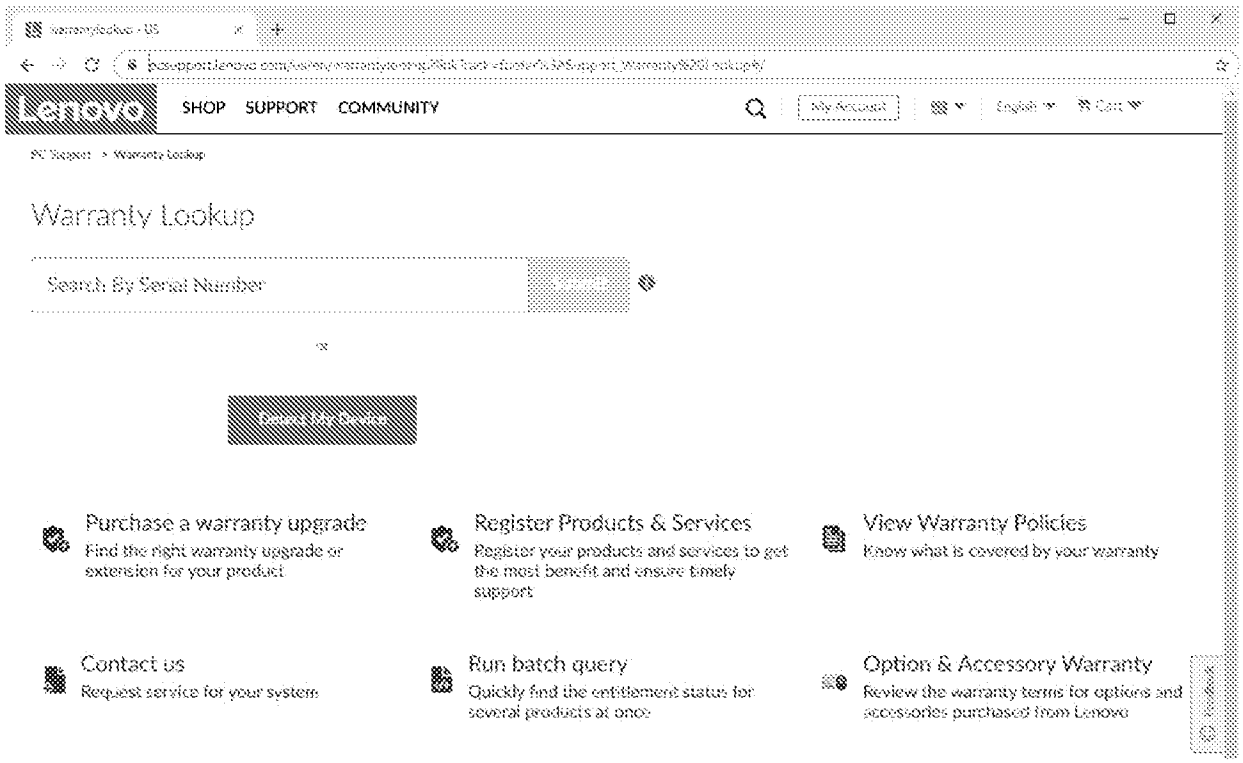


50. The specimen that Lenovo Beijing submitted on October 13, 2011 also included screenshots of the Lenovo.com Domain, www.lenovo.com/en_US/product-service/default.page?,

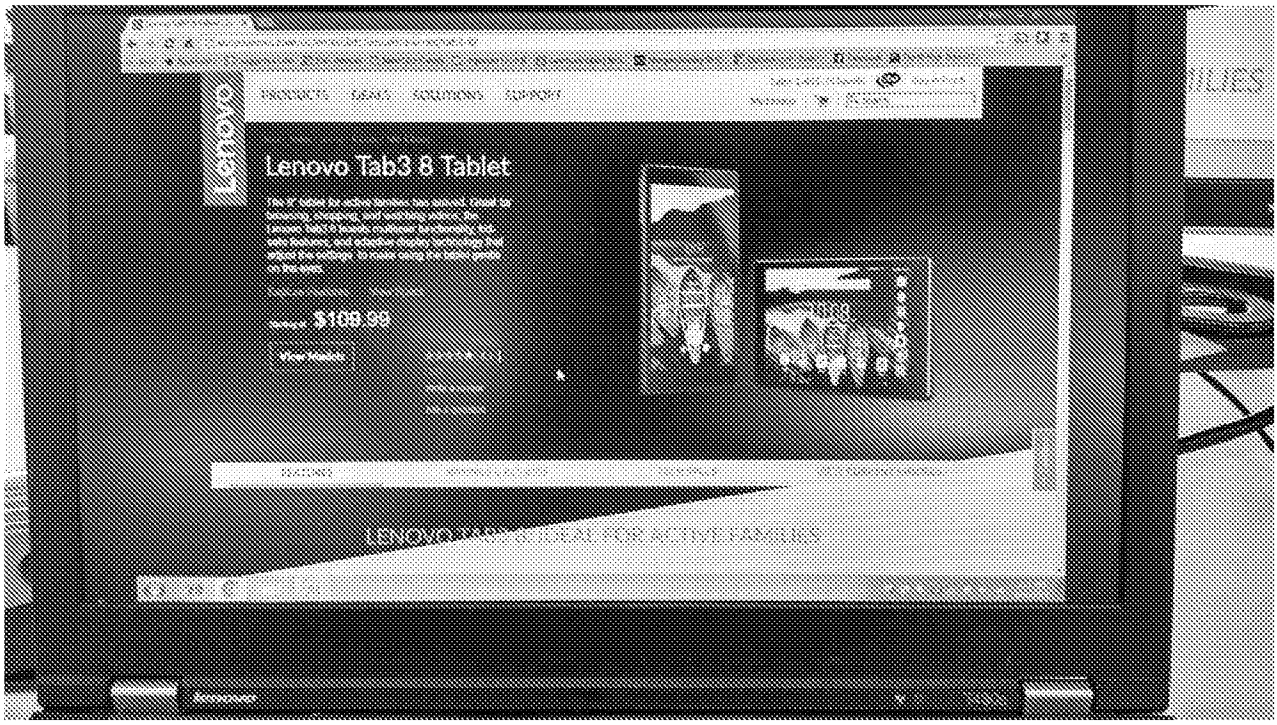
which allowed customers in the United States to check the status of their product and service warranty, upgrade their warranty, or access their warranty policies:



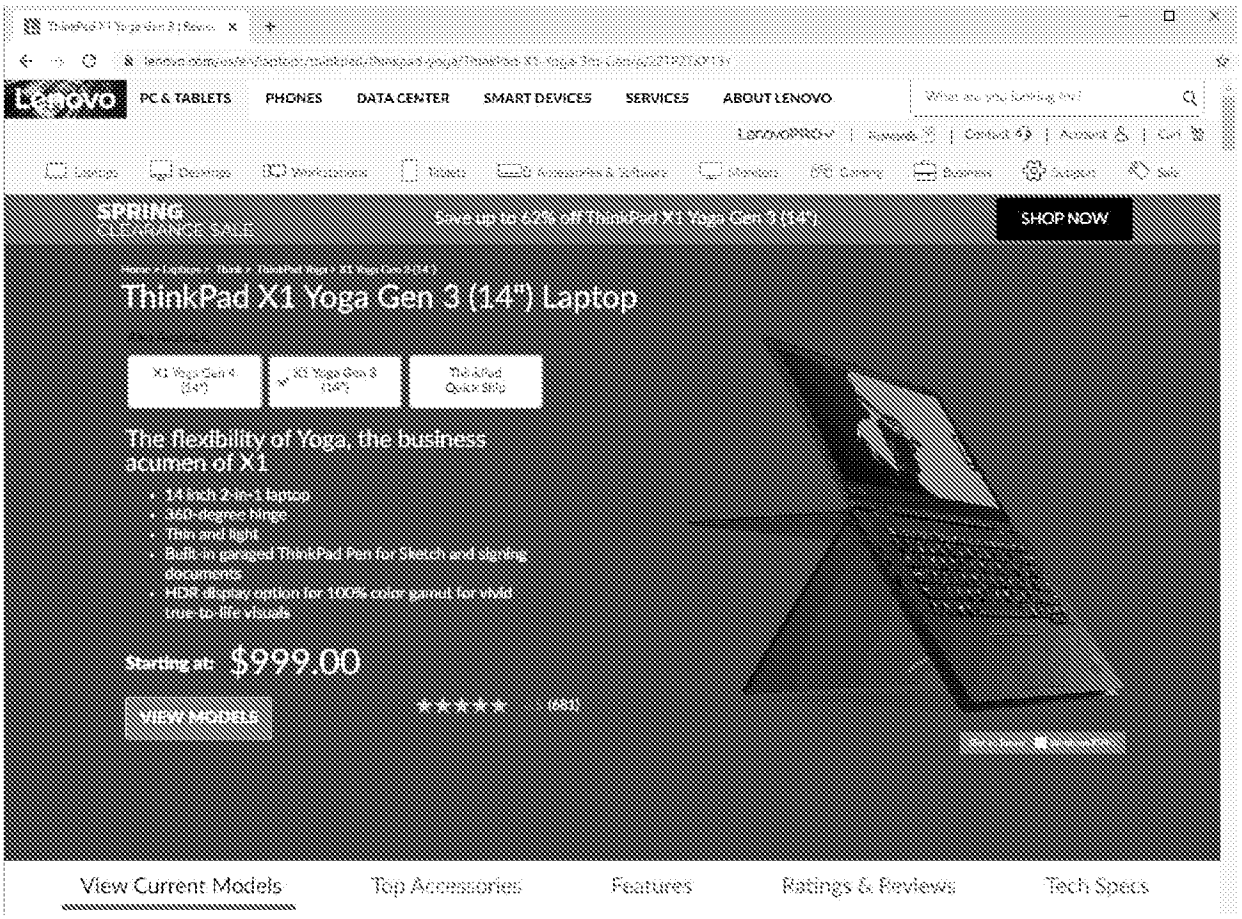
51. Lenovo Beijing continues to use the LENOVO mark on the Lenovo.com Domain, which allows customers in the United States who have purchased the Accused Products to lookup their warranty, purchase a warranty upgrade, or view their warranty policies.



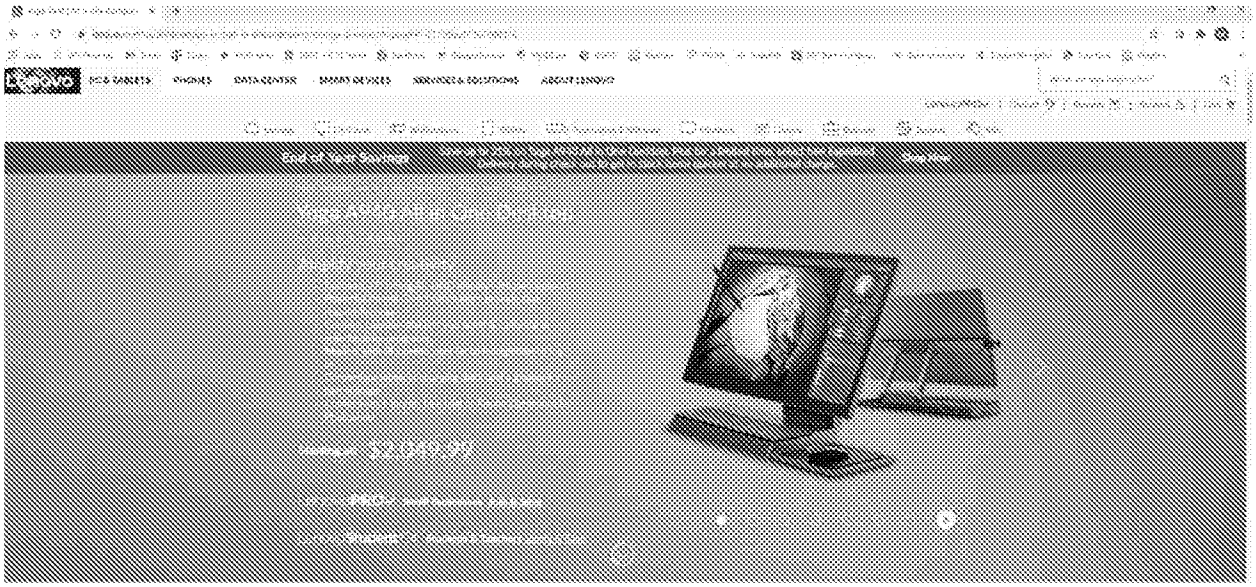
52. On August 31, 2016, Lenovo Beijing submitted a Declaration of Use that included a specimen in which the use of the LENOVO mark on Lenovo Beijing's Lenovo.com Domain is visible, and is used in connection with an offer to sell a product within the United States.



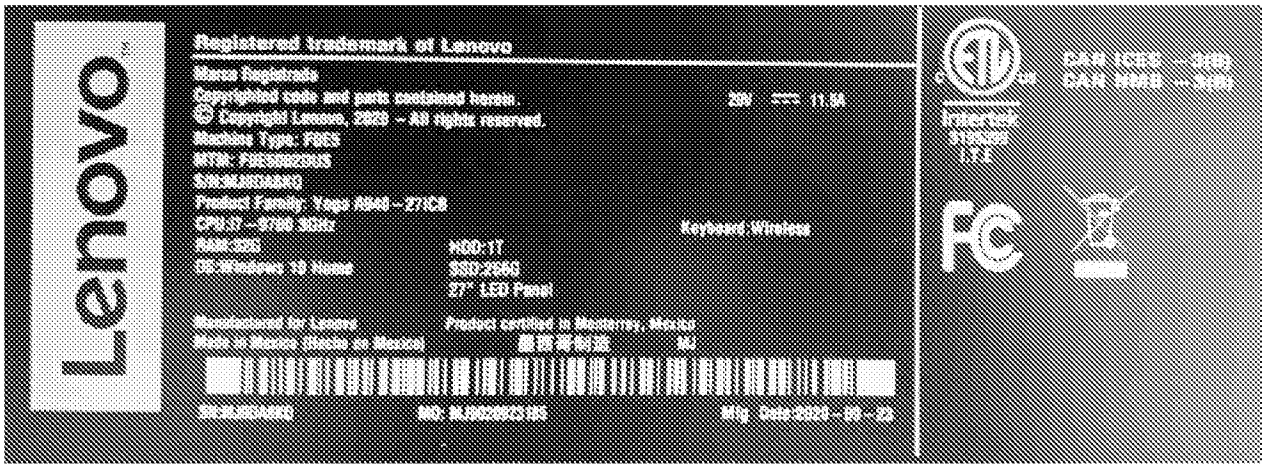
53. Lenovo Beijing continues to use the LENOVO mark on the Lenovo.com Domain in connection with offers to sell products within the United States, including each of the Accused Products (defined below). For example, Lenovo Beijing displays the LENOVO mark on the Lenovo.com Domain in connection with its offer to sell to customers within the United States, including customers within Delaware, the 3rd Generation ThinkPad X1 Yoga, which is included in the Accused Products.



54. Lenovo Beijing also displays the LENOVO mark on the Lenovo.com Domain in connection with its offer to sell to customers within the United States, including customers within Delaware, the Lenovo A940 All in One Desktop, which is one of the Accused Products:



55. A Yoga A940, which is one of the Accused Products, was purchased in Delaware from the Lenovo.com Domain. The underside of the device bears Lenovo Beijing's LENOVO mark:



56. A 3rd Generation ThinkPad X1 Yoga, which is one of the Accused Products, was purchased in the United States from Lenovo Beijing's Lenovo.com Domain. The underside of the device bears Lenovo Beijing's LENOVO mark.



57. The Accused Products are a significant source of revenue for Lenovo. In May 2019, the president of Lenovo's North America Intelligent Devices Group, Matthew Zielinksi, stated: "We took back the lead as the No. 1 PC company in the world. We hit a global market share of 24.6 percent [for the fourth quarter of 2018, according to IDC], which is 16 percent growth. ... Through calendar Q4 of last year, we were the fastest-growing PC manufacturer in the largest five. Our shipments jumped 29 percent year to year, and in calendar Q4 we outgrew the market by 26 points—just some astounding growth numbers there. That is North America alone. Not only was it 26 percent year-on-year growth, but we were just way faster by a country mile relative to the competition. ... We're absolutely on fire, and I'm extraordinarily bullish on our plans for next year." https://www.cnn.com/slide-shows/mobility/lenovo-s-matthew-zielinski-intelligent-devices-group-is-absolutely-on-fire. Lenovo's 2019 Annual Report states that the PC and Smart Device (PCSD) Business, which is part of Lenovo's Intelligent Devices Group, had "a record revenue of US $38,475 million for the fiscal year, representing approximately 75 percent of the Group's total revenue." (2019 Annual Report, p. 18). The 2019 Annual Report stated that market share gain and revenue growth "were mainly driven by Asia Pacific (AP) and North America (NA)." (*Id.*) The Accused Products fall within Lenovo's PCSD Business. Given that Lenovo accounts for nearly a quarter of global market share for personal computers, given Lenovo's "astounding growth" in North America, given that the PCSD Business that supplies the Accused Products had over $38 billion in revenues in 2019, and given the large number of

devices in the Accused Products (defined below), upon information and belief customers in United States, including in Delaware, have purchased the Accused Products from Lenovo Beijing's website in the past six years.

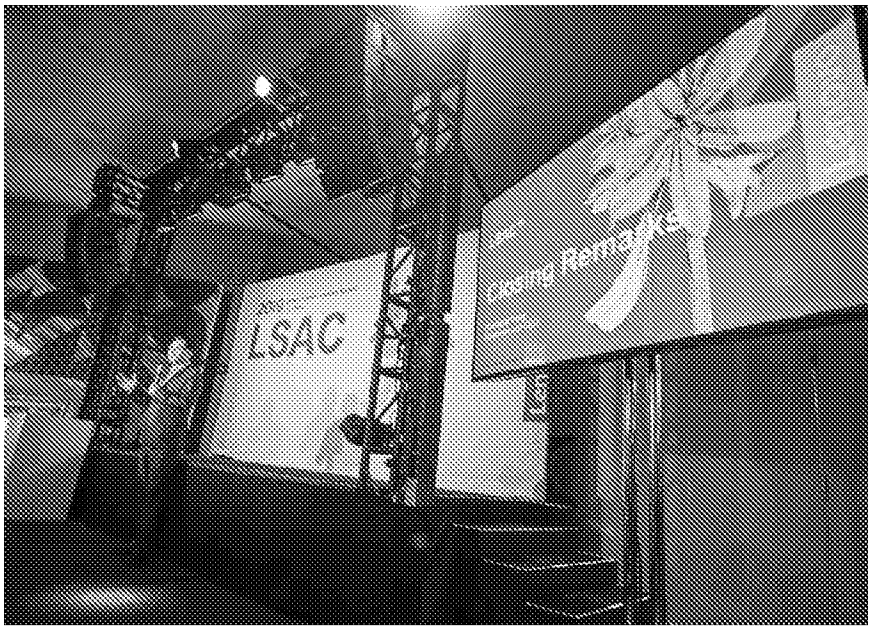
58. Lenovo Beijing plays a significant role in realizing the revenue for one or more of the Accused Products. For example, Lenovo Beijing's development and design of one or more of the Accused Products, its role with the manufacture and distribution of one or more of the Accused Products, its role getting authorization to import and sell one or more of the Accused Products in the United States and Delaware, its control over the trademarks used with the Accused Products, and its control over the Lenovo.com Domain are all important to generating the revenue associated with those Accused Products.

59. On information and belief, people in Delaware and in the United States who buy products from the Lenovo.com Domain understand that they are entering into a sales agreement with Lenovo Beijing. The Sales Agreement available on the Lenovo.com Domain generically refers to "Lenovo." https://www.lenovo.com/us/en/legal/sales-agreement/. A person in Delaware or the United States who used a WHOIS database to check who the "Lenovo" providing the Sales Agreement would learn that Lenovo Beijing owns the Lenovo.com Domain. https://who.is/whois/lenovo.com. Nothing on the Lenovo.com Domain indicates that the Sales Agreement between "Lenovo" and customers in Delaware and the United States is actually an agreement with Lenovo US. Consequently, on information and belief, people in Delaware and the United States understand that the Sales Agreement on the Lenovo.com Domain is with Lenovo Beijing.

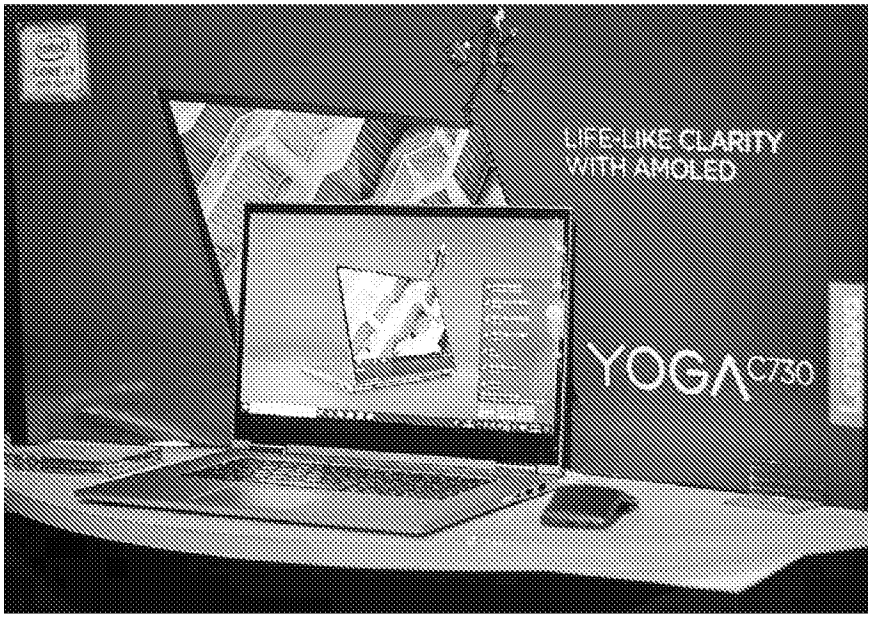
60. Lenovo Beijing's purposeful contact with the United States and with Delaware is evidenced by the following Lenovo Beijing conduct: involvement in the development and design

of one or more of the Accused Products for use in the United States and Delaware; involvement in the manufacture and distribution of one or more of the Accused Products with the intent that one or more of the Accused Products would be used in the United States and Delaware; involvement in securing compliance with the FCC requirements for marketing, importing, selling and using one or more of the Accused Products in the United States and Delaware; ownership of and control over the trademarks used with the Accused Products; and ownership of, responsibility for and control over the Lenovo.com Domain. But for these purposeful contacts by Lenovo Beijing, one or more of the Accused Products would not have been imported, offered for sale, sold, and used within the United States and Delaware, and therefore LiTL's infringement claims arise from these contacts.

61. Lenovo has promoted one or more of the Accused Products at one or more conventions, conferences, or trade shows in the United States. https://www.lenovo.com/us/en/events/ces/products. On information and belief, Lenovo Beijing and one or more of its employees has assisted Lenovo with preparation for such conventions or has attended such conventions on Lenovo's behalf. On information and belief, at such events, Lenovo Beijing employees spoke with consumers in the United States, and offered to sell or sold one or more of the Accused Products to consumers in the United States, or assisted other in doing so. On information and belief, such consumers may have been from Delaware or received such purchased Accused Products in Delaware. For example, Yuanqing Yang, the CEO of Lenovo Group and the leader of Lenovo Beijing spoke at CES 2019 in Las Vegas, where many of the Accused Products were promoted:



https://www.flickr.com/photos/lenovophotolibrary/46182094565/in/album-72157689698831183/



https://www.flickr.com/photos/lenovophotolibrary/40130936643/in/album-72157689698831183/

62. The Yoga A940 was showcased and used on or around January 9, 2019, as evidenced by the below photo from an album entitled "Lenovo at CES 2019" in Lenovo's official Flickr account, which states that the photo was "taken on January 9, 2019."



https://www.flickr.com/photos/lenovophotolibrary/32153906207/in/album-72157689698831183/

63. Lenovo US and Lenovo Beijing are part of a coordinated operation for making, importing, offering to sell, selling, and/or using the Accused Products in the United States and Delaware. On information and belief, Lenovo US and Lenovo Beijing share the same management, common ownership, advertising platforms, facilities, distribution chains and platforms, and Accused Product lines and products involving related technologies. For example, Lenovo Group's CEO, Mr. Yang Yuanqing, "formulates and recommends the strategy of the Group"—defined to includes Lenovo US and Lenovo Beijing—and then "executes the strategy agreed by the Board." https://doc.irasia.com/listco/hk/lenovo/annual/2020/ar2020.pdf. "The Group is controlled through the Board who is responsible for steering the success of the Group by overseeing the overall strategy and directing and supervising its affairs in a responsible and effective manner." Lenovo US and Lenovo Beijing are both parties of a coordinated operation that introduces the Accused Products into the stream of commerce with the knowledge, expectation, and intent that they will be sold and used in Delaware and the United States.

64. The Court exercising personal jurisdiction over Lenovo Beijing is reasonable and consistent with the constitutional requirement of "fair play and substantial justice." As a resident of Delaware, LiTL's interest in litigating in Delaware is high. Delaware's interest in providing a forum for its residents to protect its rights is high, as is its interest in discouraging injuries in Delaware. Further, Delaware has a substantial interest in cooperating with other states to provide a forum for efficiently litigating LiTL's cause of action.

65. The discovery burden on Lenovo Beijing is not significant. Lenovo Beijing asserts that discovery is limited in China, which if true, would mitigate the burden on Lenovo Beijing.

66. For the foregoing reasons, Lenovo Beijing is subject to the personal jurisdiction of this Court under Federal Rule of Civil Procedure 4(k)(1) and the Delaware Long Arm Statute. Alternatively, if Lenovo Beijing is not subject to the personal jurisdiction of the courts of Delaware, then it is subject to the personal jurisdiction of this Court under Federal Rule of Civil Procedure 4(k)(2) because it has minimum contacts with the United States.

67. On information and belief, jurisdictional discovery about the following types of conduct by Lenovo Beijing would reveal additional reasons that Lenovo Beijing is subject to the personal jurisdiction of this Court:

- registering and exercising control over the Lenovo.com Domain and the use of the Lenovo.com Domain by Lenovo US;
- developing and designing of any of the Accused Products to comply with United States regulations required to import, offer to sell, sell, and use those Accused Products in the United States, including Lenovo Beijing's development and design of the Yoga A940;

- applying and securing approval from United States regulatory agencies to import, sell, and use one or more of the Accused Products in the United States;
- involvement with and control over the manufacture of the Accused Products;
- use of the established distribution networks for the Accused Products that Lenovo Beijing created, controls, or uses;
- involvement with importation and sales of Accused Products in the United States and Delaware;
- the extent of Lenovo Beijing's knowledge of and investigation of the Asserted Patents;
- registering trademarks in the United States and control over the use of those trademarks by Lenovo US;
- the importance of the Accused Products to Lenovo Beijing;
- involvement in realizing the revenue associated with the Accused Products;
- participation in conventions and conferences in the United States;
- the relationship between Lenovo Beijing and Lenovo US regarding the design, development, manufacture, distribution, importation into the United States, and sale in the United States and Delaware of the Accused Products; and
- the burdens on Lenovo Beijing associated with litigating in Delaware.

These topics of jurisdictional discovery are exemplary, and LiTL reserves to the right to seek other forms of jurisdictional discovery.

68. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400(b). Lenovo US is incorporated in this District. Upon information and belief, Defendants have transacted business in this District and have committed acts of direct and indirect infringement in this

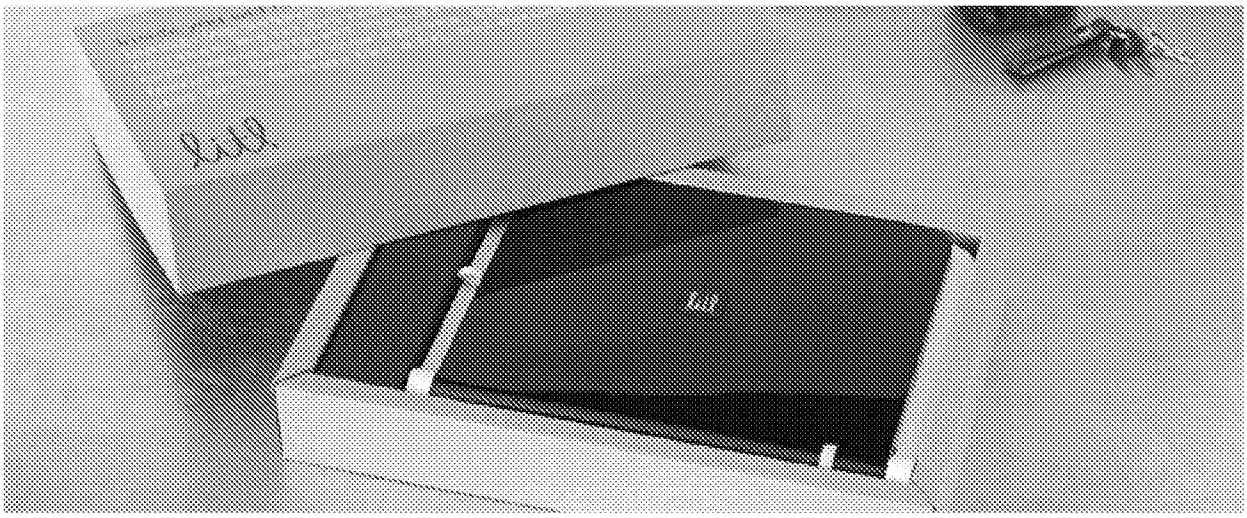
District by, among other things, making, using, offering to sell, selling, and/or importing products that infringe the Asserted Patents. Lenovo Beijing does not reside in the United States and venue lies in any judicial district pursuant to 28 U.S.C. § 1391(c)(3).

FACTUAL BACKGROUND

LiTL's Patented Technologies

69. In 2007, John Chuang had a vision for a new type of computer. He recognized that traditional computers are designed to meet the needs of everyone from a six year old to the largest employers on earth. Mr. Chuang set out to build a computer for the home that offered a simplified operating environment. Mr. Chuang founded LiTL and assembled a team of hardware and software engineers and user interface designers to achieve his vision.

70. LiTL developed a webbook, a portable computing device, which launched in 2009. LiTL focused on how a family typically uses the Internet in the home, and optimized the webbook's user interface for consuming Internet content.





