

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIZIO, INC.,
Petitioner,

v.

MAXELL, LTD.,
Patent Owner.

IPR2022-01458
Patent 9,578,369 B2

Before JOHN A. HUDALLA, KARA L. SZPONDOWSKI,
and JASON W. MELVIN, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge*
SZPONDOWSKI.

Opinion Concurring filed by *Administrative Patent Judge* MELVIN.

SZPONDOWSKI, *Administrative Patent Judge*.

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

I. INTRODUCTION

Vizio Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–18 of U.S. Patent No. 9,578,369 B2 (Ex. 1001, “the ’369 patent”). Maxell, Ltd. (“Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”).

Institution of *inter partes* review is authorized when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Based on the current record, and for the reasons explained below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim. Accordingly, we institute an *inter partes* review as to the challenged claims and grounds raised in the Petition.

II. BACKGROUND

A. *Real Parties in Interest*

Petitioner identifies itself as the real party in interest. Pet. 7. Patent Owner identifies itself as a real party in interest. Paper 3, 1.

B. *Related Proceedings*

The parties identify *Maxell, Ltd. et al v. VIZIO, Inc.*, Case No. 2:21-cv-06758 (C.D. Cal.) (hereafter, “related litigation”), *Hisense Co. Ltd. v. Maxell, Ltd.*, IPR2020-01598, Paper 8 (PTAB Jan. 29, 2021) (terminated due to settlement agreement), and *Maxell, Ltd. v. Hisense Co. Ltd., et al.*, No. 5:19-cv-00156 (E.D. Tex.). Pet. 7; Paper 3, 1.

C. The '369 Patent (Ex. 1001)

The '369 patent is generally directed to providing “a portable terminal, an information processing apparatus, a content display system, and a content display method wherein viewing of a content on a portable terminal is smoothly passed to an information processing apparatus.”

Ex. 1001, 3:8–12.

Figure 1 of the '369 patent, reproduced below, shows the operation environment of an internet connection terminal (e.g., a television set) and a mobile terminal.

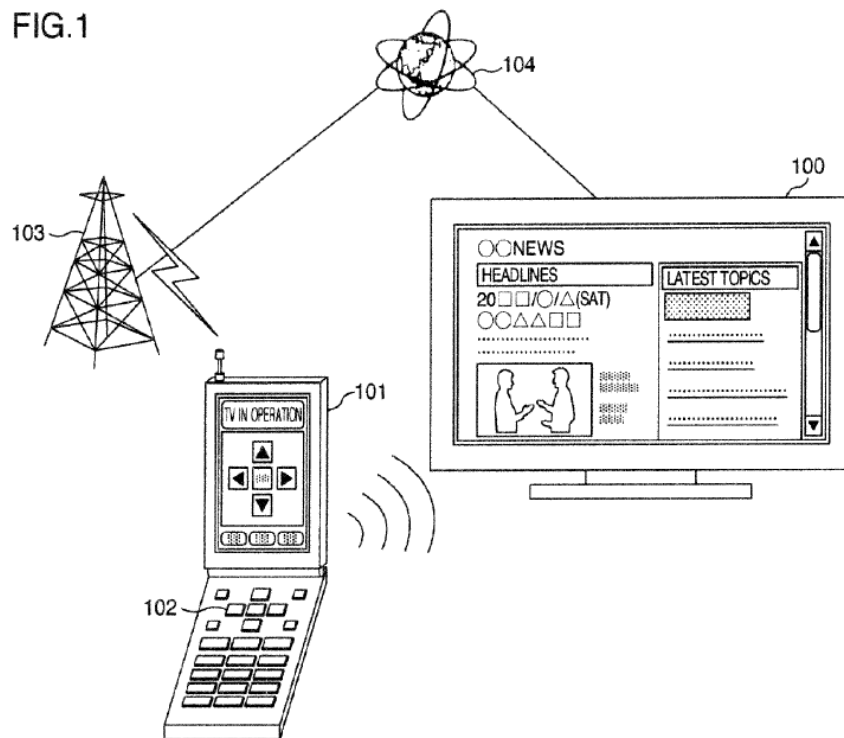


Figure 1, above, depicts mobile terminal 101 and internet terminal 100, which are terminals capable of connecting to the internet to display a homepage provided by an internet site. *Id.* at 4:38–41. Internet

terminal 100, which may be a television set or a set top box, connects to the internet 104, and mobile terminal 101 connects to the internet 104 using an input unit 102 (e.g., a plurality of buttons) and a base station 103. *Id.* at 4:43–54, 4:63–65. Internet terminal 100 also enables a user to view digital broadcast programs. *Id.* at 5:1–2.

“In operation of the internet connection terminal 100 and the mobile terminal 101, an internet site being displayed on the mobile terminal 101 can be displayed on the internet connection terminal.” *Id.* at 7:1–4. “Also, the user can operate the internet connection terminal 100 by use of the mobile terminal 101.” *Id.* at 7:4–6.

Figure 2 of the '369 patent, reproduced below, is a block diagram showing the configuration of internet connection terminal 100.

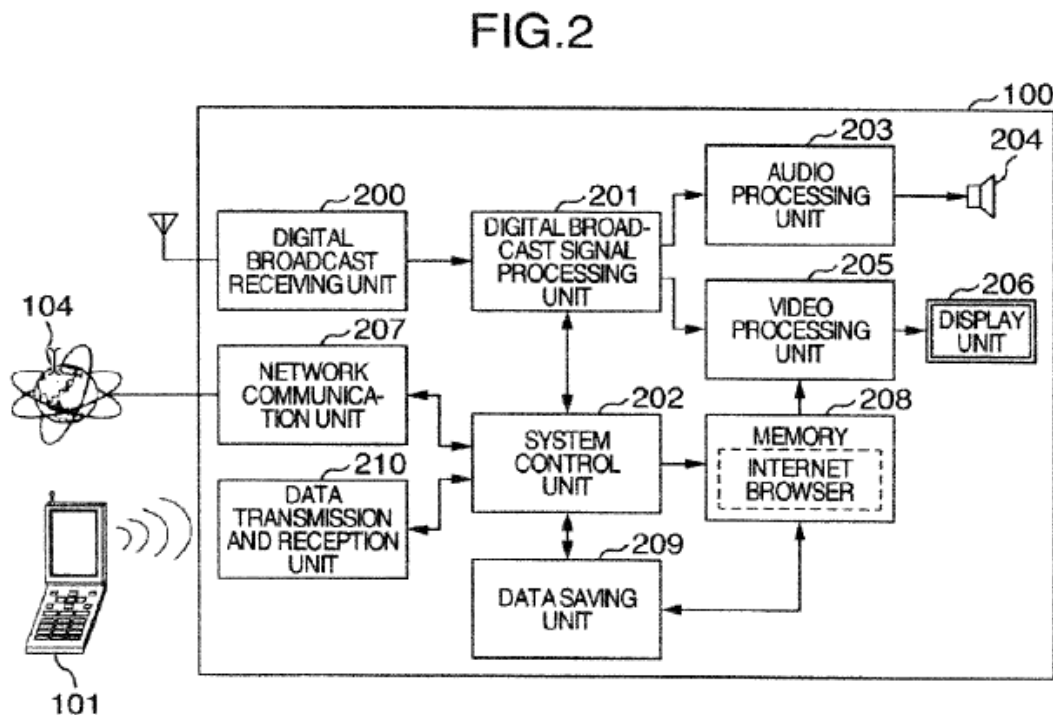


Figure 2, above, shows that internet connection terminal 100 includes digital broadcast receiving unit 200, digital broadcast signal processing unit 201, system control unit 202, audio processing unit 203, speaker 204, video processing unit 205, display unit 206, network communication unit 207, internet browser 208, data saving unit 209, and data transmitting and receiving unit 210. *Id.* at 5:5–11.

Figure 3 of the '369 patent, reproduced below, is a block diagram showing a configuration of mobile terminal 101.

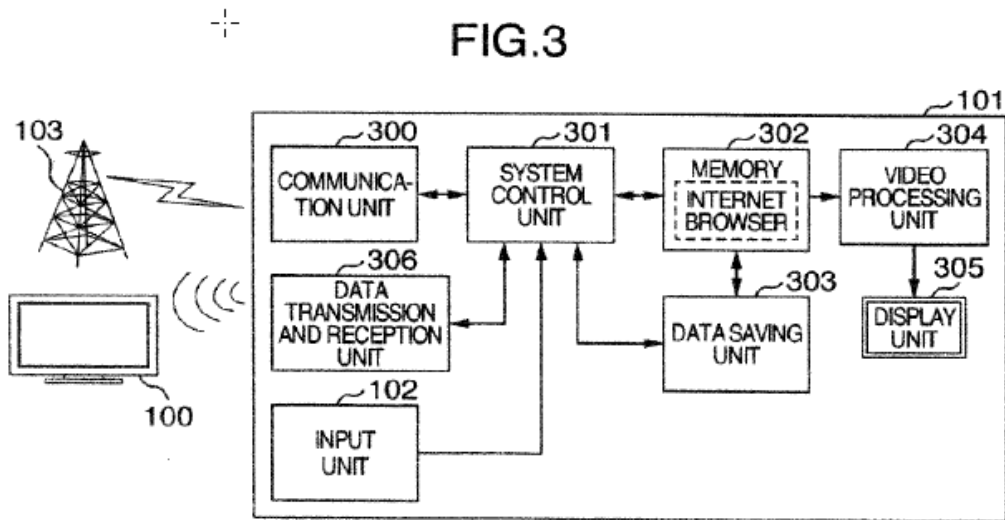


Figure 3, above, shows that mobile terminal 101 includes communication unit 300, system control unit 301, internet browser 302, data saving unit 303, video processing unit 304, display unit 305, and data transmitting and receiving unit 306. *Id.* at 6:22–26.

Figures 4 and 5 of the '369 patent illustrate an operation using an internet connection terminal 100 and mobile terminal 101, where an internet site to be displayed on mobile terminal 101 is displayed on internet connection terminal 100, and after the display of the internet site, internet

connection terminal 100 is operated from mobile terminal 101. *Id.* at 9:56–63.

Figure 5 of the '369 patent, reproduced below, shows a flowchart explaining operations of internet connection terminal 100 and mobile terminal 101.

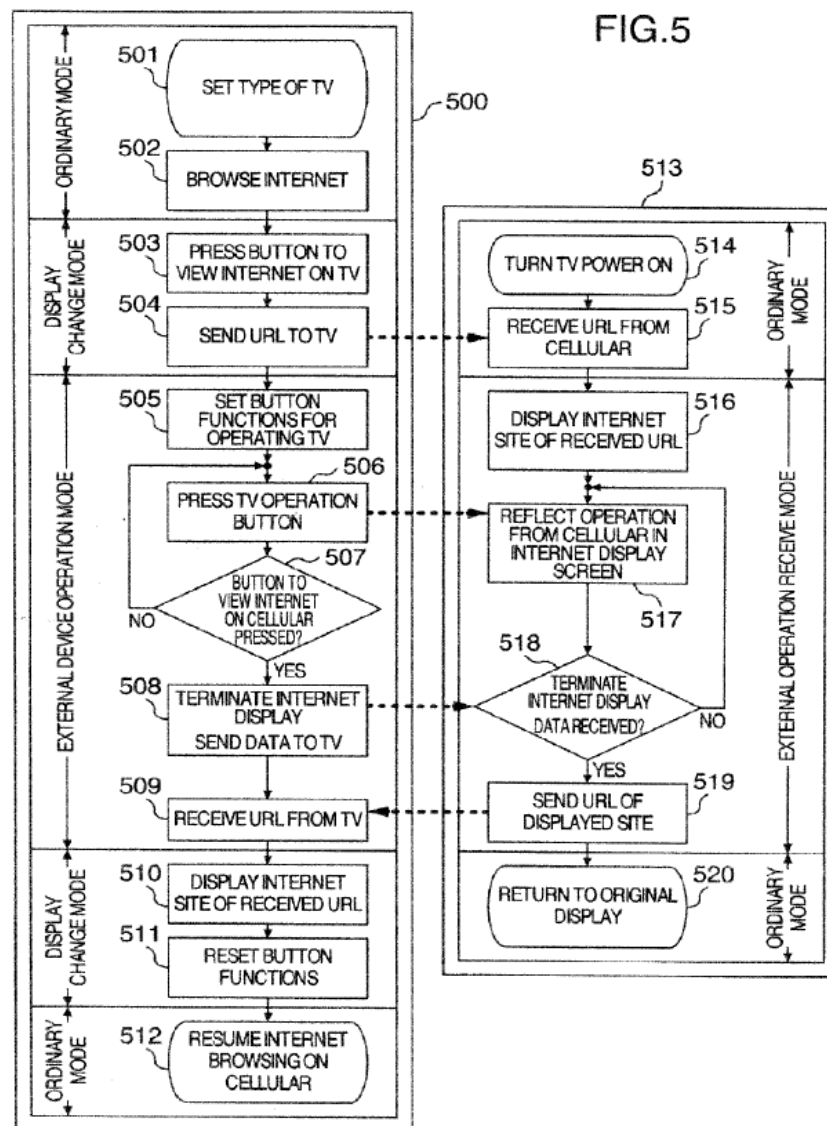


Figure 5, above, shows operations of mobile terminal 101 (cellular phone) in frame 500, and internet connection terminal 100 (television set) in frame 513. *Id.* at 9:64–10:6. In ordinary mode, the user sets a command using input unit 102 of the cellular phone to transmit information to the television set (step 501), and conducts a predetermined operation to display an internet site on the cellular phone so that the user can browse the internet site (step 502). *Id.* at 10:7–21, 30–36. In display change mode, the user uses input unit 102 to select button 402 in display unit 305 of the cellular phone (step 503), and then system control unit 301 of the cellular phone sends the Uniform Resource Locator (URL) of the internet site on the display via data transmitting and receiving unit 306 to the television set (step 504). *Id.* at 10:37–47.

