

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TCL Electronics Holdings Ltd. (f/k/a TCL Multimedia Technology Holdings, Ltd.)
TCL Industries Holdings Co., Ltd.
TCL Industries Holdings (H.K.) Limited
TTE Technology, Inc. (d/b/a TCL North America)
TTE Corporation
TCL Moka International Limited
TCL Moka Manufacturing S.A. de C.V.
TCL King Electrical Appliances (Huizhou) Co. Ltd.
Manufacturas Avanzadas S.A. de C.V.
TCL Smart Device (Vietnam) Co., Ltd
Shenzhen TCL New Technology Co., Ltd.
TCL Optoelectronics Technology (Huizhou) Co., Ltd.
TCL Overseas Marketing Ltd.
TCL Technology Group Corporation (f/k/a TCL Corp.),
Petitioners,

v.

LG Electronics Inc.,
Patent Owner.

Case No. IPR2023-00238
Patent No. 10,334,311

PATENT OWNER'S PRELIMINARY RESPONSE

LIST OF EXHIBITS	
Exhibit	Document
2001	Excerpts of the Prosecution History for U.S. 10,334,311
2002	Lee (US2011/0131610)
2003	BrownWO (WO 2009/088952)

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	BACKGROUND	1
A.	Overview of the '311 Patent.....	1
B.	Short Summary of Prosecution History	8
C.	Challenged Claims	10
III.	LEVEL OF SKILL IN THE ART	13
IV.	CLAIM CONSTRUCTION	13
A.	“external device icon”	13
B.	“select”	14
C.	“a first default image ... is displayed on the first external device icon ... change the first default image to a first image ..., wherein the first image is displayed at a position corresponding to an area where the first external device icon is displayed”	14
V.	SUMMARY OF THE PRIOR ART USED IN THE PETITION	16
A.	Nobori (US2005/0200811, EX1004)	16
B.	Kinoshita (US2006/0158838, EX1005)	18
C.	Young (US2006/0230360, EX1006).....	18
D.	Brown (US2009/0201420, EX1007).....	19
VI.	ARGUMENT.....	20
A.	The Nobori-Kinoshita combination does not disclose changing the first default image as required by the claims.....	21
1.	The proposed Nobori-Kinoshita combination lacks external device icons with default images where, in response to selecting one of the icons, the corresponding default image is changed to an input image.....	23
2.	Neither Nobori nor Kinoshita teaches changing the first image back to the first default image in response to the second external device icon being selected	30
3.	Nobori fails to teach that the claimed first image is displayed at a position corresponding to an area where the first external device icon is displayed.....	33

B.	Every Ground wrongly relies on Nobori to show “chang[ing] the first default image to a first image based on the first image signal in response to the first external device icon being selected”	34
VII.	DISCRETIONARY DENIAL UNDER SECTION 325(D).....	37
VIII.	CONCLUSION.....	40

TABLE OF AUTHORITIES**Page(s)****CASES**

<i>Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH,</i> IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020).....	37
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG,</i> IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017)	37, 40
<i>Personal Web Technologies, LLC v. Apple, Inc.,</i> 848 F.3d 987 (Fed. Cir. 2017)	20

STATUTES

35 U.S.C. § 325(d)	37
--------------------------	----

OTHER AUTHORITIES

37 C.F.R. § 42.100(b)	13
-----------------------------	----

I. INTRODUCTION

The Board should deny institution of *inter partes* review of U.S. Patent No. 10,334,311 (the “’311 Patent”) because the references cited by Petitioner do not teach or suggest the novel user interface claimed in the ’311 Patent. The challenged claims of the ’311 Patent require a small *icon* with a first default image (corresponding to the interface for an external device) that is replaced with a first image (based on the content from the external device) when the icon is selected. In contrast, the combination of prior art in the Petition changes *the entire screen* of a display when a “preview” option is selected. This is a fundamentally different approach, and Petitioner’s attempts to rely on this different approach ignore the plain language of the claims as well as the prosecution history. For at least these reasons, and as further described below, Patent Owner respectfully requests that the Board deny institution of the Petition.

II. BACKGROUND

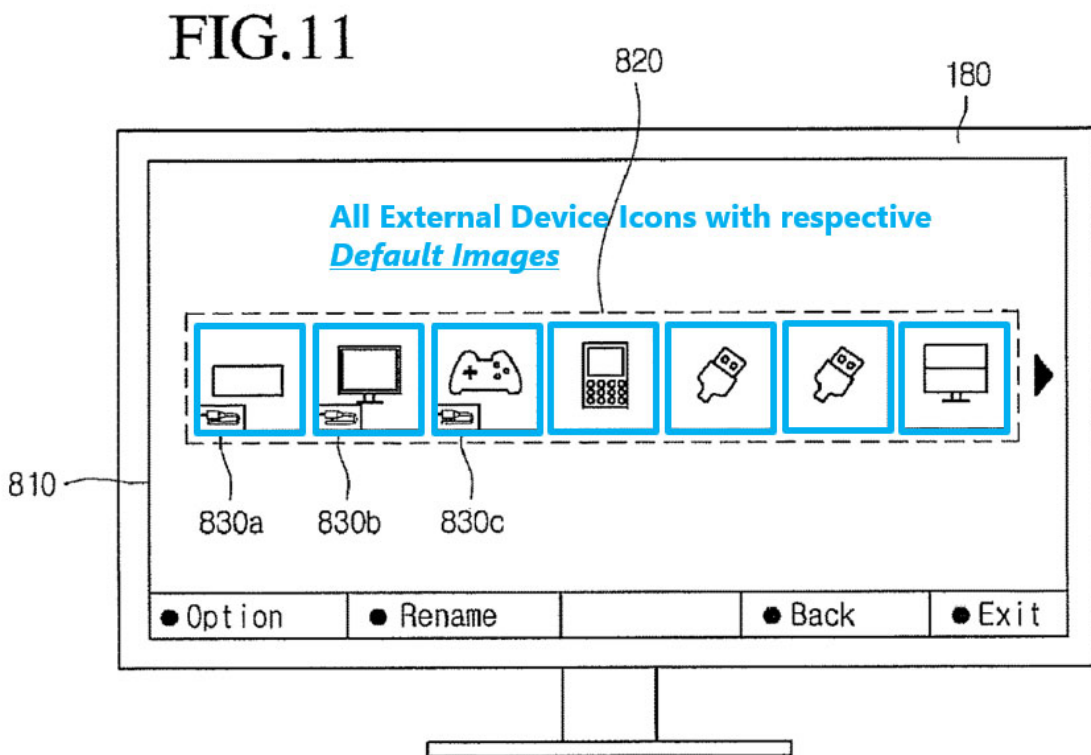
A. Overview of the ’311 Patent

The ’311 Patent is directed to an image display device, such as a digital television, and to a method for allowing a user to select from a displayed list of connected external devices (e.g., DVD player, Blu-ray player, gaming console, etc.). EX1001, 1:21-23, 8:7-11, 20:22–34.

By the time the '311 Patent's priority application was filed in 2011, digital televisions were becoming more complex and had the ability to connect to multiple external devices as well as to wired or wireless communication networks, thus providing more services than simply displaying broadcast channels. EX1001, 1:24–34. The growing complexity of features and capabilities gave rise to challenges for creating a clean, simple, and intuitive user interface (UI) for user selections. EX1029, 2 (“usability of [Consumer Electronics] devices has become a serious challenge for most users”). Accordingly, the user interface became a key differentiator among competing digital televisions having otherwise similar attributes, such as picture quality, functionality, and price. EX1029, 3 (“[User Interface] remains a factor that can help vendors differentiate from others.”). As an example of a difficult-to-follow user interface of the time, some digital televisions had a 4-level deep menu for selecting external devices. EX1029, 12.

The '311 Patent provides an improved user interface that makes it simpler, more intuitive, and more visual, thus easier and more convenient, for the user to select among various external devices that may be connected to the television. *See* EX1001, 1:38–42. As shown, for example, by Figure 11 (below), the user interface displays several external device *icons* (820), each of which has a

“default” image that can correspond to the interface for the external device (e.g., a USB interface as shown below). EX1001, 20:35–37.



The '311 Patent improves a user's convenience in switching to an external device by showing a “live” image from the external device on the corresponding external device icon when the user selects the icon by positioning a pointer or box on the icon. Figure 13 (below), for example, shows an example where the user has selected the left-most device icon 840 by positioning a pointer or box on that icon. EX1001, 20:64–21:4. As a result of this selection, the icon's default image is replaced by a “live” image 860 from the connected external device. *Id.* & *id.*, Fig. 10 (steps 710 and 720, reproduced below).

