

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,  
Petitioner,

v.

MAXELL, LTD.,  
Patent Owner.

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IPR2020-00200  
Patent 10,084,991 B2

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Before MICHAEL R. ZECHER, KEVIN C. TROCK, and  
JOHN A. HUDALLA, *Administrative Patent Judges*.

TROCK, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. *Background*

Apple Inc. (“Petitioner”) filed a Petition, Paper 1 (“Pet.” or “Petition”), requesting an *inter partes* review (“IPR”) of claims 1–5 and 8–12 (the “challenged claims”) of U.S. Patent No. 10,084,991 B2 (Ex. 1001, “the ’991 patent”). Maxell, Ltd. (“Patent Owner”) filed a Preliminary Response, Paper 6 (“Prelim. Resp.”). Pursuant to an Order, Paper 7, authorizing Petitioner to file a Reply to Patent Owner’s Preliminary Response and Patent Owner to file a Sur-reply, Petitioner filed a Reply, Paper 8 (“Reply”), and Patent Owner filed a Sur-reply, Paper 10 (“Sur-reply”).

An *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Upon consideration of the Petition, the Preliminary Response, the Reply, the Sur-reply, and the evidence of record, we determine that Petitioner has shown a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims. Accordingly, we institute an *inter partes* review.

### B. *Real Party in Interest*

Each party identifies itself as the only real party in interest. Pet. 76; Paper 4, 1.

### C. *Related Proceedings*

According to the parties, the ’991 patent is the subject of the following action: *Maxell, Ltd. v. Apple Inc.*, 5:19-cv-00036-RWS (E.D.

Tex.) filed March 15, 2019 (the “District Court Action”). Pet. 76; Paper 4, 1.

Petitioner also identifies U.S. Patent Application No. 15/631,298 filed June 23, 2017 (now U.S. Patent No. 10,070,099), U.S. Patent Application No. 15/215,839 filed July 21, 2016 (now U.S. Patent No. 9,723,268), U.S. Patent Application No. 14/811,048 filed July 28, 2015 (now U.S. Patent No. 9,432,618), U.S. Patent Application No. 13/723,312 filed December 21, 2012 (now U.S. Patent No. 9,124,758), U.S. Patent Application No. 12/457,257 filed June 4, 2009 (now U.S. Patent No. 8,363,087), U.S. Patent Application No. 16/110,331 filed August 23, 2018 (now U.S. Patent No. 10,389,978), and U.S. Patent Application No. 16/506,100 filed July 9, 2019—all of which are in the chain of priority of the ’991 patent. Pet. 76.

*D. The ’991 Patent (Ex. 1001)*

The ’991 patent describes a videophone system that “selectively sets a television (TV) broadcast program viewing function mode and videophone function mode,” with the videophone function mode “decoding a videophone signal received from a distant party to thereby display on the screen [of the videophone system] an image of the distant party using the screen and speakers” and also “encoding a video signal from a camera [of the videophone system] and a voice signal from a microphone [of the videophone system] to generate a videophone signal, which is sent to the distant party via a network.” Ex. 1001, Abstr. The ’991 patent’s videophone system uses a plurality of videophone function-added TV receivers linked together via a network, for enabling users to make videophone calls between any two of the videophone function-added TV receivers. *Id.* at 2:56–62.

Figure 1 of the '991 patent, reproduced below, illustrates a videophone function-added TV receiver set. *Id.* at 6:47–50.

**FIG.1**

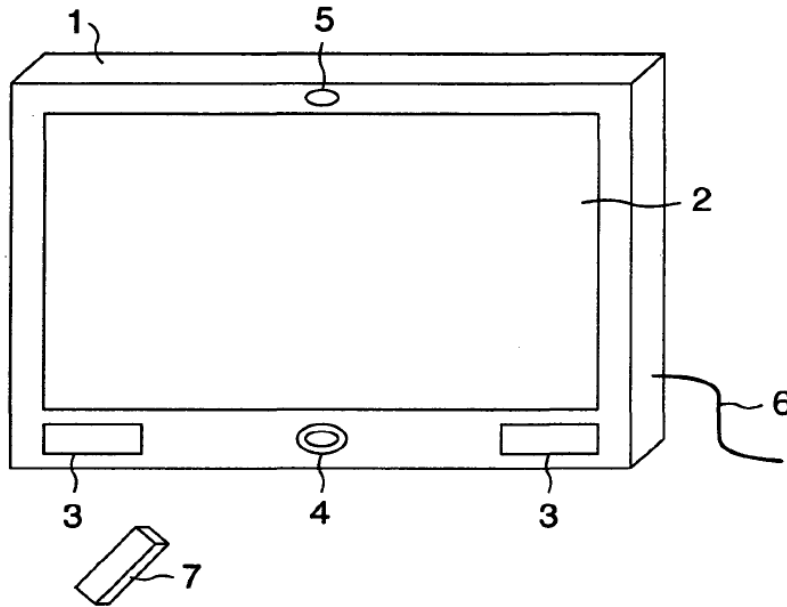


Figure 1, above, shows videophone function-added TV receiver 1, which has display screen 2, loudspeaker module 3, video camera 4, microphone 5, communications network cable 6, and wireless remote control device 7. *Id.* at 7:32–40. Videophone function-added TV receiver 1 is controlled by remote control 7 and, by manual operation of the remote control, receives digital broadcast programs, downloads video-on-demand (VOD) contents and/or makes a videophone call with another videophone function-added TV receiver. *Id.* at 7:62–67.

Figure 2, reproduced below, illustrates an electrical/electronic circuit configuration of the videophone function-added TV receiver shown in Figure 1. *Id.* at 6:51–54.

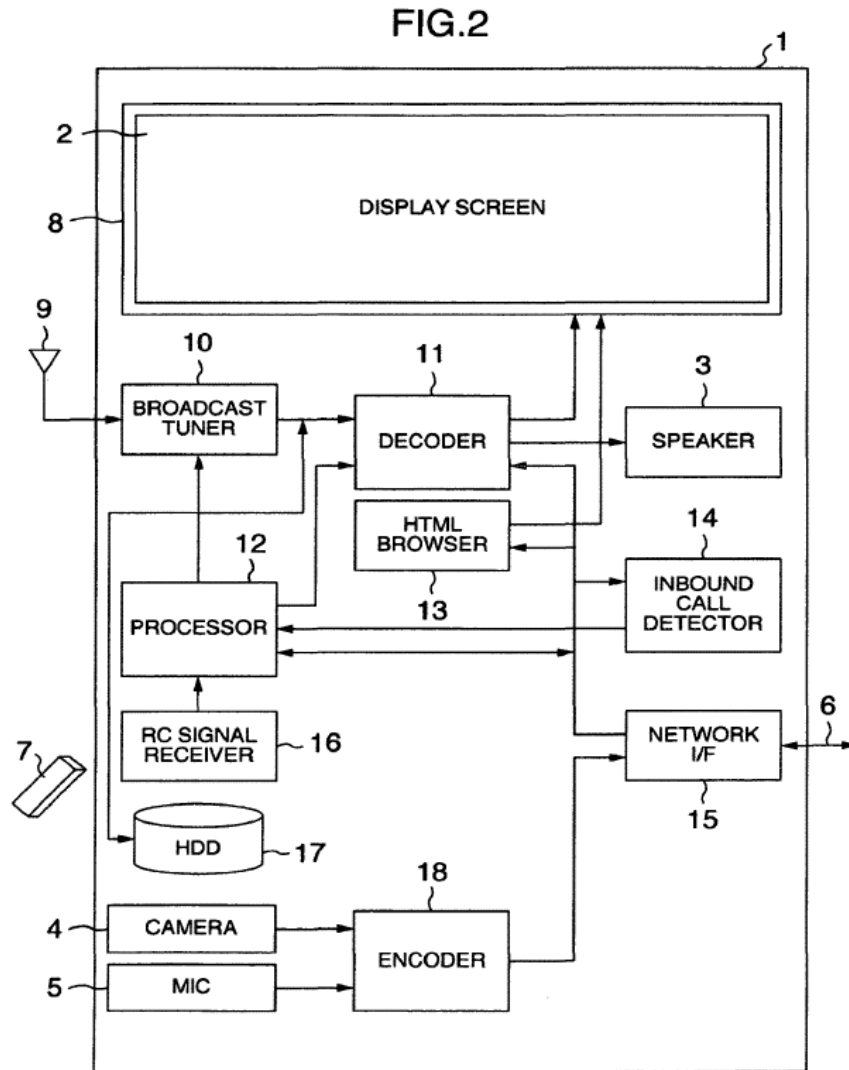


Figure 2, above, shows an example of an electrical/electronic circuit configuration of videophone function-added TV receiver 1, which includes display panel 8, antenna 9, TV broadcast tuner 10, decoder 11, processor 12, hypertext markup language (HTML) browser 13, inbound call detection device 14 for videophone communications, network interface (I/F) 15, remote control signal receiver 16, storage unit 17 such as a hard disk drive (HDD) or solid-state disk (SSD), and encoder 18. *Id.* at 8:23–42.

Figure 3 of the '991 patent, reproduced below, illustrates a video telephone system using two videophone function-added TV receivers. *Id.* at 6:55–57.

**FIG.3**

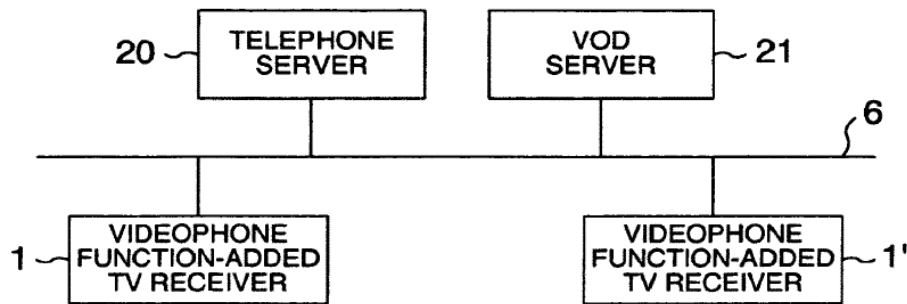


Figure 3, above, shows a video telephone system including videophone function-added TV receiver 1, another (distant party's) videophone function-added TV receiver 1' on the other end of a communication line (for performing videophone communication with videophone function-added TV receiver 1), telephone server 20, and VOD server 21, linked together via network 6. *Id.* at 9:28–49. The '991 patent describes the operation of the video telephone system of Figure 3 as follows:

[T]he TV remote control 7 . . . has the “TV” button 7*b* for setting the videophone function-added TV receiver 1 in the TV broadcast program viewing function mode, the “VOD” button 7*c* for setting the videophone function-added TV receiver 1 in the VOD function mode, and the “Phone” button 7*d* for setting the videophone function-added TV receiver 1 in the videophone function mode.

...

When the videophone function-added TV receiver 1 is presently set in the TV broadcast program viewing function mode, the decoder 11 is set by the processor 12 in the state for execution of the TV program-use decode function.

...

When the “VOD” button 7*b* (FIG. 4) of the remote control 7 is operated, the decoder 11 executes the VOD-use decode function under control of the processor 12.

...

When the “Videophone” button 7*c* (FIG. 4) of the remote control 7 is depressed, the decoder 11 is set in a state for execution of the videophone-use decode function under setup control of the processor 12. Simultaneously, the processor 12 renders the camera 4 and microphone 5 plus encoder 18 operative and sets up the videophone function mode. Note that the inbound call detector 14 is always in the state capable of detecting an incoming telephone call from the other-side videophone function-added TV receiver 1' (FIG. 3) even when the videophone function-added TV receiver 1 is in the power-off state.

Then, a video signal by means of image pickup of the camera and an audio signal indicative of voice sounds as input to the microphone 5 are supplied to the encoder 18 and subjected to compression processing (encoding) which is pursuant to videophone telecommunications so that a videophone signal which is obtained thereby is sent from the network I/F 15 via network 6 to the other-side videophone function-added TV receiver 1' (FIG. 3). A videophone signal from the other-side videophone function-added TV receiver 1' is received by the network I/F 15 and supplied to the decoder 11 so that a video signal and audio signal thereof are subjected to expansion processing (decoding), causing such decoded signals to be supplied to display panel 8 and speakers 3. This enables videophone telecommunication between the videophone function-added TV receiver 1 and the other-side videophone function-added TV receiver 1'.

*Id.* at 10:55–65, 12:11–15, 12:34–38, 13:20–46. The '991 patent further describes the operation of the video telephone system after completion of the videophone call as follows:

After completion of the videophone call, when the user depresses the “Stop” button 7*n* of the remote control 7, the processor 12 renders the decoder 11 and HTML browser 13 inoperative. As

the decoder 11 goes off, the processor 12 renders the camera 4 and microphone 5 plus encoder 18 inoperative. . . . Thus, the video phone function mode is terminated. . . .

In the TV program-use decode function mode in which the videophone function-added TV receiver 1 receives a digital broadcast program, when the “Phone” button *7d* of remote control 7 is pressed causing it to be switched to this videophone-use decode function mode, the processor 12 is responsive to completion of a videophone call by manual operation of the “Stop” button *7n* of remote control 7, for providing control so that the decoder 11 changes its operation mode from the videophone-use decode function execution mode to the state for execution of the TV program-use decode function and then returns to the digital broadcast program reception state.

*Id.* at 16:10–31. The ’991 patent explains that its videophone function-added TV receiver displays a video image for a videophone call using the display screen and loudspeaker that are inherently used for digital TV broadcast programs, so that “it is possible for a user to start a phone call and finish the call without having to move from a place at which s/he is enjoying a digital TV broadcast program.” *Id.* at 6:25–32. Additionally, “upon completion of the phone call, the decoder and encoder are automatically rendered inoperative without requiring the user to perform manual operations.” *Id.* at 6:32–37.

#### *E. Challenged Claims*

Petitioner challenges claims 1–5 and 8–12 of the ’991 patent. Pet. 1. Claims 1 and 8 of the challenged claims are independent. Claims 1 and 8 are substantially similar to each other, where claim 8 is written as a method claim and claim 1 is written as an apparatus claim. Claim 1 is illustrative.

1. [Preamble] A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:



- [1(a)] a network interface configured to receive first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface and second digital information from the another communication apparatus;
- [1(b)] a camera configured to generate video information which is included in third digital information;
- [1(c)] a display configured to display at least the first and the second digital information; and
- [1(d)] a processor;
- [1(e)] wherein when the processor receives an inbound videophone call notice while displaying the first digital information on the display, the processor pauses the displaying of the first digital information and renders the camera operative;
- [1(f)] wherein the processor outputs the third digital information to the another communication apparatus and displays the second digital information of the videophone call on the display; and
- [1(g)] wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and stops the camera.

Ex. 1001, 32:39–63, 33:28–51 (numbering designated by Petitioner; *see* Pet. 78–80 (“CLAIMS LISTING APPENDIX”)).

*F. Evidence*

Petitioner relies upon the following evidence:

(1) U.S. Patent No. 7,565,680 B1, issued July 21, 2009 (“Asmussen”) (Ex. 1004);

(2) U.S. Patent No. 7,548,255 B2, issued June 16, 2009 (“Bear”) (Ex. 1005);

(3) U.S. Patent Publication No. 2007/0139514 A1, published June 21, 2007 (“Marley”) (Ex. 1006);

(4) U.S. Patent No. 5,940,484, issued Aug. 17, 1999 (“DeFazio”) (Ex. 1007);

(5) U.S. Patent Publication No. 2004/0031064 A1, published Feb. 12, 2004 (“Lindstrom”) (Ex. 1008); and

(6) Declaration of Dr. Andrew Lippman. Ex. 1003.

*G. Asserted Grounds of Unpatentability*

<b>Claims Challenged</b>	<b>35 U.S.C. §</b>	<b>References</b>
1, 8	103(a)	Asmussen, Bear
1–5, 8–12	103(a)	Asmussen, Bear, Marley
5, 12	103(a)	Asmussen, Bear, Marley, DeFazio
1, 8	103(a)	Asmussen, Bear, Lindstrom
1–5, 8–12	103(a)	Asmussen, Bear, Lindstrom, Marley
5, 12	103(a)	Asmussen, Bear, Lindstrom, Marley, DeFazio

## II. ANALYSIS

*A. 35 U.S.C. § 314(a)*

Patent Owner argues that the Petition should be denied under 35 U.S.C. § 314(a) “because the invalidity arguments [Petitioner] raises here will be resolved in the co-pending District Court Action long before this proceeding will conclude.” Prelim. Resp. 2. Patent Owner argues, “the challenged claims are substantially the same in substance and scope as those asserted in the District Court Action.” *Id.* at 3. Patent Owner asserts, “the jury trial adjudicating the validity of the ’991 Patent will conclude *nine months before* any Final Written Decision issues in this proceeding.” *Id.* According to Patent Owner, “instituting an IPR in this circumstance would

needlessly duplicate the District Court Action, and unnecessarily waste the Board’s resources” because all the factors considered in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”), “strongly weigh in favor of denying institution of this Petition.” *Id.* at 5–6.

Petitioner disagrees. Petitioner argues that “[t]he six factors set forth in [*Fintiv*] strongly favor institution.” Reply 1.

35 U.S.C. § 314(a) states that

[t]he Director may not authorize an *inter partes* review to be instituted unless the Director<sup>1</sup> determines that the information presented in the petition filed under section 311 and any response filed under section 313 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.

Under § 314(a), the Director has discretion to deny institution of an *inter partes* review. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”).

In *NHK Spring Co., Ltd. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential) (“*NHK*”), the Board exercised its discretion under § 314(a) to deny a petition upon determining that institution would be an inefficient use of Board resources. *NHK*, Paper 8 at 19–20. In particular, the Board determined that it was proper to exercise discretion to deny institution in a case having a parallel district court proceeding involving (i) the same patent/parties, (ii) the same claim

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<sup>1</sup> “The Board institutes the trial on behalf of the Director.” 37 C.F.R. § 42.4(a).

construction, (iii) the same prior art references, (iv) the same arguments as in the district court proceeding, which was scheduled to be completed before a final decision would have been due in the Board proceeding. *See id.* at 19–20. The Board determined that these circumstances supported denial of the petition under § 314(a), considering the America Invents Act’s (“AIA’s”) objective “to provide an effective and efficient alternative to district court litigation.” *Id.* at 20 (quoting *General Plastic Industrial Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (precedential)).

In *Fintiv*, the Board indicated it will assess the following factors pertaining to a related parallel district court proceeding, in determining whether to exercise its discretion to institute review:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

*See Fintiv*, Paper 11 at 5–6.

For the reasons discussed in detail below, we do not agree with Patent Owner that the circumstances of this case warrant discretionary denial of institution under § 314(a).

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

Although Petitioner moved for a stay in the underlying litigation (*see* Reply 6; Ex. 1045), the court recently denied Petitioner’s motion. Sur-reply 2–3; Ex. 1052. Notably, the court denied the motion without prejudice and stated that it could not say, in the event that we instituted this IPR, whether “the late stage [of proceedings] would necessarily outweigh the potential simplification of issues following institution decisions” in this and other *inter partes* review cases. Ex. 1052, 6 (citing a prior case by the court in which a stay was granted three weeks before trial upon the institution of IPRs). In other words, the court signaled its willingness to entertain a renewed motion for stay from Petitioner if we were to grant institution. Notwithstanding, the court stated that, were a renewed motion for stay requested, the late stage of proceedings “will certainly weigh against granting a stay.” *Id.* Given the court’s inclination to reconsider a motion for stay for the potential simplification of issues, but also considering the court’s comment about how the late stage of proceedings would affect its consideration of any such renewed motion, we view this factor as neutral.

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

Trial in the underlying litigation is currently set for October 26, 2020. Reply 7; Sur-reply 1; Ex. 1052, 4. Nevertheless, Petitioner contends “[l]itigation will continue” after any Final Written Decision here. Reply 7. Petitioner notes that it filed a petition for writ of mandamus related to the court’s denial of Petitioner’s motion to transfer the underlying litigation. *Id.* Petitioner also notes the COVID-19 pandemic may affect the trial schedule. *Id.*

Patent Owner argues that trial “will be complete eight months before a Final Written Decision issues” here and that a delay in the trial date is unlikely. Sur-reply 3. Patent Owner cites a standing order in the court of the underlying litigation “to keep cases moving” despite the COVID-19 pandemic. *Id.* at 4 (quoting Ex. 2017). And, according to Patent Owner, even if the trial date were delayed by three months, the trial would still precede the Final Written Decision by six months. *Id.* at 3. The U.S. Court of Appeals for the Federal Circuit recently denied a petition for writ of mandamus related to the motion to transfer. *In re Apple Inc.*, No. 2020-115, 2020 WL 2125340 (Fed. Cir. Apr. 22, 2020).

The trial in the underlying litigation is currently set to occur months before any Final Written Decision in this case will issue. Although we consider delays due to the COVID-19 pandemic to be a real possibility despite the court’s standing order, we agree with Patent Owner that even a delayed trial might precede a Final Written Decision. This factor favors the exercise of discretionary denial.

*3. Investment in the parallel proceeding by the court and the parties*

Petitioner contends that, aside from claim construction proceedings, “the district court has not invested other substantive efforts and the litigation is not ‘advanced.’” Reply 8. Petitioner notes that summary judgment is still months away and fact discovery and depositions are ongoing. *Id.* According to Petitioner, the court is not likely to analyze validity until trial. *Id.*

As evidence of the court’s investment in the underlying litigation towards the issues of invalidity, Patent Owner highlights the court’s claim construction hearing and order and its rulings on Petitioner’s motion to

dismiss and motion to transfer. Sur-reply 5 (citing Exs. 2005–2008). Patent Owner also notes that fact discovery has closed and that expert discovery is underway and was expected to close June 25, 2020. *Id.* at 6 (citing Exs. 2018–2019).

