Trials@uspto.gov
Tel: 571-272-7822

Paper 56
Entered: July 18, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMCAST CABLE COMMUNICATIONS, LLC,
Petitioner,

v.

PROMPTU SYSTEMS CORPORATION,
Patent Owner.

Case IPR2018-00343
Patent RE44,326 E

Before JAMESON LEE, ROBERT L. KINDER, and
ALEX S. YAP, *Administrative Patent Judges*

KINDER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) AND 37 C.F.R. § 42.73

I. INTRODUCTION

Petitioner, Comcast Cable Communications, LLC. ("Comcast"), filed a Petition (Paper 12,[1] "Pet.") requesting an *inter partes* review of claims of claims 1–9, 11–19, and 21 of U.S. Patent RE44,326 E (Ex. 1001, "the '326 patent"). Patent Owner, Promptu Systems Corporation ("Promptu"), filed a Preliminary Response (Paper 14, "Prelim. Resp.").

Pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we issued an Initial Decision (Paper 15, "Dec.") on July 19, 2018, instituting an *inter partes* review of *all* challenged claims (1–9, 11–19, and 21) of the '326 patent, based on all grounds raised in the Petition. Dec. 30. *See also* U.S. Patent and Trademark Office, *Guidance on the Impact of SAS on AIA Trial Proceedings* (Apr. 26, 2018) ("SAS Guidance").[2]

After institution of trial, Patent Owner filed a Patent Owner Response (Paper 24, "PO Resp."), which Petitioner replied (Paper 33, "Pet. Reply"). Patent Owner also filed a Sur-Reply (Paper 41, "PO Sur-Reply").

Petitioner filed a Motion to Exclude evidence (Paper 40), which Patent Owner opposed (Paper 46), which Petitioner replied (Paper 49). Petitioner's Motion to Exclude is decided below.

Oral argument was conducted on January 28, 2019, and the transcript of the hearing has been entered as Paper 54 ("Tr.").

---

[1] On April 12, 2018, we granted Petitioner's Unopposed Motion to Correct Petition (Paper 1). Paper 11. Our citations and quotations are to the Corrected Petition – Paper 12.

[2] Available at https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial.

We have jurisdiction under 35 U.S.C. § 318(a). After considering the evidence and arguments of both parties, and for the reasons set forth below, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–9, 11–19, and 21 of the '326 patent are unpatentable.

A. Related Matter

The '326 patent is the subject of a pending civil action, *Promptu Systems Corp. v. Comcast Corp. and Comcast Cable Communications, LLC*, Case No. 2:16-cv-06516 (E.D. Pa.). Patent Owner's Mandatory Notices (Paper 4), 2. Petitioner filed a related petition for *inter partes* review of the '326 patent. Pet. viii; *see also* IPR2018-00342. The final decision in IPR2018-00342 addresses the same set of challenged claims and that final decision is being issued concurrently with this decision. The Board also instituted trial of the '326 patent in a covered business method review on October 9, 2018. CBM2018-00034, Paper 9. Patent Owner also identifies IPR2017-00344 and IPR2017-00345, as challenging related U.S. Patent No. 7,047,196. Paper 4, 2.

B. The '326 Patent

The '326 patent, titled "System and Method of Voice Recognition Near a Wireline Node of a Network Supporting Cable Television and/or Video Delivery," was issued on June 25, 2013. Ex. 1001, [45]. It issued as a reissued patent from U.S. Patent No. 7,685,523, which issued on March 23, 2010. The '326 patent was filed on November 3, 2011, and claims benefit back to U.S. Provisional Application No. 60/210,440 filed on June 8, 2000. *Id.* at [21], [22], [60]. The '326 patent relates to using a first network

path to transfer speech information to a speech recognition engine, which recognizes the speech information and effects information delivery to a second device via a second network path. *See* Ex. 1001, 50:23–44.

The '326 patent describes a "method and system of speech recognition presented by a back channel from multiple user sites within a network supporting cable television and/or video delivery." *Id.* at Abstract. As noted below however, the claims of the '326 patent do not require a back channel or address multiple user sites. According to the Specification, "a centralized wireline node refers to a network node providing video or cable television delivery to multiple users using a wireline physical transport between those users at the node." *Id*. at 2:8–11. The Specification states that "the problems of voice recognition at a centralized wireline node in a network supporting video delivery or cable television delivery have not been addressed by [the] prior art." *Id*. at 2:5–8. The Specification describes how one embodiment of the invention provides speech recognition services to a collection of users over a network that supports cable television and/or video delivery. *Id.* at 4:66–5:1. In addition, "user identification based upon speech recognition is provided over a cable television and/or video delivery network." *Id.* at 4:66–5:3.

Even though the specification relates to a centralized voice recognition system in some places, voice recognition may occur at or near any node in the system: "*This invention* relates to voice recognition performed *near a wireline node of a network* supporting cable television and/or video delivery." *Id.* at 1:38–40 (emphases added). "A speech processor system *may be* centrally located in or near a wireline node, which

may include a Cable Television (CATV) central location." *Id.* at 18:16–18 (emphasis added).

User identification based upon speech recognition is provided over a cable television and/or video delivery network." *Id.* at 5:1–3. Figure 3 of the '326 patent is reproduced below.

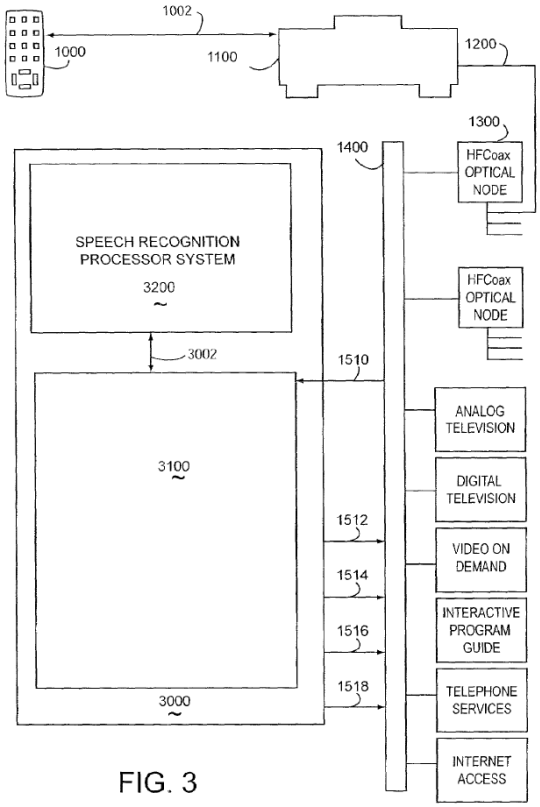


FIG. 3

Figure 3 illustrates:

> a remote control unit 1000 coupled 1002 to set-top apparatus 1100, communicating via a two-stage wireline communications system containing a wireline physical transport 1200 through a distributor node 1300, and through a high speed physical transport 1400, possessing various delivery points 1510 and entry points 1512–1518 to a tightly coupled server farm 3000, with one or more gateways 3100, and one or more tightly coupled server arrays 3200[.]

Ex. 1001, 7:13–20.

Server farm 3000 includes a central "speech recognition processor

system 3200" for processing speech signals from user sites, such as from subscribers' set-top boxes. *Id*. at Fig. 3. In one example embodiment, a set-top appliance 1100 may receive a wireless signal 1002 from remote 1000 and then re-modulate it for upstream transmission 1200 on a cable return path. *Id.* at 11:10–13.

The disclosed invention may involve multiple user sites and multiple channels: "The back channel is from a multiplicity of user sites and is presented to a speech processing system at the wireline node in the network." *Id*. at 22:2–4. At each user site, "[t]he speech signal transmitted from a subscriber's set-top box, or set-top appliance, 1100[,] is received [at the] 1510 [entry points] by the five to 40 MHz data receiving equipment." *Id*. at 12:14–17.

To begin the process of obtaining content through a system such as that depicted in Figure 3 above, "[i]n the subscriber's premises, a speech-enabled remote control [1000] may be employed, e.g. containing a microphone, as well as traditional universal remote control functionality." *Id*. at 13:46–48. "The speech output may be wirelessly transmitted to a set[-]top pod, module, or appliance located at the set-top box." *Id.* at 13:51–53. "The function of the set-top appliance 1100 may be to receive the RF signal from the remote control and then digitize and compress the speech signal and prepare it for upstream transmission." *Id.* at 11:34–36. "The invention supports unidirectional communication via coupling 1002, supporting communicative transfer from the remote 1000 via coupling 1002 to set-top apparatus 1100." *Id.* at 26:13–15.

Regarding example content derived by using the microphone, "[i]n . . . embodiments of the invention, spoken commands from a cable

subscriber are recognized and then acted upon to control the delivery of entertainment and information services, such as Video On Demand, Pay Per View, Channel control, on-line shopping, and the Internet." *Id.* at 5:14–22.

C. Challenged Claims

Claims 1 and 12 are independent. Claim 1 is a method claim "*for speech directed information delivery*, comprising" (*id*. at 50:23–27), and claim 12 is similarly directed to a "[*a*] *method for speech directed information delivery*" (*id*. at 52:29–30). Claims 2–9 and 11 depend directly or indirectly from claim 1, while claims 13–19 and 21 depend directly or indirectly from claim 12. Independent claim 1, reproduced below, is illustrative of the challenged claims.

> 1. A method *for speech directed information delivery*, comprising:
>
> > *receiving speech information at a first device, wherein said first device is a wireless device;*
> >
> > *transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and*
> >
> > *at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.*

Ex. 1001, 50:23–44 (excluding text deleted in the reissue patent).

D. Evidence Relied Upon

Petitioner relies on the following references:

Exhibit	Reference
1013	United States Patent No. 7,013,283 B1, issued March 14, 2006 ("Murdock").
1015	United States Patent No. 6,513,063 B1, issued January 28, 2003 ("Julia").
1016	United States Patent No. 5,477,262, issued December 19, 1995 ("Banker").
1017	United States Patent No. 6,314,573 B1, issued November 6, 2001 ("Gordon").
1018	United States Patent No. 5,500,691, issued March 19, 1996 ("Martin").
1019	United States Patent No. 5,663,756, issued September 2, 1997 ("Blahut").

Pet. 3. Petitioner also relies on the Declarations of Christopher Schmandt (Ex. 1023, "Schmandt Declaration"; Ex. 1033, "Schmandt Reply Declaration"), and on the Declaration of Winston Liaw (Ex. 1022, "Liaw Declaration"). Patent Owner relies on the Declaration of David Chaiken (Ex. 2032, "Chaiken Declaration") and the Declaration of Paul Cook (Ex. 2042, "Cook Declaration"). Below, we provide an overview of each reference relied upon by Petitioner.

1. Murdock (Ex. 1013)

Murdock describes a "system and a concomitant method for providing programming content in response to an audio signal." Ex. 1013, Abstract. Figure 1 of Murdock is reproduced below.

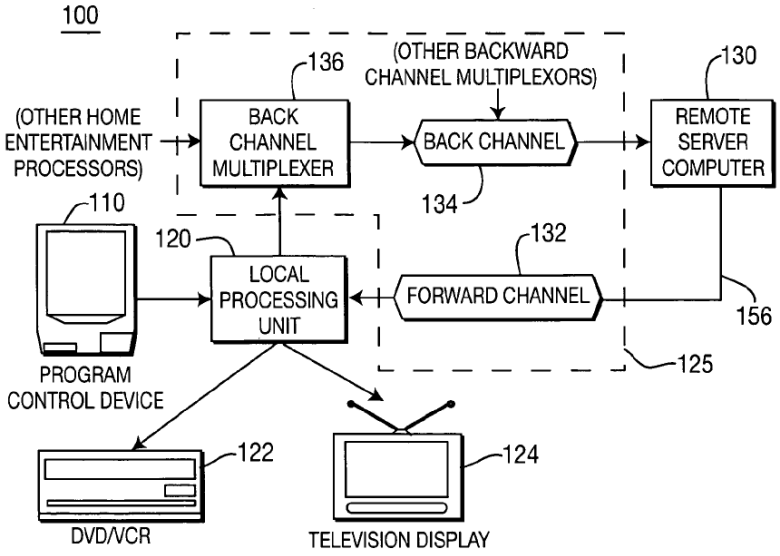


FIG. 1

Figure 1 "depicts a high-level block diagram of a voice control system." Ex. 1013, 1:64–65. The program control device 110 can be "a portable or hand-held controller." *Id*. at 2:35–36. It can "capture[] the input verbal command signal from the user of the voice activated control system 100." *Id*. at 2:22–24. "Once the input command signal is received, the program control device 110 performs a transmission, *e.g.*, a wireless transmission, of the command signal to the local processing unit 120," which "may include a set top terminal, a cable box, and the like." *Id*. at 2:31–34, 45–47. The input command signal is then transmitted to remote server computer 130 via back channel 134. *Id*. at 3:1–12. Remote server computer 130 "performs speech recognition on the received signal, . . . retrieves the requested program content from a program database[,] and transmits the retrieved program content via the forward channel 132 to the local processing unit 120." *Id*. at 3:15–36. "Upon receipt of the requested programming content, the local processing unit 120 transmits the received content to the video player 122 or the television recorder 124." *Id*. at 2:61–66.

2. Julia (Ex. 1015)

Julia describes "navigation of electronic data by means of spoken natural language requests." Ex. 1015, 1:16–18. Figure 1a of Julia is reproduced below.

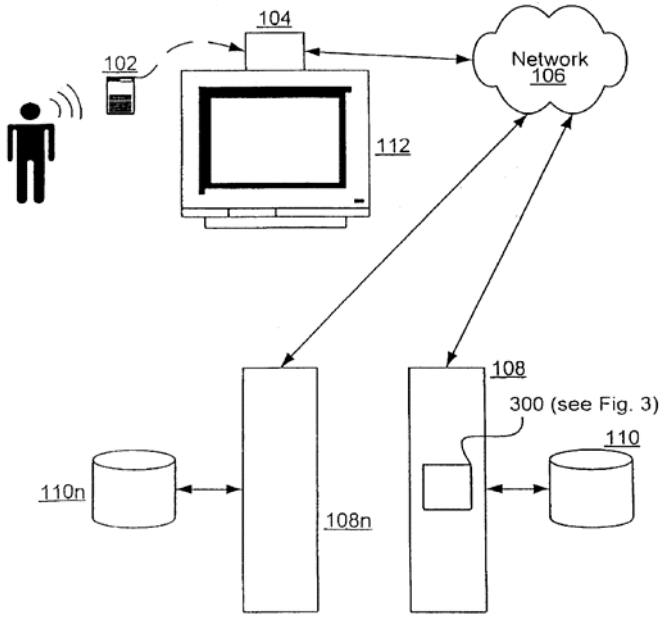


Fig. 1a

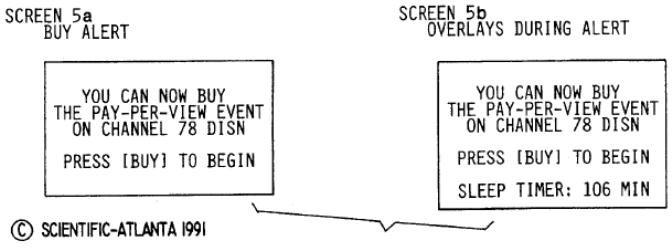
Figure 1a "illustrates a system providing a spoken natural language interface for network-based information navigation . . . with server-side processing of requests." *Id*. at 3:6–9. "[A] user's voice input data is captured by a voice input device 102, such as a microphone[, which p]referably [] includes a button or the like that can be pressed or held down to activate a listening mode." *Id*. at 3:39–43. Input device 102 can also be "a portable remote control device with an integrated microphone, and the voice data is transmitted from device 102 preferably via infrared (or other wireless) link to [a receiver in] communications box 104." *Id*. at 3:46–52. "The voice data is then transmitted across network 106 to a remote server or servers 108." *Id*. at 3:54–55. The voice data "is processed by request processing logic 300

in order to understand the user's request and construct an appropriate query or request for navigation of remote data." *Id*. at 3:61–64. "Once the desired information has been retrieved from data source 110, it is electronically transmitted via network 106 to the user for viewing on client display device 112." *Id*. at 4:18–20. Communications box 104 is used for "receiving and decoding/formatting the desired electronic information that is received across communications network 106." *Id*. at 4:27–30. It is "preferabl[e to use] the same [] communications box 104, but [it] may also be a separate unit) for receiving and decoding/formatting the desired electronic information that is received across communications network 106." *Id*. at 4:25–30.