FIG. 13

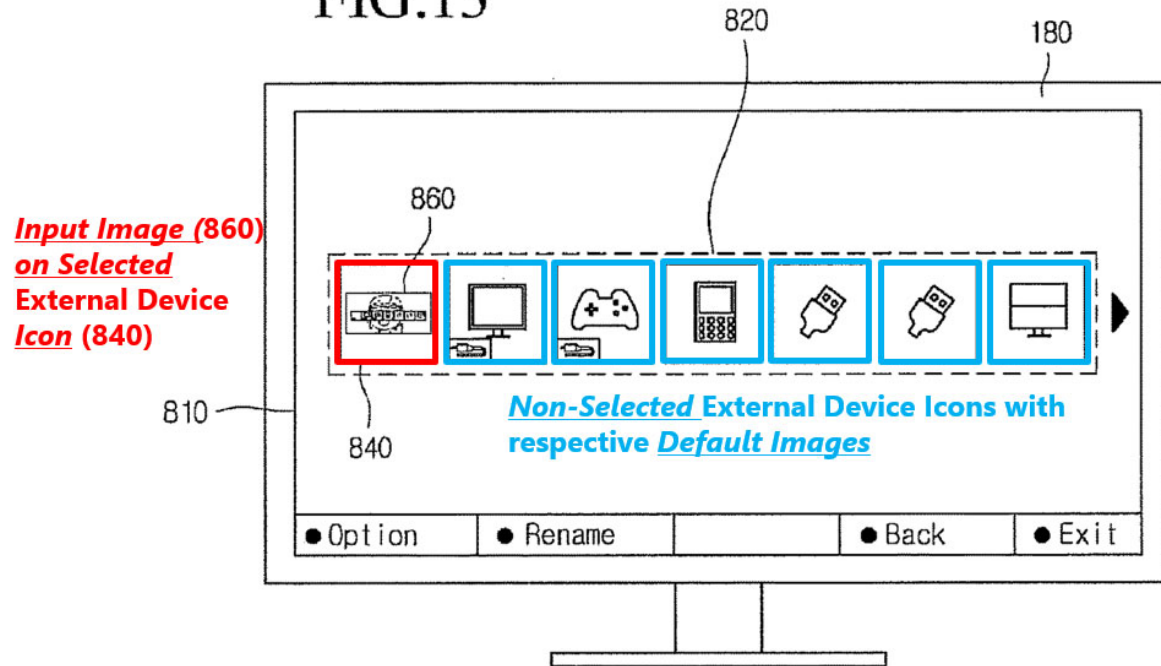
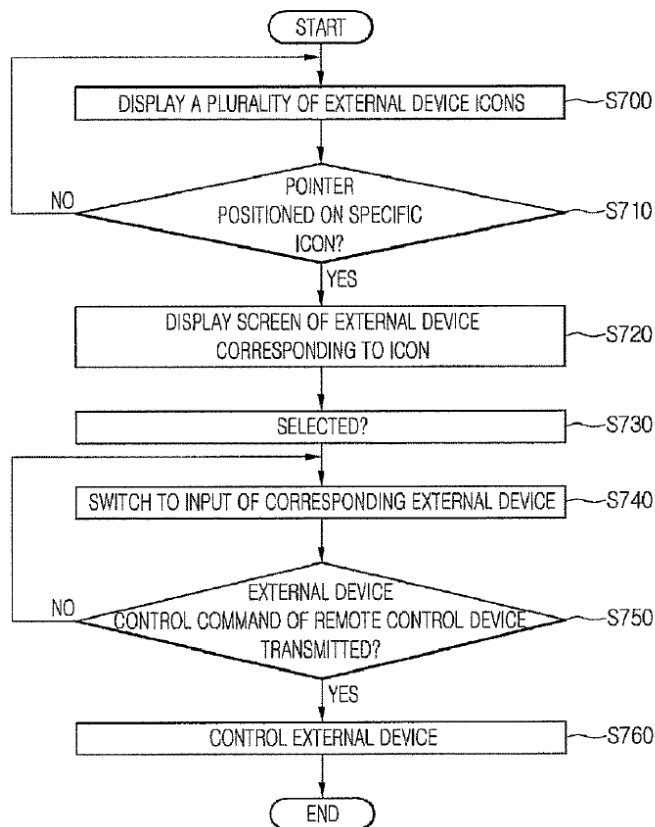
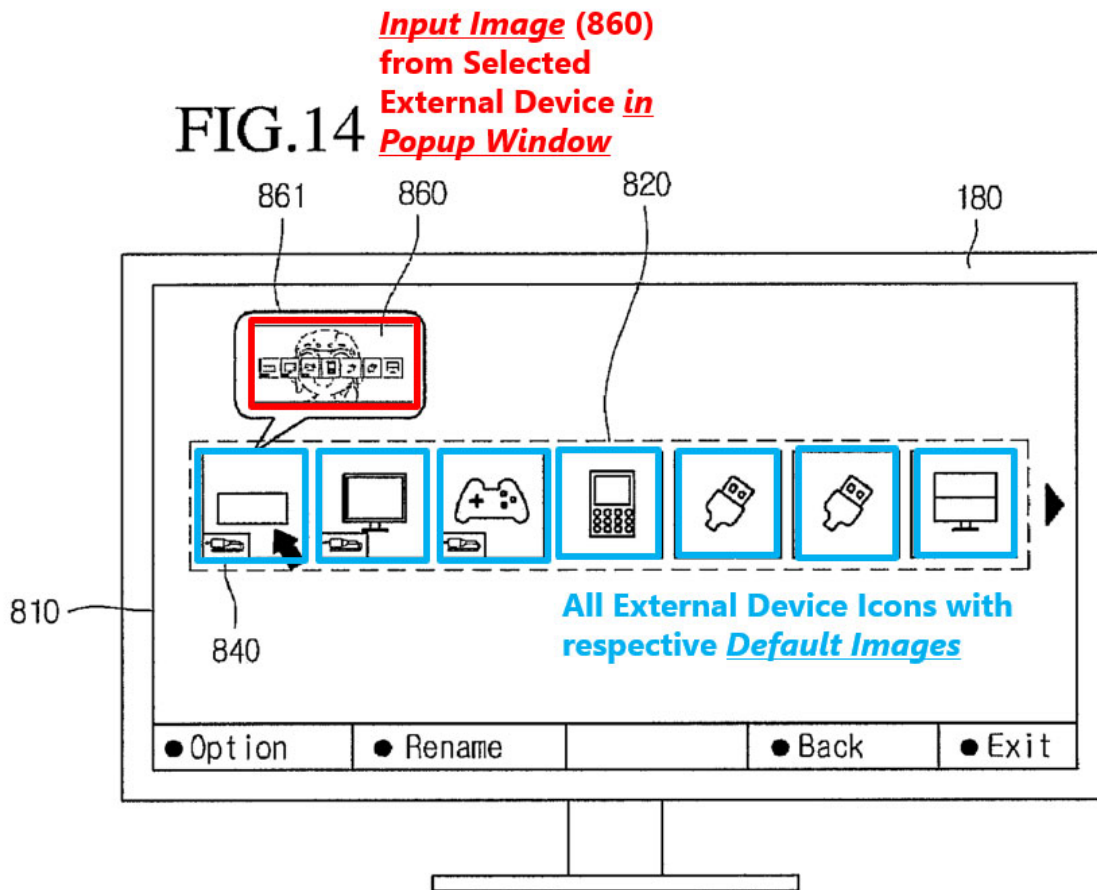
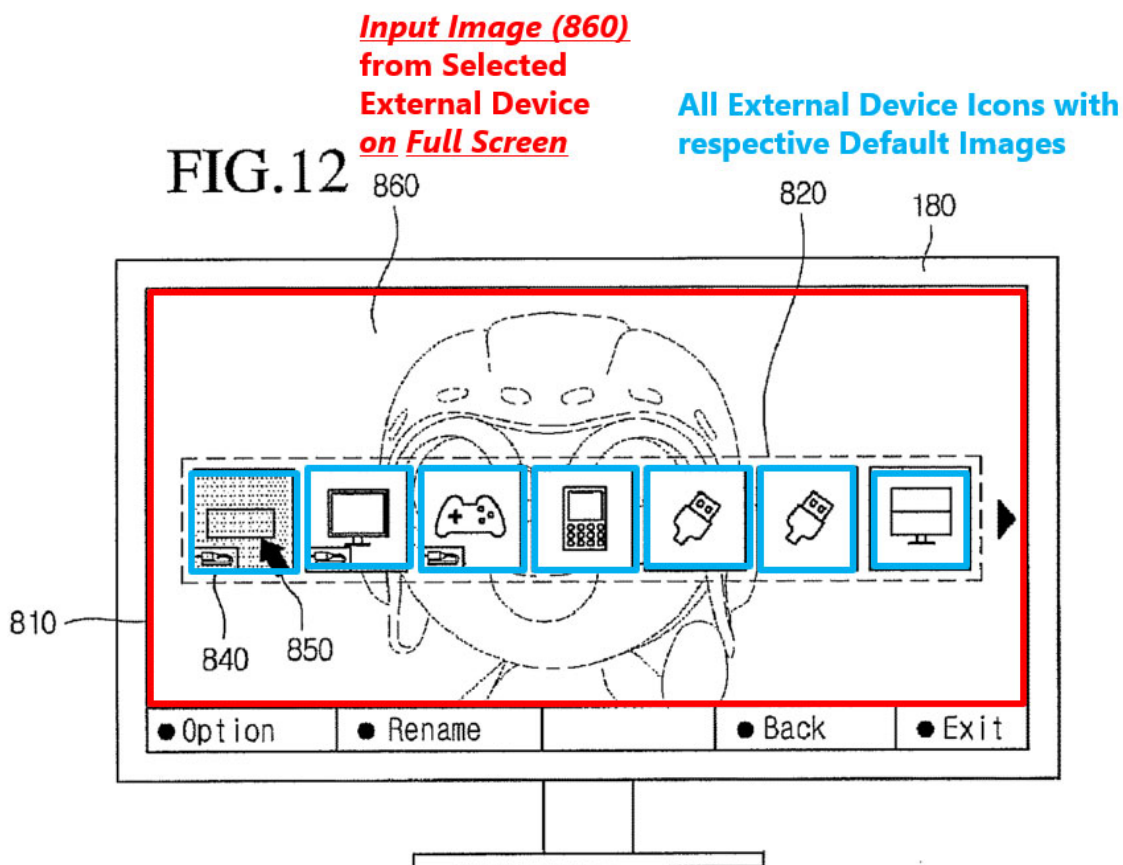


FIG.10



In Figure 13 (above), the “live” image (860) is displayed *on* the icon. The ’311 Patent also discloses embodiments where the “live” image is displayed *above* the icon (as shown below in Figure 14), or in the *background* (as shown below in Figure 12), but the *claims* of the ’311 Patent are limited to the embodiment corresponding to Figure 13 above where the “live” image is displayed *on* the icon. In particular, the last limitation of independent claims 1 and 12 requires that “the first image is displayed at a position corresponding to an area where the first external device icon is displayed.” *See* EX1001, 22:40-42, 23:46-48.





Therefore, the '311 Patent improves a user's experience by displaying device icons with default images identifying the available external devices in a clear, easy-to-understand way, and by conveniently showing a "live" image from a coupled external device when the user selects the corresponding icon. Thus, the user can easily navigate among the external devices and confirm her selection "in advance" of actually switching the entire display to that input. EX1001, 20:59–63, Fig. 10. This provides a simple, intuitive user interface for external device selection without complex multi-level menus. *See* EX1029, 12. Furthermore, the

challenged claims specifically require the placement of this “live” image to be on the selected icon, as shown in Figure 13 above.

B. Short Summary of Prosecution History

The original claims in the application for the '311 Patent were amended during prosecution to overcome prior art, including Stecyk (US2003/0075983), Tu (U.S. Pat. 7,681,141), and Lee (US2011/0131610). EX1002, 54-57. Stecyk discloses displaying external device icons for user selection. EX1009, Fig. 2F.