In ordinary mode on the television set, the user powers on the television set, the television set receives and reproduces a broadcast received from the digital broadcast receiving unit (step 514), and then receives the URL via data transmitting and receiving unit 210 from the cellular phone (step 515). *Id.* at 10:22–29, 54–59. After or concurrently with the URL transmission, system control unit 301 of the cellular phone terminates the display of the internet site on the cellular phone. *Id.* at 10:47–51. In external operation receive mode, the television displays the internet site on display unit 206 (step 516) and enters a state to receive operation from the cellular phone. *Id.* at 10:59–64.

After transmitting the URL, the cellular phone enters external device operation mode, where system control unit 301 of the cellular phone is capable of operating the television set (step 505). *Id.* at 10:65–11:5. In this mode, the user can press a key on input unit 102 of the cellular phone to

indicate an operation for the television set, and, in this way, the cellular phone serves as a remote control device for the television set (step 506). *Id.* at 11:6–22. When data transmitting and receiving unit 210 of the television set receives the information and the signal of the operation indication from the cellular phone, the television set reflects the information in screen display 406 (step 517). *Id.* at 11:23–29.

The user may terminate the internet display on the television set and return to a state where the user browses the internet site on the cellular phone (steps 507 and 508). *Id.* at 11:30–40. The television set interrupts the internet site display (step 518), sends the URL of the internet site last displayed via data transmitting and receiving unit (step 519) and then returns to ordinary mode, displaying the television program being displayed before the start of the internet display (step 520). *Id.* at 11:41–55. The cellular phone receives the URL of the internet site last displayed on the television set and then accesses and displays the internet site of the URL (step 510). *Id.* at 11:56–58. The cellular phone then enters display change mode, and input unit 102 is used to operate the cellular phone (step 511), and the cellular phone returns to ordinary mode (step 512). *Id.* at 11:65–12:5.

Figure 4 of the '369 patent, reproduced below, shows a pictorial representation of the transition described in the foregoing steps.

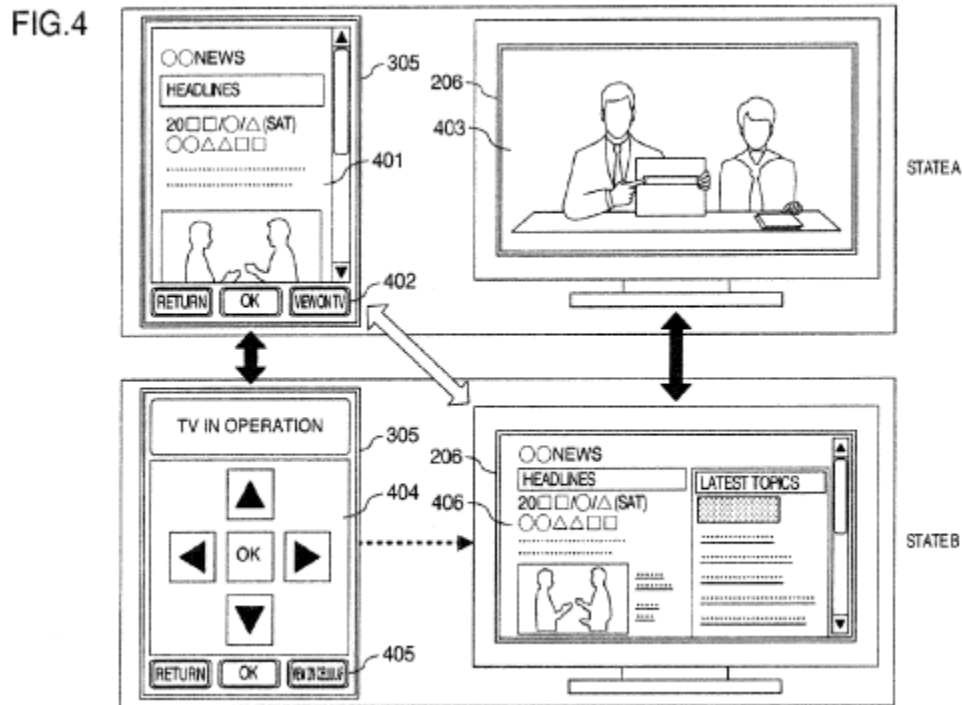


Figure 4, above, shows state A at the top, and state B at the bottom. State A depicts internet site displayed on cellular phone screen display on the left and broadcast program on the television set display on the right. *Id.* at 10:30–33, 11:45–47. After clicking on the “View on TV” button on the cellular phone, state B depicts cellular phone screen display with keys to indicate operations that can be conducted on the television set, and the internet site that was previously displayed on the cellular phone screen displayed on the television set display. *Id.* at 11:2–5, 23–29.

D. Illustrative Claims

Challenged claims 1, 2, 4, 6, 8, 10, 11, 13, 15, and 17 are independent. Ex. 1001, 20:37–26:57. Independent claims 1 and 4 are representative, and are reproduced below, with brackets indicating Petitioner’s identifiers.

1. [PRE] An information processing apparatus for displaying a content acquired via the internet, the information processing apparatus comprising:

[A] a communication unit arranged to conduct communication with a mobile terminal;

[B] a display unit arranged to display a video content; and

[C] a control unit arranged to control the display unit, wherein the control unit is arranged to:

[D] control the display unit to display a first video content;

[E] control the display unit to terminate displaying of the first video content and to start displaying a second video content acquired via the internet when the communication unit receives first information from the mobile terminal, [F] wherein the second video content is a same video content as a video content displayed on the mobile terminal before the mobile terminal sends the first information to the information processing apparatus, and wherein a state of displaying of the video content on the mobile terminal at a time when the first information is sent from the mobile terminal is taken over to a state of displaying of the second video content on the display unit at a time when the display unit starts displaying the second video content, based on the first information;

[G] control displaying of the second video content on the display unit based on second information for operating the second video content displayed on the display unit when the communication unit receives the second information from the mobile terminal;

[H] and control the display unit to terminate displaying of the second video content when the communication unit receives third information from the mobile terminal.

4. [PRE] A display apparatus for displaying a content acquired via broadcast signal or via the internet, the display apparatus comprising:

[A] a communication unit arranged to conduct communication with a mobile terminal;

[B] a display unit arranged to display a video content; and

[C] a control unit arranged to control the display unit, wherein the control unit is arranged to:

[D] control the display unit to display a first video content acquired via the broadcast signal;

[E] control the display unit to terminate displaying of the first video content and to start displaying a second video content acquired from an internet site via the internet when the communication unit receives first information including information relating to that the mobile terminal logs in to said internet site from the mobile terminal, wherein the second video content is a same video content as a video content which can be acquired by the mobile terminal after login authentication of said internet site and is displayed on the mobile terminal before the mobile terminal sends the first information to the display apparatus, and [F] wherein a state of displaying of the video content on the mobile terminal at a time when the first information is sent from the mobile terminal is taken over to a state of displaying of the second video content on the display unit at a time when the display unit starts to display the second video content, based on the first information;

[G] control displaying of the second video content on the display unit based on second information for operating the second video content displayed on the display unit when the communication unit receives the second information from the mobile terminal; and

[H] control the display unit to terminate displaying of the second video content when the communication unit receives third information from the mobile terminal.

Id. at 20:37–21:3, 21:43–22:14.

E. Prior Art and Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–18 of the '369 patent on the following grounds (Pet. 9–10):

Claim(s) Challenged	35 U.S.C. §	Reference(s)
1–3, 6, 7, 10–12, 15, 16	103(a) ¹	Bennett-'175 ²
1–3, 6, 7, 10–12, 15, 16	103(a)	Bennett-'175, Yuasa ³
1–18	103(a)	Bennett-'175, Yuasa, Cho ⁴
1–18	103(a)	Bennett-'175, Cho

Petitioner also filed the Declaration of Dr. Henry Houh in support of the Petition. Ex. 1003.

III. ANALYSIS

A. Obviousness: Legal Standards

A claim is unpatentable for obviousness if, to one of ordinary skill in the pertinent art, “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made.” *KSR Int’l Co. v.*

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102, 103, and 112. Because the '369 patent claims priority to an application filed before March 16, 2013 (the effective date of the relevant amendments), the pre-AIA versions of §§ 102, 103, and 112 apply.

² Bennett et al., US Patent No. 9,247,175 B2, issued Jan. 26, 2016 (Ex. 1007) (“Bennett-'175”).

³ Yuasa et al., US Patent No. 8,321,898 B2, issued Nov. 27, 2012 (Ex. 1008) (“Yuasa”).

⁴ Cho et al., US Patent No. 9,055,194 B2, issued June 9, 2015 (Ex. 1009) (“Cho”).

Teleflex Inc., 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). The question of obviousness is resolved on the basis of underlying factual determinations, including “the scope and content of the prior art”; “differences between the prior art and the claims at issue”; and “the level of ordinary skill in the pertinent art.” *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Additionally, secondary considerations, such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Id.*

A patent claim “is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR*, 550 U.S. at 418. Rather, an obviousness determination requires finding “both ‘that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (citation omitted); *see KSR*, 550 U.S. at 418 (for an obviousness analysis, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements [in the way the claimed] new invention does”).

Further, an assertion of obviousness “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *accord In re NuVasive, Inc.*, 842 F.3d 1376, 1383 (Fed.

Cir. 2016) (stating that “‘conclusory statements’” amount to an “insufficient articulation [] of motivation to combine”; “instead, the finding must be supported by a ‘reasoned explanation’” (citation omitted)); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.”).

The motivation to combine must be “accompanied by a reasonable expectation of achieving what is claimed in the patent-at-issue.” *Intelligent Bio-Sys*, 821 F.3d at 1367. “The reasonable expectation of success requirement refers to the likelihood of success in combining references to meet the limitations of the claimed invention.” *Id.*

B. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art “would have been familiar with display systems (such as television systems), remote controllers, control information, and user interaction” and “would have had a working knowledge of computing networking, and data representation.” Pet. 18 (citing Ex. 1003 ¶¶ 56, 57). Petitioner further asserts that a person of ordinary skill in the art “would have gained knowledge of these concepts through a mixture of education and industry experience, such as by having a Bachelor’s degree in computer science, computer communications, electrical engineering or equivalent degree, coupled with two years of experience or by obtaining a Master’s degree in those fields with less experience.” *Id.*

Patent Owner does not dispute Petitioner’s proposal or offer an alternative. *See generally* Prelim. Resp.

Petitioner’s proposal is consistent with the level of ordinary skill in the art reflected by the prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). On this record, the level of ordinary skill is neither in dispute nor dispositive of any challenge. For purposes of this Decision, we apply Petitioner’s proposed level of ordinary skill in the art.

C. *Claim Construction*

We construe each claim “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,” the same standard used to construe the claim in a civil action. 37 C.F.R. § 42.100(b).

Petitioner proposes constructions for the following limitations under 35 U.S.C. § 112 ¶ 6, identifying the alleged function and corresponding structure: communication unit, control unit, video processing unit. Pet. 20–26. Petitioner argues that any remaining claim limitations should be given “their ordinary and customary meaning” as understood by a person of ordinary skill in the art at the time of the invention. *Id.* at 27.

Patent Owner responds that it applies the constructions adopted by the district court in the related litigation in the claim construction order dated December 21, 2022. Prelim. Resp. 10 (citing Ex. 2001). Patent Owner also provides the parties’ agreed-upon constructions from the related litigation for “video processing unit” and “acquired via a broadcast signal” and the district court’s construction of “communication unit” and “control unit.” *Id.* at 11–12; see Ex. 2001 at 11–16.

Petitioner’s proposed construction of “communication unit” under § 112 ¶ 6 was adopted by the district court in the related litigation. See Pet. 20–21; Ex. 2001 at 11–12. This construction is as follows:

Claim Term	Function	Structure
communication unit	conduct communication with a mobile terminal	a communication device that is arranged to communicate with a mobile terminal according to standard communication protocols, including Bluetooth, wireless Local Area Network (LAN), or IRDA.

Ex. 2001 at 11–12. We adopt this construction, which is not disputed by Patent Owner, for purposes of this Decision. We further adopt the parties’ agreed-upon construction of “acquired via a broadcast signal,” recited in claims 2, 3, 11, and 12, as “obtained by tuning a receiver to a television station signal received via an antenna or a cable” for purposes of this Decision.

We further determine that, at this stage of the proceeding, no additional express construction is necessary to resolve any controversy in this proceeding to determine whether to institute *inter partes* review. See *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those 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))).

D. Ground 1: Obviousness Over Bennett-'175

Petitioner challenges claims 1–3, 6, 7, 10–12, 15, and 16 as obvious over Bennett-'175. Pet. 30–75. For the reasons explained below, we are persuaded that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim.