3. Banker (Ex. 1016)

Banker describes an apparatus "for providing a user friendly interface to a subscription television terminal." Ex. 1016, Abstract. Banker describes a number of user interface features such as "messaging, establishing a favorite channel list, pay-per-view, program timing, and terminal control." *Id*.; *see also id.* at 4:1–5, 16–18. Figures 6E and 6F of Banker are reproduced below.

FIG.6E



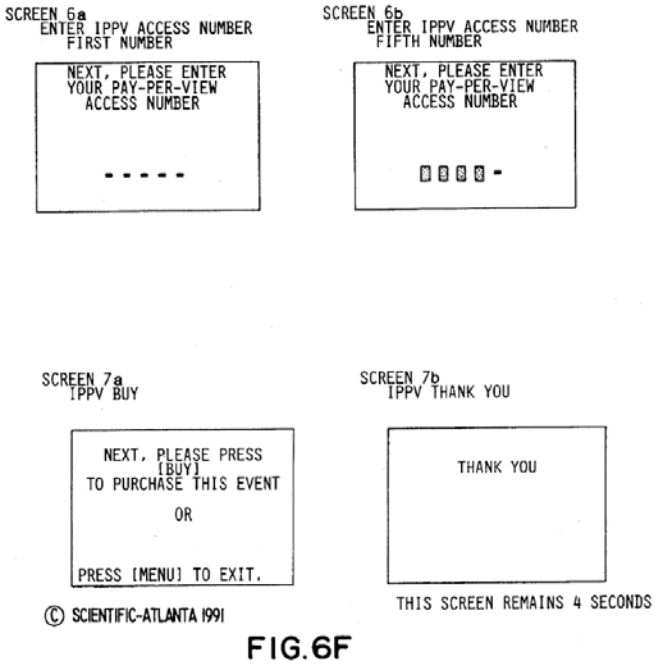


FIG.6F

Figures 6E (top) and 6F (bottom) illustrate a sequence of screens a user would navigate through in order to purchase a pay-per-view event. *Id.* at 16:54–17:3. Banker also discussed how customers can be billed for using the subscription television terminal. *See id.* at 7:58–8:3, 12:1–15.

4. Gordon (Ex. 1017)

Gordon describes a "method and apparatus for providing subscription-on-demand (SOD) services for a[n] interactive information distribution system, where a consumer may subscribe to packages of on-demand programs for a single price[.]" Ex. 1017, Abstract. Figure 8 of Gordon is reproduced below.

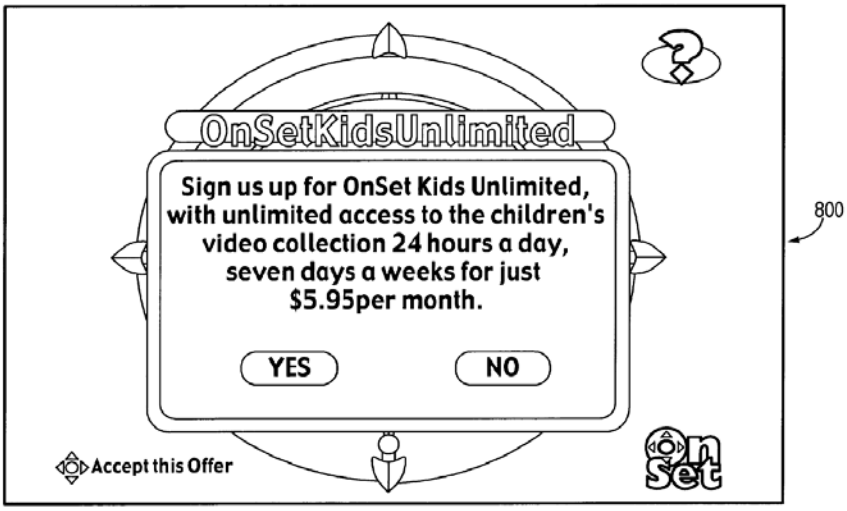


FIG. 8

Figure 8 of Gordon shows "a menu that allows a consumer to subscribe to a selected subscription-on-demand service." *Id*. at 3:40–41. According to Gordon, "through manipulation of the menus, the consumer [can] select[] a programming package [and] become[] a subscriber to that package and [will be] billed accordingly." *Id*. at 2:61–63.

5. Martin (Ex. 1018)

Martin is titled "Remote Control Identifier Setup in a Video System Having Both IR and RF Transmitters," and it describes "[a] video system is disclosed including a receiver that generates a remote identifier setup display on a television monitor and further including a remote control unit having a radio frequency transmitter and an infrared transmitter." Ex. 1018, [54], Abstract. Petitioner relies on Martin for its teaching of remote control devices that transmit identifiers. *See* Pet. 67 (analysis of claims 11 and 21). As explained by Martin, "[t]he video system enables a user to enter a remote control identifier for the radio frequency transmitter through the remote identifier setup display using the infrared transmitter." Ex. 1018, Abstract.

6. Blahut (Ex. 1019)

Blahut is titled "Restricted Access Remote Control Unit," and it describes a "device for restricting access to certain programs." Ex. 1019, [54], Abstract. Blahut describes the use of remote control units ("RCUs"), as well as RCUs that may be used in an interactive television environment. Ex. 1019, 1:8–11. Petitioner relies on Blahut for its teaching of remote control devices that transmit identifiers. *See* Pet. 67 (analysis of claims 11 and 21).

E. Instituted Grounds of Unpatentability

Petitioner challenges claims 1–9, 11–19, and 21 of the '326 patent based on the asserted grounds of unpatentability set forth in the following table. Pet. 3–4.

Asserted Grounds		
Reference(s)	**Basis[3]**	**Claims Challenged**
Murdock	§ 103(a)	1–7 and 12–17
Murdock and Banker or Gordon	§ 103(a)	8, 9, 18, and 19
Murdock and Martin or Blahut	§ 103(a)	11 and 21
Julia	§ 103(a)	1–7 and 12–17[4]
Julia and Banker or Gordon	§ 103(a)	8, 9, 18, and 19
Julia and Martin or Blahut	§ 103(a)	11 and 21

We instituted *inter partes* review of claims 1–9, 11–19, and 21 on all

[3] The relevant section of the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112–29, took effect on March 16, 2013. Because the application from which the '326 patent issued was filed before that date, the pre-AIA statutory framework applies.

[4] The Petition states at page 3 that "[a]ll challenged claims are unpatentable as obvious over Julia (Ex. 1015) alone," but at page 45, and thereafter, the Petition only challenges claims 1–7 and 12–17 as obvious based on Julia alone. Because the Petition includes no substantive analysis of any claim other than claims 1–7 and 12–17, based on Julia alone, we read the Petition as challenging only claims 1–7 and 12–17 based on Julia alone. The Petition makes the same mistake for the ground based on Murdock alone. *See* Pet. 3, 18–32.

grounds set forth in the above table for these claims. Dec. 30.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). In that regard, Petitioner and Mr. Schmandt contend that a person of ordinary skill in the relevant art would have:

> (i) an undergraduate degree (or equivalent) in electrical engineering, computer science, or a comparable subject and *at least* three years of professional work experience in the field of multi-media systems including in particular speech recognition and control technologies; or (ii) an advanced degree (or equivalent) in electrical engineering, computer science, or a comparable subject and *at least* one year of post-graduate research or work experience in the field of multi-media systems including in particular speech recognition and control technologies.

Pet. 8 (emphases added) (citing Ex. 1023 ¶¶ 81–83). Patent Owner does not propose an alternative definition nor does Patent Owner respond to Petitioner's proposal. *See generally* PO Resp.

Based on the final record, we adopt, with modification (e.g., removal of the qualifier "at least," which broadens ordinary skill to include expert level knowledge and skill), Petitioner's definition of a person of ordinary skill in the art:

> (i) an undergraduate degree (or equivalent) in electrical engineering, computer science, or a comparable subject and three

> years of professional work experience in the field of multi-media systems including in particular speech recognition and control technologies; or
>
> (ii) [a Master's of Science] degree (or equivalent) in electrical engineering, computer science, or a comparable subject and []one year of post-graduate research or work experience in the field of multi-media systems including in particular speech recognition and control technologies.

We further note that the prior art in the instant proceeding reflects the level of ordinary skill in the art at the time of the invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). For example, as reflected in Julia, a person of ordinary skill in the art would have familiarity with "the navigation of electronic data by means of spoken natural language requests," such that a user may "interact by means of intuitive natural language input not strictly conforming to the step-by-step browsing architecture of the existing navigation system." *See* Ex. 1015, 1:16–20, 2:13–20.

B. Claim Construction

In an *inter partes* review based on a petition filed prior to November 13, 2018, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b) (2017); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard as the claim construction standard to be applied in an *inter partes* review proceeding). Under the broadest

reasonable interpretation standard,[5] claim terms generally are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes constructions for two terms: "speech recognition engine" and "STB." Pet. 8–11. Patent Owner argues that "[t]he Board need not construe either of these terms because construction is unnecessary to resolve to dispute between the parties." PO Resp. 8. We agree that the claim construction of these two terms is not necessary to resolve the current dispute.

Patent Owner instead proposes that one other term—"network path"—"must be construed to resolve the dispute between the parties." *Id.* We agree. Patent Owner argues that "network path" should be construed as a physical route through which data is transmitted from a source to a destination. *Id.* at 8. Patent Owner notes that this was a "compromise" definition agreed to by the parties in district court litigation. *Id.* at 11 (citing Ex. 2039, 20). As discussed below, we agree with this "compromise" definition. Petitioner notes that adopting Patent Owner's construction does not change the result. *See* Pet. Reply 10–11 ("Nevertheless, even under

[5] The claim construction standard to be employed in an *inter partes* review recently has changed. *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Nov. 13, 2018) (codified at 37 C.F.R. pt. 42). That new standard, however, applies only to proceedings in which the petition is filed on or after November 13, 2018. This Petition was filed on December 19, 2017.

Patent Owner's proposed construction, the prior art discloses the same 'first network path' and 'second network path.' Schmandt Reply Decl. ¶¶ 4-10.").

The main claim construction issue arises in Patent Owner's attempt to differentiate the asserted prior art from the claimed invention. Thus, examining the term "network path" requires not just consideration of the arguments made by Patent Owner in its claim construction section, but also a consideration of the arguments made to differentiate the prior art. A point of contention between the parties is that Patent Owner additionally argues that the "network path" must have two nodes. For instance, Patent Owner argues a "network path" also requires a path or physical route between two nodes within a network. PO Resp. 8, 14–15. Patent Owner then adds an additional requirement, arguing that a "node" must be a device that can both send and receive messages. *Id.* at 17. Based on the final record before us, we do not agree with Patent Owner that a network path must have nodes that can both send and receive messages.

Petitioner argues that the "broadest reasonable interpretation of the claim term 'network path' in light of the specification is simply a path that a signal takes through a network of devices." Pet. Reply 9 (citing Ex. 1033 ¶ 4). Petitioner contends that the "compromise" definition adopted in the related district court proceeding should not be adopted. *Id.* Petitioner then argues, that

> [n]evertheless, even under Patent Owner's proposed construction, the prior art discloses the same "first network path" and "second network path." Schmandt Reply Decl. ¶¶ 4-10. Patent Owner's proposed construction of "network path" is a "physical route through which data is transmitted from [a] source to [a] destination," which a person of ordinary skill in the art would understand to include the network paths Petitioner

> identified in Murdock and Julia. *Id*.; Schmandt Decl. ¶¶ 259-261, 263-265, 394, 397-398.

Id. at 10–11. As addressed more below, we agree with Petitioner that Patent Owner's proposed construction does not change the result here—the challenged claims are invalid in view of the prior art under either proposed definition of "network path."

The main dispute, as noted above, is not with Patent Owner's basic proposed claim construction for "network path"—*a physical route through which data is transmitted from a source to a destination*—but instead with Patent Owner's additional proposals that further restrict this limitation. *See* PO Resp. 11 (citing Ex. 2039, 20). In its analysis of the prior art, Patent Owner further requires that a "network path" must consist of "(1) a 'path' or physical route of travel between two nodes (2) within a 'network.'" *Id.* at 14–15. Patent Owner then argues that Julia's wireless remote cannot be a node on the network because it "cannot 'receive[] messages from the network and . . . put messages on the network,' . . . and thus cannot be a node under Schmandt's definition." *Id.* at 17 (citing Ex. 2034, 32:17–19); PO Sur-Reply 1. We disagree with this last point of contention.

We have considered the intrinsic evidence and find no support in the Specification for requiring every node to be capable of both receiving and sending messages on the network. First, we agree with Mr. Schmandt that a skilled artisan would have known that a "physical" route in a network "includes both wireline connections (e.g., signals traveling through wire, fiber-optic cable, etc.) and wireless connections (e.g., signals traveling through the air)." Ex. 1033 ¶ 8; *see also* Ex. 1001, Fig. 3 (illustrating the signal path from the user through the network and ultimately to the voice

recognition processors), 9:42–51, 10:16–22. Second, the word "node" does not appear in the challenged claims of the '362 patent. Third, even if nodes were required, the Specification reveals that the wireless connection between the remote and set-top box can be bi-directional or "strictly from remote control 1000 to set-top box or appliance 1100." Ex. 1001, 10:63–67; *see also id.* at 26:13–15 ("The invention supports *unidirectional* communication via coupling 1002, supporting communicative transfer from the remote 1000 via coupling 1002 to set-top apparatus 1100." (emphasis added)), 28:36–41 (a node "may also support bi-directional communication" but does not otherwise suggest that such a requirement would be necessary in all situations).