At least some of the work underway or already completed in the underlying litigation may have relevance to issues in the Petition, including claim construction and expert discovery. Patent Owner’s arguments directed to the District Court’s rulings on the motion to dismiss or the motion to transfer provide little probative value concerning the court’s investment in the invalidity issues raised there. Considering that some of the investment by the court and the parties in the underlying litigation may be relevant to issues in this case, we find this factor slightly favors the exercise of discretionary denial.

*4. Overlap between issues raised in the petition and in the parallel proceeding*

Patent Owner asserts “[t]he scope of [Petitioner’s] challenge to the ’991 Patent’s validity in this proceeding is substantially the same as in the District Court Action” because the claims challenged by Petitioner “cover all the asserted claims against [Petitioner] in the District Court [A]ction,” and “[t]he prior art that [Petitioner] relies upon in its Petition is the same, or substantially the same, as the prior art at issue in the District Court Action.” Prelim. Resp. 13; *see also* Sur-reply 6–9. Patent Owner argues, “no meaningful distinction exists between [Petitioner’s] references and grounds used in the Petition versus those in the District Court Action.” Sur-reply 7. Indeed, Patent Owner argues, “the very same issues will be decided by a jury at the trial in the District Court Action a mere three months after the Board’s Institution Decision.” Prelim. Resp. 14.

Petitioner asserts the Petition presents different grounds than the District Court Action and challenges different claims based on different art. Reply 9–10. In particular, Petitioner asserts “[Patent Owner] only asserts dependent claim 4 (depending from claims 1–3) in the litigation” while “[t]he Petition challenges claims 1–5 and 8–12, resulting in 9 claims challenged in the Petition and not asserted by [Patent Owner], **including both independent claims 1 and 8.**” *Id.* at 9.

As part of the analysis of overlapping issues, it is helpful to consider the parties’ recent efforts in the District Court Action to narrow the issues at trial. On March 17, 2020, Patent Owner made a Final Election of Asserted Claims (Ex. 2010) in which it elected to assert only dependent claim 4 of the ’991 patent against Petitioner. *Id.* at 1. On April 7, 2020, Petitioner made a Final Election of Prior Art (Ex. 2011) to assert only the combination of Asmussen and Allen<sup>2</sup> “for the elected claim [4]” of the ’991 patent. *Id.* at 1, 4. If no other claims of the ’991 patent are being contested at trial, then only the infringement and validity of claim 4 will be decided in the District Court Action with respect to the ’991 patent.<sup>3</sup>

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<sup>2</sup> U.S. Patent Publication No. 2003/0041333 A1, published Feb. 27, 2003 (“Allen”). Despite the parties’ arguments with respect to Allen in this proceeding, *see, e.g.*, Prelim. Resp. 15–16; Reply 9, it does not appear that either party made Allen an exhibit of record. Therefore, we have entered a copy of Allen into the record as Exhibit 3001.

<sup>3</sup> We recognize that claim 4 depends serially from claims 3, 2, and 1, and in order to decide the validity of claim 4, the trier of fact in the District Court Action would necessarily consider the application of the prior art to the limitations of claims 1–3. However, we also recognize that based on the parties’ final elections, the validity of claims 1–3 will not be decided in the District Court Action because the infringement and validity of those claims are not being contested by the parties in that proceeding.



We agree with Petitioner that there is not complete overlap in the claims being asserted in the underlying litigation and in this proceeding. Here, Petitioner challenges the patentability of claims 1–5 and 8–12. Pet. 8. Patent Owner now only asserts dependent claim 4 in the underlying litigation. Ex. 2010, 1. This distinction is material because in this proceeding, the patentability of ten claims would be decided (claims 1–5 and 8–12) at trial, whereas in the District Court Action, only the validity of the single asserted claim, dependent claim 4, would ostensibly be decided at trial. At most, even when considering that the validity of dependent claim 4 would necessarily require the trier of fact in the District Court Action to consider the application of the prior art to the limitations of claims 1–3, there is an overlap of four claims between the two proceedings.

In addition, dependent claim 5 recites “wherein when the processor receives an input for making an outbound videophone call to the another communication apparatus, the processor renders the camera and microphone operative and displays information indicating the outbound videophone call on the display calling message.” Ex. 1001, 33:13–19. Dependent claim 12 recites a similar limitation. *Id.* at 34:3–9. These limitations are at issue in this proceeding, but not at issue in the District Court Action. Stated differently, these limitations, which focus on making an outbound videophone call, raise a substantively different issue than the limitations of claims 1–4, which primarily focus on receiving an inbound videophone call.

We do not find compelling Patent Owner’s assertion that “the very same issues will be decided by a jury” in the District Court Action. *See* Prelim. Resp. 14; *see also* Sur-reply 9. To support its position, Patent Owner provides a table of “a sample comparison of the evidence cited in the Petition allegedly supporting [the] unpatentability of Claim 1” to the

evidence cited by Petitioner in its preliminary invalidity contentions in the District Court Action. *See* Prelim. Resp. 14–15 (citing Pet. 17–45; Ex. 1003; Ex. 2013, 1–54). However, Patent Owner does not explain how a comparison of numerous string citations from Asmussen only against the limitations of independent claim 1 results in Patent Owner’s conclusion that “the very same issues will be decided by a jury in the District Court Action.” *See* Prelim. Resp. 13–14.

Nor do we find compelling Patent Owner’s assertion that “[t]he prior art that [Petitioner] relies upon in its Petition is the same, or substantially the same, as the prior art at issue in the District Court Action.” Prelim. Resp. 13. In this proceeding, Petitioner is relying on Asmussen, Bear, Marley, DeFazio, and Lindstrom, whereas in the District Court Action, Petitioner is relying on Asmussen and Allen only.

Patent Owner argues that “[w]ith respect to Allen, no meaningful distinction can be made relative to [Petitioner’s] secondary references used in the [P]etition, Bear, Lindstrom, Marley, and DeFazio.” Prelim. Resp. 15; Sur-reply 7. Patent Owner argues, for example, that Petitioner is using Marley to disclose “the processor restarts the displaying of the first digital information,” as recited in claim 2. Prelim. Resp. 15 (citing Pet. 50–53). Patent Owner argues that “[t]his is the exact same way [Petitioner] is relying on Allen in the District Court Action.” Prelim. Resp. 15–16 (citing Pet. 52–53; Ex. 2013, 62).

Petitioner responds by arguing, “[i]t is insufficient to merely argue both references teach the same limitation—of course they do. More importantly, because these are separate references with different teachings, the motivations to combine will be different and distinct, thus presenting unique grounds to the Board not addressed in the litigation.” Reply 10.

For purposes of understanding what issues a finder of fact would face with respect to applications of prior art, such as Allen and Marley, it is helpful to consider what, precisely, is being disclosed by the prior art.

Marley, for example concerns:

[a] system for initiating, receiving, and storing video telephony calls via a broadband television network. The system provides for the integration of all video telephony functions into the user-friendly platform of a residential set-top box which also provides standard cable television and digital video recorder functions.

Ex. 1006, Abstr.

In particular, with respect to claim 2, Petitioner relies on Marley's disclosure of:

set top box 100 with integrated video telephone functionality and "networked via the cable television infrastructure...to additional residential locations." [Ex. 1006 ¶ 16]. The set top box has "processing capabilities, specifically directed to controlling and managing video telephone functions." [*Id.* ¶ 15]. The set top box includes a primary audio/video processor (PAVP) that "pause[s] any programming presently being viewed on the monitor" when an incoming video telephone call is accepted by a user. [*Id.* ¶ 22]. The PAVP stores the paused programming in "DVR memory 116 for viewing after the termination of the video call." [*Id.*]. After termination of the video telephone call, the PAVP "restore[s] normal television viewing, thereby allowing the calling and called parties to resume real time program viewing, or recall the paused programming from DVR memory (116, 316) for viewing (519)."

Pet. 51 (quoting Ex. 1006 ¶ 22; citing Fig. 5; Ex. 1003 ¶¶ 159–160).

Whereas in the District Court Action, Petitioner relies on Allen with respect to claim 2. Allen relates to:

[a] request to establish video communication between a caller and a user of an interactive television system []. The caller is identified using information contained within the request. The user is prompted to accept or reject the request. In response to

the user rejecting the request or not accepting the request within an established time interval, a pre-recorded video greeting is sent to the caller. Thereafter, a video message is recorded including a video signal received from the caller. While the video message is being recorded, the user may interrupt the recording to establish two-way video communication with the caller.

Ex. 3001, Abstr.

In particular, in the District Court Action, Petitioner relies on Allen's disclosure of:

a system and method for automatically answering and recording video calls in which a television program or other broadcast entertainment program is automatically buffered to allow a user to subsequently view the program in its entirety. [Ex. 3001 ¶ 8]. In certain embodiments, if the user accepts the request (or later interrupts the recording of a video message to communicate with the caller), the ITV system begins to buffer a television signal being currently displayed. When the video communication is terminated, the ITV system plays back the television program being buffered from the point in time at which the communication commenced. [Ex. 3001 ¶ 27]. Later, when the communication is terminated, the television signal 404 being buffered may be played back from the point in time at which the communication commenced. Buffering may continue during playback, effectively time-shifting the television signal 404 for the period of the communication. As a result, the user 402 may provide complete attention to the caller 406 without missing significant portions of a television broadcast. [Ex. 3001 ¶ 84]. Upon termination of the two-way video communication channel 602, a playback component 914 may begin to play back the buffered television signal 404 from the point in time at which communication commenced. The playback component 914 retrieves the buffered television signal 404 from the storage device 310 and displays the signal 404 on the television 104. [Ex. 3001 ¶ 96]. A determination 1108 is then made whether the user accepts or rejects the request 408. If the user accepts, in certain embodiments, a television signal 404 currently being viewed is buffered 1110 to a storage device 310. Thereafter, two-way video communication is established 1112 between the user

402 and the caller 406. Next, a determination 1114 is made whether the communication has been terminated. If so, the television signal 404 being buffered is played back 1116 from a point in time at which the request 408 was accepted 1108. If not, the method returns to step 1114 to await the termination of the communication. [Ex. 3001 ¶ 101].

Ex. 2013, 62–63.

Petitioner then cites to Allen’s Figure 11 (Ex. 2013, 64), shown below.

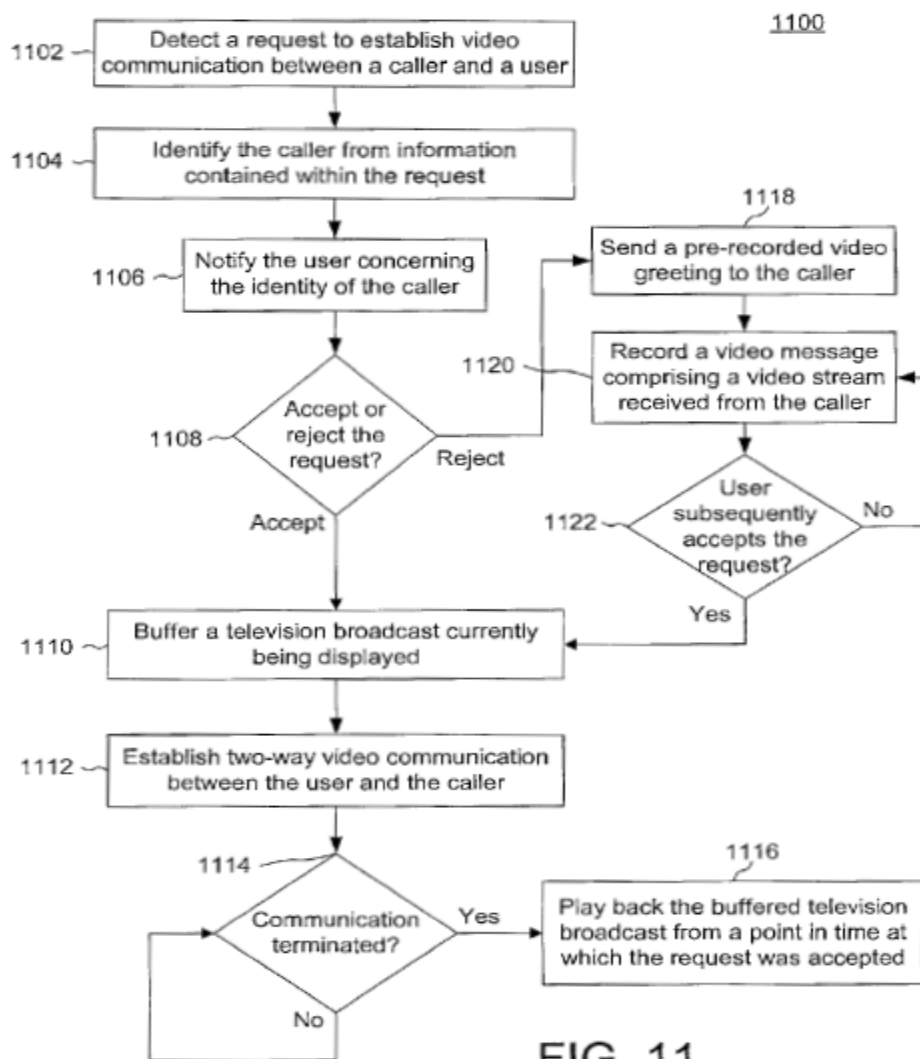


FIG. 11

Allen’s Figure 11, shown above, is a flowchart of a method for automatically answering and recording video calls.

As one can appreciate, Allen and Marley are different references. Allen describes a system and method for automatically answering and recording video calls, whereas Marley describes a system including a set top box with a primary audio/video processor that stores programming in a DVR (digital video recorder) memory. As such, to a trier of fact, the consideration of Allen is different than the consideration of Marley, because each reference is unique and requires the trier of fact to understand each reference's distinctive disclosures so that the trier of fact can determine what is, or is not, disclosed and decide whether the references teach, or do not teach, what is required by the claims. Moreover, as Petitioner points out, because the references have different teachings, the motivations to combine them with the other references, such as Asmussen, would likely be different as well, presenting unique issues in each proceeding.

Thus, we find that there is a difference in the number of claims that would have their patentability decided in this proceeding at trial compared to the single claim that would have its validity decided in the District Court Action. Moreover, we find that the prior art in each proceeding and, as a result, the issues to be considered with respect to the prior art, to be different as well.

We therefore determine that this factor weighs against exercising discretionary denial.

5. *Whether the petitioner and the defendant in the parallel proceeding are the same party*

“If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion.” *Fintiv* at 13–14. Petitioner and Patent Owner acknowledge the parties are the same in the *inter partes* proceeding and in the District Court Action.

Reply 10; Sur-reply 9. This factor does not weigh against exercising discretionary denial.

*6. Other circumstances that impact the Board's exercise of discretion, including the merits*

The final *Fintiv* factor takes into account any other relevant circumstances. The decision whether to exercise discretion to deny institution under § 314(a) is based on “a balanced assessment of all relevant circumstances in the case, including the merits.” Patent Trial and Appeal Board Consolidated Trial Practice Guide at 58 (Nov. 2019) (“Consolidated Trial Practice Guide”), *available at* <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

Considering the merits of the unpatentability arguments in the Petition and Patent Owner's arguments in the Preliminary Response, as discussed below, we determine Petitioner has established a reasonable likelihood that it would prevail with respect to the challenged claims. As discussed below, Petitioner relies on a combination of Asmussen and Bear for teaching a communication apparatus for transmitting and receiving digital information to and from another communication apparatus (independent claim 1) and a method for doing the same (independent claim 8). Based on the present record, Petitioner presents persuasive evidence and argument that the teachings of Asmussen and Bear meet all the limitations of independent claims 1 and 8, and that a person of ordinary skill in the art would have been motivated to combine their respective teachings with a reasonable expectation of success. Petitioner also presents persuasive evidence and argument that the teachings of Asmussen and Bear, along with the teachings of Marley, DeFazio and Lindstrom, meet the limitations of the remaining

claims, 2–5 and 9–12. Accordingly, the strong merits of the challenge presented in the Petition favors institution.

Patent Owner argues that Petitioner unreasonably delayed in filing the Petition. Prelim. Resp. 18–21; Sur-reply 8–10. The district court in the underlying litigation also stated that Petitioner “has not sufficiently explained its delay in filing the petitions . . . nine months after [Patent Owner] filed suit and six months after [Patent Owner] served its initial infringement contentions.” Ex. 1052, 4–5.

Petitioner notes, however, that the underlying litigation initially involved 10 different patents and “132 possibly-asserted claims”; Petitioner argues that it needed time to locate relevant prior art and prepare IPR petitions. Reply 7–8. Petitioner’s explanation is consistent with the AIA’s legislative history as to the one-year statutory bar under § 315(b). *See* 157 Cong. Rec. S5429 (daily ed. Sept. 8, 2011) (statement of Senator Kyl) (“High-technology companies, in particular, have noted that they are often sued by defendants asserting multiple patents with large numbers of vague claims, making it difficult to determine in the first few months of the litigation which claims will be relevant and how those claims are alleged to read on the defendant’s products. . . . [I]t is important that the section 315(b) deadline afford defendants a reasonable opportunity to identify and understand the patent claims that are relevant to the litigation.”). We also note that Patent Owner made its Preliminary Election of Asserted Claims in the underlying litigation on November 18, 2019. *See* Ex. 2002. The instant Petition was filed one month later, i.e., on December 19, 2019. *See* Paper 5, 1. Having considered the particular circumstances of this case, we do not consider Petitioner’s filing untimely.



Petitioner includes extensive policy arguments against the Board's application of *Fintiv* and *NHK* in determining whether to exercise discretion under § 314(a). Pet. 10–11; Reply 1–6. We need not address these arguments, as the Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office has made *Fintiv* and *NHK* precedential decisions of the Board.

Considering the particular strength of the merits of Petitioner's challenges, we determine this factor weighs against exercising discretionary denial.

### 7. Conclusion

A few of the *Fintiv* factors weigh in favor of exercising our discretion to deny institution, including the court's current trial date, and the investment in the underlying litigation, including the court's completion of claim construction. Against this, however, the differences in the claims being considered in this proceeding and the underlying litigation, as well as the differences in the prior art being applied, counsels against exercising discretionary denial. Considered as a whole, the differences between the two proceedings and Petitioner's relatively strong preliminary showing of unpatentability outweigh these other factors.

We also note that the court in the underlying litigation has left open the possibility of entertaining a stay if we were to institute this and other related proceedings. In our view, these considerations outweigh concerns about any potential inefficiency or possible inconsistent results based on the current posture of the underlying litigation. For these reasons, we decline to exercise our discretion under 35 U.S.C. § 314(a) to deny *inter partes* review.

*B. 35 U.S.C. § 325(d)*

Patent Owner argues that we should exercise our discretion to deny the asserted obvious ground based on the combined teachings of Asmussen, Bear, and Marley because “*Marley* was already considered by the [U.S. Patent and Trademark Office] during examination of the application that led to the ’991 Patent,” and “Petitioner has not provided sufficient reasons to the Board on why it should now institute a ground relying on *Marley* as a secondary reference even though this same prior art was already considered by the Office during prosecution.” Prelim. Resp. 41, 44.

Section 325(d) provides that the Director may elect not to institute a proceeding if the challenge to the patent is based on matters previously presented to the Office. 35 U.S.C. § 325(d) states, “[i]n determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.”

In evaluating matters under § 325(d), the Board uses the following 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, 8 (Feb. 13, 2020) (precedential).

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; (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. *See Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (Dec. 15, 2017), 17–18 (precedential as to § III.C.5, first paragraph) (“*Becton, Dickinson*”).

As discussed in detail below, the question of whether proffered art or arguments are “the same or substantially the same” as art or arguments previously presented to the Office is a highly factual inquiry, which may be resolved by reference to factors (a), (b), and (d), set forth in *Becton, Dickinson*.

Under § 325(d), the art and arguments must have been previously presented to the Office during proceedings pertaining to the challenged patent. Previously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement (IDS), or in the prosecution history of the challenged patent.

If the “same or substantially the same prior art or arguments previously were presented to the Office,” then the Board’s decisions generally have required a showing that the Office erred in evaluating the art or arguments. *See, e.g., Becton, Dickinson*, Paper 8 at 24 (considering

whether the petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art). This framework reflects a commitment to defer to previous Office evaluation of evidence unless material error is shown.

*1. the similarities and material differences between the asserted art and the prior art involved during examination*

Petitioner asserts the Examiner “did not have the teachings of Asmussen and Bear when considering the patentability of the claims of the ’991 Patent.” Pet. 14. Petitioner argues, “Asmussen provides a significant and detailed disclosure that is not similar to the prior art considered, including Marley; is materially different from Marley.” *Id.* Petitioner argues, “Asmussen is non-cumulative prior art that discloses features not previously considered by the Office for patentability, especially with respect to Marley.” *Id.*

Patent Owner argues, “neither *Asmussen* nor *Bear* (nor them in combination . . . ) teach each limitation of any of the challenged claims in the Petition, the same result as during prosecution of the ’991 Patent.” Prelim. Resp. 42.

Patent Owner’s argument does not address Petitioner’s assertion that Asmussen and Bear were not before the Examiner during prosecution of the ’991 patent. Because Asmussen and Bear were not considered during prosecution, we find that the art asserted here is materially different than the prior art involved during examination. This factor weighs against finding that the same or substantially the same prior art or arguments were previously presented to the Office.

*2. the cumulative nature of the asserted art and the prior art evaluated during examination*

Petitioner argues, “Asmussen provides a significant and detailed disclosure that is not similar to the prior art considered, including Marley; is materially different from Marley.” Pet. 14. Petitioner also argues, “Asmussen is non-cumulative prior art that discloses features not previously considered by the Office for patentability, especially with respect to Marley.” *Id.*

Patent Owner asserts that Asmussen and Bear are cumulative to the prior art references considered during examination of the '991 Patent. Prelim. Resp. 42.

Neither party provides a comparison or detailed analysis of Asmussen or Bear to the prior art considered by the Examiner to support their positions. Without any comparison or analysis provided in the record, this factor is neutral as to whether the same or substantially the same prior art or arguments were previously presented to the Office.