1. Bennett-'175 (Exhibit 1007)

Bennett-'175 is titled “Parallel Television Remote Control” and generally describes “[a] remote control with a built-in miniature television screen and sound system [that] manages settings and display of media on an associated television screen.” Ex. 1007, codes (54), (57). Figure 1 of Bennett-'175, reproduced below, illustrates an exemplary architecture wherein a remote control with a built-in video screen and sound system interacts with a television system.

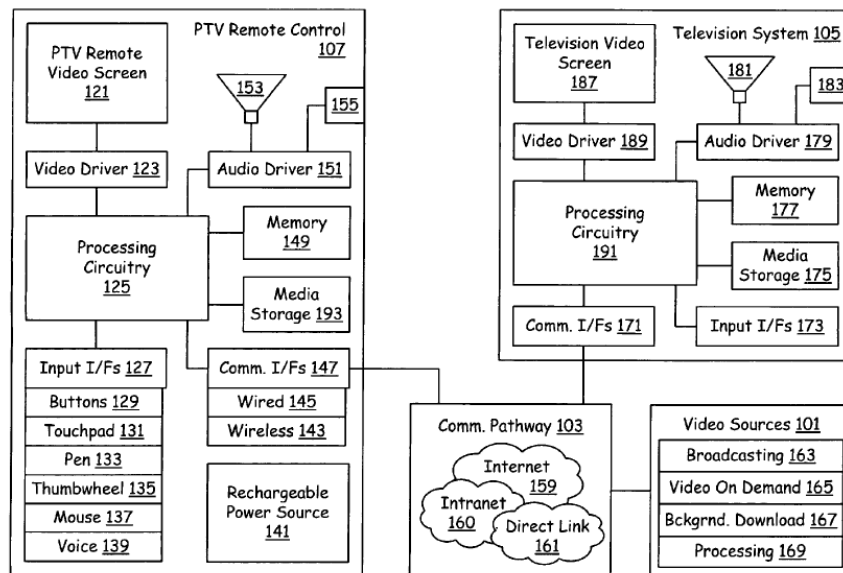


Figure 1

Figure 1, above, shows (1) parallel TV (“PTV”) remote control 107, which includes, among other things, processing circuitry 125, PTV remote video screen 121, communication interface 147, input interfaces 127, including buttons 129 and touchpad 131, and (2) television system 105, which includes, among other things, television video screen 187, video driver 189, communication interface 171, and processing circuitry 191. Video sources 101 deliver video to television system 105 and PTV remote control 107 via communication pathway 103. *Id.* at 4:22–25. Video sources 101 include broadcasting sources 163 (e.g., cable, fiber, and satellite multiple or single channel broadcast providers), video on demand sources 165, and background downloading sources 167. *Id.* at 4:35–40; *see also* Fig. 3A (showing remote sources 303, including satellite provider 311, cable provider 312, UHF/VHF stations 313, fiber TV provider 314, and internet server 315). Communication pathway 103 may comprise one or any wireless and wired combination of Internet, Intranet, and direct link. *Id.* at 5:18–21.

Bennett-’175 describes that

With the PTV remote control 107 in hand in a local premises, a first viewer watches video from a first channel being displayed on the PTV remote video screen 121, while a second viewer watches a second channel, that had been previously viewed on and selected via the PTV remote control 107 on the television video screen 187. Using a swap command delivered via one of a plurality of input interfaces 127, the first viewer may then cause the television video screen 187 to display the first channel, while the PTV remote video screen 121 displays the second.

Id. at 5:1–10. Bennett-’175 further describes the “Swap Command”:

Lastly, for example, the viewer can enter a swapping command via the input interfaces 127. In response, the processing circuitry 125 and 191 coordinate to cause the video being displayed on the PTV remote video screen 121 and television video screen 187 to be swapped. In particular for example, the processing circuitry 125 sends a request to the processing circuitry 191 for identifiers associated with the video source, video selection being displayed, and current offset into the current video selection, if appropriate, of the video being displayed by the television video screen 187. Upon receipt of the identifiers, the processing circuitry 125 sends all necessary of such types of identifiers associated with the video being displayed on the PTV remote video screen 121 to the processing circuitry 191. Having exchanged identifiers, the processing circuitry 125 and 191 use the exchanged identifiers to access and display the corresponding video and play back the associated audio, completing the swap.

Id. at 6:45–61. Bennett-’175 explains that the buttons on the PTV remote control may be used “to indicate that subsequent commands will be directed to the television.” *Id.* at 8:24–31; *see also* 5:66–6:2 (“The processing circuitry 191 uses program code stored within the memory 177 to conduct video processing and to carry out commands received from the PTV remote control 107”).

2. *Independent Claim 1*

Petitioner contends that Bennet-’175 teaches each limitation of independent claim 1. Pet. 30–64. In support, Petitioner identifies certain passages and figures in Bennett-’175 and explains their significance with respect to the corresponding claim limitation. *Id.*

a) *[PRE]: An information processing apparatus for displaying a content acquired via the internet, the information processing apparatus comprising*

Petitioner contends that Bennett-'175 discloses a television set comprising a television and a set top box (collectively or individually) (*information processing apparatus*). Pet. 34 (citing Ex. 1007, Figs. 1, 2, 3A, 7:63–66, 9:16–17; Ex. 1003 ¶¶ 79–86, 108–118). Petitioner asserts that they “process and display” video acquired from video sources 101, such as an Internet-based media server (e.g., internet servers 315) and broadcast sources. *Id.* (citing Ex. 1007, Figs. 1, 3A, 4, 6, code (54), 3:17–20, 4:11–47, 5:49–5, 6:26–60, 10:42–47, 11:8–26, 13:7–16, 14:49–50, claims 5, 10; Ex. 1003 ¶¶ 79–86, 108–118).

Patent Owner does not specifically respond to these arguments. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-'175 teaches the preamble for purposes of institution.⁵

b) *[A] a communication unit arranged to conduct communication with a mobile terminal*

Petitioner contends that Bennett-175's television system includes communication interfaces 171 coupled to processing circuitry 191 (*communication unit*) that communicate with the PTV remote control (*mobile terminal*) through an established uplink and downlink, e.g., a Bluetooth channel, via communication pathway 103. Pet. 35–38 (citing Ex. 1007, Figs. 1, 2, 4, 5, 8, 9, 3:37–48, 4:61–6:25, 6:62–7:62, 8:46–9:21,

⁵ Neither party argues whether the preamble limits claim 1. Because we find that the evidence supports that the prior art teaches the preamble, we need not determine at this stage of the proceeding whether the preamble of claim 1 is limiting. *See Realtime Data*, 912 F.3d at 1375.

11:41–12:3, 13:42–48, code (54), claims 12–17; Ex. 1003 ¶¶ 79–86, 119–133).

Patent Owner does not specifically respond to these arguments. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-'175 teaches limitation [A] for purposes of institution.

c) [B] a display unit arranged to display a video content

Petitioner contends that Bennett-'175 discloses television video screen 187 (*display unit*) that displays video content. Pet. 38–39 (citing Ex. 1007, Fig. 1, 4:19–21, 5:56–62, 6:45–61, 8:42–45, claims 1, 2, 9, 18; Ex. 1003 ¶¶ 79–86, 134).

Patent Owner does not specifically respond to these arguments. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-'175 teaches limitation [B] for purposes of institution.

d) [C] a control unit arranged to control the display unit, wherein the control unit is arranged to:

Petitioner contends that Bennet-'175's processing circuitry 191 “uses program code . . . to conduct video processing, and to carry out commands received from the PTV remote control 107” (*a control unit arranged to control the display unit*). Pet. 39 (citing Ex. 1007, 5:49–6:25; Ex. 1003 ¶¶ 79–86, 135–142). Petitioner contends that the processing circuitry receives “control signals” and “commands” from the PTV remote control, uses “exchanged identifiers to access and display the corresponding video,” “tunes to the selected channel,” “receives video and audio signals,” “processes the channel video,” and “delivers received video to the television

screen 187 via a video driver 189.” *Id.* at 39–40 (citing Ex. 1007, Figs. 1–3A, 3C, 6, 8, 9, 4:5–7, 4:61–67, 5:53–6:25, 6:45–61, 7:60–62, 8:5–7, 8:46–61, 11:8–40, 14:6–10, claims 1, 18; Ex. 1003 ¶¶ 79–86, 135–142).

Patent Owner does not specifically respond to these arguments. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-’175 teaches limitation [C] for purposes of institution.

e) [D] control the display unit to display a first video content

Petitioner contends that Bennett-’175 discloses that processing circuitry 191 (*control unit*) controls the television video screen 187 (*display unit*) to display video content. Pet. 41 (citing Ex. 1007, 4:22–50, 5:56–57, 6:5–25, 13:7–16; Ex. 1003 ¶¶ 79–86, 143–147). Petitioner further asserts that the video content may be “video channel broadcasts from the TV broadcasting 163 of the video sources 101” (*first video content*). *Id.* at 42 (citing Ex. 1007, 6:5–25).

Patent Owner does not specifically respond to these arguments. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-’175 teaches limitation [D] for purposes of institution.

f) [E] control the display unit to terminate displaying of the first video content and to start displaying a second video content acquired via the internet when the communication unit receives first information from the mobile terminal

Petitioner contends that Bennett-’175’s “Swap Command” discloses this limitation. Pet. 43–50. Specifically, Petitioner contends that Bennet-’175 discloses that the PTV remote control (*mobile terminal*) sends

the “Swap Command” and associated information, include all necessary identifiers associated with the video being displayed on the PTV remote video screen 121 (*first information*), to processing circuitry 191 (*control unit*). *Id.* at 43 (citing Ex. 1007, 5:1–10, 5:49–64, 6:26–61, 9:29–40, 10:7–20, 11:62–12:3, 13:31–36; Ex. 1003 ¶¶ 79–86, 148); *see also id.* at 46–47 (“identifiers associated with the video being played,” such as identifiers of the “video source” and “video selection,” and “current offset into the current video collection” teach *first information*).

Petitioner contends that Bennett-’175 “discloses terminating the existing video and swapping to a new video when the Processing Circuitry receives the Swap Command information via the Communication Interface (*‘when the communication unit receives first information from the mobile terminal’*).” *Id.* at 47 (citing Ex. 1003 ¶¶ 79–86, 155–157). Petitioner further contends that in response to receiving the information, processing circuitry 191 controls the television video screen (*display unit*) to terminate displaying the current video content (*first video content*) and to start displaying the video that was being displayed on the PTV remote control (*second video content acquired from the internet*). *Id.* at. 44–45 (citing Ex. 1007, 5:1–10, 5:65–6:3, 6:5–61, 7:13–62, 11:62–12:3, 13:31–36; Ex. 1003 ¶¶ 79–86, 148–152).

Patent Owner argues that Petitioner has not established that Bennett-’175 teaches the “communication unit receives first information from the mobile terminal.” Prelim. Resp. 29. Specifically, Patent Owner argues that “Petitioner’s discussion of the ‘Swap Command’ fails to mention a communication unit or any reception by a communication unit of the claimed first information.” *Id.* at 30. Patent Owner states that “[e]arly in the

Petition, Petitioner argues that the communication interface 171 and the Processing Circuitry 191 together form a communication unit,” but Petitioner’s discussion does not mention or discuss this combination. *Id.* (citing Pet. 35). Patent Owner further argues that “any information between the PTV controller and the TV is clearly exchanged via the communication pathway 103 ‘facility’ and not received by the communication unit identified by Petitioner.” *Id.* at 32; *see id.* at 32–35 (citing Ex. 1007, Fig. 1, 6:62–67, 7:8–12, 7:17–20, 7:24–31, 7:51–53, 7:56–60).

Patent Owner’s arguments do not undermine Petitioner’s showing. First, as set forth above, Petitioner explicitly identifies the processing circuitry and communication interface in its contentions for this limitation, stating “Bennett-’175 discloses terminating the existing video and swapping to a new video when the Processing Circuitry receives the Swap Command information via the Communication Interface (*‘when the communication unit receives first information from the mobile terminal’*).” Pet. 47 (citing Ex. 1003 ¶¶ 79–86, 155–157). This is also set forth in Petitioner’s contentions for this limitation describing the corresponding structure of the “communication unit,” i.e., “Processing Circuitry 191 (‘a processor’) first receives the ‘Swap Command’ request and associated information and identifiers via the Communication Interface 171” *Id.* at 49–50.

This combination, i.e., the communication unit identified by Petitioner in limitation 1[A], is further discussed by Dr. Houh in connection with this limitation. *See* Ex. 1003 ¶ 149 (PTV remote control 107 sends a “Swap Command” and associated information . . . “to Processing Circuitry 191 of Television System 105 through Communication Interfaces 171,” “ . . . when the Communication Interfaces 171 and Processing Circuitry 191 (*i.e.*, the

‘communication unit’) receives the ‘Swap Command’ and associated information”), ¶ 155 (“When Communication Interfaces 171 and Processing Circuitry 191 of Television System 105 receive the ‘Swap Command’ . . . from the PTV Remote Control 107 (i.e., ‘*when the communication unit receives first information from the mobile terminal*’ . . .)”). Moreover, Bennett-’175 describes that processing circuitry 191 receives, for example, video signals, audio signals, and commands, via communication interfaces 171. Ex. 1007, 5:53–55, 6:17–21, Fig. 1. We, therefore, do not agree with Patent Owner that Petitioner fails to discuss the combination of the processing circuitry and communication interfaces in the Petition.