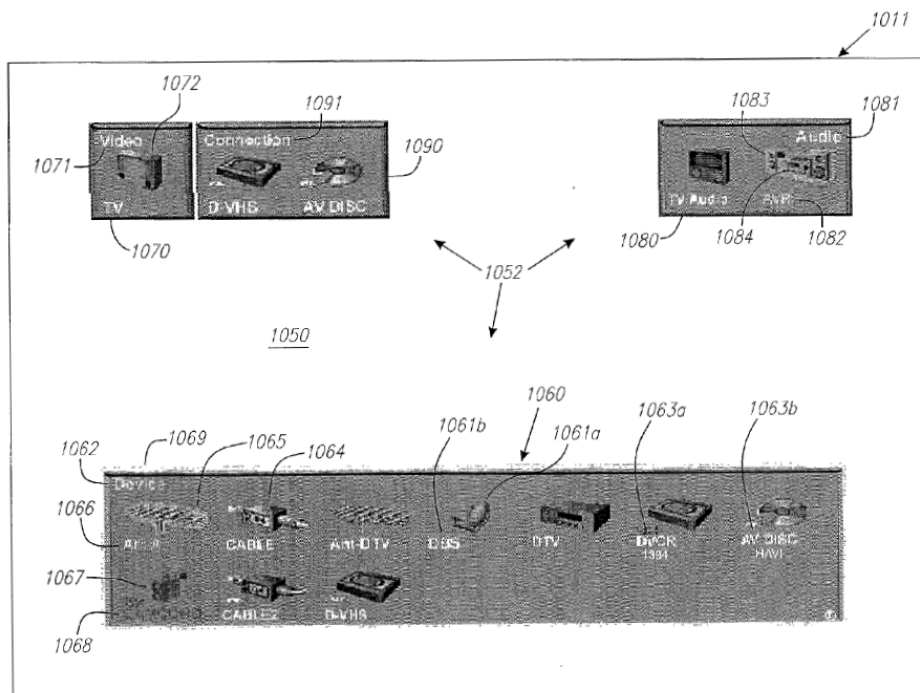
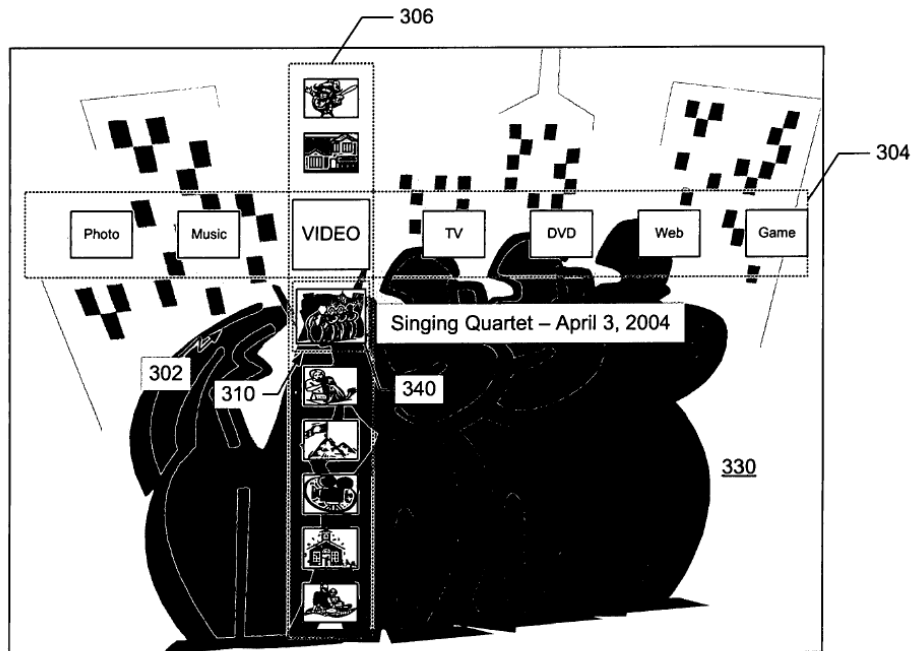


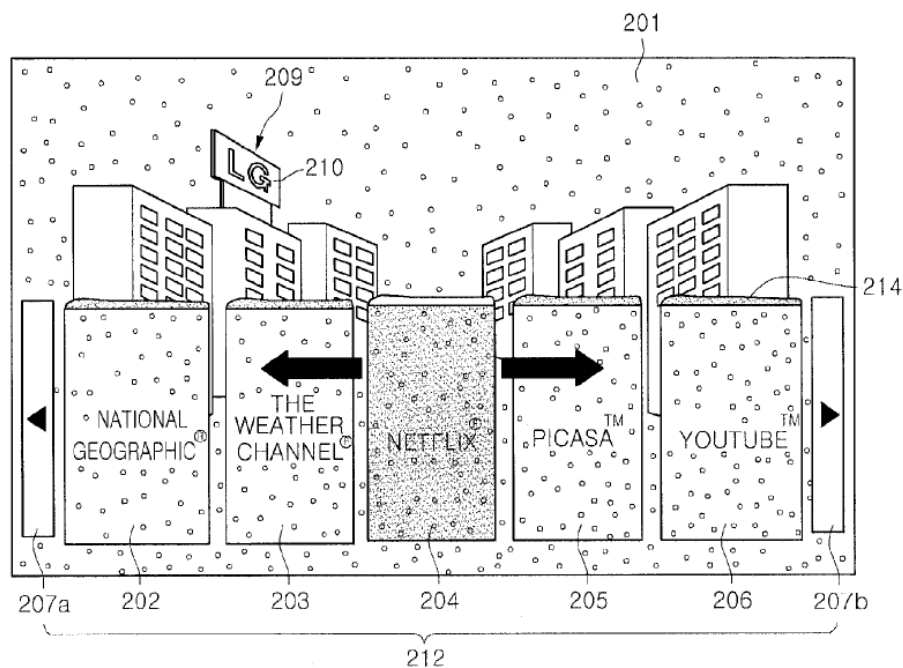
FIG. 2F

Tu discloses displaying previews of available video content files and showing the current selection (Singing Quartet) in the background. EX1011, Fig. 4.

**FIG. 4**

Lee discloses displaying background images (e.g., snowing) related to a selected icon (e.g., The Weather Channel). EX2002, Fig. 15.

Fig. 15



The '311 Patent claims were allowed over the prior art after an amendment requiring to “change the first default image to a first image ... in response to the first external device icon being selected ... and change the first image to the first default image in response to the second external device icon being selected, wherein the first image is displayed at a position corresponding to an area where the first external device icon is displayed.” EX1002, 41 (Amendment of Sep. 14, 2018, p.2.). The Applicant argued that none of the cited references disclose these limitations. *Id.*, 47-49. The Examiner agreed and allowed the amended claims on Feb. 6, 2019. EX1002, 11-14. Thereafter, the '311 Patent issued on June 25, 2019. EX1001, 2.

C. Challenged Claims

The Petition challenges the two independent claims 1 and 12 and all their dependent claims in the '311 Patent. Pet., 4. Independent claim 1 is an apparatus claim, while independent claim 12 is a method claim, but otherwise the two claims are similar with respect to the arguments in this preliminary response. Independent claims 1 and 12 are reprinted below with emphases added to highlight some of the key limitations. All of the remaining challenged claims depend from claims 1 and 12, so the Petition fails with respect to those dependent claims for at least the same reasons.

Claim 1	Claim 12
1. An image display device comprising:	12. A method of an image display device, the method comprising:
[1.1] a display;	
[1.2] a first external interface configured to receive a first image signal input from a first external device connected to the image display device;	[12.1] receiving, by a first external interface, a first image signal input from a first external device connected to the image display device;
[1.3] a second external interface configured to receive a second image signal input from a second external device connected to the image display device; and	[12.2] receiving, by a second external interface, a second image signal input from a second external device connected to the image display device;
[1.4] a controller coupled with the display, the first external interface and the second external interface, the controller configured to:	
[1.5] display a plurality of <i>external device icons</i> , on the display, wherein the plurality of external device icons include a first external device icon and a second external device icon, wherein <i>a first default image</i> corresponding to	[12.3] displaying a plurality of <i>external device icons</i> , on a display, wherein the plurality of external device icons include a first external device icon and a second external device icon, wherein <i>a first default image</i>

Claim 1	Claim 12
the first external interface is displayed <i>on the first external device icon</i> and a <i>second default image</i> corresponding to the second external interface is displayed <i>on the second external device icon</i>, and	corresponding to the first external interface is displayed <i>on the first external device icon</i> and a <i>second default image</i> corresponding to the second external interface is displayed <i>on the second external device icon</i>;
[1.6] <i>change the first default image to a first image</i> based on the first image signal <i>in response to the first external device icon being selected</i> if the first external device is connected to the image display device, and	[12.4] <i>changing the first default image to a first image</i> based on the first image signal <i>in response to the first external device icon being selected</i> if the first external device is connected to the image display device; and
[1.7] <i>change the first image to the first default image in response to the second external device icon being selected</i>,	[12.5] <i>changing the first image to the first default image in response to the second external device icon being selected</i>,
[1.8] wherein <i>the first image is displayed</i> at a position corresponding to an area <i>where the first external device icon is displayed</i>.	[12.6] wherein <i>the first image is displayed</i> at a position corresponding to an area <i>where the first external device icon is displayed</i>.

III. LEVEL OF SKILL IN THE ART

Patent Owner contends that a person of ordinary skill in the art (“Skilled Artisan” or “POSITA”) as of September 2, 2011, would be someone with an undergraduate degree in Computer Science (or a related scientific field) with at least two years of experience designing the user interface for display devices. *See* EX1008, 9:17–20.

The Petition proposes a similar level of ordinary skill. *See* Pet., 11 (citing EX1003, ¶¶ 56-60). Patent Owner believes that none of the potential differences between Petitioner's and Patent Owner's proposed level of skill is relevant to the issues in this Petition.

IV. CLAIM CONSTRUCTION

The Challenged Claims of the '311 Patent are construed herein “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b).” 37 C.F.R. § 42.100(b). The claim terms below are thus construed “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

A. “external device icon”

Petitioner proposed construing the term “external device icon” according to its plain and ordinary meaning, which is an icon corresponding to an external device.

Pet., 6. Although Patent Owner also proposed this construction before, EX1008, 9, Petitioner incorrectly argues that the claimed first and second “external device icons” are disclosed by merely “the display of only text.” Pet., 25. To the contrary, the plain and ordinary meaning of “icon” requires more than just “the display of only text,” such as a graphic symbol.

This dispute, however, is not relevant to the issues in this Preliminary Response, because the '311 Patent claims expressly require that a respective “default image” is displayed *on* each of the claimed first and second “external device icons” and, in response to an icon being selected, the “default image” on that icon is changed to an image input from the corresponding external device. As discussed below in detail, these limitations are not rendered obvious by the prior art.

B. “select”

Petitioner proposed construing the term “select” according to its plain and ordinary meaning, which includes selection by placing a cursor on or highlighting an icon. Pet., 6. For the purposes of this Preliminary Response, Patent Owner does not dispute this proposed construction of “select.”