Mr. Schmandt's clarifying testimony is also persuasive.

> Patent Owner's argument appears to interpret my testimony to define a "node" as something that both puts messages on the network and also receives messages from the network. In my opinion, that is not a reasonable reading of my testimony particularly in light of my explanation that a network includes nodes that are endpoints. In the context of the '326 Patent and the cited prior art, such end points include the television remote control and the television (i.e., nodes with only one path into it).

Ex. 1033 ¶ 15. We agree with Mr. Schmandt that nothing in the record limits a node to a device that both sends and receives messages because "[a] person of ordinary skill in the art would understand that a 'network' includes unidirectional nodes (i.e., nodes that send or receive messages but not both)." *Id.* ¶ 17.

Accordingly, we agree with Patent Owner that a "network path" means *a physical route through which data is transmitted from a source to a destination*. We do not agree with Patent Owner that a "network path" also

requires nodes that both send and receive messages. Based on our review of the final record before us, we determine that no additional claim terms require express construction to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that only claim terms that "are in controversy" need to be construed and "only to the extent necessary to resolve the controversy").

C. Obviousness

1. General Principles

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

An invention "composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Rather, to establish obviousness, it is petitioner's "burden to demonstrate both that a skilled artisan would have been motivated to

combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (quotations omitted); *see KSR*, 550 U.S. at 418. Moreover, a petitioner cannot satisfy this burden by "employ[ing] mere conclusory statements" and "must instead articulate specific reasoning, based on evidence of record" to support an obviousness determination. *Magnum Oil*, 829 F.3d at 1380. Stated differently, there must be "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). The "factual inquiry" into the reasons for "combin[ing] references must be thorough and searching, and [t]he need for specificity pervades . . . ." *In re NuVasive, Inc.*, 842 F.3d 1376, 1381–82 (Fed. Cir. 2016) (quotations omitted). We analyze the asserted grounds with these principles in mind.

2. Obviousness Ground Based on Julia Alone

Petitioner contends that claims 1–7 and 12–17 are unpatentable over Julia under 35 U.S.C. § 103(a), relying on the supporting testimony of Mr. Schmandt. Pet. 45–59 (citing Ex. 1023). For the reasons set forth above and below, Petitioner's explanations and evidence establish by a preponderance of the evidence that claims 1–7 and 12–17 would have been obvious pursuant to this ground. We begin our analysis with an overview of the parties' contentions related to independent claims 1 and 12, followed by our analysis for claims 1 and 12. We then address the parties' contentions related to the remaining claims, followed by our analysis.

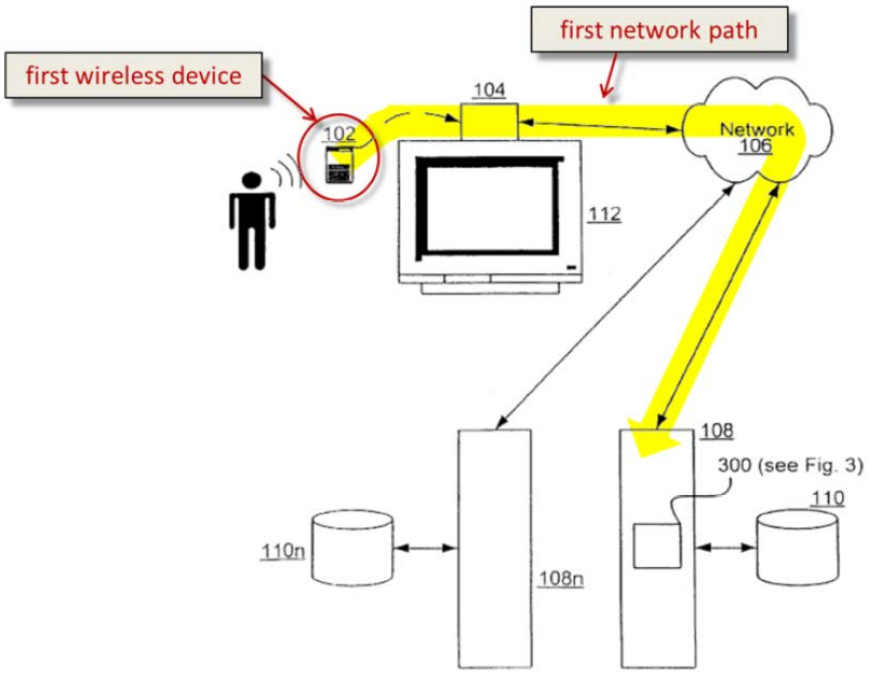
i. Petitioner's Challenge (Claims 1 and 12)

In challenging claim 1, Petitioner notes that "both the '326 patent and Julia specifically relate to remote recognition of voice commands for a cable television client device." Pet. 59 (citing Ex. 1001, 5:10–13; Ex. 1015, 2:30–36). Petitioner submits that "Julia discloses a method for speech directed information delivery." Pet. 45 (citing Ex. 1023 ¶ 390). Petitioner points to Julia's disclosure of "a system, method, and article of manufacture for navigating network-based electronic data sources in response to spoken input requests." *Id.* (quoting Ex. 1015, 2:27–30). Julia receives spoken requests and interprets the request in order to "automatically construct[] an operational navigation query to retrieve the desired information from one or more electronic network data sources." *Id.* (quoting Ex. 1015, 2:36–41).

Petitioner identifies the claimed receiving speech information at a first device, wherein said first device is a wireless device of claim 1 as being taught by Julia's "'voice input device 102' (in Fig. 1a), which constitutes a 'first device' that is 'wireless' and 'receiv[es] speech information.'" *Id*. at 46 (quoting Ex. 1023 ¶ 392; Ex. 1015, 3:45–54). According to Petitioner, Julia's "voice input device 102 is a 'portable remote control device with an integrated microphone, and the voice data is transmitted from device 102 preferably *via infrared (or other wireless) link* to communications box 104.'" *Id*.

Claim 1 next requires "transferring said speech information from said first wireless device via a first network path to a speech recognition engine." Petitioner contends that Julia teaches "transmitting spoken commands (i.e., the claimed 'speech information') from voice input device 102 to communications box 104 and then over network 106 to remote server 108

for speech recognition processing." Pet. 47 (quoting Ex. 1015, 3:45–66 ("[T]he voice data is processed by request logic 300 in order to understand the user's request and construct an appropriate query or request for navigation of remote data source 110.")). Petitioner next contends that "'request processing logic 300' located at remote server 108 constitutes a 'speech recognition engine,' as recited in the claim." *Id.* at 47 (citing Ex. 1023 ¶ 394). To illustrate these positions, Petitioner submits annotated versions of Julia's Figure 1a (*id.* at 47–50), copies of which we reproduce below:

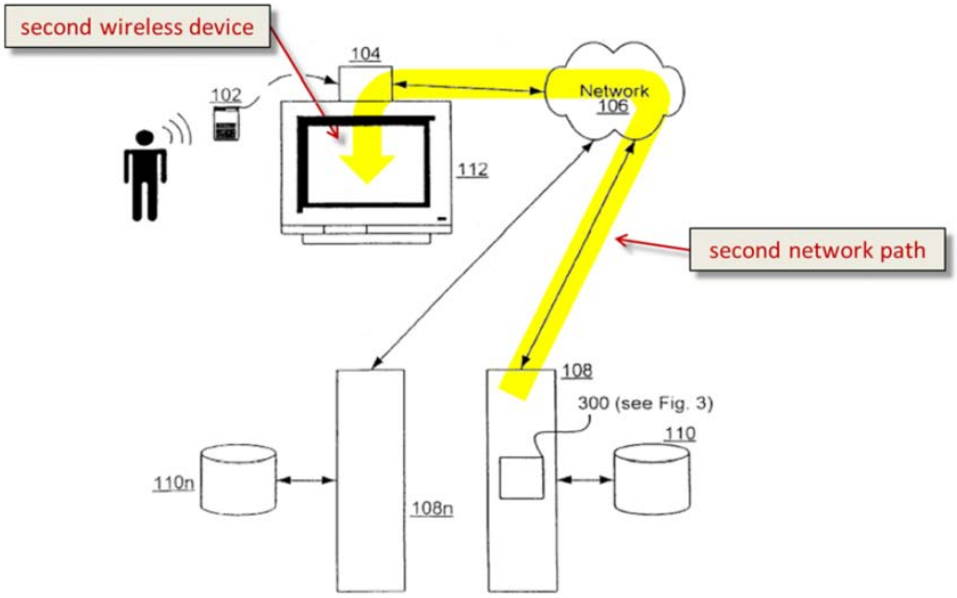


Julia Fig. 1a (annotated)

Petitioner's annotated Figure 1a (Pet. 48) depicts a first wireless device and first network path. Petitioner identifies the first network path disclosed by Julia from voice input device 102 through communications box 104 and then over network 106 to remote server 108 for speech processing logic 300. Pet.

47–48 (citing Ex. 1015, 3:45–66).

As for the claimed "recognizing said speech information and effecting information delivery to a second device via a second network path," Petitioner relies on "Julia disclos[ing] transmitting programming content (i.e., 'effecting information delivery') from the remote server computer to the local processing unit and then to the television display (i.e., 'second device')." Pet. 49 (quoting Ex. 1023 ¶ 397). Petitioner relies on a second annotated Figure 1a as further illustrating the "second network path" from the speech recognition engine to the viewer's television:



Julia Fig. 1a (annotated)

Petitioner's annotated Figure 1a (Pet. 50) depicts a highlighted second network path leading to client display device 112, which Petitioner identifies as the claimed second device. Relying on the testimony of Mr. Schmandt, Petitioner identifies the second network path as the path "transmitting requested content from remote server 108 through network 106 to

communications box 104 and ultimately to client display device 112." Pet. 50 (citing Ex. 1015, 3:45–66; Ex. 1023 ¶ 397).

Petitioner addresses the contention that input device 102 is not in the network path by arguing that

> Julia discloses that "voice data is transmitted from voice input device 102 … to communications box 104" and the "voice data is then transmitted across network 106 to a remote server or servers 108" for speech recognition processing. Ex. 1015, 3:45–55, 61–66. Thus, the voice input device is the source of the voice data and remote server 108 is the destination. The path between them (illustrated above) is the "first network path" even under Patent Owner's proposed construction. Schmandt Reply Decl. ¶ 6.

Pet. Reply 13–14. Petitioner next argues in Reply that Julia's voice input device need not be considered a node on the network, because "the word 'node' does not appear in any of the challenged claims or even in Patent Owner's proposed construction of 'network path.'" *Id.* at 14. Petitioner points out that Patent Owner attempts "to make 'node' relevant to 'first network path' by citing a proposed construction from related litigation that includes the word 'node'—a proposal that Patent Owner itself opposed and that was never agreed to or adopted." *Id.* Petitioner further contends that "[t]here is simply no basis to apply Patent Owner's unreasonable alternative construction of a 'network path,' [which] exclude[es] any device that does not both transmit and receive messages." *Id.* at 14–15.

Petitioner relies on the testimony of Mr. Schmandt, who states "that a network includes nodes that are endpoints," such as "the television remote control and the television." Ex. 1033 ¶ 15. Mr. Schmandt similarly testifies that

> I certainly do not understand, and one of ordinary skill in the art

> would not understand, that a node is limited to a device that both sends and receives messages, and I did not interpret the term "network path" in the challenged claims to exclude devices that cannot both send and receive messages. It would be unreasonable to impose such a limitation. A person of ordinary skill in the art would understand that a "network" includes unidirectional nodes (i.e., nodes that send or receive messages but not both). For example, a person of ordinary skill in the art would understand televisions in a broadcast television network to be network nodes (i.e., part of the network) though they only receive television signals. Similarly, a person of ordinary skill in the art would understand that video cameras are part of a security network though they only transmit data to the central location.

Id. ¶ 17; Pet. Reply 14–15. As explained more below, we find Mr. Schmandt's testimony as to this issue persuasive.

Petitioner also relies on the Specification of the '326 patent, "which states that the wireless connection between the remote and settop box can be bi-directional or 'strictly from remote control 1000 to set-top box or appliance 1100.'" Pet. Reply 15 (quoting Ex. 1001, 10:63–67). "Thus," according to Petitioner, "the remote is in the 'first network path' even though it can be a unidirectional device." *Id.* at 15–16.

"Petitioner also identified an alternative 'second network path' in Julia from remote server 108 (source) through network 106 to communications box 104 (destination). Pet. at 50; Schmandt Decl. ¶ 398; Schmandt Reply Decl. ¶ 6," and Petitioner contends that "Patent Owner appears to concede that this path constitutes a 'second network path' as claimed." Pet. Reply 17.

Claim 12 is similar in scope to claim 1, whereas claim 12 also requires "[a] method for speech directed information delivery," and an identical

"receiving speech" step. *See* Pet. 55; Ex. 1001, 50:29–54. The "transferring" step of claim 12 is nearly identical to the "transferring" step of claim 1 with only one difference being that claim 12 states that the speech information is transferred from the first device "in an unrecognized state." *See id.* Petitioner relies on Julia's user's voice command being transmitted to the remote server for speech recognition processing. Pet. 56 (citing Ex. 1015, 3:45–66). "Thus," according to Petitioner, "Julia discloses 'transferring said speech information in an unrecognized state.'" *Id.* (citing Ex. 1023 ¶ 426).

The "recognizing" limitations of claim 12 overlap substantially with the same limitations of claim 1. "The only difference is that claim 12 recites that the second device 'is capable of displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio.'" *Id.* at 56–57 (citing Ex. 1023 ¶ 71). Petitioner relies on Julia's disclosure of client display device 112 (television) for the "second device," or controlled device. *Id.* (citing Ex. 1023 ¶¶ 428–429). Relying on the testimony of Mr. Schmandt, Petitioner reasons that "[a] person of ordinary skill in the art would have known that a television, in the cable network implementation of Julia, was "capable of displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio." *Id.* at 57 (quoting Ex. 1023 ¶ 429). Notably, Patent Owner does not specifically challenge any of the unique limitations found in claim 12, and, as such, we examine claims 1 and 12 concurrently.

As explained below, we find Petitioner's contentions persuasive, notwithstanding Patent Owner's arguments set forth, and addressed, below.

ii. Patent Owner's Argument (Claims 1 and 12)

Patent Owner presents arguments in contesting Petitioner's challenge to claims 1 and 12, and more specifically, whether Julia teaches a first and a second network path. PO Resp. 14–18. In particular, Patent Owner first argues that it does not matter that the two identified paths begin and end at different endpoints because "under the plain meaning of the claim language, those points must be on the network." *Id.* at 14. Patent Owner contends that Julia's "device 102" (first wireless device) is actually "outside the network" and Petitioner fails to identify any disclosure of the remote being inside the network. *Id.* at 14–15 ("the network connection ends at element 104").