*3. the extent of the overlap between the arguments made during examination and the manner in which petitioner relies on the prior art*

Petitioner argues that “Marley was [] distinguished by the Examiner with respect to Marley’s teachings related to an inbound videophone call. In contrast, Marley is applied [here] as a ground of unpatentability for claims 2, 5, 9, and 12, none of which is directed to an inbound videophone call.” Pet. 13–14 (citing Ex. 1002, 366).

Patent Owner acknowledges that “the combination of Asmussen and Bear and Marley was not explicitly presented during examination.” Prelim. Resp. 43. Patent Owner, however, does not provide any description of or analysis of any overlap between the arguments made during examination

and the manner in which Petitioner relies on Asmussen, Bear, and Marley here.

Petitioner shows that the manner in which it relies on Marley as prior art here is different than how Marley was applied during examination of the '991 patent. This factor weighs against finding that the same or substantially the same prior art or arguments were previously presented to the Office.

4. *Summary of 35 U.S.C. § 325(d)*

*Advanced Bionics* indicates that satisfying the first part of the framework is a pre-requisite to reaching the second part of the framework. *See Advanced Bionics*, 8 (“[I]f either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims.”), 10 (“If, after review of [*Becton, Dickinson*] factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.”). As we explained above, we find that the first part of the *Advanced Bionics* framework is not satisfied because the art and arguments raised in the Petition are not the same or substantially the same as the art and arguments previously presented to the Office. Thus, we need not reach part two of the *Advanced Bionics* framework. Because the same or substantially the same prior art or arguments were not previously presented to the Office, we decline to exercise discretionary denial under 35 U.S.C. § 325(d).

C. *Level of Ordinary Skill*

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art

at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

Petitioner describes a person of ordinary skill in the art as a person having “a Bachelor’s degree in Electrical Engineering, Computer Engineering, or Computer Science, or an equivalent degree with at least two years of experience in digital video systems and networking, human-computer interaction, or related technologies.” Pet. 5 (citing Ex. 1003 ¶ 32).

Patent Owner describes a person of ordinary skill in the art as a person having “a working knowledge of image processing and/or networking, gained through a Bachelor of Science in Electrical Engineering, computer engineering, computer science or equivalent, and at least two years of experience in the field of image processing and/or networking.” Prelim. Resp. 22–23.

The parties’ assessment of a person of ordinary skill are substantially similar and consistent with the subject matter of the ’991 patent. For purposes of this proceeding, we determine that a person of ordinary skill in the art is a person having a Bachelor’s degree in Electrical Engineering, Computer Engineering, or Computer Science, or an equivalent degree with at least two years of experience in digital video systems, networking, or a related field.

#### *D. Claim Construction*

For petitions filed on or after November 13, 2018, a claim shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), including

construing the 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. 37 C.F.R. § 42.100 (2019). The Petition was accorded a filing date of December 19, 2019. Paper 5. Thus, we apply the claim construction standard as set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Under *Phillips*, claim terms are generally given their ordinary and customary meaning, as would be understood by one with ordinary skill in the art, in the context of the specification, the prosecution history, other claims, and even extrinsic evidence including expert and inventor testimony, dictionaries, and learned treatises, although extrinsic evidence is less significant than the intrinsic record. *Phillips*, 415 F.3d at 1312–17. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* at 1315.

Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Matal*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); see *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (applying *Vivid Techs.* in the context of an *inter partes* review).

Petitioner proposes construction for the claim term “communication apparatus.” Pet. 9–11. In particular, Petitioner contends that “[a] proper construction for ‘communication apparatus’ is a ‘videophone function-added TV receiver’” because “[t]he ’991 Patent repeatedly (over 280 times, excluding the claims) references the described system as a ‘videophone function-added TV receiver.’” *Id.* (citing Ex. 1001 2:32–48, 7:32–29, 8:36–50).



Patent Owner submits “for the purposes of this Preliminary Response only, Patent Owner simply applies Petitioner’s own constructions,” and “reserves all rights to dispute Petitioner’s proposed construction with the support of expert testimony to the extent the Board decides to institute review of this Petition.” Prelim. Resp. 23.

For purposes of this Decision, we determine that no claim term requires express construction at this point in the proceeding. *See Vivid Techs.*, 200 F.3d at 803 (holding that only terms that are in controversy need to be construed, and “only to the extent necessary to resolve the controversy”).

*E. Principles of Law on Obviousness*

Section 103(a) forbids issuance of a patent when “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 to a person having ordinary skill in the art to which said subject matter pertains.” In *Graham*, 383 U.S. at 17, the Supreme Court set out a framework for applying the statutory language of Section 103: the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.

The Supreme Court has made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 415 (2007). Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *KSR*, 550 U.S. at 417. Reaching this

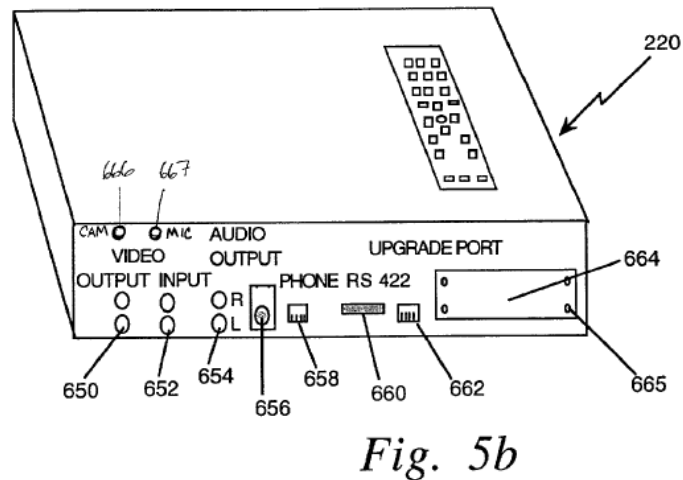
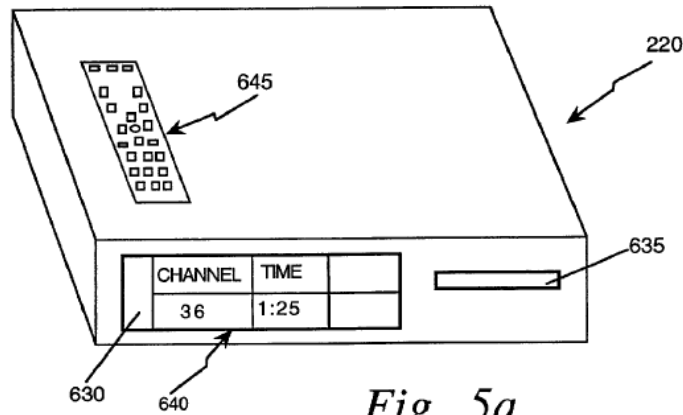
conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.*

*F. Obviousness of Independent Claims 1 and 8 based on Asmussen and Bear (Ground 1)*

Petitioner asserts claims 1 and 8 are unpatentable as obvious under 35 U.S.C. § 103(a) over the combination of Asmussen and Bear. Pet. 8, 17–48 (Ground 1).

*5. Asmussen (Ex. 1004)*

Asmussen describes a “set top terminal equipped with a camera and microphone [and] includ[ing] the capability to send and receive video calls through a cable television delivery system or other communications networks.” Ex. 1004, Abstr. In response to detecting the occurrence of a video call event, a video program is automatically paused and an indication of the occurrence of the event is displayed. *Id.* The system also buffers the video program while paused, permitting a user to replay missed portions of it, or the system waits for a triggering event, which includes the user’s access to the communications event, in order to pause the video program. *Id.* The set top terminal also includes features for caller identification of video calls. *Id.* Figures 5a and 5b of Asmussen, reproduced below, show a set top terminal. *Id.* at 5:3–4.



In Figures 5a and 5B, above, set top terminal 220 includes output terminals 650 for a TV and for a VCR. *Id.* at 16:17–38.

Set top terminal 220 also includes camera input 666 and microphone jack 667, by which a camera and microphone, respectively, can be connected; or a camera and microphone can be built into the set top terminal. *Id.*

Figure 12a of Asmussen, reproduced below, shows hardware upgrades in the set top terminal. *Id.* at 5:23–24.

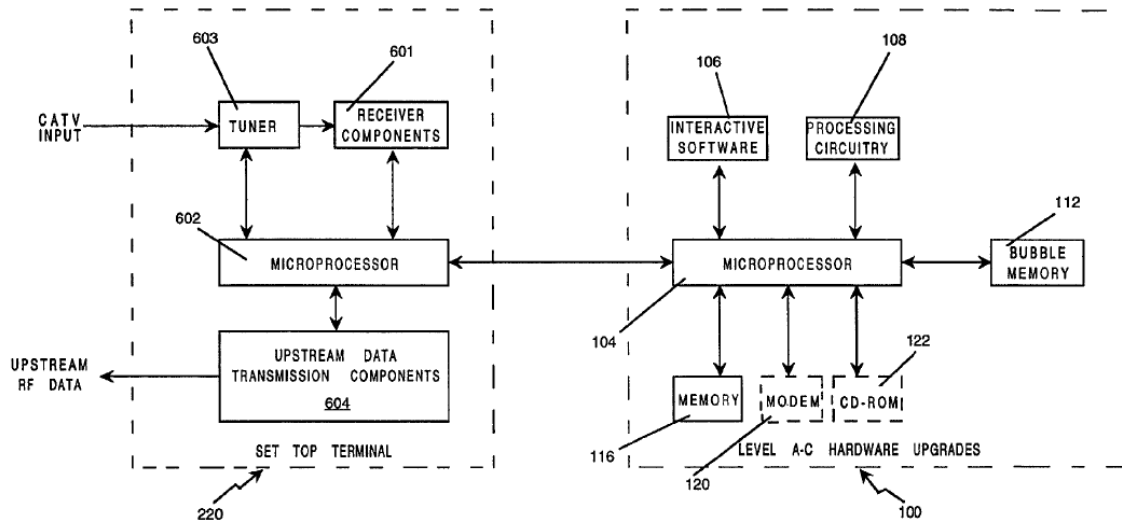


Fig. 12a

The set top terminal's hardware upgrades shown in Figure 12a, above, include, *inter alia*, tuner 603. *Id.* at 26:53–63. Community access television (“CATV”) input signals are received by set top terminal 220 using tuner 603 and other receiver components 601, and the set top terminal's microprocessor coordinates all CATV signal reception and also interacts with upstream data transmission components 604. *Id.*

Asmussen's set top terminal 220 includes video calling capability enabled by “a small video camera [2000] located and oriented on the set top terminal 220 so that it is typically directed at the face, torso, or entire body of one viewing the display 602” (e.g., a television set), input device 704 (for accepting user input in order to establish and manage a video call), and receiver 750, as shown in Figure 30 of Asmussen, reproduced below. *Id.* at 6:1–2, 49:45–50:51.

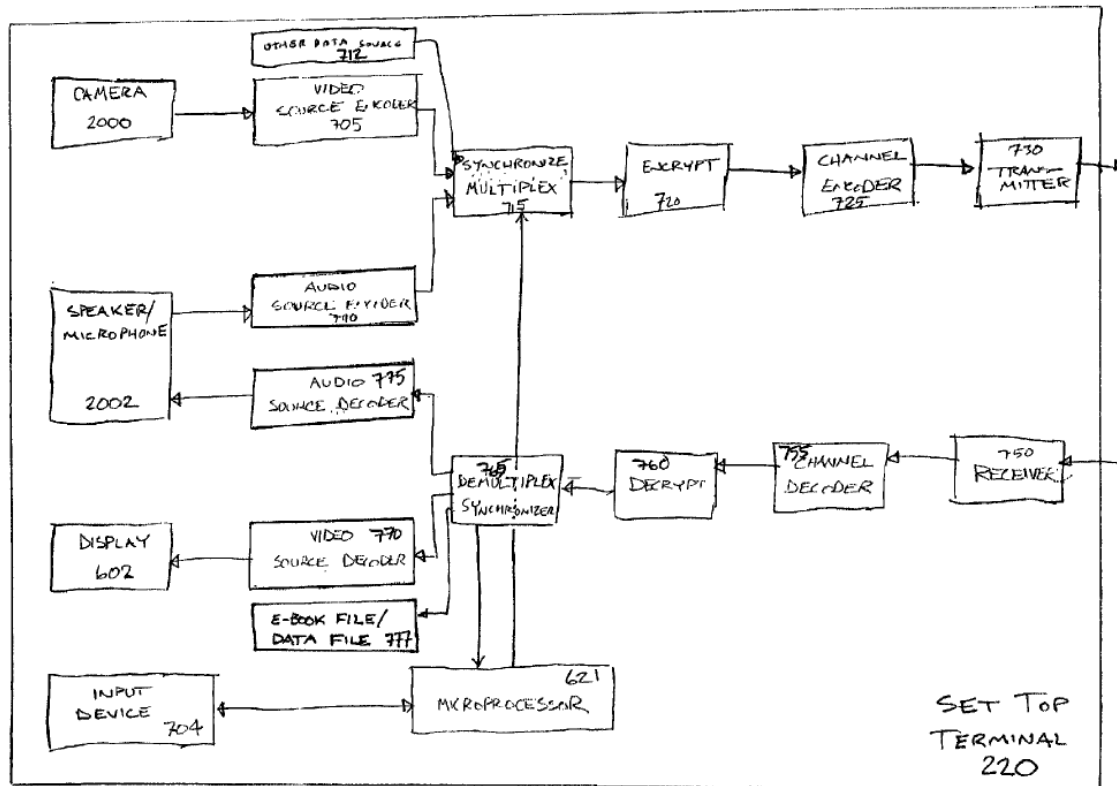


Fig. 30

Figure 30, shown above, is a block diagram of video call transmission and reception functions of set top terminal 220. *Id.* at 50:18–22. Here, “an incoming (i.e., downstream) video conferencing signal is received by a receiver 750 [in Figure 30 above], decoded by a channel decoder 755, decrypted by a decryptor 760, and demultiplexed [sic] with proper relative timing among video, audio and other data components by a demultiplexer synchronizer 765.” *Id.* at 50:44–51. Video signals are then decompressed by video source decoder 770 and output for display on display device 602. *Id.* at 50:49–51. Audio signals are decompressed by audio source decoder 775 and output for playing on speaker/microphone 2002. *Id.* at 50:51–56.

Figure 31 of , shown below, illustrates various video conferencing network connections according to one embodiment. *Id.* at 6:3–5.

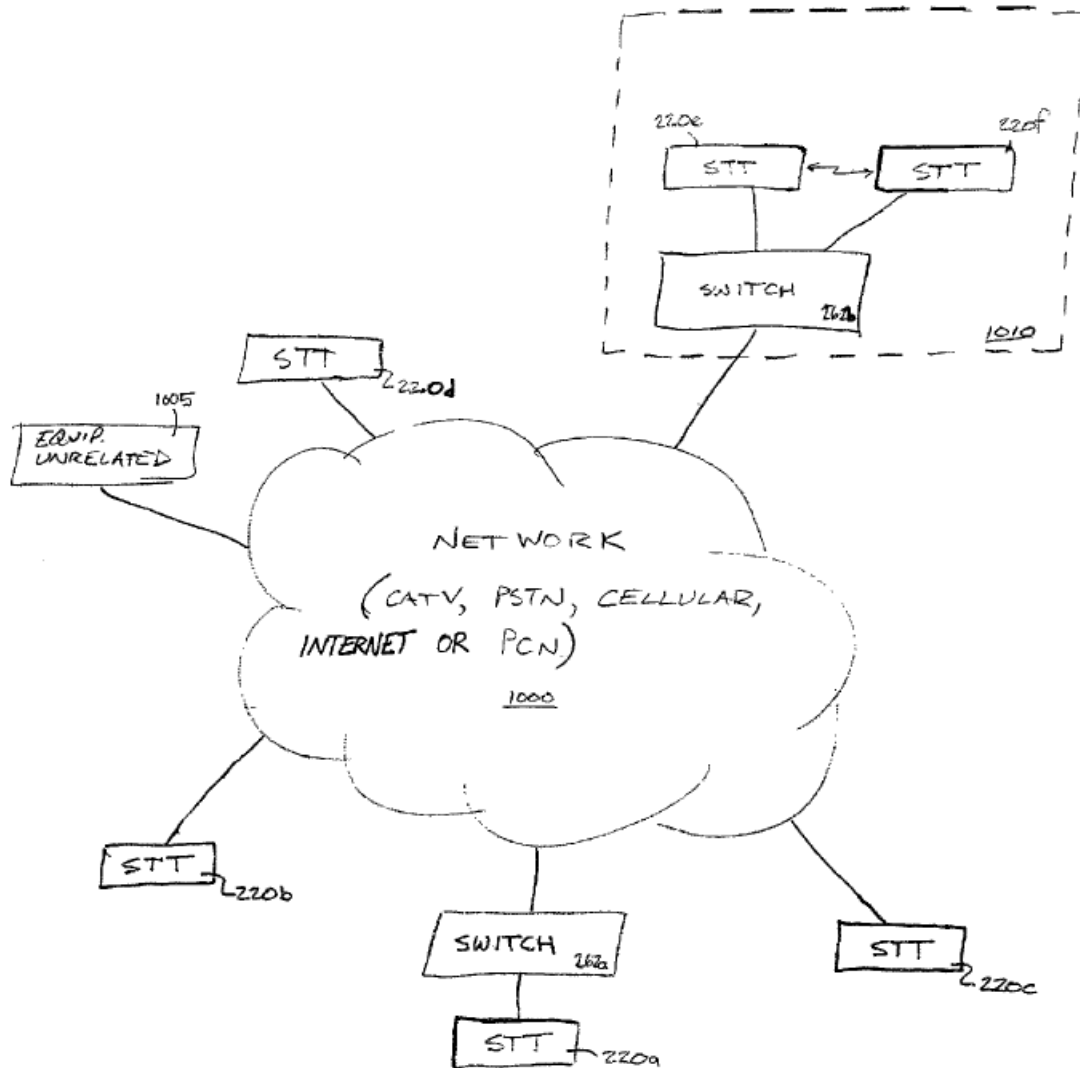


Fig. 31

Figure 31, above, illustrates video conferencing network 1000 and various configurations for connecting set top terminals 220 (including terminals 220a–220f) or other video conferencing end equipment 1005, to the network 1000. *Id.* at 51:10–13. Asmussen describes the video conferencing network in Figure 31 as follows:

[N]etwork 1000 provides full duplex interconnectivity between set top terminals 220 involved in a given video conference call.

The network 1000 can support many simultaneous calls. One typical configuration for connecting a set top terminal 220 to the network 1000 is via a local switch 262, such as shown in the lower central area of FIG. 7, where a set top terminal 220a is connected to a local switch 262a, which in turn is connected to the network 1000. A variation of this configuration is a direct connection between the network 1000 and a set top terminal 220, such as the set top terminals 220b-220d.

FIG. 31 also illustrates a mini-network 1010. The mini-network 1010 can provide full duplex interconnectivity between set top terminals 220 in a limited area (e.g., within a home, building, or campus) so as to support video calls without involvement of the network 1000. For example, in the case of a video call between two set top terminals 220e and 220f within the mini-network 1010, the connection between the set top terminals 220e and 220f can be a direct connection or it can be a connection through the local switch 262b.

*Id.* at 51:13–33.

Asmussen further describes “pausing a video program in response to detection of an occurrence of a communications event or triggering event.” *Id.* at 46:27–30. According to Asmussen, the term “communications event” includes “any communication of information through any wireline or wireless medium,” and the term “triggering event” includes “a user’s access to a communications event.” *Id.* at 43:20–27. Communications events include “an incoming cell phone call; an incoming facsimile transmission; an indication of a voice mail; or an incoming video call.” *Id.* at 44:9–13. Triggering events include “a user answering an incoming cell phone call; a user accessing or otherwise requesting to view an incoming facsimile transmission; a user’s access to a pending voice mail message; . . . or a user’s initiation of a video call.” *Id.* at 44:13–19, 47:40–42.

Figure 28 of Asmussen is shown below.