We also disagree with Patent Owner that Petitioner has not established that the specified communication unit (i.e., processing circuitry 191 and communication interfaces 171) receives information. See Prelim. Resp. 34. As set forth above, Petitioner has shown that the “Swap Command” and associated information, including all necessary identifiers, is received by the processing circuitry via the communication interface. See Pet. 43, 46–47. Patent Owner’s argument that “[t]he communication unit of the TV identified by Petitioner does not receive any alleged first, second, or third information, but rather it is the communication pathway 103 facility that receives it,” is not commensurate with the claim language, which only requires that “the communication unit receives first information from the mobile terminal,” but does not preclude indirect receipt of the claimed information (i.e., through communication pathway 103 and then to communication interfaces 171 and processing circuitry 191). See Prelim. Resp. 34; Ex. 1007, Fig. 1. As Patent Owner points out (Prelim. Resp. 33), communication pathway 103 establishes an uplink and downlink between

PTV remote control 107 and television system 105 so that control information may be exchanged. *See* Ex. 1007, 7:56–60; *see also* 6:6–7:62. But Bennett-'175 clearly shows in Figure 1 communication pathway 103 between communication interfaces 147 and processing circuitry 125 in the PTV remote control and communication interfaces 171 and processing circuitry 191 in the television system. Accordingly, Patent Owner's arguments do not undermine Petitioner's contentions.

We agree with Petitioner that Bennett-'175's Swap Command teaches limitation [E], for the reasons set forth by Petitioner. Pet. 43–50. Accordingly, based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-'175's Swap Command teaches limitation [E] for purposes of institution.

g) [F] wherein the second video content is a same video content as a video content displayed on the mobile terminal before the mobile terminal sends the first information to the information processing apparatus, and wherein a state of displaying of the video content on the mobile terminal at a time when the first information is sent from the mobile terminal is taken over to a state of displaying of the second video content on the display unit at a time when the display unit starts displaying the second video content, based on the first information

Petitioner contends that Bennett-'175's Swap Command discloses this limitation. Pet. 50–62. Petitioner asserts that before the Swap Command is sent, Bennett-'175's PTV remote control is in a state of displaying certain video content (described as state 713), and after the Swap Command is sent, the PTV remote control no longer displays the video content, and the television system is in the state of displaying the video content (described as state 721). *Id.* at 51–52 (citing Ex. 1007, Fig. 7, 6:54–61, 11:52–53, 11:64–66; Ex. 1003 ¶¶ 79–86, 163–167). According to Petitioner, the swap is

completed when the television system uses the received information “to access and display the corresponding video.” *Id.* at 52. Petitioner asserts that as part of Swap Command, the PTV remote control sends “current offset into the current video selection” to the television system, and a person of ordinary skill in the art would have recognized that such “offsets” and “identifier information” allow processing circuitry 191 to control display of the video content. *Id.* at 53 (citing Ex. 1007, Figs. 1, 7, 8, 6:45–61, 7:23–62, claims 1, 13, 14, 17, 18; Ex. 1003 ¶¶ 79–86, 163–177).

Patent Owner does not specifically respond to these arguments. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-’175’s Swap Command teaches limitation [F] for purposes of institution.

h) [G] control displaying of the second video content on the display unit based on second information for operating the second video content displayed on the display unit when the communication unit receives the second information from the mobile terminal

Petitioner asserts that Bennett-’175’s PTV remote control can “control the . . . display of . . . video selections” on the television screen. Pet. 52 (citing Ex. 1007, 8:24–29; Ex. 1003 ¶¶ 79–86, 178). Although Petitioner contends that the ’369 patent “does not disclose, or require any specific operations related to navigating displayed video content (e.g., pause, fast forward, reverse, etc.),” Petitioner states that the ’369 patent provides examples of operations related to internet site navigation, such as the ability to “move a selection item of an internet site being displayed on the TV set or to determine a selection item.” *Id.* at 53 n.25 (citing Ex. 1003 ¶¶ 79–85, 179–202), 53 (citing Ex. 1001, 11:12–29).

According to Petitioner, Bennet-'175's PTV remote control sends "control operation" commands/information (*second information*) to the processing circuitry of the television system. *Id.*; *see also id.* at 53–54 (citing Ex. 1007, 5:66–63, 6:14–26, 7:56–62, 8:29–31, 12:6–13:41; Ex. 1003 ¶¶ 79–86, 179–202). Petitioner provides several examples of such "control operations," such as performing screen configuration, setting the video mode to color or black and white, setting power management options, and performing channel selection and tuning. *Id.* at 54 (citing Ex. 1007, 1:39–55, 5:46–48, 5:66–6:2, 8:29–31, 8:48–61, 11:56–61, 12:6–13:41, 13:17–24, 13:37–41, Fig. 7; Ex. 1003 ¶¶ 79–86, 179–202).

Petitioner alternatively contends that if the "second information for operating the second video content" requires some specific control functionality, such as pause, fast-forward, rewind, or stop," then a person of ordinary skill in the art would have understood Bennet-'175 to teach it or render it obvious. *Id.* (citing Ex. 1003 ¶¶ 79–86, 179–202). For example, Petitioner asserts that Bennett-'175's PTV remote control "is an enhancement of . . . conventional remote control functionality and would have included their traditional functionality." *Id.* (citing Ex. 1007, 1:39–2:36, 9:45–52, 4:56–60, Figs. 8, 9; Ex. 1003 ¶¶ 79–86, 179–202. Moreover, Petitioner argues, "such controls were commonly used for video streaming," which Bennett-'175 discloses, so a person of ordinary skill in the art would have understood that "these disclosed capabilities (e.g., media storage, buffering, internet download, video-on-demand, non-real time playback, surfing, sampling and the ability to control various devices) to disclose, or render obvious, the PTV Remote Controls' ability to send, and the Television System's ability to receive[] and execute commands to, *e.g.*,

pause, fast-forward, rewind, or stop video.” *Id.* at 55–56 (citing Ex. 1003 ¶¶ 79–86, 179–202); *see also id.* at 54–55 (citing Ex. 1007, 1:39–2:36, 4:43–60, 6:2–4, 8:27–31, 9:33–40, 9:45–52, 11:8–13, Figs. 8, 9; Ex. 1010, 13:34–55; Ex. 1012 ¶ 252). Petitioner further provides, supported by the testimony of Dr. Houh, reasons why it would have been obvious to one of ordinary skill in the art to modify Bennett-’175 to include conventional video navigation functionality (e.g., play, pause, stop), and why there would have been a reasonable expectation of success in doing so. *Id.* at 69–75 (citing, e.g., Ex. 1003 ¶¶ 79–86, 92–94, 253–261).

Petitioner further contends that, to control the display of the television set, the PTV remote control enters into device control mode 811, which causes it to enter into state 827 to control the operations of the television system. *Id.* at 55–56 (citing Ex. 1007, Fig. 8, 12:23–13:2; Ex. 1003 ¶¶ 79–86, 203, 204). According to Petitioner, device control mode 811 may follow a Swap Command, so that it controls the display of internet-based video content swapped from the PTV remote control. *Id.* at 57–58 (citing Ex. 1007, 5:56–6:3, 12:48–13:41, 6:45–61, Fig. 9; Ex. 1003 ¶¶ 79–86, 203, 204).

Patent Owner argues that Bennett-’175’s control operation commands/information do not disclose the claimed “second information,” because they are not “for operating the second video content displayed,” as required by the claim language. Prelim. Resp. 35–38. Patent Owner generally argues that none of the examples provided by Petitioner from Bennett-’175 are “for operating the second video content displayed.” *Id.*

We find that Petitioner has sufficiently shown that Bennett-’175 discloses the claimed “second information for operating the second video

content displayed.” For example, Bennett-’175 teaches that the viewer can use buttons on the PTV remote control to control the selection and display of media guides and video selections on the television system’s video screen. Ex. 1007, 8:24–27; *see also id.* at 8:30–31 (“the viewer may select one of the buttons 235 to indicate that the subsequent commands will be directed to the television”). The viewer may also use a rocker button 237 to “browse up and down to sample or ‘surf’ video offerings and adjust associated volume.” *Id.* at 8:24–29. Moreover, we also find persuasive Petitioner’s contentions that Bennett-’175’s disclosures render obvious the PTV remote control’s ability to send, and the television system’s ability to receive and execute commands to, for example, pause, fast-forward, rewind, or stop video. Pet. 55–56. Patent Owner does not address these alternative contentions in the Preliminary Response.

Accordingly, based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-’175 teaches limitation [G] for purposes of institution.

i) [H] and control the display unit to terminate displaying of the second video content when the communication unit receives third information from the mobile terminal

Petitioner contends that Bennett-’175 discloses that, in response to a second Swap Command that includes related identifiers, offsets, and information (*third information*), processing circuitry 191 terminates the display of internet-based video content (*second video content*) by swapping the television system back to the broadcast-based video content (*first video content*) and the PTV remote control back to the internet-based video

content (*second video content*). Pet. 60–62 (citing Ex. 1007, Fig. 9, 5:66–6:3, 6:45–61, 7:23–61, 12:48–13:41; Ex. 1003 ¶¶ 79–86, 209–223).

Petitioner alternatively contends that Bennett-'175 discloses sending a command to power-off the television system (*third information*), which terminates displaying internet-based video on the television system when received. *Id.* at 61–62 (citing Ex. 1007, Fig. 9, 1:39–43, 13:37–41, 5:66–6:3; Ex. 1003 ¶¶ 79–86, 209–223).

Patent Owner does not specifically respond to these arguments. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-'175 teaches limitation [H] for purposes of institution.

j) Conclusion for Independent Claim 1

For the foregoing reasons, Petitioner has established a reasonable likelihood that it would prevail in showing that independent claim 1 is unpatentable over Bennett-'175.

3. Independent Claims 2, 6, 10, 11, and 15

Independent claim 2 is similar to claim 1, but recites, “a display apparatus for displaying a content acquired via a broadcast signal or via the internet” and the “first video content [is] acquired via the broadcast signal.” Ex. 1001, 21:4–6, 12–13. For independent claim 2, Petitioner relies largely on its contentions as to independent claim 1, and further contends that Bennett-'175 teaches the limitations of independent claim 2 that differ from claim 1. Pet. 64–65. Specifically, Petitioner contends that Bennett-'175's television system teaches the claimed “display apparatus,” and that Bennett-'175 displays video from many sources, including broadcast and the internet.

Id. at 64 (citing Ex. 1007, 6:5–25, 13:7–16; Ex. 1003 ¶¶ 79–86, 227–230).

Petitioner contends that Bennett-'175's disclosure "also satisfies Patent Owner's proposed construction of '*acquired via [a/the] broadcast signal.*'"

Id. at 65 (citing Ex. 1003 ¶¶ 66, 79–86, 108–118, 227–230) (alteration in original).⁶

Patent Owner contends that Bennett-'175 does not teach the parties' agreed construction of "acquired via a broadcast signal," which is "obtained by tuning a receiver to a television station signal received via an antenna or a cable." Prelim. Resp. 38. Specifically, Patent Owner contends that Petitioner has not established that Bennett-'175 discloses content that is received via an antenna or cable. *Id.* at 39. Patent Owner further argues that "the display apparatus does not receive content acquired via a broadcast signal because the signal is instead received and processed by the communication pathway 103 facility." *Id.* at 40.

We disagree that Bennett-'175 does not teach the parties' agreed construction of "acquired via a broadcast signal." Petitioner explicitly addresses the agreed-upon construction of "acquired via a broadcast signal." See Pet. 65; Ex. 1003 ¶ 230. For example, Petitioner cites to testimony (see Pet. 65) from Dr. Houh, where he testifies that "Bennett-'175 allows for any of a wide variety of sources of video to provide the video for both the PTV Remote Control and the Television system. These are shown in Figure 3A and include satellite video, cable video, UHF/VHF video, Fiber TV, and 'Internet server.'" Ex. 1003 ¶ 113 (citing Ex. 1007, 9:21–52); *see also, e.g.,*

⁶ Petitioner is referring to Patent Owner's proposed construction from the related litigation, which is the same construction agreed upon by the parties. See Ex. 1025, 4.

id. ¶ 115 (“UHF/VHF is ‘broadcast’”), ¶ 230 (citing Ex. 1007, 4:37–40, which states “[t]he TV broadcasting sources 163 include cable, fiber and satellite multiple-channel broadcast providers and single-channel broadcast stations”). Dr. Houh also testifies that “Bennett-’175 discloses that ‘STB 223 has tuners 249, which are tuned to receive the video/audio channels,’ and the STB ‘can be part of the television.’” Ex. 1003 ¶ 230 (citing Ex. 1007, 8:46–9:21). We also disagree with Patent Owner’s arguments as to the communication pathway 103 facility (see Prelim. Resp. 40–42) for the same reasons as discussed above with respect to limitation 1[E].