As for the claimed "second network path," Patent Owner further alleges that television 112 is outside the network. *Id.* at 15. According to Patent Owner, "the network connection ends at element 104," and as such, "both of the 'paths' identified by the petition have **the same** endpoints—element 104 and element 108." *Id.* at 16. Patent Owner further argues "that the wireless microphone (el. 102) and element 112 are not part of a network," because a network path requires a path or physical route of travel between two nodes within a network, and these nodes must all be capable of receiving messages from the network and putting messages on the network. *Id.* at 16–17 (citing Ex. 2034, 32:17–19). Patent Owner contends that "Julia only discloses that communication box 104, not the wireless microphone or device 112, is connected to network 106 and can receive messages and put messages on the network." *Id.* at 17 (citing Ex. 1015, 3:47–55, 4:25–30).

Similarly, Patent Owner contends the Petition fails to establish that Julia's wireless microphone is a node on the network. *Id.* According to Patent Owner, "[b]ecause Julia only discloses that the voice input device has

transmission (and not reception) capabilities, it clearly cannot 'receive[] messages from the network and . . . put messages on the network,' and thus cannot be a node under Schmandt's definition. Ex. 2034 at 32:17-19." *Id.* at 17; *see also id.* at 17–18 ("[T]he petition does not assert that the television can 'receive[] messages from the network and can put messages on the network,' Ex. 2034 at 32:17-19, and thus failed to show the television is node under Schmandt's definition."). As explained above in the claim construction analysis, we reject this narrow interpretation of "network path."

In its Sur-Reply, Patent Owner similarly argues that the voice input device and display device of Julia are not part of a network path because these devices are not nodes on a communication network. PO Sur-Reply 4–7. Patent Owner analogizes that while a keyboard can input text into an email and a monitor is capable of displaying this information, neither device would be considered part of the network because they cannot send and receive messages. *Id.* at 4. According to Petitioner, Julia's voice input device 102 is not on network 106 because the endpoint is communications box 104. *Id.* at 5–6. Likewise, for the second network path, Patent Owner argues that display device 112 is not an endpoint because "in Julia, it is the communications box 104, not display device 112, that receives the network messages." *Id.* at 7. Thus, Patent Owner concludes that "the Petition fails to establish that Julia discloses the claimed first and second network paths because it fails to prove that the remote and the controlled device are nodes on a communication network, which its mappings would require." *Id.* at 7–8.

iii. Secondary Considerations

Patent Owner's Contentions

Patent Owner contends that "several objective indicia based on the success and acclaim of an AgileTV system embodying the invention of the '326 patent provide compelling additional evidence that the challenged claims were nonobvious." PO Resp. 21. Patent Owner relies on the purported success of AgileTV's (the assignee of the '326 patent) system using "a voice-enabled search and navigation solution for the cable industry." *Id.*

Citing the Chaiken Declaration, Patent Owner first alleges that the "AgileTV system embodies the invention disclosed and claimed in the '326 patent." *Id.* at 24–25 (citing Ex. 2032 ¶¶ 8–12, 13–16). Mr. Chaiken testifies that "[t]he embodiments described in the '326 patent describe the foundations of the design of the AgileTV solution," and "[t]he '326 patent describes the initial architecture of the AgileTV solution, which was subsequently extended and improved by AgileTV." Ex. 2032 ¶ 14. Patent Owner also contends that "[t]he specification of the '326 patent further describes the AgileTV solution at the time of the '326 patent, including the AgileTV Speech Processor, the AgileTV Voice Processing Unit (AVPU), and a similar depiction of the system architecture." PO Resp. 25.

Patent Owner alleges that "[u]nlike existing speech recognition methods and systems, the '326 patent teaches using a first network path to transfer speech information to a speech recognition engine, which recognizes the speech information and effects information delivery via a second network path." *Id.* (citing Ex. 1001, 22:8–12, 23:63–24:3). According to Patent Owner, "the evidence of objective indicia of

nonobviousness similarly relates to these same features of the AgileTV system that were used to provide voice recognition processing for users in a cable television network." *Id.* Patent Owner contends "[t]he success and industry praise of the AgileTV system was the direct result of AgileTV having successfully implemented the claimed invention to provide voice recognition processing for *multiple users* in a cable television network." *Id.* at 27 (emphasis added). Thus, Patent Owner asserts a nexus exists between the AgileTV systems and the claimed invention.

Patent Owner next claims that "[t]here was a long-felt but unmet need for using voice recognition in cable systems, and the AgileTV system successfully satisfied this need in Comcast's own network." *Id.* (emphasis omitted). According to Patent Owner, there was an unmet need "for using voice recognition in cable systems," and "[p]revious tools for navigating the large amounts of content in cable systems were unwieldy and impractical." *Id.* (citing Ex. 2032 ¶¶ 6–8). Patent Owner alleges that "prior to AgileTV's solution, no one had provided voice recognition processing for multiple users in a cable television network using an architecture including the claimed invention of the '326 patent." PO Resp. 28. Patent Owner alleges that the AgileTV system satisfied the long-felt but unmet need and was successfully implemented, such as through demonstrations and field trials in Comcast's cable network system and for other potential customers. *Id.* Patent Owner's evidence in support of this contention consists of citation to Mr. Chaiken's Declaration and to a 2005 online article (Ex. 2040), which states that AgileTV was "the first company to bring voice-activated remotes and program guide[s] to market." *Id.* (quoting Ex. 2040 (*Hey, Remote: Find 'Seinfeld'*, Steve Donahue, (dated Jan. 23, 2005))).

Patent Owner next contends that "the AgileTV system was widely praised within the cable industry because it provided advantages that previously were unavailable." PO Resp. 29 (citing Ex. 2032 ¶¶ 17–25). Patent Owner points to AgileTV's alleged "Most Innovative Solution Award" from Speech Technology Magazine. *Id.* (citing Ex. 2009, 3). Exhibit 2009, discussed in more detail below in relation to Petitioner's Motion to Exclude, is an internal email purporting to be a communication related to a potential AgileTV press release discussing the "Most Innovative Solution Award." *See* Ex. 2009, 1 ("first draft of the AgileTV Speech Technology award press release").

Patent Owner also cites the appearance of AgileTV's former CEO (Paul Cook) and CTO (Harry Printz) to the Kudlow & Cramer television show on CNBC in 2004 to talk about the AgileTV solution and to demonstrate the technology. PO Resp. 29 (citing Ex. 2032 ¶ 23; Ex. 2018; Ex. 2019). Patent Owner also relies on "[a] study of Comcast by the Buckingham Research Group in May 2005." *Id.* at 30 (citing Ex. 2032 ¶ 24; Ex. 2020, 7).

Patent Owner also alleges that Comcast praised the AgileTV system. PO Resp. 30. Patent Owner points to a request by Comcast to deploy AgileTV's "voice recognition solution into portions of Comcast's cable network," and Comcast further allegedly "requested AgileTV to demonstrate its solution for Comcast's management and even Senators." *Id.* (citing Ex. 2032 ¶¶ 19–21; Ex. 2011; Ex. 2012; Ex. 2013; Ex. 2014). Patent Owner further contends that "Comcast expressed an intent to invest in AgileTV and deploy the AgileTV solution for Comcast's 21 million subscribers." *Id.* at 31 (citing Ex. 2032 ¶ 21; Ex. 2015). Patent Owner also relies on a license

agreement with Comcast, claiming "that Comcast itself previously licensed the AgileTV solution, including rights to what is now the '326 Patent." *Id.* at 32 (citing Ex. 2032 ¶ 27; Ex. 2022 ("License and Development Agreement"); Ex. 2023 ("Marketing Trial Agreement for Voice Activated Television Control Service"). The agreements provide Comcast with rights to use the AgileTV solution internally and to run trials of the system. *Id.* at 32–33. Patent Owner presents evidence that the AgileTV solution was tested by Comcast, with test market households receiving "a voice-activated remote, the Promptu receiver, an installation DVD, quick start guide, user's guide, and voice reference card." *Id.* at 33 (citing Ex. 2032 ¶¶ 31–32; Ex. 2026; Ex. 2027; Ex. 2028; Ex. 2029).

Patent Owner next claims that "Comcast copied the claimed invention." PO Resp. 33. Patent Owner alleges that after the field trials of the AgileTV solution, Comcast did not take a longer-term license, and thereafter began marketing its own voice recognition product. *Id.* (citing Ex. 2032 ¶ 33). Patent Owner contends that "Comcast's implementation of voice recognition in its X1 System is practically identical to the AgileTV solution installed in Comcast's cable network in the mid-2000s." *Id.* at 33–34. Patent Owner claims that "Comcast's X1 System practices the invention claimed in the '326 patent." *Id.* at 34 (citing Ex. 1021, 83–103). Patent Owner's proof of copying are district court "initial claim charts" (Ex. 1021, 83) and Exhibit 2026, which is an instructional video for "Promptu Voice Controlled Television" for Comcast Cable.

Patent Owner also contends that the AgileTV solution was commercially successful because it raised millions in investment funding. PO Resp. 31–32 (citing Ex. 2032 ¶ 26; Ex. 2002, 3; Ex. 2003, 34; Ex. 2021,

1–2).

Petitioner's Contentions

Petitioner contends that Patent Owner has failed to "establish a nexus between its evidence and any novel features of the challenged claims." Pet. Reply 19 (emphasis omitted). Petitioner disagrees that a nexus should be presumed because Patent Owner has not established that the AgileTV product embodies the claimed invention. *Id.* at 19–20. Petitioner attacks Patent Owner's supporting evidence. Petitioner notes that "Patent Owner relies on a conclusory declaration by its former CTO David Chaiken and a figure Patent Owner asserts is in the '326 Patent's provisional application, but which does not actually appear in the provisional application (or any of Patent Owner's other exhibits). *Id.* Petitioner contends that Mr. Chaiken's testimony is insufficient because he makes no attempt to show that the elements of the challenged claims were embodied in the AgileTV product or that it was "coextensive" with the challenged claims. Pet. Reply 19, n.8 (citing Ex. 2032 ¶¶ 14–16). Petitioner also alleges that Mr. Chaiken "never attempted to determine the scope of the challenged claims." *Id.* (citing Ex. 1028, 115:2–116:16).

Petitioner next argues that Patent Owner does not attempt to identify any purportedly novel aspect of the claims tied to its evidence of secondary considerations. Pet. Reply 20. Specifically, Petitioner argues:

> Rather, it asserts that the challenged claims were "[u]nlike existing speech recognition methods and systems" because the patent "teaches using a first network path to transfer speech information to a speech recognition engine, which recognizes the speech information and effects information delivery via a second network path." PO Resp. at 25. Patent Owner makes no attempt to tie its secondary considerations evidence to these purportedly

novel aspects of the claims

Id. at 20–21. Petitioner also contends that the purported invention was known in the prior art, for example, "Julia discloses transmitting voice commands on a first network path to a speech recognition engine that recognizes and transmits content back on a second network path." *Id.* at 21.

Petitioner next challenges the contention that the AgileTV system satisfied a long-felt but unmet need. Pet. Reply 22. Petitioner makes the point that the only evidence of long-felt need is testimony that the problem arose as early as 2000, which was the same year that the provisional application cited by the '326 patent was filed. *Id.* Petitioner reasons that the need could not be long-felt if the need arose in 2000 and was met in the same year. *Id.* Petitioner further argues that "Patent Owner offers no evidence to show that the alleged "long-felt need" was "persistent" and not already satisfied by the prior art. *Id.* Petitioner also argues that the "long-felt need" could not have been satisfied by the AgileTV product in Comcast's own network because "Comcast undisputedly rejected it." *Id.* at 22–23 (citing Ex. 1027, 215:13–217:7; Ex. 1028, 70:19-71:8).

Petitioner next contends that any evidence of industry praise is not tied to any novel feature of the challenged claims, and should therefore be discounted. Pet. Reply 23–24. Petitioner points out that the recognition given by a report by Buckingham Research Group (Ex. 2020, 7) is directed to the ease of voice recognition searches, yet numerous prior art references of record already taught the same features. *Id.* at 23. Likewise, Petitioner contends that Comcast's "praise[] of the AgileTV product suffers the same defect—the cited statements all relate to spoken search functionality in the prior art." *Id.*

As for the purported award by "Speech Technology Magazine," Petitioner contends there is no supporting evidence of such an award except a self-congratulatory press release without any evidence of an actual award. *Id.* (citing Ex. 2009, 1–2). Further, the Petitioner argues that "the press release credits aspects of the AgileTV system not in the challenged claims." *Id.* at 23–24. Petitioner also questions the alleged industry praise from a trial conducted in just 10 homes over a month period (Ex. 2010, 5) because the summary of this trial "shows only that an extremely limited test did not fail —not 'industry praise.'" *Id.* at 25.

Petitioner next argues that the challenged claims are not commercially valuable and that the invention has not been commercially successful. Pet. Reply 25. Petitioner first notes that "Comcast's payment under the License and Development Agreement was a loan that Patent Owner later repaid in full." *Id.* (citing Ex. 1027, 156:5–12, 160:20–161:2). Petitioner then notes that Comcast declined to license Patent Owner's patents and "[a]fter failing to win Comcast's business, Patent Owner dropped its television product and shifted to an automobile product instead." *Id.* Petitioner also notes that Comcast did not license the challenged claims, but instead conducted a limited evaluation of the AgileTV product. *Id.* at 26 (Ex. 2022, 8). Notably, Petitioner points out that "[t]he license required 'no additional consideration' for all of Patent Owner's then-pending patent applications and four SRI patents." *Id.* (citing Ex. 2022, 77–78 (Exhibit E); Ex. 1036, 450:25–452:19. Further, Petitioner notes that "[t]he license shows no 'recognition and acceptance' of the challenged claims because they did not yet exist." *Id.* (citation omitted).

Petitioner argues that the investment funding received was for two

distinct products and nothing mentions particular patents or claimed features of the television product that would tie any investment to the challenged claims. Pet. Reply 25 (citing Ex. 2003, 34; Ex. 2002, 3; Ex. 2021, 1–2). Petitioner also notes that Patent Owner has cited no legal authority that investment funding is a secondary consideration of nonobviousness regarding a patent issued to the company years later. *Id.* n.11.

As for alleged copying, Petitioner argues that the only evidence presented are district court preliminary infringement contentions, and infringement contentions standing alone are not sufficient evidence of copying. Pet. Reply 27. As explained below, we agree with Petitioner that Mr. Chaiken's testimony that "unidentified 'acquaintances' saying 'they confused Comcast's functionality with the AgileTV solution' from ten years earlier," is impermissible hearsay, to which we give no weight. *Id.* (citing Ex. 2032 ¶ 34).

iv. Analysis (claims 1 and 12)

Based on the final record before us, and notwithstanding Patent Owner's arguments and evidence, we find Petitioner's contentions with respect to claims 1 and 12 persuasive. Considering the evidence as a whole, including Patent Owner's evidence of objective indicia of nonobviousness, we determine that Petitioner has established by a preponderance of the evidence that claims 1 and 12 would have been unpatentable as obvious over Julia.