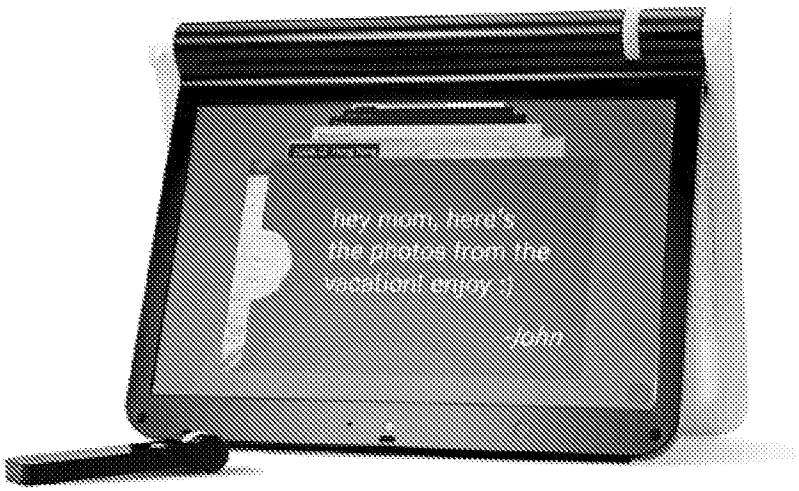
http://web.archive.org/web/20091204052449/http://www.litl.com/essays/hardware.htm

71. The webbook provided multiple display modes. In laptop mode, users access a keyboard and touchpad to browse the Internet and access apps that can be arranged as a set of cards.



http://web.archive.org/web/20091204052449/http://www.litl.com/essays/hardware.htm

72. Rotating the webbook display into "easel mode" allows users to easily consume content from the Internet via a streamlined, intuitive interface.



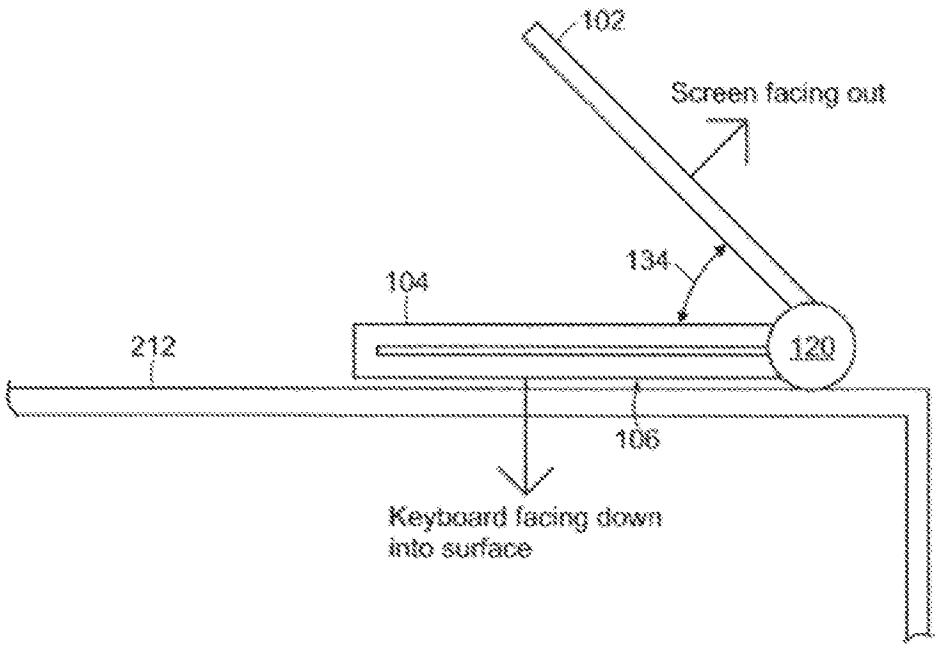
http://web.archive.org/web/20091201114605/http://www.litl.com/easy-to-use/intuitive-interface.htm

73. In easel mode the webbook's keyboard faces away from the user, and content is enlarged on the display for easier viewing from further away.



http://web.archive.org/web/20130420102239/http://litl.com/webbook/meet-webbook/more-fun.htm

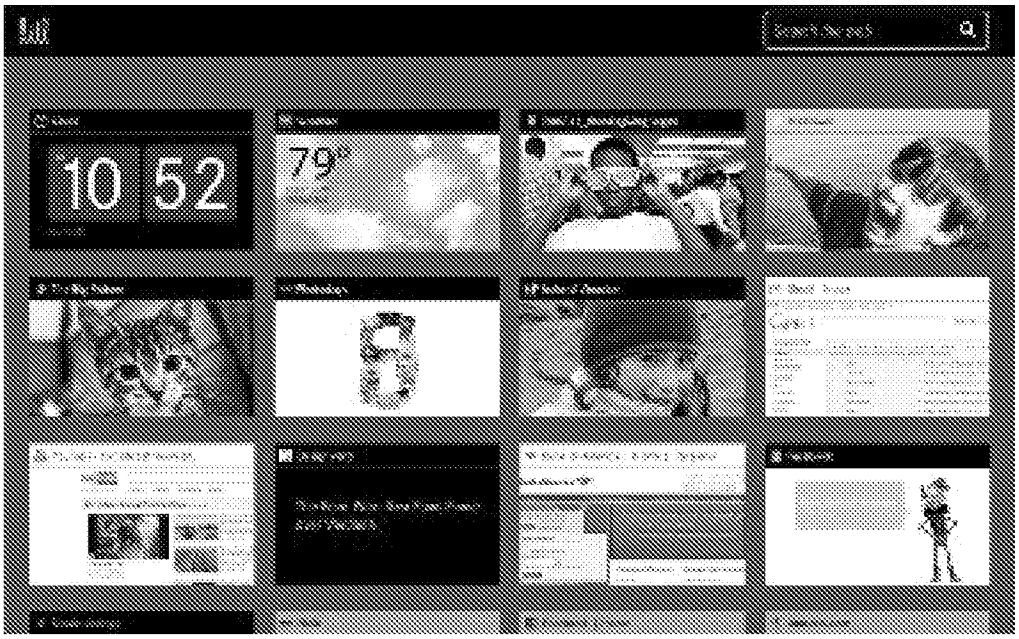
74. The webbook can also be configured in "frame mode," in which the keyboard faces down into the surface on which the webbook rests.



'688 patent, Figure 26.

75. The webbook delivers content from a user's favorite websites via "channels" to provide an experience that resembles watching television.





http://web.archive.org/web/20091204052453/http://www.litl.com/essays/software.htm

76. LiTL's continuing investment in innovation has produced a portfolio that includes over 20 patents in the United States and other countries across the globe.

LiTL's Asserted Patents

77. This complaint focuses on six LiTL patents directed to various aspects of computing devices that can be used in multiple display modes.

78. LiTL is the current owner by assignment of the entire right, title and interest in and to the '688 patent titled "Portable computer with multiple display configurations." LiTL filed U.S. Pat. App. No. 12/170,939 on July 10, 2008, which published as U.S. Pub. No. 2009/0244832 ("'832 Publication"), and the application issued as the '688 patent on October 16, 2012. The patent is generally directed to portable computers configurable between a plurality of display modes. A copy of the '688 patent is attached as Exhibit A.

79. LiTL is the current owner by assignment of the entire right, title and interest in and to the '844 patent titled "Portable computer with multiple display configurations." LiTL filed U.S. Pat. App. No. 12/170,951 on July 10, 2008, which published as U.S. Pub. No.

2009/0244012 ("'012 Published Application"), and the application issued as the '844 patent on January 7, 2014. The patent is generally directed to portable computers configurable between a plurality of display modes. A copy of the '844 patent is attached as Exhibit B.

80. LiTL is the current owner by assignment of the entire right, title and interest in and to the '154 patent titled "Portable computer with multiple display configurations." The '154 patent was duly and legally issued on May 14, 2019. The patent is generally directed to portable computers configurable between a plurality of display modes. A copy of the '154 patent is attached as Exhibit C.

81. LiTL is the current owner by assignment of the entire right, title and interest in and to the '715 patent titled "System and method for streamlining user interaction with electronic content." The '715 patent was duly and legally issued on January 30, 2018. The patent is generally directed to a user interface configured to display a plurality of views of computer content. A copy of the '715 patent is attached as Exhibit D.

82. LiTL is the current owner by assignment of the entire right, title and interest in and to the '888 patent titled "Method and apparatus for managing digital media content." The '888 patent was duly and legally issued on December 17, 2013. The patent relates generally to accessing and managing digital media libraries on streamlined computing devices with a plurality of selectable I/O profiles. A copy of the '888 patent is attached as Exhibit E.

83. LiTL is the current owner by assignment of the entire right, title and interest in and to the '957 patent titled "System and method for streamlining user interaction with electronic content." The '957 patent was duly and legally issued on November 5, 2013. The patent is generally directed to streamlined computer devices configured to perform a remote access operation. A copy of the '957 patent is attached as Exhibit F.

84. LiTL complied with its obligations under 35 U.S.C. § 287.

85. The Asserted Patents were well-known to personal computing companies because the Asserted Patents and their published applications are frequently cited during prosecution of patent applications owned by personal computing companies.

86. The Asserted Patents belong to a family whose members have been cited over 900 times in the prosecution of third-party patent applications.

87. The '688 patent and its corresponding published application have been cited at least 284 times in patents or publications assigned to major players in the personal computing space, as depicted below. Lenovo Group and its subsidiaries are fifth in the list of assignees whose patents and patent applications have cited the '688 patent and its published application

Ultimate Parent of Assignee	**Citations to '688 Patent**	**Citations to Published App.**	**Total Citations**
Microsoft Corp.	35	54	89
Apple Inc.	13	16	29
Intel Corp.	19	7	26
Google Inc.	10	2	12
Lenovo Group Ltd.	6	3	9
Hewlett Packard Co.	6	2	8
Dell Inc.	4	2	6
Other (excluding LiTL)	32	73	105
Total	125	159	284

88. The '844 patent and its corresponding published application have been cited at least 112 times in patents or publications assigned to major players in the personal computing space. Lenovo Group and its subsidiaries are third in the list of assignees whose patents and patent applications have cited the '844 patent and its published application.

Ultimate Parent of Assignee	Citations to '844 Patent	Citations to Published App.	Total Citations
Microsoft Corp.	16	1	17
Apple Inc.	0	12	12
Lenovo Group Ltd.	1	8	9
Google Inc.	3	5	8
Intel Corp.	2	2	4
Dell Inc.	2	1	3
Other (excluding LiTL)	24	35	59
Total	48	64	112

89. The '154, '715, '888 and '957 patents are descendants of the '688 and '844 patents.

90. According to a 2015 article by Lenovo Beijing employee Fred Gao, from the "Patent Management" department: "Lenovo's IP strategy is an integral part of the innovation cycle and product design process. R&D teams work closely with the company's IP lawyers from product conception through to manufacture and commercialization to develop effective IP strategies for new products. … Lenovo's Yoga Laptop, which combines its unique 360-degree rotating screen with standard tablet and laptop functionality, boasts around 100 patent and design rights." https://www.wipo.int/wipo_magazine/en/2015/03/article_0002.html

91. Given the close working relationship between Lenovo Beijing's R&D teams and the company's IP lawyers, and the numerous patents directed to Lenovo Yoga laptops, several of which cite the '688 and '844 patents and corresponding published applications, on information and belief Lenovo Beijing was aware of each of the Asserted Patents before the filing of the Original Complaint and knew that the Yoga laptop's 2-in-1 design infringes the Asserted Patents.

Lenovo's Incorporation of LiTL's Patented Technologies into Its Computing Devices

92. The allegations provided below are exemplary and without prejudice to LiTL's infringement contentions. In providing these allegations, LiTL does not convey or imply any particular claim constructions or the precise scope of the claims. LiTL's claim construction

contentions regarding the meaning and scope of the claim terms will be provided under the Court's scheduling order and local rules.

93. The infringing products include, but are not limited to, IdeaPad Yoga 13; IdeaPad Yoga 11S; Flex 2 (14 inch); Flex 2 (15 inch); Flex 3 (11 inch); Flex 3 (14 inch); Flex 3 (15 inch); Flex 4 (11 inch); Flex 4 (14 inch); Flex 4 (15 inch); Flex 5 (14 inch); Flex 5 (15 inch); Flex 6 (11 inch); Flex 6 (14 inch); Flex 10; Flex 14; Flex 14D; Flex 15; Flex 15D; Edge 15; Edge 2; Yoga 2 (11 inch); Yoga 2 (13 inch); Yoga 2 Pro; Yoga 3 (11 inch); Yoga 3 (14 inch); Yoga 3 Pro; Yoga 260; Yoga 300; Yoga 460; Yoga 500 (14 inch); Yoga 500 (15 inch); Yoga 510 (14 inch); Yoga 510 (15 inch); Yoga 520; Yoga 530; Yoga 700 (11 inch); Yoga 700 (14 inch); Yoga 710 (11 inch); Yoga 710 (14 inch); Yoga 710 (15 inch); Yoga 720 (12 inch); Yoga 720 (13 inch); Yoga 720 (15 inch); Yoga 730 (13 inch); Yoga 730 (15 inch); Yoga 900; Yoga 900S; Yoga 910; Yoga 920; Yoga Book with Windows; Yoga C630; Yoga C640; Yoga S730; Yoga C740 (14 inch); Yoga C740 (15 inch); Yoga S740 (14 inch); Yoga S740 (15 inch); Yoga C930; Yoga Book C930; Yoga C940 (14 inch); Yoga C940 (15 inch); Yoga Slim 7; Yoga P40; LaVie 360; 1st Generation ThinkPad Yoga 11e; 2nd Generation ThinkPad Yoga 11e; 3rd Generation ThinkPad Yoga 11e; 4th Generation ThinkPad Yoga 11e; 5th Generation ThinkPad Yoga 11e; ThinkPad Yoga 12; ThinkPad Yoga 14; ThinkPad Yoga 15; ThinkPad L380 Yoga; ThinkPad L390 Yoga; 1st Generation ThinkPad X1 Yoga; 2nd Generation ThinkPad X1 Yoga; 3rd Generation ThinkPad X1 Yoga; 4th Generation ThinkPad X1 Yoga; 5th Generation ThinkPad X1 Yoga; ThinkPad Yoga X380; ThinkPad Yoga X390; ThinkPad L13 Yoga; Lenovo 300e Windows; Lenovo 300e Winbook; Lenovo N23 Winbook (collectively "Accused Portable Products"); and Lenovo Yoga A940 (together with the Accused Portable Products, the "Accused Products"). The Accused Products are non-limiting examples that were identified based on publicly available information,

and LiTL reserves the right to identify additional infringing activities, products and services, including, for example, on the basis of information obtained during discovery.

94. The Accused Portable Products are convertible devices, which are capable of being used in multiple modes, including laptop mode, tent mode, and stand mode. From 2012 through the present, the Lenovo.com Domain has hosted press releases touting the multi-mode capabilities of the following Accused Portable Products. Lenovo intends that those press releases influence buyers in the United States and Delaware.

- IdeaPad Yoga 13 (October 9, 2012): https://news.lenovo.com/pressroom/press-releases/lenovo-premiers-yoga-and-debuts-family-of-convertible-devices-designed-for-windows-8/
- Yoga 11S (May 16, 2013): https://news.lenovo.com/pressroom/press-releases/lenovo-launches-yoga-11s-convertible/
- Yoga 2 Pro, ThinkPad Yoga, Flex 14, Flex 15 (September 5, 2013): https://news.lenovo.com/pressroom/press-releases/lenovo-expands-multimode-family-with-new-yoga-convertibles-and-flex-dual-mode-devices/
- Yoga 2, Flex 14D, Flex 15D (January 6, 2014): https://news.lenovo.com/pressroom/press-releases/lenovo-adds-more-convertibles-and-detachable-devices-to-multimode-computing-roster/
- Flex 2 (April 16, 2014): https://news.lenovo.com/pressroom/press-releases/lenovo-flexes-multimode-muscle-with-new-dual-mode-laptops/
- Edge 15 (September 4, 2014): https://news.lenovo.com/pressroom/press-releases/new-lenovo-devices-transform-to-fit-the-board-room-game-room-and-beyond/

- Yoga 3 Pro (October 9, 2014): https://news.lenovo.com/pressroom/press-releases/new-lenovo-ultra-slim-yoga-3-pro-adapts-to-users/
- Flex 3 (January 5, 2015): https://news.lenovo.com/pressroom/press-releases/lenovo-brings-consumers-new-choices-for-mobile-and-home-computing/
- LaVie 360 (January 5, 2015): https://news.lenovo.com/pressroom/press-releases/lenovo-and-necp-introduce-two-lighter-than-air-lavie-z-ultraportables/
- ThinkPad Yoga, Yoga 3 (January 5, 2015): https://news.lenovo.com/pressroom/press-releases/lenovo-yoga-family-takes-flexibility-and-interactivity-even-further-with-new-technologies/
- ThinkPad Yoga 11e (January 21, 2015): https://news.lenovo.com/pressroom/press-releases/lenovo-gets-back-to-school-with-new-thinkpad-11e-laptops-series/
- Yoga 260, Yoga 460 (September 2, 2015): https://news.lenovo.com/pressroom/press-releases/new-thinkpad-yoga-and-thinkcentre-tiny-transform-business-computing/
- Yoga 900 (October 19, 2015): https://news.lenovo.com/pressroom/press-releases/new-lenovo-yoga-windows-10-pcs-primed-for-portability/
- Yoga 700 (October 29, 2015): https://news.lenovo.com/pressroom/press-releases/new-lenovo-yoga-700-offers-more-options-for-performance-and-portability/
- Yoga P40 (December 1, 2015): https://news.lenovo.com/pressroom/press-releases/creativity-without-limits-performance-without-compromise-lenovo-unveils-the-thinkpad-p40-yoga/
- ThinkPad X1 Yoga (January 3, 2016): https://news.lenovo.com/pressroom/press-releases/lenovo-unveils-pioneering-modular-thinkpad-x1-tablet/

- Yoga 900S (January 4, 2016): https://news.lenovo.com/pressroom/press-releases/lenovo-launches-yoga-900s-as-worlds-thinnest-convertible-laptop/
- Yoga 510, Yoga 710, Flex 4 (February 21, 2016): https://news.lenovo.com/pressroom/press-releases/lenovo-launches-new-travel-ready-windows-10-tablet-and-yoga-laptops/
- Lenovo N23 (May 10, 2016): https://news.lenovo.com/pressroom/press-releases/lenovo-launches-new-n23-and-n42-laptops-designed-for-k-12-institutions/
- Yoga 910 (August 31, 2016): https://news.lenovo.com/pressroom/press-releases/lenovo-pushes-the-portability-envelope-with-latest-yoga-laptop-and-tablet/
- Yoga Book (August 31, 2016): https://news.lenovo.com/pressroom/press-releases/lenovo-reveals-the-yoga-book-the-2-in-1-tablet-for-productivity-and-creativity/
- Yoga 520, Yoga 720 (February 27, 2017): https://news.lenovo.com/pressroom/press-releases/lenovo-sets-stage-for-new-mobility-with-smart-connected-devices-services/
- Yoga 920 (August 31, 2017): https://news.lenovo.com/pressroom/press-releases/lenovo-connects-consumers-with-powerful-reality-of-todays-new-smart-devices/
- Yoga 530, Yoga 730 (February 26, 2018): https://news.lenovo.com/pressroom/press-releases/lenovo-sees-intelligence-transforming-everything-at-mwc-2018-from-devices-to-data-center/
- Yoga C930 (August 30, 2018): https://news.lenovo.com/pressroom/press-releases/raising-the-bar-lenovo-design-vp-on-the-new-yoga-c930/

- Yoga C730 and Yoga A940 (January 8, 2019): https://news.lenovo.com/pressroom/press-releases/lenovo-yoga-smartest-consumer-computers-yet/
- Lenovo 100e Windows, Lenovo 300e Windows (January 22, 2019): https://news.lenovo.com/pressroom/press-releases/lenovo-laptops-amplify-learning-experiences-through-digital-innovation/
- ThinkPad X390 Yoga (February 25, 2019): https://news.lenovo.com/pressroom/press-releases/intelligent-mobile-computing-showcased-by-latest-thinkpad-laptops-mwc/
- https://news.lenovo.com/pressroom/press-releases/smarter-lenovo-thinkpad-laptops-engineered-for-future-workforce/
- Yoga C740, Yoga S740, Yoga C940 (September 5, 2019): https://news.lenovo.com/pressroom/press-releases/lenovo-launches-new-devices-offering-smarter-technology-for-all-ifa-tech-life/
- Yoga Slim 7 (January 6, 2020): https://news.lenovo.com/pressroom/press-releases/lenovo-breaks-barriers-with-new-consumer-technology-unveiled-at-ces-2020-2/
- ThinkPad X13 Yoga, ThinkPad L13 Yoga (February 24, 2020): https://news.lenovo.com/pressroom/press-releases/updated-thinkpad-laptop-portfolio-empowers-choice-and-business-freedom/

95. Convertible devices like the Accused Portable Products have played a significant role in the profitability of Lenovo entities. For example:

- According to a 2013 article, Lenovo's leadership recognized that convertible devices that use the Windows 8 operating system "are helping the company break into the

high-end segment for the North American market." https://www.cio.com/article/2388774/windows-8-convertibles-help-lenovo-break-into-high-end-pc-market.html

- In a 2013 interview with McKinsey, Lenovo's leadership explained the impact that the Yoga had on Lenovo's fortunes in the United States: "Yoga, our ultrabook that functions both as a laptop and tablet, is a good example. Before we launched it, we had never addressed the high-priced laptop market in the US. Now, since launching Yoga, we have a more than 40 percent market share in the $900-and-above price band in the US retail market. That's from this one product with just two models, a 13-inch and an 11-inch. It's been a huge, huge success. And it's not only helped us to grow our volume and market share but also to build our brand. It has repositioned us as a brand known for innovation." http://sites.utexas.edu/chinaecon/files/2015/06/McKinsey_Interview-Lenovo-CEO-Yang.pdf
- In a 2013 interview with the Economic Times, Lenovo's leadership stated: "Yoga is a hybrid laptop that is also a tablet with touch capability. That's the future of notebook." https://economictimes.indiatimes.com/opinion/interviews/lenovos-protect-and-attack-strategy-helped-it-expand-globally-yang-yuanqing-chairman-and-ceo-lenovo-group/articleshow/18281695.cms
- In a 2013 interview with the Wall Street Journal, Lenovo's leadership stated that "high-end products, like the IdeaPad Yoga" had "helped raise average selling prices." https://blogs.wsj.com/digits/2013/08/15/qalenovo-ceo-on-smartphones-and-blackberry/

96. Lenovo entities make, use, sell, offer for sale and import the 3rd Generation ThinkPad X1 Yoga with a Windows 10 operating system and the device's features are described on Lenovo's website in various places, including but not limited to:

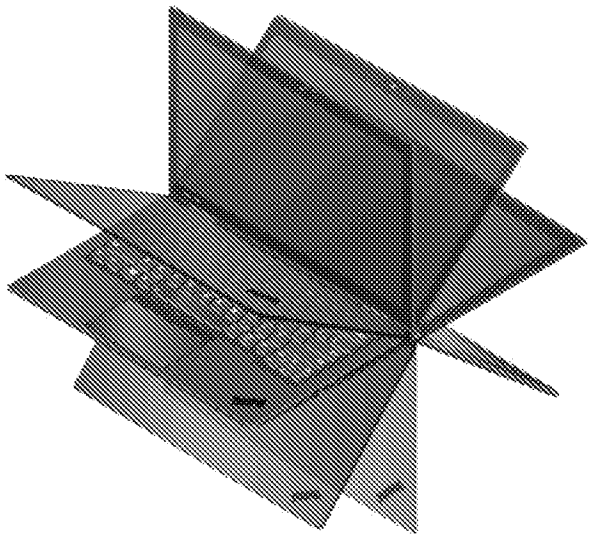
- https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-yoga/ThinkPad-X1-Yoga-3rd-Gen/p/22TP2TXX13Y ("ThinkPad Webpage")
- https://www.lenovo.com//us/en/laptops/thinkpad/thinkpad-yoga/ThinkPad-X1-Yoga-3rd-Gen/p/22TP2TXX13Y/gallery/image ("ThinkPad Photos")
- https://www.lenovo.com//us/en/laptops/thinkpad/thinkpad-yoga/ThinkPad-X1-Yoga-3rd-Gen/p/22TP2TXX13Y/gallery/video ("ThinkPad Video")
- https://psref.lenovo.com/syspool/Sys/PDF/Think_Tablets/ThinkPad_X1_Tablet_3rd_Gen/ThinkPad_X1_Tablet_3rd_Gen_Spec.PDF ("ThinkPad Specifications")
- https://pcsupport.lenovo.com/us/en/products/accessory/pens-and-supplies/thinkpad-pen-pro-for-l380-yoga/solutions/VID500081 ("ThinkPad Yoga Modes")
- https://download.lenovo.com/pccbbs/mobiles_pdf/tp_x1_carbon-yoga_hmm_v3_en.pdf ("ThinkPad Hardware Maintenance Manual")
- https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/thinkpad-x-series-laptops/thinkpad-x1-yoga-3rd-gen-type-20ld-20le-20lf-20lg/manuals/um500370 ("ThinkPad HTML User Guide")
- https://download.lenovo.com/pccbbs/mobiles_pdf/x1yoga_x1carbon_ug_en.pdf ("ThinkPad User Guide")

97. The user guide for the 3rd Generation ThinkPad X1 Yoga describes four operating modes.

Get to know YOGA modes (for X1 Yoga only)

Your computer display can be rotated to any angle up to 360 degrees.

Attention: Do not rotate the computer display with too much force, or apply too much force to the upper-right or upper-left corner of the computer display. Otherwise, the computer display or hinges might get damaged.



Your computer features the following four YOGA modes. You can switch among different modes according to your preference.

See ThinkPad User Guide, p. 28.

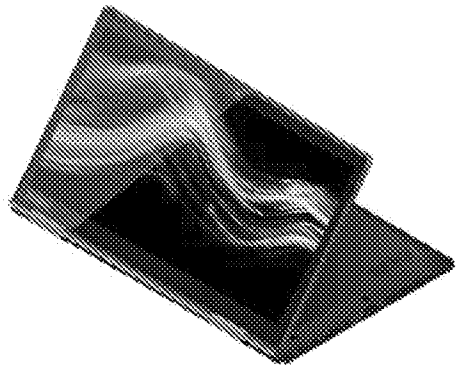
98. The keyboard is automatically disabled in three of the four operating modes.

Your computer features the following four YOGA modes. You can switch among different modes according to your preference.

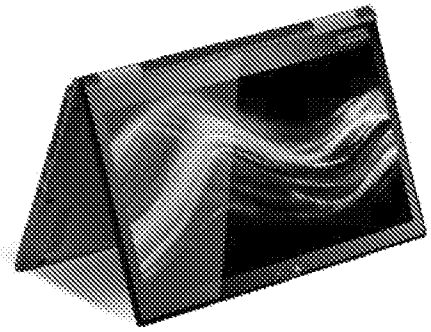
Note: The keyboard and the pointing devices are automatically disabled in the stand mode, tent mode, and tablet mode. Use the touch screen to control your computer instead.



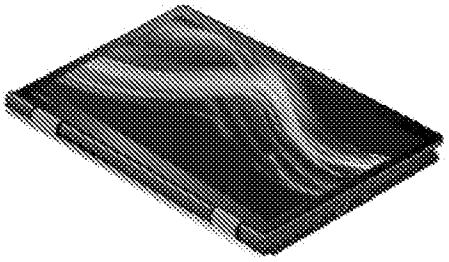
Notebook mode



Stand mode



Tent mode



Tablet mode

See ThinkPad User Guide, pp. 28-29.