C. “a first default image ... is displayed on the first external device icon ... change the first default image to a first image ..., wherein the first image is displayed at a position corresponding to an area where the first external device icon is displayed”

Although the Petition does not propose an express construction for these terms, it argues that “the Asserted Claims contain no limitations regarding where the

first external device icon and first default image are located after the first image is displayed.” Pet., 32. On the contrary, by their express terms, and as confirmed during prosecution, the claims require that the “first default image” is displayed *on* the “first external device icon,” and that the “first default image” *on* the “first external device icon” is changed to the “first image” which is displayed at a position where the “first external device icon” is displayed. EX1001, claims 1, 12 (emphasis added). The plain and ordinary meaning of this claim language makes it clear that the claims are directed to implementations like that shown in Figure 13 of the ’311 Patent, where the “default image” *on* the first device icon is replaced with the “first image,” which is also displayed *on* the first device icon.

To the extent Petitioner may argue that the ’311 Patent discloses other implementations, such as displaying the “first image” *above* the icon (as shown Figure 14) or in the *background* (as shown in Figures 12 and 15), those are not claimed by the independent claims of the ’311 Patent, because they do not change the “default image” on the icon to the “first image,” and do not display the “first image” “at a position corresponding to an area where the first external device icon is displayed.” See EX1001, 22:40–42, 23:46–48.

V. SUMMARY OF THE PRIOR ART USED IN THE PETITION

A. Nobori (US2005/0200811, EX1004)

Nobori discloses a projector including a touch panel control with an LCD display to select an input source for the projector. EX1004, Fig. 1, [0028]. Nobori's Figure 2 shows a display screen (300) on the touch panel's LCD display when the power supply of the projector is turned on. EX1004, [0045], Fig. 2 (reproduced below).

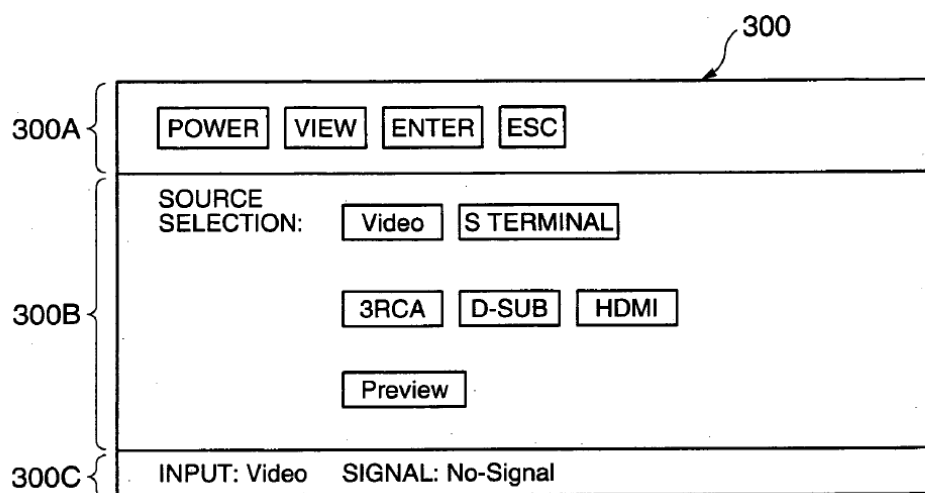


FIG. 2

The power-on screen 300 includes an "image input I/F display screen 300B" displaying touch keys with respective text of "Video," "S TERMINAL," "3RCA," "D-SUB," and "HDMI" which correspond to interfaces which can be selected to provide an image input for the projector. EX1004, [0048], Fig. 2 (above).

The power-on screen portion 300B also includes a "Preview" touch key. EX1004, [0048], Fig. 2 (reproduced above). When a desired interface, say "3RCA,"

is selected and the user also selects the “Preview” touch key, Nobori's power-on screen 300 is replaced with a preview screen 310. EX1004, [0048-49], Fig. 3 (reproduced below).

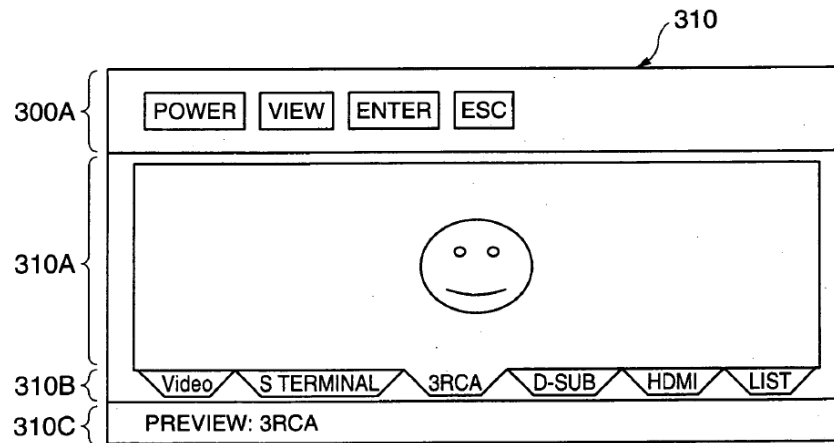
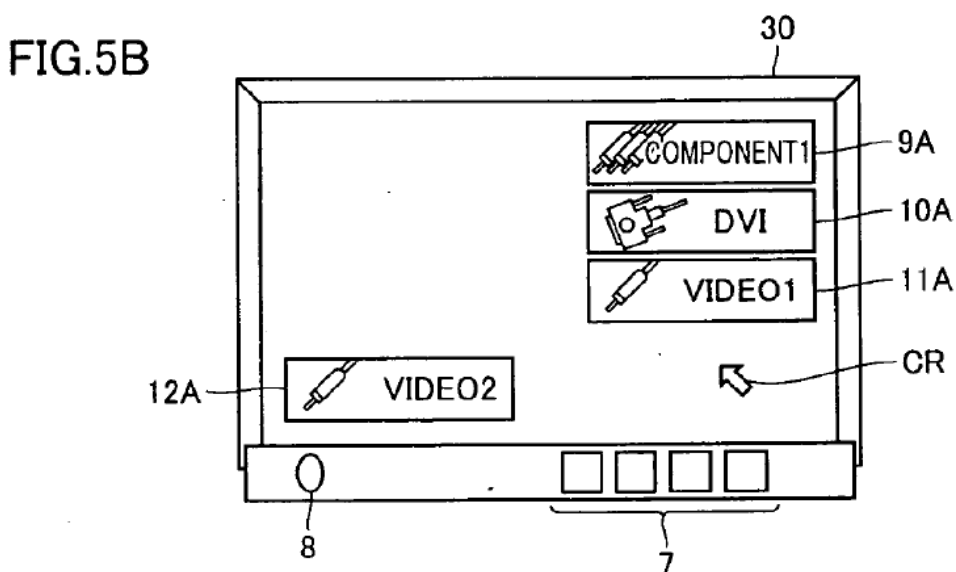


FIG. 3

In the preview screen 310, “image information 310A of the selected image input I/F (3RCA) is displayed in the [form] of a thumbnail in the region within the image input I/F display screen 300B.” *Id.* “Also, a list display screen 310B to display a list of all the image input I/Fs and ‘LIST’ in the form of tabs is shown at the bottom of the image information 310A.” EX1004, [0050]. “When an image input I/F other than ‘3RCA’ described above by way of example is selected, a desired image input I/F is selected by selecting a tab for the desired image to be displayed.” EX1004, [0054].

B. Kinoshita (US2006/0158838, EX1005)

Kinoshita discloses displaying and re-arranging “icons representing types of video signals supplied to respective ones of a plurality of input terminals ... [wherein] the icons also show shapes of the input terminals.” EX1005, Abstract. Kinoshita's icons for input terminals are illustrated, e.g., in Fig. 5B (reproduced below).

**C. Young (US2006/0230360, EX1006)**

Young discloses “providing a plurality of windows for a menu, displaying the image content of a plurality of signal sources of the display apparatus via the windows, and selecting one of the foregoing signal sources.” EX1006, Abstract, Fig. 2.

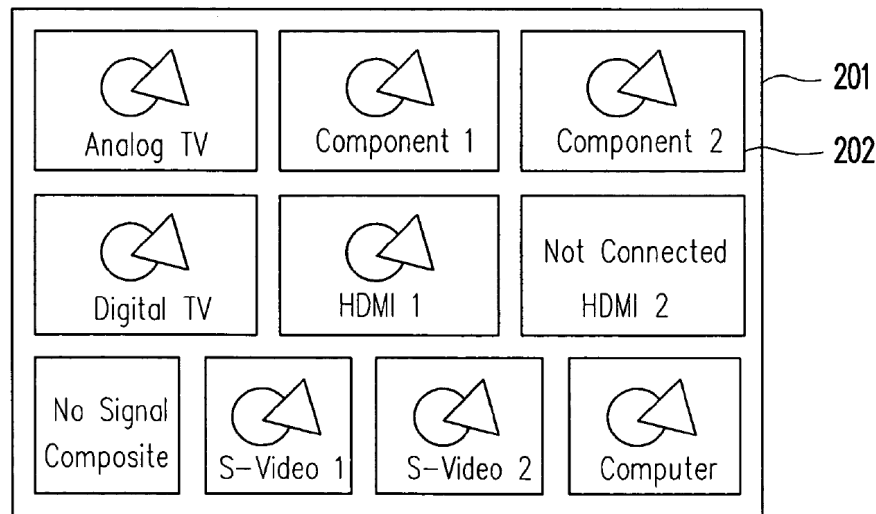
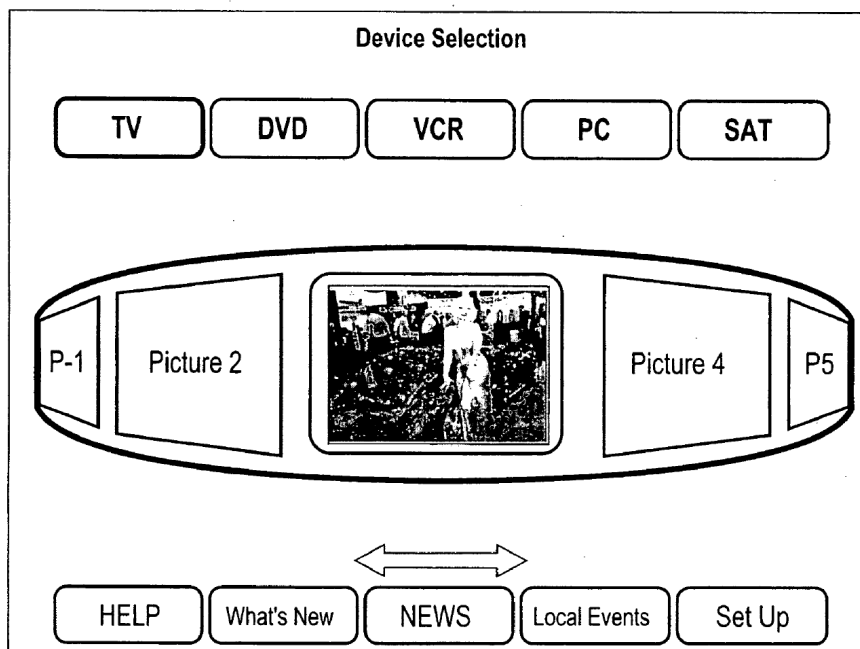


FIG. 2

D. Brown (US2009/0201420, EX1007)

Brown discloses an on-screen display menu system that allows a user to select from available input sources. EX1007, Abstract. For example, Brown discloses displaying an on-screen menu showing the navigation options, including input sources, at the top and bottom of the screen, and corresponding input source videos or images in the middle. EX1007, [0057], Fig. 6A (reproduced below). In particular, an image from the currently selected (TV) input source is shown in the middle, while other source images can be shown on the sides. *Id.*

**FIG. 6A**

VI. ARGUMENT

In order to show that the challenged claims are obvious, the Petition must establish that all claim elements are present in the cited art. *See Personal Web Technologies, LLC v. Apple, Inc.*, 848 F.3d 987, 993 (Fed. Cir. 2017) (reversing obviousness determination for failing to explain how the cited art “disclose all of the elements recited in the challenged claims”). The Petition fails to show that the cited references disclose or render obvious at least the last four limitations of independent claims 1 and 12 (i.e., claim elements [1.5]–[1.8] and [12.3]–[12.6], reproduced above).

