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Paper 11
Entered: January 7, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS INC.,
Petitioner,

v.

CONTEMPORARY DISPLAY LLC,
Patent Owner.

IPR2019-01269
Patent 8,863,219 B2

Before MICHAEL R. ZECHER, SHIELA F. McSHANE, and MICHAEL T. CYGAN, *Administrative Patent Judges*.

CYGAN, Administrative Patent Judge.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314; 37 C.F.R. § 42.4

I. BACKGROUND

A. Background and Summary

Unified Patents Inc. ("Petitioner") filed a Petition for *inter partes* review ("IPR") of claims 1–3 and 5–7 of U.S. Patent No. 8,863,219 B2 (Ex. 1001, "the '219 patent"). Paper 2 ("Pet."). Patent Owner, Contemporary Display LLC ("Patent Owner"), filed a Preliminary Response. Paper 6 ("Prelim. Resp."). Institution of an *inter partes* review is authorized by statute 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). An *inter partes* review may not be instituted on fewer than all claims challenged in the Petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

Having considered the Petition and the Preliminary Response, we conclude that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging at least one of claims 1–3 of the '219 patent as unpatentable under 35 U.S.C. § 102(b), but not in challenging claims 1–3 and 5–7 as being unpatentable under 35 U.S.C. § 103(a). Pursuant to § 314, we hereby institute an *inter partes* review as to claims 1–3 and 5–7 of the '219 patent on all grounds raised in the Petition.

B. Real Party in Interest

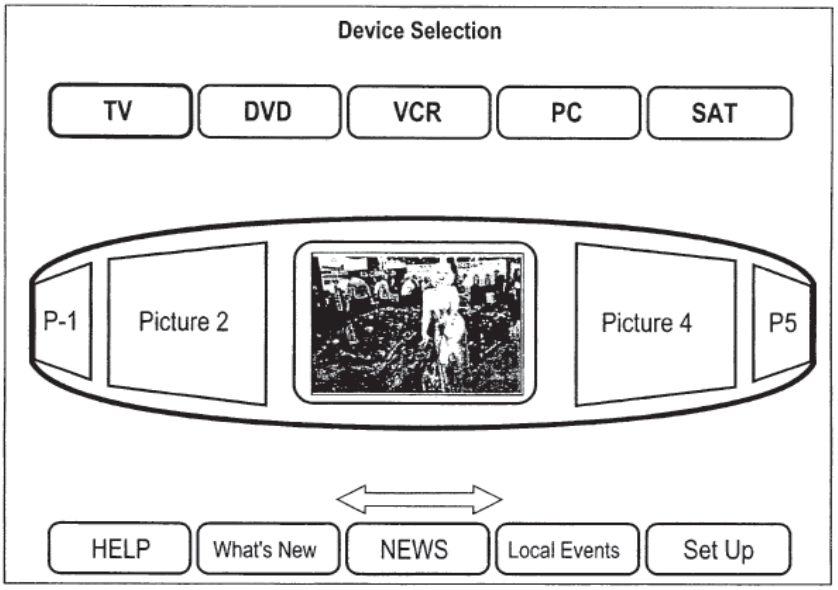
Petitioner identifies itself as the only real party in interest to this IPR petition. Pet. 1.

C. Related Matters

The parties indicate that the ’219 patent is involved in the following pending litigation: *Contemporary Display LLC v. Cox Communications, Inc*., No. 1:19-cv-00224 (D. Del., filed Feb. 1, 2019); *Contemporary Display LLC v. Verizon Communications Inc*., No. 1:19-cv-00225 (D. Del. filed Feb. 1, 2019); and *Contemporary Display LLC v. LG Electronics USA, Inc.*, No. 2:18-cv-00152 (E.D. Tex. filed Apr. 17, 2018). Pet. 1–2; Paper 3, 2.[1]

D. The ’219 Patent

The ’219 patent generally relates to an on-screen television display menu system that allows a user to select from available input sources using a graphical user interface. Ex. 1001, code (57). Figure 6A is illustrative of the graphical user interface display menu.



[1] Patent Owner’s Mandatory Notices filed in accordance with 37 C.F.R. § 42.8 does not include page numbers. We consider the Title page as page 1 and then proceed from there in numerical order.

Figure 6A portrays a display having a device selection menu that includes a top icon row of input sources, a center icon row of the content of inputs that includes video of one of the inputs, and a bottom icon row of user options. Ex. 1001, 9:1–41.

Conventional television systems identify the input sources by the television system's fixed connectors, e.g., as HDMI [high definition multimedia interface] or S-Video connectors. Ex. 1001, 1:37–50. However, those connectors may be used to connect entirely different types of devices; for example, a DVD [digital versatile disk] connector may be used to connect a cable box rather than a DVD player, either intentionally or unintentionally. *Id.* at 1:50–58. The television system of the '219 patent can embed incoming videos into the graphical user interface menu that represent the content of the signal through each connector, thus allowing the user to select the input source that the user would like to see. *Id.* at 4:36–47. Remote control commands may control the television system through its menu system, and can control other devices in the system either directly or through the television system. *Id.* at 5:35–54. The television system automatically adapts to the type of input signal selected for display; for example, the system may be connected to a personal computer having software that will recognize that a certain device, such as a USB [universal serial bus] cable, is connected. *Id.* at 11:57–64, code (57).

E. Illustrative Claims

Petitioner challenges claims 1–3 and 5–7 of the '219 patent. Claim 1, reproduced below (with identifying labels "[a]"–"[d]" added), is an independent claim and is illustrative of the subject matter of challenged claims 1–3:

> 1. A method for on-screen managing and navigating television system functionality and input source selection, the method comprising:
>
> [a] identifying each of a plurality of input signals from a plurality of input sources, each of the plurality of input sources connected to a television system, wherein each of the plurality of input signals in unique to each of the plurality of input sources, and the television system identifies each of the plurality of input signals by analyzing each of the plurality of input signals;
>
> [b] generating an on screen menu on a display device of the television system to allow selection of each of the plurality of input sources that have been identified including a display of an input source type or description that was identified wherein an input source on the on screen menu is identified by an input signal, wherein the display is a video content of the content of the input source;
>
> [c] receiving a user selection of a menu option corresponding to one of the plurality of input signals; and
>
> [d] displaying the input signal on the display device of the television system in response to the user selection.

Claim 5, reproduced below, is an independent claim and it is illustrative of the subject matter of challenged claims 5–7:

> 5. A method for on-screen managing and navigating television system functionality and input source selection, the method comprising:
>
> displaying non-computer based content on a display device of a television system through the television system, wherein the television system is configured to identify an input source of the plurality of input sources based on the input signal from the input source, wherein the display is a video content of the content of the input source, wherein each of the plurality of input signals is unique to each of the plurality of input sources, and the television system identifies each of the plurality of input signals by analyzing each of the plurality of input signals;

receiving a computer related command at the television system;

forwarding the computer command to a computer connected to the television system; and

transitioning the television system from displaying the non-computer based content to display a computer source content from the computer.