99. On information and belief, the Accused Portable Products identified in the table below were and continue to be made, sold, and offered for sale with Windows 10 pre-installed and are capable of operating in the four operating modes described in the preceding paragraph:

Flex 3 (11 inch)	https://www.lenovo.com/us/en/laptops/lenovo/flex-series/flex-3-11/
Flex 3 (14 inch)	https://www.lenovo.com/us/en/laptops/lenovo/flex-series/flex-3-14/
Flex 3 (15 inch)	https://www.lenovo.com/us/en/consumer-notebook/ideapad/ideapad-flex-series/Lenovo-Flex-3-1580/p/88LG8FX0647
Flex 4 (11 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/IdeaPad-Flex-4-11-inch/p/88IP8FX0737
Flex 4 (14 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/Lenovo-ideapad-FLEX-4-1470/p/88IP8FX0685

Flex 4 (15 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/Lenovo-ideapad-FLEX-4-1570/p/88IP8FX0686
Flex 5 (14 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/Flex-5-14/p/88IP8FX0831
Flex 5 (15 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/flex-series/flex-5-1570
Flex 6 (11 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/Lenovo-FLEX-6-11IGM/p/88IP8FX0889
Flex 6 (14 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/Lenovo-ideapad-FLEX-6-14IKB/p/88IP8FX0980
Flex 14	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/Lenovo-IdeaPad-FLEX-14IWL/p/88IP8FX1271
Flex 15	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/Lenovo-IdeaPad-FLEX-15IWL/p/88IP8FX1272
Edge 2	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/lenovo-edge-series-laptops/edge-2-1580
Yoga 3 (14 inch)	https://www.lenovo.com/us/en/laptops/lenovo/yoga-laptop-series/yoga-3-14/
Yoga 260	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-yoga/Yoga-260/p/22TP2TXY260
Yoga 300	https://www.lenovo.com/us/en/consumer-notebook/lenovo-yoga/essential/Yoga-300-11/p/88YG3000595
Yoga 460	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-yoga/Yoga-460/p/22TP2TSS460
Yoga 500 (14 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-500-14isk
Yoga 500 (15 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-500-15isk
Yoga 510 (14 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-510-14ikb
Yoga 510 (15 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-510-15ikb
Yoga 520	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-520-14ikb
Yoga 530	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-530-14ikb

Yoga 700 (11 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Lenovo-YOGA-700-11ISK/p/88YG7000616
Yoga 700 (14 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/yoga-700-14/
Yoga 710 (11 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Yoga-710-11/p/88YG7000723
Yoga 710 (14 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Lenovo-YOGA-710-14IKB/p/88YG7000771
Yoga 710 (15 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Lenovo-YOGA-710-15IKB/p/88YG7000772
Yoga 720 (12 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Yoga-720-12/p/88YG7000919
Yoga 720 (13 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Yoga-720-13/p/88YG7000827
Yoga 720 (15 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Yoga-720-15/p/88YG7000828
Yoga 730 (13 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Yoga-730-13-/p/88YG7000964
Yoga 730 (15 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Yoga-730-15/p/88YG7000965
Yoga 900	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Yoga-900-13/p/88YG9000571
Yoga 900S	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Lenovo-YOGA-900S/p/88YG90S0572
Yoga 910	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Yoga-910/p/88YG9000786
Yoga 920	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Yoga-920-13/p/88YG9000859
Yoga Book with Windows	https://www.lenovo.com/us/en/tablets/windows-tablets/yoga-book-windows-series/Yoga-Book-with-Windows/p/ZZITZTWYB2L
Yoga C630	https://www.lenovo.com/us/en/laptops/yoga/yoga-c-series/Yoga-C630-13Q50/p/88YGC601090
Yoga C640	https://www.lenovo.com/us/en/laptops/yoga/yoga-c-series/Yoga-C640/p/88YGC601300
Yoga S730	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-700-series/Yoga-S730/p/88YGS701077

Yoga C740 (14 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Lenovo-Yoga-C740-14/p/88YGC701292
Yoga C740 (15 inch)	https://www.lenovo.com/us/en/laptops/yoga/700-series/Lenovo-Yoga-C740-15/p/88YGC701293
Yoga S740 (14 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-s740-14iil
Yoga S740 (15 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-700-series/Lenovo-IdeaPad-S740-15IRH/p/88IPS701212
Yoga C930	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Yoga-C930-13IKB/p/88YGC900982
Yoga Book C930	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Yoga-Book-C930/p/ZZIWZWBYB1J
Yoga C940 (14 inch)	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Lenovo-Yoga-C940-14IIL/p/88YGC901221
Yoga C940 (15 inch)	https://www.lenovo.com/us/en/laptops/yoga/yoga-900-series/Lenovo-Yoga-C940-15IRH/p/88YGC901298
Yoga S940	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-900-series/Lenovo-IdeaPad-S940-14IWL/p/88IPS901238
Yoga Slim 7 (14 inch)	https://www.lenovo.com/us/en/coming-soon/IdeaPad-Slim-7-14ARE05/p/88IPS701400
Yoga Slim 7 (15 inch)	https://www.lenovo.com/us/en/laptops/ideapad/ideapad-700-series/IdeaPad-Slim-7-15IIL05/p/88IPS701406
Yoga P40	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-p/ThinkPad-P40-Yoga/p/22TP2WPWP40
LaVie 360	https://www.lenovo.com/us/en/laptops/lenovo/lavie/lavie-360/
3rd Generation ThinkPad Yoga 11e	https://www.lenovo.com/us/en/laptops/thinkpad/11e-and-chromebooks/20GA-MT/p/22TP2TX152E20GA
4th Generation ThinkPad Yoga 11e	https://www.lenovo.com/us/en/laptops/thinkpad/11e-and-chromebooks/ThinkPad-Yoga-11e-4th-Gen/p/22TP2TX153E20HU
5th Generation ThinkPad Yoga 11e	https://www.lenovo.com/us/en/outletus/laptops/thinkpad/thinkpad-11e-laptops-and-chromebooks/ThinkPad-Yoga-11e-5th-Gen/p/22TP2TX154E20LM
6th Generation ThinkPad Yoga 11e	https://www.lenovo.com/us/en/coming-soon/11e-Yoga-G6/p/22ED11E11N6
ThinkPad Yoga 14	https://www.lenovo.com/us/en/laptops/thinkpad/yoga-series/yoga-14/
ThinkPad Yoga 15	https://www.lenovo.com/us/en/laptops/thinkpad/yoga-series/yoga-15/

ThinkPad L380 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-yoga/ThinkPad-L380-Yoga/p/22TP2TBL38020M7
ThinkPad L390 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-l/ThinkPad-L390-Yoga/p/WMD00000384
1st Generation ThinkPad X1 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-x/ThinkPad-X1-Yoga-1st-Gen/p/22TP2TXX11Y
2nd Generation ThinkPad X1 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-yoga/Thinkpad-X1-Yoga-2nd-Gen/p/22TP2TXX12Y
3rd Generation ThinkPad X1 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-yoga/ThinkPad-X1-Yoga-3rd-Gen/p/22TP2TXX13Y
4th Generation ThinkPad X1 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-x/X1-Yoga-Gen-4/p/22TP2TXX14Y
5th Generation ThinkPad X1 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-x/X1-Yoga-Gen-5/p/22TP2X1X1Y5
ThinkPad Yoga X380	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-x/ThinkPad-X380-Yoga/p/22TP2TXX380
ThinkPad Yoga X390	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-x/ThinkPad-X390-Yoga/p/22TP2TX390Y
ThinkPad L13 Yoga	https://www.lenovo.com/us/en/laptops/thinkpad/thinkpad-l/ThinkPad-L13-Yoga/p/22TPL13L3Y1
Lenovo 300e Windows	https://www.lenovo.com/us/en/laptops/lenovo/student-laptops/Lenovo-300e-2nd-Gen/p/88EL10S9992
Lenovo 300e Winbook	https://www.lenovo.com/us/en/laptops/lenovo/student-laptops/300e/p/88EL10S1024
Lenovo N23 Winbook	https://www.lenovo.com/us/en/laptops/lenovo/lenovo-n-series/N23/p/88EL10S0756

100. According to the Lenovo.com Domain, the Accused Portable Products identified in the table below have been tested for compatibility with Windows 10.

https://support.lenovo.com/us/en/solutions/ht103535.

IdeaPad Yoga 13	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-13-notebook-ideapad
IdeaPad Yoga 11S	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-11s-notebook-ideapad

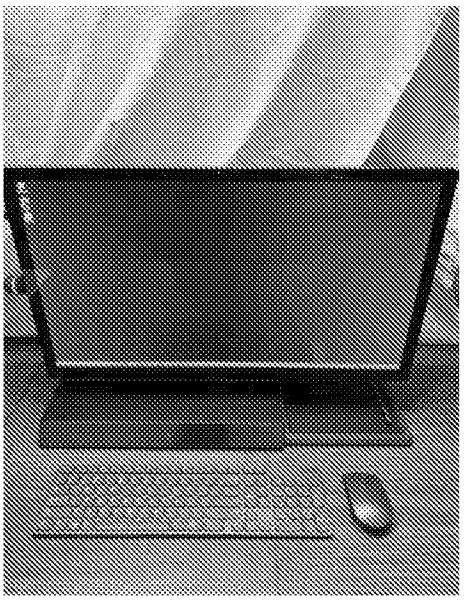
Flex 2 (14 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/flex-series/flex-2-14-notebook-lenovo
Flex 2 (15 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/flex-series/flex-2-15-notebook-lenovo
Flex 10	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/flex-series/flex-10-notebook-lenovo
Flex 14D	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/flex-series/ideapad-flex-14d-notebook
Flex 15D	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/flex-series/ideapad-flex-15d-notebook
Edge 15	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/lenovo-edge-series-laptops/edge-15-laptop-lenovo
Yoga 2 (11 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-2-11-notebook-lenovo
Yoga 2 (13 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-2-13-notebook-lenovo
Yoga 2 Pro	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-2-pro-lenovo
Yoga 3 (11 inch)	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-3-1170
Yoga 3 Pro	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/yoga-series/yoga-3-pro-1370-laptop-lenovo
1st Generation ThinkPad Yoga 11e	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/thinkpad-yoga-series-laptops/thinkpad-yoga-11e
2nd Generation ThinkPad Yoga 11e	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/thinkpad-yoga-series-laptops/thinkpad-yoga-11e-20e5-20e7
ThinkPad Yoga 12	https://pcsupport.lenovo.com/us/en/products/laptops-and-netbooks/thinkpad-yoga-series-laptops/thinkpad-yoga-12

101. To the extent that Lenovo entities made, used, sold, offered to sell or imported any of the Accused Portable Products with a Windows operating system other than Windows 10, purchasers of such products were offered the ability to upgrade to Windows 10 for free until July 29, 2016. https://support.lenovo.com/us/en/solutions/ht103748 and https://www.lenovo.com/us/en/windows-10/

102. On information and belief, the 3rd Generation ThinkPad X1 Yoga is representative of the Accused Portable Products with respect to the limitations recited in the claims of the Asserted Patents.

103. The Yoga A940 is an all-in-one personal computer with a customized user interface, an Intel i9 processor with 32 gigabytes of memory, and a 27-inch, 4K touchscreen. The rotating 4K display of the Yoga A940 can be placed in different computer system configurations using a rotating hinge. *See* https://www.lenovo.com/us/en/desktops-and-all-in-ones/ideacentre/yoga-a-series/Yoga-A940-27ICB/p/FFYGF900316 ("the A940 Webpage").

104. When the display is in an upright configuration the wireless keyboard is designed to be operable to receive input from an operator of the computer.



105. When the rotating display is folded down into a drafting configuration, the wireless keyboard is designed to be inoperable to receive input and is stowed under the display.



https://www.youtube.com/watch?v=SlVSiK0LrtA, at 15:21.



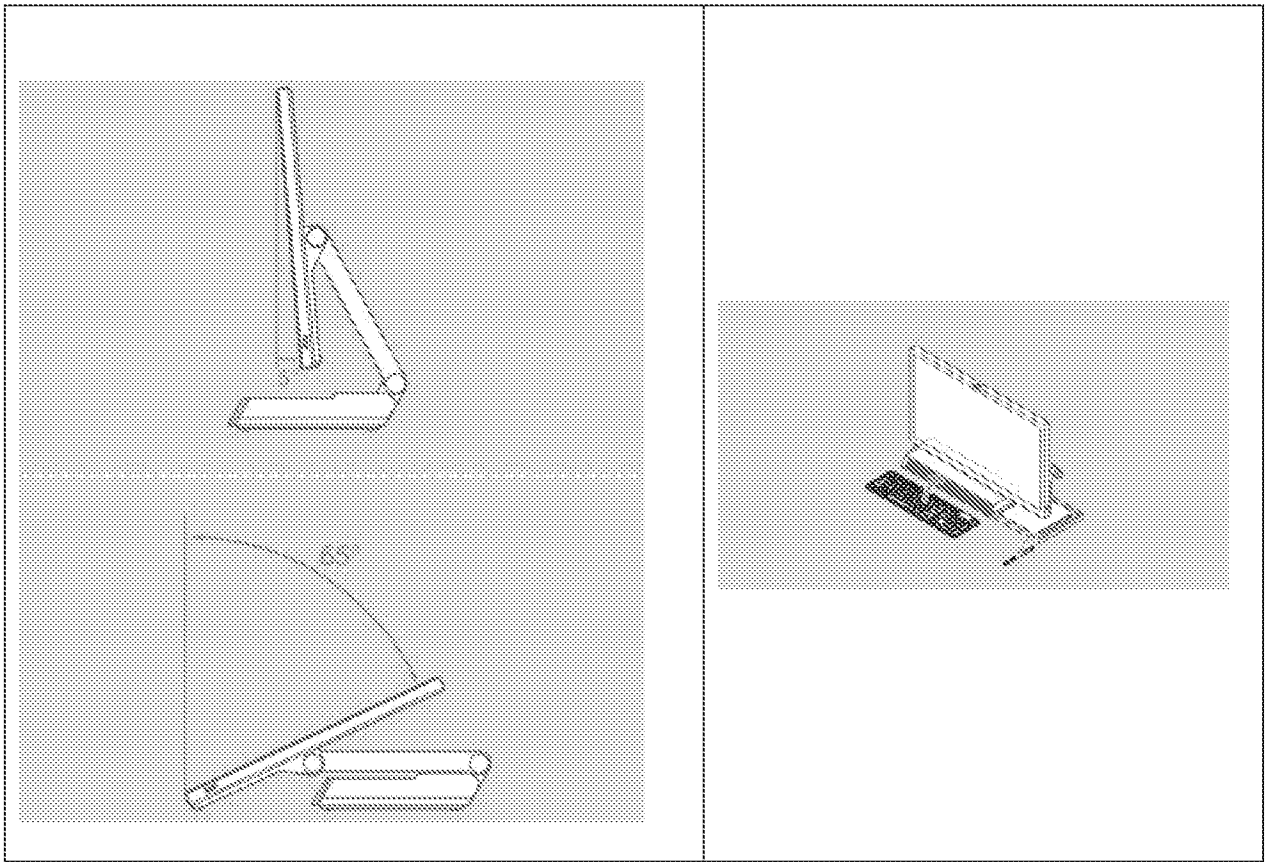
https://www.flickr.com/photos/lenovophotolibrary/32153906207/in/album-72157689698831183/

106. The functionality of the Yoga A940's configurable display with touchscreen has been touted on the Lenovo.com Domain since the product's launch.

https://news.lenovo.com/pressroom/press-releases/lenovo-yoga-smartest-consumer-computers-

yet/; https://news.lenovo.com/lenovo-unboxed-yoga-a940-all-in-one-pc/; see also https://www.youtube.com/watch?v=3O66VahPxRk.

107. The setup guide for Lenovo's Yoga A940 depicts the ability of the rotating display to be configured into different positions and the platform for the keyboard to be used when the display is rotated down into a drafting configuration:





See Lenovo's official Flickr page (https://www.flickr.com/photos/lenovophotolibrary/32153906207/in/album-72157689698831183/).

108. The Yoga A940 was and continues to be made, sold, and offered for sale with Windows 10 Pro pre-installed and is capable of operating in the configurations described above.

109. As detailed below, each element of at least one claim of each of the Asserted Patents is literally present in the Accused Products, or is literally practiced by Lenovo personnel, agents or customers who use the Accused Products. To the extent that any element is not literally present or practiced, each such element is present or practiced under the doctrine of equivalents.

110. Lenovo has made extensive use of LiTL's patented technologies, including the technology described and claimed in the Asserted Patents. LiTL is committed to defending its proprietary and patented technology. LiTL requests that this Court award it damages sufficient to compensate for Lenovo's infringement of the Asserted Patents, find this case exceptional and

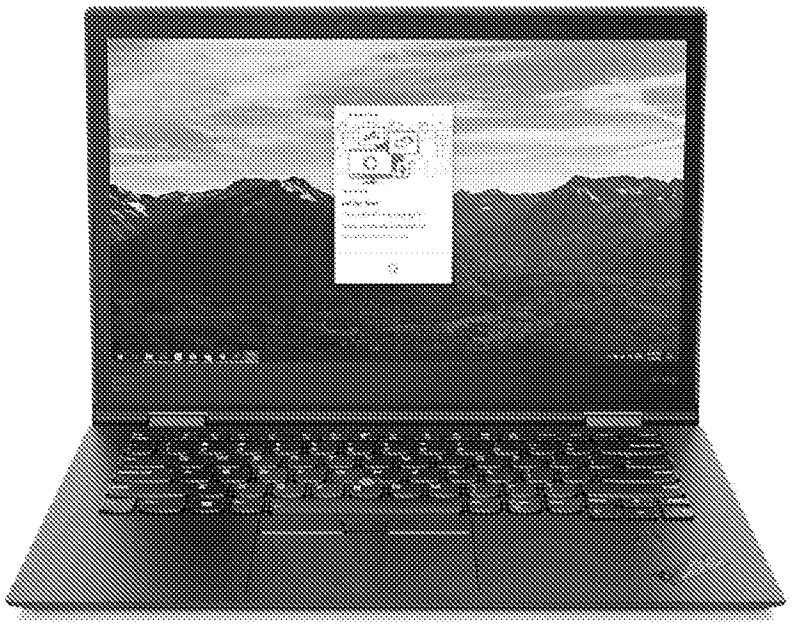
award LiTL its attorneys' fees and costs, and grant an injunction against Lenovo to prevent ongoing infringement of the Asserted Patents.

COUNT I

(Infringement of U.S. Patent No. 8,289,688)

111. LiTL incorporates by reference and realleges all the foregoing paragraphs of the First Amended Complaint as if fully set forth herein.

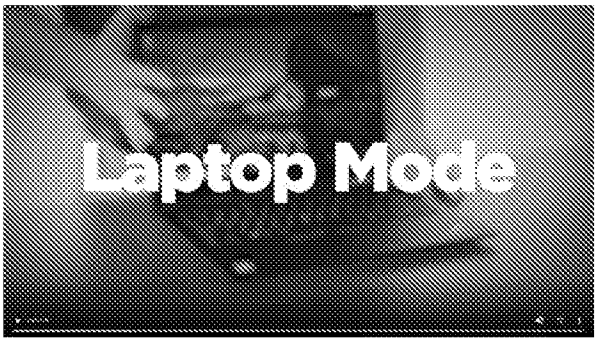
112. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) are portable computers that include a base unit comprising an integrated keyboard and a single display unit including a single display screen configured to display content. For example:



See, e.g., ThinkPad Photos.

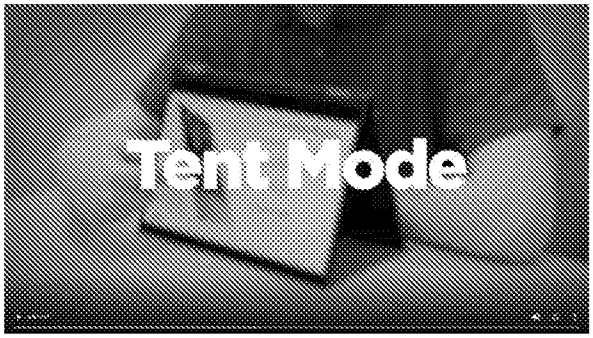
113. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include an orientation sensor which detects a physical orientation of the single display unit relative to the base unit and a display orientation module which orients the content displayed on the single display screen responsive to the physical orientation detected by the orientation sensor

between at least a first content display orientation and a second content display orientation, the second content display orientation being 180 degrees relative to the first content display orientation. For example:





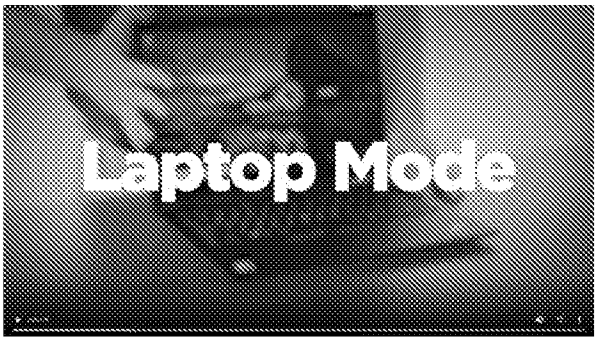
See, e.g., ThinkPad Yoga Modes at 0:14-0:23.





See, e.g., ThinkPad Yoga Modes at 0:32-0:36.

114. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a display orientation module that is configured to detect a change between a laptop mode, an easel mode, and a frame mode based on the detected physical orientation of the single display unit relative to the base unit. For example:

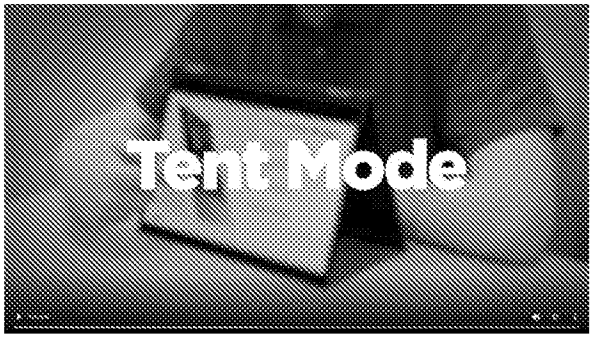




See, e.g., ThinkPad Yoga Modes at 0:14-0:23.

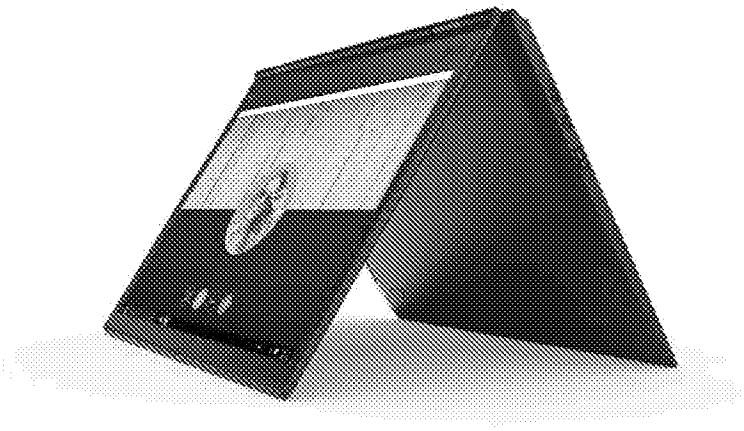


See, e.g., ThinkPad Photos, image with caption: "Lenovo ThinkPad X1 Yoga (3rd Gen) in laptop mode."

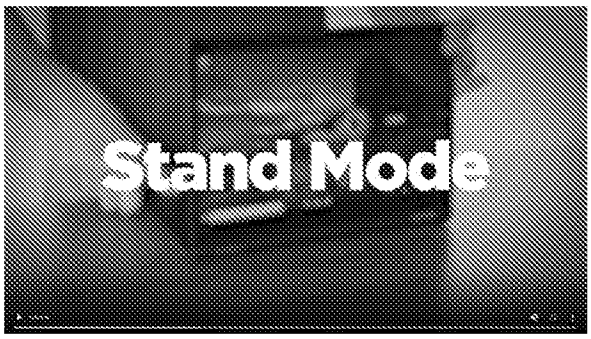


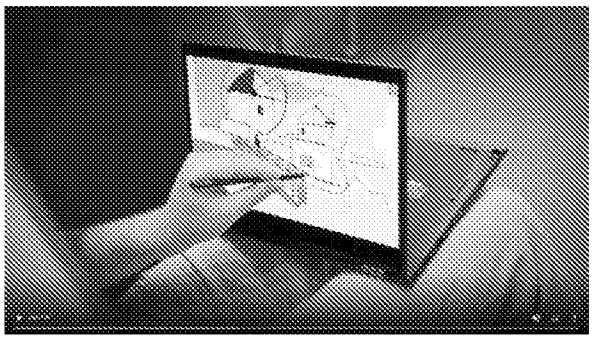


See, e.g., ThinkPad Yoga Modes at 0:32-0:36.



See, e.g., ThinkPad Photos, image with caption: "Lenovo ThinkPad X1 Yoga (3rd Gen) in tent mode with Skype for Business."





See, e.g., ThinkPad Yoga Modes at 0:24-0:31.



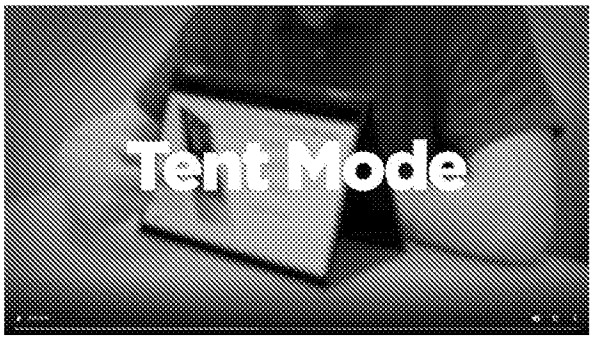
See, e.g., ThinkPad Photos, image with caption: "Lenovo ThinkPad X1 Yoga (3rd Gen) in stand mode with home design app." *See, e.g.*, ThinkPad Video at 0:36-0:43.

115. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a display orientation module further configured to trigger a display inversion from one of the first and second content display orientations to the other of the first and second content display orientations responsive to the orientation sensor detecting the change between the laptop mode and the easel mode. For example:





See, e.g., ThinkPad Yoga Modes at 0:14-0:23.

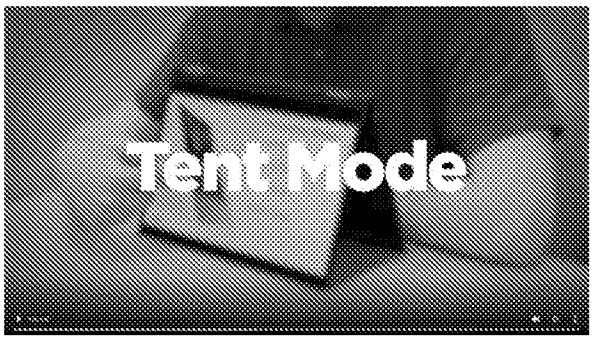




See, e.g., ThinkPad Yoga Modes at 0:32-0:36.

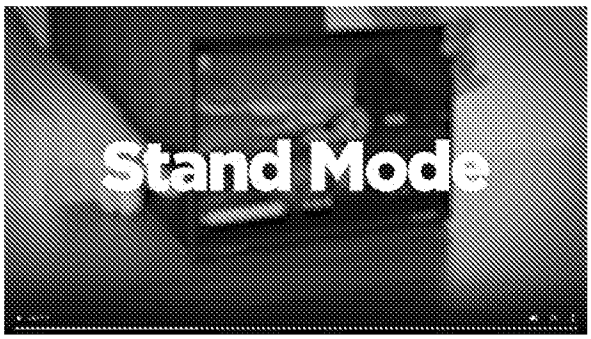
116. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a display orientation module further configured to trigger a display inversion from one of the first and second content display orientations to the other of the first and second content

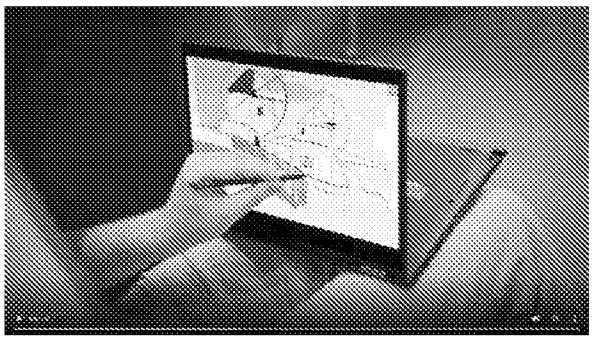
display orientations responsive to the orientation sensor detecting the change between the easel mode and the frame mode. For example:





See, e.g., ThinkPad Yoga Modes at 0:32-0:36.





See, e.g., ThinkPad Yoga Modes at 0:24-0:31.

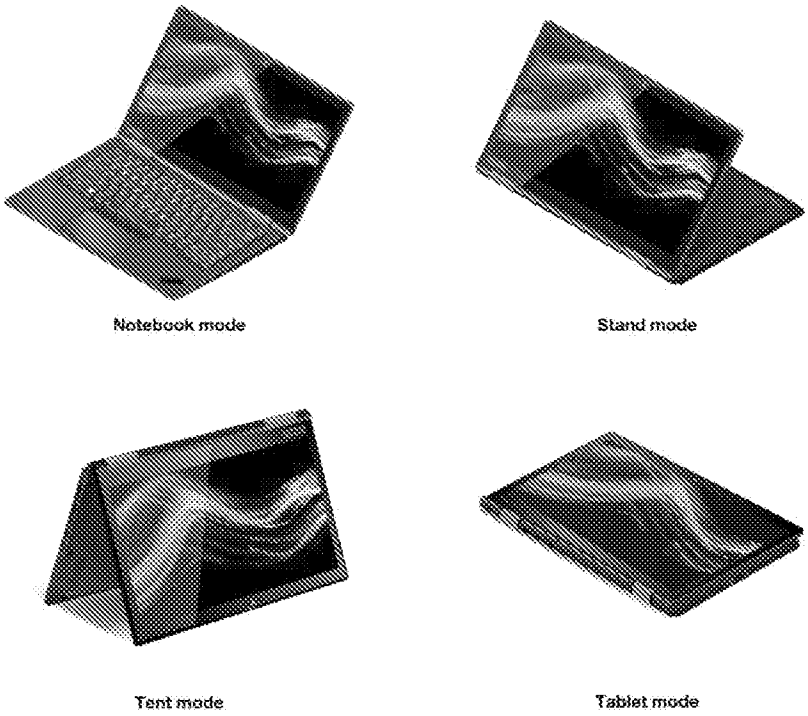
Lenovo US

117. Lenovo US has directly infringed and continues to directly infringe, literally and/or equivalently, one or more claims of the '688 patent, including at least claim 19, including by importing, using, selling, and offering for sale in the United States certain computing devices with multiple display modes, including at least the Accused Products. D.I. 27 (Noble Declaration), ¶ 2.

118. Since at least the filing of the Original Complaint, Lenovo US knew of the '688 patent.

119. Since at least the filing of the Original Complaint, Lenovo US knew that the Accused Portable Products infringe at least claim 19 of the '688 patent when used by customers or other users, when sold or offered for sale by resellers, and when imported by Lenovo entities.

120. Since at least the filing of the Original Complaint, Lenovo US has had the intent to encourage customers or other users to directly infringe at least claim 19 of the '688 patent by continuing to advertise, offer for sale, or sell, or by encouraging resellers to offer for sale or sell the Accused Portable Products in the United States, including in Delaware. Since at least the filing of the Original Complaint, Lenovo US has provided with the Accused Portable Products and on the website https://www.lenovo.com/us/en manuals, product documentation, and advertising materials that induce customers or other users to infringe at least claim 19 of the '688 patent by encouraging the use of the Accused Portable Products. For example, the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees" and that "[b]y rotating the display to different angle, your computer features the following four operating modes":



See ThinkPad HTML User Guide, Using Your ThinkPad / Using your computer / Operating modes.

121. Since at least the filing of the Original Complaint, Lenovo US's infringement of at least claim 19 of the '688 patent has been willful. Lenovo US's offers for sale, sales, and use of the Accused Portable Products with provision of manuals and instruction to purchasers that encourage use it knows will infringe the '688 patent constitutes willful infringement. Lenovo US is a large corporation with substantial resources. Lenovo US's failure to fully investigate the allegations of infringement against it, its ongoing offers for sale, sales, and use of the Accused Portable Products, and its failure to take remedial action to avoid infringement evidences its willful infringement.

122. The foregoing description of Lenovo US's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Portable Products that it obtains during discovery.

123. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo US's infringement of the '688 patent.

124. Lenovo US's infringement of the '688 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

Lenovo Beijing

125. Lenovo Beijing has had knowledge of the '688 patent since before the filing of the Original Complaint.

126. On March 13, 2013, Lenovo Beijing filed U.S. Patent Application No. 14/209,145 ("the Lenovo '145 application"). In a list of references cited by the examiner dated September 15, 2016, a USPTO examiner identified to Lenovo Beijing the '688 patent.

127. On November 13, 2013, Lenovo Beijing filed U.S. Patent Application No. 14/079,046 ("the Lenovo '046 application"), which disclosed an electronic device that provides "a triangle supporting state of the electronic device, in which the notebook computer does not need the user to support the notebook with hands." U.S. Pub. No. 2014/0132486, ¶ [006]. In the "triangle supporting state" an LCD display is rotated into the shape of an inverted "V" like LiTL's easel mode, as depicted below in Figures 1, 2 and 3 of U.S. Pub. No. 2014/0132486.

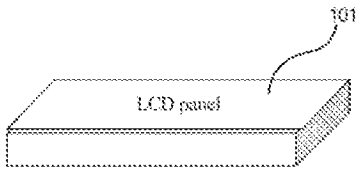


Fig. 1

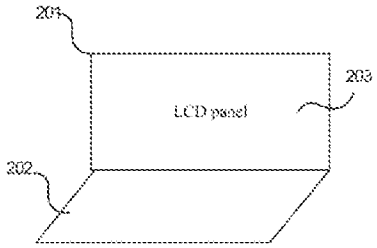


Fig. 2



Fig. 3

128. In office actions dated January 27, 2015, May 21, 2015, December 11, 2015, and April 18, 2016, a USPTO examiner rejected pending claims 4 and 14 of the Lenovo '046 application as obvious in view of, among other references, U.S. Patent Application Publication

No. 2009/0244832 ("the '832 Publication"), which issued as the '688 patent and contains the same specification. In a response dated March 23, 2015, Lenovo Beijing admitted that "Behar [the '832 Publication] teaches a portable computer that has a laptop mode and an easel mode in which the base of the computer and its display component stand vertically forming an inverted 'V' and the base of the computer comprises a keyboard (Fig. 1 and Fig. 4)."