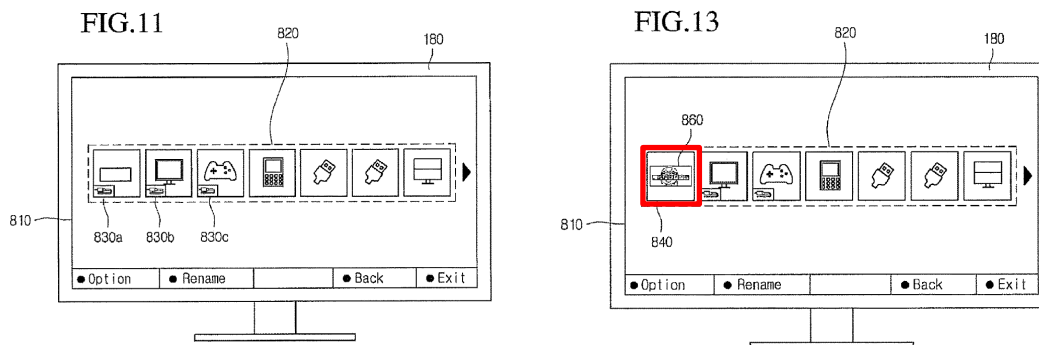
A. The Nobori-Kinoshita combination does not disclose changing the first default image as required by the claims

Grounds 1 and 2 of the Petition rely on the combination of Nobori (EX1004) and Kinoshita (EX1005) to teach the limitations of independent claims 1 and 12. Pet., 4, 22-46. The Nobori-Kinoshita combination, however, fails to disclose or render obvious at least the last four limitations of independent claims 1 and 12 (i.e., claim elements [1.5]–[1.8] and [12.3]–[12.6]).

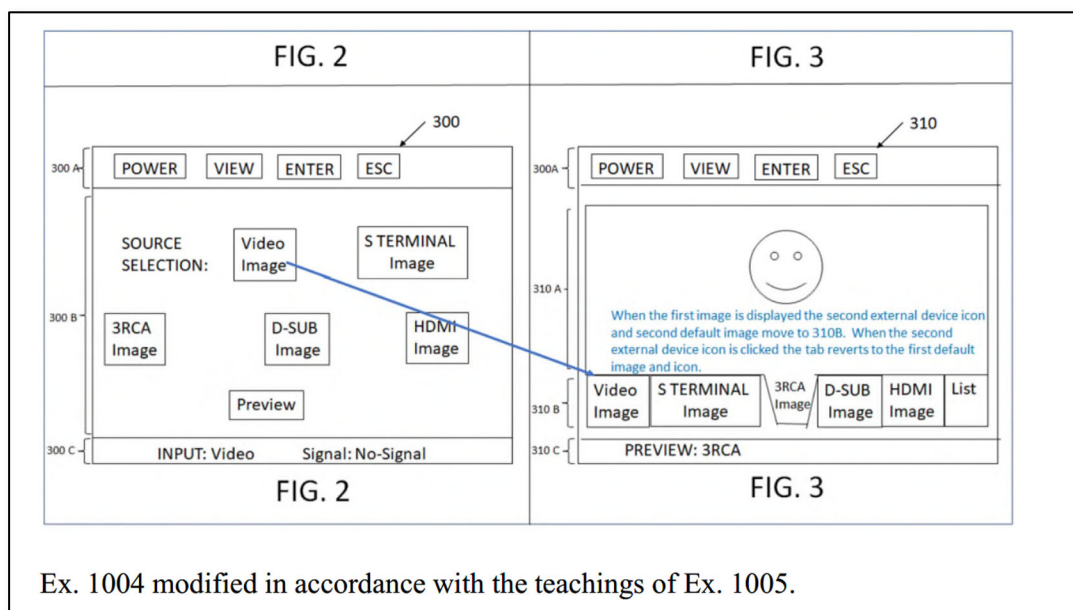
Claim 1 requires, in part, an image display device including a display, first and second external interfaces configured to receive respective first and second image signal inputs, and a controller configured (i) to display first and second external device icons with respective first and second default images on the display, (ii) to change the first default image to a first image based on the first image signal input in response to the first external device icon being selected, and (iii) to change the first image back to the first default image in response to the second external device icon being selected. EX1001, 22:14-39. Claim 1 also expressly requires that the first image is displayed where the first external device icon is displayed. EX1001, 22:40-42. Claim 12 is directed to a method of an image display device and requires similar limitations. *Supra* pp.11-12.

As discussed above, these claim limitations correspond to implementations similar to that shown in Figures 11 and 13 of the '311 Patent. *Supra* pp.2–8;

EX1001, Fig. 11 (reproduced below, showing icons with default images) and Fig. 13 (reproduced below with a highlight showing the change of an icon's default image to the corresponding input image upon selection).



The Petition alleges that these features are rendered obvious by Nobori's disclosure of the touch panel's power-on screen 300 being changed to the preview screen 310. Pet., 33; EX1004, Figs. 2 & 3. Petitioner's expert provided an annotated figure illustrating this theory:



EX1003, ¶¶141-42. But Nobori changing an *entire screen* (Fig. 2) to another screen (Fig. 3) is not the same as changing a default image *on a selected icon*, as required by the '311 claims. This fundamental disconnect causes Petitioner's mapping to deviate from the claim language in several places, as discussed below in detail. The Nobori-Kinoshita combination therefore fails to disclose and render obvious the challenged claims of the '311 Patent.

1. The proposed Nobori-Kinoshita combination lacks external device icons with default images where, in response to selecting one of the icons, the corresponding default image is changed to an input image

Claim 1 in part [1.5] recites “a first external device icon and a second external device icon, wherein a first default image corresponding to the first external interface is displayed on the first external device icon and a second default image is displayed on the second external device icon.” Claim 12 in part [12.3] requires similar limitations. *Supra* p.11; *see also* EX1001, Figs. 11 & 13 (annotated below to emphasize that input image (860) appears *on* the selected icon).

FIG. 11

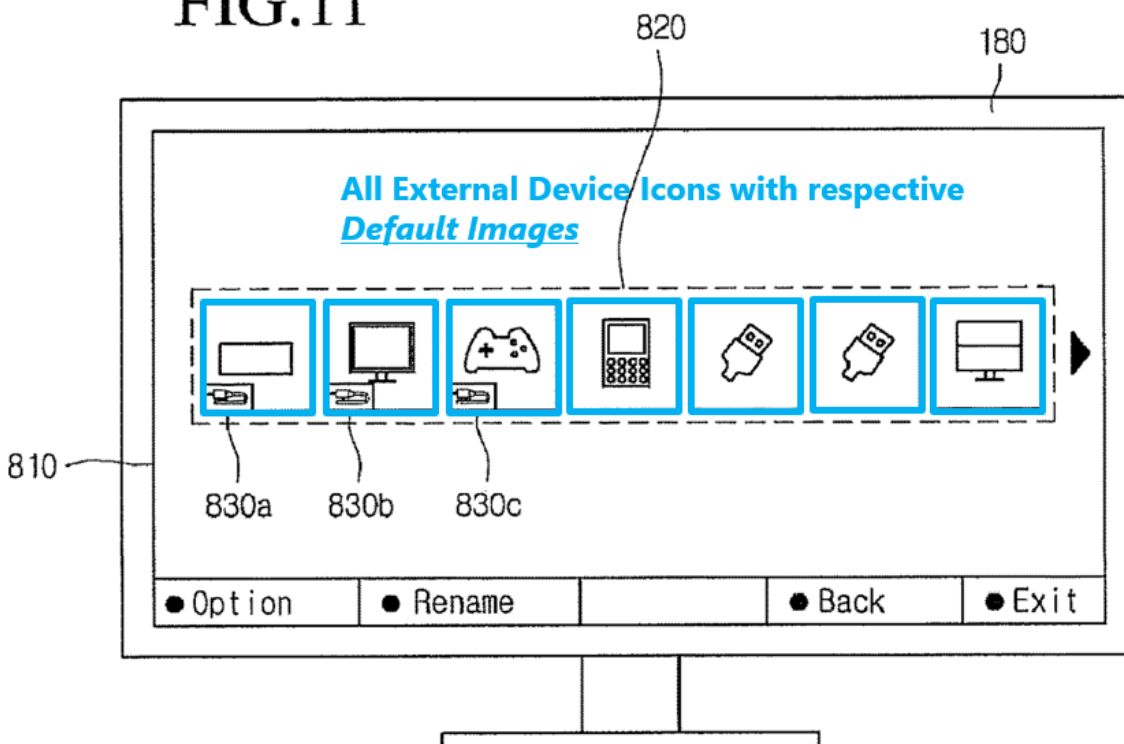
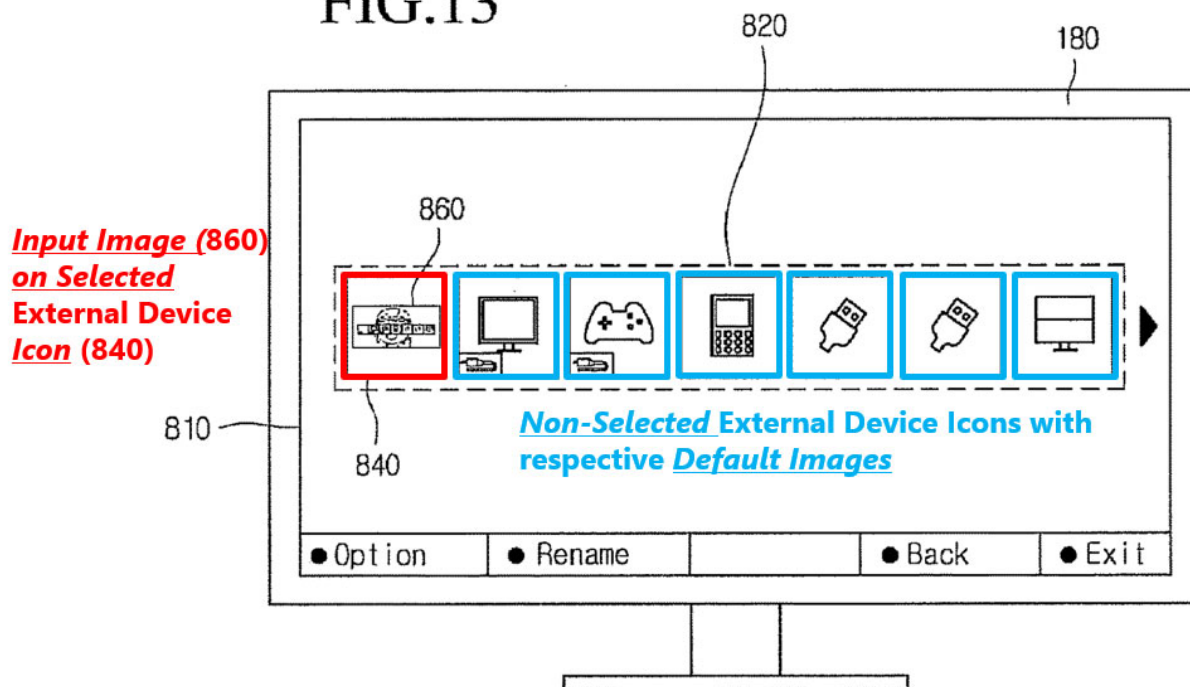