F. Prior Art Relied Upon

Petitioner relies upon the prior art references listed below. Pet. 3–4.

U.S. Patent Application Publication 2006/0064719 A1 (filed Sept. 17, 2004; published Mar. 23, 2006) ("Youden," Ex. 1004);

U.S. Patent Application Publication 2006/0164561 A1 (filed Jan. 26, 2006; published July 27, 2006) ("Lacy," Ex. 1005);

U.S. Patent Application Publication 2002/0051083 A1 (filed May 11, 2001; published May 2, 2002) ("Aratani," Ex. 1006);

IEEE Standard for a High Performance Series Bus 1394-1995 (Instit. Electr. and Electr. Eng'rs, Inc. 1996) (publicly available on October 4, 1996)[2] ("IEEE 1394," Ex. 1007); and

U.S. Patent Application Publication 2008/0172504 A1 (filed Oct. 31, 2007; published July 17, 2008) ("Kimura," Ex. 1008).

Based on the current record, we determine Petitioner has made a threshold showing that these references are prior art patents or printed publications under 35 U.S.C. § 102. *See* Pet. 4–5; Ex. 1004, codes (22), (43); Ex. 1005, codes (22), (43); Ex. 1006, codes (22), (43); Ex. 1007, 1; Ex. 1008, codes (22), (43); Ex. 1011.

[2] Petitioner relies upon the testimony of Rachel Watters (Ex. 1011) in asserting that the public availability date of IEEE 1394 is October 4, 1996, which has not been challenged by Patent Owner at this stage of the proceeding. Pet. 13.

G. Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–3 and 5–7 of the '219 patent on the following grounds:

Claim(s) Challenged	35 U.S.C. §[3]	Reference(s)
1–3	102(b)	Youden
1–3	103(a)	Youden, Lacy
5, 7	103(a)	Aratani, Lacy
5, 7	103(a)	Aratani, Lacy, IEEE 1394
6	103(a)	Aratani, Lacy, Kimura

II. DISCUSSION

A. Legal Standards

1. *§ 102(b)*

A claim is unpatentable under 35 U.S.C. § 102(b) "if each and every [claim] limitation is found either expressly or inherently in a single prior art reference." *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 851 F.3d 1270, 1273 (Fed. Cir. 2017) (citation omitted). "A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly present." *Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1192 (Fed. Cir. 2003) (citing *Rosco, Inc. v. Mirror Lite, Co.*, 304 F.3d 1373, 1380 (Fed. Cir. 2002)). We analyze the asserted ground based on anticipation with these principles in mind.

[3] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), revised 35 U.S.C. §§ 102 and 103, effective March 16, 2013. Because the application from which the '219 patent issued was filed before this date, the pre-AIA versions of §§ 102 and 103 apply.

2. *§ 103(a)*

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations).[4] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze the asserted grounds based on obviousness with these principles in mind.

B. Level of Skill in the Art

Petitioner offers an assessment as to the level of skill in the art as of the time the '219 patent was filed. Pet. 18–19. Relying upon a Declaration of Dr. Anthony Wechselberger (hereinafter, the "Wechselberger Declaration"), Petitioner asserts a person of ordinary skill in the art would have possessed a "Bachelor of Science in Electrical Engineering or Computer Engineering, or the equivalent," as well as "approximately two years of experience with user interfaces as applied in the digital television or TV set-top box related fields." *Id.* (citing Ex. 1002 ¶¶ 22–26 (Wechselberger Decl.)). Patent Owner does not dispute Petitioner's

[4] Patent Owner does not identify any secondary considerations to be considered. Accordingly, we do not consider this aspect of the obviousness analysis at this stage of the proceeding.

characterization. Prelim. Resp. 1. For purposes of institution, we accept the undisputed assessment offered by Petitioner as it is supported by the Wechselberger Declaration and is consistent with the '219 patent and the asserted prior art.

C. Claim Construction

Petitioner submits that all terms of the challenged claims should be interpreted according to their plain and ordinary meaning. Pet. 19. In its Preliminary Response, Patent Owner does not specifically address the construction of the claim terms. *See generally* Prelim. Resp. The Petition was filed on June 28, 2019, after the effective date of the rule change that replaced the broadest reasonable interpretation standard. *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,340, 51,358 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)).

Accordingly, we apply the federal court claim construction standard that is used to construe a claim in a civil action under 35 U.S.C. § 282(b), construing the claim in accordance with the ordinary and customary meaning of such claim, as understood by one of ordinary skill in the art in the context of the patent, and the prosecution history pertaining to the patent, as articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). "[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy.'" *Nidec Motor Corp.*, 868 F.3d at 1017 (quoting *Vivid Techs, Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). Although the parties do not advance express constructions of any claim term, the parties' arguments regarding

patentability reflect implicit interpretations, which we address below. For the purposes of institution, however, we do not expressly construe any claim terms beyond our discussion of the parties' arguments below.

D. Asserted Anticipation over Youden

Petitioner contends that claims 1–3 of the '219 patent are unpatentable as being anticipated under 35 U.S.C. § 102(b) by Youden. Pet. 20–39. As noted by Patent Owner (Prelim. Resp. 7 n.1), the Petition erroneously titles this ground as being based upon obviousness over the combination of Youden and Lacy. Pet. 20. However, as acknowledged by Patent Owner regarding the limitation at issue (Prelim. Resp. 7 n.1), Petitioner relies only on the disclosure of Youden for this anticipatory ground of rejection. Pet. 20–39. Additionally, Petitioner's "Grounds of Challenge" list the first ground as anticipation under 35 U.S.C. § 102 by Youden. *Id*. at 4. Further evidence of the typographical nature of this error is reflected in Petitioner's characterization of the actual, separately argued obviousness ground based on Youden and Lacy as one that "includes all teachings above in [the anticipatory ground based on Youden] and additionally includes the teachings of Lacy with respect to Element [1.A.3]." *Id.* at 39. Consequently, we treat this ground as being based upon anticipation under 35 U.S.C. § 102(b) over Youden.

Petitioner contends that Youden discloses each and every limitation of claims 1–3. Pet. 20–39. Petitioner also relies upon the Wechselberger Declaration to support its positions. Ex. 1002. At this stage of the proceeding, we are persuaded by Petitioner's explanations and supporting evidence concerning claims 1–3 and the disclosure of Youden. We begin our analysis with a brief overview of Youden.

1. *Overview of Youden*

Youden relates to a method of selecting video content to be displayed from among a plurality of video inputs. Ex. 1004, code (57). The video content from all video inputs is simultaneously displayed, permitting a user to select from among the inputs. *Id.* Figure 4 is illustrative of the user interface display.