129. On February 14, 2014, Lenovo Beijing filed U.S. Patent Application No. 14/181,072 ("the Lenovo '072 Application"). In an office action dated October 21, 2016, a USPTO examiner issued a non-final rejection of pending claim 17 of the Lenovo '072 Application as obvious in view of, among other references, the '832 Publication, which issued as the '688 patent and contains the same specification. On March 31, 2017, the examiner issued a notice of references cited, and identified to Lenovo Beijing the '688 patent.

130. On September 30, 2016, Lenovo Beijing filed U.S. Patent Application No. 29/579,625 ("the Lenovo '625 Application") directed to an ornamental design for a tablet computer. Figures 7 and 8 depict front and back perspectives of the tablet computer with the stand in a first position. Figures 9 and 10 depict the tablet computer in a horizontal orientation.

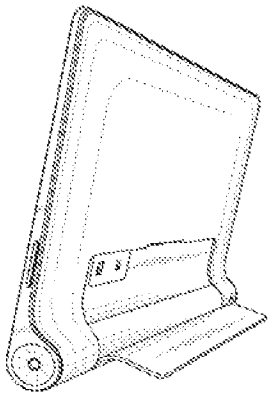


Fig. 7

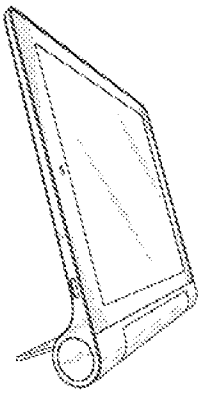


Fig. 8

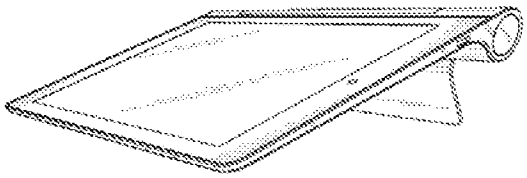


Fig. 9

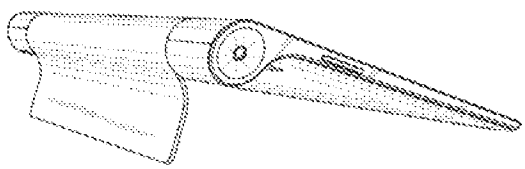


Fig. 10

131. On March 20, 2017, Lenovo Beijing identified the '688 patent in an information disclosure statement submitted to the USPTO in connection with the Lenovo '625 Application.

132. On September 30, 2016, Lenovo Beijing filed U.S. Patent Application No. 29/579,629 ("the Lenovo '629 Application") directed to an ornamental design for a tablet computer. On May 22, 2017, Lenovo Beijing identified the '688 patent in an information disclosure statement submitted to the USPTO in connection with the Lenovo '629 Application.

133. On August 8, 2017, the USPTO issued U.S. Patent No. 9,727,091 ("the Lenovo '091 Patent") to Lenovo Beijing. The '688 patent is cited on the face of the Lenovo '091 Patent.

134. Lenovo Beijing's R&D teams work closely with intellectual property (IP) lawyers from product conception through manufacture and commercialization to develop effective IP strategies for new products, such as the Yoga-branded laptops.
https://www.wipo.int/wipo_magazine/en/2015/03/article_0002.html

135. Since at least 2016 Lenovo Beijing knew or should have known, or at a minimum acted with willful blindness to the fact that, the Accused Portable Products sold on its website and bearing its marks infringe one or more claims of the '688 patent based on at least the following:

- the USPTO's repeated rejections of claims in Lenovo Beijing patent applications based on the '688 patent or its published application;
- Lenovo Beijing's disclosure of the '688 patent in information disclosure statements;
- Lenovo Beijing's admission, when prosecuting a patent application directed to an electronic device having multiple configurations, including LiTL's easel mode configuration, that the specification of the '688 patent discloses "a portable computer that has a laptop mode and an easel mode in which the base of the computer and its

display component stand vertically forming an inverted 'V' and the base of the computer comprises a keyboard";

- the close working relationship between Lenovo Beijing's R&D teams and its IP lawyers and Lenovo Beijing's substantial patent prosecution activities directed to electronic devices having the 2-in-1 functionality of the Accused Portable Products, including the YOGA-branded laptop products; and
- the frequency with which the '688 patent, and related patents and patent application publications, has been cited by the USPTO during prosecution of patent applications owned by major players in the personal computing space, including Lenovo Beijing and other Lenovo subsidiaries.

136. The repeated citation of the '688 patent and its published application during prosecution of Lenovo Beijing's patent applications, including applications directed to 2-in-1 laptops having multiple viewing modes, and the importance of one or more of the Accused Portable Products to Lenovo's revenue and reputation in the United States provided Lenovo Beijing since at least 2016 with knowledge of the '688 patent and knowledge that use of the Accused Portable Products infringes the '688 patent.

137. On information and belief, Lenovo Beijing is a sophisticated company regarding patents and business in the United States, and citation of patents that cover any of Lenovo's products is a significant concern to Lenovo Beijing. In a 2007 press release, Lenovo's leadership stated that "one of the most important goals of international business" is "the protection of intellectual property," and "[a]s a global corporate citizen, Lenovo is deeply committed to the protection of intellectual property. We continue to take the lead by encouraging more businesses and individual users to respect and protect intellectual property as a means of building an

innovation-friendly business environment." https://news.lenovo.com/pressroom/press-releases/lenovo-joins-forces-with-microsoft-to-continue-driving-support-for-intellectual-property-rights/. In a 2018 press release, Lenovo's leadership noted that "[i]ntellectual property is a strategic asset for Lenovo" that "not only protects our investment in invention and innovation, but also positions Lenovo's businesses to flourish and grow."

138. On information and belief, Lenovo Beijing has procedures to evaluate whether Lenovo products have freedom to operate in the United States, particularly where the products comprise a significant portion of Lenovo's revenue. On information and belief, the Accused Portable Products comprise a significant portion of Lenovo's revenue, and since at least 2016 Lenovo Beijing knew that use of the Accused Portable Products infringes the '688 patent.

139. On information and belief, citation of the '688 patent and its application during the USPTO prosecution of Lenovo Beijing patents caused Lenovo Beijing to investigate, become aware of, and consider the '688 patent, related patents, and the rest of LiTL's patent portfolio. Beyond Lenovo Beijing's actual knowledge of the '688 patent, these citations during Lenovo Beijing's USPTO prosecution gave Lenovo Beijing the subjective belief that the '688 patent existed, and failure to learn of the existence of the '688 patent would have required Lenovo Beijing to deliberately avoid reviewing or understanding the prosecution documents. On information and belief, Lenovo Beijing would not have done so in a matter so important to the Accused Portable Products and the revenue and reputation derived therefrom.

140. In addition, Lenovo Beijing has known that the Accused Portable Products sold on its website and bearing its marks infringe one or more claims of the '688 patent since at least 2016, or at least since the time that it received notice of the Original Complaint, or at least since September 29, 2020.

141. Lenovo Beijing's Lenovo.com Domain continues to market and offer for sale the Accused Portable Products bearing Lenovo Beijing's marks into the United States and Delaware since the filing of the Original Complaint, which thoroughly detailed how the Accused Portable Products infringe at least claim 19 of the '688 patent.

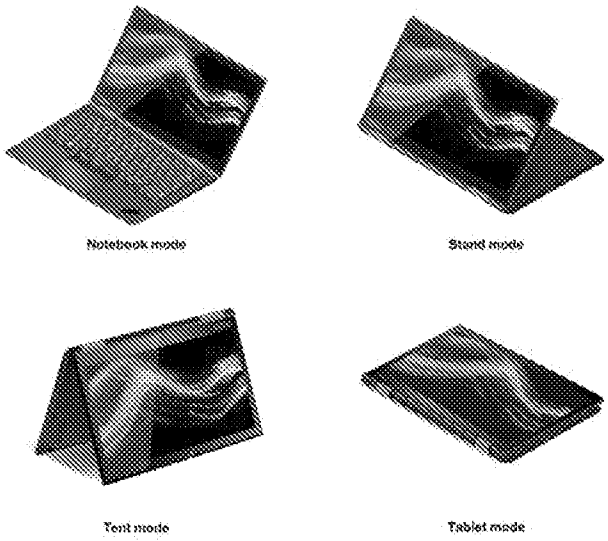
142. Lenovo Beijing has known or should have known since it first became aware of the '688 patent, and at least by September 29, 2020, that end users, importers, distributors, retailers, repair and service technicians, Lenovo US and its employees and contractors, and other users of the Accused Portable Products are infringing the '688 patent.

143. Lenovo Beijing is responsible for content displayed on the Lenovo.com Domain, including the press releases identified in Paragraph 90 above, which encourage users of the Accused Portable Products in the United States and Delaware to infringe at least claim 19 of the '688 patent by using the Accused Portable Products. Since at least 2016, Lenovo Beijing has encouraged customers to use the Accused Portable Products by providing the Lenovo.com Domain to host press releases that encourage customers to use the Accused Portable Products. Lenovo Beijing's conduct since 2016 demonstrates an intent to induce customers to directly infringe at least claim 19 of the '688 patent. Lenovo Beijing's conduct since at least 2016 also demonstrates an intent to induce Lenovo US to infringe the '688 patent by selling, offering for sale, and using the Accused Portable Products.

144. Lenovo Beijing has actively and knowingly induced infringement, and is actively and knowingly inducing infringement of one or more claims of the '688 patent, literally and/or equivalently, at least by inducing end users, repair and service technicians, Lenovo employees and contractors, and others to use the Accused Portable Products in an infringing manner. Lenovo Beijing makes available the Lenovo.com Domain to disseminate manuals, product

documentation and other advertising material that encourages customers to infringe the asserted claims by using the Accused Portable Products.

145. For example, in the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees" and that "[b]y rotating the display to different angle, your computer features the following four operating modes":



See ThinkPad HTML User Guide, Using Your ThinkPad / Using your computer / Operating modes.

146. Lenovo Beijing has had knowledge of the '688 patent and its infringement of the '688 patent since it first became aware of the '688 patent in 2016, and at least by the filing of the Original Complaint. Lenovo Beijing has induced infringement of the '688 patent with specific intent to induce infringement of that patent.

147. Lenovo Beijing's willful infringement is evidenced by the following: Lenovo Beijing's intellectual property lawyers' detailed knowledge of LiTL's patents, as demonstrated by Lenovo Beijing's admissions during prosecution of Lenovo Beijing's patent applications; the close working relationship between Lenovo Beijing's IP and research and design departments;

the similarities between how the Accused Portable Products operate, the functionality that Lenovo Beijing sought to claim in its patent applications, and the requirements of claim 19 of the '688 patent; Lenovo Beijing's significant size and resources; and Lenovo Beijing's failure to take remedial action to avoid infringement. Lenovo Beijing's infringement of the '688 patent has been willful since it first became aware of the '688 patent in 2016, or at least since the filing of the Original Complaint, or at least since September 29, 2020. Lenovo Beijing's ongoing infringement of the '688 patent continues to be willful. Lenovo Beijing has chosen to manufacture or control manufacture of the Accused Portable Products with the intent that the Accused Portable Products would be imported, offered for sale, sold, and/or used in the United States, to distribute or control distribution of the Accused Products in Lenovo's established distribution channels with the intent that the Accused Products would be imported, offered for sale, sold, and/or used in the United States, as explained in more detail above, and knowing that doing so infringes the '688 patent, and despite receiving notice from LiTL that continuing to do so would infringe the '688 patent.

148. The foregoing description of Lenovo Beijing's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Portable Products that it obtains during discovery.

149. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo Beijing's infringement of the '688 patent.

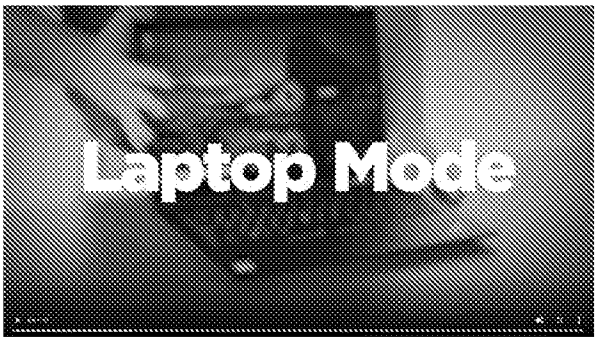
150. Lenovo Beijing's infringement of the '688 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

COUNT II

(Infringement of U.S. Patent No. 8,624,844)

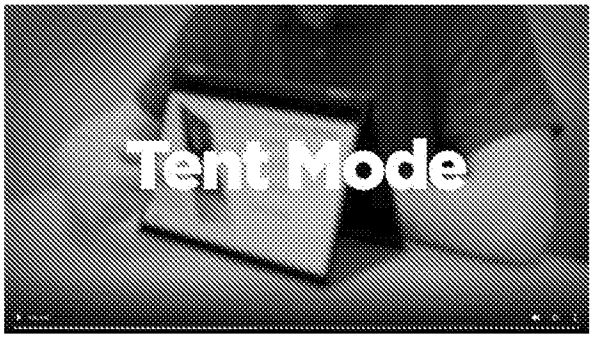
151. LiTL incorporates by reference and realleges all the foregoing paragraphs of the First Amended Complaint as if fully set forth herein.

152. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) are portable computers that are configurable between a plurality of display modes including a laptop mode and an easel mode wherein transitions between the plurality of display modes permit an operator to interact with a single display screen in each of the plurality of display modes. For example:





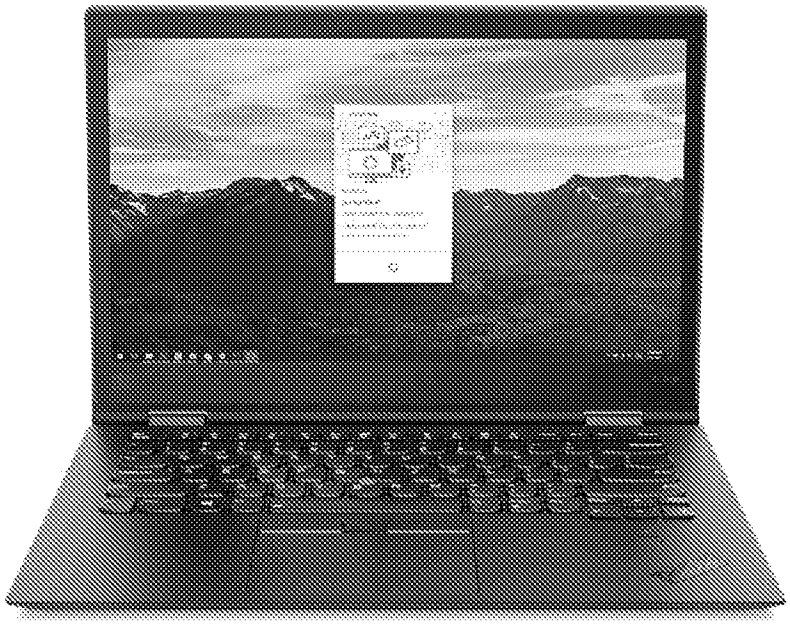
See, e.g., ThinkPad Yoga Modes at 0:14-0:23.





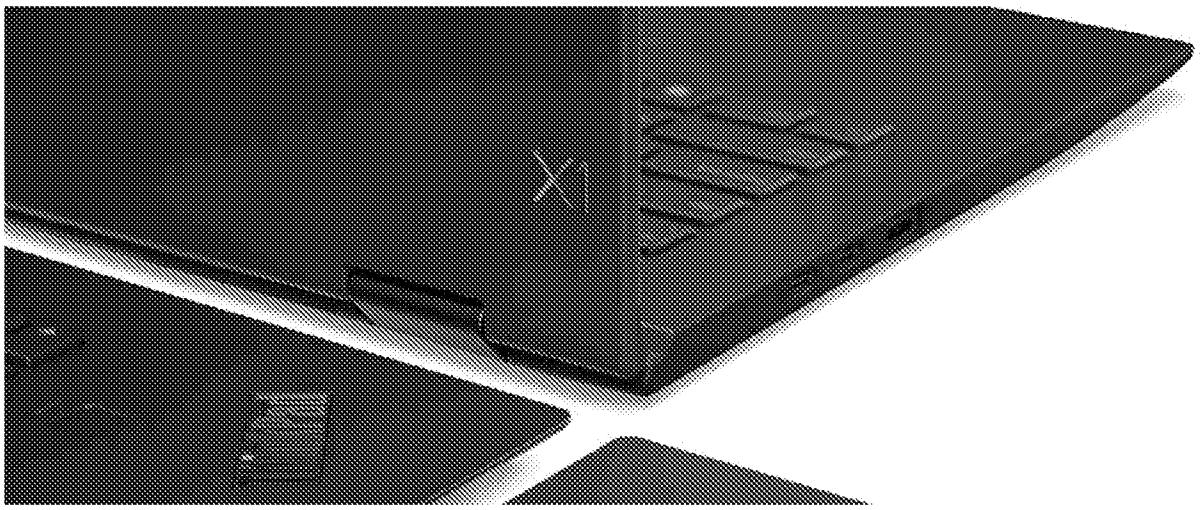
See, e.g., ThinkPad Yoga Modes at 0:32-0:36.

153. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) are portable computers that include a base including a keyboard, a main display component rotatably coupled to the base and including the single display screen which displays content. For example:



See, e.g., ThinkPad Photos.

154. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a hinge assembly disposed at least partially within the base. For example:

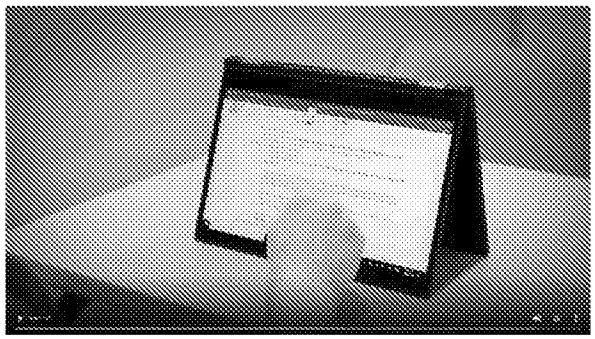


See, e.g., ThinkPad Photos.

155. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a main display component that defines an axis of rotation about which both the base and the main display component are rotatable to transition the portable computer between at least the laptop mode and the easel mode, 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. For example:



See, e.g., ThinkPad Yoga Modes at 0:14-0:23.



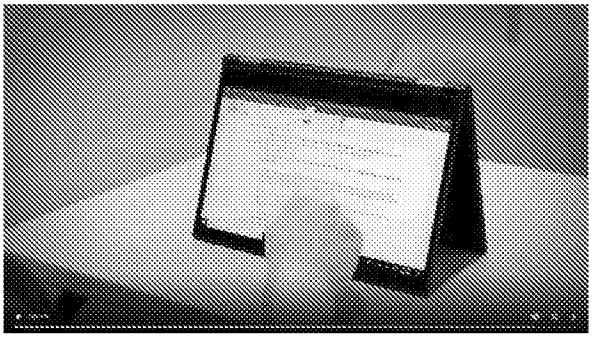
See, e.g., ThinkPad Yoga Modes at 0:42-0:47.

156. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a laptop mode that 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. For example:



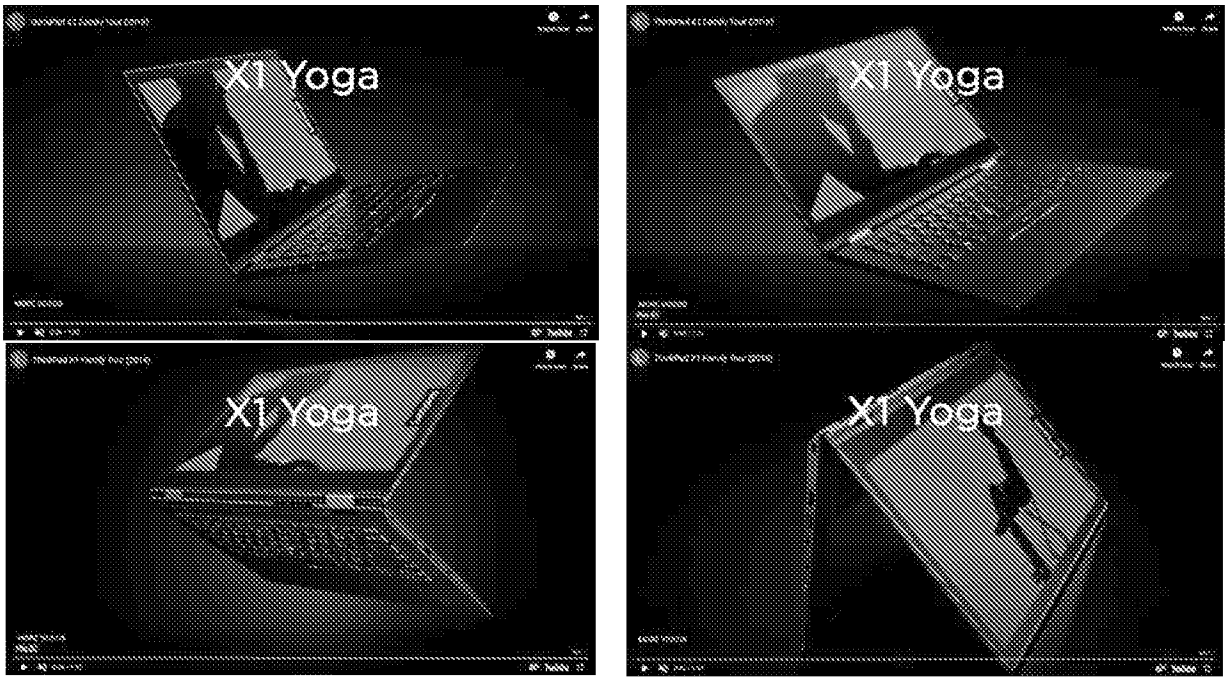
See, e.g., ThinkPad Yoga Modes at 0:14-0:23.

157. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include an easel mode that 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. For example:



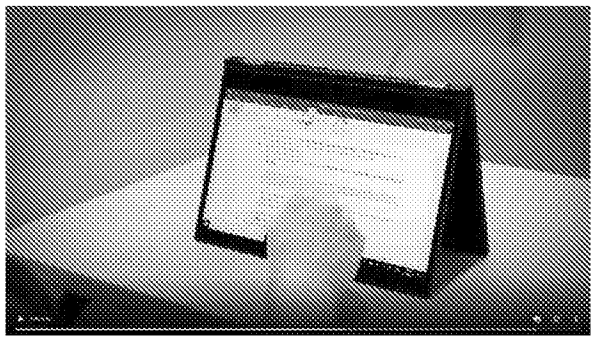
See, e.g., ThinkPad Yoga Modes at 0:42-0:47.

158. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include first and second content display orientations that are 180 degrees relative to each other. For example:



See, e.g., ThinkPad Yoga Video at 0:38-0:42.

159. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include portable computers that are operable in the easel mode to enable the user to interact with displayed content without interacting with the keyboard. For example:



See, e.g., ThinkPad Yoga Modes at 0:42-0:47.

160. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a navigation control accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and

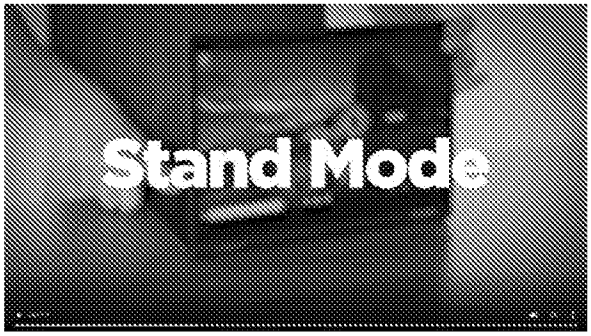
the content displayed on the single display screen. For example, the 3rd Generation ThinkPad X1 Yoga includes a touchscreen that is accessible in any mode.

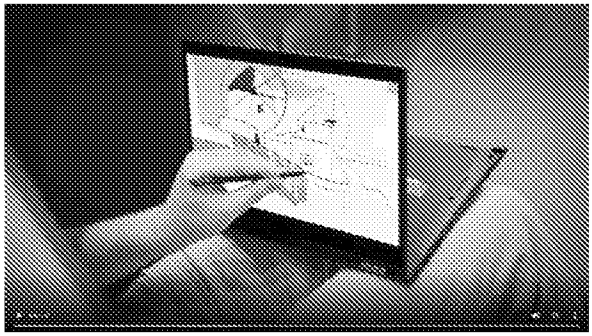
Display Type ⊗

14.0" FHD (1920 x 1080) IPS anti-reflective, anti-smudge, touchscreen, 300 nits

See, e.g., ThinkPad Webpage.

161. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a plurality of modes that includes 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.





See, e.g., ThinkPad Yoga Modes at 0:24-0:31.

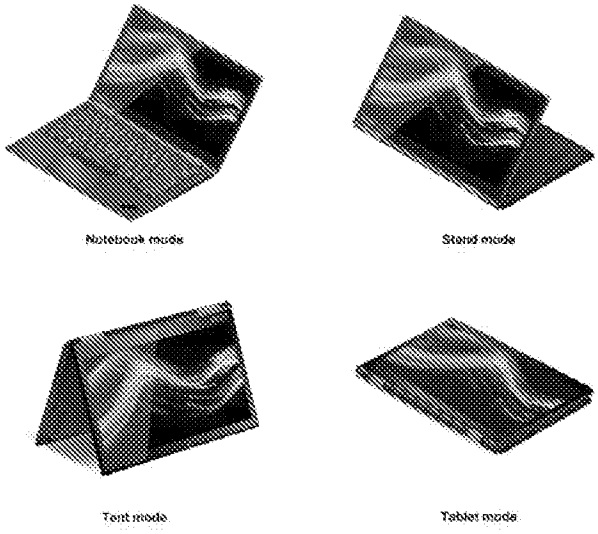
Lenovo US

162. Lenovo US has directly infringed and continues to directly infringe, literally and/or equivalently, one or more claims of the '844 patent, including at least claim 10, including by importing, using, selling, and offering for sale in the United States certain computing devices with multiple display modes, including at least the Accused Products. D.I. 27 (Noble Declaration), ¶ 2.

163. Since at least the filing of the Original Complaint, Lenovo US knew of the '844 patent.

164. Since at least the filing of the Original Complaint, Lenovo US knew that the Accused Portable Products infringe at least claim 10 of the '844 patent when used by customers or other users, when sold or offered for sale by resellers, and when imported by Lenovo entities.

165. Since at least the filing of the Original Complaint, Lenovo US has had the intent to encourage customers or other users to directly infringe at least claim 10 of the '844 patent by continuing to advertise, offer for sale, or sell, or by encouraging resellers to offer for sale or sell the Accused Portable Products in the United States, including in Delaware. Since at least the filing of the Original Complaint, Lenovo US has provided with the Accused Portable Products and on the website https://www.lenovo.com/us/en manuals, product documentation, and advertising materials that induce customers or other users to infringe at least claim 10 of the '844 patent by encouraging the use of the Accused Portable Products. For example, in the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees" and that "[b]y rotating the display to different angle, your computer features the following four operating modes":



See ThinkPad HTML User Guide, Using Your ThinkPad / Using your computer / Operating modes.

166. Since at least the filing of the Original Complaint, Lenovo US's infringement of at least claim 10 of the '844 patent has been willful. Lenovo US's offers for sale, sales, and use of the Accused Portable Products with provision of manuals and instruction to purchasers that encourage use it knows will infringe the '844 patent constitutes willful infringement. Lenovo US is a large corporation with substantial resources. Lenovo US's failure to fully investigate the allegations of infringement against it, its ongoing offers for sale, sales, and use of the Accused Portable Products, and its failure to take remedial action to avoid infringement evidences its willful infringement.

167. The foregoing description of Lenovo US's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Portable Products that it obtains during discovery.

168. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo US's infringement of the '844 patent.

169. Lenovo US's infringement of the '844 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

Lenovo Beijing

170. Lenovo Beijing has had knowledge of the '844 patent since before the filing of the Original Complaint.

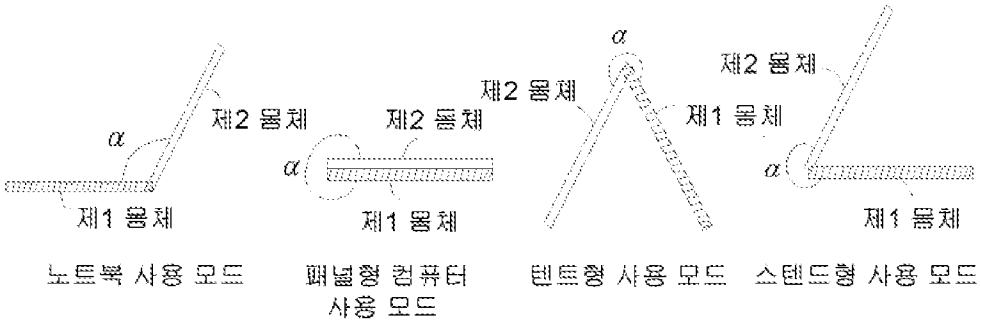
171. On January 7, 2014, the '844 patent issued from U.S. Patent Application No. 12/170,951, which had earlier published on October 1, 2009 as U.S. Patent Application Publication No. 2009/0244012 ("the LiTL '012 publication").

172. Since at least 2012 Lenovo Beijing has had knowledge of the LiTL '012 publication.

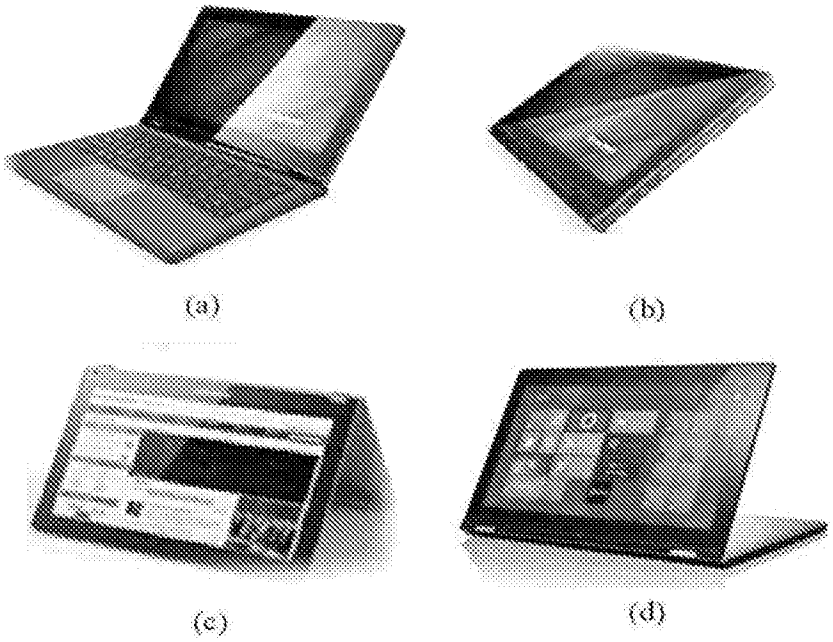
173. On October 22, 2012, the Chinese Intellectual Property Office issued a search report to Lenovo Beijing identifying the LiTL '012 publication in connection with Lenovo's Chinese Patent Application No. 2010102585153. The Chinese Intellectual Property Office issued three office actions dated November 26, 2012, August 1, 2013 and February 24, 2014, which rejected Lenovo Beijing's pending claims based on the disclosures in the LiTL '012 publication. In particular, the first office action stated that the LiTL '012 publication disclosed that: "Laptop computers can be configured between modes, includes an off mode, a laptop mode (corresponding to a first state), an easel mode (corresponding to a second state different from the first state), a flattened mode, and a frame mode."