Petitioner persuasively shows on the final record that a person of ordinary skill in the art would have understood Julia's disclosure of voice input device 102 acts as the claimed "first device" for receiving spoken commands, or speech information, wherein voice input device 112 is a

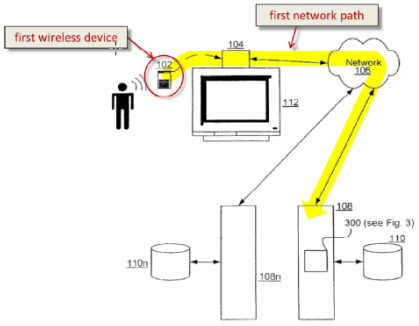
wireless device. Pet. 45–46; Ex. 1015, 3:45–54; Ex. 1023 ¶ 392.

Claims 1 and 12 next require "transferring said speech information from said first wireless device via a first network path to a speech recognition engine," and we are persuaded by Petitioner's contention that "Julia describes transmitting spoken commands (i.e., the claimed 'speech information') from voice input device 102 to communications box 104 and then over network 106 to remote server 108 for speech recognition processing." Pet. 47 (citing Ex. 1015, 3:45–66, Fig. 1a; Ex. 1023 ¶ 394).

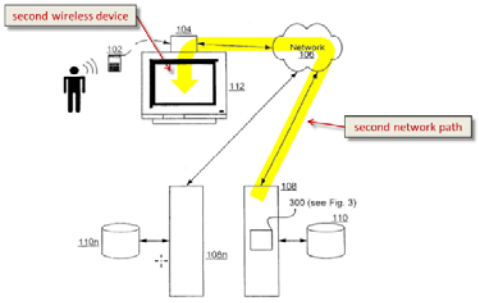
As explained above in the claim construction analysis, we disagree with Patent Owner's contentions that a "network path" requires devices that both send and receive messages. *See*, *e.g.*, PO Resp. 17 ("Julia only discloses that communication box 104, not the wireless microphone or device 112, is connected to network 106 and can receive messages and put messages on the network."). We find Mr. Schmandt's testimony more persuasive in opining that "one of ordinary skill in the art would not understand[] that a node [on a network path] is limited to a device that both sends and receives messages, and I did not interpret the term 'network path' in the challenged claims to exclude devices that cannot both send and receive messages." Ex. 1033 ¶ 17. Further, we agree with Petitioner that the network contemplated within the '326 patent includes unidirectional nodes (i.e., nodes that send or receive messages but not both). Petitioner also has persuasively shown that a physical route in a network includes both wireline connections and wireless connections. *See* Ex. 1033 ¶¶ 7–10; Ex. 1001, 50:39–41 ("said first device is a wireless device").

Given Patent Owner's proposed basic construction of "network path," i.e., physical route through which data is transmitted from a source to a

destination, which we have adopted, a person of ordinary skill in the art would understand such a route to include the network paths Petitioner identified in Julia. Petitioner's annotated Figure 1a (Pet. 48, 50) of Julia and corresponding analysis explain how Julia teaches both a first wireless device and first network path, as well as a second network path leading to display device 112, which Petitioner identifies as the claimed second device.



Julia Fig. 1a (annotated)



Julia Fig. 1a (annotated)

Petitioner's annotated Figures 1a (Pet. 21, 22) of Julia depicting a first network path and second network path. Julia discloses that the user's speech commands are transmitted from the first wireless device (input device 102) to communications box 104 and then over network 106 to remote server 108 for speech recognition processing. Ex. 1015, 3:45–66. As illustrated above, we agree with Petitioner that the path from input device 102 through communications box 104 and then to remote server 108 for speech recognition processing constitutes the claimed "first network path." *See* Ex. 1023 ¶ 397.

With regard to Patent Owner's first arguments, we are not persuaded that input device 102 is outside the network within the first network path identified by Petitioner. Patent Owner argues that input device 102 is not in the network path because "element 102 is not included in network 106." PO Resp. at 15. We disagree because Julia teaches that "voice data is

transmitted from device 102 preferably via infrared (or other wireless) link to communications box 104 (e.g., a set-top box or a similar communications device that is capable of retransmitting the raw voice data and/or processing the voice data) local to the user's environment and coupled to communications network 106" for transmission across network 106. Ex. 1015, 3:45–55. Communications box 104 simply retransmits the raw voice data (or processes it) that has originated from device 102. "Thus," we agree with Petitioner that "the voice input device is the source of the voice data and remote server 108 is the destination." Pet. Reply 14 (citing Ex. 1033 ¶ 6). We agree with Petitioner that the path between them (illustrated above) is the "first network path," even under Patent Owner's proposed construction. *See* Ex. 1033 ¶¶ 5– 6. Petitioner has presented persuasive evidence and testimony from Mr. Schmandt explaining why these claim elements are taught by Julia. *See* Pet. Reply 12–16; Ex. 1023 ¶¶ 394, 426; Ex. 1033 ¶¶ 5– 6.

Patent Owner additionally argues that the device 112 (television) is outside the network, and thus not part of a second network path as required by claims 1 and 12. PO Resp. 15–16 ("Petitioner draws a television 112, which is outside the network, as being inside the network."). We also find this argument unpersuasive to rebut Petitioner's contentions on the final record. Claim 1 and 12's final limitation requires "recognizing said speech information and effecting information delivery to a second device via a second network path." We agree with Petitioner that "Julia discloses that '[a]t remote server 108, the voice data is processed by request processing logic 300 in order to understand the user's request' and the requested content 'is electronically transmitted via network 106 to the user for viewing on

client display device 112.'" Pet. Reply 16 (quoting Ex. 1015, 3:61–66, 4:18–20).

Patent Owner again suggests that because communications box 104 acts as a transfer, that somehow display device 112 cannot be considered the destination of the second network path. But, considering the plain meaning of the claim language, Patent Owner's arguments do not persuasively explain why display device 112 would be outside the second network path identified by Petitioner. Claim 1 requires "effecting information delivery to a second device via a second network path" and this operation is taught by Julia as Petitioner and Mr. Schmandt explain. *See* Ex. 1023 ¶¶ 397–398; Pet. Reply 16; Ex. 1033 ¶ 6.

Further, Petitioner also identified an alternative "second network path" in Julia from remote server 108 (source) through network 106 to communications box 104 (destination). Pet. 50; Ex. 1023 ¶ 398 (explaining that alternatively the communications box also constitutes a "second device" as claimed); Pet. Reply 17. Patent Owner does not persuasively address this alternative. *See* generally PO Resp. To the contrary, Patent Owner states that "the network connection ends at element 104" and element 104 is part of the network. PO Resp. 15, 17–18.

We have considered the evidence presented by both parties related to the objective indicia of nonobviousness. Considering the final record before us, we find the evidence of nonobviousness to be weak and the evidence of obviousness to be strong. On balance, the strong evidence of obviousness outweighs the weak evidence of nonobviousness.

Patent Owner contends that its AgileTV system has been commercially successful and received industry praise. We address each of

these considerations below, but at the outset, we are not persuaded that Patent Owner has established that its AgileTV system embodies the claimed invention. Patent Owner proceeds as if there is a presumption that because both the AgileTV system and the '326 patent relate to voice-enabled searching, a nexus must therefore exist between the product and the patent in that whatever is claimed is embodied in the product. *See* PO Resp. 24–27. That is inappropriate.

Although the AgileTV system had many attributes related to a voice-enabled search and navigation system, it simply cannot be presumed that what is claimed is what is in the commercial product. Also, the patent claims focus not just on voice-enabled search and navigation features, but also on a defined first and second network path. Specifically, Patent Owner does not persuasively show how the commercial AgileTV system performed "transferring said speech information from said first wireless device via a first network path to a speech recognition engine," and then "recognizing said speech information and effecting information delivery to a second device via a second network path." *See* Ex. 2032 ¶¶ 8–16.

To establish the relationship between the claims of the '326 patent and the AgileTV system, Patent Owner relies on two pieces of evidence—we address each below. The first is a declaration by its former CTO David Chaiken (Ex. 2032 ¶¶ 8–12, 13–16). The second is a figure (PO Resp. 23, 26) Patent Owner asserts is in the '326 patent's provisional application. This figure purports to show how "voice data could be received by the Agile Engine [Agile TV platform] over a first path (in blue), which could effect the video on demand content provided from the VOD server over a second path (in red)." PO Resp. 22. We first address this figure and then Mr.

Chaiken's testimony.

We are not persuaded that the Patent Owner has persuasively established that the figure appearing at pages 23 and 26 of Patent Owner's Response depicts a commercial embodiment of the AgileTV system. First, Patent Owner alleges this figure is found in Exhibit 2006 (provisional application file history), but Exhibit 2006 has no such figure. Thus, this figure does not actually appear in the provisional application (or any of Patent Owner's other exhibits in this proceeding). *See* Ex. 2006. Patent Owner later clarifies that the figure appearing at pages 23 and 26 of Patent Owner's Response "actually comes [from] the provisional application for the '538 Patent," and it "show[s] the architecture of the AgileTV system created by AgileTV in 2001." PO Sur-Reply 20–21, n.5. Regardless, Patent Owner has not persuasively shown the relevance of this figure. Apart from the attorney argument quoted above, Patent Owner also has not presented persuasive evidence showing that the AgileTV system actually implemented the architecture depicted in the figure found at page 23 of the Response. *See* Sur-Reply 20–21; *see also* PO Resp. 22–26; Ex. 2032 ¶¶ 9–16 (citing no evidence to support his testimony related to the function of AgileTV and not discussing Exhibit 2006 or the figure at page 23 of the Response). Patent Owner simply failed to tie the figure appearing at pages 23 and 26 of Patent Owner's Response to any commercially produced version of the AgileTV system for which Patent Owner now alleges commercial success, industry praise, and copying.

Mr. Chaiken's testimony regarding the AgileTV system fares no better because he has not explained sufficiently or shown that the commercial AgileTV system relied upon for commercial success, praise, and

copying, is covered by any challenged claim. *See* Ex. 2032 ¶¶ 8–16. He testifies that "[t]he embodiments described in the '326 patent describe the foundations of the design of the AgileTV solution," and "the architecture and solution described in the '326 patent accurately reflect the AgileTV solution by 2003." *Id.* ¶¶ 14, 16. Such testimony is based on what is described in the '326 patent, not what is claimed. Even with respect to what is described in the '326 patent, Mr. Chaiken does not adequately explain how and to what extent the broad and varied descriptions in the '326 patent specification are the same as what is in the AgileTV system.

Mr. Chaiken fails to show that AgileTV "product embodies the claimed features, and is coextensive with them." *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000). Further, on cross examination, Mr. Chaiken admitted that he did not attempt to determine the scope of the challenged claims, or examine the AgileTV system in light of that claim scope. Ex. 1028, 115:2–116:16. Patent Owner does not persuasively show whether the claim scope of the application filed in 2011 leading to the '326 patent relates to the AgileTV system, which was discontinued some five years earlier. Thus, we are not persuaded that the marketed AgileTV system embodies the claimed features of the '326 patent.

Likewise, the mention of the AgileTV system in the Specification of the '326 patent does not demonstrate that the AgileTV system embodied the claimed invention of any challenged claim. At most, mention of the AgileTV system in the Specification shows the potential compatibility of the claimed invention with an existing model of the AgileTV system, but nowhere does the Specification state that the claimed invention was to be embodied into any specific commercial AgileTV system. *See* Ex. 1001,

12:38–49.

Because Patent Owner has not persuasively established that the marketed AgileTV system embodies all claimed features of any one challenged claim, a presumption of nexus has not been shown by Patent Owner. *See WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1329 (Fed. Cir. 2016) ("[T]here is a presumption of nexus for objective considerations when the patentee shows that the asserted objective evidence is tied to a specific product and that product 'is the invention disclosed and claimed in the patent.'" (quoting *J.T. Eaton & Co. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997)).

Similarly, Patent Owner also has not persuasively established that Comcast's cable X1 System copies the AgileTV system or is covered by the claims of the '326 patent, as explained below. Considering the record as a whole, including Patent Owner's evidence of nonobviousness, Petitioner still has established obviousness of the challenged claims. We examine the evidence for each secondary consideration more below.

We are not persuaded by Patent Owner's arguments alleging satisfaction of a long-felt but unresolved need (PO Resp. 27–28). Patent Owner asserts that its invention satisfied a long-felt but unresolved need, i.e., "for using voice recognition in cable systems." PO Resp. 27. Patent Owner further asserts that prior to AgileTV's solution, "no one had provided voice recognition processing for multiple users in a cable television network using an architecture including the claimed invention of the '326 patent." *Id.* at 28. The argument is misplaced, because it merely represents, at most, that Patent Owner is the first to conceive of all elements of its claimed invention. It does not mean that prior to the invention of the '326 patent, there were no

cable systems providing voice recognition. We see no basis in the record to find that Patent Owner's claimed invention is the only way to use voice recognition in cable systems.

Through the misplaced argument, Patent Owner is asserting that whatever system that did not use Patent Owner's claimed invention had a need that was long-felt and unresolved. This circular approach is inappropriate and not meaningful. For purposes of further discussion, we separate the claimed invention from Patent Owner's assertion of what was the long-felt but unresolved need, and focus on what Patent Owner has clearly stated as the long-felt but unresolved need, i.e., "using voice recognition in cable systems." *Id.* at 28.

"[A]n allegation [of an unsolved problem in the art] is not evidence of unobviousness unless it is shown . . . that the widespread efforts of skilled workers having knowledge of the prior art had failed to find a solution to the problem." *In re Allen*, 324 F.2d 993, 997 (CCPA 1963) (citing *Toledo Pressed Steel Co. v. Standard Parts, Inc.*, 307 U.S. 350, 356 (1939) ("Nor is there any evidence of general or widespread effort to solve the problem here involved.")). More recently, the Federal Circuit clarified that although evidence is particularly probative of nonobviousness when it demonstrates both that a demand existed for the patented invention and that others tried but failed to satisfy that demand, a patent owner "may establish a long-felt need without presenting evidence of failure of others." *Millennium Pharm., Inc. v. Sandoz Inc.*, 862 F.3d 1356, 1369 n.5 (Fed. Cir. 2017). That clarification, is not of significance here because to demonstrate long-felt but unresolved need, Patent Owner does not rely on the character and nature of pre-existing "solutions" that have been provided.

Patent Owner identifies prior "solutions" by others as providing voice recognition processing for multiple users in a cable television network. *Id.* Petitioner refers to only one such prior solution as unsuccessful. *Id.* Patent Owner's characterization of the attempt as unsuccessful is not sufficiently supported or explained. Mr. Chaiken states, in a conclusory manner without explanation: "To my knowledge, Integra5's solution [using a telephone call to request content] was not successful." Ex. 2032 ¶ 7. We do not credit that testimony because Mr. Chaiken does not provide the underlying basis for his conclusion that Integra5's solution was not successful.