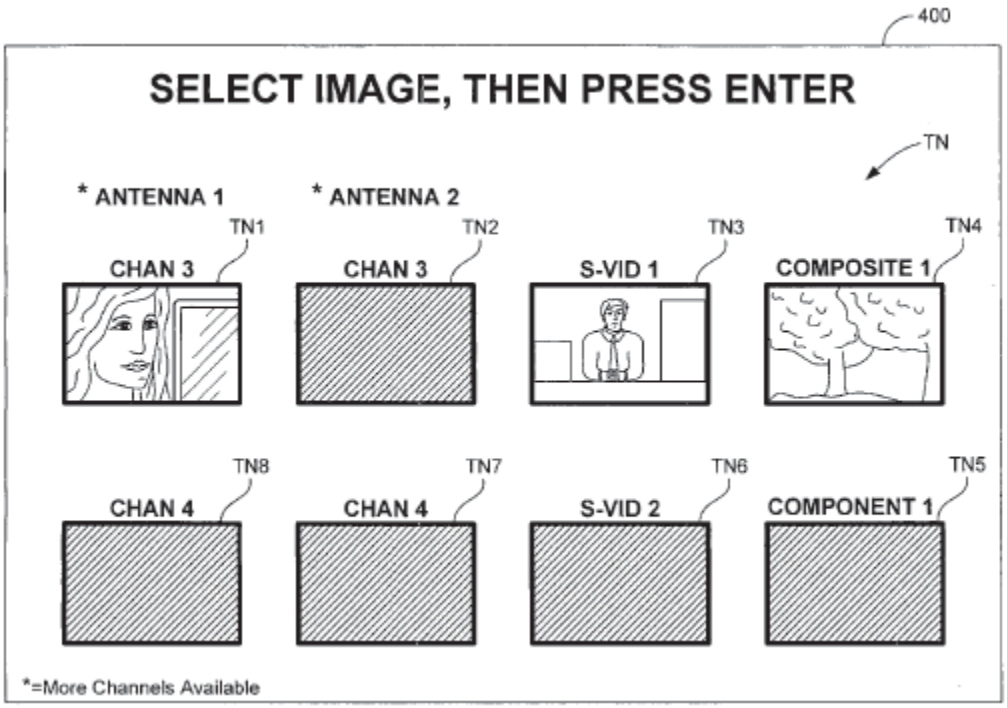


Figure 4 portrays two rows of input sources having content displayed for each input source that is available. *Id.* ¶ 26.

Youden provides an exemplary embodiment in which the video display device has six video inputs and eight video input thumbnails. Ex. 1004 ¶ 26, Fig. 4. The video inputs are: two radiofrequency ("RF") video inputs labeled "ANTENNA 1" and "ANTENNA 2," two S-video inputs labeled "S-VID 1" and "S-VID 2," a composite video input labeled "COMPOSITE 1," and a component video input labeled "COMPONENT

1." *Id.* The video content of the video inputs are displayed as video thumbnails TN1–TN8, in which each of the S-video, composite video, and component video inputs is assigned a separate thumbnail (TN3–TN6) that displays the content of the input, if any exists. *Id.* ¶¶ 26–27, Fig. 4. The two RF video inputs are displayed as four video input thumbnails, in which the first video input is displayed as TN1 and TN8, showing the content that is being presented on channels 3 and 4, respectively, of the first RF video input. *Id.* ¶ 26, Fig. 4. The second video input is displayed as TN2 and TN7, showing the content that is being presented on channels 3 and 4, respectively, of the second RF video input. *Id.*

2. *Analysis*

Upon review of Petitioner's explanation and supporting evidence, and Patent Owner's Preliminary Response, we are persuaded that Petitioner has demonstrated sufficiently, for purposes of institution, that Youden anticipates the challenged claims. Notably, Petitioner provides claim mappings of each individual limitation of the challenged claims to Youden's disclosure. Pet. 19–39. We discuss below Petitioner's contentions regarding independent claim 1, which recites a method and is illustrative of the claimed subject matter.

a) *Petitioner's Proffered Anticipation*

With respect to the preamble of claim 1, "[a] method for on-screen managing and navigating television system functionality and input source selection," Petitioner contends this claim language, to the extent it is limiting, is met by Youden's video display generating device 202, which includes video display 206 for displaying the video content from each of the

video inputs as an on-screen display of thumbnails presented for selection by the user. Pet. 20–21 (citing Ex. 1004, Figs. 2, 4, ¶ 24; Ex. 1002 ¶¶ 46–50).

Limitation 1[a] recites

> identifying each of a plurality of input signals from a plurality of input sources, each of the plurality of input sources connected to a television system, wherein each of the plurality of input signals in unique to each of the plurality of input sources, and the television system identifies each of the plurality of input signals by analyzing each of the plurality of input signals.

Petitioner contends that such identifying is performed by Youden's video input channel selection circuitry 216, which receives input signals in the form of video signals from input sources in the form of video input sources for a television-connected device such as a DVD, VCR [video cassette recorder], etc. *Id.* at 22 (citing Ex. 1004 ¶ 14). Petitioner contends that Youden's video input channel selection circuitry 216 identifies each input signal based upon the specific video input from which the input signal is received. *Id.* (citing Ex. 1004 ¶ 24; Ex. 1002 ¶¶ 51–52). The circuitry indicates, and displays on the television screen, the particular video input source that supplies a corresponding video signal. *Id.* Petitioner characterizes Youden's video display generating device 202 as a television because it receives transmitted video signals and displays the video content on a display. *Id.* at 23–24 (citing Ex. 1004 ¶ 14, Fig 2; Ex. 1002 ¶¶ 53–54). Petitioner further contends that Youden discloses a unique, one-to-one correspondence between each incoming signal and the input through which it is received. *Id.* at 24–25 (citing Ex. 1004 ¶ 14, Fig. 2; Ex. 1002 ¶¶ 55–56).

Petitioner further contends that Youden discloses that "the television system identifies each of the plurality of input signals by analyzing each of the plurality of input signals," as claimed. *Id.* at 25–27. Petitioner contends

that this limitation can be understood by reference to the Specification of the '219 patent, in particular, the portions cited by Patent Owner for support when the limitation was added during prosecution. *Id.* at 25–26. Petitioner characterizes the '219 patent as explaining that "the television system determines the presence of a signal on a particular connector. If there is a signal, the system generates an icon corresponding to the connector from which the signal originates, and if there is no signal, then no icon is generated." *Id.* (citing Ex. 1001, 6:31–37). Petitioner characterizes Youden as determining whether video content is present on an input source and displaying a thumbnail of the video content if there is a signal, and not displaying a thumbnail if there is no signal. *Id.* at 26–27 (citing Ex. 1004 ¶¶ 17–20, 26–27). Petitioner additionally characterizes Youden as analyzing a signal connected to an antenna video source and as identifying on the screen further identifying information in the form of the specific channel that the signal is tuned to. *Id.* at 27–28 (citing Ex. 1004 ¶ 27, Fig. 4; Ex. 1002 ¶¶ 57–61).