Independent claim 6 is similar to claims 1 and 2, but, rather than reciting a “first video content” and “second video content acquired via the internet,” claim 6 recites a “broadcast video content acquired via the video broadcast signal” and “internet video content acquired via the internet.” Ex. 1001, 22:20–56. For independent claim 6, Petitioner largely relies on its contentions for independent claims 1 and 2, and further contends that after a second Swap Command, the original broadcast video content that had been swapped to the PTV remote control is swapped back to the television system, and the internet-based video content is swapped back to the PTV remote control. *Id.* at 66–67 (citing Ex. 1007, 6:5–61, 12:48–13:41; Ex. 1003 ¶¶ 79–86, 239–244).

Independent claim 10 is similar to independent claim 1, except that it recites a first, second, and third “communication,” rather than a first, second, and third “information,” and also recites that each such “communication [is] between the mobile terminal and the information processing apparatus.” Ex. 1001, 23:42–24:9. For independent claim 10, Petitioner largely relies on its contentions for independent claim 1, and further contends that Bennett-

'175's PTV remote control and television system conduct the claimed communications, for similar reasons as set forth for independent claim 1. Pet. 68 (citing Ex. 1003 ¶¶ 79–86, 246–248; Ex. 1007, 6:45–7:62).

Independent claim 11 is similar to independent claims 1, 2, and 10, described above. Ex. 1001, 24:10–43. For independent claim 11, Petitioner relies on its contentions for independent claims 1, 2, and 10. Pet. 69.

Independent claim 15 is similar to independent claims 1, 6, and 10, described above. Ex. 1001, 25:25–26:3. For independent claim 15, Petitioner relies on its contentions for independent claims 1, 6, and 10. Pet. 69.

Patent Owner does not separately argue claims 6, 10, 11, and 15. *See generally* Prelim. Resp. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-'175 teaches the limitations in claims 2, 6, 10, 11, and 15 for purposes of institution. Accordingly, Petitioner has established a reasonable likelihood that it would prevail in showing that independent claims 2, 6, 10, 11, and 15 are unpatentable over Bennett-'175.

4. Dependent Claims 3, 7, 12, and 16

Claim 3 depends from claim 2 and recites “a video processing unit to conduct video processing to both a video content acquired via the broadcast signal and a video content acquired via the internet.” Ex. 1001, 21:38–42. Claims 7, 12, and 16 depend from claims 6, 11, and 15, respectively, and recite the same limitations. *Id.* at 22:57–61, 24:44–48, 26:4–8. Petitioner contends that Bennett-'175's processing circuitry includes the claimed video processing unit. Pet. 65–66 (citing Ex. 1007, Figs. 1, 2, 3A, 3C, 4, 4:5–65,

5:53–6:2, 9:29–40, 9:48–52, code (57), 10:7–20; Ex. 1003 ¶¶ 79–86, 231–238); *see also id.* at 67, 69 (citing Ex. 1003 ¶¶ 245, 250, 252).

Patent Owner argues that Petitioner has not demonstrated that Bennett-’175 discloses “video content acquired via a broadcast signal” based on the same arguments set forth above for claim 2. Prelim. Resp. 42–43. For the same reasons discussed above with respect to claim 2, we disagree with Patent Owner’s arguments.

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-’175 teaches the limitations in claims 3, 7, 12, and 16 for purposes of institution. Accordingly, Petitioner has established a reasonable likelihood that it would prevail in showing that independent claims 3, 7, 12, and 16 are unpatentable over Bennett-’175.

5. *Conclusion as to Ground 1*

For the reasons stated above,⁷ we conclude that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim in Ground 1.

E. *Ground 2: Obviousness Over Bennett-’175 and Yuasa*

Petitioner challenges claims 1–3, 6, 7, 10–12, 15, and 16 as obvious over Bennett-’175 and Yuasa. Pet. 76–85. Petitioner essentially relies on the same arguments as set forth for Ground 1, but alternatively relies on Yuasa for certain limitations in the independent claims. *Id.* For the reasons explained below, we are persuaded that Petitioner has established a

⁷ See Section III.H.7 below for additional discussion of Petitioner’s contentions for Ground 1.

reasonable likelihood that it would prevail with respect to at least one challenged claim.

1. Yuasa (Ex. 1008)

Yuasa generally discloses a content display-playback system. Ex. 1008, code (57). Yuasa describes that an operation control apparatus, such as an infrared remote controller, can control operations on a display-playback apparatus, such as a television. *Id.* at 19:41–20:21.

Figure 16A of Yuasa, reproduced below, shows the first part of an example process of selection of a display-playback apparatus by operation control operators.

FIG. 16A

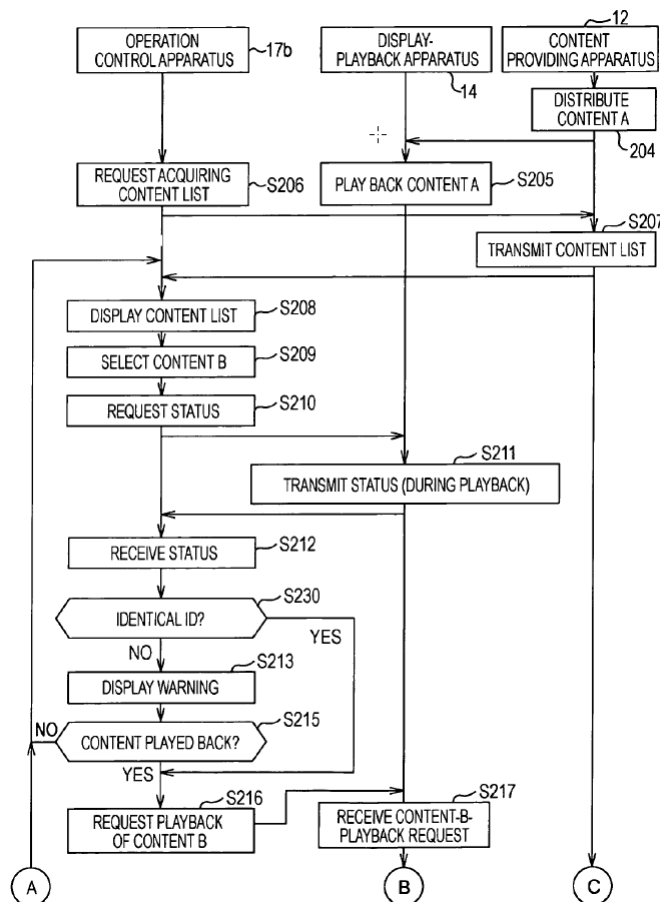


Figure 16A, depicted above, shows display playback-apparatus 14 receives video content A distributed by streaming from content providing apparatus 12, and plays back content A (s205). *Id.* at 20:51–57. Operation control apparatus 17b may be used to request and view different video content B (s206–s215) on operation control apparatus. *Id.* at 20:58–21:12. Operation control apparatus 17b may also request playback of content B on display play-back apparatus 14 (s216–s217). *Id.* at 21:31–49.

Figure 16B of Yuasa, reproduced below, shows the second part of an example process of selection of a display-playback apparatus by operation control operators.

FIG. 16B

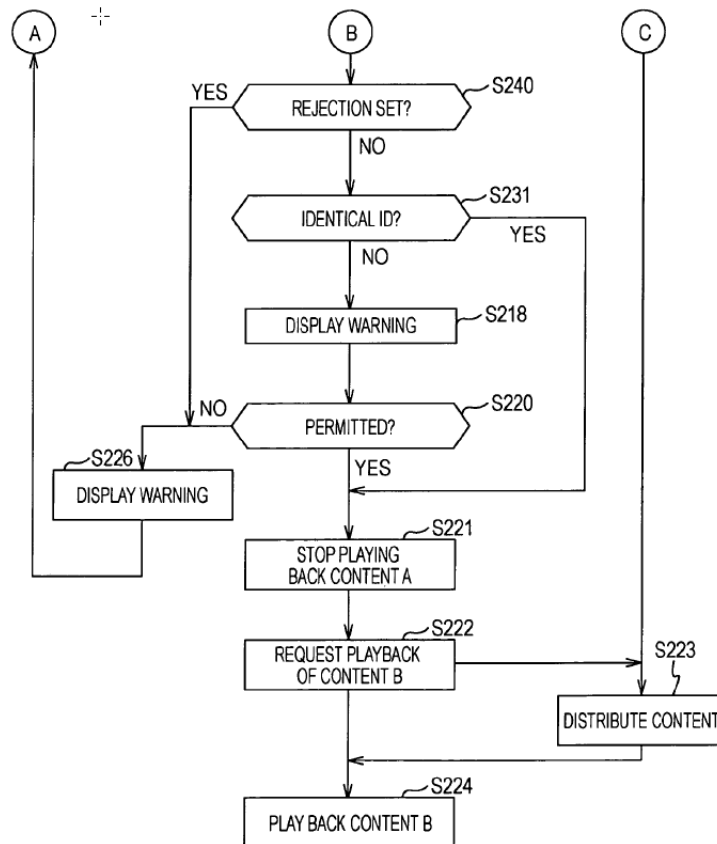


Figure 16B, depicted above, shows that display-playback apparatus 14 stops playing content A (s221) and starts playing content B (s222). *Id.* at 21:67–22:8.

Yuasa also describes playback operation signals for playing back, stopping, and pausing content on the display of the operation control apparatus 17 and on the display-playback apparatus 14. *Id.* at 12:39–45.

2. *Independent Claims 1, 2, 6, 10, 11, and 15*

Petitioner contends that, if Patent Owner argues that Bennett-’175 does not teach limitations [G] and [H] in the independent claims because it does not expressly recite certain actions such as “pause,” “play,” or “stop,” then Yuasa expressly discloses them. Pet. 76.

Specifically, for limitation [G] Petitioner contends that Yuasa discloses sending operation signals from operation control apparatus 17, which include signals for “starting, stopping, and pausing playback” of video content, which are generated in control signal generation unit 62 of operation control apparatus 17 and communicated over a network to communication interface 40 of display-playback apparatus 14. *Id.* at 79 (citing Ex. 1008, 12:23–66, 11:10–15, 11:29–36, 10:24–37, 10:3–13; Ex. 1003 ¶¶ 87–88, 265–285). Petitioner further contends that CPU 46 of display-playback apparatus 14 receives the operation signal and controls the display of video content on LCD 44, such as by pausing playback of the video content. *Id.* at 80 (citing Ex. 1008, 12:39–45, 10:3–13, 9:53–64; Ex. 1003 ¶¶ 87–88, 265–285).

For limitation [H], Petitioner contends that Yuasa discloses sending an operation signal that causes CPU 46 to stop the display of video content on LCD 44, and alternatively discloses a “power off” operation signal that a

person of ordinary skill in the art would have understood, or found obvious, to be sent from operation control apparatus 17. *Id.* (Ex. 1008, Fig. 1, 12:39–56, 10:3–13; Ex. 1003 ¶¶ 87–88, 265–289).

Petitioner further provides, supported by the testimony of Dr. Houh, reasons why it would have been obvious to one of ordinary skill in the art to modify Bennett-'175 in view of Yuasa with a reasonable expectation of success. *Id.* at 80–85. Petitioner explains that “[t]he proposed combination combines Bennett-'175 with the well-known functionality disclosed in Yuasa of ‘starting, stopping, and pausing playback’ of video content.” *Id.* at 80–81 (citing Ex. 1008, 10:3–5, 11:29–36, 12:23–65; Ex. 1003 ¶¶ 87, 88, 265–270, 290). For example, Petitioner contends that “[i]t was well-known for mobile devices to control video on televisions by pausing, playing, and stopping video,” and a person of ordinary skill in the art “would have understood the advantages that this functionality provides (e.g., ‘time shifting’) and that it would have complemented Bennett-'175’s buffering internet video for later playback, and sampling and surfing the video offerings.” *Id.* at 81–82 (citing Ex. 1003 ¶¶ 87, 88, 265–270, 290–293). Petitioner also contends that another reference, Bennett-'144,⁸ which incorporates Bennett-'175 by reference, and has a highly similar disclosure to Bennett-'175, provides additional suggestion and motivation to combine. *Id.* at 82–83 (citing, e.g., Ex. 1003 ¶¶ 87, 88, 92–94, 265–270, 290–292, 294–305; Ex. 1006 ¶ 28). Petitioner further contends that the combination involves the use of a known technique (Yuasa’s operation signals to control display of video content) to improve a similar device (providing Bennett-

⁸ Bennett et al., US 2007/0165144 A1 (published July 19, 2007) (Bennett-'144) (Ex. 1006).

'175's PTV remote control and television system with "time shifting" capabilities) in the same way (i.e., modifying Bennett-'175's "control operation" commands and related functionality to include and implement Yuasa's operation signals). *Id.* at 83 (citing Ex. 1003 ¶¶ 87, 88, 265–270, 290–292, 309–310). Petitioner also provides various reasons why a person of ordinary skill in the art would have had a reasonable expectation of success, including that both Yuasa and Bennett-'175 use well-known, conventional architectural elements that all perform their intended functions, and including Yuasa's operation signals in Bennett-'175's "control operation" commands would have been a matter of routine skill and understanding to a person of ordinary skill in the art. *Id.* at 84 (citing, e.g., Ex. 1003 ¶¶ 87, 88, 265–270, 290–292, 311–315).