Patent Owner identifies other solutions that "ran solely on a set-top box, without a voice-activated remote control, and did not perform any operations at the headend." PO Resp. 28 (citing Ex. 2040). Patent Owner does not state whether those "solutions" worked or failed, in providing voice recognition in cable systems. If those solutions worked, then there was no long-felt but unresolved need at the time of invention of the '326 patent. If those solutions failed, Patent Owner has not explained why. Furthermore, it is unclear what problem those efforts were attempting to solve. It is unclear if those efforts even intended to include a voice-activated remote control unit. In any event, Patent Owner has not explained why the general problem of providing voice recognition in a cable system requires a voice-activated remote control unit to solve. The identification of these other "solutions" is insufficiently explained to establish satisfaction of long-felt but unresolved need for using voice recognition in a cable system. Further, we note that the AgileTV system was not commercially adopted apart from a limited test, and thus there is absence of any showing by Patent Owner of a prompt adoption of its proposed solution, which can be indicative of satisfaction of

long-felt but unresolved need. *See In re Mixon*, 470 F.2d 1374, 1377 (CCPA 1973). Finally, as of 2000, Julia provided detailed disclosures for voice recognition technology that could be integrated into the home entertainment market. *See* Ex. 1015, 1:17–48.

To the extent Patent Owner regards providing voice recognition processing for multiple users as the long-felt but unresolved need, none of the challenged claims require a system for multiple users. *See* PO Resp. 28 ("no one had provided voice recognition processing for multiple users in a cable television network using an architecture including the claimed invention of the '326 patent"). Thus, Patent Owner's own invention would not meet that need because the challenged claims of the '326 patent do not require voice recognition processing for *multiple users* in a cable television network. *See Therasense, Inc. V. Becton, Dickinson & Co*., 593 F.3d 1325, 1336 (Fed. Cir. 2010) ("finding no long-felt need because the claims were broad enough to cover devices that did not solve the problem").

For all the reasons set forth above, Patent Owner's arguments are not well supported by underlying evidence and testimony to establish satisfaction of a long-felt need for Patent Owner's patented invention in the cable TV industry.

Patent Owner's evidence of industry (and Comcast) praise is also not persuasive. The recognition given by a report by Buckingham Research Group (Ex. 2020, 7) is directed to the ease of voice recognition searches, yet numerous prior art references of record in these proceedings also teach the same features. *See* IPR2018-00342, Paper 54 (final decision). The evidence for the award by "Speech Technology Magazine" is simply Patent Owner's own self-congratulatory press release without any evidence of the actual

basis or criteria for the award, or information from the magazine about the award. *See* Pet. Reply 23 (citing Ex. 2009, 1–2). Patent Owner has not shown that this press release actually issued to the public. Additionally, the internal press release itself identifies purported advantages of the AgileTV system outside the scope of the challenged claims. *Id.* For example, the press release states that "Promptu utilizes an extensive, dynamically managed database of more than 100,000 phrases and delivers higher than 90 percent voice recognition accuracy" (Ex. 2009, 1), yet the claims do not require these features. Ex. 1027, 250:15–253:14, 255:22–258:21, 316:4–6. Additionally, the AgileTV system employed voice recognition processing provided by a third-party vendor. *Id.*

The appearance of AgileTV's former CEO (Paul Cook) and CTO (Harry Printz) on the Kudlow & Cramer television show on CNBC in 2004 to discuss the AgileTV solution and to demonstrate the technology shows that others had an interest in the technology, but the appearance alone does not establish industry praise. *See* Ex. 2032 ¶ 23; Ex. 2018; Ex. 2019. Moreover, the product did not work during this broadcast. Ex. 2019, 1–3 ("It won't work precisely. Just go through a dry run."); Ex. 1028, 96:14–97:19. More importantly, the description of the product during the broadcast highlighted the same voice search functionality disclosed in the prior art. Ex. 2019, 3 (such as "find movies with Brad Pitt"). Patent Owner does not effectively tie the evidence of industry or Comcast praise, if any, to any novel feature of the challenged claims. As explained above, any praise given to AgileTV does not translate to the claims of the '326 patent because Patent Owner has not established a nexus.

Patent Owner also states its alleged "industry praise above was

directly based, for example, on the AgileTV system's ability to provide voice recognition processing for *multiple users* in a cable television network using an architecture including the claimed invention of the '326 patent." PO Resp. 30 (emphasis added). But again, to the extent Patent Owner regards providing voice recognition processing for *multiple users* as the basis of any industry praise, the claims of the '326 patent do not even require voice recognition processing for multiple users.

As for copying, Patent Owner asserts that Comcast's implementation of voice recognition in its X1 System is practically identical to the AgileTV solution installed in Comcast's cable network in the mid-2000s, but we find Patent Owner's support for these allegations also lacking. Patent Owner does not persuasively establish whether the X1 System is a copy of the AgileTV system or whether the X1 System would be covered by the claims of the '326 patent. Patent Owner's proof that the Comcast X1 system copied AgileTV are district court "Initial Claim Charts" (Ex. 1021, 83) and Exhibit 2026, which is an instructional video for "Promptu Voice Controlled Television" for Comcast Cable. Because the initial claim charts are not supported by corresponding argument in the briefs or expert testimony, we find them unpersuasive in establishing copying or proving that the X1 system is covered by the claims of the '326 patent.

Patent Owner alleges that Comcast rejected its AgileTV system and "instead market[ed] its own voice recognition product," with an "implementation" that "is practically identical." PO Resp. 33–34 (citing Ex. 2032 ¶¶ 33–35). The support for these assertions is Mr. Chaiken's testimony that "acquaintances of mine who were aware of the scope of my work at AgileTV told me they confused Comcast's functionality with the

AgileTV solution." Ex. 2032 ¶ 34. This statement is hearsay and excluded from consideration because the statement is being offered for the truth of the matter asserted and the "acquaintances" have not made any appearance in this proceeding to subject their beliefs to cross-examination. The only other evidence cited by Mr. Chaiken to support his assertions that Comcast's X1 system somehow relates to AgileTV is the fact that an infringement lawsuit was filed. *Id.* ¶ 35. Mr. Chaiken does not offer testimony as to the accuracy of the district court litigation initial claim charts. Ex. 1021, 83. In the aggregate, Patent Owner's evidence supporting the assertion that Comcast's X1 system is a "copy" of AgileTV is not persuasive.

Finally, we determine that Patent Owner's evidence and argument fails to demonstrate that the AgileTV system was commercially successful. Patent Owner alleges commercial success because Comcast licensed the AgileTV system and AgileTV received investor funding. Again, Patent Owner has not established that the challenged claims of the '326 patent cover any commercial embodiment of the AgileTV system. But, even if there was an established nexus, the AgileTV system was not successful because the product was not adopted except in limited Comcast test markets. Ex. 1027, 215:13–218:13. Also, the money transferred by Comcast to AgileTV pursuant to the license agreement was a loan that was repaid by AgileTV. Ex. 1027, 156:5–12, 160:20–161:25; *see* Pet. Reply 25. Further, Patent Owner dropped its AgileTV system after being rejected by Comcast and shifted to unrelated automobile voice control technology. Ex. 1027, 215:13–218:13. We also do not view investor funding of a company, without more, as demonstrating commercial success of a product made by the company, and Patent Owner has not presented persuasive evidence tying

investment to the challenged claims. *See* Ex. 2021, 1–2.

Patent Owner has not provided any pertinent information about competing products on the market, nor has Patent Owner provided any relevant market share information. *See In re Applied Materials, Inc.*, 692 F.3d 1289, 1300 (Fed. Cir. 2012) ("An important component of the commercial success inquiry in the present case is determining whether Applied had a significant market share relative to *all* competing pads based on the merits of the claimed invention, which Applied did not show."). Patent Owner also has not shown pertinent market share information regarding the sales of products incorporating the claimed invention.

Petitioner also presents persuasive evidence and arguments addressing the unique limitations of claim 12, which are not found in claim 1. Specifically, Petitioner relies on Julia's voice command being transmitted to the remote server for speech recognition processing, as teaching "transferring said speech information in an unrecognized state." Pet. 56 (citing Ex. 1015, 3:45–66; Ex. 1023 ¶ 426). Petitioner relies on Julia's disclosure of client display device 112 for the "second device," or controlled device. *Id.* at 57 (citing Ex. 1023 ¶ 428–429). We agree that "[a] person of ordinary skill in the art would have known that a television, in the cable network implementation of Julia, was 'capable of displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio.'" *Id.* (quoting Ex. 1023 ¶ 429). Petitioner also establishes how Julia teaches that "said first network path and said second network paths are different," because Julia's "'first network path' . . . goes from the voice input device to the communications box and then via the network to the remote server, while the 'second network path' begins at the

remote server and goes via the network to the communications box and ultimately to the client display device (i.e., television)." Pet. 51. Patent Owner does not challenge these unique limitations found in claim 12 (but not claim 1) and we find persuasive Petitioner's argument and evidence for these limitations.

For the foregoing reasons, considering the entirety of the evidence before us, we determine that the evidence of obviousness outweighs that of nonobviousness. Petitioner has established by a preponderance of the evidence that claims 1 and 12 are unpatentable as obvious over Julia.

v. Analysis (Claims 2–7 and 13–17)

We have reviewed Petitioner's contentions regarding each of claims 2–7 and 13–17, and determine that, notwithstanding Patent Owner's argument discussed below, Petitioner establishes by a preponderance of the evidence that these claims would have been obvious over Julia. *See* Pet. 50–59. We determine that Petitioner's arguments with regard to the limitations added by these dependent claims relative to the independent base claim are persuasive as highlighted below.

Claim 2 depends from claim 1 and further requires "said first network path and said second network path are different paths." Petitioner presents persuasive arguments and credible evidence to support a finding that Julia discloses this limitation whereas Julia's "'first network path' . . . goes from the voice input device to the communications box and then via the network to the remote server, while the 'second network path' begins at the remote server and goes via the network to the communications box and ultimately to the client display device (i.e., television)." Pet. 51.

Claim 3 depends from claim 1 and claim 13 depends from claim 12. Each claim further requires "wherein said first device and said second device are different devices." Petitioner presents persuasive arguments and credible evidence to support a finding that Julia discloses this limitation. *Id.* ("Julia discloses a first device (i.e., voice input device 102) that is different than the second device (i.e., client display device 112).") (citing Ex. 1023 ¶ 406); *see also* Pet. 57–58 (citing Ex. 1023 ¶¶ 72, 433).

Claims 4 depends from claim 1 and claim 14 depends from claim 12. Each claim further requires "wherein said speech information comprises video search information; and wherein said information delivery comprises video information." Petitioner presents persuasive arguments and credible evidence to support a finding that Julia discloses this limitation whereas Julia uses spoken search command to identify video programming and then displaying several records that satisfy a query in a manner to allow user selection. *Id.* at 51–52, 58 (citing Ex. 1015, 11:29–32, 36–43; Ex. 1023 ¶¶ 409–411, 435–437).

Claim 5 depends from claim 1 and claim 15 depends from claim 12. Each claim further requires "wherein said speech information transfer comprises transferring said speech information in either of a partially recognized state or an unrecognized state." Petitioner presents persuasive arguments and credible evidence to support a finding that Julia discloses this limitation whereas Julia's speech transfer from voice input device 102 to remote server 108 for speech processing is in "an unrecognized state" as claimed. *Id.* at 52–53, 58 (citing Ex. 1015, 3:45–66 ("capable of transmitting the raw voice data and/or processing the voice data" and the voice date may be transmitted in compressed digital form or analog format);

Ex. 1023 ¶¶ 413, 439).

Claim 6 depends from claim 1 and claim 16 depends from claim 12. Each claim further requires "wherein said wireless device is used for input and output for control purposes, wherein said information delivery is to said second device which comprises a television and STB." Petitioner presents persuasive arguments and credible evidence to support a finding that Julia discloses these limitations whereas Julia's portable voice input device is an "input" for spoken commands that are then "output" to the communications box. *Id.* at 53–54, 58 (Ex. 1015, 3:37–60, 4:18–30,; Ex. 1023 ¶¶ 415–417). Further, Petitioner shows how the voice commands cause the remote server to deliver video information, such as television programs, to the communications box and client display device. *Id.*

Patent Owner does not address Petitioner's contentions for the above claims and has therefore waived any opposition. *See generally* PO Resp.; *see also* Paper 16, 3 ("The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.").

Patent Owner's only rebuttal as to the claims discussed in this subsection is to challenge whether Julia alone teaches the requirement found in claims 7 and 17[6] of "determining a user site associated with a user of the first device." Ex. 1001, 51:34–35 (claim 7). We address the parties' contentions below related to this limitation. Claim 7 requires:

> The method of claim 1, further comprising at least one of

[6] Claim 17 has the same limitations as claim 7. *See* Ex. 1001, 53:14–25. Claims 9 and 19 have similar "user site" limitations. *Id.* at 51:62–52:4. Claims 9 and 19 are not challenged by Petitioner as obvious based on Julia alone, but our analysis here is equally applicable to Petitioner's challenges of claims 9 and 19 addressed below.

> the steps of:
>
> determining a user site associated with a user of said first device;
>
> determining said associated user site from said recognized speech;
>
> determining said associated user site from said recognized speech and a speaker identification library;
>
> determining said associated user site from said recognized speech and a speech recognition library; and
>
> determining said associated user site from an identification within said speech channel.

Ex. 1001, 51:24–43. Importantly, only one of the above steps need be shown in Julia to meet the "at least one of" claim language. Petitioner, and Mr. Schmandt, contend Julia teaches "determining a user site associated with a user of said first device." Pet. 54–55 (citing Ex. 1023 ¶¶ 419–420).

Petitioner addresses the "user site" limitation in the Petition, arguing that:

> Julia discloses a system in which multiple different users at multiple different locations all access the same remote server to perform speech recognition processing. Schmandt Decl. ¶ 420. Julia states that "multiple users, each having their own client input device, may issue requests, simultaneously or otherwise, for navigation" of the remote data source. Julia at 6:12-16. Once the Julia system identifies and recognizes a user's voice command, the remote server retrieves the desired information from the data source and transmits the information to the user's communications box and client display device. *Id.* at 4:18-20. . . . To do so, the remote server must determine the "user site associated with" the user that issued the speech command using "said first device" (i.e., voice input device 102). *Id.* at 3:45-54; Schmandt Decl. ¶ 420.

Pet. 55. As further explained by Mr. Schmandt, "[a] person of ordinary skill in the art would know that the remote server would have to determine the

particular communications box issuing a particular voice command so that the recognized command could be transmitted back to the correct communications box," and further "[t]hat communications box has an associated 'first device' (i.e., voice input device 102), which the user of the system uses to input spoken commands." Ex. 1023 ¶ 420 (citing ex. 1015, 3:45–54). "Thus," according to Mr. Schmandt, "Julia discloses determining a user site, and the user site is associated with a user of said first device (voice input device)." *Id.* We credit the testimony of Mr. Schmandt because it is consistent with and supported by the cited evidence, as well as on its face rational.

Patent Owner contends that Petitioner only sets forth a case of inherency of the user site limitation for each claim, but "the petition does not explain why this feature would be inherent." PO Resp. 19. Specifically, Patent Owner argues "the petition fails to establish a reasonable likelihood[7] that claim 7 is unpatenable." *Id.* at 19–20. Patent Owner makes identical arguments for claims 17 and 9. *Id.* at 20.