> Limitation 1[b] sets forth
>
> > generating an on screen menu on a display device of the television system to allow selection of each of the plurality of input sources that have been identified including a display of an input source type or description that was identified wherein an input source on the on screen menu is identified by an input signal, wherein the display is a video content of the content of the input source.

Petitioner contends this limitation is disclosed by Youden's generation of a video screen having video input thumbnails on video display 206, wherein the content of each video input may be selected by a user. *Id.* at 28–30 (citing Ex. 1004 ¶¶ 17, 20; Ex. 1002 ¶¶ 62–65). Petitioner further contends

that Youden displays identification information indicating which video input is associated with each thumbnail. *Id.* at 30–32 (citing Ex. 1004 ¶¶ 26–27, Fig. 4; Ex. 1002 ¶¶ 66–70). Petitioner further contends that Youden's video digitizing circuitry 218 captures a frame of video content that is being presented on the corresponding video input. *Id.* at 32–34 (citing Ex. 1004 ¶¶ 11, 14, 17–18; Ex. 1002 ¶¶ 71–73).

With respect to limitation 1[c], "receiving a user selection of a menu option corresponding to one of the plurality of input signals," Petitioner contends this limitation is disclosed by Youden. In particular, Petitioner contends that Youden's receipt of a control signal at controller 208 via link 212 from remote control 204, in response to a user's depressing a button, discloses "receiving a user selection." *Id.* at 34–35 (citing Ex. 1004 ¶ 16). With respect to "a menu option corresponding to one of the plurality of input signals," Petitioner contends that Youden discloses that a user may depress select button 224 on remote control 204 to select a highlighted thumbnail and thereby display the video content of the video input VI corresponding to the thumbnail on the display. *Id.* at 35 (citing Ex. 1004 ¶¶ 17–18, 24; Ex. 1002 ¶¶ 77–79). With respect to limitation 1[d], "displaying the input signal on the display device of the television system in response to the user selection," Petitioner contends this limitation is disclosed by Youden's use of remote control 204 to highlight and select one of the thumbnails, causing the selected video input to be output on video display 206. *Id.* at 36–37.

Based on the current record, we discern no deficiency in Petitioner's characterizations of Youden and the knowledge in the art. In addition, for purposes of institution, we accept Mr. Wechselberger's testimony concerning the relevant disclosure of Youden. At this stage of the

proceeding, the only limitation that Patent Owner disputes is "identifies each of the plurality of input signals by analyzing each of the plurality of input signals," which we address below. *See* Prelim. Resp. 3–11.

b) *Patent Owner's Preliminary Response*

Patent Owner argues that Petitioner errs in contending that Youden discloses a television system that "identifies each of the plurality of input signals by analyzing each of the plurality of input signals," as set forth in claim 1. Prelim. Resp. 6, 12. Patent Owner argues that this identification requires "***more than simply identifying a location* where *the inputs were plugged in***." *Id.* at 6. Patent Owner contends that this distinction was made "throughout the prosecution of the '801 Application leading to the '219 Patent," where the applicant distinguished the claimed invention from the prior art reference applied on that basis during prosecution. *Id.* Patent Owner argues that Youden describes passing signals through pre-labeled physical connectors to a signal digitizer. *Id.* at 7 (citing Ex. 1004 ¶ 14 (stating that "the DVD video input receives a video signal from a DVD player, the TV video input is an RF video input of the device 202 and receives a video signal from a VCR")). Patent Owner argues that, although Youden digitizes an analog signal, Youden identifies the signal by the port through which it enters, and not by analyzing the signal as claimed. *Id.* at 7–8.

c) *Analysis*

Neither Patent Owner nor Petitioner have provided an explicit construction of the phrase "identifies each of the plurality of input signals by analyzing each of the plurality of input signals" in limitation 1[a]. *See supra* Section II.C. However, Patent Owner and Petitioner have proffered

interpretations as to what a reference must disclose in order to meet that limitation. Indeed, we understand Petitioner to proffer two alternative interpretations, which we address in turn below.

In a first interpretation, Petitioner asserts that the contested limitation is met where an icon is generated based on the availability of a signal on a particular connector. Pet. 27. Petitioner argues that Patent Owner relied upon this interpretation during prosecution. *Id.* Petitioner further argues that this interpretation is consistent with paragraph 27 of Specification of the application that matured into the '219 patent, which was one of a number of portions of the Specification cited during prosecution for support of the amendment that resulted in withdrawal of the Examiner's rejection. Pet. 25–26 (citing Ex. 1003, 34 (prosecution history of the '219 patent)); *see also* Prelim. Resp. 3 (identifying the elements of claim 1 added through amendment). Petitioner further describes this contested limitation as identifying "whether a video signal is present at a video input of the television system." Pet. 42–43.

We are not persuaded by Petitioner's assertion that a limitation reciting "identifying . . . a plurality of input signals . . . by analyzing each of the plurality of input signals" is met by a disclosure of determining whether a signal is present at a particular input of a connector and, if so, the signal is thereby identified by generating an icon. Pet. 26. Patent Owner contends that the claims were specifically amended to distinguish from that type of "identification" that was exhibited by the prior art applied during prosecution, "[requiring] more than simply identifying a location where the inputs were plugged in" (emphasis omitted). Prelim. Resp. 6, 8. The claim language requires a plurality of input signals to be present, to be analyzed,

and then to be identified. At this stage, we agree with Patent Owner's reasoning that the claim requires an analysis that identifies the signal, and not merely an analysis that identifies whether any signal is present on a particular connector. Accordingly, we are not currently persuaded by Petitioner's argument that Youden's disclosure of determining whether a signal exists at a particular input and, if so, generating an icon, meets the contested limitation.

We have also considered Patent Owner's additional argument that Petitioner's interpretation is foreclosed by an amendment during prosecution overcoming similar subject matter. Prelim. Resp. 3–6, 8. However, we are not persuaded by such argument because that amendment added not one, but two separate limitations relevant to the Examiner's rejection. In addition to the contested limitation, the amendment also added the limitation that "each of the plurality of input signals is unique to each of the plurality of input sources." Prelim. Resp. 3. Prior to that amendment, the Examiner had specifically referenced that the claim language would be met by a single input connector, and indicated that "applicant's [F]igure 8 [which shows multiple input sources 803] appears to have some differences from [the applied prior art reference]." Ex. 1003, 87. Accordingly, the record indicates that the amendment to require multiple unique input sources could have formed an independent reason for the Examiner's allowance of claim 1. Patent Owner has not explained how the allowability of the claims resulted solely from the addition of the contested limitation. Nor has Patent Owner adequately explained, in the context of its argument, how Youden's subject matter is sufficiently similar to that considered during prosecution such that the amendment would have necessarily distinguished over Youden,

particularly in view of Petitioner's second explanation of how Youden discloses the contested limitation, to which we now turn.