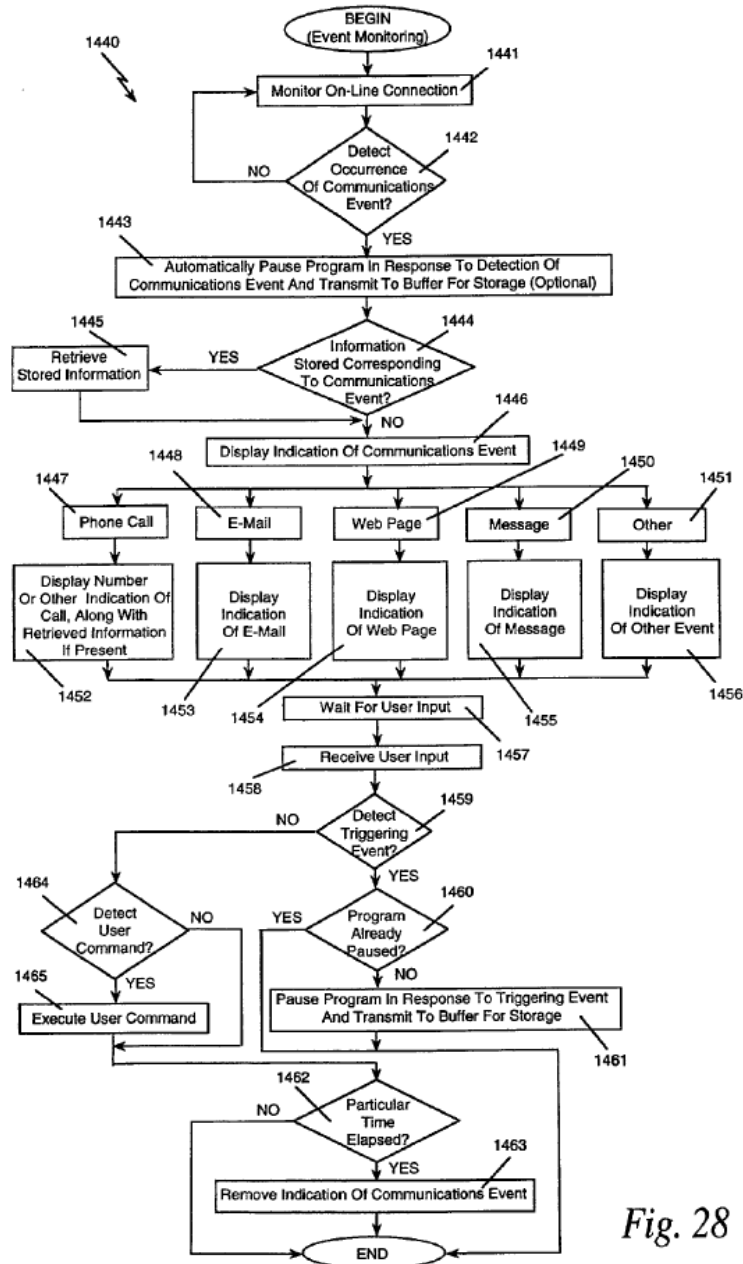


Fig. 28

Figure 28, shown above, is a flow chart of a method for event monitoring for use in pausing a video program in response to detection of occurrence of a communications event. *Id.* at 5:63–65. Asmussen describes steps 1441–1443 in Figure 28 as follows:



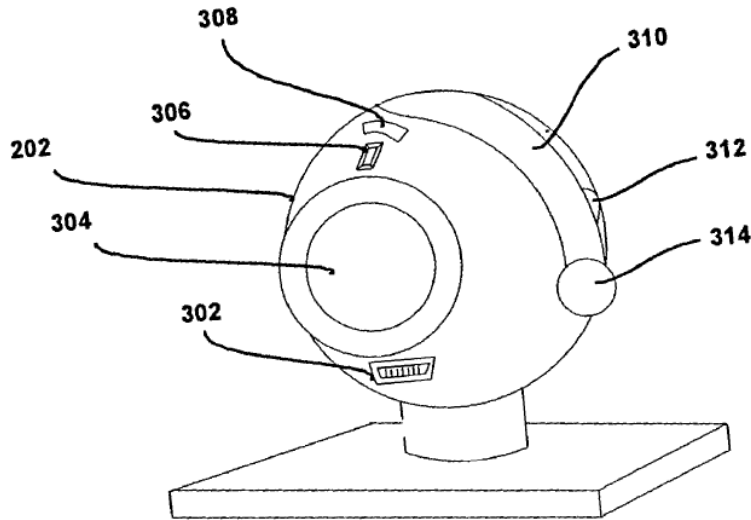
In event monitoring method 1440, the system monitors an on-line connection (step 1441). This typically occurs at set top terminal 220, which may include a connection with a phone line through telephone jack 658 in addition to a connection to a source of a cable television signal, a satellite television signal, or other sources of video programs such as those described above or in the related applications identified above. The system continually monitors the connection for an occurrence of a communications event (step 1442). Upon detecting the occurrence of a communications event, the system optionally automatically pauses the video program in response to the communications event and continues to transmit it to the buffer for storage (step 1443). Step 1443 is optional in that a user may choose to have the video program paused in response to a triggering event, explained below, rather than in response to a communications event.

*Id.* at 46:36–51.

6. *Bear (Ex. 1005)*

Bear describes a system and method for improved video capture on a personal computer equipped with video controls and a camera with a privacy lens cover. Ex. 1005, Abstr. A sensor for sensing when the lens cover is closed is used along with an actuator for mechanically opening the lens cover, so that the system may open the lens cover automatically for video capture applications. *Id.* A user may capture a video stream or still images using the video controls, and may also answer an incoming phone call that supports video by pressing the camera button. *Id.* The user can also set a preference so that “the camera is automatically enabled whenever answering a call that supports video.” *Id.* The system may be configured to “automatically transition to video or from video (e.g., to an audio only state, or a state that displays something else) anytime during the call, whenever the lens cover is opened or closed, respectively.” *Id.* at 3:1–5. When the call is

over, the system may be configured such that the user may hang up by pressing the camera button, which will terminate the call and turn off the camera indicator light. *Id.* at 3:5–7. Figure 3 of Bear is shown below.



**FIG. 3**

Figure 3, shown above, is a general representation of a camera including a privacy shutter and video capture control. *Id.* at 3:24–26. The camera shown in Figure 3, above, includes microphone 302, lens 304, camera indicator light 306, video capture button 308, lens cover 310, sensor 312, and actuator 314. *Id.* at 7:35–45. Capture button 308 may be located on the camera body where the right index finger normally rests while manually aiming the lens. *Id.* Pressing capture button 308 while an audio/video (A/V) capture application is executing, triggers an image or video stream capture depending on the mode setting. *Id.* at 7:42–46.

Figure 10 of Bear is shown below.

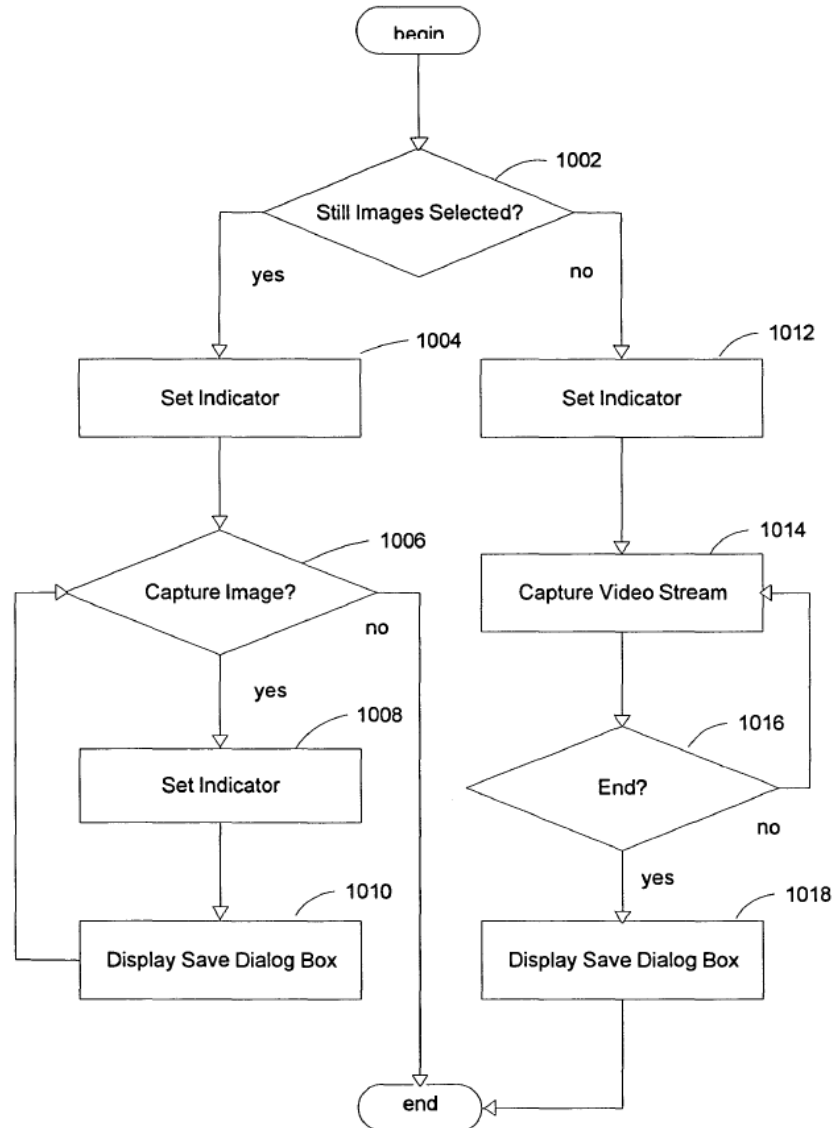


FIG. 10

Figure 10, shown above, is a flowchart illustrating an exemplary audio/video application using the camera to capture a video stream. *Id.* at 3:46–48. Bear describes the operations of the audio/video (A/V) application function in Figure 10 as follows:

The A/V capture application may be launched whenever a capture event occurs such as opening the lens cover 310. . . . [T]here are other ways of launching the application, such as a user may launch it by pressing the capture button 308 or selecting

the application from a menu of a graphical user interface, or the computer system may launch the application in response to receiving an incoming phone call that supports video, and so forth. First, the A/V capture application checks if a video stream or still images are to be captured at step 1002. . . .

If the user has not selected still images to be captured in the A/V capture application, then the application sets the camera capture indicator light 306 to red at step 1012 to indicate that the A/V capture application is in the mode of capturing a video stream. The camera begins capturing the video stream at step 1014. The application periodically checks if the user has made any indication to stop capturing the video stream at step 1016. If no indication has been made, the application continues to capture the video stream at step 1014. . . .

[T]here are many applications that may use the camera and video controls for capturing video and still images. For example, whenever there is an incoming phone call that supports video, the camera indicator light 306 may slowly blink red to alert the user. The user may then answer the call immediately in that mode by pressing the camera button 308. If the user presses the camera button, the system opens the video monitor, lights the camera indicator, and starts streaming video. Optionally, the user can set a preference so that the camera is automatically enabled whenever answering a call that supports video. Additionally, the system could automatically transition to or from video anytime during the call whenever the lens cover 310 is opened or closed. When the call is over, the user may hang up by pressing the camera button which will terminate the call and turn off the camera indicator light.

*Id.* at 11:35–12:25.

#### *7. Independent Claim 1*

Claim 1 is directed to a communication apparatus for transmitting and receiving digital information to and from another communication apparatus. Ex. 1001, 32:39–63.

*[Preamble] A communication apparatus for transmitting and receiving digital information to and from another communication apparatus, comprising:*

With respect to claim 1's preamble, Petitioner argues Asmussen "teaches a communication apparatus, namely a set top terminal 220 in combination with a television 222, display 602, or video display 1400, which transmits and receives digital information to and from another communication apparatus." Pet. 17. Petitioner also argues Asmussen teaches a "set top terminal [STT] equipped with a camera and microphone" that "includes the capability to send and receive video calls through a cable television delivery system or other communication[s] networks." *Id.* (quoting Ex. 1004, Abstr., Figs. 5a, 5b).

Petitioner further argues, "[t]he STT is used in combination with a subscriber's television 222 [], display 602, or video display 1400, such that video programs and video information from a videoconference call are displayed on the television." Pet. 18 (citing Ex. 1004, 25:28–32, 43:43–55, Fig. 3, Fig. 24a).

Patent Owner does not respond substantively to Petitioner's arguments or evidence with respect to the preamble of claim 1. *See* Prelim. Resp. 29–40.

Petitioner's arguments are supported by the cited evidence. Petitioner's declarant, Dr. Lippman, provides credible testimonial evidence that Asmussen's set top terminal 220 with video calling capabilities in combination with television 222 is a communication apparatus for transmitting and receiving digital video programs and video calls ("digital information") to and from other set top terminal television systems. *See* Ex. 1003 ¶ 73–80.

The issue, however, of whether the preamble is limiting need not be resolved at this stage of the proceeding because, regardless of whether the preamble is limiting, Petitioner shows sufficiently for purposes of institution that the recitation in the preamble is satisfied by the prior art.

*[1a] a network interface configured to receive first digital information which is received from a contents server which is coupled to the communication apparatus via the network interface and second digital information from the another communication apparatus;*

Petitioner maps Asmussen’s “collective tuner 603 and receiver 750” to the recited “network interface,” Asmussen’s “set top terminal 220 (or first set top terminal 220a)” to the recited “communication apparatus,” Asmussen’s “second set top terminal (or set top terminals 220b–f)” to the recited “another communication apparatus,” Asmussen’s “video programs, including live or prerecorded programs, from a source” to the recited “first digital information,” and Asmussen’s “video information from a videoconference call” to the recited “second digital information.” Pet. 20–29. Petitioner’s arguments and evidence in support of these mappings is discussed in more detail below.

As noted above, Petitioner maps Asmussen’s tuner 603 in combination with receiver 750 to the recited “network interface,” which, Petitioner argues, “collectively receives the first and second digital information across a cable television network.” Pet. 22 (citing Ex. 1004, 15:15–20, 26:1–11, 50:44–49; Ex. 1003 ¶¶ 111–112). Petitioner argues, “[t]he network connecting the cable headend 208 to the STT is a ‘conventional concatenated cable television system 210.’” Pet. 22 (citing Ex. 1004, 6:48–50; Ex. 1003 ¶ 106). Petitioner also argues, “[t]he tuner 603

receives all cable signals intended for reception on the subscriber's TV, and the 'CATV input signals are received by the set top terminal 220 using a tuner 603 and various receiver components...denoted generally at 601 in FIGS. 12a and 12b.'" Pet. 22 (citing Ex. 1004, 26:1–8, 15:15–23, 23:35–36, 25:55–26:63, 26:21–29, 28:9–11, Figs. 10–12a).

Petitioner argues, "Asmussen further teaches video information from a videophone call may be transmitted across a cable television network and received at receiver 750." Pet. 23 (citing Ex. 1004, 50:4–49, 53:14–22; Ex. 1003 ¶¶ 114–115). Petitioner argues, "[r]eceiver 750 receives 'incoming (i.e., downstream) video conferencing signal[s],' and videocalls can be made using the cable television network. Pet. 23–24 (citing Ex. 1004, 50:44–51, 53:14–22).

Petitioner argues, "[i]t would have been obvious to a [person of ordinary skill in the art] that the STT including tuner 603 is further modified to include receiver 750, as taught by *Asmussen*, to provide a collective network interface for receiving both first and second digital information across a cable television system." Pet. 24 (citing Ex. 1004, Fig. 12a; Ex. 1003 ¶¶ 115–119).

Petitioner maps Asmussen's "video programs, including live or prerecorded programs, from a source" to the recited "first digital information." Pet. 24–25. Petitioner explains that Asmussen "teaches the STT, using the tuner 603, receives 'video signals and program control signals' that 'correspond to specific television programs and menu selections that each subscriber may access.'" *Id.* at 24 (citing Ex. 1004, 7:34–37, 26:57–60). Petitioner notes that, in Asmussen, video programs include "live or prerecorded programs from any source such as, for example, a broadcast television signal transmission, a cable television signal transmission, satellite

television, video streaming over the internet or other network, a VCR, a computer memory such as a hard disk, CDROM, or digital versatile disk (DVD).” Pet. 25 (emphasis omitted) (quoting Ex. 1004, 4:20–25).

Petitioner maps Asmussen’s “operations center 202” to the recited “contents server,” which provides the recited “first digital information.” Pet. 25–26. Petitioner points out that Asmussen’s ““operations center 202 performs two primary services, packaging television programs and generating the program control information signal’ and stores programs for viewing by a subscriber.” *Id.* at 25 (quoting Ex. 1004, 7:56–8:15; Ex. 1003 ¶ 94). Petitioner argues, “[t]he user of the STT can select the video programming they wish to watch using the menus, and the operations center will then send the selected video programming to their terminal.” Pet. 25–26 (citing Ex. 1004, 7:34–55).

Petitioner maps Asmussen’s “video information from a videoconference call” to the recited “second digital information.” Pet. 26–29. Petitioner point out that Asmussen’s SST has the “capability to send and receive video calls through the set top terminal equipped with a camera and microphone. The video call can be communicated through the cable television delivery system or other communications networks.” *Id.* at 27 (quoting Ex. 1004, 4:5–9). Petitioner argues Asmussen teaches “a first set top terminal 220a receives the video call, including the video information, from a second set top terminal 220b.” Pet. 28 (citing Ex. 1004, 50:18–57, 51:9–23, 58:4–29, 4:5–9, Abstract, Fig. 30).

Petitioner argues,

both the first digital information, i.e., the video programs, and the second digital information, i.e., the video information from a video call, are received across a cable television transmission network, and the video information from the video call is



received from another communication apparatus, i.e., a second STT 220b–f.

Pet. 28 (citing Ex. 1003 ¶¶ 99–108).

Patent Owner argues that Asmussen does not teach the recited “network interface.” Prelim Resp. 29–32. In particular, Patent Owner argues Petitioner relies on two separate embodiments in Asmussen for the recited “network interface,” a first embodiment, shown in Figure 11, having tuner 603, which is primarily used to change cable signals intended for reception on the subscriber’s TV, and a second or different embodiment having receiver 750. *Id.* at 31. Patent Owner argues “there is no explicit disclosure that the combination of the tuner 603 and receiver 750 satisfy the claimed network interface receiving first and second digital information.” *Id.* Patent Owner further argues, “Asmussen mentions receiver 750, the receiver with respect to video conferencing, only once in the entirety of the patent and this is not in the context of use with a tuner as other receivers.” *Id.*

Based on the present record, we disagree with Patent Owner. Although Asmussen does not provide a drawing depicting both tuner 603 and receiver 750 in the same figure, Asmussen does provide drawings of set top terminal 220 that include tuner 603 (Figure 12a, below) and receiver 750 (Figure 30, below). Moreover, Asmussen’s discussion of its set top terminal explains its hardware and feature upgrades, which include “the capability to send and receive video calls through the set top terminal equipped with a camera and a microphone.” *See* Ex. 1004, 3:30–41, 4:5–9.

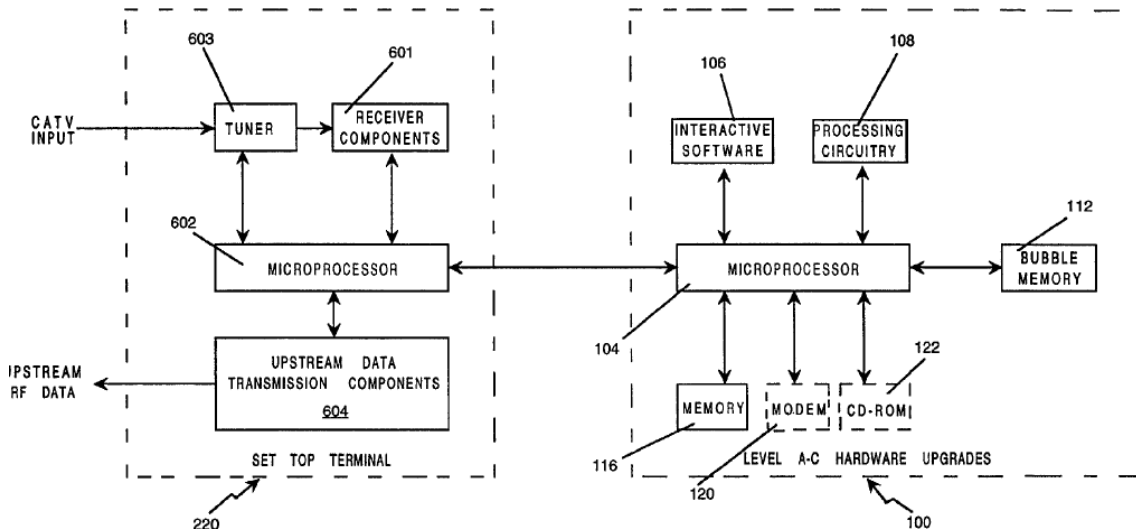
For example, with respect to the recited “network interface,” Petitioner’s expert, Dr. Lippman, explains:

Asmussen describes a set top terminal 220 with hardware upgrades “to provide additional advanced features and functional capabilities.” [Ex. 1004], 21:49–60, 15:15–23, 16:44–53, 16:60–17:9. Due to Asmussen teaching that existing set top terminals can be upgraded, Asmussen describes the features of the set top terminal in multiple sections, such as picture-in-picture capability (32:34), interactive services (37:30), digital audio capability (39:53), automatic program pause (43:18), and video call features (49:42), to name a few. Because of each of the sections described, Asmussen builds onto the set top terminal 220 as originally discussed in the description at 14:4–16:43. Because of this, Asmussen describes multiple types of network interfaces that serve to receive information across a network. For example, and as discussed below, a tuner 603 is described as receiving RF [radio frequency] signals corresponding to all cable signals intended for reception on the subscriber’s TV. [Ex. 1004], 26:1–11. Multiple receivers are described, including receiver 332 (26:12–20), receiver components 601 (26:57–63), receiver 750 (50:44–57), cellular receiver (54:31–33), CDMA transceiver (52:12–17), PCS transceivers (54:42–46), and wireless RF transceivers (51:35–50). Any one of these receivers (which includes tuner 603) is a network interface, as the receiver serves as the interface between the set top terminal and the network and receives the incoming digital signals across the network.

Ex. 1003 ¶ 109.

According to Dr. Lippman, “[i]t would have been obvious to incorporate one or more of the receivers (including receiver 750) into the set top terminal based on the desired functionality that is already described in Asmussen.” *Id.* ¶ 110. Dr. Lippman testifies, “Asmussen also recognizes that multiple types or forms of data would be received across a network, such as the cable television network, in describing cable signals, including both video programming and videocall information, being transmitted across the cable television network.” *Id.*

Asmussen’s Figure 12a is shown below.



*Fig. 12a*

Asmussen’s Figure 12a, shown above, depicts on the left hand side, set top terminal 220 with microprocessor 602 and tuner 603. Tuner 603 receives CATV input. Ex. 1004, 26:53–63. Dr. Lippman testifies, “the set top terminal’s microprocessor 602 ‘instructs the tuner 603 to tune to the proper frequency of the channel or program desired and subsequently instructs the processing circuitry 340 to begin descrambling of this channel or program.’” *Id.* ¶ 113 (quoting Ex. 1004, 26:24–29). These teachings in Asmussen, Dr. Lippman testifies, “indicate the CATV signal input to the tuner includes, at the least, digital video program information.” *Id.*

Dr. Lippman testifies that “Asmussen also teaches the set top terminal receives videocalls via receiver 750, illustrated in Fig[ure] 30,” shown below. *Id.* ¶ 114.