174. In an examination report dated February 14, 2014, the Korean Intellectual Property Office rejected several claims in Lenovo Beijing's Korean Patent Application No. 10-2013-0025594 ("the Lenovo '594 Korean application") in view of the LiTL '012 publication. Figure 2 of the Lenovo '594 Korean application depicts four usage modes of a notebook computer that embodies the subject matter disclosed therein:

도면 도2



175. Figure 18 of the Lenovo '594 Korean application depicts a notebook computer that embodies the subject matter disclosed therein:



176. The Lenovo '594 Korean application is a foreign counterpart to Lenovo Beijing's U.S. Patent Application No. 13/793,836 ("the Lenovo '836 application"). When prosecuting the Lenovo '836 application, Lenovo Beijing filed an information disclosure statement dated January 28, 2015, in which it identified to the USPTO the LiTL '012 publication and the Korean Intellectual Property Office examination report dated February 14, 2014.

177. The Lenovo '836 application, paragraph 59, describes Figure 2, which "is an exemplary view of four usage modes in an electrical device provided in the embodiments of the present disclosure." Figure 2 of the Lenovo '836 application is depicted below:

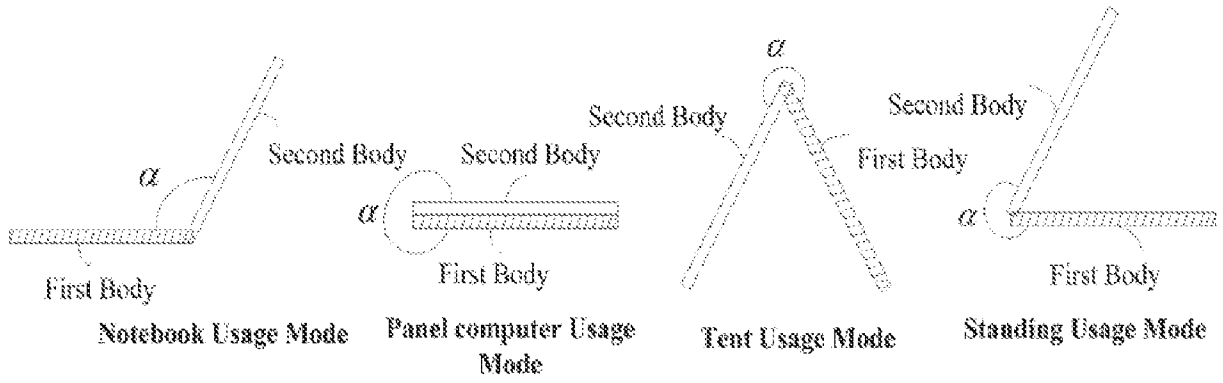


Fig. 2

178. The '836 application, paragraph 75, describes Figures 18a to 18d, which "illustrate the four usage modes in the notebook computer according to the embodiment of the present disclosure." Figures 18a to 18d of the Lenovo '836 application are depicted below:

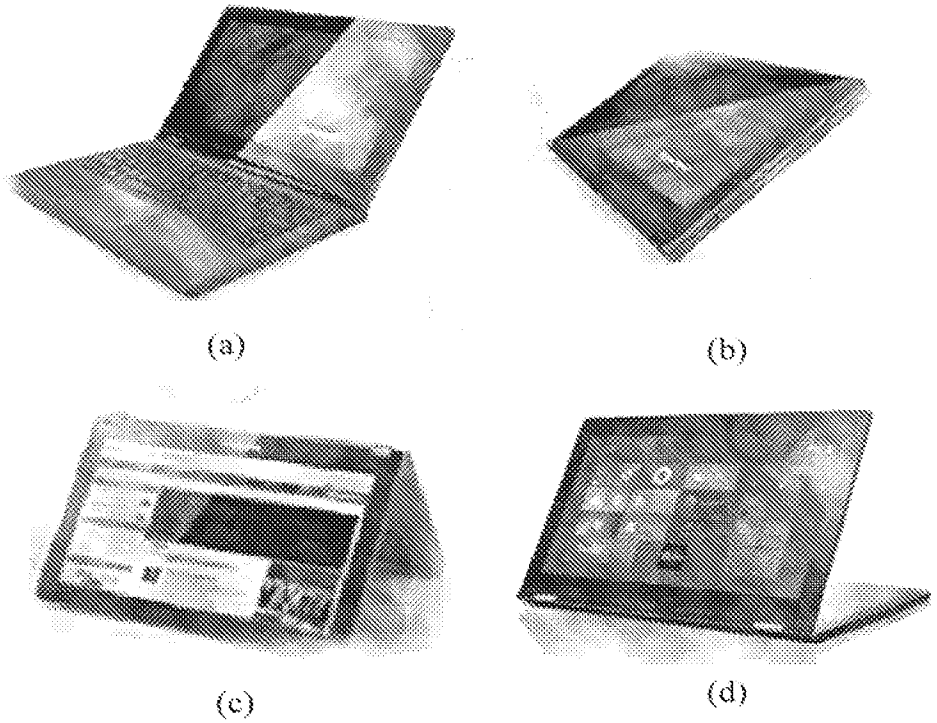


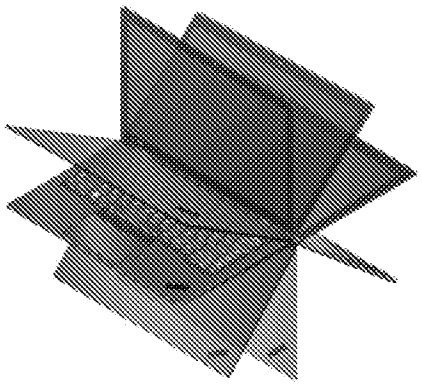
Fig.18

179. The notebook computer depicted in Figure 18 of the Lenovo '836 application and of Figure 18 of its Korean counterpart, the Lenovo '594 Korean application, appears to be one of Lenovo's Yoga notebooks. The four modes disclosed in the Lenovo '836 application and in the Lenovo '594 Korean application are the same four operating modes of the Accused Products. For example, Lenovo depicted the four modes in product literature for the 3rd Generation ThinkPad X1 Yoga.

Get to know YOGA modes (for X1 Yoga only)

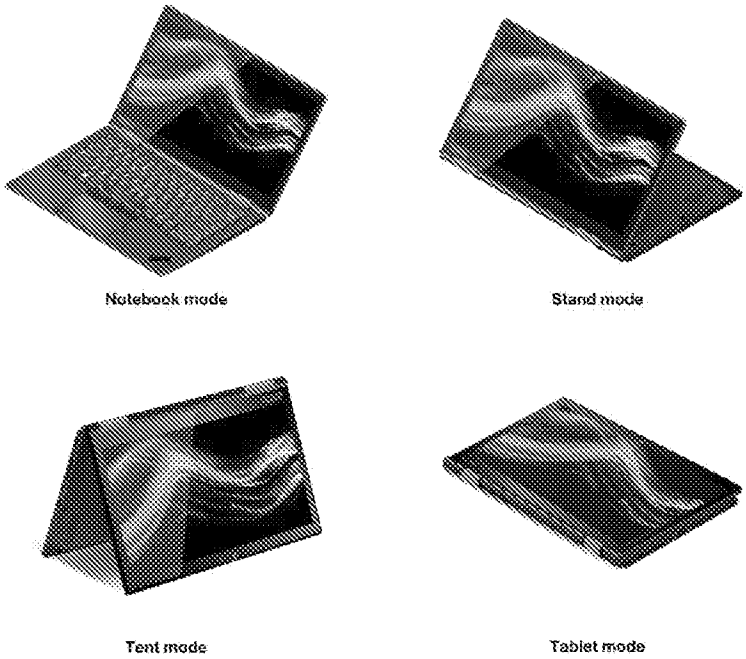
Your computer display can be rotated to any angle up to 360 degrees.

Attention: Do not rotate the computer display with too much force, or apply too much force to the upper-right or upper-left corner of the computer display. Otherwise, the computer display or hinges might get damaged.



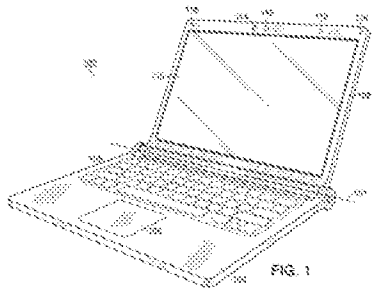
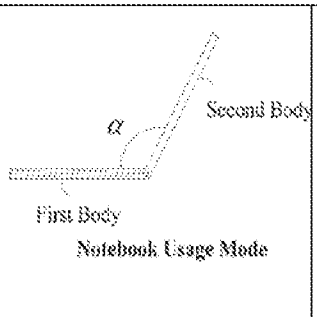
Your computer features the following four YOGA modes. You can switch among different modes according to your preference.

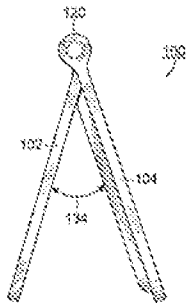
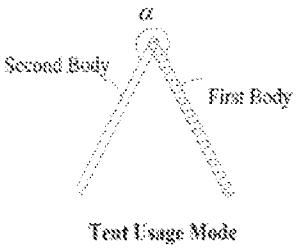
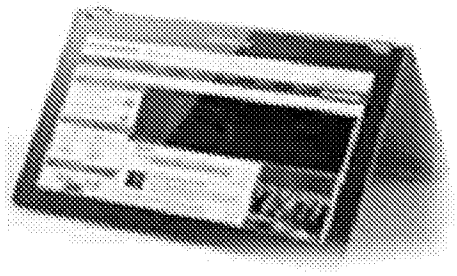
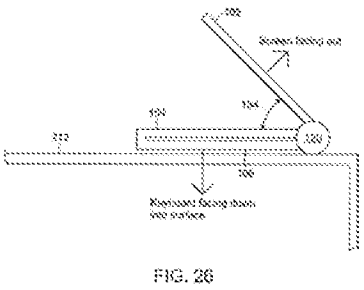
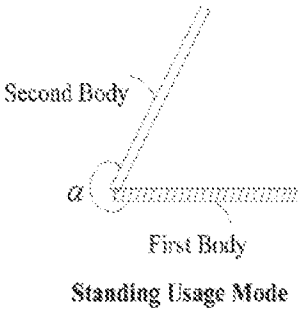
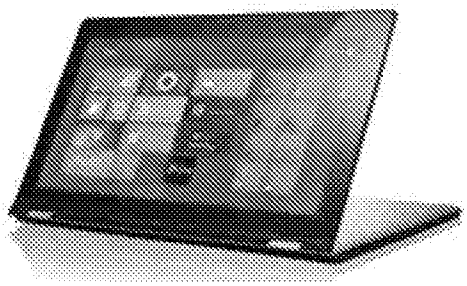
See ThinkPad User Guide, p. 28.



See ThinkPad User Guide, pp. 28-29.

180. The three modes disclosed in Figures 1, 5 and 26 of the LiTL '012 publication and claimed as the "laptop mode," "easel mode" and "frame mode" in claim 10 of the '844 patent match the "notebook usage mode," "tent usage mode" and "standing usage mode" of the Lenovo '836 application and also the Lenovo '594 Korean application, whose claims were rejected over the LiTL '012 publication:

		
LiTL '012 publication, Fig. 1 Laptop Mode	Lenovo '836 application, Fig. 2	Lenovo '594 Korean application, Fig. 18(a)

 FIG. 5		
LiTL '012 publication, Fig. 5 Easel Mode	Lenovo '836 application, Fig. 2	Lenovo '594 Korean application, Fig. 18
 FIG. 26		
LiTL '012 publication, Fig. 26 Frame Mode	Lenovo '836 application, Fig. 2	Lenovo '594 Korean application, Fig. 18

181. Lenovo has extensive experience with intellectual property. Lenovo Beijing has been the owner of over 2,500 patent applications and over 2,200 patents. Over the past decade, Lenovo US has been involved in over 200 patent litigations in the United States, and has been a party in over 50 *inter partes* review proceedings before the U.S. Patent Trial and Appeals Board. The Lenovo 2019 Annual Report identifies intellectual property (IP) risk as one of the "key risks that the Group considers to be of great significance to the Group as it stands today." https://doc.irasia.com/listco/hk/lenovo/annual/2019/ar2019.pdf, page22. For example, the report recognizes that Lenovo could suffer "reputational harm if found to infringe a third party's valid patents." https://doc.irasia.com/listco/hk/lenovo/annual/2019/ar2019.pdf, page 27. To manage and mitigate its IP risk, Lenovo plans to: "Monitor, develop and execute IP litigation defense

strategy" and "License IP as appropriate and monitor its continued validity and value to the Group."

182. Consistent with Lenovo Beijing's sophistication with IP matters, on information and belief, Lenovo Beijing was aware by 2016 of the family of LiTL patents and applications to which the '844 patent belongs.

183. LiTL's U.S. Patent No. 9,003,315 ("the '315 patent") states that "application No. 12/170,951, filed on Jul. 10, 2008, [is] now Pat. No. 8,624,844." Lenovo Beijing knew of the '315 patent by at least 2016, when it was cited to Lenovo Beijing by the USPTO during prosecution of Lenovo Beijing's U.S. Patent Application No. 14/209,145. During prosecution of that application, Lenovo Beijing received an office action dated September 15, 2016 that cited LiTL's U.S. Patent No. 9,003,315 ("the '315 patent"). By at least September 15, 2016, Lenovo Beijing knew or should have known that the LiTL U.S. Pat. Application No. 12/170,951, which published as the LiTL '012 publication, had issued as the '844 patent on January 7, 2014.

184. Since at least 2016 Lenovo Beijing knew or should have known, or at a minimum acted with willful blindness to the fact, that the Accused Portable Products sold on its website and bearing its marks infringe one or more claims of the '844 patent based on at least the following:

- The frequency with which the '844 patent, and related patents and patent application publications (including the LiTL '012 publication), has been cited by the USPTO during prosecution of patent applications owned by major players in the personal computing space, including Lenovo Beijing and other Lenovo subsidiaries;
- the Lenovo Beijing patent applications that were rejected over or cited to the LiTL '012 publication were also directed to subject matter embodied by the Accused

Products, including the usage modes such as the laptop mode, tent/easel mode, and stand/frame mode, which are recited in claim 10 of the '844 patent;

- Lenovo Beijing's disclosure of the LiTL '012 publication in information disclosure statements;
- the close working relationship between Lenovo Beijing's R&D teams and its IP lawyers and Lenovo Beijing's substantial patent prosecution activities directed to electronic devices having the 2-in-1 functionality of the Accused Portable Products, including the YOGA-branded laptop products; and
- Lenovo Beijing knew or should have known, or was willfully blind to the fact, that the LiTL '012 publication had issued as the '844 patent.

185. The repeated citation of the LiTL '012 publication during the prosecution of Lenovo Beijing patents, including applications directed to 2-in-1 laptops having multiple viewing modes, and the importance of one or more of the Accused Portable Products to Lenovo's revenue and reputation in the United States provided Lenovo Beijing since at least 2016 with knowledge of the '844 patent and knowledge that use of the Accused Portable Products infringes the '844 patent.

186. On information and belief, Lenovo Beijing is a sophisticated company regarding patents and business in the United States, and citation of patents that cover any of Lenovo's products is a significant concern to Lenovo Beijing. In a 2007 press release, Lenovo's leadership stated that "one of the most important goals of international business" is "the protection of intellectual property," and "[a]s a global corporate citizen, Lenovo is deeply committed to the protection of intellectual property. We continue to take the lead by encouraging more businesses and individual users to respect and protect intellectual property as a means of building an

innovation-friendly business environment." See https://news.lenovo.com/pressroom/press-releases/lenovo-joins-forces-with-microsoft-to-continue-driving-support-for-intellectual-property-rights/. In a 2018 press release, Lenovo's leadership noted that "[i]ntellectual property is a strategic asset for Lenovo" that "not only protects our investment in invention and innovation, but also positions Lenovo's businesses to flourish and grow."

187. On information and belief, Lenovo Beijing has procedures to evaluate whether Lenovo products have freedom to operate in the United States, particularly where the products comprise a significant portion of Lenovo's revenue. On information and belief, the Accused Portable Products comprise a significant portion of Lenovo's revenue, and since at least 2016 Lenovo Beijing knew that use of the Accused Portable Products infringes the '844 patent.

188. On information and belief, citation of the '844 patent's published application during the USPTO and foreign prosecution of Lenovo Beijing patents caused Lenovo Beijing to investigate, become aware of, and consider the '844 patent, related patents, and the rest of LiTL's patent portfolio. Beyond Lenovo Beijing's actual knowledge of the '844 patent, these citations during Lenovo Beijing's USPTO and foreign prosecution gave Lenovo Beijing the subjective belief that the '844 patent existed, and failure to learn of the existence of the '844 patent would have required Lenovo Beijing to deliberately avoid reviewing or understanding the prosecution documents. On information and belief, Lenovo Beijing would not have done so in a matter so important to the Accused Portable Products and the revenue and reputation derived therefrom.

189. In addition, Lenovo Beijing has known that the Accused Portable Products sold on its website and bearing its marks infringe one or more claims of the '844 patent since at least

2016, or since at least the time that it received notice of the Original Complaint, or since at least September 29, 2020.

190. Lenovo Beijing's Lenovo.com Domain continues to market and offer for sale the Accused Portable Products bearing Lenovo Beijing's marks into the United States and Delaware since the filing of the Original Complaint, which thoroughly detailed how the Accused Portable Products infringe at least claim 10 of the '844 patent.

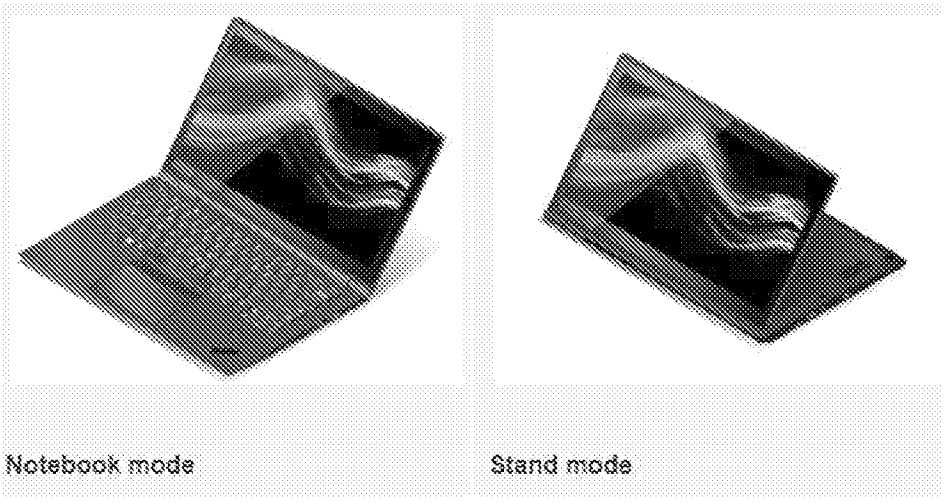
191. Lenovo Beijing has known or should have known since it first became aware of the '844 patent, and at least by September 29, 2020, that end users, importers, distributors, retailers, repair and service technicians, Lenovo US and its employees and contractors, and other users of the Accused Portable Products are infringing the '844 patent.

192. Lenovo Beijing is responsible for content displayed on the Lenovo.com Domain, including the press releases identified in Paragraph 90 above, which encourage users of the Accused Portable Products in the United States and Delaware to infringe at least claim 10 of the '844 patent by using the Accused Portable Products. Since at least 2016, Lenovo Beijing has encouraged customers to use the Accused Portable Products by providing the Lenovo.com Domain to host press releases that encourage customers to use the Accused Portable Products. Lenovo Beijing's conduct since at least 2016 demonstrates an intent to induce customers to directly infringe at least claim 10 of the '844 patent. Lenovo Beijing's conduct since at least 2016 also demonstrates an intent to induce Lenovo US to infringe the '844 patent by selling, offering for sale, and using the Accused Portable Products.

193. Lenovo Beijing has actively and knowingly induced infringement, and is actively and knowingly inducing infringement of one or more claims of the '844 patent, literally and/or equivalently, at least by inducing end users, repair and services technicians, Lenovo employees

and contractors, and others to use the Accused Portable Products in an infringing manner. Lenovo Beijing makes available the Lenovo.com Domain to disseminate manuals, product documentation and other advertising material that encourages customers to infringe the asserted claims by using the Accused Portable Products.

194. For example, in the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees" and that "[b]y rotating the display to different angle, your computer features the following four operating modes":



See ThinkPad HTML User Guide, Using Your ThinkPad / Using your computer / Operating modes.

195. Lenovo Beijing has had knowledge of the '844 patent and its infringement of the '844 patent since it first became aware of the '844 patent in 2016, and by at least the time it received notice of the Original Complaint. Lenovo Beijing has induced infringement of the '844 patent with specific intent to induce infringement of that patent.

196. Lenovo Beijing's willful infringement is evidenced by the following: Lenovo Beijing's intellectual property lawyers disclosed the LiTL '012 publication during the course of prosecution of Lenovo Beijing's patents before the USPTO, and with full knowledge of repeated citation to it as prior art by foreign patent prosecution bodies; the close working relationship between Lenovo Beijing's IP and research and design departments; the similarities between how the Accused Portable Products operate, the functionality that Lenovo Beijing sought to claim in its patent applications, and the requirements of claim 10 of the '844 patent; Lenovo Beijing's significant size and resources; and Lenovo Beijing's failure to take remedial action to avoid infringement. Lenovo Beijing's infringement of the '844 patent has been willful since it first became aware of the '844 patent in 2016, or at least since the time it received notice of the Original Complaint, or at least since September 29, 2020. Lenovo Beijing's ongoing infringement of the '844 patent continues to be willful. Lenovo Beijing has chosen to manufacture or control manufacture of the Accused Portable Products with the intent that the Accused Portable Products would be imported, offered for sale, sold, and/or used in the United States, to distribute or control distribution of the Accused Portable Products in Lenovo's established distribution channels with the intent that the Accused Portable Products would be imported, offered for sale, sold, and/or used in the United States, as explained in more detail

above, and knowing that doing so would infringe the '844 patent, and despite receiving notice from LiTL that continuing to do so would infringe the '844 patent.

197. The foregoing description of Lenovo Beijing's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

198. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo Beijing's infringement of the '844 patent.

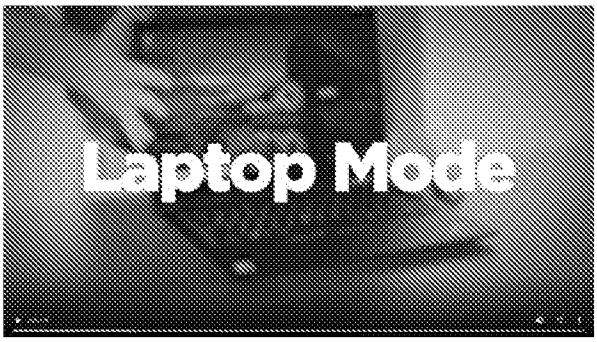
199. Lenovo Beijing's infringement of the '844 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

COUNT III

(Infringement of U.S. Patent No. 10,289,154)

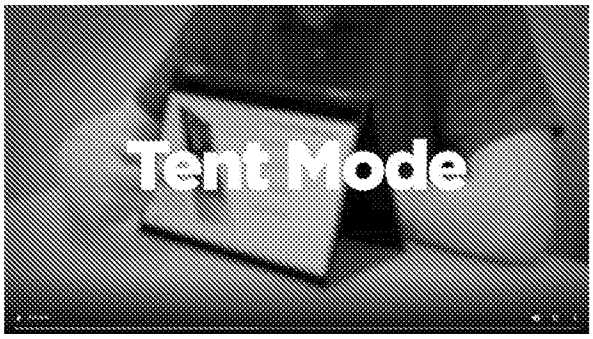
200. LiTL incorporates by reference and realleges all the foregoing paragraphs of the First Amended Complaint as if fully set forth herein.

201. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) are portable computers that are configurable between a plurality of display modes comprising a first mode, a second mode, and a third mode. For example:



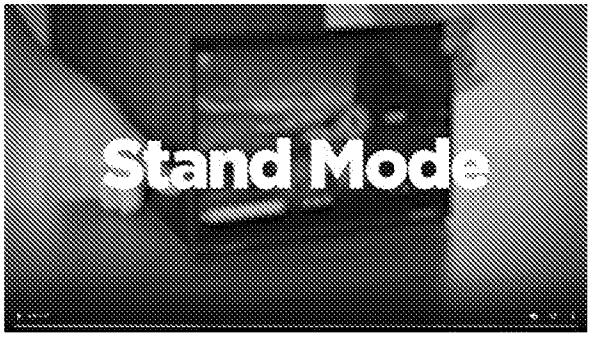


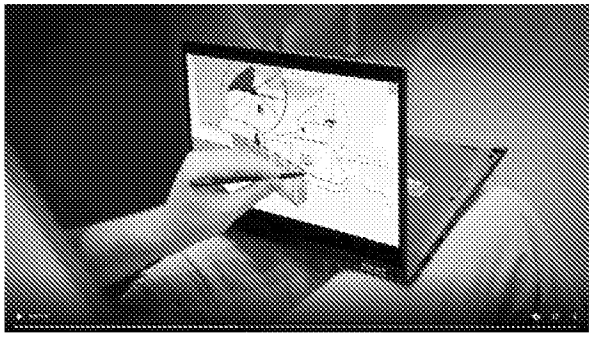
See, e.g., ThinkPad Yoga Modes at 0:14-0:23.





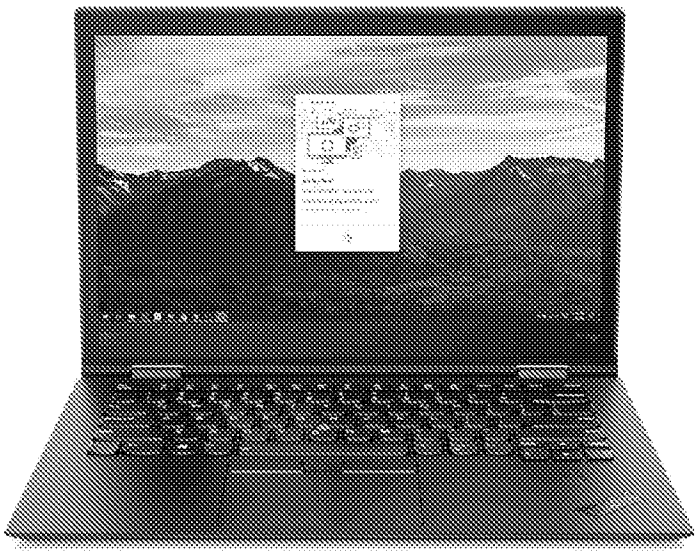
See, e.g., ThinkPad Yoga Modes at 0:32-0:36.





See, e.g., ThinkPad Yoga Modes at 0:24-0:31.

202. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a display component comprising a surface and a display screen disposed in the surface of the display component. For example:



See, e.g., ThinkPad Photos.

203. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a camera disposed in the surface of the display component. For example:



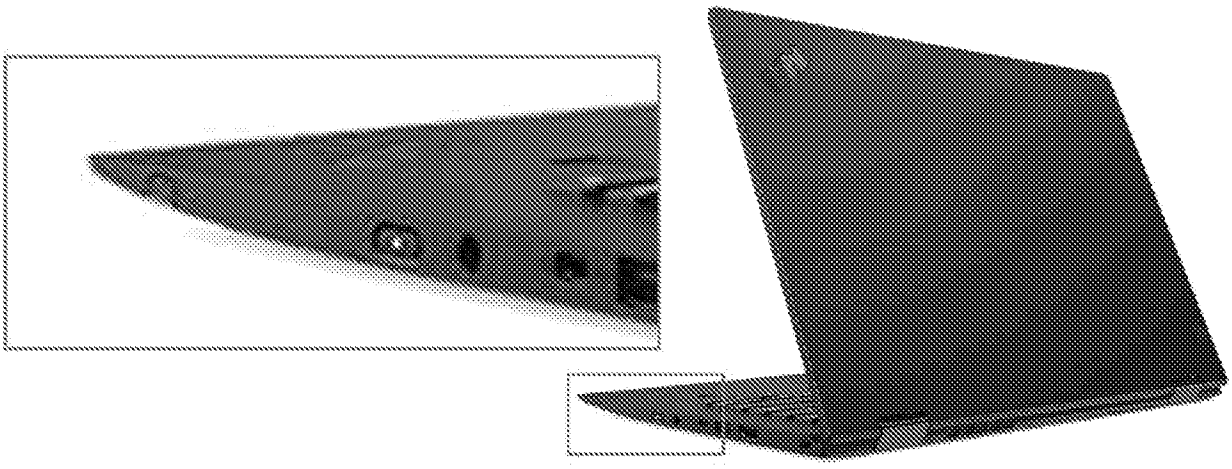
See, e.g., ThinkPad Yoga Video at 0:50.

204. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a base comprising a first surface and a second surface, a keyboard disposed in the first surface of the base, and a touchpad disposed in the first surface of the base.



See, e.g., ThinkPad Photos.

205. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a power button disposed in the second surface of the base. For example:



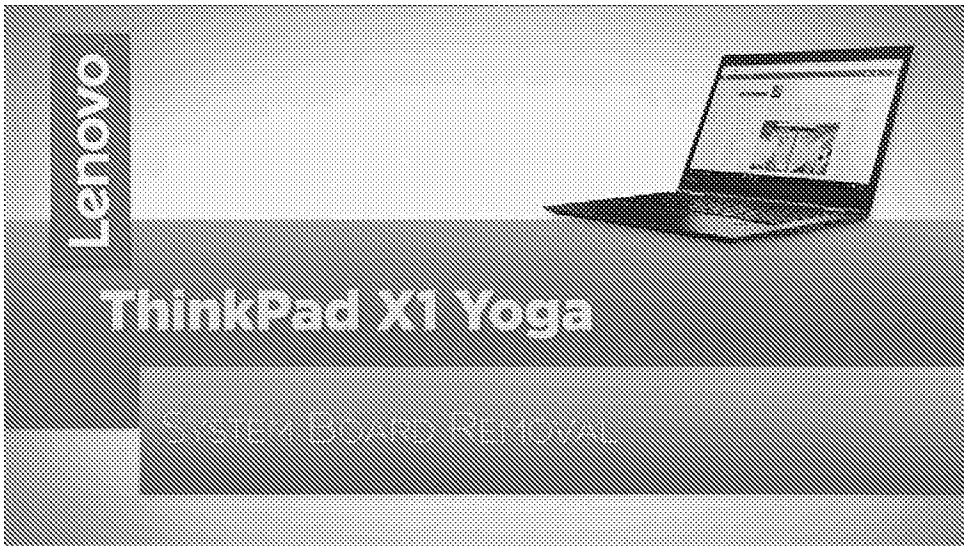
See, e.g., ThinkPad Photos.

206. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a central processing unit disposed in the base. For example:

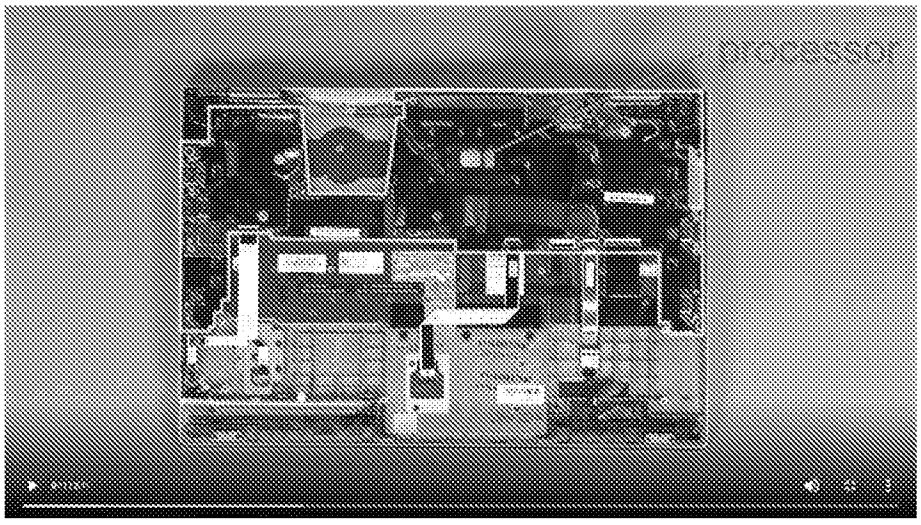
Processor

8th Generation Intel® Core™ i5-8250U Processor (1.60 GHz, up to 3.40 GHz with Turbo Boost, 4 Cores, 8 Threads, 6 MB Cache)

See, e.g., ThinkPad Webpage.

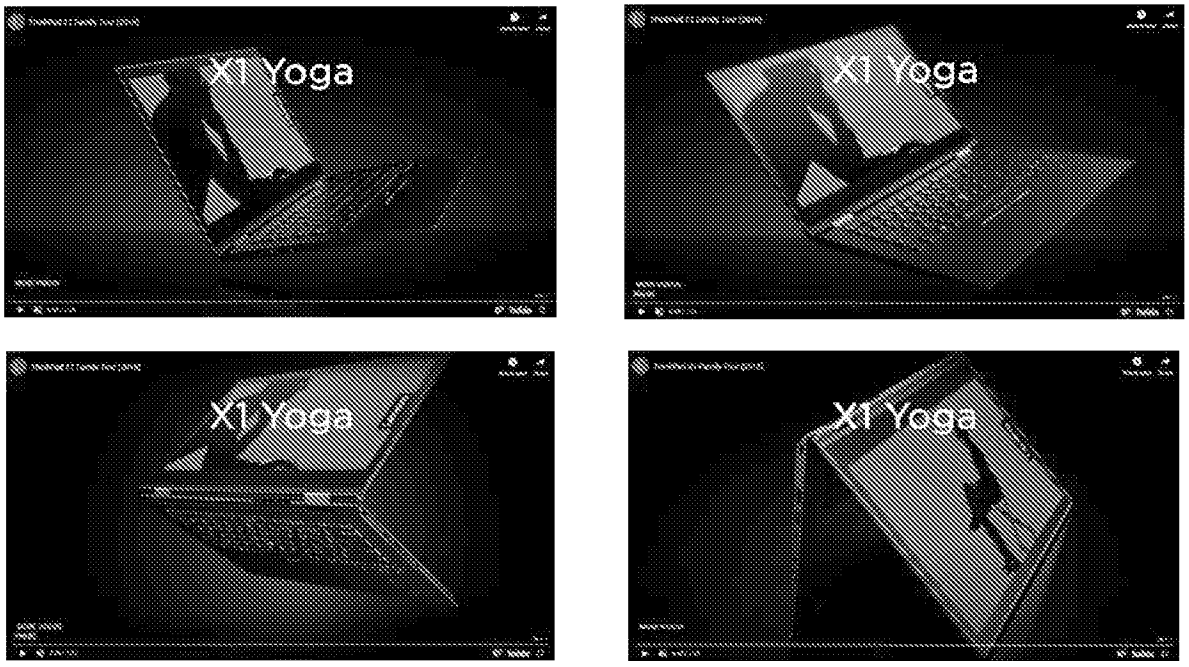


See, e.g., https://download.lenovo.com/lts/RTPW1610/FOF/RTPW1610-X1Yoga_REM_FRU_14_SystemBoard.mp4.

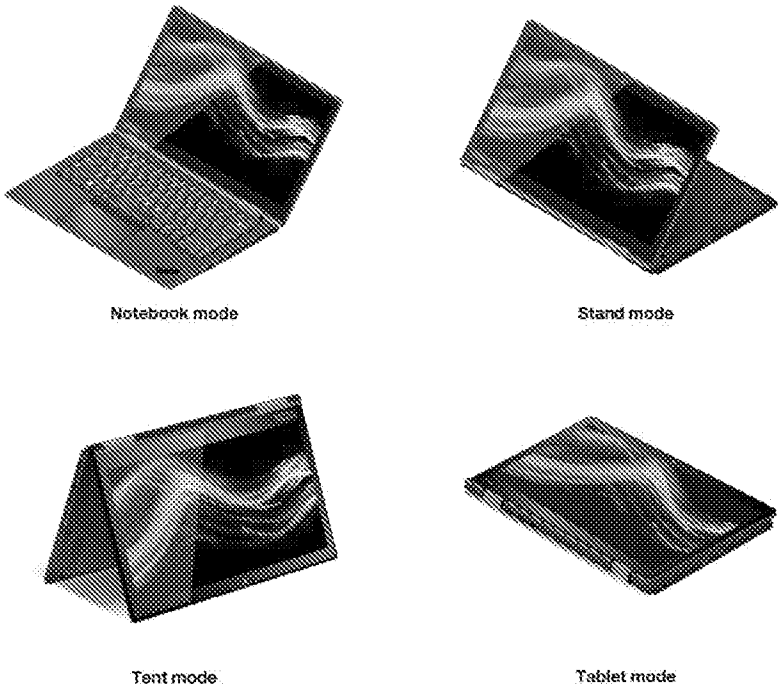


See, e.g., https://download.lenovo.com/lts/RTPW1610/FOF/RTPW1610-X1Yoga_REM_FRU_14_SystemBoard.mp4 at 0:11 (annotations added).

207. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a hinge assembly that rotatably couples the base to the display component, the hinge assembly being configured to permit the display component to rotate relative to the base up to at least 270 degrees from a closed position where the surface of the display component faces the first surface of the base. For example:

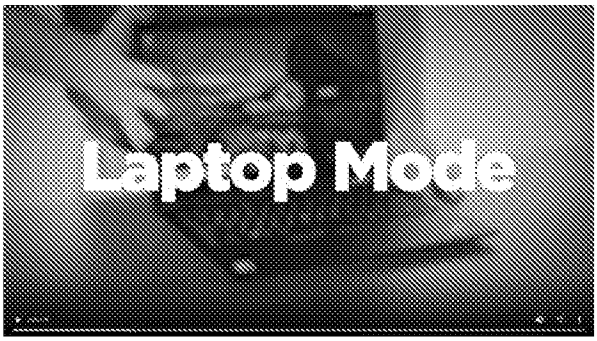


See, e.g., ThinkPad Yoga Video at 0:38-0:42.



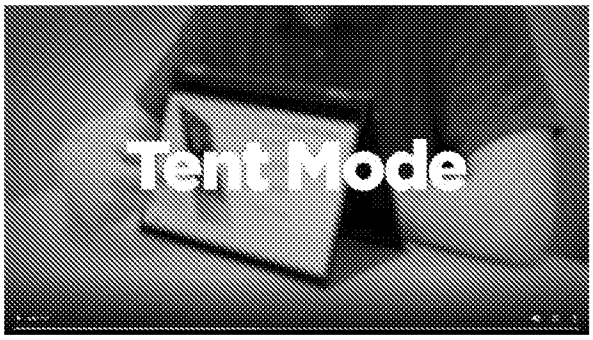
See ThinkPad User Guide, p. 29.

208. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include an orientation sensor configured to generate orientation information indicative of an orientation of at least part of the portable computer and a display manager configured to detect a current display mode from among the plurality of display modes based at least in part on the orientation information, display content in a first orientation when the current display mode is the first mode or the third mode, display content in a second orientation that is rotated 180 degrees relative to the first orientation when the current display mode is the second mode, and enlarge at least some computer content displayed on the display screen when the current display mode transitions from the first mode to the second mode.



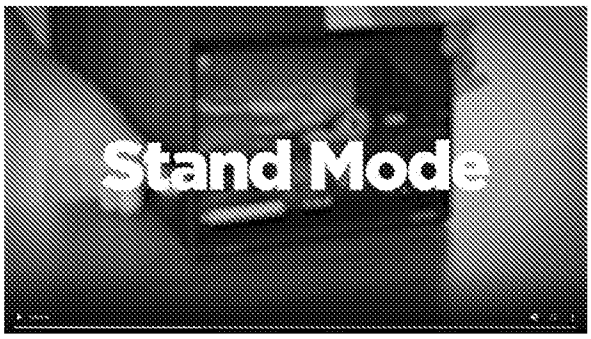


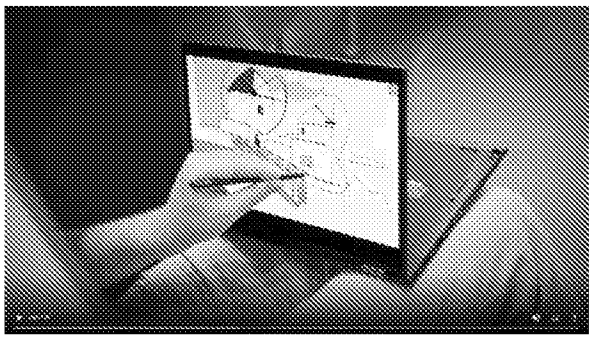
See, e.g., ThinkPad Yoga Modes at 0:14-0:23.





See, e.g., ThinkPad Yoga Modes at 0:32-0:36.





See, e.g., ThinkPad Yoga Modes at 0:24-0:31.

Lenovo US

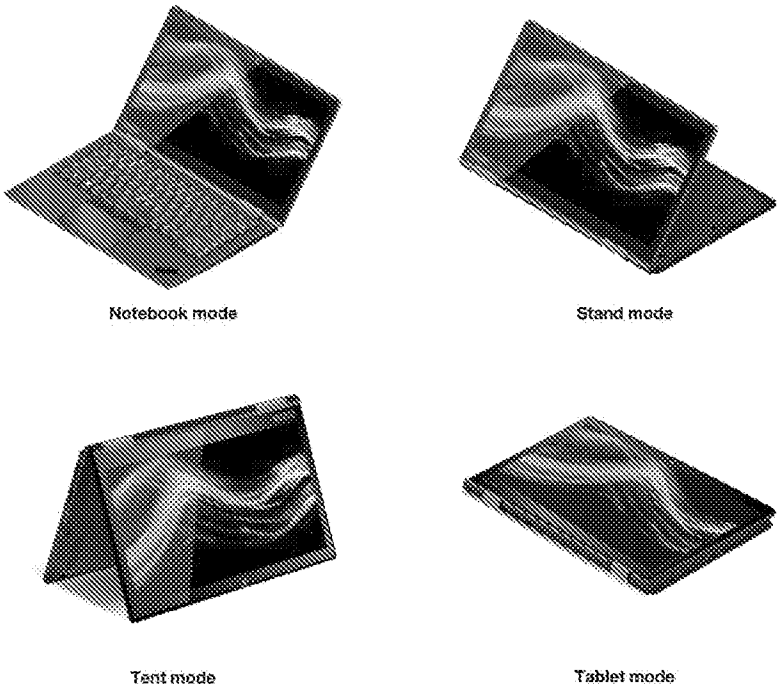
209. Lenovo US has directly infringed and continues to directly infringe, literally and/or equivalently, one or more of the claims of the '154 patent, including at least claim 11, including by importing, using, selling, and offering for sale in the United States certain computing devices with multiple display modes, including at least the Accused Products. D.I. 27 (Noble Declaration), ¶ 2.

210. Since at least the filing of the Original Complaint Lenovo US knew of the '154 patent.

211. Since at least the filing of the Original Complaint, Lenovo US knew that the Accused Portable Products infringe at least claim 11 of the '154 patent when used by customers or other users, when sold or offered for sale by resellers, and when imported by Lenovo entities.

212. Since at least the filing of the Original Complaint, Lenovo US has had the intent to encourage customers or other users to directly infringe at least claim 11 of the '154 patent by continuing to advertise, offer for sale, or sell, or by encouraging resellers to offer for sale or sell the Accused Portable Products in the United States, including in Delaware. Since at least the filing of the Original Complaint, Lenovo US has provided with the Accused Portable Products and on the website https://www.lenovo.com/us/en/pc-nfe/?s_tnt=133500%3A1%3A0&adobe_mc_sdid=SDID%3D16149CC949FC05AE-4D0E38E96242D744%7CMCORGID%3DF6171253512D2B8C0A490D45%40AdobeOrg%7CTS%3D1609296681&adobe_mc_ref=https%3A%2F%2Fwww.lenovo.com%2Fus%2Fen manuals, product documentation, and advertising materials that induce customers or other users to infringe at least claim 11 of the '154 patent by encouraging the use of the Accused Portable Products.

213. For example, in the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees" and that "[b]y rotating the display to different angle, your computer features the following four operating modes":



See ThinkPad User Guide, p. 29.

214. Since at least the filing of the Original Complaint, Lenovo US's infringement of at least claim 11 of the '154 patent has been willful. Lenovo US's offers for sale, sales, or use of the Accused Portable Products with provision of manuals and instruction to purchasers that encourage use it knows will infringe the '154 patent constitutes willful infringement. Lenovo US is a large corporation with substantial resources. Lenovo US's failure to fully investigate the allegations of infringement against it, its ongoing offers for sale, sales, and use of the Accused Portable Products, and its failure to take remedial action to avoid infringement evidences its willful infringement.

215. The foregoing description of Lenovo US's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Portable Products that it obtains during discovery.

216. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo US's infringement of the '154 patent.

217. Lenovo US's infringement of the '154 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

Lenovo Beijing

218. On information and belief, Lenovo Beijing has had knowledge of the '154 patent since before the filing of the Original Complaint.

219. Lenovo has extensive experience with intellectual property. Lenovo Beijing has been the owner of over 2,500 patent applications and over 2,200 patents. Over the past decade, Lenovo US has been involved in over 200 patent litigations in the United States, and has been a party in over 50 *inter partes* review proceedings before the U.S. Patent Trial and Appeals Board. The Lenovo 2019 Annual Report identifies intellectual property (IP) risk as one of the "key risks that the Group considers to be of great significance to the Group as it stands today." https://doc.irasia.com/listco/hk/lenovo/annual/2019/ar2019.pdf, page22. For example, the report recognizes that Lenovo could suffer "reputational harm if found to infringe a third party's valid patents." https://doc.irasia.com/listco/hk/lenovo/annual/2019/ar2019.pdf, page 27. To manage and mitigate its IP risk, Lenovo plans to: "Monitor, develop and execute IP litigation defense strategy" and "License IP as appropriate and monitor its continued validity and value to the Group." Lenovo Beijing's R&D teams work closely with IP lawyers from product conception through manufacture and commercialization to develop effective IP strategies for new products, such as the Yoga-branded laptops.
https://www.wipo.int/wipo_magazine/en/2015/03/article_0002.html.

220. Consistent with Lenovo Beijing's sophistication with IP matters and the fact that the Asserted Patents belong to a patent family that has been frequently cited in patent

applications of major players in the personal computing space, on information and belief, Lenovo Beijing was aware by 2016 of the family of LiTL patents and applications to which the '154 patent belongs.

221. Since at least 2019 Lenovo Beijing knew or should have known, or at a minimum acted with willful blindness to the fact that, the Accused Portable Products sold on its website and bearing its marks infringe one or more claims of the '154 patent based on at least the following:

- Lenovo Beijing's sophistication and substantial resources with respect to intellectual property matters;
- Lenovo Beijing's knowledge of the patent family to which the '154 patent belongs;
- Lenovo Beijing's knowledge since at least 2016 of the '688 and '844 patents, which are ancestors to the '154 patent, and citation to these patents and their corresponding publications in Lenovo Beijing patent applications since at least 2016; and
- the close working relationship between Lenovo Beijing's R&D teams and its IP lawyers and Lenovo Beijing's substantial patent prosecution activities directed to electronic devices having the 2-in-1 functionality of the Accused Portable Products, including the YOGA-branded laptop products.

222. On information and belief, Lenovo Beijing has known, should have known, or has been willfully blind to the existence of the '154 patent, since at least 2019. As a descendant of the '688 and '844 patents (and their corresponding published patent applications), which have been frequently cited during prosecution of patent applications owned by major players in the

personal computing space, including the Lenovo Group and its subsidiaries, Lenovo Beijing knew or was willfully blind to the existence of the '154 patent.

223. On information and belief, Lenovo Beijing is a sophisticated company regarding patents and business in the United States, and citation of patents that cover any of Lenovo's products is a significant concern to Lenovo Beijing. In a 2007 press release, Lenovo's leadership stated that "one of the most important goals of international business" is "the protection of intellectual property." He also noted that "[a]s a global corporate citizen, Lenovo is deeply committed to the protection of intellectual property. We continue to take the lead by encouraging more businesses and individual users to respect and protect intellectual property as a means of building an innovation-friendly business environment." *See* https://news.lenovo.com/pressroom/press-releases/lenovo-joins-forces-with-microsoft-to-continue-driving-support-for-intellectual-property-rights/. In a 2018 press release, Lenovo's leadership noted that "[i]ntellectual property is a strategic asset for Lenovo" that "not only protects our investment in invention and innovation, but also positions Lenovo's businesses to flourish and grow."

224. On information and belief, Lenovo Beijing has procedures to evaluate whether Lenovo products have freedom to operate in the United States, particularly where the products comprise a significant portion of Lenovo's revenue. On information and belief, the Accused Portable Products comprise a significant portion of Lenovo's revenue, and since at least 2019 Lenovo Beijing knew that use of the Accused Portable Products infringes the '154 patent.

225. On information and belief, citation of the '688 and '844 patents and/or their corresponding published applications during the USPTO prosecution of Lenovo Beijing patents

caused Lenovo Beijing to investigate, become aware of, and consider descendant patents, including the '154 patent, and the rest of LiTL's patent portfolio.

226. Since at least 2019 Lenovo Beijing knew or should have known, or at a minimum acted with willful blindness to the fact that, the Accused Portable Products sold on its website and bearing its marks infringe one or more claims of the '154 patent since the patent is a descendant of LiTL's frequently cited ancestor patents (and related published applications), which Lenovo Beijing cited during the prosecution of multiple patents.

227. In addition, Lenovo Beijing has known that the Accused Portable Products sold on its website and bearings its marks infringe one or more of the claims of the '154 patent since at least the time that it received notice of the Original Complaint, or since at least September 29, 2020.

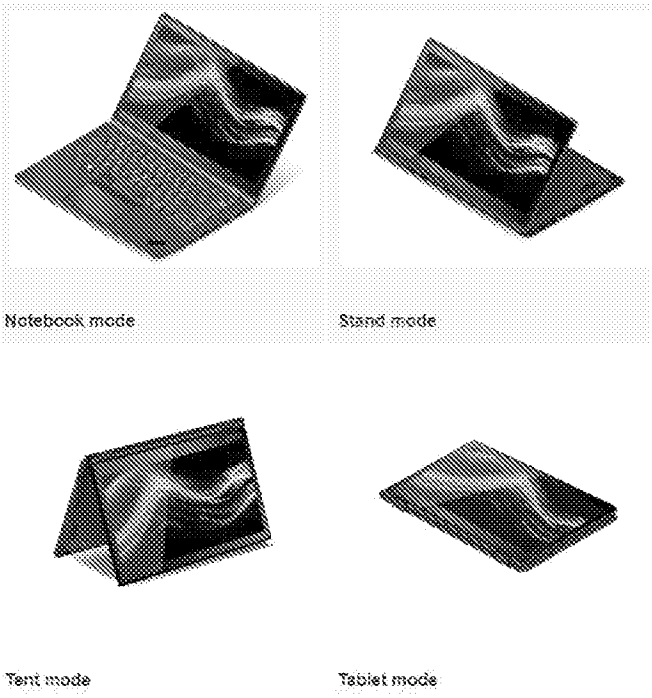
228. Lenovo Beijing's Lenovo.com Domain continues to market and offer for sale the Accused Products bearing Lenovo Beijing's marks into the United States and Delaware since the filing of the Original Complaint, which thoroughly detailed how the Accused Portable Products infringe at least claim 11 of the '154 patent.

229. Lenovo Beijing has known or should have known since it first became aware of the '154 patent, and at least by September 29, 2020, that end users, importers, distributors, retailers, repair and service technicians, Lenovo US and its employees and contractors, and other users of the Accused Portable Products are infringing the '154 patent.

230. Lenovo Beijing is responsible for what is posted on the Lenovo.com Domain, including its press releases identified in Paragraph 90 above, which encourage users of the Accused Products in the United States and Delaware to infringe at least claim 11 of the '154 patent by using the Accused Portable Products. Since at least 2019, Lenovo Beijing has

encouraged customers to use the Accused Portable Products by providing the Lenovo.com Domain to host press releases that encourage customers to use the Accused Portable Products. Lenovo Beijing's conduct since 2019 demonstrates an intent to induce customers to directly infringe at least claim 11 of the '154 patent. Lenovo Beijing's conduct since 2019 also demonstrates an intent to induce Lenovo US to infringe the '154 patent by selling, offering for sale, and using the Accused Portable Products.

231. Lenovo Beijing has actively and knowingly induced infringement, and is actively and knowingly inducing infringement of one or more claims of the '154 patent, literally and/or equivalently, at least by inducing end users, repair and service technicians, Lenovo employees and contractors, and others to use the Accused Portable Products in an infringing manner. Lenovo Beijing makes available the Lenovo.com Domain to disseminate manuals, product documentation and other advertising material that encourages customers to infringe the asserted claims by using the Accused Portable Products. For example, in the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees" and that "[b]y rotating the display to different angle, your computer features the following four operating modes":



See ThinkPad HTML User Guide, Using Your ThinkPad / Using your computer / Operating modes.

232. Lenovo Beijing has had knowledge of the '154 patent and its infringement of the '154 patent since it first became aware of the '154 patent in 2019, and since at least the time it received notice of the Original Complaint or at least by September 29, 2020. Lenovo Beijing has induced infringement of the '154 patent with specific intent to induce infringement of that patent.

233. Lenovo Beijing's infringement of the '154 patent has been willful since it first became aware of the '154 patent in 2019, or since at least the time it received notice of the Original Complaint, and its ongoing infringement of the '154 patent continues to be willful. Lenovo Beijing's willful infringement is evidenced by the following: the close working relationship between Lenovo Beijing's IP and research and design departments; the similarities between how the Accused Portable Products operate, the functionality that Lenovo Beijing sought to claim in its patent applications, and the requirements of claim 11 of the '154 patent; Lenovo Beijing's significant size and resources; and Lenovo Beijing's failure to take remedial

action to avoid infringement. Lenovo Beijing has chosen to manufacture or control manufacture of the Accused Portable Products with the intent that the Accused Products would be imported, offered for sale, sold, and/or used in the United States, to distribute or control distribution of the Accused Products in Lenovo's established distribution channels with the intent that the Accused Products would be imported, offered for sale, sold, and/or used in the United States, as explained in more detail above, and knowing that doing so would infringe the '154 patent, and despite receiving notice from LiTL that continuing to do so would infringe the '154 patent.

234. The foregoing description of Lenovo Beijing's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Portable Products that it obtains during discovery.

235. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo Beijing's infringement of the '154 patent.

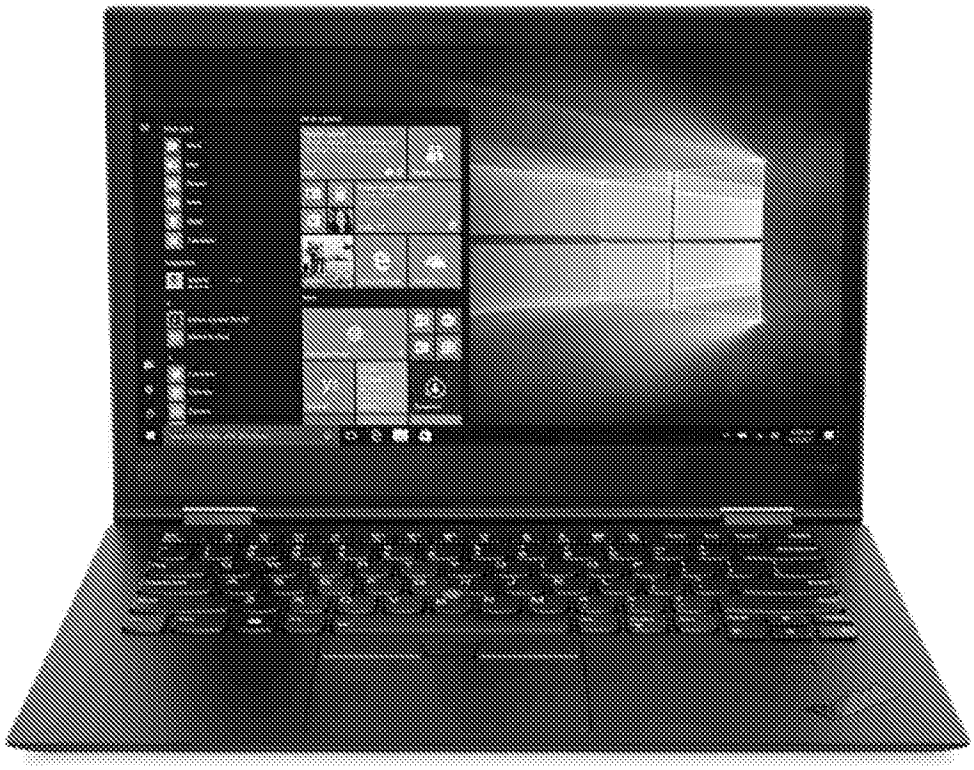
236. Lenovo Beijing's infringement of the '154 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

COUNT IV

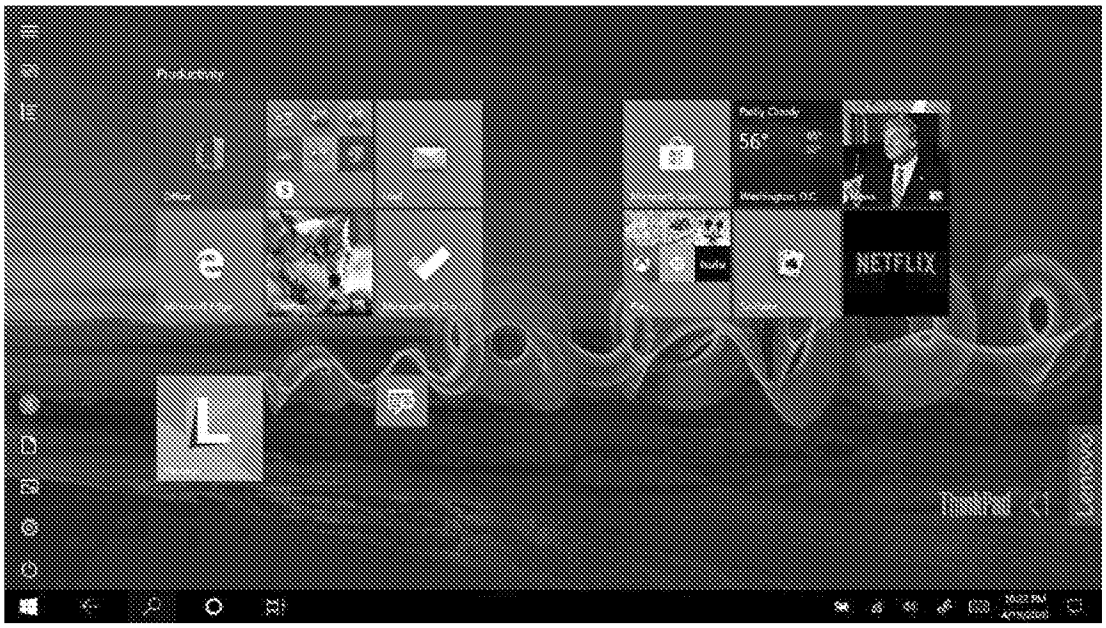
(Infringement of U.S. Patent No. 9,880,715)

237. LiTL incorporates by reference and realleges all the foregoing paragraphs of the First Amended Complaint as if fully set forth herein.

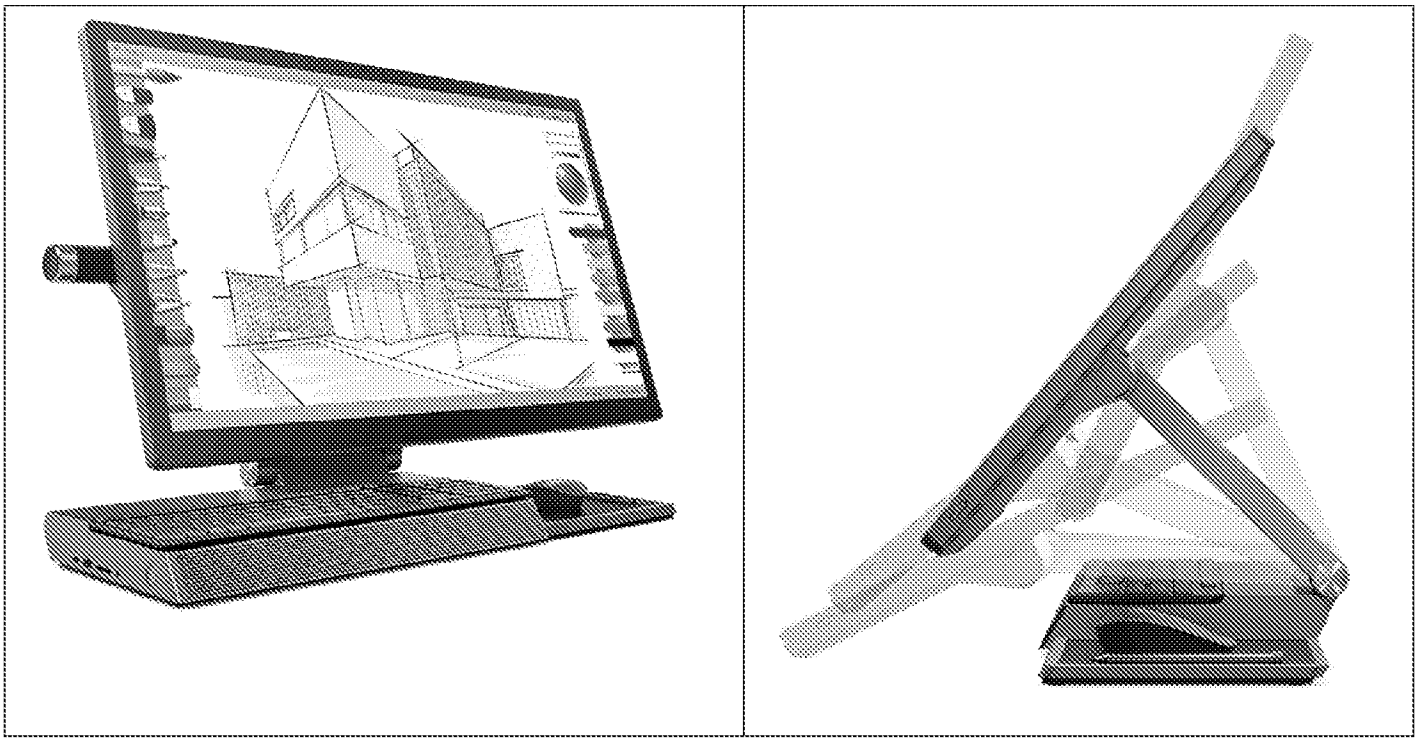
238. The Accused Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga, the Yoga A940) include a customized user interface to display computer content on a display component of a computer system including a keyboard. For example:



See, e.g., ThinkPad Photos, caption: Lenovo ThinkPad X1 Yoga (3rd Gen) front view with Windows 10 Pro.