In a second interpretation, Petitioner asserts that Youden's disclosure meets the contested limitation because Youden's analysis of a signal identifies not only the presence of the signal, but also the content of the signal in a manner that identifies the source of the signal. Pet. 27. In particular, Petitioner points to Youden's treatment of a signal connected to the "Antenna 1" connector, wherein the signal may contain multiple potential channels of content. *Id.* at 27–28 (citing Ex. 1004 ¶ 27, Fig. 4). Petitioner characterizes Youden as analyzing that signal to identify, on the screen, the specific channel that the signal is tuned to. *Id.* at 27. Petitioner contends that Youden identifies the signal with respect to a specific channel of the signal on Antenna 1, and not merely the existence of any signal of Antenna 1, to identify the signal as "Antenna 1." *Id.*

We determine that Petitioner's second interpretation is consistent with the language of the claim. Under this interpretation, Youden determines an input signal is present, analyzes the signal to determine which channel it represents, then identifies the input signal by indicating that channel on the screen next to an image of the video signal from that channel. Youden identifies the channel of the signal (e.g., Channel 3), not merely the connector through which the signal is inputted (e.g., Antenna 1). Such an interpretation is consistent with Patent Owner's reasoning that the claims require "more than simply identifying a location where the inputs were plugged in." Prelim. Resp. 6 (emphasis omitted).

Accordingly, based on the current record and for purposes of institution, we are persuaded that Petitioner has shown Youden to disclose

"identifying each of a plurality of input signals . . . by analyzing each of the plurality of input signals," as set forth in claim 1. Consequently, Petitioner has shown a reasonable likelihood of prevailing on its assertions that claim 1 is anticipated by Youden.

d) *Claims 2 and 3*

Claim 2 adds the limitation, "wherein each of the plurality of input signals is received through a separate input source." Petitioner alleges that this limitation is met by Youden's disclosure of multiple inputs (e.g., a DVD video input and a V2 video input) receiving unique signals (respectively, a DVD video signal and a camcorder video signal). Pet. 37–38 (citing Ex. 1004 ¶14, Fig. 2; Ex. 1002 ¶¶ 84–87).

Claim 3 adds the limitation, "displaying at least one image from the plurality of sources through the on screen menu prior to selection." Petitioner alleges that this limitation is met by Youden's disclosure of a still digital image to be displayed on the video screen as a thumbnail that displays video content from one of the sources. *Id.* at 38–39 (citing Ex. 1004 ¶¶ 14, 20, 25; Ex. 1002 ¶¶ 88–90).

Patent Owner argues that claims 2 and 3 are not anticipated for the same reasons argued for claim 1. Prelim. Resp. 10–12. However, as we explain *supra*, we were not persuaded by Patent Owner's arguments. Instead, based on the current record and for purposes of institution, we are persuaded by Petitioner's analysis. Specifically, Petitioner has cited relevant portions of Youden as evidence for each element of claims 2 and 3. *See* Pet. 37–39. In addition, Petitioner's positions as to claims 2 and 3 are supported by the Wechselberger Declaration. Ex. 1002 ¶¶ 84–90. Consequently, Petitioner also has shown a reasonable likelihood of prevailing on its assertions that dependent claims 2 and 3 are anticipated by Youden.

E. Asserted Obviousness over Youden and Lacy

Petitioner contends that claims 1–3 of the '219 patent are unpatentable as being obvious under 35 U.S.C. § 103(a) over the combined teachings or suggestions of Youden and Lacy. Pet. 39–45. At this stage of the proceeding, we are not persuaded by Petitioner's explanations and supporting evidence concerning claims 1–3 and the combined teachings and suggestions of Youden and Lacy. We begin our analysis with a brief overview of Lacy.

1. *Overview of Lacy*

Lacy generally relates to a method of detecting whether a signal is present on a plurality of video inputs. Ex. 1005, code (57). Figure 5 is reproduced below.

FIG 5

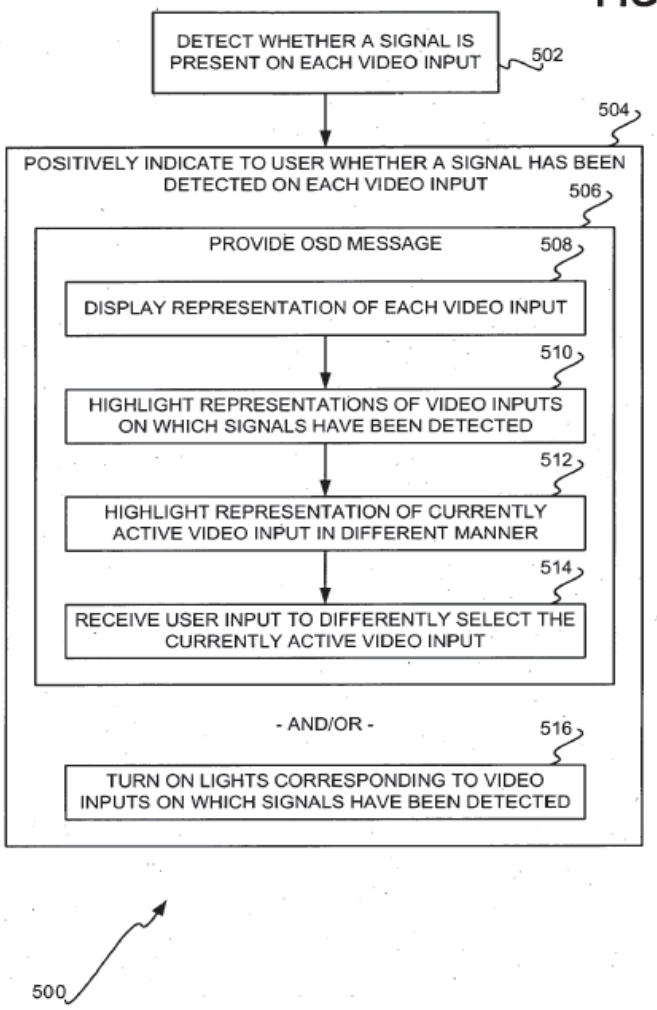


Figure 5 illustrates a procedure for detecting and indicating whether a signal is present on each video input, wherein representations of video input are displayed and highlighted to show detected input and currently active video input; in addition or in the alternative, lights may be turned on to indicate the inputs having detected signals. *Id.* ¶¶ 8, 25–28.

Lacy describes a procedure for investigating causes of malfunction in a display device, such as when the display is not displaying the expected video data from a given video source device. *Id.* ¶¶ 2, 13. For each video input, the display device displays an on-screen display message overlaying

the video signal from that input. *Id.* ¶ 14. The on-screen display message includes a representation of the type of video input to which it corresponds. *Id.* ¶ 15. The display of each video signal may be highlighted to indicate that a signal has been detected on the video input in question. *Id.* ¶ 16.