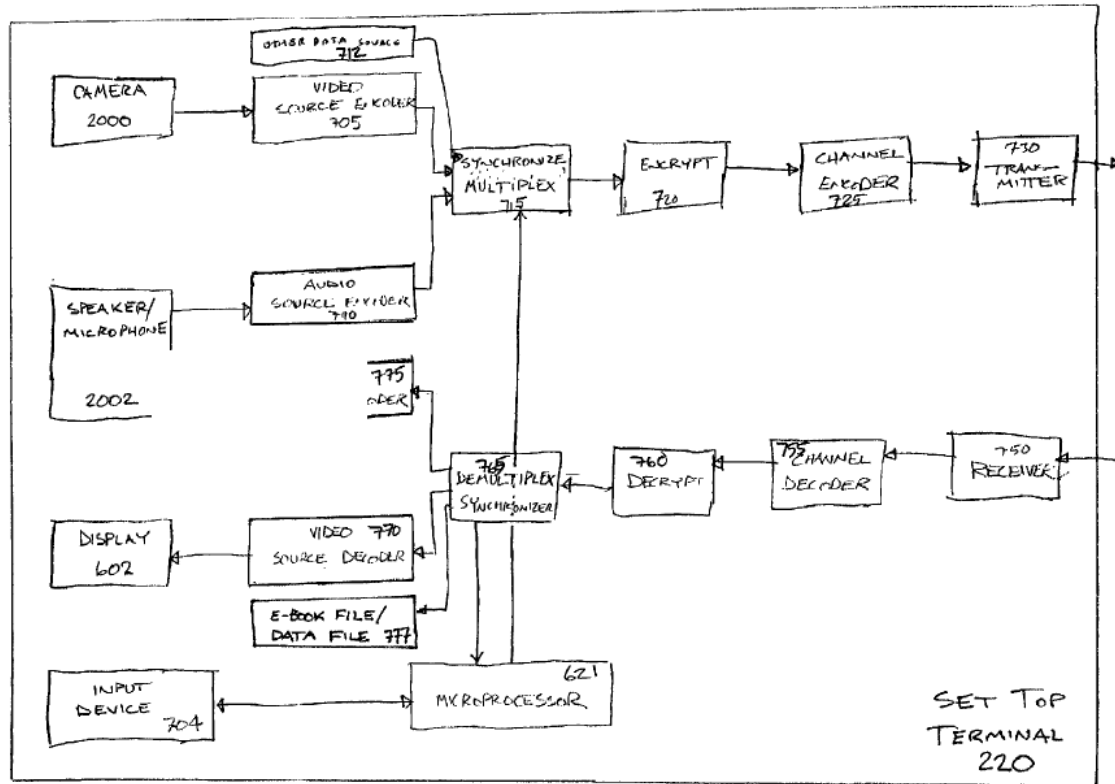


Fig. 30

Asmussen's Figure 30, shown above, depicts set top terminal 220 with receiver 750, microprocessor 621, display 602, and camera 2000, among other components. Ex. 1004, 50:44–57. Dr. Lippman testifies, “Asmussen teaches utilizing an existing set top terminal that is already compatible with a cable television network and modifying it by adding hardware components to support video telephone capabilities.” Ex. 1003 ¶114 (citing Ex. 1004, 3:31–41). In discussing the set top terminal, Asmussen explains that, “[t]he hardware upgrades provide additional advanced features and functional capabilities to any of these embodiments.” Ex. 1004, 3:39–41. Asmussen also explains, “[s]uch features include the capability to send and receive video calls through the set top terminal equipped with a camera and microphone. The video call can be communicated through the cable

television delivery system or other communications network.” *Id.* at 4:5–9; *see also* Ex. 1003 ¶¶ 114–15.

Dr. Lippman testifies that Asmussen’s Figure 12a:

is an exemplary embodiment of how the receiver 750 and the transmitter 730 would be integrated into the set top terminal. Figure 12a is generally referring to the level A, B and C hardware upgrades (*see* [Ex. 1004], 5:24–25), but Fig. 12a’s disclosure of including receiver components 601 indicates to me that Asmussen recognizes the set top terminal may be upgraded to include certain functionality and associated hardware, such as receiver components 601.

Ex. 1003 ¶ 116.

Dr. Lippman testifies, “[i]n my opinion, Asmussen is expressly recognizing a receiver that receives both video program and videocall data in stating that the ‘upstream communication capability for video calling is in addition to the downstream communication capability by which broadcast programming is received.’” Ex. 1003 ¶ 118 (quoting Ex. 1004, 50:4–8).

Petitioner’s arguments are supported by the cited evidence. Dr. Lippman provides credible testimonial evidence that Asmussen’s tuner 603 in combination with receiver 750 amounts to a network interface that receives video programs (“first digital information”) from operations center 202 (“contents server”), which is coupled to set top terminal 220 through tuner 603, and also receives video conference calls (“second digital information”) from other set top terminals 220 b–d (“another communication apparatus”) through receiver 750. *See* Ex. 1003 ¶ 81–119.

Based on this preliminary record, we are persuaded Petitioner has demonstrated sufficiently that Asmussen teaches the recited limitations.

*[1b] a camera configured to generate video information which is included in third digital information*

Petitioner asserts Asmussen teaches this limitation because “the STT includes a camera and a microphone: ‘A set top terminal equipped with a camera and microphone includes the capability to send and receive video calls through a cable television network delivery system or other communications network.’” Pet. 29 (quoting Ex. 1004, Abstr.). Asmussen’s Figure 30, *supra*, depicts camera 2000 as a component of set top terminal 220.

Petitioner maps the output signal of Asmussen’s camera during a video call as included in the recited “third digital information.” Pet. 30. Petitioner argues that, when the STT performs a video call, “both the camera and microphone will output signals, such as video signals, that the STT converts into a digital format and compresses/encodes.” *Id.* (citing Ex. 1004, 55:56–56:8; Ex. 1003 ¶ 121 (citing Ex. 1004, 50:18–43)). Petitioner also argues the information generated by the camera is output to another communication apparatus, because “the video information generated at the first STT 220a in Asmussen is transmitted to the second STT 220b–f during the videoconference call.” Pet. 30–31 (citing Ex. 1004, 50:35–40, 50:44–57, 58:4–29).

Patent Owner does not respond substantively to Petitioner’s arguments or evidence with respect to this limitation. *See* Prelim. Resp. 29–40.

Petitioner’s arguments are supported by the cited evidence. Dr. Lippman provides credible testimonial evidence that Asmussen’s set top terminal 220 contains camera 2000, which produces a video signal (“video

information”) for processing and transmitting (“third digital information”) to a video conferencing network. *See* Ex. 1003 ¶ 120–122.

Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that Asmussen teaches the recited limitation.

*[1c] a display configured to display at least the first and the second digital information*

Petitioner asserts Asmussen teaches this limitation because Asmussen’s STT is “used in combination with a subscriber’s television, display, or video display.” Pet. 31. Petitioner argues “Figure 30 of Asmussen illustrates the set top terminal 220 including display 602, which Asmussen states is typically television 222.” *Id.* (citing Ex. 1004, Fig. 30, 50:44–51; Ex. 1003 ¶ 123). Petitioner argues, “Asmussen thus teaches a display, as claimed, namely television 222, display 602, or video display 1400.” Pet. 32 (citing Ex. 1004, 25:28–32 (describing video and menus with text being displayed on TV 222), Fig. 2 (RN 222); *see also* Ex. 1003 ¶¶ 78–80).

Petitioner argues, “Asmussen teaches the video display 1400 ‘may be implemented with a television 222 or any device for displaying a video program, such as a computer monitor or flat screen display.’” Pet. 32–33 (emphases omitted) (quoting Ex. 1004, 43:43–55, Figs. 24a–d (RN 1400) (illustrating various video displays)). Petitioner argues, “Asmussen further teaches the video signals from a videoconferencing signal ‘are decompressed by a video source decoder 770 and output for display on a display device 602, which is typically the television 222.’” Pet. 33 (quoting Ex. 1004, 50:44–51; Ex. 1003 ¶ 123. Petitioner also argues, “[t]he video associated with a videoconference call is mapped as the ‘second digital information.’” Pet. 33.

Patent Owner does not respond substantively to Petitioner's arguments or evidence with respect to this limitation. *See* Prelim. Resp. 29–40.

Petitioner's arguments are supported by the cited evidence. Dr. Lippman provides credible testimonial evidence that Asmussen's set top terminal 220 contains television 222, display 602, or video display 1400 for displaying a video program ("first digital information") or a video conference call ("second digital information"). *See* Ex. 1003 ¶¶ 123–124.

Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that Asmussen teaches the recited limitation.

*[Id] a processor*

Petitioner asserts Asmussen teaches this limitation because Asmussen's STT "includes a processor, namely microprocessor 602, for receiving and sending of video phone calls." Pet. 34. Petitioner points out that Asmussen explains:

The microprocessor 602 is capable of executing program instructions stored in memory. These instructions allow a user to access various menus by making selections on the remote control 900. To support video calling, the instructions also enable the microprocessor 602 to process video signals from a camera, to process audio signals from a microphone and to control a camera and microphone.

*Id.* (emphases omitted) (quoting Ex. 1004, 15:24–30; *see also id.* at Fig. 4; Ex. 1003 ¶¶ 125–126). Petitioner argues, "[t]he microprocessor may comprise multiple processors and controls the reception of the digital video programming." Pet. 34 (citing Ex. 1004, 15:30–33, 26:60–63, 32:63–33:3, 36:13–15).



Patent Owner does not respond substantively to Petitioner's arguments or evidence with respect to this limitation. *See* Prelim. Resp. 29–40.

Petitioner's arguments are supported by the cited evidence. Dr. Lippman provides credible testimonial evidence that Asmussen's set top terminal 220 contains microprocessor 602, which may be a single microprocessor or several microprocessors, which coordinate CATV signal reception and processes video signals. *See* Ex. 1003 ¶¶ 125–126.

Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that Asmussen teaches the recited limitation.

*[1e] wherein when the processor receives an inbound videophone call notice while displaying the first digital information on the display, the processor pauses the displaying of the first digital information and renders the camera operative*

Petitioner asserts Asmussen alone or the combination of Asmussen and Bear teaches this limitation. Pet. 34–39. Petitioner argues, “Asmussen teaches the STT actively monitors for incoming video phone calls, and if one is detected, automatically pauses the current video program and displays a notification of the incoming video call.” *Id.* at 34 (citing Ex. 1004, 46:27–51, Fig. 28). Petitioner explains, “[t]he monitoring and automatic pausing is performed using software or firmware executed by the microprocessor 602.” Pet. 34–35 (citing Ex. 1004, 46:27–35). Petitioner asserts Asmussen's Figure 28, shown below, illustrates the monitoring and auto-pausing.

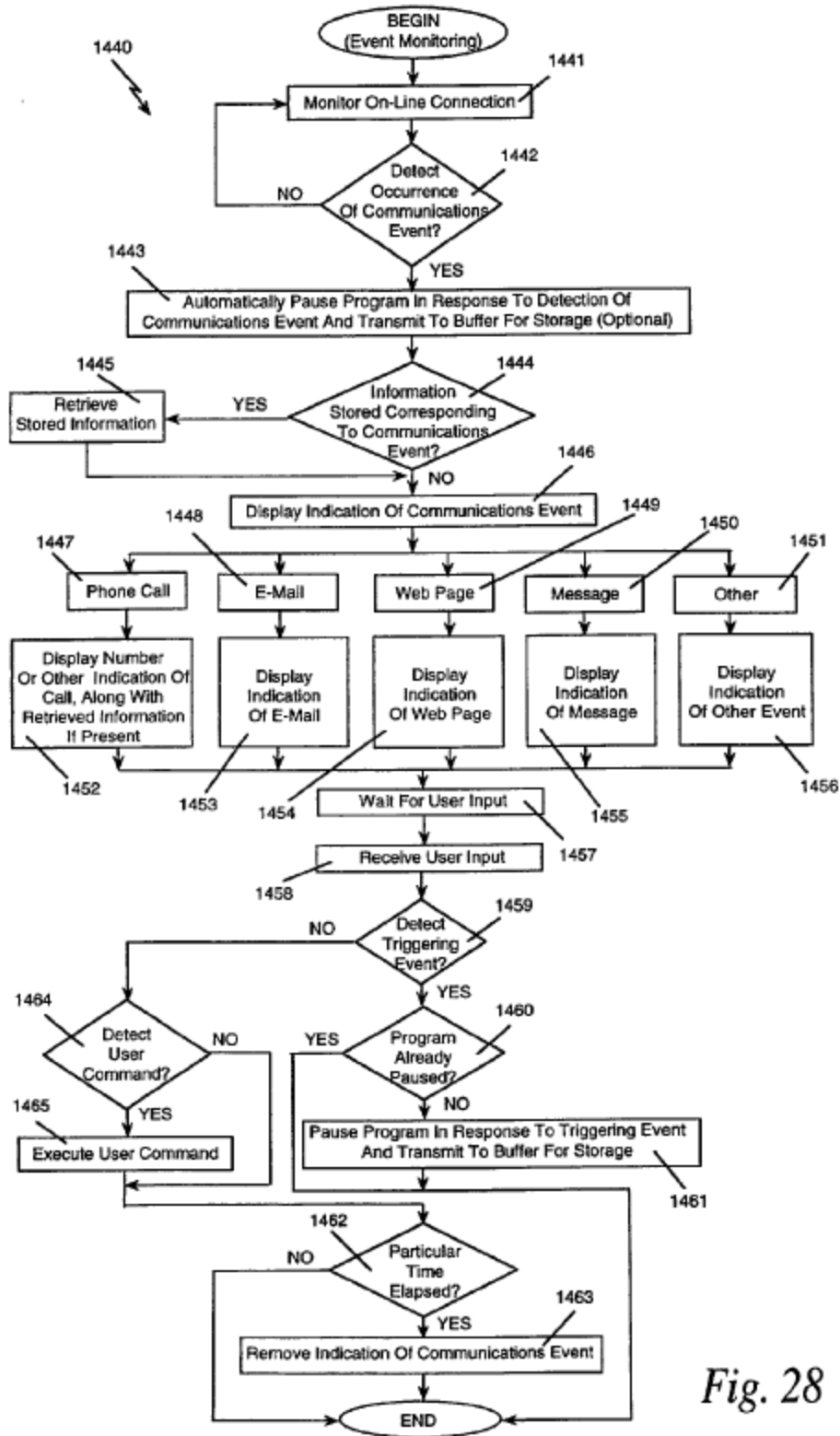


Fig. 28

Asmussen's Figure 28, above, "is a flow chart of an event monitoring method 1440 for monitoring communications events and pausing a video program in response to detection of an occurrence of a communications event or triggering event." Ex. 1004, 46:27–30. Petitioner argues that Asmussen teaches "monitoring the on-line connection (step 1441), detecting a communications event (step 1442), automatically pausing the video program in response to the communications event (step 1443), and displaying an indication of the communications event (step 1446)." Pet. 36 (citing Ex. 1004, 46:26–51, 44:7–13 (disclosing a communications event includes an "incoming video call"), 46:59–47:3 (disclosing an indication of a communications event is displayed on the same screen currently displaying the video program), 47:26–38, Fig. 28 (Steps 1451, 1456), Figs. 24a–d (illustrating exemplary indications), 43:41–55).

Petitioner argues,

when the claimed processor (i.e., microprocessor 602), receives an inbound videophone call notice (i.e., an indication of a communications event per step 1442 of Fig. 28, where a communications event is defined as an "incoming video call" (see 44:7–13)), while displaying the first digital information (i.e., while viewing the video program) on the display (i.e., TV 222 or video display 1400), the processor pauses the displaying of the first digital information (step 1443 of Fig. 28, 44:44–48).

Pet. 36 (citing Ex. 1004, 44:20–24; Ex. 1003 ¶ 127).

With respect to the recited "renders the camera operative," Petitioner argues Asmussen "teaches the microprocessor supports video calling, including processing video signals from the camera." Pet. 36 (citing Ex. 1004, 15:27–30; Ex. 1003 ¶¶ 128–130).

Petitioner also argues Asmussen teaches the microprocessor renders the camera operative "when the processor receives an inbound videophone

call notice.” Pet. 37. Petitioner explains, “[t]he user may set up, via a video call options menu 1022, a default state of the video camera 2000 to on or off.” *Id.* (citing Ex. 1004, 21:34–42). “When the user selects a default state of the video camera 2000 as ‘on,’ the camera is rendered operative when the processor receives the inbound videophone call notice, per steps 1441 and 1442 of Fig[ure] 28.” Pet. 37 (citing Ex. 1003 ¶¶ 128–129).

Petitioner also argues that, to the extent Asmussen does not teach the recited “renders the camera operative,” Bear does. Pet. 37–39. Petitioner argues “Bear teaches a ‘control handling program (e.g., the operating system 1343, or an application program 135 such as an A/V capture application program)’ that generates hardware and software events or commands, such as ‘initiating video capture.’” *Id.* at 37 (citing Ex. 1005, 9:33–45, 10:32–37; Ex. 1003 ¶ 134). Petitioner argues, “Bear teaches the ‘computer system may launch the [A/V] application in response to receiving an incoming phone call that supports video.’” Pet. 37–38 (emphasis omitted) (quoting Ex. 1005, 11:37–43). Petitioner explains that, “[u]pon launch, the A/V application determines if still or video images are to be taken, and if video images are to be taken, proceeds to capture a video stream.” Pet. 38 (citing Ex. 1005, 11:43–45, 11:61–66, Fig. 10; Ex. 1003 ¶¶ 135–137).

Patent Owner contests Petitioner’s assertions, arguing that Asmussen does not “disclose the ‘rendering the camera operative’ limitation, which results from the operation of the processor in response to an inbound videophone call as claimed.” Prelim Resp. 33. Patent Owner argues the recited camera must be rendered operative “when a videophone call is received, i.e., a causation result that occurs without user involvement.” *Id.* at 34. Patent Owner argues that in Asmussen:

the processor does not cause the camera to be rendered operative after receiving a videophone call as Claim 1(e) requires. At most, the processor pauses the program and waits for further instruction from the user. The claim requires that the camera is rendered operative upon receipt of the video call, not when the call is answered.

*Id.* at 35.

Patent Owner further argues, “there is nothing in Asmussen that discloses that that the camera is rendered operative by the processor when the inbound video call is received. At most, as admitted by Petitioner’s expert, the program is paused and waits for further user input.” *Id.* at 36–37.

With respect to Bear, Patent Owner argues:

Nowhere does Bear explain or disclose that the camera is rendered when the processor in Bear receives an inbound videophone call notice while displaying the first digital information as required in Claim 1(e). Nor does Bear explicitly disclose that the processor pauses the displaying of the first digital information and renders the camera operative as required in Claim 1(e).

*Id.* at 39. Patent Owner does acknowledge, however, that Bear “mentions that ‘the computer system may launch the [A/V] application in response to receiving an incoming phone call that supports video.’” *Id.* (citing Ex. 1005, 11:41–43).

Based on the present record, we disagree with Patent Owner. Dr. Lippman testifies, “Bear teaches the computer system launches the A/V application in response to receiving an incoming video call.” Ex. 1003

¶ 135. Dr. Lippman relies on Bear’s explanation that:

Those skilled in the art will appreciate that there are other ways of launching the application, such as a user may launch it by pressing the capture button 308 or selecting the application from a menu of graphical user interface, or ***the computer system may launch the application in response to receiving an incoming***

*phone call that supports video*, and so forth. First, the A/V capture application checks if a video stream or still images are to be captured at step 1002.

*Id.* (quoting Ex. 1005, 11:37–43, Fig. 10). Dr. Lippman testifies, “Bear’s computer system launches the application in response to an inbound video call, at least because Bear teaches the computer system may launch the application in response to receiving an incoming phone call that supports video.” *Id.* (emphasis omitted).

Dr. Lippman also testifies:

After the application is launched, Bear teaches that the “first” thing that the application will determine is if the user has selected either video streaming or still images to be captured by the camera. [Ex. 1005], 11:43–49; *see also id.* at Abstract, 2:47–52, 11:61–65. If a user has not opted to capture still images, then the application will turn the camera indicator light to red and begin capturing video. The user selection of whether to take still images or video streaming is something the user would have selected or chosen prior to receipt of the incoming call because the application is performing this check after being launched due to a video call.

Ex. 1003 ¶ 136.

Dr. Lippman further testifies, “Bear then teaches that if the user did not select still images, the A/V application will activate the camera and begin capturing video from it.” *Id.* ¶ 137. Dr. Lippman points out that Bear explains:

If the user has not selected still images to be captured in the A/V capture application, then the application sets the camera capture indicator light 306 to red at step 1012 to indicate that the A/V capture application is in the mode of capturing a video stream. The camera begins capturing the video stream at step 1014.

*Id.* (emphasis omitted) (quoting Ex. 1005, 11:43–45, 11:61–66, Fig. 10); *see also id.* at 7:50–56.

(describing when the camera indicator light is red video capture is taking place).

Dr. Lippman concludes:

it is my opinion that Bear teaches the camera is rendered operative without the user having to manually activate the camera and without the need for the user to answer the incoming video call. Because the A/V application is launched in response to the call, and further because the A/V application first checks if a video stream is to be captured (11:37–45), and if so, proceeds to capture the video stream (11:61–65), then the video stream is captured (and the camera is thereby rendered operative) without the user having to answer the call.

Ex. 1003 ¶ 138.

Petitioner’s arguments are supported by the cited evidence. Dr. Lippman provides credible testimonial evidence that Asmussen teaches microprocessor 602 (“processor”) executing software monitoring method 1440 for incoming videophone calls, where upon detecting a communications event (“inbound videophone call notice”), microprocessor 602 automatically pauses the video program (step 1443) (“while displaying the first digital information on the display, the processor pauses the displaying of the first digital information”) and displays an indication of the communications event (step 1446) on the television or display device which displays the video program. Dr. Lippman also provides credible testimonial evidence that Bear teaches a computer system that can launch an A/V capture application in response to receiving an incoming phone call that supports video, which will begin capturing video (“renders the camera operative”). *See* Ex. 1003 ¶ 127–141.