FIG. 13



The Petition asserts that the “external device icons” are disclosed by touch keys labeled “Video,” “S TERMINAL,” “3RCA,” “D-SUB,” and “HDMI” on Nobori’s power-on screen 300. Pet., 25-26; EX1004, Fig. 2 (reproduced below, left).

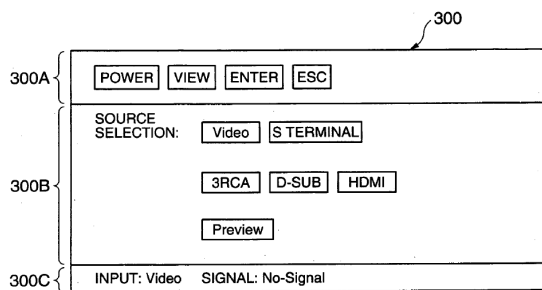
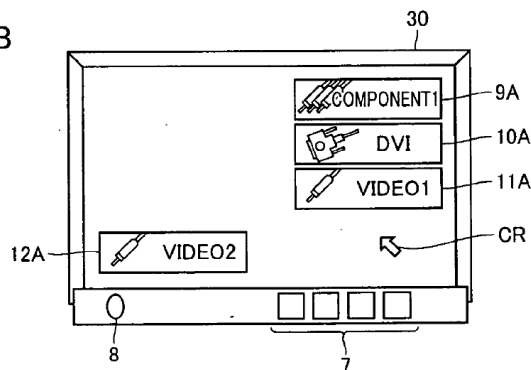


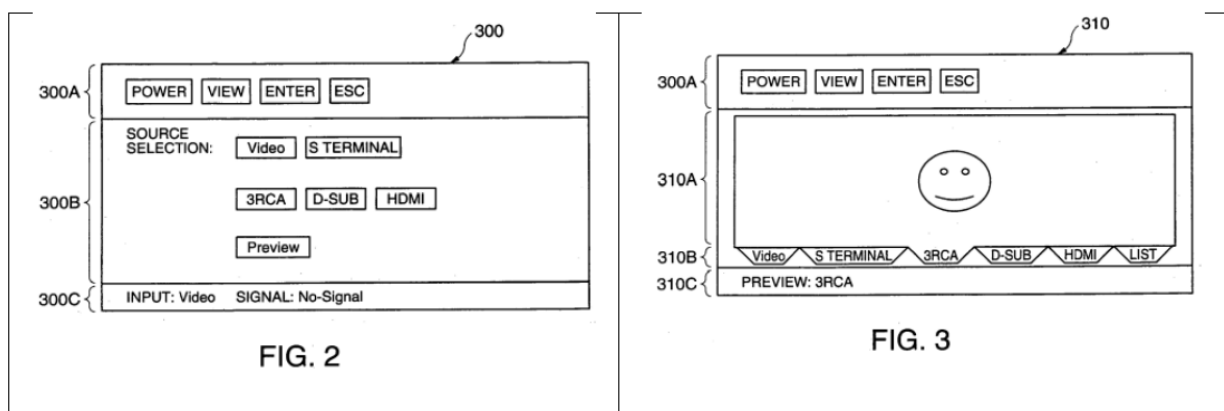
FIG. 2

FIG.5B



Nobori’s touch keys, however, have only text without any “default image” of the corresponding interface. *Id.* The Petition points to Kinoshita’s icons 9A to 12A of Fig. 5B (reproduced above, right) which display the names of input terminals together with their corresponding pictures. Pet., 26-28; EX1005, [0041], [0032]. The Petition argues that the Nobori-Kinoshita combination would “provide image input I/Fs icons that display an image corresponding to the terminal in a manner similar to Kinoshita’s terminal icons 9A, 10A, 11A and 12A.” Pet., 28. Thus, the Petition proposes to add Kinoshita’s pictures of input terminals to Nobori’s touch keys labeled “Video,” “S TERMINAL,” “3RCA,” “D-SUB,” and “HDMI” on its power-on screen 300 (EX1004, Fig. 2).

However, this reliance on the power-on screen 300 in Nobori is problematic for Petitioner's subsequent analysis. Claim 1 in part [1.6] further requires to "change the first default image to a first image based on the first image signal in response to the first external device icon being selected." Claim 12 in part [12.4] requires similar limitations. *Supra* p.12. The Petition asserts that these limitations are rendered obvious by Nobori's disclosure of changing the *entire* power-on screen 300 (in Fig. 2, below, left) to the preview screen 310 (in Fig. 3, below, right). Pet., 29-31.



Id., 32-33 (image from Petition, showing Nobori Figs. 2 and 3 side-by-side). But Nobori's screen-change, even with Kinoshita's input terminal pictures added, fails to disclose or fairly suggest "chang[ing] the first default image to a first image based on the first image signal in response to the first external device icon being selected" for a number of reasons.

First, the claims require changing specifically a "first default image" which is displayed on the *selected* "first external device icon" to another image—*not* changing *all* the alleged device icons on one display screen into an entirely different

preview screen as disclosed by Nobori. Nobori's "FIG. 2 shows a display screen 300 displayed on the liquid crystal display 123 when the power supply of the projector 10 is turned ON." EX1004, [0045]. This power-on screen 300 includes a number of source selection keys together with a "Preview" touch key "to display an image of the desired image input I/F selected." *Id.*, [0048]. In response to that "Preview" touch key being selected, Nobori's power-on screen 300 is changed to "a preview screen 310." *Id.*, [0048-49], Fig. 3. In the preview screen 310, all the source selection touch keys of the power-on screen are replaced with a single preview image (smiley, 310A). *Id.* Tabs (in list display screen 310B) allowing the user to select a preview image from another source are displayed below the current preview image. *Id.*, [0050]. Therefore, Nobori discloses switching a power-on screen 300 to a preview screen 310. As a result, all source selection touch keys (selected or not) on the power-on screen 300 are changed to a single preview image below which new tabs are provided for source selection. Instead of such an overall screen change, the '311 Patent requires changing a default image on *one* selected icon.

Second, even if Kinoshita's input terminal pictures were added to Nobori's touch keys, the combination still lacks changing *a default image on a selected icon* as claimed. Instead, Nobori deletes all the touch keys (with or without Kinoshita's pictures) in the power-on screen 300 of Fig. 2 and replaces all of them with a preview image 310A, in the preview screen of Fig. 3. Thus, what Nobori "changes" is not a

specific “first default image” displayed on a selected icon, but the entire power-on screen section 300B with everything on it, selected or not, having a “default image” or not.

Third, the Petition asserts that the “external device icons” from the power-on screen 300 of Nobori (with Kinoshita's pictures added) would also replace the tabs in Nobori's preview screen area 310B. Pet., 30; EX1004, Fig. 3. Those tabs in the preview screen area 310B (Fig. 3), however, are not the same as the input selecting touch keys in the power-on screen 300 (Fig. 2). The Petition is devoid of any reason or motivation to replace the tabs in the Preview area 310B with the touch keys of the power-on screen. But even if those tabs were replaced as proposed, they would still fail to disclose changing “a default image” displayed on “an external device icon” when *that* “external device icon” is selected. Instead, Nobori deletes the entire screen with all the alleged “device icons” and all the alleged “default images,” and presents a completely different screen with different images.

Fourth, the Petition also proposes that the Nobori-Kinoshita combination would further modify the preview screen 310 (Fig. 3) of Nobori such that only “the ‘Video,’ ‘S Terminal,’ ‘D-Sub,’ and ‘HDMI’ icons would be a square shaped external device icon with a default image of the source displayed thereon instead of the inverted trapezoid tab shown in figure 3.” Pet., 30; EX1004, Fig. 3. That is, the Petition proposes that each tab in the preview screen 310 (Fig. 3) would be replaced

with a “square shaped ... icon with a default image” as in the modified power-on screen 300 (Fig. 2), with the *exception* of the selected “3RCA” tab. *Id.* But neither Nobori nor Kinoshita discloses or fairly suggests replacing *only non-selected* tabs of the preview screen with icons having Kinoshita's picture (the alleged “default image”) and *not* adding Kinoshita's picture to the selected tab. The Petition provides no reason to leave out the currently selected tab. Even if a Skilled Artisan would be motivated to add Kinoshita's pictures to Nobori's touch keys, such a motivation would apply to all touch keys. Leaving out a currently selected tab from the proposed combination comes purely from hindsight, i.e., Petitioner's attempt to match the claim language.