2. *Analysis*

a) *Petitioner's Proffered Combination*

Petitioner contends that claims 1–3 are obvious over Youden in view of Lacy, relying on the same teachings of Youden discussed above in the anticipatory ground based on Youden. Pet. 39. However, in this ground Petitioner relies upon Lacy in the alternative for the teaching of the limitation "the television system identifies each of the plurality of input signals by analyzing each of the plurality of input signals." *Id.* Petitioner contends that Lacy teaches integrated circuits within a display device that identify each input signal in a plurality of input signals. *Id.* at 40. Petitioner further contends that these integrated circuits identify whether a signal is present on each of the video inputs by returning a value of "true" if a signal is detected and a value of "false" if a signal is not detected. *Id.* at 40–41.

b) *Patent Owner's Preliminary Response*

Patent Owner contends that Lacy does not analyze an input signal, but instead is simply "a function that can be called to determine whether a signal is present on a given video input." Prelim. Resp. 9 (quoting Ex. 1005 ¶ 26). Patent Owner characterizes Lacy as "merely interrogating a video input to determine whether a video source is plugged into the input port." *Id.* at 10. Patent Owner contends that Lacy teaches an input source that is identified by an input signal, and not, as claimed, identifying each of the plurality of input signals by analyzing each of the plurality of input signals.

c) *Analysis*

Based on the current record, we are persuaded by Patent Owner's analysis. As discussed in Section II.D(2)(c), *supra*, we are persuaded by Patent Owner's argument that claim 1 sets forth an identification that requires more than simply identifying a location where the inputs are plugged in. Similar to Petitioner's first interpretation of the contested limitation discussed *supra* in the context of its anticipatory ground based on Youden, Petitioner here contends only that Lacy determines whether a signal is present—Lacy does not identify the input signal by analyzing the input signal. Pet. 40–42. As we explain *supra*, we find such a teaching insufficient to teach the contested limitation because the claim requires an analysis that identifies the signal itself, and not merely an analysis that identifies whether any signal is present on a particular connector. Accordingly, we are not persuaded that Petitioner has shown a reasonable likelihood that it would prevail on its assertions that claim 1 would have been obvious in view of the combination of Youden and Lacy.

With respect to dependent claims 2 and 3, Petitioner relies on the same teachings as for claim 1 to teach or suggest the contested limitation. Pet. 39. Patent Owner further argues that Petitioner has not addressed claims 2 and 3 in the Petition in this ground. Prelim. Resp. 12–13. Patent Owner admits that Petitioner characterizes this ground as rendering claims 1–3 unpatentable. *Id.* at 12. We note that Petitioner includes all of the teachings above in that anticipatory ground based on Youden, with the addition of Lacy for the teachings in the alternative. Pet. 39. The teachings in the anticipatory ground based on Youden therefore include an explanation of how the combination of Youden and Lacy allegedly render obvious

claims 2 and 3. *Id.* at 37–39. Consequently, we do not agree with Patent Owner that Petitioner has not addressed claims 2 and 3 in this ground.

However, for this alternative ground, as discussed above we have determined that Lacy does not teach or suggest the limitation in claim 1 that "the television system identifies each of the plurality of input signals by analyzing each of the plurality of input signals." *See supra*. Accordingly, Petitioner has not shown that limitation, which is required by dependent claims 2 and 3, is taught by Lacy. Based on the record, and for purposes of this Decision, we are not persuaded that Petitioner has shown a reasonable likelihood that it would prevail on its assertions that claims 2 and 3 would have been obvious in view of the combination of Youden and Lacy.

F. Asserted Obviousness over Aratani in view of Lacy

Petitioner contends that claims 5 and 7 of the '219 patent are unpatentable as being obvious under 35 U.S.C. § 103(a) over the combined teachings or suggestions of Aratani and Lacy. Pet. 62–70. At this stage of the proceeding, we are not persuaded by Petitioner's explanations and supporting evidence concerning claims 5 and 7 and the combined teachings and suggestions of Aratani and Lacy. We begin our analysis with a brief overview of Aratani.

1. *Overview of Aratani*

Aratani generally relates to a television monitor that operates as the monitor for an associated computer. Ex. 1006, code (57), Fig. 1. Figure 1 is reproduced below.

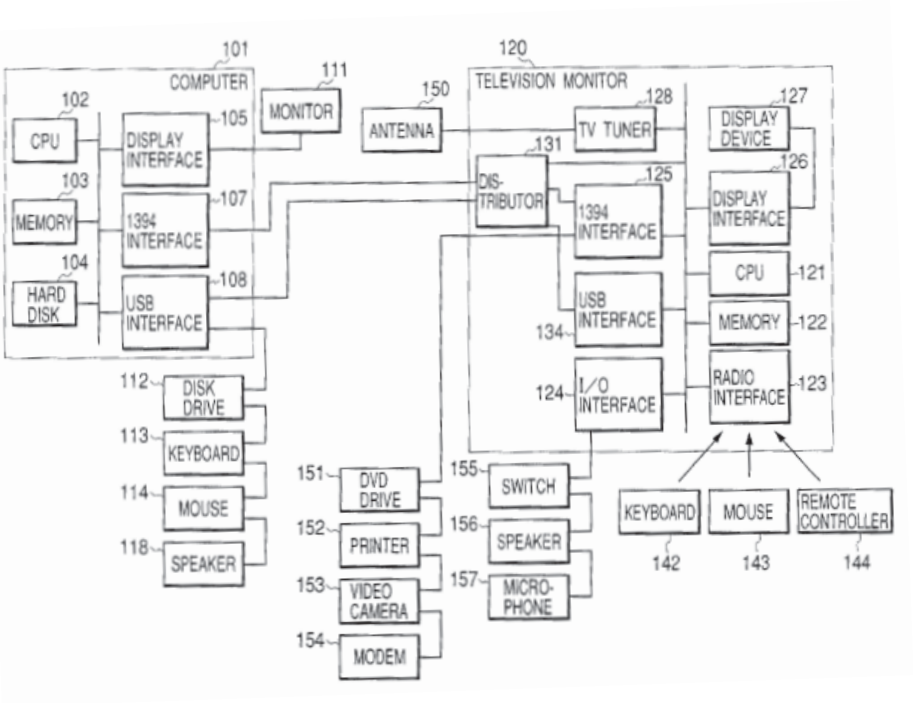


Figure 1 illustrates a computer connected to a television monitor, in which the monitor can receive signals from a keyboard, mouse, and remote controller, and is connected to a television antenna, computer, and additional devices such as a DVD drive, printer, video camera, and modem. *Id.* ¶¶ 12, 22–27.

In Aratani, the television monitor may be operated in either a TV mode or a computer mode. Ex. 1006 ¶ 32. In computer mode, the computer automatically recognizes the TV monitor as a USB hub and display device, and recognizes devices connected to the TV as input/output devices of the computer. *Id.* ¶¶ 32, 42.