Patent Owner argues that Yuasa does not disclose "[E] displaying a second video content acquired **via the internet . . . [F] wherein the second video content is a same video content as a video content displayed on the mobile terminal.**" Prelim. Resp. 43. However, Petitioner does not rely on Yuasa to teach these limitations. *See* Pet. 76–85. Rather, as set forth above, Petitioner relies on Yuasa to bolster its contentions for limitations [G] and [H]. *See id.* at 76. Petitioner states that "the proposed combination combines Bennett'175 with the well-known functionality disclosed in Yuasa of 'starting, stopping, and pausing playback' of video content." *Id.* at 80–81. Therefore, Patent Owner's arguments are not responsive to Petitioner's contentions. Similarly, Patent Owner's arguments that Yuasa does not disclose that the "communication unit receives the second information from the mobile terminal" (limitation [G]) and "terminate displaying of the second video content when the communication unit receives third

information from the mobile terminal” (limitation [H]) are also nonresponsive, as Yuasa is not relied upon to disclose these portions of limitations [G] and [H]. *E.g., id.* at 84 (“Including Yuasa’s Operation Signals in Bennett-’175’s ‘control operation’ commands would have been a matter of routine skill and understanding to a [person of ordinary skill in the art], as Bennett-’175’s Processing Circuitry would have been able to process Yuasa’s Operation Signals”).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-’175 and Yuasa teach the limitations in independent claims 1, 2, 6, 10, 11, and 15 and that Petitioner has provided an articulated reason to combine the references with a reasonable expectation of success. Accordingly, Petitioner has established a reasonable likelihood that it would prevail in showing that independent claims 1, 2, 6, 10, 11, and 15 are unpatentable over Bennett-’175 and Yuasa.

3. Remaining Claims in Ground 2

Aside from the differences set forth above for the independent claims, i.e., the combination with Yuasa for limitations [G] and [H], Petitioner’s contentions for claims 3, 7, 12, and 16, are the same as set forth above for Ground 1. Accordingly, Petitioner has established a reasonable likelihood that it would prevail in showing that claims 3, 7, 12, and 16, are unpatentable over Bennett-175 and Yuasa for the same reasons as set forth above for Ground 1.

4. Conclusion as to Ground 2

For the reasons stated above, we conclude that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim in Ground 2.

F. Ground 3: Obviousness Over Bennett- '175, Yuasa, and Cho

Petitioner challenges claims 1–18 as obvious over Bennett- '175, Yuasa, and Cho. Pet. 85–93. Petitioner relies on the same arguments as set forth for Grounds 1 and 2, but also relies on Cho to teach certain limitations not recited in those claims. *Id.* For the same reasons as set forth for Grounds 1 and 2, as well as the reasons explained below, we are persuaded that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim.

1. Cho (Ex. 1009)

Cho generally describes a method and device for switching a media renderer to another media renderer while a client performs streaming playback of content. Ex. 1009, code (57). Figure 2 of Cho, reproduced below, shows a method of switching media renderers according to an exemplary embodiment.

FIG. 2

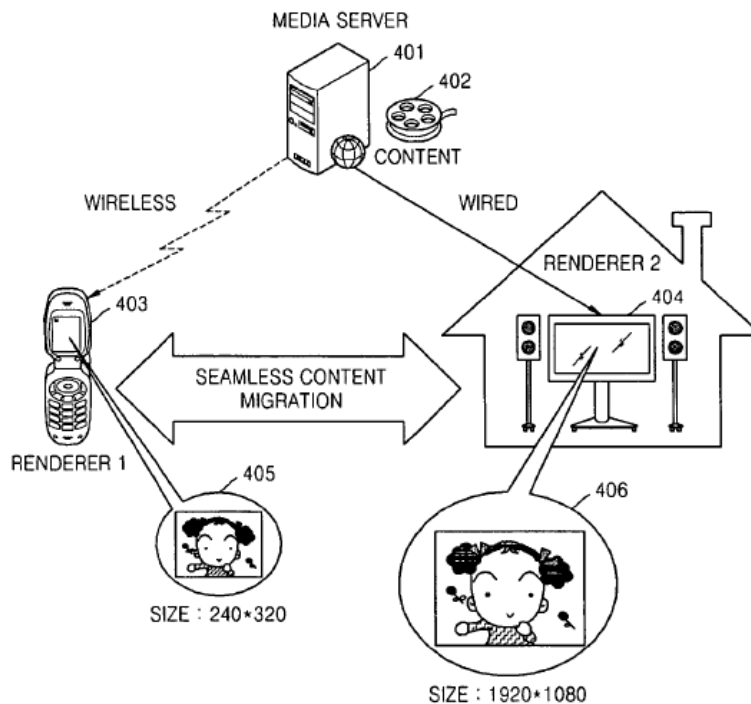


Figure 2, above, illustrates that “[w]hen a user arrives home during streaming playback of content 402 of a media server 401 using a mobile phone 403, the user transmits playback environment information of the content 402 to a digital television (DTV) 404 by using a specific button of the mobile phone 403.” *Id.* at 4:21–25. “The playback environment information may include information about a uniform resource locator (URLS) of the content, volume, caption setting, and the like.” *Id.* at 4:25–28. “The DTV 404 which receives the playback environment information performs streaming playback of the content 402 of the media server 401 by using the URL of the content 402.” *Id.* at 4:28–31.

Cho describes that:

At first, in the first renderer 510, the streaming unit 513 receives the content from the server 520 and performs

streaming playback of the content. The generator 511 generates playback environment information which specifies a current playback environment of the first renderer 510 that performs streaming playback. That is, *the playback environment information may include information about a current playback position, volume, caption setting, a URL of the currently played content, authentication information for access to the currently played content, and the like.* The transmitter 512 transmits the playback environment information generated by the generator 511 to the second renderer 530.

Id. at 5:24–35 (emphasis added); *see also id.* at 6:32–39 (“The message . . . includes playback environment information contextInfo and authentication information authenticationInfo for access to the corresponding streaming”).

2. Analysis

Petitioner asserts that challenged claims 4, 5, 13, 14, 17, and 18, which are not challenged in Grounds 1 and 2, are substantively identical to claims 2, 3, 5, 6, 11, 12, 15, and 16 except for limitations relating to “login authentication” information provided in the “first” “information”/ “communication” and limitations requiring the “control unit” to control the “communication unit” in claims 8 and 17. Pet. 85. Petitioner, therefore, relies on its contentions for Grounds 1 and 2, and adds the functionality disclosed in Cho to teach the claimed “login authentication” information and relies on Bennett-’175 to teach the disclosure of the “communication unit” in claims 8 and 17. *Id.* at 85–86. Petitioner also asserts that “if Patent Owner argues that a ‘mobile terminal’ requires a mobile phone, Cho expressly discloses it.” *Id.* at 85 (citing Ex. 1003 ¶¶ 89–91, 316–321) (emphasis omitted).

Petitioner contends that Bennett-'175 discloses limitation C in independent claims 8 and 17, which recites “a control unit arranged to control the communication unit and the display unit.” Ex. 1001, 23:1–2, 26:16–17. Petitioner contends that a person of ordinary skill in the art “would have understood Bennet-'175 to disclose Processing Circuitry 191 controlling itself and its Communication Interfaces 171 (“communication unit”) to communicate with, e.g., the PTV Remote Control and Internet Servers.” Pet. 86 (citing Ex. 1007, Fig. 1, 5:49–50, 5:53–55, 6:17–21, 6:26–31, 6:49–55, 9:22–32; *see also* Ex. 1001, 5:57–61, Ex. 1003 ¶¶ 89–91, 316–323).

Petitioner further contends that Cho teaches limitation [E] in claims 4, 5, 8, and 9, which recites “(1) ‘*first information*’ that includes ‘*information relating to that the mobile terminal logs in to [said/the] internet site*’ and (2) ‘*second video content is a same video content as a video content which can be acquired by the mobile terminal after login authentication of said internet site.*’” *Id.* Petitioner similarly contends that Cho teaches limitation [E] in claims 13, 14, 17, and 18, which “appear[s] to require the ‘*first communication*’ to occur while the mobile terminal is already logged into an internet site (‘*when a first communication between the mobile terminal and the display apparatus is conducted during the mobile terminal logs in to said internet site*’).” *Id.* at 86–87 (citing Ex. 1001, 24:63–65; Ex. 1003 ¶¶ 89–91, 316–321, 324–331).

Petitioner contends that “Cho discloses that Renderer 1 sends Playback Environment Information (‘*first*’ ‘*information*’/‘*communication*’) to Renderer 2—allowing Renderer 2 to access the video content and continue to display it from the point that Renderer 2 left off.” *Id.* at 88

(citing Ex. 1009, code (57), 4:18–41, 5:24–35, 6:32–44, Figs. 2, 5, 6; Ex. 1003 ¶¶ 89–91, 316–321, 324–331). Petitioner further contends that Cho’s playback environment information includes “a URL of the currently played content” and “authentication information for access to the currently played content,” which discloses “*information relating to that the mobile terminal logins.*” *Id.*; see also Ex. 1009, Fig. 6, element 705. Petitioner asserts that “both Renderers can acquire internet-based video content (*‘video content which can be acquired by the mobile terminal after login authentication of said internet site’*).” Pet. 88–89 (citing Ex. 1009, Fig. 6). Petitioner further asserts that a person of ordinary skill in the art “would have understood Cho’s Renderer 1 is authenticated and logged into the internet site when it sends the Playback Environment Information/Migrate Content Message to Renderer 2 (*‘when a first communication between the mobile terminal and the display apparatus is conducted during the mobile terminal logins to said internet site’*).” *Id.* at 89–90 (citing Ex. 1009, Fig. 6; Ex. 1003 ¶¶ 89–91, 316–321, 324–331).

Petitioner, therefore, combines Cho’s “authentication” and “URL” functionality with Bennett-’175’s system. *Id.* at 85. Petitioner asserts that “Cho bolsters Bennett-’175 by explicitly disclosing sending authentication and URL information in the ‘first information’ to effectuate ‘seamless content migration.’” *Id.* (citing Ex. 1003 ¶¶ 89–91, 316–321) (emphasis omitted); see *id.* at 86–90. Petitioner provides reasons, including those discussed in connection with Grounds 1 and 2, supported by the testimony of Mr. Houh, why it would have been obvious to one of ordinary skill in the art to combine Bennett-’175, Yuasa, and Cho. *Id.* at 90–92. For example, Petitioner contends that a person of ordinary skill in the art would have

known that login authentication was used by internet-based video content providers, and would have been motivated to incorporate Cho's URL and login information into Bennett-'175 because it would have allowed Bennett-'175's television system to access the commercial, internet-based repositories of internet content available at the time, such as Netflix. *Id.* at 91 (citing Ex. 1003 ¶¶ 89–91, 316–321, 341; Ex. 1013, code (57), 1:5–15, 3:41–54). Petitioner also points to the similarities between the disclosures in Bennett-'175 and Cho. *Id.* at 91–92. Petitioner also contends that a person of ordinary skill in the art would have recognized the combination as use of a known technique (Cho's use and transmission of URL and authentication information) to improve a similar device (Bennett-175's PTV remote control and television system) in the same way (i.e., modifying Bennett-'175's Swap Command information and related functionality to provide URL and authentication information). *Id.* at 92 (citing Ex. 1007, 4:33–36, 6:45–61; 7:23–62, 11:19–21; Ex. 1003 ¶¶ 89–91, 316–321, 341, 342). In addition, Petitioner provides several reasons why a person of ordinary skill in the art would have had a reasonable expectation of success in making the combination, for example, that Cho's URL and authentication information is consistent with the type of information that Bennett-'175's PTV remote control sends as part of the Swap Command to “access and display” video content. *Id.* at 92–93.

Patent Owner does not separately argue Ground 3. *See* Prelim. Resp. 50. Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Bennett-'175, Yuasa, and Cho teach the limitations in claims 1–18 for purposes of institution, and has provided articulated reasons for the combination with a reasonable

expectation of success. Accordingly, Petitioner has established a reasonable likelihood that it would prevail in showing that independent claims 1–18 are unpatentable over Bennett-’175, Yuasa, and Cho.

3. Conclusion as to Ground 3

For the reasons stated above, we conclude that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim in Ground 3.

G. Ground 4: Obviousness Over Bennett-’175 and Cho

Petitioner challenges claims 1–18 as obvious over Bennett-’175, and Cho. Pet. 93. Petitioner relies on the same arguments as set forth for Grounds 1 and 3. *Id.* For the same reasons as set forth for Grounds 1 and 3 above, we are persuaded that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim.

H. Discretionary Denial Under 35 U.S.C. § 314(a)

Patent Owner contends that we should exercise our discretion to deny institution under 35 U.S.C. § 314(a) in light of the related litigation. Prelim. Resp. 14–19. Patent Owner contends that the factors identified in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”), weigh in favor of exercising our discretion to deny institution. *Id.* Petitioner argues that there is no basis to exercise our discretion to deny institution because the Petition presents a “compelling, meritorious challenge.” Pet. 93.

On June 21, 2022, the Director of the U.S. Patent and Trademark Office (“USPTO”) issued a Memorandum titled “Interim Procedure for

Discretionary Denials in AIA Post-Grant Proceedings With Parallel District Court Litigation” (“Interim Procedure”), which provides several clarifications to the application of the *Fintiv* factors when there is parallel litigation. Interim Procedure 2; *see also CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 (PTAB Feb. 27, 2023) (precedential) (“*CommScope*”) (the Board should engage in the compelling merits question only if *Fintiv* factors 1–5 favor discretionary denial).