Based on this preliminary record, we are persuaded Petitioner has demonstrated sufficiently that the combined teachings of Asmussen and

Bear meet the recited limitation. We consider Petitioner's evidence and arguments with respect to the motivation to combine Asmussen and Bear, *infra*.

*[1f] wherein the processor outputs the third digital information to the another communication apparatus and displays the second digital information of the videophone call on the display*

Petitioner argues, “the Asmussen microprocessor 602 executes instructions to process the video signals generated by the camera and microphone of the first STT 220a (i.e., the claimed ‘third digital information’).” Pet. 40 (citing Ex. 1004, 55:56–56:8). Petitioner also argues, “Asmussen teaches ‘each of the set top terminals 220 participating in a video conference call broadcasts its audio/video signal(s), and any set top terminals 220 that receives the signal(s) performs the necessary processing to output the audio and video components in combination with those of other received signal(s).’” Pet. 40 (emphases omitted) (quoting Ex. 1004, 52:20–25). Each STT, Petitioner argues, includes the capability to send and receive video calls. Pet. 40 (citing Ex. 1004, 4:5–9, Abstr., 50:4–10, 50:18–43, 55:56–56:31). A person of ordinary skill in the art, Petitioner argues, “would have understood the microprocessor of the STT outputs the video information captured by the camera, at least because Asmussen teaches the STT transmitting the video information to another STT.” Pet. 40 (citing Ex. 1003 ¶¶ 142–144). Therefore, Petitioner argues, “Asmussen teaches the microprocessor of a first set top terminal (which, as mapped for the preamble, is a component of the claimed ‘communication apparatus’) outputs the captured video signals from the first set top terminal 220a (i.e., the claimed ‘third digital information’) to another set top terminal 220b–f.” Pet. 40–41.



Petitioner argues, “Asmussen also teaches set top terminal 220a displays the second digital information (i.e., the video information from the another communication apparatus) of the videophone call on the display, as claimed.” *Id.* at 41. Petitioner argues, “Asmussen discloses a received or incoming video conferencing signal is decoded, decrypted, demultiplexed, and decompressed.” *Id.* (citing Ex. 1004, 50:44–57). The video signals, Petitioner argues, are “output for display on a display device 602, which is typically the television 222.” Pet. 41 (quoting Ex. 1004, 50:49–54; Ex. 1003 ¶ 145).

Patent Owner does not respond substantively to Petitioner’s arguments or evidence with respect to this limitation. *See* Prelim. Resp. 29–40.

Petitioner’s arguments are supported by the cited evidence. Dr. Lippman provides credible testimonial evidence that Asmussen’s microprocessor 602 (the “processor”) outputs video signals from camera 2000 (the “third digital information”) to other set top terminals participating in a video conference call (the “another communication apparatus”) and incoming video conferencing signals are received by receiver 750, processed, and output for display on display device 602, which is typically television 222 (“displays the second digital information of the videophone call on the display”). *See* Ex. 1003 ¶¶ 142–145.

Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that Asmussen teaches the recited limitation.

*[1g] wherein when the processor receives an input for stopping the videophone call, the processor stops output of the third digital information and stops the camera*

Petitioner asserts that “Asmussen alone or in combination with Bear teaches the limitations of claim 1(g).” Pet. 41. Petitioner argues, “Asmussen teaches the set top terminal illustrated in Fig. 30 includes an input device 704, which may be a remote control unit 900.” *Id.* (citing Ex. 1004, 49:49–50, 50:2–3, Fig. 30). Petitioner points out that Asmussen explains, “[t]he input device 704 performs the function of accepting user input in order to establish and manage a video call, e.g., entering party identifiers, hanging up, etc.” Pet. 41 (quoting Ex. 1004, 49:5–50:3). Petitioner argues, “[t]he input device (remote control) is also in direct communication with microprocessor 602, as illustrated in Fig. 30, thus indicating that an input to the input device is transmitted to the microprocessor for processing.” Pet. 41–42 (citing Ex. 1004, Fig. 30; Ex. 1003 ¶¶ 146–147).

“Asmussen further teaches,” Petitioner argues, “the remote 900 includes a ‘hang up’ button to support video calling, which a [person of ordinary skill in the art] would have understood stops the videophone call.” Pet. 42 (citing Ex. 1004, 31:39–43, 49:57–59). “Because Asmussen teaches the set top terminal includes an input device (49:49–50),” Petitioner argues, “such as a remote control (50:2–3), for performing video calling (49:57–59), and because the remote control includes a ‘hang up’ button (31:39–43), the microprocessor 602 of the set top terminal receives an input for stopping the videophone call, as claimed.” Pet. 42 (citing Ex. 1003 ¶¶ 146–148).

Petitioner also argues, “Asmussen teaches or otherwise renders obvious stopping the videophone call also stops output of the video

information generated at the set top terminal and stops the camera.” Pet. 42 (citing Ex. 1003 ¶ 149). Petitioner argues, “Asmussen teaches the user may manage the video call using the input device, including providing user input of ‘hanging up.’” Pet. 42 (citing Ex. 1004, 49:57–59). “A natural and expected result of hanging up the videophone call,” Petitioner argues, “would be stopping the output of the video information from the videophone call and stopping the camera.” Pet. 42 (citing Ex. 1003 ¶ 149).

Petitioner also argues that, to the extent Asmussen does not teach this limitation, “Bear teaches that, “[w]hen the call is over, the system may be configured such that the user may hang up by pressing the camera button, which will terminate the call and turn off the camera indicator light.” Pet. 42–43 (emphasis omitted) (citing Ex. 1005, 6:50–53).

Patent Owner does not respond substantively to Petitioner’s arguments or evidence with respect to this limitation. *See* Prelim. Resp. 29–40.

Petitioner’s arguments are supported by the cited evidence. Dr. Lippman provides credible testimonial evidence that Asmussen’s microprocessor 602 (the “processor”) receives user input from input device 704, which may be a remote control unit 900, for stopping the videophone call, such as the user pressing a “hang up” button (“when the processor receives an input for stopping the videophone call”), where upon microprocessor 602 will terminate the call and turn off the camera (“the processor stops output of the third digital information and stops the camera”). *See* Ex. 1003 ¶¶ 146–155.

Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that Asmussen teaches the recited limitation.

*Summary as to Claim 1*

Based on this preliminary record, and for the reasons discussed *supra*, we are persuaded Petitioner has demonstrated sufficiently that the combined teachings of Asmussen and Bear meet the limitations of independent claim 1. We consider the evidence and arguments with respect to the motivation to combine Asmussen and Bear, *infra*.

*8. Independent Claim 8*

Independent claim 8 is directed to a method for transmitting and receiving digital information for a communication apparatus. Ex. 1001, 33:28–51. Claim 8 is substantially similar to claim 1, but they differ in that claim 1 is directed to an apparatus, whereas claim 8 is directed to a method. For claim 8, Petitioner relies substantially on the evidence and arguments it presents for claim 1.

Patent Owner only provides argument with respect to limitation 8(c), “rendering the camera operative.” *See* Prelim. Resp. 40–41. Patent Owner argues, “[f]or the same reasons that Petitioner has failed to show the disclosure of Claim 1(e) in Asmussen and Bear, Petitioner has equally failed to show the disclosure in claim 8(c).” *Id.* at 40.

Based on this preliminary record, and for the reasons discussed *supra* with respect to independent claim 1, we are persuaded Petitioner has demonstrated sufficiently that the combined teachings of Asmussen and Bear meet the limitations of independent claim 8. We consider the evidence and arguments with respect to the motivation to combine Asmussen and Bear, *infra*.

*9. Motivation to Combine Asmussen and Bear*

Petitioner argues a person of ordinary skill in the art “would have been motivated and found it obvious to modify Asmussen to include Bear’s

teaching of automatically launching the A/V application and beginning capture of a video stream in response to receiving an incoming call supporting video.” Pet. 39 (citing Ex. 1003 ¶¶ 140–141). Such an addition, Petitioner argues, “uses Bear’s known technique of the processor enabling and capturing video from a camera with Asmussen’s ability for the processor to receive an inbound videocall notification and pause the current video program.” Pet. 39. “The modification of Asmussen’s processor,” Petitioner argues, “would improve the functionality of the STT in the same way as Bear and accomplish Bear’s stated need for a ‘simplified system’ for interacting with media applications.” *Id.* (quoting Ex. 1005, 2:1–10). “The modified Asmussen system,” Petitioner argues, “would be simplified with increased user friendliness, reducing the learning curve needed for use of the system.” Pet. 39 (citing Ex. 1003 ¶¶ 140–141). Petitioner argues, “[t]here would have been a reasonable expectation of success in modifying Asmussen’s system, because the modification requires only simple programming techniques well within a [person of ordinary skill in the art’s] expertise and Asmussen already teaches a video call options menu 1022 allowing for a user to set default functionality, including turning a camera on/off.” Pet. 39.

Petitioner also argues a person of ordinary skill in the art “would have been motivated and found it obvious to modify Asmussen to include Bear’s known technique of receiving an input via a user pressing a button to terminate the video call and stop the camera.” *Id.* at 44 (citing Ex. 1003 ¶ 153). Petitioner argues, “Asmussen teaches the set top terminal includes a remote control with a button for hanging up (i.e., stopping) the video call.” Pet. 44 (citing Ex. 1004, 31:39–43). “Modifying Asmussen’s set top terminal (and specifically programming the processor) to stop the output of

the video information and stop the camera when the ‘hang up’ button is depressed,” Petitioner argues, “would improve the functionality of the set top terminal in the same way as Bear.” Pet. 44.

“For example,” Petitioner argues, “modifying Asmussen’s set top terminal so that ‘hanging up’ the call also stopped output of the video information from the camera would prevent needlessly continuing to capture video that is not otherwise being outputted to the another communication apparatus because the video call is terminated.” *Id.* (citing Ex. 1003 ¶ 153). Petitioner argues, “[j]ust as hanging up a conventional audio-only call (whether made using a land-line and PSTN or a mobile device and wireless network) stops output of audio information to the called party, a [person of ordinary skill in the art] would have found it obvious that the expected result of ending the videophone call in Asmussen and turning off the camera would be the termination of outputting video signals to the another communication apparatus.” Pet. 44–45 (citing Ex. 1003 ¶ 149).

Patent Owner argues “Petitioner relies on the disclosure of both Asmussen and Bear for Claims 1(e) and 8(c), but has not clearly articulated what is missing from Asmussen.” Prelim. Resp. 24–25. Patent Owner argues, “[w]ithout explaining what is missing from Asmussen for this element, it is unclear why a person of ordinary skill would turn to the teachings of Bear for an element that, according to Petitioner, is also taught by the primary reference.” *Id.* at 25.

Patent Owner also argues, “Petitioner [] fails to clearly articulate what it is combining from Asmussen and Bear to arrive at the claimed invention. Petitioner never explains what allegedly obvious combination Petitioner is advancing as the basis for its asserted ground.” *Id.* at 26.

Patent Owner further argues Petitioner “fails to provide any explanation as to why a [person of ordinary skill in the art] would be motivated to rely on Bear to include automatically launching an A/V capture application to begin capture of a video stream in Asmussen.” *Id.* at 26–27. Patent Owner argues, “the design requirements for Asmussen and Bear are substantially different [and a person of ordinary skill in the art] would not be motivated to combine the teachings of Asmussen and Bear because they are directed to solving different problems and use different structures to solve these problems.” *Id.* at 27. Patent Owner argues that a person of ordinary skill in the art “would not be motivated to modify Asmussen, a set top box system, to include an A/V capture application designed for use in a personal computer as described in Bear.” *Id.* at 28. Patent Owner does acknowledge, however, that Bear states that its invention “may be suitable for use with . . . set top boxes.” *Id.* (quoting Ex. 1005, 3:66–4:9). Patent Owner further argues that Petitioner “does not explain how [a person of ordinary skill in the art] would implement the personal computer-based application of Bear in a set top box system like Asmussen.” Prelim. Resp. 28.

Based on the present record, we disagree with Patent Owner. As Dr. Lippman testifies, “it would have been obvious to combine the automatic launching of the A/V capture application and capturing of a video stream in response to receiving an incoming video call, as taught by Bear, in the system of Asmussen for the advantages discussed by Bear of providing a ‘simplified system and method for a user to interact with various communications and media applications in a consistent way.’” Ex. 1003 ¶ 140 (quoting Ex. 1005, 2:1–10). Dr. Lippman explains, “[t]his combination would have used Bear’s techniques of the processor enabling the camera with Asmussen’s processor, which was already capable of

receiving incoming video call notifications and pausing the current video program.” Ex. 1003 ¶ 140. Dr. Lippman also explains that “[m]odifying Asmussen’s system to render the camera operative in response to an inbound videophone call notice, as taught by Bear, would have reduced the time it would take the system to begin transmitting video out to a calling party, thereby reducing lag time between the starting of a video call and the reception of the video stream at the calling party’s set top terminal.” *Id.* ¶ 141.

Dr. Lippman testifies that “[t]his would have simplified the Asmussen system for the user and eliminate the possibility of the user forgetting to activate their camera, having to locate the remote to activate the camera, and having to learn the operations for beginning a videophone call (which is, again, in keeping with Bear’s stated desired to simplify the user’s interactions with the media system).” *Id.* Dr. Lippman explains that “[i]t would have been an easy programming step to provide an option to render the camera operative upon receipt of an inbound videophone call, as the skilled person would need only program such an option in Asmussen’s options menu 1022.” *Id.*

Dr. Lippman also testifies that “[m]odification of Asmussen’s processor to stop outputting video signals and turning off the camera in response to the pressing of the ‘hang up’ button on the remote control would improve Asmussen’s set top terminal’s functionality in the same way as Bear.” *Id.* ¶ 153. Dr. Lippman testifies that a person of ordinary skill in the art “would have understood that the modification of Asmussen’s set top terminal to stop output of the video signal from the camera upon a user pressing the ‘hang up’ button would free up system resources by eliminating



the need to store or process video signals that were no longer being transmitted out to other communication apparatus.” *Id.*

We credit Dr. Lippman’s testimony, which supports Petitioner’s position. We agree that it would have been relatively straightforward and desirable for a person of ordinary skill in the art to combine Bear’s automatic launching of an audio/video capture application to capture a video stream in response to receiving an incoming video call with Asmussen’s system of videoconferencing calling to provide for a simplified system and method as described by Bear. Such a system would eliminate the need for a user to manually interact with the system when receiving an incoming videoconference call.

We also agree with Petitioner that modifying Asmussen’s processor to stop outputting video signals and turn off the camera in response to pressing a ‘hang up’ button on the remote control would be a straightforward application of using a known technique (i.e., Bear’s teaching of turning off a camera when pressing a “hang up button”) to improve a similar device that controls Asmussen’s set top terminal. We agree with Dr. Lippman that a person of ordinary skill in the art would have understood that such a modification would beneficially free up system resources by eliminating the need to store or process video signals that were no longer being transmitted in the videoconference call.

At this stage of the proceeding and based on this preliminary record, we are persuaded that Petitioner has made a sufficient showing that a person of ordinary skill in the art would have had reason to combine the teachings of Asmussen and Bear in the manner described by the Petition.

*10. Conclusion as to Independent Claims 1 and 8 (Ground 1)*

Based on the record presented, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to independent claims 1 and 8 under 35 U.S.C. § 103(a) as obvious over the combination of Asmussen and Bear.

*G. Obviousness of Claims 1–5, 8–12 based on Asmussen, Bear, and Marley (Ground 2)*

Petitioner asserts claims 1–5 and 8–12 are unpatentable as obvious under 35 U.S.C. § 103(a) over the combination of Asmussen, Bear, and Marley. Pet. 8, 48–66 (Ground 2).

*1. Marley (Ex. 1006)*

Marley describes a “system for initiating, receiving, and storing video telephony calls via a broadband television network,” and “provid[ing] for the integration of all video telephony functions into the user-friendly platform of a residential set-top box which also provides standard cable television and digital video recorder functions.” Ex. 1006, Abstr. Marley’s Figure 1 is shown below.

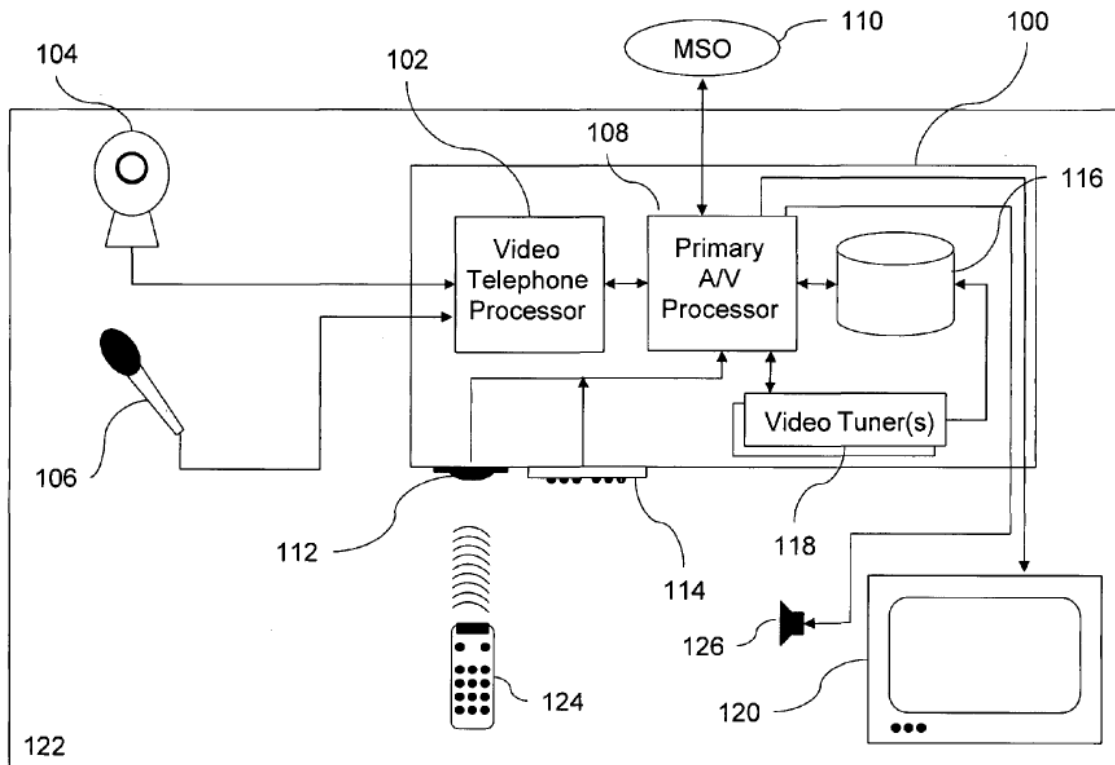


FIG. 1

Figure 1, shown above, is a block diagram of a video telephony system. *Id.* ¶ 7. The video telephony system includes DVR-capable set-top box 100 for viewing and storage of digital video programming. *Id.* ¶ 15. Set-top box 100 includes “additional video processing capabilities, specifically directed to controlling and managing video telephone functions” implemented with the use of a video telephone processor (VTP) 102. *Id.* VTP 102 is linked to camera 104, microphone 106, and primary audio/video processor (PAVP) 108 that performs audio and video processing functions typically associated with DVR-capable set-top appliances. *Id.* Camera 104 and microphone 106 are situated in the same residential location 122 as set-top box 100, speaker 126, and monitor 120 that receives audio and video data, such that the voice and image of an individual viewing monitor 120

and operating set-top box 100 can be captured by microphone 106 and camera 104, respectively. *Id.* ¶¶ 15–16.

Marley's Figure 5, is reproduced below.