2. *Analysis*

a) *Petitioner's Proffered Combination*

Petitioner contends that claims 5 and 7 are obvious over Aratani in view of Lacy. Petitioner relies upon Aratani for each of the limitations of claims 5 and 7, except for "identify[ing] an input source being based on the

input signal from the input source." For that limitation, Petitioner relies upon Lacy, specifically, the same teachings and suggestions of Lacy as relied upon in the obviousness ground based on Youden and Lacy. We turn first to independent claim 5.

With respect to the preamble of claim 5, "[a] method for on-screen managing and navigating television system functionality and input source selection," Petitioner contends this language, to the extent that it is limiting, is taught by Aratani's on-screen display that permits a user to enter either "TV mode" or "PC mode." Pet. 45–46 (citing Ex. 1006, Fig. 4, code (57), ¶¶ 36, 41; Ex. 1002 ¶ 107).

With respect to the limitation "displaying non-computer based content on a display device of a television system through the television system," Petitioner contends this limitation is taught by Aratani's use of the TV monitor to display video content from the associated TV tuner. *Id.* at 46–47.

With respect to the limitation "wherein the television system is configured to identify an input source of the plurality of input sources," Petitioner contends this limitation is taught by Aratani's receipt of signals from both a computer and TV, in which the computer functionality automatically recognizes the TV monitor as an input/output device of the computer, and the user can confirm an image signal output from the computer on the TV monitor's display device. *Id.* at 48–49 (citing Ex. 1006 ¶¶ 30, 32, 52; Ex. 1002 ¶¶ 111–113). With respect to the further limitation that the identifying be "based on the input signal from the input source," Petitioner relies on the teachings of Lacy. *Id.* at 48. Petitioner contends that this limitation is taught by Lacy's detection mechanism 604, which detects whether a video signal is present on each of the video inputs, returning either

a "true" or "false" depending on whether a signal is detected or not. *Id.* at 49–50 (citing Ex. 1005 ¶¶ 26–27; Ex. 1002 ¶¶ 111–113).

Petitioner asserts that one having ordinary skill in the art would have combined the identified teachings of Lacy and Aratani, which are both analogous art to the '219 patent, as applying a known technique (Lacy's technique for analyzing whether a video signal is present on a video input) to a known device (Aratani's television and its on-screen display menu) to yield predictable results. *Id.* at 50–51 (citing Ex. 1005 ¶ 26; Ex. 1002 ¶¶ 115–116). Petitioner further asserts that the identified combination would have been the combination of prior art elements according to known methods to yield predictable results. *Id.* at 51 (citing Ex. 1002 ¶ 117). Petitioner further asserts that the identified combination could have been made by a person having ordinary skill in the art, with a reasonable expectation of success, because it would have been "a simple modification of code within existing hardware commonly found in television systems disclosed by Aratani." *Id.* at 52 (citing Ex. 1002 ¶ 118).

With respect to the limitation "wherein the display is a video content of the content of the input source," Petitioner contends this is taught by Aratani's image data output from the TV tuner, which may be displayed on the TV display device. *Id.* (citing Ex. 1006 ¶¶ 27–28, 30). Petitioner further contends that a person having ordinary skill in the art would have recognized that the "image data output from the TV tuner" amounts to video content. *Id.* (citing Ex. 1006 ¶ 30; Ex. 1002 ¶¶ 120–122).

With respect to the limitation "wherein each of the plurality of input signals is unique to each of the plurality of input sources," Petitioner contends this is taught by Aratani's separate input from the TV tuner and

computer, each provided to the TV. *Id*. at 53 (citing Ex. 1006 ¶¶ 30, 52; Ex. 1002 ¶¶ 123–125).

With respect to the limitation "the television system identifies each of the plurality of input signals by analyzing each of the plurality of input signals," Petitioner contends that this is taught by Lacy's determining the presence of a signal on a particular connector and generating an icon only if there is a signal. *Id*. at 53–54 (citing Ex. 1001; Ex. 1002 ¶¶ 126–127).

With respect to the limitation "receiving a computer related command at the television system," Petitioner contends that this is taught by Aratani's use of a keyboard and mouse, each issuing commands for the computer that are received by the television system, which acts as a USB hub and relays the commands to the computer. *Id.* at 56–58 (citing Ex. 1006 ¶¶ 51–52; Ex. 1002 ¶¶ 134–137). Petitioner further contends that the commands from the keyboard and mouse are computer-related because they remotely control the computer, and because a command can be an instruction in the form of a signal for performing an operation or function. *Id.* at 57 (citing Ex. 1002 ¶¶ 134–137; Ex. 1009, 475 (1992 Dictionary of Science and Technology)).

With respect to the limitation "forwarding the computer command to a computer connected to the television system," Petitioner contends that this is taught by Aratani's transmission of mouse movements and keyboard keystrokes through the USB interface in the TV to the computer. *Id.* at 58–59 (citing Ex. 1006 ¶ 51; Ex. 1002 ¶¶ 138–140).

With respect to the limitation "transitioning the television system from displaying the non-computer based content to display a computer source content from the computer," Petitioner contends this is taught by Aratani's transitioning of TV display device content from the TV tuner

content to computer content. *Id.* at 59–60 (citing Ex. 1006 ¶¶ 32, 49; Ex. 1002 ¶¶ 141–143).

b) *Patent Owner's Preliminary Response*

Patent Owner asserts that the combination of Aratani and Lacy does not teach or suggest the claimed limitation of identifying "each of the plurality of input signals by analyzing each of the plurality of input signals." Prelim. Resp. 10. Patent Owner argues that Petitioner's reliance on Lacy for teaching this limitation is misplaced, because Lacy does not identify an input signal by analyzing the input signal. *Id.*

c) *Analysis*

Based on the current record, we are persuaded by Patent Owner's analysis for the same reasons as set forth in Section II.E(2)(c), *supra*. As discussed with respect to claim 1 in Section II.D(2)(c), *supra*, we are persuaded by Patent Owner that claim 5 sets forth an identification that requires more than simply identifying a location where the inputs were plugged in. Petitioner here contends only that Lacy determines whether a signal is present and, if so, generating an icon. Pet. 53–54. For the same reasons we discuss *supra*, Lacy does not teach or suggest identifying the input signal by analyzing the input signal. Accordingly, we are not persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertions that claim 5 would have been obvious in view of the combination of Aratani and Lacy.

With respect to dependent claim 7, Petitioner relies on the same teachings as for claim 5 to teach or suggest the limitation required by claim 7 of identifying the signal is "based on the input signal from the input source." Pet. 60–61. Because we have determined that neither Aratani nor

Lacy provides a sufficient teaching of that claim limitation, we are not persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 7 would have been obvious in view of the combination of Aratani and Lacy.