We consider the facts and circumstances before us in view of the *Fintiv* factors and the Interim Procedure and determine that the circumstances presented here do not support exercising discretion under § 314(a) to deny institution of *inter partes* review because Petitioner has presented a compelling unpatentability challenge.

1. *Factor 1 – whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

As stated above, the parties are currently engaged in related litigation in district court involving the ’369 patent. Petitioner has not filed a motion to stay the related litigation. Prelim. Resp. 15. Given the particular circumstances of this case, we lack sufficient information to determine, at this stage, the likelihood that the district court might grant a motion to stay, should one be requested. *See Sand Revolution II, LLC v. Cont’l Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative) (“*Sand Revolution*”). Accordingly, we determine that this factor does not weigh either for or against exercising our discretion to deny institution in this case. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 11–12 (PTAB May 13, 2020) (informative) (“*Fintiv II*”) (“Neither party has requested a stay of the District Court case pending in this

proceeding. Thus, the District Court has not ruled on this issue This factor does not weigh for or against discretionary denial in this case.”).

2. *Factor 2 – proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision*

In the Petition, Petitioner presents evidence of time-to-trial statistics, and states that the trial date in the related litigation would be no earlier than the second quarter (April, May, or June) of 2024 because “patent cases in this District currently average approximately 15 months between a Markman **order** (not hearing) and trial.” Pet. 94 (citing Ex. 1024). After the Petition was filed, a claim construction order issued in the related litigation on December 21, 2022, and the district court scheduled a trial date for January 23, 2024.⁹ Exs. 2001, 2002. Patent Owner asserts that the trial date is scheduled three months before the Board’s expected date of April 2024 for a final written decision. Prelim. Resp. 16 (citing Ex. 2002). According to Patent Owner, “there is no indication that the trial will be delayed.” *Id.*

We are presented with a scheduled trial date of January 23, 2024, or a projected date using Petitioner’s time-to-trial statistics, which results in an approximate trial date of March 2024 (fifteen months after the claim construction order), both of which are prior to the projected date for final written decision of April 2024. “If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution.” *Fintiv* at 9; *see also Fintiv II* at 13 (trial scheduled to begin two months before deadline to reach final decision weighs “somewhat in favor” of discretionary denial). Under

⁹ The Scheduling Order issued on December 28, 2022. Ex. 2002.

these circumstances, we find that this factor weighs somewhat in favor of exercising discretion to deny institution.

3. *Factor 3 – investment in the parallel proceeding by the court and the parties*

Patent Owner argues that the parties and the district court have already invested significantly in the related litigation, including serving and responding to discovery. Prelim. Resp. 17. In addition, the parties have already briefed and argued claim construction, and the district court has already issued a claim construction order. See Ex. 2001; Prelim. Resp. 17. Petitioner contends that the related litigation is still in its very early stages. Pet. 94. We agree with Petitioner—much remains to be done; for example, fact discovery is ongoing, and expert reports and dispositive motions are not yet due. See Ex. 2002. The district court and the parties have not substantively addressed invalidity. See *id.* (setting a June 20, 2023 date for exchanging expert reports). Thus, although the parties and the district court have invested effort in the related litigation to date, further effort remains to be expended before trial. Based on these facts, we determine that this factor weighs only marginally, if at all, in favor of exercising discretion to deny institution. See *Sand Revolution* at 10–11.

4. *Factor 4 – overlap between issues raised in the petition and in the parallel proceeding*

Patent Owner argues that the claims challenged in the present proceeding “include” the claims asserted against Petitioner in the related litigation, and the prior art relied upon is the same. Prelim. Resp. 17–18. Patent Owner also argues that Petitioner has not provided a *Sotera* stipulation. *Id.* at 18. Petitioner argues that claims 4–9 and 13–18, which

are challenged in the Petition, have not been asserted in the related litigation. Pet. 95. Petitioner does not further elaborate on the alleged lack of overlap with issues raised in the related litigation. Although a number of claims challenged here are not asserted in the related litigation, we note that the same prior art is asserted. See Ex. 2003, 4. Further, although there may be some differences in the claims that are not asserted in the related litigation, particularly claims 4, 5, 13, and 14, the present record does not establish that these differences are substantial enough to mitigate concerns of duplicative efforts, or concerns of potentially conflicting decisions. See *Sand Revolution* at 12; *Cisco Sys., Inc. v. Oyster Optics LLC*, IPR2021-00238, Paper 10 at 16 (PTAB June 1, 2021) (“The mere fact, however, that one claim being challenged here is not being asserted in the district court litigation without any explanation of why the lack of challenge of that particular claim in the district court is significant is not enough to favor institution.”). As Patent Owner notes, Petitioner has not filed any stipulation, *Sotera* or otherwise. In light of the particular facts and circumstances of this case, we find that this factor weighs in favor of exercising our discretion to deny institution.

5. *Factor 5 – whether the petitioner and the defendant are the same in the parallel proceeding*

The parties in this proceeding are identical to the parties in the related litigation. Therefore, this factor weighs in favor of exercising our discretion to deny institution.

6. *Summary Regarding Fintiv Factors 1–5*

In summary, factors 2, 4, and 5 weigh in favor or somewhat in favor of exercising our discretion to deny institution, factor 3 weighs marginally, if

at all, in favor of exercising our discretion to deny institution, and factor 1 is neutral. Weighing these factors as a whole, we determine that these factors weigh in favor of exercising our discretion to deny institution.

7. *Factor 6 – other circumstances that impact the Board’s exercise of discretion, including the merits*

Because we find that *Fintiv* factors 1–5 weigh in favor of exercising our discretion to deny institution, we must determine whether Petitioner has presented a compelling unpatentability challenge. *CommScope*, Paper 23 at 4–5. “[C]ompelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel.” Interim Procedure 4. “Compelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Id.* The Director has stated:

To be clear, a compelling-merits challenge is a higher standard than the reasonable likelihood required for the institution of an IPR under 35 U.S.C. § 314(a). A challenge can only “plainly lead to a conclusion that one or more claims are unpatentable” if it is highly likely that the petitioner would prevail with respect to at least one challenged claim. I recognize that all relevant evidence likely will not have been adduced at the point of institution; trial should produce additional evidence that may support a determination in the Final Written Decision that unpatentability has not been adequately proven. Thus, a determination of “compelling” merits should not be taken as a signal to the ultimate conclusion after trial. The Board shall provide its reasoning in determining whether the merits are compelling.

OpenSky Indus., LLC v. VLSI Tech. LLC, IPR2021-01064, Paper 102 at 49–50 (PTAB Oct. 4, 2022) (precedential).

We determine, based on the present record, that, for Ground 1, Petitioner has set forth a compelling unpatentability challenge to claim 1. We incorporate our discussion above in Section III.D, and add the following.

We determine that, on the current record, Petitioner has plainly shown that Bennett-'175 teaches the preamble. For example, as set forth above, Petitioner has shown that Bennett-'175's television system 105 can process and display video acquired via the Internet and/or broadcast sources. *See, e.g.*, Ex. 1007, Fig. 1, elements 101 (video sources), 105, 163 (broadcasting), 187, 191, Fig. 3A (showing remote video sources 303, including satellite provider 311, cable provider 312, UHF/VHF stations 313, fiber TV provider 314, internet server 315), 4:16–18 (“various local and remote video sources for delivering video for display on both the remote control and television screens”). Patent Owner's Preliminary Response did not challenge Petitioner's assertions as to the preamble. *See generally* Prelim. Resp. Our review of the preamble set forth that Petitioner's contentions support institution, and based on the current record, we also determine that it is highly likely that Petitioner would prevail in showing that Bennett-'175 teaches the preamble.

We determine that, on the current record, Petitioner has plainly shown that Bennett-'175 teaches limitation 1[A]. For example, as set forth above, Petitioner has shown that communication interfaces 171 and processing circuitry 191 in television system 105 communicates with PTV remote control 107 through communication pathway 103. *See, e.g.*, Ex. 1007, Fig. 1, 5:14–21 (“[t]he PTV remote control 107 and the television system 104 communicate via a communication interface 147 that supports both wireless 143 and wired 145 communication according to proprietary and industry

standard protocols making up the communication pathway 103”), 5:53–55 (“the processing circuitry 191 of the television system 105 receives video and audio signals via one or more of the communication interfaces 171”); 6:17–21 (“[t]he processing circuitry 125 responds to the second command by delivering the second command to the processing circuitry 191 via the communication interfaces 147 and 171 and the communication pathway 193”). Patent Owner’s Preliminary Response did not challenge Petitioner’s assertions as to limitation 1[A]. *See generally* Prelim. Resp. Our review of limitation 1[A] set forth that Petitioner’s contentions support institution, and based on the current record, we also determine that it is highly likely that Petitioner would prevail in showing that Bennett-’175 teaches limitation 1[A].

We determine that, on the current record, Petitioner has plainly shown that Bennett-’175 teaches limitation 1[B]. For example, as set forth above, Petitioner has shown that Bennett-’175’s television system 105 includes video screen 187 that displays video content. *See, e.g., id.* at Fig. 1, elements 105, 187, 189, 5:56–57 (“The processing circuitry 191 delivers received video to the television screen 187 via a video driver 189 . . .”). Patent Owner’s Preliminary Response did not challenge Petitioner’s assertions as to limitation 1[B]. *See generally* Prelim. Resp. Our review of limitation 1[B] set forth that Petitioner’s contentions support institution, and based on the current record, we also determine that it is highly likely that Petitioner would prevail in showing that Bennett-’175 teaches limitation 1[B].

We determine that, on the current record, Petitioner has plainly shown that Bennett-’175 teaches limitation 1[C]. For example, as set forth above,

Petitioner has shown that Bennett-'175's processing circuitry 191 "receives video and audio signals via one or more of the communication interfaces 171," "delivers received video to the television screen 187 via a video driver 189," "uses program code stored within the memory 177 to conduct video processing, and to carry out commands received from the PTV remote control 107." *See, e.g., id.* at 5:49–6:61. Patent Owner's Preliminary Response did not challenge Petitioner's assertions as to limitation 1[C]. *See generally* Prelim. Resp. Our review of limitation 1[C] set forth that Petitioner's contentions support institution, and based on the current record, we also determine that it is highly likely that Petitioner would prevail in showing that Bennett-'175 teaches limitation 1[C].

We determine that, on the current record, Petitioner has plainly shown that Bennett-'175 teaches limitation 1[D]. For example, as set forth above, Petitioner has shown that Bennett-'175's processing circuitry 191 "delivers received video to the television screen 187 via a video driver 189," e.g., "video channel broadcasts from the TV broadcasting 163 of the video sources 101." *See, e.g., id.* at 5:56–57, 6:5–8, Fig. 1. Patent Owner's Preliminary Response did not challenge Petitioner's assertions as to limitation 1[D]. *See generally* Prelim. Resp. Our review of limitation 1[D] set forth that Petitioner's contentions support institution, and based on the current record, we also determine it is highly likely that Petitioner would prevail in showing that Bennett-'175 teaches limitation 1[D].

We determine that, on the current record, Petitioner has shown that Bennett-'175's Swap Command plainly discloses limitation 1[E]. For example, Bennett-'175 generally describes the swap as follows:

With the PTV remote control 107 in hand in a local premises, a first viewer watches video from a first channel being displayed on the PTV remote video screen 121, while a second viewer watches a second channel, that had been previously viewed on and selected via the PTV remote control 107, on the television video screen 187. Using a swap command delivered via one of a plurality of input interfaces 127, the first viewer may then cause the television video screen 187 to display the first channel, while the PTV remote video screen 121 displays the second. The PTV remote control 107 may also be used to view a media guide or listing from which a particular program or channel may be selected for viewing on either or both of the screens 121 and 187.

Id. at 5:1–13. As set forth by Petitioner, Bennett-'175's communication interfaces 171 and processing circuitry 191 of television system 105 receive all necessary identifiers associated with the video source being displayed on the PTV remote video screen, and the processing circuitry 191 uses the identifiers to access and display the corresponding video to the television video screen 187, thus terminating the first content displayed on the television video screen. *See id.* at 6:54–57 (“Upon receipt of the identifiers, the processing circuitry 125 sends all necessary of such types of identifiers associated with the video being displayed on the PTV remote video screen 121 to the processing circuitry 191”); 6:57–61 (“the processing circuitry 125 and 191 use the exchanged identifiers to access and display the corresponding video and playback the associated audio”), 11:62–67 (“the state of the PTV remote goes to state 719, which determines whether to perform channel swapping to change the channel on the television system. If the choice is selected to be yes, the channel on the PTV screen is swapped to the main screen at state 721, otherwise the old channel is continued at state 725”). As set forth in the discussion of recitation 1[PRE], the video

content may be acquired via the Internet. *See, e.g., id.* at Fig. 3A, element 315 (internet server).