We have considered Patent Owner's Response, which consists only of attorney argument that the "user site" claim limitation required by claims 7, 9, 17, and 19 is not taught, either explicitly or inherently, by Julia. After considering the final record before us, we determine Petitioner has shown by a preponderance of the evidence that Julia teaches a user site associated with a user of said first device as required by the claim language. Julia's remote server would have to determine the particular communications box issuing a particular voice command so that the recognized command could be

[7] Petitioner must prove the elements of its case by a "preponderance of the evidence" and not just present a "reasonable likelihood."

transmitted back to the correct communications box. Ex. 1023 ¶ 420. Petitioner establishes that Julia's disclosure of allowing users to request content, and then delivering that content in response, creates a specific financial consequence "such that content is provided to a user pay-per-view or video-on-demand location and thus identified with the user site as required by claim 9 (and claim 19)." Pet. Reply 17–18 (citing Ex. 1023 ¶¶ 458, 475). Further "Julia also discloses that 'multiple users, each having their own client input device, may issue requests' . . . of the remote data source," such that "[o]nce the desired information has been retrieved from data source 110, it is electronically transmitted via network 106 to the user for viewing." *Id.* at 18 (citing Ex. 1015 4:24–30). Thus, Petitioner presents persuasive argument and credible evidence that "Julia teaches 'determining a user site associated with a user of said first device' as recited in claim 7 and 17," and also as similarly required for claims 9 and 19. *Id.*

As noted above in the context of the independent claims, we have determined that the objective evidence of nonobviousness does not overcome Petitioner's strong showing of obviousness. The same is true for these dependent claims. Furthermore, the evidence of nonobviousness is just as weak for these dependent claims because the dependent claims include more limitations than the independent claims from which they depend, and Patent Owner has not submitted secondary considerations evidence specifically directed to the features of these dependent claims. For the foregoing reasons, Petitioner has established by a preponderance of the evidence that claims 2–7 and 13–17 are unpatentable as obvious over Julia.

3. Obviousness Ground Based on Julia and Either Banker or Gordon

Petitioner contends that claims 8, 9, 18, and 19 are unpatentable over Julia and either Banker or Gordon under 35 U.S.C. § 103(a), relying on the supporting testimony of Mr. Schmandt. Pet. 59–65 (citing Ex. 1023 ¶¶ 388, 450–483). Having now considered the evidence in the complete record established during trial, we are persuaded that, based on this record, Petitioner has demonstrated by a preponderance of the evidence that claims 8, 9, 18, and 19 would have been obvious over those references in combination.

Claim 8 depends from claim 1 and adds two additional limitations. The first limitation requires "assessing a response identified as to a user device comprising any of said first device and said second device to create a financial consequence." Petitioner contends Julia teaches this limitation. Pet. 59–60. "In particular, Julia states that the disclosed invention could be implemented 'on any number of different hardware and software computing platforms and environments' specifically including the 'Diva Systems video-on-demand system." *Id.* at 60 (citing Ex. 1015, 6:47–59; Ex. 1023 ¶ 450). Petitioner contends that "[a] person of ordinary skill in the art would have known that the Diva System provided pay-per-view functionality," and "a user could verbally request a pay-per-view movie using the Julia system, and the remote server would process the request and retrieve the content." *Id.* (citing Ex. 1023 ¶ 450).

The next limitation of claim 8 requires "billing a user associated with said user device based upon said financial consequence." Petitioner contends that "Julia discloses to a skilled artisan the step of 'billing' the requesting user 'based upon said financial consequence' (i.e., the pay-per-

view purchase)." Pet. 60–61 (citing Ex. 1023 ¶¶ 450–451).

Alternatively, Petitioner relies on either Banker or Gordon combined with Julia for meeting the "assessing" and "billing" steps of claim 8. Pet. 61. Petitioner argues that "Banker discloses a system in which the user can purchase a pay-per-view movie by pressing the 'BUY key' on the television remote control and then entering a code provided by the system to begin a purchase sequence." *Id.* at 34–35, 61 (citing Ex. 1016, 7:60–63, 16:43–17:3, Figs. 6F, 16:51–55 ("[T]he user by actuating the BUY key initiates a buy sequence. Consequently, this key is used to purchase an event."). "Once entered by the user, the 'code is checked with the code stored in memory' (i.e., 'assessing [a] response identified' [with the] user)." *Id.* at 35 (citing Ex. 1016, 16:67–17:1). After pressing a buy key, the user is billed. "Thus," Petitioner establishes how "Banker discloses the 'assessing' and 'billing' steps recited in claim 8." *Id.* (citing Ex. 1023 ¶ 335). Likewise, Gordon teaches offering the subscriber an option to purchase an on-demand program subscription, generating a master PIN as confirmation, and then updating the billing system with the new subscriber's account number. *Id.* (citing Ex. 1017, 2:60–63, 9:64–10:9, 10:16–27, 10:43–46, Figs. 3B and 8). We find Petitioner's contentions for claim 8 persuasive on the final record before us.

Claim 9 depends from claim 1 and further requires "assessing a response to create a financial consequence identified with a user site" and "communicating said financial consequence to said user." Petitioner relies on Julia's disclosure of a payment for a movie-on-demand as creating a financial consequence. Pet. 61–62 (Ex. 1023 ¶¶ 458, 459–461). Petitioner also shows how Banker and Gordon disclose "assessing" a response to "create a financial consequence," and then displaying this "financial

consequence." *Id.* at 62 (Ex. 1023 ¶¶ 341, 459–461); Pet. 36 ("In Banker, a user can purchase a pay-per-view movie by pressing the 'BUY key' on the television remote control and then entering a code provided by the system to begin a purchase sequence. Banker at 16:43-55, 16:62-17:1, Fig. 6F."); *see also* Ex. 1016, 16:62–17:3 (describing a display screen confirming the viewer's intent to accept the purchase).

Claim 9 further requires "said user confirming said communicated financial consequence to create a financial commitment," and "billing said user based upon said financial commitment." Pet. 62–63. Petitioner contends that "[a] person of ordinary skill in the art would know that a pay-per-view movie purchase, such as that disclosed in Julia, involves informing the user that they are making a purchase and confirming their intent." *Id.* at 63 (citing Ex. 1023 ¶ 465). Alternatively, Petitioner contends Banker and Gordon also "disclose confirming the 'displayed financial consequence' to 'create a financial commitment' as required by this claim." *Id.* (citing Ex. 1023 ¶ 465); *see id.* at 38 (describing Banker's "BUY" key and code for confirming the intent to purchase). Claim 9's last requirement of "billing said user based upon said financial commitment" is taught by Julia's pay-per-view system, or, alternatively, "Banker and Gordon also disclose billing the subscriber for a pay-per-view purchase." *Id.* at 63 (Ex. 1023 ¶ 467); *see id.* at 39 ("Banker also discloses billing the subscriber for a pay-per-view purchase. Banker at 7:60-63, 16:62-17:3."). We find Petitioner's contentions for claim 9 persuasive on the final record before us.

Claim 18 recites limitations identical to claim 8, and Petitioner adopts the analysis of claim 8 discussed above. Pet. 63–64. That analysis is persuasive for reasons discussed above in the context of claim 8.

Claim 19 recites limitations identical to claim 9, and Petitioner adopts the analysis of claim 9 discussed above. *Id.* at 64. That analysis is persuasive for reasons discussed above in the context for claim 9.

Petitioner establishes persuasively that a person of ordinary skill in the art would have been motivated to combine the teachings of Julia with Banker or Gordon. Pet. 64–65 (citing Ex. 1023 ¶¶ 484–485). Each reference provides similar interfaces for interactive television networks and cable networks in particular, as well as providing pay-per-view functionality. *Id.* (citing Ex. 1015, 1:30–38, 3:36–60, Fig. 1a; Ex. 1016, Abst.; Ex. 1017, 1:8–13). Mr. Schmandt testifies that a person of ordinary skill in the art would have naturally considered Banker or Gordon in connection with the system disclosed by Julia. Ex. 1023 ¶ 484. As argued by Petitioner, "the discussion of on-demand video functionality in Julia suggests systems like those disclosed in Banker or Gordon," and both references teach the benefits of user interfaces that minimize the chances of accidental or unauthorized purchases. Pet. 65 (citing Ex. 1023 ¶ 485, Ex. 1016, 16:43–50, 16:51–55, 16:62–17:3, Fig. 6F; Ex. 1017, 2:60–63, 3:61–63, 8:66–10:9, 10:43–46; Figs. 3B, 8). As explained by Mr. Schmandt, and with the above benefits of Banker and Gordon in mind, "[i]t would also have been within the capability of a person of ordinary skill in the art to combine Julia with either Banker or Gordon to permit a user to order pay-per-view movies using the sequence described by Banker or Gordon but using voice commands as in Julia." Ex. 1023 ¶ 485.

Patent Owner does not present any arguments addressing Petitioner's contentions for claims 8, 9, 18, and 19 as obvious over Julia and either Banker or Gordon. *See generally* PO Resp. Patent Owner's Response does

not mention Banker or Gordon, nor does the Response address the combination of Julia with either Banker or Gordon. Patent Owner has therefore waived any arguments for patentability related to this ground. *Id.*; *see also* Paper 16, 3 ("The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.").

With regard to the evidence of nonobviousness, we have determined above, with respect to independent claims 1 and 12, that the evidence of nonobviousness is weak. That evidence is just as weak with respect to dependent claims 8, 9, 18, and 19, because these claims include all the elements of the independent claims from which they depend. Patent Owner has not persuasively shown that whatever was sold or licensed, whatever was allegedly copied, and whatever was praised by others, had all the elements of the claimed subject matter. Also, other deficiencies of the assertions of industry praise, commercial success, copying, and satisfaction of long-felt but unresolved need, with respect to claims 1 and 12, also apply to claims 8, 9, 18, and 19. Thus, as is the case with independent claims 1 and 12, we determine that on the final record the weak evidence of nonobviousness does not outweigh the strong evidence of obviousness presented by Petitioner. For the foregoing reasons, Petitioner has established by a preponderance of the evidence that claims 8, 9, 18, and 19 are unpatentable as obvious over Julia and either Banker or Gordon.

4. Obviousness Ground Based on Julia and Either Martin or Blahut

Petitioner asserts that claims 11 and 21 are unpatentable over Julia and either Martin or Blahut under 35 U.S.C. § 103(a), relying on the supporting testimony of Mr. Schmandt. Pet. 65–69 (citing Ex. 1023 ¶¶ 487–

500). For this ground, Petitioner relies on either Marin or Blahut combined with Julia for teaching remote control devices that transmit identifiers. Pet. 66 (citing Ex. 1023 ¶ 487–489). For the reasons set forth above, and for the reasons explained below, Petitioner has proven by a preponderance of the evidence based on the final record that claims 11 and 21 would have been obvious over Julia and either Martin or Blahut.

Claim 11 requires "responding to recognized speech identified as to said first device based upon natural language to create a response uniquely identified with said user device." Ex. 1001, 52:12–28. Claim 21 recites a nearly identical limitation. *Id.* at 53:47–50. Petitioner relies on Julia's disclosure "that request processing logic 300 (located on remote server 108) includes both 'speech recognition engine 310' to perform speech recognition and 'natural language (NL) parser 320,' which 'linguistically parses and interprets the textual output of the speech recognition engine." Pet. 66 (citing Ex. 1015, 7:12–13, 7:47–49, Figs. 3, 4). Petitioner contends that the natural language interpreter determines both meaning of words and grammar of the statement and then "the Julia system provides the requested content (e.g., movie, television program) to the particular requesting user – one of many users accessing the speech recognition engine." *Id.* (citing 1015, 4:18–20, 4:24–30, 6:12–16, Figs. 1a, 1b, 2). "Thus," according to Petitioner, "Julia discloses using the 'recognized speech' to provide 'a response uniquely identified' with the requesting user, as claimed." *Id.* at 66–67 (citing Ex. 1023 ¶ 489).

Petitioner then alternatively contends that one of skill in the art would have combined Julia with Martin and Blahut, which both disclose remote control devices that transmit identifiers. According to Petitioner,

> A person of ordinary skill in the art would recognize the benefit of combining Julia with this teaching, including, for example, uniquely identifying remote controls for access control purposes and providing the system designer with options for an identifier for the particular home system, and thus the combination of Julia with either Martin or Blahut would render this claim obvious. [Ex. 1023] ¶¶ 494, 501–502.

Pet. 67.

Petitioner further establishes that a person of ordinary skill in the art would have been motivated to combine the teachings of Julia with either Martin or Blahut. *Id.* at 68–69 (citing Ex. 1023 ¶¶ 501–502). Petitioner notes each reference is in the field of "interactive television networks" and each relates to "remote controls communicating wirelessly with television set-top boxes." *Id.* at 68. Petitioner argues that the combination would provide a system designer with options for an identifier for the particular home system, and the combination would enable "uniquely identifying a remote control," which in turn "would allow the system to limit what channels or functions are available to a particular user, such as a child, of a remote control. *Id.* at 68–69 (citing Ex. 1019, 1:21–30; Ex. 1023 ¶ 502). Thus, according to Petitioner, "[a] person of ordinary skill in the art would have naturally considered Martin or Blahut in connection with the system disclosed by Julia." *Id.* at 68 (citing Ex. 1023 ¶ 501).

We have considered Petitioner's arguments and evidence set forth above and find them persuasive on the final record before us. Patent Owner does not present any arguments addressing Petitioner's contentions for claims 11 and 21 as obvious over Julia and either Martin or Blahut. *See generally* PO Resp. Patent Owner's Response does not mention Martin or Blahut, nor does the Response address the combination of Julia with either

Martin or Blahut. Patent Owner has therefore waived any arguments for patentability related to this ground. *Id.*; *see also* Paper 16 ("The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.").

With regard to the evidence of nonobviousness, the evidence of nonobviousness is also weak with respect to dependent claims 11 and 21. Claim 11 depends from claim 1 and thus includes all the elements of claim 1. Claim 21 depends from claim 12 and thus includes all the elements of claim 12. For the same reasons discussed above with respect to the elements of claim 1, and the elements of claim 12, Patent Owner has not persuasively shown that whatever was sold or licensed, whatever was allegedly copied, and whatever was praised by others, had all the elements of the claimed subject matter. Also, other deficiencies of the assertions of industry praise, commercial success, copying, and satisfaction of long-felt but unresolved need, with respect to claims 1 and 12, also apply to claims 11 and 21. Thus, as is the case with independent claims 1 and 12, we determine that on the final record the weak evidence of nonobviousness does not outweigh the strong evidence of obviousness presented by Petitioner. For the foregoing reasons, Petitioner has established by a preponderance of the evidence that claims 11 and 21 are unpatentable over Julia and either Martin or Blahut.