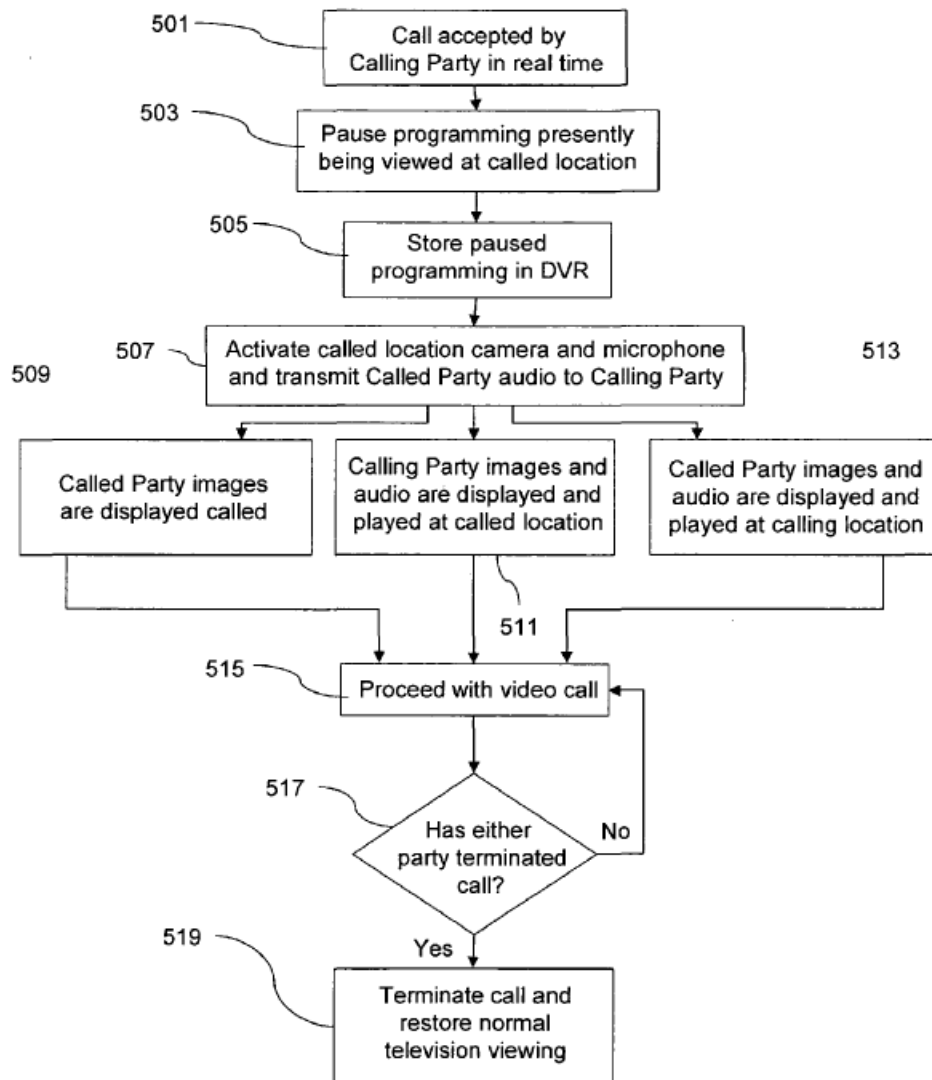


FIG. 5

Marley's Figure 5, shown above, is a flowchart diagram of steps for accepting a video telephone call in real time. *Id.* ¶ 11. As shown in Marley's Figure 5, after a calling party situated at residential location 122 initiates (dials) a video call to a called party at another (remote) residential

location having a similar set-top box 100, the call placed to the remote residential location is accepted in real-time (step 501). *Id.* ¶ 21. Marley explains that “[a]cceptance of the call causes PAVP 308 [at the remote residential location] to mute and/or pause any programming presently being viewed on monitor 320 [at the remote location] (503), and store the paused programming in DVR memory 316 for viewing after the termination of the video call (505).” *Id.* ¶ 22. The VTP at the remote residential location activates the camera and microphone associated with the set-top box, and in conjunction with the PAVP, transmits the video image and audio from the camera and microphone for reception by the set-top box (step 507), and provides a real time “self-image” of the camera’s output on a portion of the monitor for viewing by the called party (step 509). *Id.* The received image from residential location 122 is displayed on a portion of the monitor at the remote residential location, and audio received from residential location 122 is played on the speaker at the remote location (step 511). *Id.*

Simultaneously, images received by video telephone set-top box from the called party are displayed at residential location 122 on a portion of the monitor there, and audio received from the called party is played on the connected speaker (step 513). *Id.* A video phone call is then carried out between the two parties (step 515). *Id.* Marley further provides:

The call could be terminated by either party actuating a button on their remote control 124 or 324, or manual input panel 114 or 314 (517). Upon such termination, the respective PAVPs (108, 308) at the residential locations 122 and 202 [(the remote location)] restore normal television viewing, thereby allowing the calling and called parties to resume real time program viewing, or recall the paused programming from DVR memory (116, 316) for viewing (519).

*Id.*

*2. Independent Claims 1 and 8*

For independent claims 1 and 8, Petitioner relies on the same evidence and arguments it presents with respect to the asserted obviousness ground based on the combined teachings of Asmussen and Bear, which we discuss, *supra*. In addition, Petitioner relies on Marley for limitation 1(c). *See* Pet. 48–50, 61–62.

With respect to limitation 1(c), Petitioner argues that, “to the extent [Patent Owner] contends a single housing must contain both the display and other recited components of the claimed ‘communication apparatus,’ Marley teaches such.” Pet. 49. Petitioner argues, “Marley teaches the ‘set top box features and functionality can be integrated into a TV or monitor, so that no separate physical box is needed.’” *Id.* (citing Ex. 1006 ¶ 29). According to Petitioner, Marley’s “set top box has integrated video telephone functionality for communicating with other set top boxes connected via a cable television network.” Pet. 49 (citing Ex. 1006 ¶¶ 5, 16, 19, Fig. 3).

For independent claims 1 and 8, Patent Owner relies on the same evidence and arguments it presents with respect to the asserted obviousness ground based on the combined teachings of Asmussen and Bear, which we discuss, *supra*. *See* Prelim. Resp. 44.

Based on this preliminary record, and for the reasons discussed *supra* with respect to independent claims 1 and 8 under the asserted obviousness ground based on the combined teachings of Asmussen and Bear, we are persuaded Petitioner has demonstrated sufficiently that the combined teachings of Asmussen, Bear, and Marley meet the limitations of independent claims 1 and 8. We consider Petitioner’s evidence and arguments with respect to the motivation to combine Asmussen, Bear, and Marley, *infra*.

*3. Dependent Claims 2–5, 9–12*

Petitioner argues the combination of Asmussen, Bear, and Marley teaches or suggests the additional limitations of dependent claims 2–5 and 9–12. *See* Pet. 56–66.

Petitioner provides evidence and argument indicating that the combination of Asmussen, Bear, and Marley teaches the additional limitations of these dependent claims. Petitioner also provides evidence and argument that one of ordinary skill in the art would have combined the teachings of Asmussen, Bear, and Marley in the manner described in the Petition. Petitioner’s evidence and arguments are supported by the testimony of Dr. Lippman, which we credit. *See* Ex. 1003 ¶¶ 156–181. We now discuss dependent claim 5 in greater detail.

Dependent claim 5 reads as follows:

The communication apparatus according to claim 4, wherein when the processor receives an input for making an outbound videophone call to the another communication apparatus, the processor renders the camera and microphone operative and displays information indicating the outbound videophone call on the display calling message.<sup>4</sup>

Ex. 1001, 33:13–20.

Petitioner argues “Marley teaches a user initiates a video call by utilizing a ‘dial command’ on a remote control 124 or via a manual input panel 114.” Pet. 57 (citing Ex. 1006 ¶ 18). Petitioner argues, “[t]he user then either manually enters the number of the called party or selects the number from a phone book stored in memory.” *Id.* Once the number is chosen, Petitioner argues, “the primary audio/video processor (PAVP) 108

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<sup>4</sup> By virtue of its dependencies, claim 5 incorporates the limitations recited in claims 1, 2, 3, and 4.

sends a request to connect to the other set top box 222, communicates with the video telephone processor (VTP) to activate both the camera and microphone, and both processors work together to provide a real time image feedback on a portion of the monitor.” Pet. 57. Marley explains:

In response to the “dial” command, PAVP 108 would also communicate with VTP 102 to activate camera 104 and microphone 106, and provide for the encoding of the audio from microphone 106 and images from camera 104 to a format compatible with PAVP 108 (407). VTP 102, in conjunction with PAVP 108, would also provide a real time image of camera 104’s output on a portion of monitor 120 for viewing by the calling party (409).

*Id.* (emphases omitted) (quoting Ex. 1006 ¶ 19).

Petitioner points out that Marley’s set-top box 100 includes both PAVP 108 and VTP 102. Pet. 57–58 (citing Ex. 1006, Fig. 1, ¶ 15).

Petitioner argues:

Because the PAVP communicates with the VTP to activate the camera and microphone, and the processors work “in conjunction” and are “linked,” the PAVP renders the camera and microphone operative or such would be obvious. ([Ex. 1003] ¶¶ 170; 169 citing [Ex. 1006] ¶¶ 15, 19, and further opining the activation of the camera and microphone is in response to the set top terminal’s processor receiving an input, e.g., the “dial” command, for making an outbound videophone call to another communication apparatus, i.e., the set top terminal 100 at residential location 202). Therefore, the PAVP instructs operation of the camera and microphone via an instruction to the VTP.

Pet. 58 (citing Ex. 1003 ¶ 170).

Petitioner further argues:

Marley also teaches the claimed “displays information indicating the outbound videophone call on the display calling message.” Marley teaches in response to a dial button, the processor performs two operations: (1) “provide[s] a real time image of



camera 104's output on a portion of the monitor 120"; and (2) retrieves a previously stored "phone book" from "DVR memory 116" and displays it on "a portion of monitor 120." ([Ex. 1006] ¶¶ 19, 18). The calling party is thus provided with a real-time image of what is "being transmitted to the called party." ([Ex. 1006] ¶ 19). Additionally, the calling party can either manually enter the called party's number or select the called party from the phone book retrieved from DVR memory.

Either or both of the real-time image from the calling party's camera or the retrieved phone number displayed on the monitor satisfies the claimed "information indicating the outbound videophone call." ([Ex. 1003] ¶ 171, 173–174). Because both the real-time image from the camera and the phone number of the called party are displayed on a portion of the monitor, as taught by Marley, either or both of the displayed information indicate the outbound videophone call and are displayed "on the display calling message," as claimed. ([Ex. 1003] ¶¶ 173–174). Additionally, because the '991 Patent does not describe any particular format or structure for the claimed "display calling message," any format of a message displaying information indicating the outbound videophone call satisfies the claimed "display calling message."

Pet. 59–60 (emphases omitted) (citing Ex. 1003 ¶ 172; Ex. 1001, 15:40–57, Fig. 5).

Patent Owner argues:

Petitioner does not identify what element in Marley is the claimed processor of Claim 5, which is the same claimed processor in Claims 1–4. Rather, Petitioner primarily discusses the primary audio/video processor (PAVP) alone executes certain tasks upon receiving an input for making an outbound call, but then pivots to stating that "it would have been obvious for the PAVP to directly render operative the camera and microphone or for the PAVP to comprise multiple sub-processors, including the VTP." Petition at 57–59. It is unclear which of the two processors—PAVP and/or VTP—allegedly perform the processor functionality both in Claim 5 as well as Claims 1–4.

Prelim. Resp. 47.

Patent Owner further argues, “Marley does not disclose, for example, that the same processor of Claim 5 paused the programming and rendered the camera operative when receiving an inbound videophone call as required by Claim 1(e)—Marley at best only teaches pausing of programming upon acceptance of the inbound call.” *Id.* at 48 (emphasis omitted) (citing Ex. 1006 ¶ 22).

Based on the present record, we disagree with Patent Owner. Dr. Lippman testifies that, “[a]fter the called party’s telephone number has been entered or selected from the phone book, the primary audio/video processor (PAVP) sends a request to the called party’s set-top box to connect.” Ex. 1003 ¶ 168. Dr. Lippman goes on to testify that “the PAVP and the video telephone processor (VTP) work together to perform [this] functionality. Indeed, Dr. Lippman points out that in Marley, “PAVP 108 would also communicate with VTP 102 to activate camera 104 and microphone 106,” and “VTP 102, in conjunction with PAVP 108, would also provide a real time image of camera 104’s output on a portion of monitor 120 for viewing by the calling party (409).” Ex. 1003 ¶ 169 (quoting Ex. 1006 ¶ 19).

Dr. Lippman also testifies that:

Marley teaches that the PAVP receives input for making an outbound videophone call, and as a direct result of this input: (1) retrieves the “phone book” from memory and displays it on a portion of the screen, (2) the PAVP along with the VTP activates the camera and microphone (i.e., the claimed “processor renders the camera and microphone operative”), and (3) the PAVP and the VTP provides a real time image from the now operative camera on a portion of the display.

Ex. 1003 ¶ 169.

Dr. Lippman further testifies that:

the Marley primary audio/video processor performs the steps of receiving the input and rendering the camera and microphone operative. In particular, Marley expressly teaches the processors working “in conjunction” to provide the real time image at the calling party’s monitor. [Ex. 1006 ¶ 19]. Marley teaches the PAVP performs audio and video processing and the PAVP is linked to VTP. *Id.* Therefore, the PAVP instructs operation of the camera and microphone via an instruction to the VTP. It also would have been obvious for the PAVP to directly render operative the camera and microphone or for the PAVP to comprise multiple sub-processors, including the VTP. Marley teaches the PAVP processor “may include multiple sub-processors and related systems, well-known in the art, to perform the listed operations.” [Ex. 1006 ¶ 15]. Therefore, the processors perform the control of the camera and microphone.

Ex. 1003 ¶ 170.

We have considered the evidence and arguments with respect to dependent claim 5, as well as dependent claims 2–4 and 9–12. We credit Dr. Lippman’s testimony, which supports Petitioner’s position. For example, with respect to claim 5, Dr. Lippman provides credible testimonial evidence that Marley describes how, in response to a “dial” command (“when the processor receives an input for making an outbound videophone call”), PAVP (primary audio/video processor) 108 communicates with VTP (video telephone processor) 102 to activate camera 104 and microphone 106 (“the processor renders the camera and the microphone operative”), and provides for the encoding of the audio from the microphone and images from the camera to a compatible format. Then, VTP 102, in conjunction with PAVP 108, provides a real time image of camera 104’s output on a portion of monitor 120 for viewing by the calling party (“displays information indicating the outbound videophone call on the display”). *See* Ex. 1003 ¶¶ 168–178.

Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that the combined teachings of Asmussen, Bear, and Marley meet the limitations of dependent claims 2–5 and 9–12. We consider Petitioner’s evidence and arguments with respect to the motivation to combine Asmussen, Bear, and Marley, *infra*.

*4. Motivation to Combine Asmussen, Bear, and Marley*

Petitioner argues a person of ordinary skill in the art would have been motivated and found it obvious to modify the teachings of Asmussen and Bear to include particular teachings of Marley. *See, e.g.*, Pet. 49–50, 52–53, 60–61. We discuss Petitioner’s evidence and arguments with respect to claims 1 and 5, *infra*.

With respect to claim 1, Petitioner argues a person of ordinary skill in the art “would have been motivated and found it obvious to modify Asmussen to include Marley’s teaching of incorporating all of its components into a single housing.” Pet. 49 (citing Ex. 1003 ¶ 158). Petitioner asserts:

Marley teaches consumers lacked the confidence to purchase videophones due to their high cost, and the fact that purchasing one generally required the purchase of a stand-alone unit. Marley states it would be “advantageous, therefore, to provide video telephony functionality and service to a consumer via an information appliance and telecommunication infrastructure that is preexisting in a large number of residential environments.” [Ex. 1006] ¶¶ 3–5. Such a modification to Asmussen would incorporate Marley’s stated benefits of: (1) reducing the number of appliances a consumer would be required to purchase in order to have videophone capabilities; (2) providing videophone capabilities to a consumer in a format that they are already familiar with; and (3) utilizing a telecommunications infrastructure (i.e., cable television network) that a consumer is more than likely to already be using.

Pet. 49–50 (citing Ex. 1003 ¶ 158).

With respect to claim 1, Patent Owner argues:

By relying on both Asmussen and Marley, Petitioner has not clearly articulated what is missing from Asmussen or, more generally the combination of Asmussen and Bear since that combination (with Marley) is Ground 2. Petitioner does not say this limitation [1(c)] is missing from Asmussen (just the opposite, see Petition at 31–33), but provides arguments contingent on Maxell’s interpretation of the claim language.

...

Without explaining what is missing from Asmussen (and also why Bear is omitted despite it being part of Ground 2) for these elements/claims, it is unclear why a person of ordinary skill would turn to the teachings of Marley for an element that, according to Petitioner, is also taught by the primary reference (Asmussen) or the combination of Asmussen and Bear.

Prelim. Resp. 52–53.

On the present record, we disagree with Patent Owner. Petitioner argues, “[w]hile Claim 1 does not require the communication apparatus must include both the display and other components be packaged together within a single housing, *to the extent Maxell contends a single housing must contain both the display and other recited components of the claimed “communication apparatus,”* Marley teaches such.” Pet. 49 (emphasis added). Here, Petitioner implies that the combination of Asmussen and Bear do not teach necessarily a single housing that contains the display and the other recited components of claim 1. For purposes of claim 1, Petitioner makes clear it is relying on Marley to provide the teaching of a single housing to the extent Patent Owner asserts it is necessary.

Moreover, Dr. Lippman testifies:

It would have been obvious to modify Asmussen’s set top terminal and TV/display into a single television unit to improve Asmussen’s system in the same way as taught by Marley. Marley provides express teachings that combining these components

reduces the total number of components that would be present at a user's residence. [Ex. 1006 ¶ 29]. Furthermore, Marley teaches that consumers had still not widely accepted videophones due to the fact that "present videophone systems require[ed] consumers to purchase some additional appliance." [Ex. 1006 ¶ 3]. A [person of ordinary skill in the art] would have understood that the modification of Asmussen's set top terminal and TV/display into a single user component, such as a television, would provide the benefit of a single user appliance. A [person of ordinary skill in the art] would have also recognized since these communication apparatuses are being used in a user's home, that the user would more readily accept a TV with a video phone enabled set-top box integrated into it, since the user would already be familiar with television sets. Additionally, a combination set top receiver and TV would have utilized a telecommunications infrastructure (i.e., cable television network) that a consumer is more than likely to already be using, given how common set top boxes were at the time of the '991 Patent.

Ex. 1003 ¶ 158.

With respect to claim 5, Petitioner argues:

A [person of ordinary skill in the art] would have found it obvious and been motivated to combine *Marley's* activation of the camera and microphone in response to a user's input to make an outgoing video call (i.e., the "dial command"), and display of information indicating the outbound videophone call, into the set top terminal taught by *Asmussen* in view of *Bear*. [Ex. 1003 ¶¶ 175-178]. This combination would have employed *Marley's* known technique of using a single user input (i.e., the "dial command") to activate both the camera and microphone in *Asmussen's* similar set top terminal. *Id.* A single user input to provide a dial command resulting in the camera and microphone rendered operative is consistent and expected with *Asmussen's* teaching of a default state for the camera being "on." *Id.* [citing Ex. 1006, 21:34-42]. When the default state is "on," it would be obvious to a [person of ordinary skill in the art] to render the camera operative in response to *Marley's* dial command. *Id.*

Additionally, it would have been obvious to display information indicating the outbound videophone call. *Asmussen* teaches its set top terminal already contains a list of stored telephone numbers in memory for the purpose of cross referencing incoming telephone numbers with a “list of names, other textual data, or graphics,” so that if a match is found between the incoming phone number and the stored numbers, “the corresponding text or graphics are displayed on the television screen” for caller ID functionality. [Ex. 1004, 39:18–32.] *Asmussen* also teaches the set top terminal contains all of the “hardware components necessary to produce a picture-on-picture capability,” so that the video from the video call can be displayed simultaneously on the screen along with video programs. [Ex. 1004, 33:53–62, 4:26–28]. A [person of ordinary skill in the art] would have had a reasonable expectation of success for this combination at least because the system of *Asmussen* is a system for performing video calls, such that rendering the camera and microphone operative and displaying the outbound videophone call information requires only routine programming of the set top terminal.

Pet 60–61 (citing Ex. 1003 ¶¶ 175–178).

Patent Owner applies some of the same criticism to claim 5 that it applies to claim 1. *See, e.g.*, Prelim. Resp. 53. Patent Owner also argues that:

because Petitioner fails to identify what is missing from *Asmussen* or the combination of *Asmussen* and *Bear* (as is required for Ground 2) such that a [person of ordinary skill in the art] would turn to the teachings of *Marley* for multiple claim limitations, the Petition fails to show “sufficiently why a [person of ordinary skill in the art]—without improper hindsight—would have combined . . . [the two references] to account for all the features of the challenged claims . . . .” [*LG Elecs.*, IPR2016-00197, Paper No. 7, 9]. Therefore, Petitioner has not established a reasonable likelihood that it would prevail in showing that any of the challenged claims would have been obvious over *Asmussen* and *Bear* and *Marley*.

Prelim. Resp. 53–54.

On the present record, we disagree with Patent Owner. With respect to claim 5, Dr. Lippman explains clearly how and why a person of ordinary skill in the art would have combined the teachings of Marley with those of Asmussen and Bear in the manner described in the Petition. For example, Dr. Lippman testifies:

it would have been obvious to modify *Asmussen's* processor using *Marley's* teachings of the processor receiving a single user input from a remote control for making an outbound a video call (i.e., the “dial” command), and in response to said input the processor rendering the camera and microphone active. Additionally, since *Asmussen* teaches that the user can optionally set “the default state of the video camera 2000 (on or off),” a [person of ordinary skill in the art] would have expected a single user input (like that of a dial command) to render both the camera and microphone operative if the default state for the camera had been previously set to “on.” [Ex. 1004, 21:34–42]. Thus, it would have been obvious to that in response to the “dial” command of *Marley*, that both the camera and microphone are rendered operative when the default state of *Asmussen's* camera had been set to “on.”

Additionally, it would have been obvious to modify *Asmussen's* processor to display information indicating the outbound videophone call. *Asmussen's* set top terminal already contains the necessary components for displaying the called party's telephone number as taught by *Marley*. *Asmussen's* set top terminal's memory contains a list of telephone numbers for the purpose of caller ID, and the processor can cross reference telephone numbers with a “list of names, other textual data, or graphics,” for the purpose of displaying “the corresponding text or graphics ... on the television screen,” thereby providing a caller ID. [Ex. 1004, 39:18-32]. *Asmussen's* set top terminal also has the “hardware components necessary to produce a picture-on-picture capability” for the simultaneous displaying of different data on the screen. [Ex. 1004, 33:53–59]. Employing *Marley's* disclosed functionality would provide for an improved method of allowing the user of *Asmussen's* set top terminal to select from a list of stored numbers, a number to perform a video



call with, and press a single button on the remote to initiate said video call. Such functionality would be an obvious addition to *Asmussen's* set top terminal, allowing a user to quickly select and initiate a video call without needing to recall a number from memory and reduce the number of buttons that a user would push to initiate such a call.

Ex. 1003 ¶¶ 175–176; *see also id.* ¶¶ 177–178.

We credit Dr. Lippman's testimony, which supports Petitioner's position. For example, with respect to claim 1, we agree that modifying *Asmussen* to use *Marley's* teaching of incorporating all of its components into a single housing would be a relatively straightforward application of a known technique for a person of ordinary skill in the art and would provide several benefits to consumers, such as reducing the number of appliances a consumer would need to purchase in order to have videophone capabilities and provide videophone capabilities in familiar format to consumers.