Fifth, the claims require to “change the first default image [on the first external device icon] to a first image based on the first image signal *in response to the first external device icon being selected.*” In Nobori, the power-on screen 300 (Fig. 2) includes a “Preview” touch key which, if selected, changes that power-on screen 300 to the preview screen 310 (Fig. 3). EX1004, Fig. 2, [0048-49]. The desired input source, e.g., “3RCA,” for the preview image (image information 310A) is selected earlier with the respective touch keys in the power-on screen 300 (Fig. 2). EX1004, Figs. 2 & 3, [0048-49]. Thus, Nobori's change from the power-on screen 300 (Fig. 2) to the preview screen 310 (Fig. 3) happens in response to selecting the “Preview”

key—it does not happen in response to selecting the alleged “external device icon” as required by the claims. *Id.*

For at least these reasons, the Petition's analysis—equating an entire screen change with changing a specific image—should be rejected. This theory is contrary to the plain and ordinary meaning of the express terms in the claim. Therefore, the Petition fails to show that the Nobori-Kinoshita combination renders obvious the limitations [1.5] and [1.6] of claim 1, and limitations [12.3] and [12.4] of claim 12.

2. Neither Nobori nor Kinoshita teaches changing the first image back to the first default image in response to the second external device icon being selected

Claim 1 in part [1.7] further requires to “change the first image to the first default image in response to the second external device icon being selected.” Claim 12 in part [12.5] requires similar limitations. *Supra* p.12. The Nobori-Kinoshita combination in the Petition does not include this limitation.

The Petition asserts that this limitation is taught by Nobori's disclosure of changing the preview image when an input tab “other than ‘3RCA’ ... is selected” in its preview screen 310 (Fig. 3, reproduced below). Pet., 31-32 (citing EX1004, [0054]).

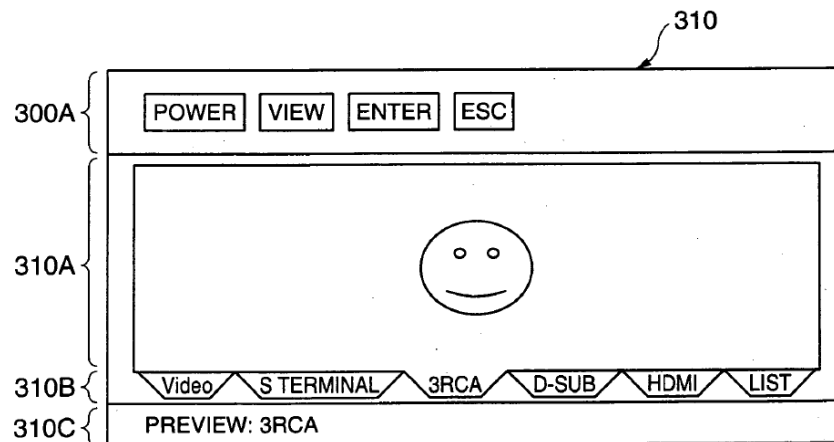
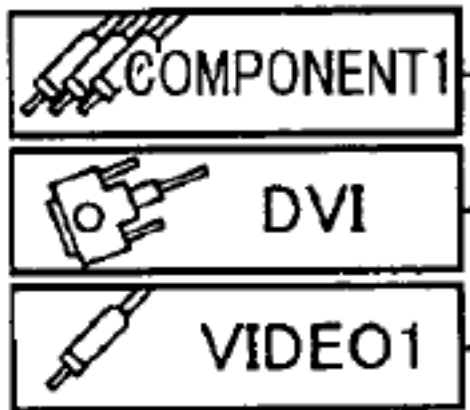


FIG. 3

Nothing in either reference teaches or suggests changing Nobori's image information 310A (the smiley face in Fig. 3, the alleged "first image") to Kinoshita's picture of the corresponding input terminal (the alleged default image). Because Nobori lacks the claimed default images, it cannot teach changing any image to the default image. Instead, Nobori teaches that selecting another tab in its preview screen 310 changes the image information 310A to another image from the source corresponding to the selected tab. EX1004, [0054] ("When an image input I/F other than '3RCA' described above by way of example is selected, a desired image input I/F is selected by selecting a tab for the desired image to be displayed."). But this image from a second source corresponds to the "second image" in the Petition, not the alleged default image. *See Pet.*, 37.

Kinoshita also lacks any teaching about changing an input image to an image of the input terminal. Instead, Kinoshita merely teaches displaying together the

name and picture of the input terminals. EX1005, Fig. 5B (reproduced below in part).



What Kinoshita displays is independent of the icons being selected or not. Thus, neither Nobori nor Kinoshita has any disclosure, teaching or suggestion to change Nobori's image 310A to Kinoshita's picture of the input terminal.

None of Petitioner's arguments can overcome this omission in the art. First, the Petition argues that Nobori teaches these limitations because, in Nobori's preview screen section 310B, the selected tab is hollow, unlike the unselected tabs which are closed. Pet., 31; EX1004, Fig. 3. But Nobori's open and closed tabs have nothing to do with "default images" of input terminals being added or not. Second, the Petition also argues that, after selecting another preview source, the "first default image is now located at the bottom of 310B portion of Figure 3." Pet., 32. The alleged "first image," however, was displayed in the area 310A, not "at the bottom of 310B portion of Figure 3." EX1004, Fig. 3. Applying the plain and ordinary meaning of "changing" one image to another, the input image in the area 310A of

Nobori is “changed” to another input image from the newly selected source. EX1004, [0054].¹ The input image in the area 310A is **not** changed to anything “at the bottom of 310B portion of Figure 3.”

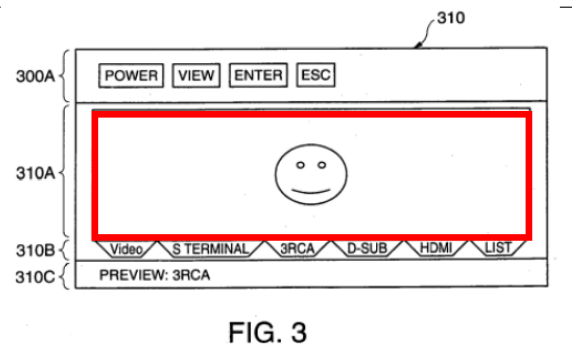
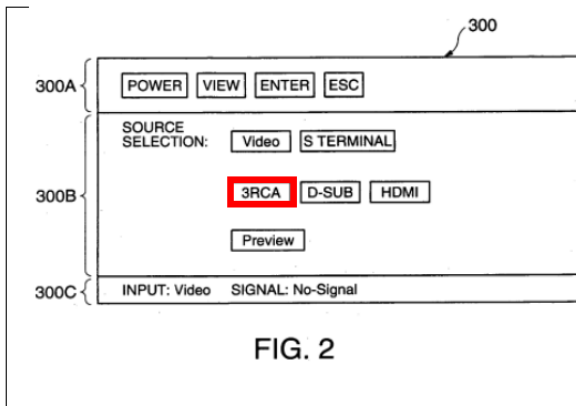
Therefore, the Petition fails to show that the Nobori-Kinoshita combination renders obvious the claim limitations [1.7] and [12.5].

3. Nobori fails to teach that the claimed first image is displayed at a position corresponding to an area where the first external device icon is displayed

Claim 1 in part [1.8] further requires that “the first image is displayed at a position corresponding to an area where the first external device icon is displayed.” Claim 12 in part [12.6] requires similar limitations. *Supra* p.12.

The Petition argues that this limitation is satisfied by the Nobori-Kinoshita combination, because the preview image 310A from the “3RCA” interface (Fig. 3, below right, red box annotation added showing the location of the thumbnail image 310A) is displayed at a position corresponding to an area where the touch key for the “3RCA” interface is displayed (Fig. 2, below left, red annotation added showing the location of the touch key for “3RCA”). Pet., 32-33; EX1004, Figs. 2 & 3.

¹ Furthermore, as discussed above, *supra* pp.2–8, the Petition is incorrect that the claims “contain no limitations regarding where the first external device icon and the first default image are located after the first image is displayed.” Pet., 32.



But the preview image 310A (Fig. 3, above right), is displayed at a position corresponding to an area 300B where *all* the source selection touch keys are displayed, not an area where specifically the touch key for the “3RCA” interface is displayed (Fig. 2, above, left). Under the Petition’s overbroad interpretation, “a position corresponding to an area where the first external device icon is displayed” would be satisfied even by full screen previews, because the first external device icon is displayed on the same screen. That is not what is claimed. *Supra* at pp.13-15.

Therefore, the Nobori-Kinoshita fails to disclose or render obvious claim elements [1.8] and [12.6].

B. Every Ground wrongly relies on Nobori to show “chang[ing] the first default image to a first image based on the first image signal in response to the first external device icon being selected”

Grounds 3-5 of the Petition rely on the combination of Nobori (EX1004) and Young (EX1006) to teach the limitations of independent claims 1 and 12. Pet., 4, 47-73. The Nobori-Young combination, however, fails to disclose or render

obvious at least the last four limitations of independent claims 1 and 12 (i.e., claim elements [1.5]–[1.8] and [12.3]–[12.6]).

In the combination of Nobori and Young, the Petition relies on the disclosure of Nobori for the limitations [1.6]–[1.8] of independent claim 1 and refers back to “the reasons discussed above with respect to Ground 1.” Pet., 53. With respect to the limitations [12.4]–[12.6] of independent claim 12, the Petition also refers back to the reasons discussed with reference to limitations [1.6]–[1.8] of claim 1 for Ground 2. Pet., 62–63. As discussed above with reference to Grounds 1 and 2, Nobori fails to disclose or render obvious these limitations. *Supra* pp.21–34. Because the Nobori-Young combination relies on the same arguments and disclosure of Nobori for these limitations (i.e., [1.6]–[1.8] and [12.4]–[12.6]), Grounds 3–5 fail for at least the same reasons discussed above with respect to Grounds 1 and 2.

Furthermore, the Nobori-Young combination also fails to disclose claim limitations [1.5] and [12.3]. These limitations require “a first default image corresponding to the first external interface ... and a second default image corresponding to the second external interface.” As discussed above, Nobori's touch keys have only text and therefore lack “default images” of the corresponding interface. *Supra* pp.23–30. The Petition alleges that Young's “windows [202] for

displaying image contents [of the ten] signal sources” disclose the claimed “default images.” Pet., 48; EX1006, [0016-17], Fig. 2. As the Petition admits, Young’s “image contents of the signal sources” that are displayed in those windows are “either instant extracted static images, namely snapshots, or real-time motion images.” Pet., 50; EX1006, [0016].

A snapshot or a real-time image extracted from the signal source, however, is *not* a “default image corresponding to the ... external interface” itself. Instead, Young’s snapshot or real-time image extracted from the signal source is an image that is based on the image signal that is input from an external device. And the ’311 Patent clearly differentiates the claimed “default image” corresponding to the external interface from an image that is based on an image input from an external device. For example, the claims require “chang[ing] the first default image [corresponding to the first external interface] to a first image based on the first image signal [input from a first external device].” *Supra* pp.11–12 (*see, e.g.*, claim elements[1.2], [1.5] and [1.6] and [12.1], [12.3] and [12.4]]).