Screenshot from 3rd Generation ThinkPad X1 Yoga, home screen in tablet mode.

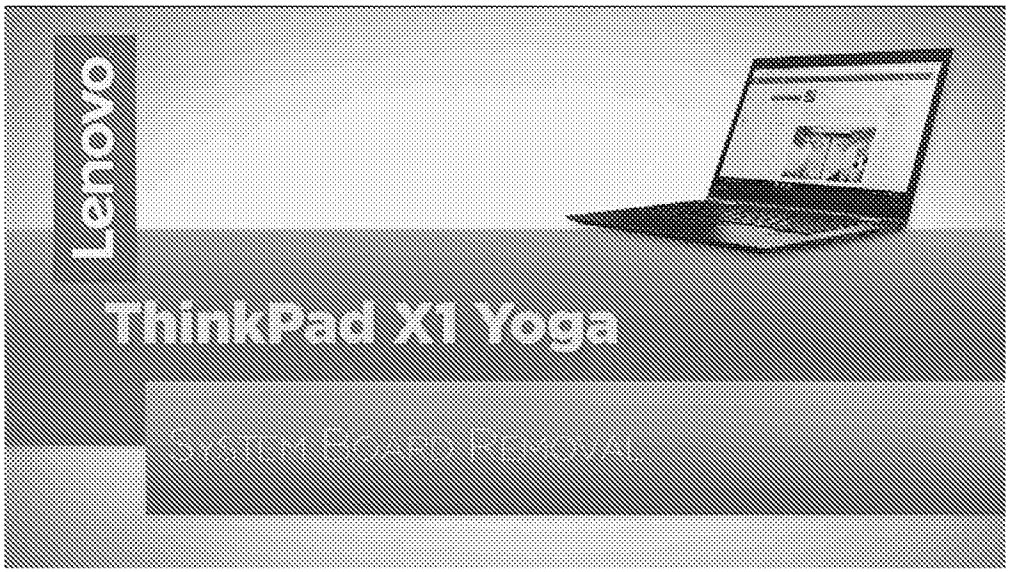


https://www.lenovo.com/us/en/desktops-and-all-in-ones/ideacentre/yoga-a-series/Yoga-A940-27ICB/p/FFYGF900316.

239. The Accused Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga, Yoga A940) include a user interface comprising: at least one processor operatively connected to a memory of the computer system. For example:

3rd Generation ThinkPad X1 Yoga	YOGA A940
Processor 8th Generation Intel® Core™ i5-8250U Processor (1.60 GHz, up to 3.40 GHz with Turbo Boost, 4 Cores, 8 Threads, 6 MB Cache)	**Processor** 9th Generation Intel® Core™ i7-9700 Processor with vPro™ (3.00GHz, up to 4.70 GHz with Turbo boost, 8 Cores, 12MB Cache)
Operating System Windows 10 Pro 64	**Operating System** Windows 10 Home 64
Display Type 14.0" FHD (1920 x 1080) IPS anti-reflective, anti-smudge, touchscreen, 300 nits	**Display Type** 27" 4K UHD (3840 x 2160) IPS, multi-touch
Memory 8 GB LPDDR3 2133MHz (Soldered)	**Memory** 32 GB DDR4 2666MHz (2 x 16 GB)
Hard Drive 512 GB PCIe SSD	**Hard Drive** 1TB 5400 RPM + 256GB SSD PCIe

See, e.g., ThinkPad Webpage, A940 Webpage.



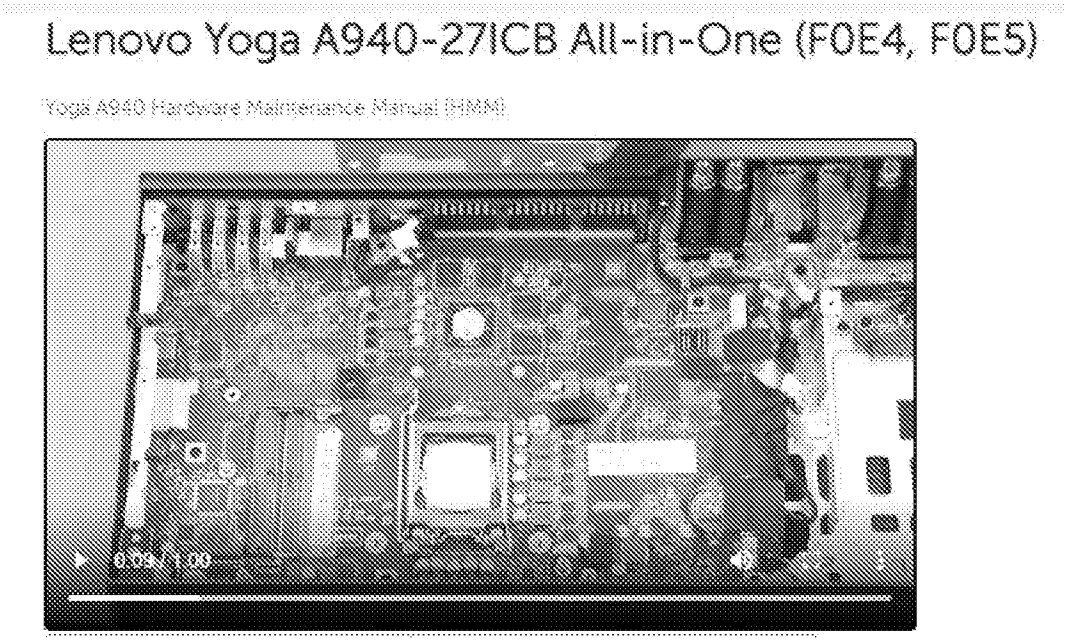
See, e.g., https://download.lenovo.com/lts/RTPW1610/FOF/RTPW1610-X1Yoga_REM_FRU_14_SystemBoard.mp4.



See, e.g., https://download.lenovo.com/lts/RTPW1610/FOF/RTPW1610-X1Yoga_REM_FRU_14_SystemBoard.mp4 at 0:11 (annotations added).

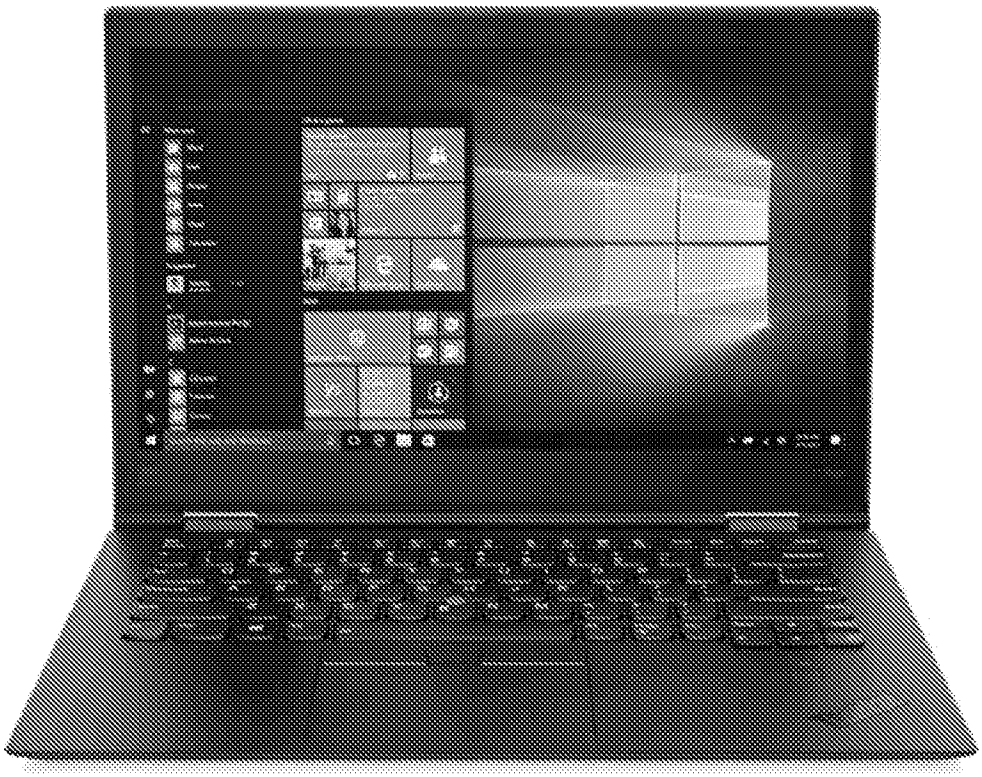


See, e.g., https://support.lenovo.com/us/en/solutions/ht508724-removal-and-replacement-videos-lenovo-yoga-a940-27icb-all-in-one-f0e4-f0e5

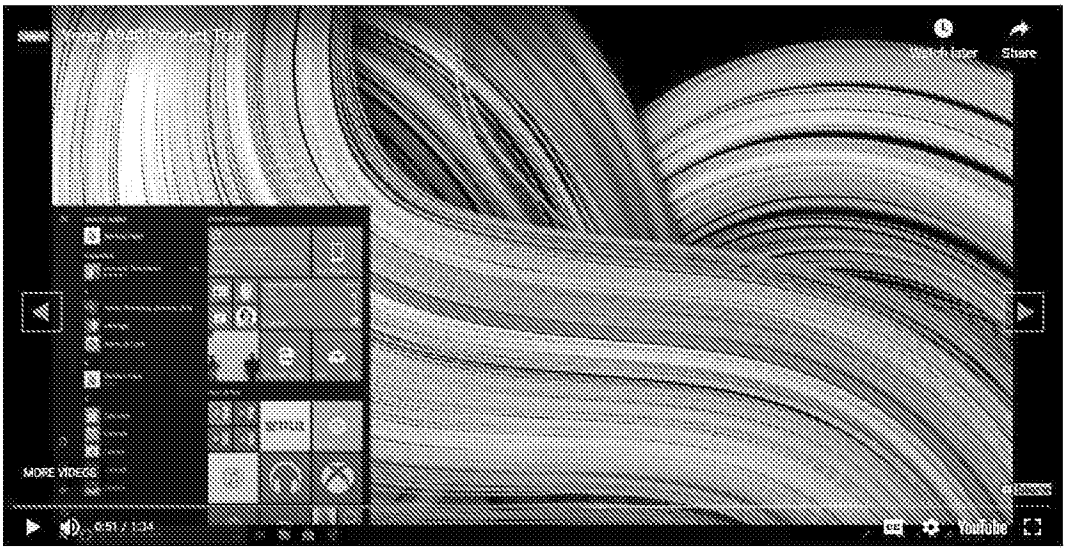


See, e.g., https://support.lenovo.com/us/en/solutions/ht508724-removal-and-replacement-videos-lenovo-yoga-a940-27icb-all-in-one-f0e4-f0e5.

240. The Accused Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga, Yoga A940) include a graphical user interface, executing on the at least one processor, configured to display the computer content on the display component of the computer system. For example:

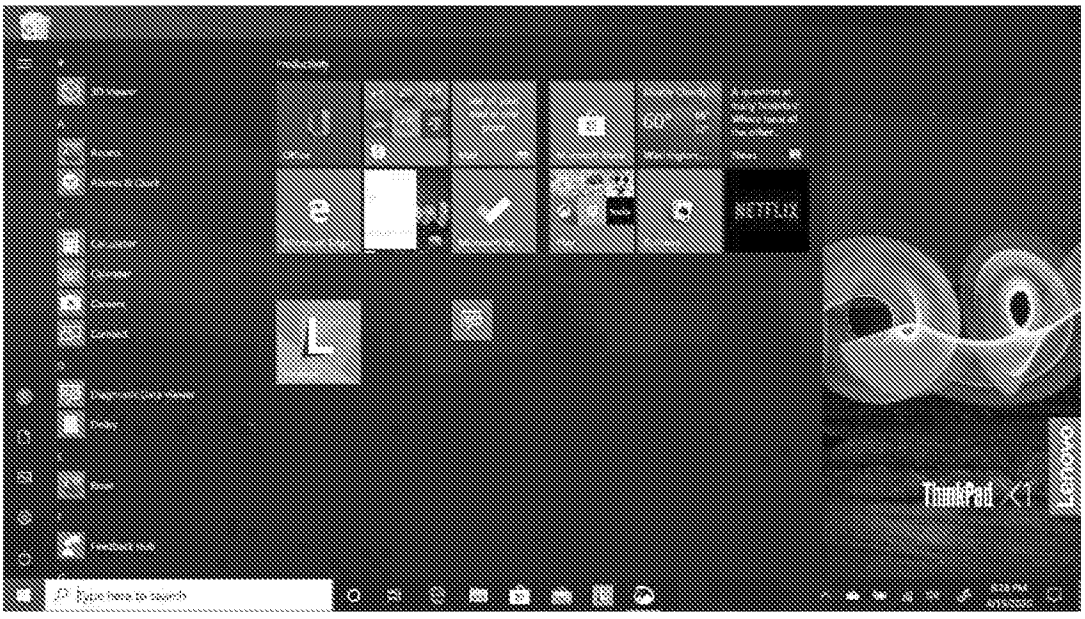


See, e.g., ThinkPad Photos, caption: Lenovo ThinkPad X1 Yoga (3rd Gen) front view with Windows 10 Pro.

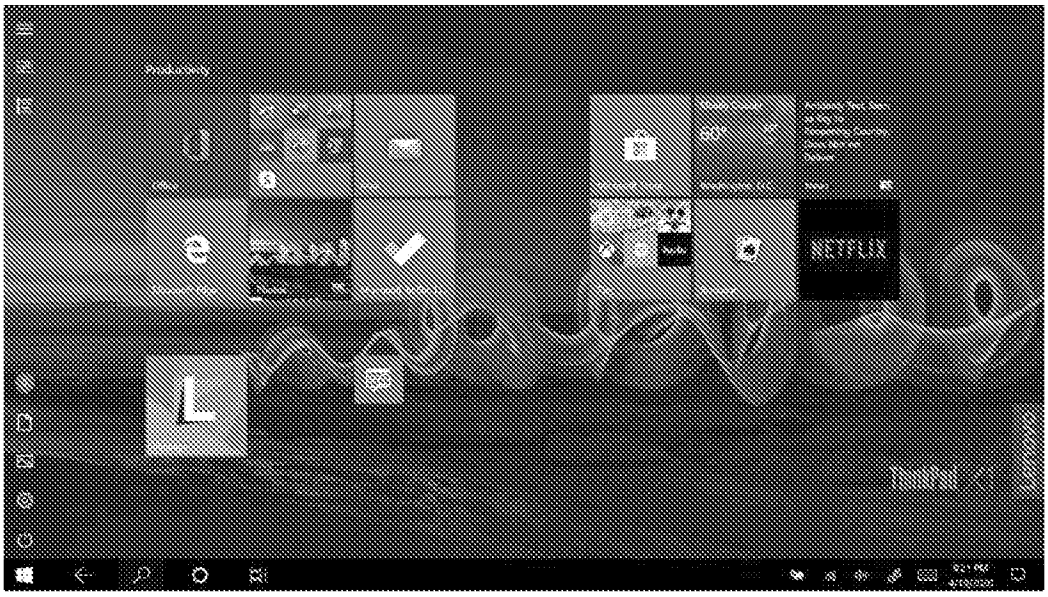


See, e.g., https://www.youtube.com/watch?v=3O66VahPxRk.

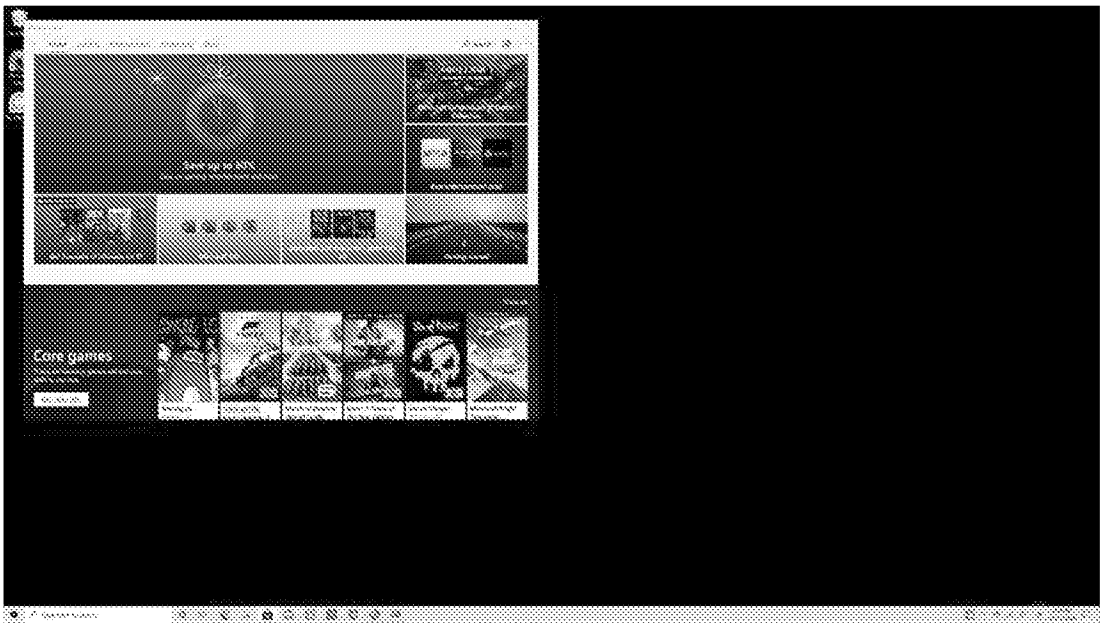
241. The Accused Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga, Yoga A940) include a graphical user interface configured to: display a plurality of views of a plurality of visual representations of computer content. For example, the 3rd Generation ThinkPad X1 Yoga is configured to display a home screen in laptop mode and a home screen in tablet mode:



Screenshot from 3rd Generation ThinkPad X1 Yoga, home screen in laptop mode.



Screenshot from 3rd Generation ThinkPad X1 Yoga, home screen in tablet mode.



Screenshot from Yoga A940, upright position, home screen in normal mode.

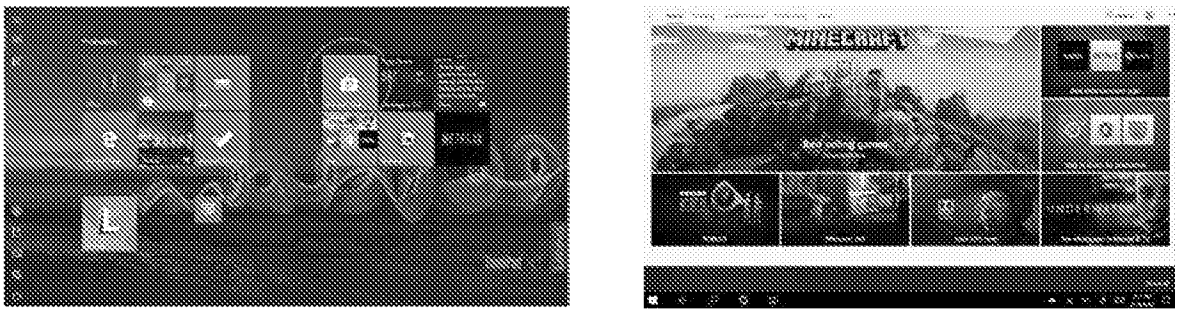


Screenshot from Yoga A940, drafting position, home screen in tablet mode.

242. The Accused Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga, Yoga A940) include computer content that includes at least one of selectable digital content, selectable computer operations and passive digital content. For example, the Microsoft Store app can be selected from the task bar in laptop mode and in tablet mode:



Screenshots from 3rd Generation ThinkPad X1 Yoga, Microsoft Store selected in laptop mode.



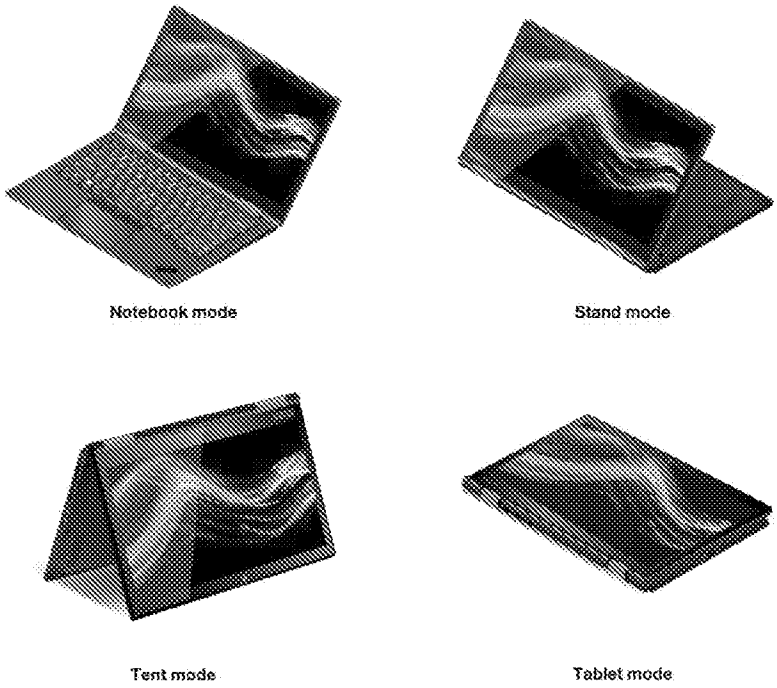
Screenshots from 3rd Generation ThinkPad X1 Yoga, Microsoft Store selected in tablet mode.

243. The Accused Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga, Yoga A940) include an execution component, executing on the at least one processor, configured to: detect a current computer system configuration from at least a first computer system configuration where the keyboard is operable to receive input from an operator of the computer system to control the computer system and a second computer system configuration where the keyboard is inoperable to receive input from the operator of the computer system to control the computer system; select one of the plurality of views for display on the computer system in response to the detected current computer system configuration; and transition the display component to the selected one of the plurality of views.

244. For example, the keyboard in the 3rd Generation ThinkPad XI Yoga is operable in notebook mode and inoperable in tent mode:

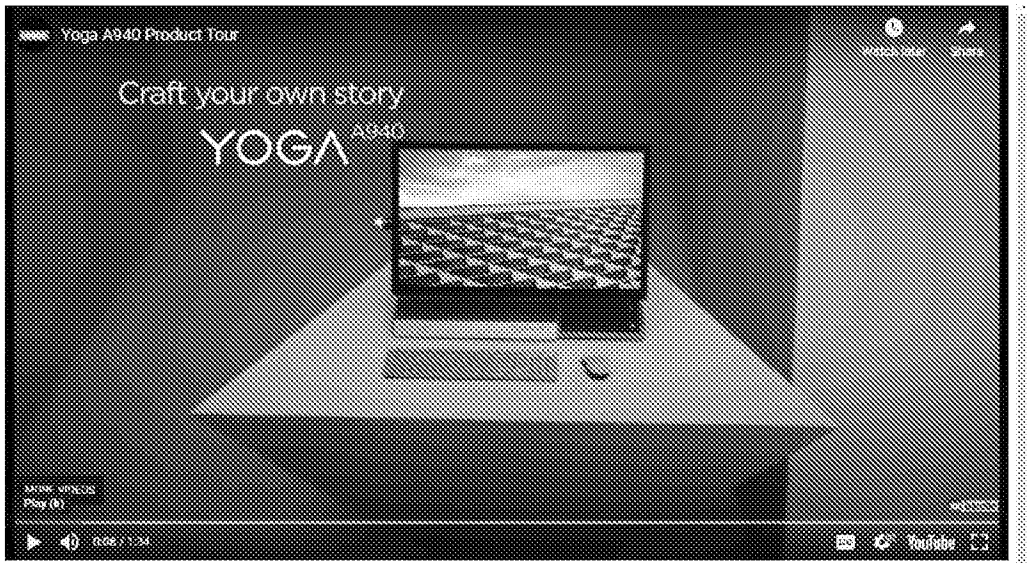
Your computer features the following four YOGA modes. You can switch among different modes according to your preference.

Note: The keyboard and the pointing devices are automatically disabled in the stand mode, tent mode, and tablet mode. Use the touch screen to control your computer instead.

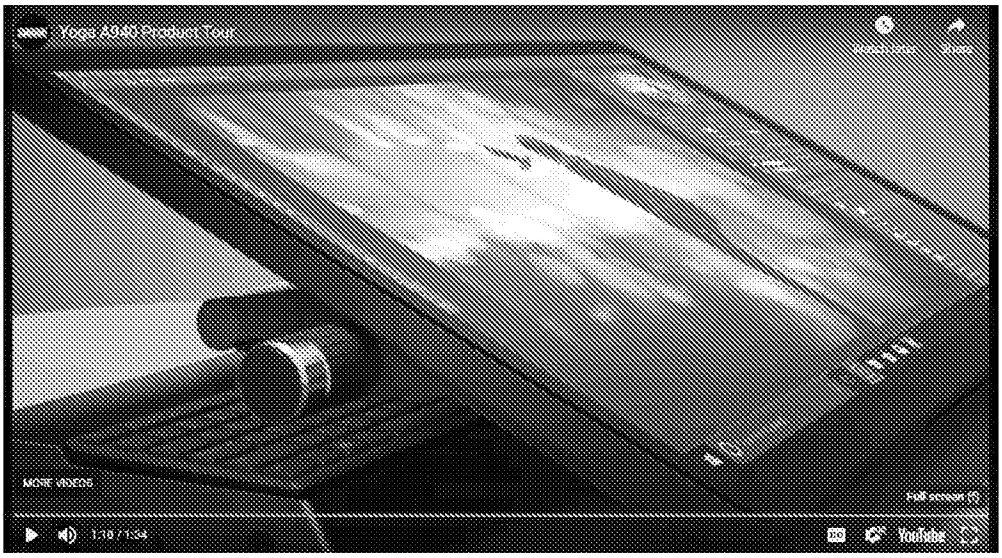


See ThinkPad User Guide, pp. 28-29.

245. For example, in a first computer system configuration in which the display is oriented in an upright position the keyboard in the Yoga A940 is operable to receive input from an operator, and the normal mode can be selected in Microsoft Windows 10. In a second computer system configuration in which the display is lowered into drafting mode, the keyboard is inoperable to receive input from an operator, and the tablet mode can be selected in Microsoft Windows 10:



See https://www.youtube.com/watch?v=3O66VahPxRk at 0:06.



See https://www.youtube.com/watch?v=3O66VahPxRk at 1:18.

Lenovo US

246. Lenovo US has directly infringed and continues to directly infringe, literally and/or equivalently, one or more of the claims of the '715 patent, including at least claim 1, including by importing, using, selling, and offering for sale in the United States certain

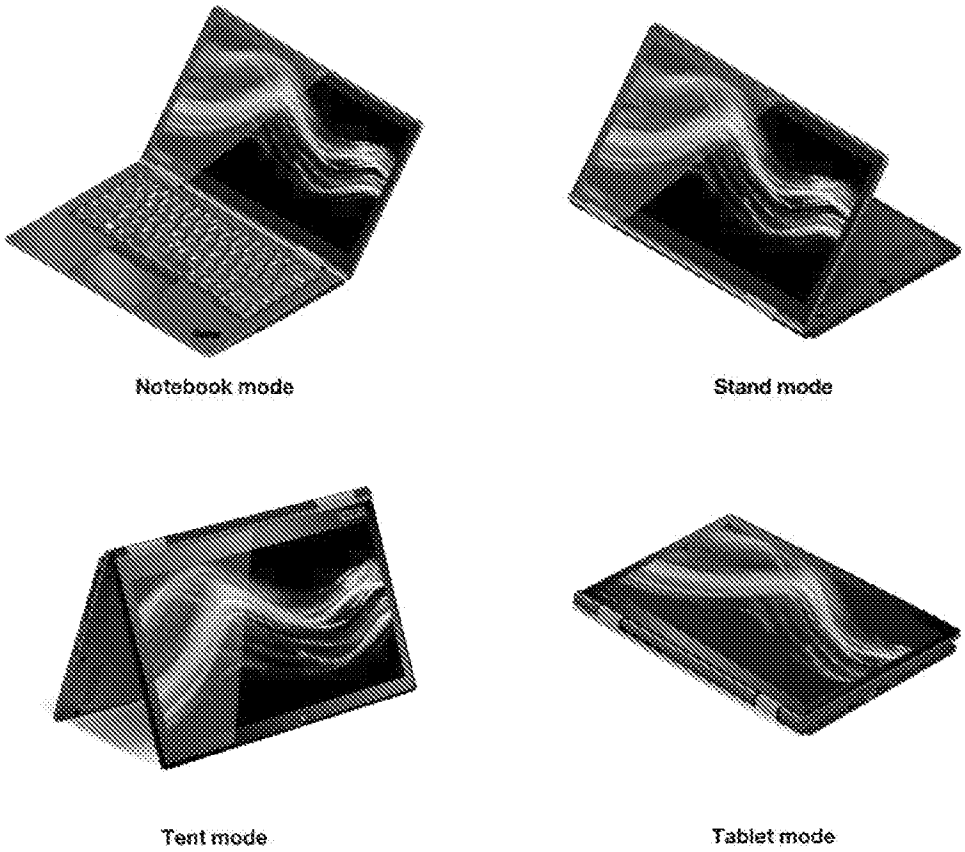
computing devices with multiple display modes, including at least the Accused Products. D.I. 27 (Noble Declaration), ¶ 2.

247. Since at least the filing of the Original Complaint Lenovo US knew of the '715 patent.

248. Since at least the filing of the Original Complaint, Lenovo US knew that the Accused Portable Products infringe at least claim 1 of the '715 patent when used by customers or other users, when sold or offered for sale by resellers, and when imported by Lenovo entities.