Similarly, with respect to claim 5, we agree that it would have been relatively straightforward for a person of ordinary skill in the art to modify *Asmussen's* processor using *Marley's* teachings of having a processor receive a single user input from a remote control for making an outbound a video call (i.e., a “dial” command), and in response having the processor render the camera and microphone active. We also agree that it would have been a relatively straightforward modification to have *Asmussen's* processor display information indicating an outbound videophone call on the display, as *Asmussen's* set top terminal already contains the necessary components for displaying the called party's telephone number as taught by *Marley*.

At this stage of the proceeding and based on this preliminary record, we are persuaded that Petitioner has made a sufficient showing that a person

of ordinary skill in the art would have had reason to combine the teachings of Asmussen, Bear, and Marley in the manner described by the Petition.

*5. Conclusion as to Claims 1–5 and 8–12 (Ground 2)*

Based on the record presented, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claims 1–5 and 8–12 under 35 U.S.C. § 103(a) as obvious over the combination of Asmussen, Bear, and Marley.

*H. Obviousness of Claims 5 and 12 based on Asmussen, Bear, Marley, and DeFazio (Ground 3)*

Petitioner asserts claims 5 and 12 are unpatentable as obvious under 35 U.S.C. § 103(a) over the combination of Asmussen, Bear, Marley, and DeFazio. Pet. 8, 66–69 (Ground 3).

*1. DeFazio (Ex. 1007)*

DeFazio describes a “self-provisioning names database [that] adds new names to a database for associating names to calling address data in a caller identification with name delivery service,” with a new caller’s name being added to the database each time the new caller places a call to a service subscriber. Ex. 1007, Abstr. The names database provides “an efficient and cost-effective database that translates the calling party’s telephone number to the name of the person listed as the subscriber to that telephone number.” *Id.* at 1:57–60.

Figure 1 of DeFazio is shown below.

**FIG. 1**

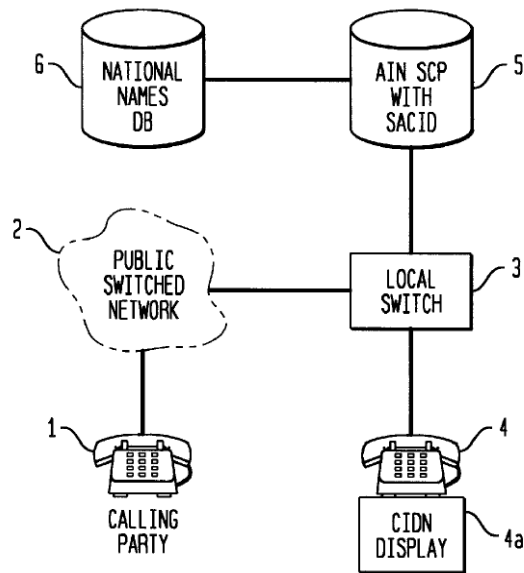


Figure 1 of DeFazio, shown above, shows public switched telephone network 2 connected to local switch 3. *Id.* at 3:27–31. Calling party 1 places a call through public switched telephone network 2 and is connected to local switch 3 serving called subscriber 4 having a telephone and associated caller identification display unit 4a. *Id.* at 3:30–48. Number to name translation database 5 may be located at a central office serving subscriber 4, or on the customer’s premises. *Id.* Also associated with the names database 5 is national or other names database 6. *Id.* Names database 6, upon request from switch 3, performs a translation from a telephone address such as a telephone number or Internet address to a name and forwards for display on display 4a. *Id.* In order to build names database 5, the names translation result is reported to the database 5 on request. *Id.* During an outgoing call made by the subscriber, the name of a called party is displayed at subscriber display 4a to provide feedback that the subscriber

dialed the correct telephone number by providing the called party's name.  
*Id.* at 5:10–15.

Figure 2 of DeFazio is shown below.

**FIG. 2**

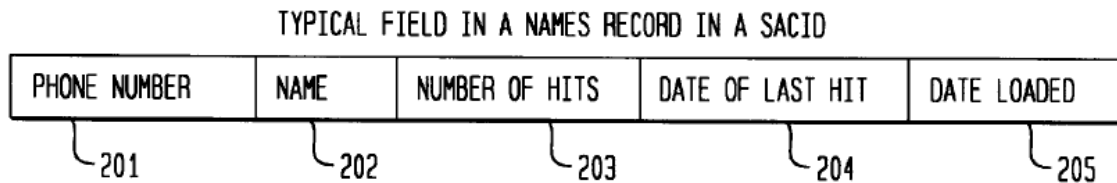


Figure 2 of DeFazio, shown above, shows a data record for database 5, including telephone number (or Internet address) (201), name associated with the number or address (202), count or number of hits (203), date and time of the last hit (204), and date and time of the first hit or when the name record was first loaded (205) into the names database 5. *Id.* at 4:5–15. The addition of a name to the database is triggered by the placement of an incoming call to a subscriber of database 5. *Id.* at 5:16–20. The addition of a name to the database may also be triggered by an outgoing call. *Id.* at 5:20–25. Database 5 may “provid[e] names entries for telecommunications related services such as Internet services, television/video conferencing services and the like.” *Id.* at 7:66–8:3.

## *2. Dependent Claims 5 and 12*

Dependent claim 5 reads as follows:

The communication apparatus according to claim 4, wherein when the processor receives an input for making an outbound videophone call to the another communication apparatus, the processor renders the camera and microphone operative and displays information indicating the outbound videophone call on the display calling message.

Ex. 1001, 33:13–20.

Dependent claim 12 reads as follows:

The method according to claim 11, further comprising the steps of: upon receiving an input for making an outbound videophone call to the another communication apparatus, rendering the camera and microphone operative; and displaying information indicating the outbound videophone call on the display at the same time.<sup>5</sup>

Ex. 1001, 34:3–9.

For dependent claim 5, Petitioner relies principally on the evidence and arguments it presents for claim 5 under the asserted obviousness ground based on the combined teachings of Asmussen, Bear, and Marley, discussed *supra* in Section I.F.4. *See* Pet. 66–68. For dependent claim 12, Petitioner relies principally on the evidence and arguments it presents for claim 12 under the asserted obviousness ground based on the combined teachings of Asmussen, Bear, and Marley, and claim 5 under the asserted obviousness ground based on the combined teachings of Asmussen, Bear, Marley, and DeFazio. *See* Pet. 68–69.

For example, with respect to claim 5, Petitioner argues, “[t]o the extent Maxell contends *Asmussen* in combination with *Marley* does not teach the limitations of Claim 5 . . . , the combination of *Marley* and *DeFazio* teaches such.” *Id.* at 66. Petitioner argues, “*DeFazio* teaches the processor displaying information indicating the outbound videophone call on the display calling message, as claimed.” *Id.* Petitioner argues, “[a person of ordinary skill in the art] would have found it obvious and been motivated to combine *DeFazio*’s name database that associates a calling number with a name and displaying the name of a called party on the display into the set

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<sup>5</sup> By virtue of its dependencies, claim 12 incorporates the limitations recited in claims 8, 9, 10, and 11.

top terminal, as taught by *Asmussen* in view of *Bear* in further view of *Marley*.” *Id.* at 67.

Patent Owner relies principally on the same arguments and evidence it presented with respect to the asserted obviousness ground based on the combined teachings of *Asmussen*, *Bear*, and *Marley*. *See* Prelim. Resp. 57. Patent Owner also argues Petitioner did not “explain[] what is missing from . . . the *Asmussen/Bear/Marley* combination for these elements/claims,” so “it is unclear why a person of ordinary skill would turn to the teachings of *DeFazio* for an element that, according to Petitioner, is also taught by *Marley*.” Prelim. Resp. 58. Patent Owner argues Petitioner fails to identify what is missing from the primary reference, fails to explain what it is combining from each reference, and fails to explain how it is combining each reference. *Id.* at 58–62. Patent Owner also argues that a person of ordinary skill in the art would not have been motivated to combine the references in the manner described in the Petition. *Id.* at 60–61.

Based on the present record, we disagree with Patent Owner. Dr. Lippman explains what is being combined from the references, how it is being combined and the reasons a person of ordinary skill in the art would have to combine the references in the manner described in the Petition. *See, e.g.,* Ex. 1003 ¶¶ 182–187. For example, with respect to claim 5, Dr. Lippman testifies, and we agree, that *DeFazio* teaches a processor displaying information indicating an outbound videophone call on a display, and that a person of ordinary skill in the art would have been motivated to combine *DeFazio*’s name database that associates a calling number with a name and displaying the name of a called party on the display of *Asmussen*’s set top terminal. We agree with Dr. Lippman that this modification would only require routine programming, would be relatively easy to implement, and

would provide the obvious benefit of allowing a user to verify if they had dialed the correct number.

We have considered the evidence and arguments with respect to dependent claims 5 and 12. Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that the combined teachings of Asmussen, Bear, Marley, and DeFazio meet the recited limitations of these claims and that one of ordinary skill in the art would have been motivated to combine the teachings of these references in the manner described in the Petition.

Based on the record presented, we are persuaded Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claims 5 and 12 under 35 U.S.C. § 103(a) as obvious over the combination of Asmussen, Bear, Marley, and DeFazio.

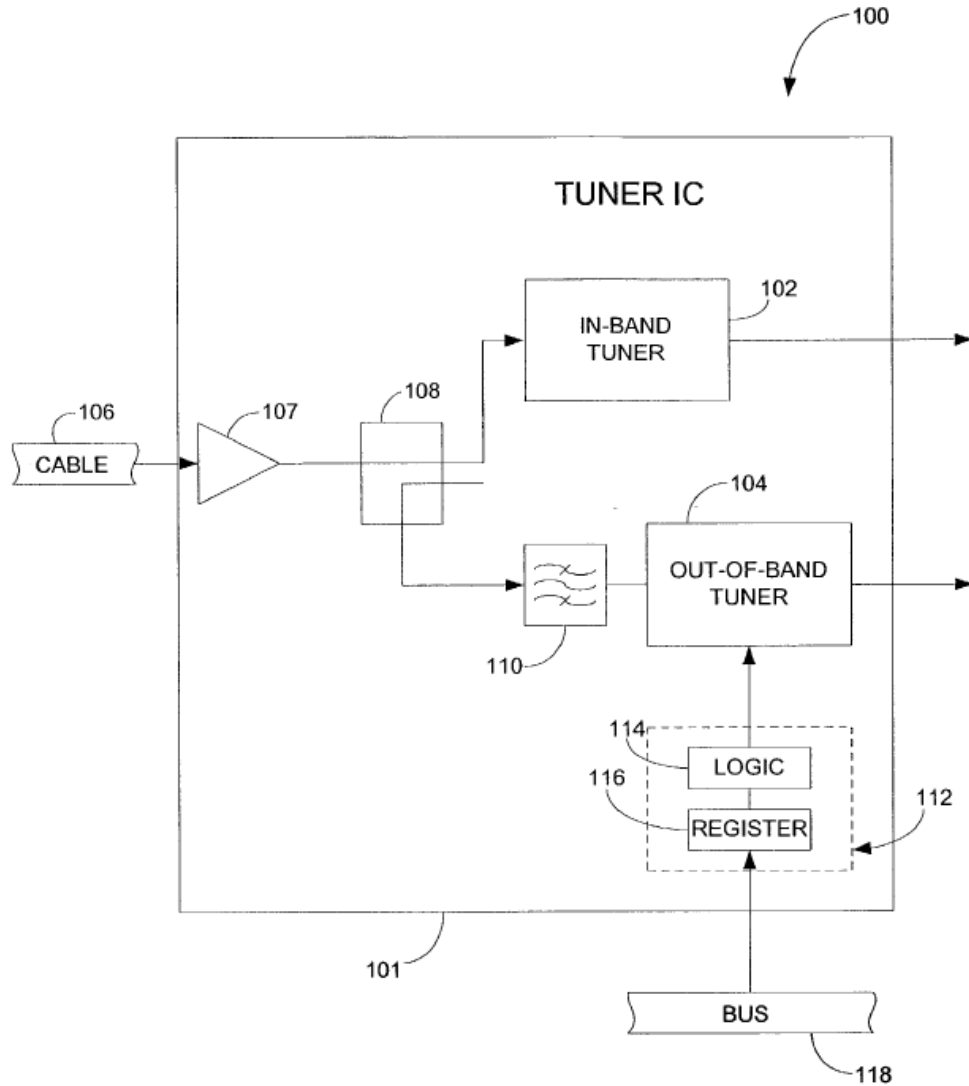
*I. Obviousness of Independent Claims 1 and 8 based on Asmussen, Bear, and Lindstrom (Ground 4)*

Petitioner asserts claims 1 and 8 are unpatentable as obvious under 35 U.S.C. § 103(a) over the combination of Asmussen, Bear, and Lindstrom. Pet. 8, 69–73 (Ground 4).

*1. Lindstrom (Ex. 1008)*

Lindstrom describes a cable television receiver that includes in-band and out-of-band tuners integrated on a single integrated circuit (IC), with a mode controller that determines whether an out-of-band signal is being received and powers the out-of-band tuner off when no out-of-band signal is present. Ex. 1008, Abstr. Lindstrom also describes a signal divider that divides the signals between the in-band and out-of-band tuners and provides a higher power signal to the in-band tuner and a lower power signal to the out-of-band tuner. *Id.*

Figure 1 of Lindstrom is shown below.



**Figure 1**

Lindstrom's Figure 1, shown above, is a block diagram showing tuner IC 100 integrated on semiconductor chip 101 and comprising in-band (IB) tuner 102 and out-of-band (OOB) tuner 104. *Id.* ¶ 15. Tuner IC 100 is contained in a subscriber's home terminal, such as a cable set top box. *Id.* ¶ 15. In-band tuner 102 is used to receive and downconvert signals containing cable TV channels, and receive supplemental data or digital



content, such as programming guides and information. *Id.* ¶ 16. RF signals received over input cable line 106 are provided to both in-band tuner 102 and out-of-band tuner 104; alternatively, tuners 102 and 104 may receive in-band and out-of-band signals by wireless transmission. *Id.* ¶ 18. Lindstrom further describes OOB tuner 104 as follows:

Out-of-band tuner 104 is used primarily to receive and downconvert narrowband data and digital signals to an intermediate frequency (IF). The out-of-band channels received by tuner 104 are typically located in the 70-130 MHz frequency range and, within that range, each channel occupies a relatively narrower frequency band of 3 MHz or less. Examples of the types of signals that may be carried on the out-of-band channels received by tuner 104 include, but are not limited to, Internet data, video-on-demand and pay-per-view programming, interactive programming guides, interactive games and IP telephony and videophone signals. As with in-band tuner 102, tuner 104 may use any architecture that is appropriate to the particular application, including single-conversion (FIG. 2) and dual-conversion (FIG. 3) architectures. Where possible, a single-conversion architecture is preferred as component count and costs are reduced.

*Id.* ¶ 17.

## *2. Independent Claims 1 and 8*

Petitioner relies on *Asmussen and Bear* for the limitations of claims 1 and 8 (as asserted in the obvious grounds based on the combined teachings of (1) *Asmussen and Bear*, and (2) *Asmussen, Bear, and Marley* ), and Lindstrom for the “network interface” limitation recited in claim 1(a). *See* Pet. 69–73.

For example, with respect to claim 1, Petitioner argues:

to the extent Maxell contends *Asmussen’s* collective tuner 603 and receiver 750 do not satisfy the claimed “network interface” receiving first and second digital information, *Lindstrom* teaches

such. *Lindstrom* teaches a single out-of-band tuner for receiving both video-on-demand information (included in the claimed “first digital information”) and videocall information (the claimed “second digital information”).

*Id.* at 69–70 (citing Ex. 1008 ¶¶ 16–17).

Petitioner also argues:

[a person of ordinary skill in the art] would have been motivated and found it obvious to modify Asmussen in at least two predictable configurations. In a first configuration, it would have been obvious to substitute Lindstrom’s single integrated circuit having both an in-band tuner 102 and an out-of-band tuner 104 for Asmussen’s tuner 603 and receiver 750. *See* Ex. 1008 ¶¶ 15–17].

...

A second obvious and predictable configuration is to substitute Asmussen’s receiver 750 with Lindstrom’s out-of-band tuner 104 for the reception of both video on-demand and videophone signals.

Pet. 72 (citing Ex. 1003 ¶ 195).

Patent Owner argues Petitioner fails to identify what is missing from the primary reference, fails to explain what it is combining from each reference, and fails to explain how it is combining each reference. Prelim. Resp. 62–66. Patent Owner also argues that a person of ordinary skill in the art would not have been motivated to combine the references in the manner described in the Petition. *Id.* at 65–66.

Based on the present record, we disagree with Patent Owner. Dr. Lippman explains what is being combined from the references, how it is being combined and the reasons a person of ordinary skill in the art would have to combine the references in the manner described in the Petition. *See, e.g.,* Ex. 1003 ¶¶ 188–198. For example, Dr. Lippman testifies that Lindstrom teaches a single out-of-band tuner for receiving both video-on-

demand information (included in the claimed “first digital information”) and videocall information (the claimed “second digital information”). Dr. Lindstrom also credibly testifies, and we agree, that it would have been obvious to substitute Lindstrom’s single integrated circuit having both an in-band tuner and an out-of-band tuner for Asmussen’s tuner and receiver.

We have considered the evidence and arguments with respect to independent claims 1 and 8. Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that the combined teachings of Asmussen, Bear, and Lindstrom meet the limitations of these claims and that one of ordinary skill in the art would have been motivated to combine the teachings of these references in the manner described in the Petition.

Based on the record presented, we are persuaded Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claims 1 and 8 under 35 U.S.C. § 103(a) as obvious over the combination of Asmussen, Bear, and Lindstrom.

*J. Obviousness of Claims 1–5, 8–12 based on Asmussen, Bear, Lindstrom, and Marley (Ground 5)*

Petitioner asserts claims 1–5 and 8–12 are unpatentable as obvious under 35 U.S.C. § 103(a) over the combination of Asmussen, Bear, Lindstrom, and Marley. Pet. 8, 73 (Ground 5). Petitioner’s mapping for claims 1–5 and 8–12 is substantially similar to the mapping Petitioner uses for these claims in the asserted obviousness ground based on the combined teachings of Asmussen, Bear, and Marley. Here, however, Petitioner relies on Lindstrom for the “network interface” limitation recited in claim 1(a). *See* Pet. 73.

Patent Owner “incorporates its arguments in Section III(C), its arguments regarding why the combination of *Asmussen* and *Bear* and *Marley* do not render obvious Claims 1–5 and 8–12, and its arguments regarding why the combination of *Asmussen* and *Bear* and *Lindstrom* do not render obvious Claims 1 and 8.” Prelim. Resp. 67. Patent Owner also argues “Petitioner does not . . . incorporate by reference its discussion of *Lindstrom* for Claim 1(a) as set forth in Ground 4,” which “is another independent reason to deny this Ground—the combination, per Petitioner’s incorporation, does not disclose Claim 1(a).” *Id.*

We have considered the evidence and arguments with respect to claims 1–5 and 8–12. Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that the combined teachings of *Asmussen*, *Bear*, *Lindstrom*, and *Marley* meet the limitations of these claims and that one of ordinary skill in the art would have been motivated to combine the teachings of these references in the manner described in the Petition. *See, e.g.*, Ex. 1003 ¶¶ 156–181, 188–198.

Based on the record presented, we are persuaded Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claims 1–5 and 8–12 under 35 U.S.C. § 103(a) as obvious over the combination of *Asmussen*, *Bear*, *Lindstrom*, and *Marley*.

*K. Obviousness of Claims 5 and 12 based on Asmussen, Bear, Lindstrom, Marley, and DeFazio (Ground 6)*

Petitioner asserts claims 5 and 12 are unpatentable as obvious under 35 U.S.C. § 103(a) over the combination of *Asmussen*, *Bear*, *Lindstrom*, *Marley*, and *DeFazio*. Pet. 8, 74. Petitioner’s mapping for claims 5 and 12 is substantially similar to the mapping Petitioner used for these claims in the asserted obviousness ground based on the combined teachings of *Asmussen*,

Bear, Marley, and DeFazio. The only difference is Petitioner’s reliance on *Lindstrom* for the “network interface” limitation recited in claim 1(a). *Id.*

Patent Owner “incorporates its arguments in Section III(C), its arguments regarding why the combination of *Asmussen* and *Bear* and *Marley* do not render obvious Claims 1-5 and 8-12, and its arguments regarding why the combination of *Asmussen* and *Bear* and *Lindstrom* do not render obvious Claims 1 and 8.” Prelim. Resp. 67. Patent Owner further argues, “Petitioner does not . . . incorporate by reference its discussion of *Lindstrom* for Claim 1(a) as set forth in Ground 4,” which “is another independent reason to deny this Ground—the combination, per Petitioner’s incorporation, does not disclose Claim 1(a).” *Id.*

We have considered the evidence and arguments with respect to claims 5 and 12. Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently that the combined teachings of *Asmussen*, *Bear*, *Lindstrom*, *Marley*, and *DeFazio* meet the limitations of these claims and that one of ordinary skill in the art would have been motivated to combine the teachings of these references in the manner described in the Petition. *See, e.g.*, Ex. 1003 ¶¶ 182–198.

Based on the record presented, we are persuaded Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to claims 5 and 12 under 35 U.S.C. § 103(a) as obvious over the combination of *Asmussen*, *Bear*, *Lindstrom*, *Marley*, and *DeFazio*.

### III. CONCLUSION

For the foregoing reasons, we are persuaded that the Petition demonstrates a reasonable likelihood of prevailing in showing the unpatentability of claims 1–5 and 8–12 of the '991 patent.

At this stage of the proceeding, we have not made a final determination as to the patentability of any of the challenged claims or the construction of any claim term.

### IV. ORDER

Accordingly, it is

ORDERED that an *inter partes* review is instituted as to all challenged claims on the grounds raised in the Petition; and

FURTHER ORDERED that *inter partes* review is instituted commencing 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.

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