Patent Owner's arguments regarding limitation 1[E] were discussed above in Section III.D.2.f, i.e., that Petitioner has not established that Bennett-'175 teaches the "communication unit receives first information from the mobile terminal." We set forth the reasons, including citations to the Petition and to Dr. Houh's testimony, as to why we disagree with Patent Owner that Petitioner fails to discuss the combination of the processing circuitry and communication interfaces (the "communication unit") in the Petition. As discussed above, we also are not persuaded by Patent Owner's arguments that the processing circuitry and communication interfaces do not receive the information, but, rather, the communication pathway 103 receives it. *See* Prelim. Resp. 32–34. Bennett-'175 states "if there is any control information to be exchange[d] between PTV remote control 107 and the television system 105, the communication pathway establishes a link (both uplink and downlink) and accomplishes the interaction in terms of the exchange of the control information." Ex. 1006, 7:56–60. Figure 1 of Bennett-'175 further clearly depicts that the communication pathway 103 links the communication interfaces 147 of the PTV remote control 107 and the communication interfaces 171 of the television system 105, thus showing that it is a *pathway* for the PTV remote control and the television system 105 to receive information. Viewing the evidence under the compelling-merits standards, we conclude that it is highly likely that Petitioner would prevail regarding limitation 1[E], based on Bennett-'175's plain disclosures that communication interfaces 171 and processing circuitry 191 receive

information (i.e., all necessary identifiers associated with the video source being displayed on the PTV remote video screen).

We determine that, on the current record, Petitioner has shown that Bennett-'175's Swap Command plainly discloses limitation 1[F], for the same reasons as set forth above in limitation 1[E]. In addition, Bennett-'175 discloses that PTV remote control is in a first state 713, displaying a selected channel on the PTV remote control screen, then the PTV remote control goes to state 719, which determines whether to perform channel swapping to change the channel on the television system, and if yes, then the channel on the PTV remote control screen is swapped to the television screen at state 721. *Id.* at 11:51–67. Patent Owner's Preliminary Response did not challenge Petitioner's assertions as to limitation 1[F]. *See generally* Prelim. Resp. Our review of limitation 1[F] set forth that Petitioner's contentions support institution, and based on the current record, we also determine that it is highly likely that Petitioner would prevail in showing that Bennett-'175 teaches limitation 1[F].

We determine that, on the current record, Petitioner has shown that Bennett-'175's plainly discloses limitation 1[G]. For example, Bennett-'175 discloses that, after the Swap Command is performed, commands from the PTV remote control can be directed to the television, including the selection and display of media guides and video selections on the television system's video screen, which plainly teaches “operating the second video content displayed.” *Id.* at 8:24–27; *see also id.* at 8:30–31 (“the viewer may select one of the buttons 235 to indicate that the subsequent commands will be directed to the television”). Bennett-'175 also describes that, after the swap has occurred, the PTV remote control may enter state 811, the device control

mode, and may subsequently control, for example, the television set. *See id.* at Fig. 8, 12:23–24. Petitioner, supported by the testimony of Dr. Houh, identifies a number of examples of “control operations” disclosed by Bennett-’175. *See* Pet. 54 (citing Ex. 1003 ¶¶ 179–191, 198). Although Patent Owner challenged whether Bennett-’175’s examples teach “operating the second video content displayed,” Patent Owner did not substantively address why these examples do not teach this limitation. *See* Prelim. Resp. 35–38. Viewing the evidence under the compelling-merits standard, we conclude that it is highly likely Petitioner would prevail regarding limitation 1[G] based upon Bennett-’175’s disclosure, supported by the expert testimony relied upon by Petitioner.

We further find that, on the current record, Petitioner’s alternative contentions plainly teach this limitation, i.e., that Bennett-’175’s disclosures of video streaming related capabilities such as media storage, buffering, internet download, video-on-demand, non-real time playback, surfing, sampling and the ability to control various devices render obvious the PTV remote control’s ability to send, and the television system’s ability to receive and execute commands to, for example, pause, fast-forward, rewind, or stop video. Pet. 54–56. For example, we find persuasive Petitioner’s contentions, supported by Dr. Houh’s testimony, that such pause, fast-forward, rewind, or stop commands were commonly used for video streaming, and that Bennett-’175’s PTV remote control would be understood to support these types of typical actions. *See id.* at 55–56 (citing Ex. 1003 ¶¶ 192–202). Viewing the evidence under the compelling-merits standard, we conclude that it is highly likely Petitioner would prevail regarding these

alternative contentions to limitation 1[G] based upon Bennett-'175's disclosure, supported by the expert testimony relied upon by Petitioner.

We further determine that, on the current record, Petitioner has shown that Bennett-'175 plainly discloses limitation 1[H]. As described above in similar limitation 1[E], during a Swap Command, Bennett-'175's communication interfaces 171 and processing circuitry 191 of television system 105 receive all necessary identifiers associated with the video source being displayed on the PTV remote video screen, and the processing circuitry 191 uses the identifiers (*third information*) to access and display the corresponding video to the television video screen 187, thus terminating the video content (*second video content*) displayed on the television video screen. See Ex. 1007, 6:54–57 (“[u]pon receipt of the identifiers, the processing circuitry 125 sends all necessary of such types of identifiers associated with the video being displayed on the PTV remote video screen 121 to the processing circuitry 191”); 6:58–61 (“the processing circuitry 125 and 191 use the exchanged identifiers to access and display the corresponding video and playback the associated audio”); see also *id.* at Fig. 9 (video swap mode 919). Alternatively, as previously discussed in connection with limitation 1[G], Bennett-'175 discloses that the PTV remote control may direct commands to the television set, including relating to power management. See *id.* at 1:39–43 (“[a] typical remote control . . . has a series of predefined buttons that, when selected, directly interact with a corresponding TV . . . to perform a variety of tasks such as changing channels, adjusting TV settings, and controlling power to the TV”), 5:66–6:3 (“[t]he processing circuitry 191 uses program code stored within the memory 177 to conduct video processing and to carry out commands

received from the PTV remote control”); 13:37–39 (“the power management options can be set or controlled remotely in state 921, to select the power management options”). We further agree with Petitioner that the PTV remote control sending a command (*third information*) to the television set to power off the television set terminates displaying the second video content and, therefore, teaches this limitation. Patent Owner’s Preliminary Response did not challenge Petitioner’s assertions as to limitation 1[H]. See *generally* Prelim. Resp. Our review of limitation 1[H] set forth that Petitioner’s contentions support institution, and based on the current record, we also determine that it is highly likely that Petitioner would prevail in showing that Bennett-’175 teaches limitation 1[H].

Accordingly, based on the current record, we determine it is highly likely that Petitioner will prevail in its challenge to claim 1 under Ground 1. Thus, Petitioner has set forth a compelling, meritorious challenge that, if unrebutted in trial, would plainly lead to the conclusion that at least one claim is unpatentable (based on the current record).

8. Conclusion

Although we determine that *Fintiv* Factors 1–5 favor denial of institution, we also determine that it is highly likely that Petitioner would prevail with respect to at least one challenged claim. Therefore, Petitioner presents a compelling, meritorious challenge that, if unrebutted in trial, would plainly lead to a conclusion that at least one challenged claim is unpatentable.

Accordingly, we decline to exercise our discretion to deny institution under 35 U.S.C. § 314(a). We note, however, that as additional relevant evidence is likely to be adduced at trial, this determination of compelling

merits “should not be taken as a signal to the ultimate conclusion after trial.”
OpenSky, Paper 102 at 50.

I. Discretionary Denial Under 35 U.S.C. § 325(d)

Patent Owner asserts that we should exercise our discretion under 35 U.S.C. § 325(d) to deny institution because, according to Patent Owner, Cho’s prior publication is listed on the face of the ’369 patent, Bennett-’175 was previously presented to the Office in applications related to the ’369 patent, and Yuasa is cumulative. Prelim. Resp. 20. Patent Owner further contends that Petitioner has not demonstrated error by the Office. *Id.* at 28. We decline to exercise discretion to deny institution under § 325(d) for the reasons discussed below.

1. Standards of Law

In evaluating the exercise of discretion to deny institution under Section 325(d), the Board uses a two-part framework: (1) determining whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, determining whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential).¹⁰

¹⁰ We note that *Advanced Bionics* does not expressly extend the § 325(d) inquiry to art considered in a related application.

In applying the two-part framework, we consider several non-exclusive factors, including:

- (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;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which petitioner relies on the prior art or patent owner distinguishes the prior art;
- (e) whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to Section III.C.5, first paragraph) (“*Becton, Dickinson*”). *Becton, Dickinson* factors (a), (b), and (d) relate to whether the art or arguments presented in the Petition are the same or substantially the same as those previously presented to the Office. *Advanced Bionics*, Paper 6 at 10. Factors (c), (e), and (f) “relate to whether the petitioner has demonstrated a material error by the Office” in its prior consideration of that art or arguments. *Id.* Only if the same or substantially the same art or arguments were previously presented to the Office do we consider whether the petitioner has demonstrated a material

error by the Office. *Id.* “At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Id.* at 9.

2. Analysis

Petitioner asserts that Bennett-’175 and Yuasa were not cited or submitted during prosecution of the ’369 patent. Pet. 96 (citing Ex. 1003 ¶¶ 95–101). Petitioner further argues that “[a]lthough the Applicant submitted an application related to Cho in an IDS, that application was submitted along with 66 other prior art references, it was not raised with or by the Examiner, and there is no indication that the Examiner considered it, much less in combination with other references.” *Id.* (citing Ex. 1002, 363–74; Ex. 1003 ¶¶ 95–101). In addition, Petitioner argues that the prior art cited in the Notice of Allowance is not cumulative of and is materially different than the prior art relied upon here. *Id.* at 96–98 (citing Ex. 1002, 58–59; Ex. 1003 ¶¶ 95–101).

Patent Owner contends that Cho’s prior publication US2007/0136488, (which has no substantive differences from Cho) is listed on the face of the ’369 patent and, therefore, Cho was previously presented to the Office. Prelim. Resp. 21–22. Patent Owner contends that Bennett-’175 was considered by the Examiner in two of the ’369 patent’s continuation applications, which issued as U.S. Patent Nos. 10,327,029 and 10,200,735 (“the ’029 patent” and “the ’735 patent,” respectively). *Id.* at 22 (citing Exs. 2004, 2005). According to Patent Owner, the claims of the ’369 patent are substantially similar to the ’735 and ’029 patent claims, and Patent Owner provides a chart comparing claim 1 of the ’369 patent with claim 1 of the ’735 patent. *Id.* at 22–25. Patent Owner contends that the Examiner’s

consideration of Bennett-'175 during prosecution of the applications leading to the '735 and '029 patents is relevant here. *Id.* at 26. Patent Owner also contends that although Yuasa was not previously presented to the Office, it is cumulative of prior art considered during prosecution of the '369 patent, for example, the Huang reference. *Id.* at 27.

The prosecution history of the '369 patent provides little insight into the Examiner's evaluation of the prior art. The Examiner issued one rejection under 35 U.S.C. § 112 ¶ 2 (*see* Ex. 1002, 166–68) and allowed the claims after an interview in which the applicant agreed to amend the claims and file a terminal disclaimer. *Id.* at 135, 151, 166–68. In the Notice of Allowance, the Examiner only mentions the Slotznick, Walker, and Goto references. *Id.* at 58–59. Patent Owner did not submit as evidence the prosecution histories of the '735 and '029 patents, so there is no evidence in the record as to the extent to which Bennett-'175 was evaluated, if at all. On this record, Patent Owner does not persuasively argue that the § 325(d) analysis under *Advanced Bionics* should be extended to prosecution of a child application. Nor do we discern any indication in the record that the Examiner ever considered the combination of Bennett-'175 and Cho, as in Petitioner's Ground 4, or Bennett-'175 and Huang, which Patent Owner asserts is cumulative to Yuasa.

However, even assuming, without deciding, that the first part of the *Advanced Bionics* framework is satisfied, we determine that Petitioner has shown material error under the second part of the framework. As explained above, we determine at this stage that Petitioner has sufficiently shown that the prior art relied upon in each ground teaches the limitations in the challenged claims, and that Petitioner has provided sufficient motivation to

combine the references where relevant. Petitioner has, therefore, demonstrated that the Office erred in a manner material to the patentability of the challenged claims. Moreover, our determination that, on the current record, Petitioner has provided a compelling case on the merits in its obviousness challenge to claim 1 over Bennett-'175 further supports that the Office erred in a manner material to patentability.

Accordingly, we decline to exercise our discretion to deny institution pursuant to 35 U.S.C. § 325(d).

IV. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition and Preliminary Response establishes that there is a reasonable likelihood that Petitioner would prevail in challenging at least one claim of the '369 patent. At this stage of the proceeding, we have not made a final determination with respect to the patentability of any of the challenged claims or the construction of any claim term.

V. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to all challenged claims and on all grounds raised in the Petition; and

FURTHER ORDERED that *inter partes* review is commenced on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIZIO, INC.,
Petitioner,

v.

MAXELL, LTD.,
Patent Owner.

IPR2022-01458
Patent 9,578,369 B2

Before JOHN A. HUDALLA, KARA L. SZPONDOWSKI,
and JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge, concurring*.

I concur with the conclusion that we should not deny institution under *Fintiv*. I would, however, reach that conclusion through a different path. As to factor 2 (the district court’s schedule), I view the record as showing the expected trial is “around the same time” as our April 2024 statutory deadline, supporting no discretionary denial. See Director’s Memo 9 (“The PTAB will weigh this factor against exercising discretion to deny institution under *Fintiv* if the median time-to-trial is around the same time or after the projected statutory deadline for the PTAB’s final written decision.”). Further, I view factors one through five together as weighing against discretionary

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denial, largely because of the expected trial date. I therefore do not believe we should address the Petition's compelling merits. In all other regards, I agree with my colleagues.

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