Therefore, the Nobori-Young combination also fails to disclose or fairly suggest at least limitations [1.5]-[1.8] of independent claim 1 and limitations [12.3]-[12.6] of independent claim 12.

VII. DISCRETIONARY DENIAL UNDER SECTION 325(D)

The Board should also exercise its discretion under 35 U.S.C. § 325(d) to deny institution because “the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). The three *Becton, Dickinson* factors related to whether substantially the same prior art or arguments were previously considered are: “(a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination;” and “(d) the extent of the overlap between the arguments made during examination and the manner in which petitioner relies on the prior art.” *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (citing *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017)).

Two of the references relied on by Petitioner were substantively before the Patent Office during examination of the '311 Patent. First, the Petition admits that U.S. Patent No. 7,880,816 to Kinoshita, issued from the published application of Kinoshita (EX1005), was cited by the Examiner when allowing the claims of the '311 Patent. Pet., 80. In fact, the Examiner searched for Kinoshita (as “7880816”) several times right before allowing the claims of the '311 Patent. EX2001, 2-3 (File Wrapper, Search History items S387 and S388 dated 1/12/2019 and item L1 dated

1/16/2019, omitted from EX1002). Thus, the record clearly shows that the Examiner considered Kinoshita right before allowing the '311 claims.

Second the Petition also misleadingly argues that Brown is not cited on the face of the '311 Patent. Pet., 80. While the specific publication (US2009/0201420) of Brown is not expressly cited, its international counterpart is WO 2009/088952, which is cited on the face of the '311 Patent. EX1001, 1; *compare* EX1007 and EX2003, *e.g.* at 1 (claiming priority to provisional application 61/018,261) and Figs. 1-8. The Examiner considered Brown's international counterpart on 11/30/2017 as part of the first Office Action. EX2001, 5 (signed IDS in Office Action dated 12/06/2017).

Petitioner's other prior art references (Nobori and Young) are also cumulative of references that the Examiner considered before allowing the claims of the '311 Patent, namely, the combination of Stecyk (EX1009) and Tu (EX1011). *See* EX1002, 27-30. Stecyk discloses icons for selecting an input source (below, left), similar to the device selection by the touch keys of Nobori's Fig. 2 (below, right). EX1009, Fig. 2F; EX1004, Fig. 2.

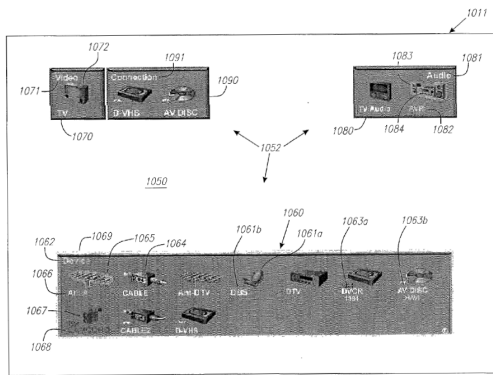


FIG. 2F

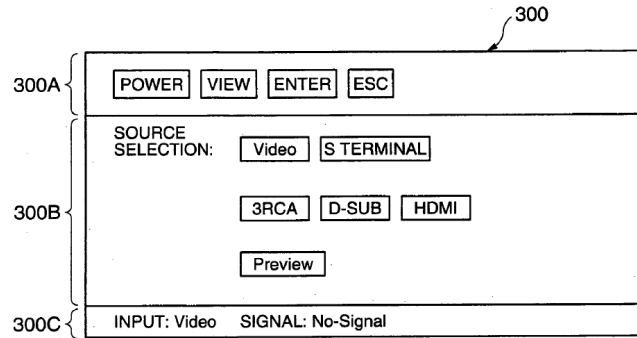
Previously presented

FIG. 2

Relied on in Petition

And Tu discloses preview windows from multiple sources (below left), similar to the preview windows of Young (below, right). EX1011, Fig. 4; EX1006, Fig. 2.

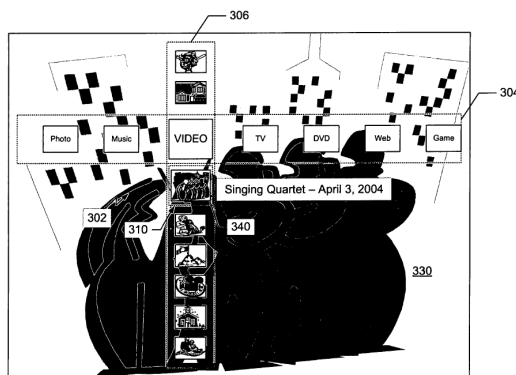


FIG. 4

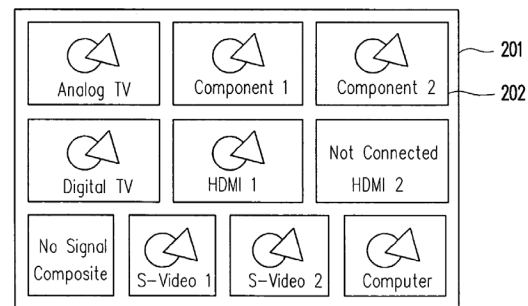
Previously presented

FIG. 2

Relied on in Petition

Further, as explained above, the Examiner also considered Brown. Brown discloses providing a preview at a central part of the display (below, left) with source selection, similar to Nobori's preview screen (below, right). EX1007, Fig. 6A; EX1004, Fig. 3.

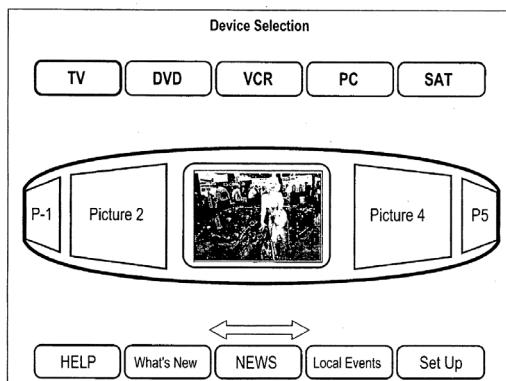


FIG. 6A

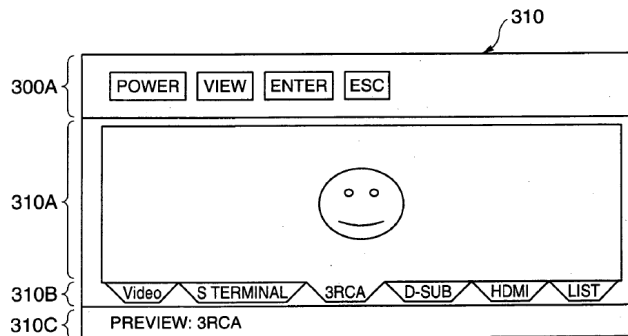
Previously presented

FIG. 3

Relied on in Petition

Because two of the references used in the Petition (Kinoshita and Brown) were expressly considered by the Examiner, and the other references (Nobori and Young) are cumulative of the references considered in prosecution, *Beckton*, *Dickinson* factors (a), (b), and (d) support denying institution. Furthermore, the Petition fails to show that the Examiner erred in allowing the claims over the same or similar prior art. In that regard, factor (c) weighs in favor of denying institution because substantially similar prior art references (e.g., Stecyk and Tu) were used as the basis for rejection. For factors (e) and (f), Petitioner does not engage with the Examiner's prior analysis to suggest any specific mistakes, nor does Petitioner explain how the presented combinations meaningfully differ from the art considered during examination.

Therefore, denial under § 325(d) is appropriate.

VIII. CONCLUSION

For the reasons set forth herein, the Petition should be denied.

Date: March 20, 2023

/Eliot D. Williams/

Eliot D. Williams (Reg. No. 50,822)

BAKER BOTTS L.L.P.

700 K Street, N.W.

Washington, D.C. 20001-5692

T: (202) 639-1334

F: (202) 639-1167

Peter H. Kang (Reg. No. 40,350)

Brianna L. Potter (Reg. No. 76,748)

BAKER BOTTS L.L.P.

1001 Page Mill Road,

Building One, Suite 200

Palo Alto, CA 94304

T: (650) 739-7500

F: (650) 739-7699

Theodore W. Chandler (Reg. No.
50,319)

BAKER BOTTS L.L.P.

1801 Century Park East

Suite 2400

Los Angeles, CA 90067

T: (213) 202-5702

F: (213) 202-5732

Ferenc Pazmandi (Reg. No. 66,216)

Lute Yang (Reg. No. 79,253)

BAKER BOTTS L.L.P.

101 California Street

Suite 3200

San Francisco, CA 94111

T: (415) 291-6200

F: (415) 291-6300

Mark A. Speegle (Reg. No. 77,512)

Sean Lee (Reg. No. 77,322)

BAKER BOTTS L.L.P.

401 South First Street

Suite 1300
Austin, TX 78704
T: (512) 322-2500
F: (512) 322-2501

Counsel for Patent Owner
LG Electronics Inc.

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing Patent Owner Preliminary Response, exclusive of the exempted portions as provided in 37 C.F.R. § 42.24(a), contains no more than 6,437 words and therefore complies with the type-volume limitations of 37 C.F.R. § 42.24(b).

Date: March 20, 2023

/Eliot D. Williams/
Eliot D. Williams (Reg. No. 50,822)
BAKER BOTTS L.L.P.
700 K Street, N.W.
Washington, D.C. 20001-5692
United States
T: (202) 639-1334
F: (202) 639-1167

Counsel for Patent Owner
LG Electronics Inc.

CERTIFICATE OF SERVICE

In accordance with 37 C.F.R. § 42.6(e), the undersigned certifies that on the 20th day of March, 2023, a complete and entire copy of the foregoing **PATENT OWNER'S PRELIMINARY RESPONSE** and **Exhibits 2001–03** were served by email on the following counsel for Petitioners:

Jeremy D. Peterson (Reg. No. 52,115) PV Law LLP 5335 Wisconsin Avenue, N.W., Suite 440 Washington, DC 20015-2052 Phone: 202.871.0140 Fax: 202.888.3163 Email: jeremy.peterson@pvuslaw.com LGE-IPRs@pvuslaw.com	Bradford A. Cangro (Reg. No. 58,478) PV Law LLP 5335 Wisconsin Avenue, N.W., Suite 440 Washington, DC 20015-2052 Phone: 202.871.0140 Fax: 202.888.3163 Email: bradford.cangro@pvuslaw.com
---	---

Date: March 20, 2023

/Eliot D. Williams/
Eliot D. Williams (Reg. No. 50,822)
BAKER BOTTS L.L.P.
700 K Street, N.W.
Washington, D.C. 20001-5692
United States
T: (202) 639-1334
F: (202) 639-1167

Counsel for Patent Owner
LG Electronics Inc.