G. Asserted Obviousness over Aratani, Lacy, and IEEE 1394

Petitioner contends that claims 5 and 7 of the '219 patent are unpatentable as being obvious under 35 U.S.C. § 103(a) over the combined teachings or suggestions of Aratani, Lacy, and IEEE 1394. Pet. 62–70. At this stage of the proceeding, we are not persuaded by Petitioner's explanations and supporting evidence concerning claims 5 and 7 and the combined teachings and suggestions of Aratani, Lacy, and IEEE 1394.

In this asserted obviousness ground, Petitioner relies upon many of the same teachings of Aratani and Lacy as set forth in the obviousness ground based on Aratani and Lacy. *Id.* Petitioner, however, takes a new position by relying upon IEEE 1394 to teach the claim limitations of "receiving a computer related command at the television system" and "forwarding the computer command to a computer connected to the television system." *Id.* at 62–70.

Patent Owner contends that Petitioner's combination does not teach or suggest the claimed limitation of identifying "each of the plurality of input signals by analyzing each of the plurality of input signals." Prelim. Resp. 6, 10. Once again, Patent Owner argues that Petitioner's reliance on Lacy for teaching this limitation is misplaced, because Lacy does not identify an input signal by analyzing the input signal. *Id*. Patent Owner further contends that the IEEE 1394 is cumulative to teachings considered during prosecution,

specifically, to the Sampsell reference applied as prior art.[5] Prelim. Resp. 16.

Based on the current record, we are persuaded by Patent Owner's analysis for the same reasons as set forth in Section II.E(2)(c) and Section II.F, *supra*. As an initial matter, Patent Owner's contention that the IEEE 1394 is cumulative of the Sampsell reference applied during prosecution is not persuasive. Patent Owner contends that the "existence of IEEE 1394-1995 – and its relationship to the claimed subject matter of the '219 Patent – was analyzed and rejected by the Examiner during prosecution." Prelim. Resp. 16. However, Patent Owner does not persuasively explain how the teachings of the IEEE 1394 reference were distinguished during prosecution. Patent Owner has stated that the claims were distinguished from the Sampsell reference by the inclusion of an amendment towards identifying "each of the plurality of input signals by analyzing each of the plurality of input signals." Prelim. Resp. 9–10. Yet, the Patent Owner also states that the IEEE 1394 reference is being introduced in the Petition to meet different claim limitations, i.e., the "receiving a computer related command at a television system" and the "forwarding the computer command to a computer connected to the television system" limitations. *Id.* at 16. Patent Owner has not shown that the IEEE 1394 reference was considered, and distinguished, for the same purpose as during prosecution. Accordingly, Patent Owner's argument on this particular issue is not persuasive.

[5] The Sampsell reference is identified in the prosecution history as U.S. Patent No. 6,219,839. Ex. 1003, 88.

As discussed with respect to the identical limitation recited in claim 1 in Section II.D(2)(c), *supra,* we are persuaded by Patent Owner's argument that claim 5 sets forth an identification that requires more than simply identifying a location where the inputs were plugged in. Petitioner here contends only that Lacy determines whether a signal is present—Lacy does not identify the input signal by analyzing the input signal. Pet. 53–54. Accordingly, we are not persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 5 would have been obvious in view of the combination of Aratani, Lacy, and IEEE 1394.

With respect to dependent claim 7, Petitioner relies on the same teachings as for claim 5 to teach or suggest the contested limitation. Pet. 62. Consequently, we are not persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertion that claim 7 would have been obvious in view of the combination of Aratani, Lacy, and IEEE 1394.

H. Asserted Obviousness over Aratani, Lacy, and Kimura

Petitioner contends that claim 6 of the '219 patent is unpatentable as being obvious under 35 U.S.C. § 103(a) over the combined teachings or suggestions of Aratani, Lacy, and Kimura. Pet. 70–75. At this stage of the proceeding, we are not persuaded by Petitioner's explanations and supporting evidence concerning claim 6 and the combined teachings and suggestions of Aratani, Lacy, and Kimura.

In this particular ground, Petitioner relies upon the same teachings of Aratani and Lacy as set forth in its challenge to claim 5 based on obviousness over Aratani and Lacy. *Id.* Claim 6 depends from claim 5, and adds the limitations "receiving a command from the computer," and "transitioning the television system from displaying the non-computer based

content to display a computer source content from the computer." Petitioner relies upon Kimura to teach the limitation "receiving a command from the computer," and relies upon Aratani to teach the limitation "transitioning the television system from displaying the non-computer based content to display a computer source content from the computer." *Id*. at 71–75.

Patent Owner contends that Petitioner's combination does not teach or suggest the claimed limitation of identifying "each of the plurality of input signals by analyzing each of the plurality of input signals" in claim 5. Prelim. Resp. 6, 10. Once again, Patent Owner argues that Petitioner's reliance on Lacy for teaching this limitation is misplaced, because Lacy does not identify an input signal by analyzing the input signal. *Id*.

Based on the current record, we are persuaded by Patent Owner's analysis for the same reasons as set forth with respect to the identical limitation in claim 1 in Section II.E(2)(c) and Section II.F, *supra*. As discussed in Section II.D(2)(c), *supra*, we are persuaded by Patent Owner that claim 6 sets forth an identification that requires more than simply identifying a location where the inputs were plugged in. Petitioner here contends only that Lacy determines whether a signal is present—Lacy does not identify the input signal by analyzing the input signal. Pet. 53–54. Accordingly, we are not persuaded that Petitioner has shown a reasonable likelihood of prevailing on its assertions that claim 6 would have been obvious in view of the combination of Aratani, Lacy, and Kimura.

III. CONCLUSION

Taking into account the Preliminary Response, we conclude that the information presented in the Petition demonstrates that there is a reasonable likelihood that Petitioner would prevail in challenging at least one of claims 1–3 of the '219 patent as unpatentable under 35 U.S.C. § 102(b), but not in challenging claims 1–3 and 5–7 as being unpatentable under 35 U.S.C. § 103(a). Given this determination, we institute trial on all challenged claims and all grounds raised in the Petition. *See SAS Inst.*, 138 S. Ct. at 1359–60; Patent Trial and Appeal Board Consolidated Trial Practice Guide 64 (Nov. 2019), *available at* https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf ("The Board will not institute on fewer than all claims or all challenges in a petition."). At this stage of the proceeding, we have not made a final determination with respect to the patentability of any challenged claim.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4, an *inter partes* review is hereby instituted based on all claims and all grounds raised in the Petition, which are:

Claims 1–3 under 35 U.S.C. § 102(b) over Youden; and

Claims 1–3 under 35 U.S.C. § 103(a) over the combined teachings of Youden and Lacy; and

Claims 5, 7 under 35 U.S.C. § 103(a) over the combined teachings of Aratani and Lacy; and

Claims 5, 7 under 35 U.S.C. § 103(a) over the combined teachings of Aratani, Lacy, and IEEE 1394; and

Claim 6 under 35 U.S.C. § 103(a) over the combined teachings of Aratani, Lacy, and Kimura.

FURTHER ORDERED that 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; the trial will commence on the entry date of this Decision.

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