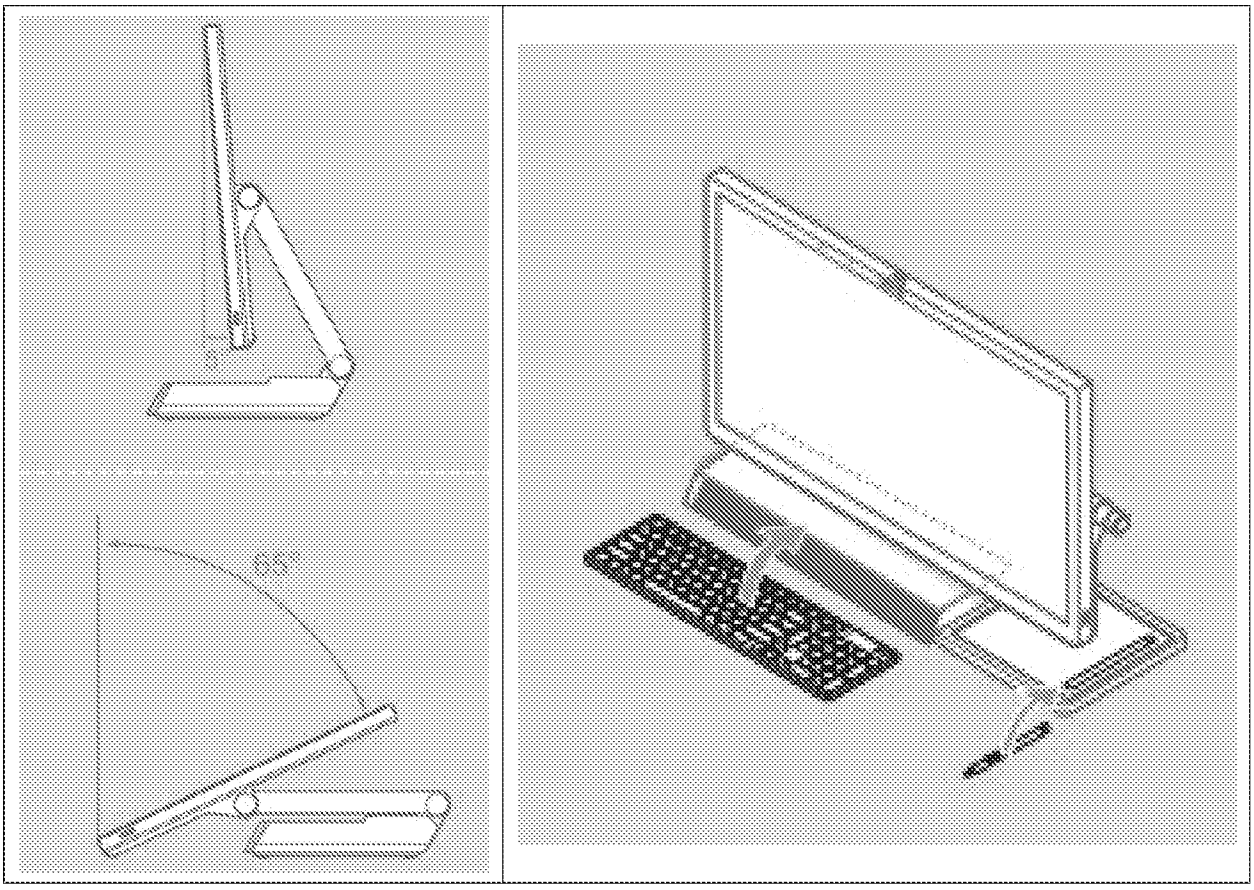
249. Since at least the filing of the Original Complaint, Lenovo US has had the intent to encourage customers or other users to directly infringe at least claim 1 of the '715 patent by continuing to advertise, offer for sale, or sell, or by encouraging resellers to offer for sale or sell the Accused Portable Products in the United States, including in Delaware. Since at least the filing of the Original Complaint, Lenovo US has provided with the Accused Portable Products and on the website https://www.lenovo.com/us/en manuals, product documentation, and advertising materials that induce customers or other users to infringe at least claim 1 of the '715 patent by encouraging the use of the Accused Portable Products.

250. For example, in the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees" and that "[b]y rotating the display to different angle, your computer features the following four operating modes":



See ThinkPad User Guide, p. 29.

251. For example, the Yoga A940 Setup guide instructs users that the Yoga A940 can be configured into the following computer system configurations:



252. Since at least the filing of the Original Complaint, Lenovo US's infringement of at least claim 1 of the '715 patent has been willful. Lenovo US's offers for sale, sales, or use of the Accused Portable Products with provision of manuals and instruction to purchasers that encourage use it knows will infringe the '715 patent constitutes willful infringement. Lenovo US is a large corporation with a plethora of resources. Lenovo US's failure to fully investigate the allegations of infringement against it, its ongoing offers for sale, sales, and use of the Accused Portable Products, and its failure to take remedial action to avoid infringement evidences its willful infringement.

253. The foregoing description of Lenovo US's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Portable Products that it obtains during discovery.

254. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo US's infringement of the '715 patent.

255. Lenovo US's infringement of the '715 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

Lenovo Beijing

256. On information and belief, Lenovo Beijing has had knowledge of the '715 patent since before the filing of the Original complaint.

257. Lenovo Beijing has extensive experience with intellectual property. Lenovo Beijing has been the owner of over 2,500 patent applications and over 2,200 patents. Over the past decade, Lenovo US has been involved in over 200 patent litigations in the United States, and has been a party in over 50 *inter partes* review proceedings before the U.S. Patent Trial and Appeals Board. The Lenovo 2019 Annual Report identifies intellectual property (IP) risk as one of the "key risks that the Group considers to be of great significance to the Group as it stands today." https://doc.irasia.com/listco/hk/lenovo/annual/2019/ar2019.pdf, page22. For example, the report recognizes that Lenovo could suffer "reputational harm if found to infringe a third party's valid patents." https://doc.irasia.com/listco/hk/lenovo/annual/2019/ar2019.pdf, page 27. To manage and mitigate its IP risk, Lenovo plans to: "Monitor, develop and execute IP litigation defense strategy" and "License IP as appropriate and monitor its continued validity and value to the Group." Lenovo Beijing's R&D teams work closely with IP lawyers from product conception through manufacture and commercialization to develop effective IP strategies for new products, such as the Yoga-branded laptops.
https://www.wipo.int/wipo_magazine/en/2015/03/article_0002.html.

258. Consistent with Lenovo Beijing's sophistication with IP matters and the fact that the Asserted Patents belong to a patent family that has been frequently cited in patent

applications of major players in the personal computing space, on information and belief, Lenovo Beijing was aware by 2016 of the family of LiTL patents and applications to which the '715 patent belongs.

259. Since at least 2017, Lenovo Beijing has been aware of the published application, U.S. 2009/303676 ("the LiTL '676 publication"), which issued as U.S. Patent No. 9,003,315 ("the '315 patent"), and from which the '715 patent is a continuation.. On September 8, 2016, the USPTO issued an office action rejecting claims in Lenovo Beijing's U.S. Patent Application No. 13/971,229 as obvious over, inter alia, the LiTL '676 publication. On August 18, 2017, the USPTO issued an office action rejecting claims in Lenovo Beijing's U.S. Patent Application No. 14/079,046 as obvious over, inter alia, the LiTL '676 publication. On September 15, 2016, the USPTO an office action dated September 15, 2016 citing the '315 patent in Lenovo Beijing's U.S. Patent Application No. 14/209,145.

260. Since at least 2018 Lenovo Beijing knew or should have known, or at a minimum acted with willful blindness to the fact that, the Accused Products sold on its website and bearing its marks infringe one or more claims of the '715 patent based on at least the following:

- Lenovo Beijing's sophistication and substantial resources with respect to intellectual property matters;
- Lenovo Beijing's knowledge of and citation to the LiTL '676 publication, which is the parent to the '715 patent, during prosecution of three of Lenovo Beijing's U.S. patent applications as early as 2016;
- Lenovo Beijing's knowledge of the patent family to which the '715 patent belongs;

- Lenovo Beijing's knowledge since at least 2016 of the '688 and '844 patents, which are ancestors to the '715 patent, and citation to these patents and their corresponding publications in Lenovo Beijing patent applications since at least 2016; and
- the close working relationship between Lenovo Beijing's R&D teams and its IP lawyers and Lenovo Beijing's substantial patent prosecution activities directed to electronic devices having the 2-in-1 functionality of the Accused Portable Products, including the YOGA-branded laptop products.

261. On information and belief, Lenovo Beijing has known, should have known, or has been willfully blind to the existence of the '715 Patent, since at least 2018. As a descendant of the '688 and '844 patents (and their corresponding published patent applications), which have been frequently cited during prosecution of patent applications owned by major players in the personal computing space, including the Lenovo Group and its subsidiaries, Lenovo Beijing knew or was willfully blind to the existence of the '715 patent.

262. On information and belief, Lenovo Beijing is a sophisticated company regarding patents and business in the United States, and citation of patents that cover any of Lenovo's products is a significant concern to Lenovo Beijing. In a 2007 press release, Lenovo's leadership stated that "one of the most important goals of international business" is "the protection of intellectual property." He also noted that "[a]s a global corporate citizen, Lenovo is deeply committed to the protection of intellectual property. We continue to take the lead by encouraging more businesses and individual users to respect and protect intellectual property as a means of building an innovation-friendly business environment." *See* https://news.lenovo.com/pressroom/press-releases/lenovo-joins-forces-with-microsoft-to-

continue-driving-support-for-intellectual-property-rights/. In a 2018 press release, Lenovo's leadership noted that "[i]ntellectual property is a strategic asset for Lenovo" that "not only protects our investment in invention and innovation, but also positions Lenovo's businesses to flourish and grow."

263. On information and belief, Lenovo Beijing has procedures to evaluate whether Lenovo products have freedom to operate in the United States, particularly where the products comprise a significant portion of Lenovo's revenue. On information and belief, the Accused Portable Products comprise a significant portion of Lenovo's revenue, and since at least 2018 Lenovo Beijing knew that use of the Accused Portable Products infringes the '715 patent.

264. On information and belief, citation of the '688 and '844 patents and their corresponding published applications during the USPTO prosecution of Lenovo Beijing patents caused Lenovo Beijing to investigate, become aware of, and consider descendant patents, including the '715 patent, and the rest of LiTL's patent portfolio.

265. Since at least 2018 Lenovo Beijing knew or should have known, or at a minimum acted with willful blindness to the fact that, the Accused Products sold on its website and bearing its marks infringe one or more claims of the '715 patent since the patent is a descendant of LiTL's frequently cited ancestor patents (and related published applications), which Lenovo Beijing cited during the prosecution of multiple patents.

266. In addition, Lenovo Beijing has known that the Accused Products sold on its website and bearing its marks infringe one or more of the claims of the '715 patent since at least the time that it received notice of the Original Complaint, or since at least September 29, 2020.

267. Lenovo Beijing's Lenovo.com Domain continues to market and offer for sale the Accused Products bearing Lenovo Beijing's marks into the United States and Delaware since the

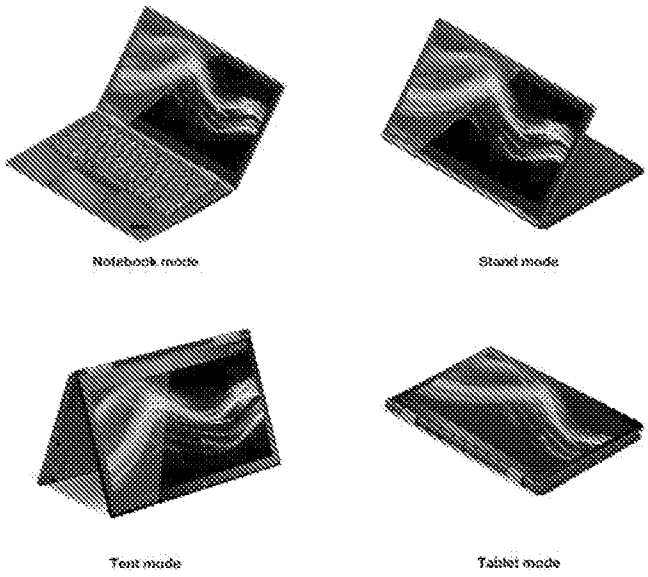
filing of the Original Complaint, which thoroughly detailed how the Accused Portable Products infringe at least claim 1 of the '715 patent.

268. Lenovo Beijing has known or should have known since it first became aware of the '715 patent, and at least by September 29, 2020, that end users, importers, distributors, retailers, repair and service technicians, Lenovo US and its employees and contractors, and other users of the Accused Portable Products are infringing the '715 patent.

269. Lenovo Beijing is responsible for what is posted on the Lenovo.com Domain, including its press releases identified in Paragraph 90 above, which encourage users of the Accused Products in the United States and Delaware to infringe at least claim 1 of the '715 patent by using the Accused Portable Products. Since at least 2018, Lenovo Beijing has encouraged customers to use the Accused Portable Products by providing the Lenovo.com Domain to host press releases that encourage customers to use the Accused Products. Lenovo Beijing's conduct since 2018 demonstrates an intent to induce customers to directly infringe at least claim 1 of the '715 patent. Lenovo Beijing's conduct since 2018 also demonstrates an intent to induce Lenovo US to infringe the '715 patent by selling, offering for sale, and using the Accused Portable Products.

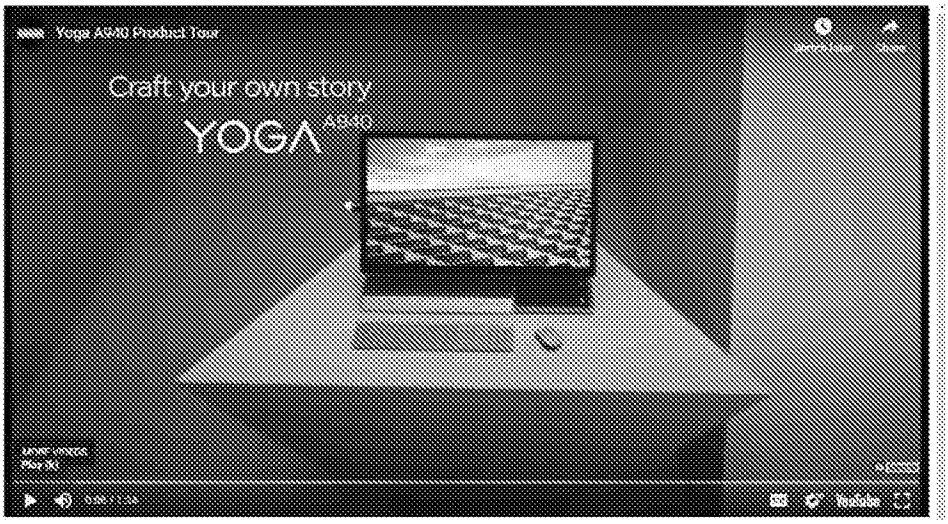
270. Lenovo Beijing has actively and knowingly induced infringement, and is actively and knowingly inducing infringement of the '715 patent, literally and/or equivalently, at least by inducing end users, repair and service technicians, Lenovo employees and contractors, and others to use the Accused Products in an infringing manner. Lenovo Beijing makes available the Lenovo.com Domain to disseminate manuals, product documentation and other advertising material that encourages customers to infringe the asserted claims by using the Accused Products.

271. For example, in the ThinkPad HTML User Guide Lenovo instructs users that the 3rd Generation ThinkPad X1 Yoga "can be opened to any angle within a range of up to 360 degrees," that "[b]y rotating the display to different angle, your computer features the following four operating modes," and that "[t]he keyboard and the pointing devices are automatically disabled in the stand mode, tent mode, and tablet mode":



See ThinkPad HTML User Guide, Using Your ThinkPad / Using your computer / Operating modes.

272. For example, Lenovo's promotional materials for the Yoga A940 demonstrate the intent for users to use a 25° hinge to adjust the display into different computer system configurations. *See* https://news.lenovo.com/lenovo-unboxed-yoga-a940-all-in-one-pc/ at 1:56, 14:45. In an upright position, the keyboard is operable to receive input. In a lower position, the keyboard is stowed underneath the display and is therefore inoperable to receive input.



See A940 Webpage, Yoga A940 Product Tour at 0:06.



See A940 Webpage, Yoga A940 Product Tour at 1:18.

273. Lenovo Beijing has had knowledge of the '715 patent and its infringement of the '715 patent since it first became aware of the '715 patent in 2018, and since at least the time it received notice of the Original Complaint or at least by September 29, 2020. Lenovo Beijing has induced infringement of the '715 patent with specific intent to induce infringement of that patent.

274. Lenovo Beijing's infringement of the '715 patent has been willful since it first became aware of the '715 patent in 2018, or since at least the time it received notice of the

Original Complaint, and its ongoing infringement of the '715 patent continues to be willful. Lenovo Beijing's willful infringement is evidenced by the following: the citation of the LiTL '676 publication and '315 patent (which is the parent to the '715 patent) to Lenovo Beijing during prosecution of three of its U.S. patent applications; the close working relationship between Lenovo Beijing's IP and research and design departments; the similarities between how the Accused Portable Products operate, the functionality that Lenovo Beijing sought to claim in its patent applications, and the requirements of claim 11 of the '154 patent; Lenovo Beijing's significant size and resources; and Lenovo Beijing's failure to take remedial action to avoid infringement. Lenovo Beijing has chosen to manufacture or control manufacture of the Accused Products with the intent that the Accused Products would be imported, offered for sale, sold, and/or used in the United States, to distribute or control distribution of the Accused Products in Lenovo's established distribution channels with the intent that the Accused Products would be imported, offered for sale, sold, and/or used in the United States, as explained in more detail above, and knowing that doing so would infringe the '715 patent, and despite receiving notice from LiTL that continuing to do so would infringe the '715 patent.

275. The foregoing description of Lenovo Beijing's infringement is based on publicly available information. LiTL reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

276. LiTL has been and is being irreparably harmed, and has incurred and will continue to incur damages, as a result of Lenovo Beijing's infringement of the '715 patent.

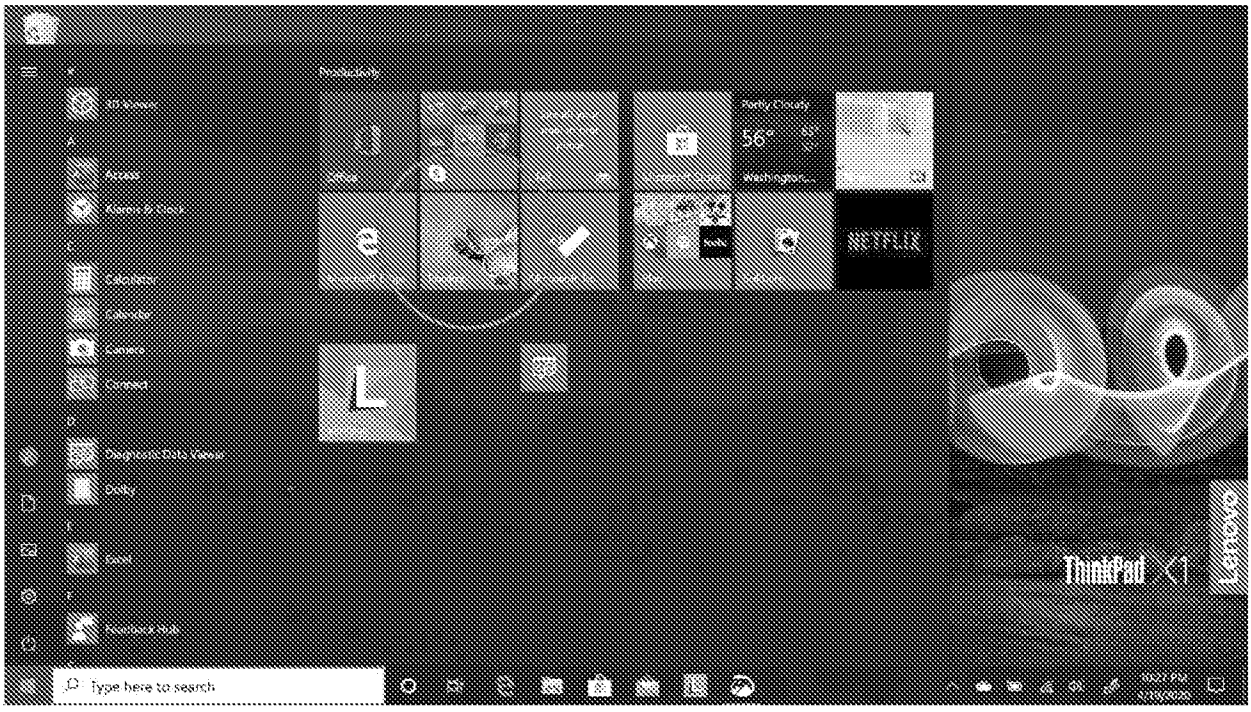
277. Lenovo Beijing's infringement of the '715 patent has damaged and continues to damage LiTL in an amount yet to be determined, of at least a reasonable royalty.

COUNT V

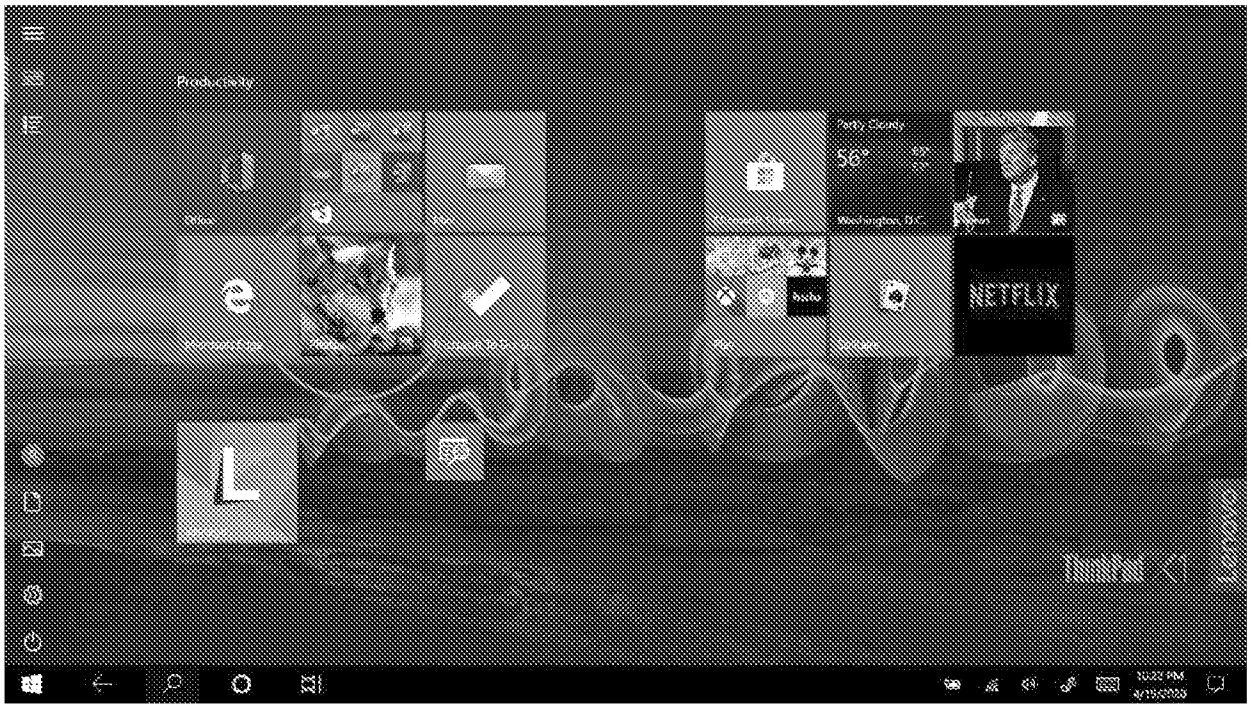
(Infringement of U.S. Patent No. 8,612,888)

278. LiTL incorporates by reference and realleges all the foregoing paragraphs of the First Amended Complaint as if fully set forth herein.

279. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a system for accessing and managing digital media libraries with a plurality of selectable I/O profiles. For example, the 3rd Generation ThinkPad X1 Yoga includes the Microsoft Photos app, which can be accessed in tablet mode and in laptop mode:

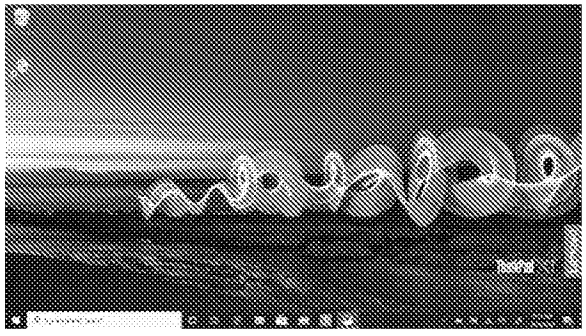


Screenshot from 3rd Generation ThinkPad X1 Yoga, Microsoft Photos (circled) in laptop mode.



Screenshot from 3rd Generation ThinkPad X1 Yoga, Microsoft Photos (circled) in tablet mode.

280. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include a display component configured to display a graphical user interface on a computing device, wherein the graphical user interface comprises at least a plurality of views of digital media content, wherein the plurality of views include at least one of a plurality of visual representations. For example, the 3rd Generation ThinkPad X1 Yoga includes a laptop mode and a tablet mode:



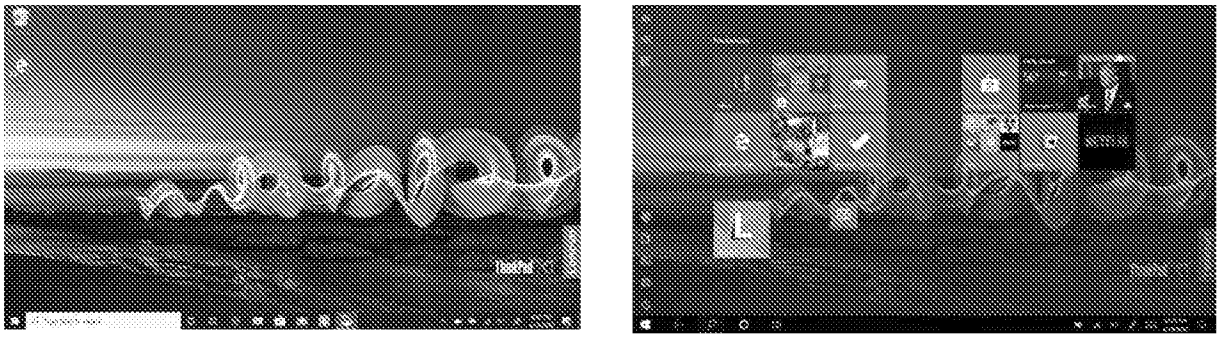
Laptop Mode



Tablet Mode

Screenshot from 3rd Generation ThinkPad X1 Yoga, home screen in laptop and tablet modes.

281. The Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) include an execution component configured to transition the graphical user interface between the plurality of views in response to selection of an I/O profile. For example, the 3rd Generation ThinkPad X1 Yoga is configured to transition between a plurality of views in response to selection of laptop and tablet modes.

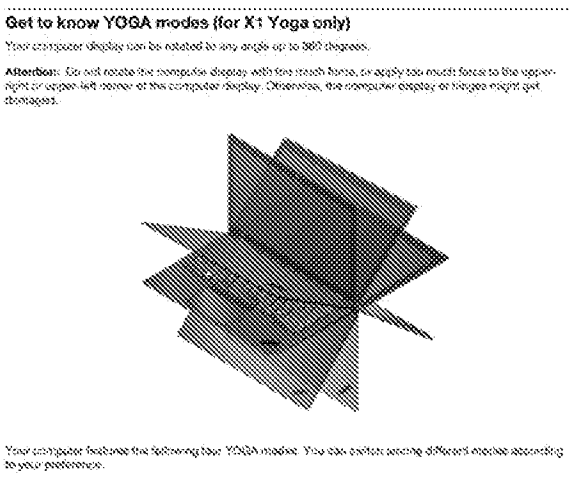


Laptop Mode **Tablet Mode**

Screenshot from 3rd Generation ThinkPad X1 Yoga, home screen in laptop and tablet modes.

282. Selecting the I/O profile within the Accused Portable Products (*e.g.*, the 3rd Generation ThinkPad X1 Yoga) includes: responding to user rotation of a display component of the computing device about a longitudinal axis running along an interface between the display component and a base of the streamlined computing device; responding to rotation of the display component about the longitudinal from a closed mode to a first physical orientation configures the computing device into a laptop mode having a first physical configuration of the display component and the base with one of the plurality of views as a default display; and responding to rotation of the display component about the longitudinal axis from the closed mode to a second physical orientation configures the computing device into another display mode having a second physical configuration of the display component and the base with another one of the plurality of views as the default display. For example, the 3rd Generation ThinkPad X1 Yoga can display a

laptop mode when rotated from a closed mode to a notebook mode, and can further display a tablet mode when rotated from a notebook mode to a tent mode.



Get to know YOGA modes (for X1 Yoga only)

Your computer display can be rotated to any angle up to 360 degrees.

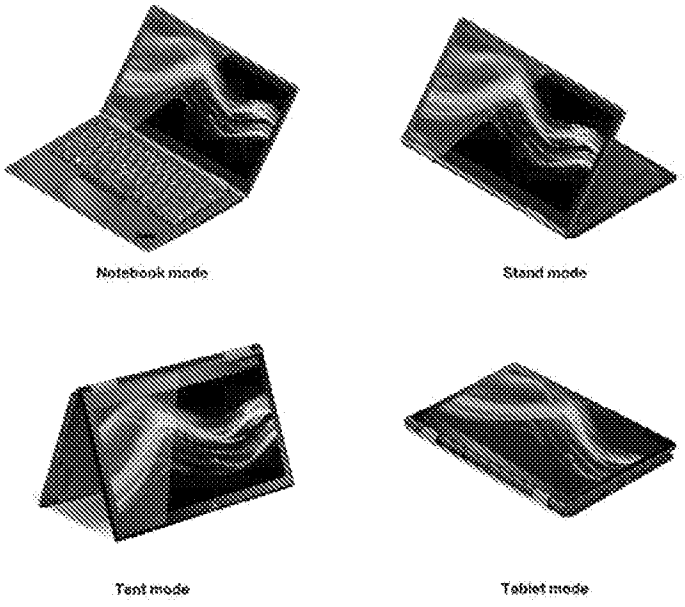
Attention: Do not rotate the computer display with too much force, or apply too much force to the upper-right or upper-left corner of the computer display. Otherwise, the computer display or hinges might get damaged.

Your computer features the following four YOGA modes. You can switch among different modes according to your preference.

ThinkPad User Guide, p. 28.

Your computer features the following four YOGA modes. You can switch among different modes according to your preference.

Note: The keyboard and the pointing devices are automatically disabled in the stand mode, tent mode, and tablet mode. Use the touch screen to control your computer instead.



See ThinkPad User Guide, pp. 28-29.