5. All Obviousness Grounds Based on Murdock

Petitioner contends that claims 1–9, 11–19, and 21 are unpatentable over Murdock alone (Ground 1), Murdock in view of Banker or Gordon (Ground 2) or in view of Martin or Blahut (Ground 3) under 35 U.S.C. § 103(a), relying on the supporting testimony (Exs. 1023, 1033) of Mr.

Schmandt. Pet. 11–14, 16–44.

The ’326 patent is a reissue of U.S. Patent No. 7,685,523, which issued from an application (11/283,176) filed on November 17, 2005, which, in turn, is a continuation of an application (09/785,375)[8] filed on February 16, 2001. Ex. 1001, at [22], [60], [63], [64]; Pet. 6. This 2001 application claims the benefit of priority to a provisional application (60/210,440) with a filing date of June 8, 2000. *Id.* As addressed in detail below, Petitioner accepted this June 8, 2000 date as the priority date for the ’326 patent.

Murdock was filed on November 16, 2000, after the June 8, 2000 effective filing date of the ’326 patent that was adopted in the Petition, but claims the benefit of priority to the filing date of Provisional Application No. 60/166,010 (Ex. 1014, the “Murdock Provisional”), which was filed on November 17, 1999. Ex. 1013, at [22], [60]. Petitioner argues that Murdock is 35 U.S.C. § 102(e) prior art to the ’326 patent because Murdock is entitled to the benefit of priority to the filing date of the Murdock Provisional. Pet. 12.

In *Ex Parte Mann*, the Board held that “under *Dynamic Drinkware*, a non-provisional child can be entitled to the benefit of a provisional application’s filing date if the provisional application provides sufficient support for *at least one claim* in the child.” 2016 WL 7487271, at *6 (PTAB Dec. 21, 2016) (discussing whether *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) requires “support in the provisional [] for *all* claims, *any* claim, or something in between”). The Board further held that “the [party claiming priority] also must show that the

[8] This application issued as U.S. Patent No. 7,047,196, which is subject to related proceedings mentioned *supra*.

subject matter relied upon in the non-provisional is sufficiently supported in the provisional application [and that t]his subject matter test is in addition to the comparison of claims required by *Dynamic Drinkware*." *Id*. at *5.

Recognizing these requirements, Petitioner asserts that:

> Petitioner's expert Christopher Schmandt shows in his supporting declaration that at least claim 1 of Murdock is supported by the disclosure in the provisional application. Schmandt Decl. ¶¶ 109–124. In addition, ... Petitioner's expert witness shows that the Murdock provisional application meets this requirement, too. Schmandt Decl. ¶¶ 254, 257, 261, 266, 270, 275, 280, 283, 288, 292, 295, 298, 301, 305, 308, 311, 316, 319, 324, 327, 338, 349, 355, and 367 (showing that the provisional application discloses the same subject matter disclosed in Murdock and cited to herein).

Pet. 11–12.

Patent Owner contends that the Petition omits the analysis necessary to establish Murdock as prior art, and instead relies on bare conclusions lacking any factual support, and improper incorporation by reference, that could sustain its position. PO Resp. 11–14. Patent Owner notes Petitioner's assertion and analysis is a "barebones analysis" that is insufficient to support Petitioner's contention that Murdock is entitled to the filing date of the Murdock Provisional. PO Resp. 13. Patent Owner notes that Petitioner improperly incorporates by reference "thirty-nine paragraphs of essential analysis from the declaration into the petition." *Id.* Petitioner presents two primary arguments why the Petition is insufficient.

"First," Patent Owner argues, "the incorporation lacks the particularity and specificity required of supporting evidence under the governing statute and rules set forth in 35 U.S.C. § 312(a)(3) and in 37 C.F.R. §§ 42.22(a)(2), 42.104(b)(4)–(5)." *Id.* "Second, . . . the incorporation violates the Board's

rules prohibiting arguments made in a supporting document from being incorporated by reference into a petition. *Id.* (citing 37 C.F.R. § 42.6(a)(3)).

We agree here with Patent Owner that Petitioner's barebones analysis, in its Petition, is insufficient to support its contention that Murdock is entitled to the filing date of the Murdock Provisional. Specifically, although there is no requirement to rewrite every word or example from an expert declaration into a petition, Petitioner's two sentences concluding that "at least claim 1 of Murdock is supported by the disclosure in the [Murdock P]rovisional application" and that "the [Murdock P]rovisional . . . provide[s] support for the subject matter relied upon," are insufficient to establish Murdock as prior art. "Arguments must not be incorporated by reference from one document into another document." 37 C.F.R. § 42.6(a)(3). Here, Petitioner cites to 39 paragraphs, spanning just as many pages in the Schmandt Declaration. No reasonable application of 37 C.F.R. § 42.6(a)(3) to the circumstance of this case results in a conclusion that Petitioner complied with the rule. The Petition must provide reasonable notice to Patent Owner as to how the Murdock Provisional provides support for the subject matter relied upon. In this proceeding, we initially determined that the Petition offered only an insufficient conclusory statement as to the Murdock Provisional. Dec. 19–22. Nonetheless, pursuant to *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1355 (2018) and Patent Office practice, we instituted review of all grounds, including the grounds based on Murdock. *Id.* at 30.

We maintain our initial determination and disregard all the material improperly incorporated by reference for this issue, which is paragraphs 109–124, 254, 257, 261, 266, 270, 275, 280, 283, 288, 292, 295, 298, 301,

305, 308, 311, 316, 319, 324, 327, 338, 349, 355, and 367 of the Schmandt Declaration (Ex. 1023). We consider only the two conclusory and general sentences in the Petition with respect to why at least one claim of Murdock is supported by the disclosure of the Murdock Provisional and how the Murdock Provisional provides support for the subject matter relied upon.

Petitioner now attempts to remedy its deficient Petition in its later Reply briefing by shifting portions of the incorporated by reference material into the Reply brief. Pet. Reply 2–8. Petitioner contends that, in any event, Murdock still constitutes applicable prior art because Murdock predates the actual filing date of the '326 patent. Petitioner argues that it was incumbent on Patent Owner to establish entitlement to an earlier effective filing date, which Patent Owner did not do. *Id.* at 2. Petitioner contends that it is Patent Owner's burden to first establish that the claims of the '326 patent "are entitled to a filing date (constructive or otherwise) prior to the filing date of Murdock." *Id.* at 3 (internal quotations omitted) (quoting *Dynamic Drinkware*, 800 F.3d at 1380).

Patent Owner counters that the positions in Petitioner's Reply are "new argument[s] and [they] should not be considered." PO Sur-Reply 8. Patent Owner notes that "neither the Petition nor the Institution Decision challenged the '326 patent's effective filing date." PO Sur-Reply 9. Patent Owner views portions of the Reply related to Murdock as "a blatant attempt to circumvent not only the Board's rules on incorporation by reference but also the Panel's prior order that this material would be disregarded." *Id.* at 10.

Important to our analysis, the Petition states that: "the claimed invention was not new or novel as of the patent's effective filing date in June

2000." Pet. 1. Within a section of the Petition titled "Effective Filing Date of the '326 Patent," Petitioner affirmatively states: "The '326 Patent claims priority to a provisional application filed on June 8, 2000. Thus, the effective filing date of the claims of the '326 Patent is no earlier than June 8, 2000. Patent Owner does not assert any earlier priority date." *Id.* at 4. *See also* Ex. 1023 ¶ 241, ("the earliest effective filing date of the '326 Patent in June 2000"), ¶ 376 ("as of the June 2000 effective filing date of the '326 Patent"), ¶ 492 (same). Thus, Petitioner bases its arguments and evidence on an effective filing date of June of 2000 for the '362 patent. Petitioner does not, however, provide any notice to Patent Owner that any other date other than June 8, 2000 need be considered as the effective filing date.

We analogize Petitioner's assertion (June 8, 2000 priority date) [9] made in its Petition to assertions made by litigants in their pleadings. Specifically, the doctrine of judicial admissions recognizes that allegations made by litigants in their pleadings are binding in the case and on appeal. *See, e.g.*, *Purgess v. Sharrock*, 33 F.3d 134, 144 (2d Cir. 1994) ("A court can appropriately treat statements in briefs as binding judicial admissions of fact.") (citations omitted); *see also* Kenneth S. Broun et al., McCormick on Evidence § 254 (6th ed. 2009). Further, "'[a] patent owner . . . is undoubtedly entitled to notice of and a fair opportunity to meet the grounds of rejection,' based on due-process and APA guarantees." *In re NuVasive,*

[9] Whether a priority document contains sufficient disclosure under § 112, ¶ 1 is a question of law. *See Utter v. Hiraga*, 845 F.2d 993, 998 (Fed. Cir. 1988). However, "compliance with the written description aspect of that requirement is a question of fact." *Id.* We view the admission of a priority date as an assertion of fact that is dispositive of the ultimate legal determination.

Inc., 841 F.3d 966, 971 (Fed. Cir. 2016) (quoting *Belden Inc. v. Berk–Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015)). Accordingly, and pursuant to both the doctrine of judicial admissions and the APA's requirement for notice of and a fair opportunity to meet the grounds of rejection, Petitioner's adoption of an effective filing date in its Petition acts as notice to Patent Owner of the scope of the proceeding and as a binding admission unless otherwise withdrawn. Thus, the proceeding before us is distinct from *Dynamic Drinkware* cited by Petitioner.

Alternatively, we believe that Petitioner must first raise the issue of entitlement to any earlier effective filing date in order to require the Patent Owner to establish that the asserted claims in the '326 patent are entitled to the benefit of a filing date (constructive or otherwise). In an *inter partes* review, the burden is on the petitioner to show a reasonable likelihood that it would prevail on a ground of unpatentability. 35 U.S.C. § 314(a). With respect to entitlement to any earlier effective filing date, however, a patent owner is not presumed to be entitled to the earlier filing dates of ancestral applications that do not share the same disclosure, such as in a CIP situation. *Focal Therapeutics, Inc. v. SenoRX, Inc.*, Case IPR2014-00116, slip op. at 9–10 (PTAB Apr. 22, 2014) (Paper 8). However, a petitioner first must raise the issue by at least identifying the features, claims, and ancestral applications allegedly lacking § 112 support for the claims based on the identified features. *Id.* at 10. *See also Huawei Technologies Co., Ltd. v. Samsung Electronics Co. Ltd.*, Case IPR2017-01980, slip op. 9 (PTAB Feb. 27, 2018) (Paper 9) ("Nevertheless, Petitioner first must raise the issue of whether Patent Owner is entitled to its effective filing date by 'identifying, *specifically*, the features, claims, and ancestral applications allegedly lacking

written description support for the claims based on the identified features.'" (quoting *Lupin Ltd. v. Pozen, Inc*., Case IPR2015-01775, slip op. at 10–11 (PTAB Mar. 1, 2016)). If Petitioner makes such an allegation in its Petition, then the patent owner must make a sufficient showing[10] of entitlement to earlier filing date(s), in a manner that is commensurate in scope with the specific points and contentions raised by the petitioner. *See id*.

In the proceeding before us, the Petitioner states[11] that "the effective filing date of the claims of the '326 Patent is no earlier than June 8, 2000." Pet. 4. Petitioner never raised any doubt as to this June 2000 priority date for the '326 patent. Thus, in this circumstance, the effective filing date of the '326 patent is June 8, 2000, without any additional showing from Patent Owner. For Murdock to be applicable prior art, Petitioner must prove

---

[10] We observe that even an applicant for patent before the United States Patent Office is not required to explain how every element of every claim is supported by each ancestral application in the priority chain during the examination process. Typically, the applicant makes an accounting in that regard after the Examiner indicates to the applicant what claim element is not supported by which ancestral application, and the showing is limited to the claim element or elements identified by the Examiner.

[11] We have considered Petitioner's arguments made during oral hearing that "we did not adopt the date [June 8, 2000]." Tr. 26:1–25. First, we disagree with this argument and view the clear statements in the Petition as judicial admissions. Second, even ignoring the admissions, the issue is whether Petitioner identified anything for Patent Owner to address. Patent Owner is not expected to explain, *sua sponte*, how each element of every claim has support through each application in the priority chain. *Focal Therapeutics*, *supra*. In its Reply, Petitioner has not pointed to anything in the Petition that amounts to a belief by Petitioner that an element, feature, or limitation of any challenged claim is not supported by any ancestral application in the priority chain of the priority chain of the '326 patent. *See generally* Pet. Reply.

Murdock is entitled to the filing date of its provisional application—a burden that Petitioner failed to meet in the Petition.

In its Reply, Petitioner now attempts to remedy its defective Petition. *See* Pet. Reply 2–9. Specifically, Petitioner presents new detailed argument over four pages as to how and why claim 1 of Murdock is supported by the Murdock Provisional. *See id.* at 4–7. To support its new arguments made for the first time in Reply, the briefing cites to portions of the Schmandt Declaration that we expressly excluded in our Decision on Institution for violation of our rules on incorporation by reference. Dec. 21. While we are bound by *SAS* to institute trial on all claims, we are not required to allow a petitioner to fix glaring deficiencies in the petition for grounds that we would otherwise not institute. This is so because Petitioner may not submit new evidence or argument in reply that it should have presented earlier. Further, after we declined to consider the 39 paragraphs in Schmandt's Declaration at the institution phase, if we were now to consider that same evidence as if it were not excluded, we would fail to provide Patent Owner "notice of and a fair opportunity to meet the grounds of rejection." *Belden Inc.*, 805 F.3d at 1080. Petitioner cannot present its case in chief in Reply, and Patent Owner should not be forced to present its case in response for the first time in a Sur-Reply. Accordingly, we decline to consider the new arguments and evidence submitted in Petitioner's Reply.

Based on the above findings and determinations, Petitioner has not shown that Murdock is entitled to the benefit of priority of the filing date of the Murdock Provisional. Hence, Petitioner has not shown that Murdock is prior art to the '326 patent. Because each of the Murdock asserted grounds relies on Murdock in whole or in part, we determine that Petitioner has not

proven by a preponderance of the evidence the (1) unpatentability of claims 1–7 and 12–17 over Murdock, (2) unpatentability of claims 8, 9, 18, and 19 over Murdock and either Banker or Gordon, or (3) unpatentability of claims 11 and 21 over Murdock and either Martin or Blahut.

III. MOTION TO EXCLUDE

Petitioner filed a Motion to Exclude evidence (Paper 40), which Patent Owner opposed (Paper 46), which Petitioner replied (Paper 49). In its Motion to Exclude, Petitioner seeks to exclude inadmissible evidence submitted by Patent Owner in Exhibits 2001, 2002, 2003, 2009, 2010, 2011, 2015, 2021, 2024, and 2032. *See* Paper 40, 1.

Exhibits 2001, 2002, and 2003 – Business Plans and Presentations

Exhibits 2001, 2002, and 2003 relate to a business plan (Ex. 2001), corporate summary (Ex. 2002), and a presentation (Ex. 2003). Petitioner argues these exhibits should be excluded as inadmissible hearsay under FRE 801–803. *Id.* at 2.

We deny Petitioner's request to exclude these exhibits. Patent Owner contends, and we agree, that each of these three exhibits meets the hearsay exception for business records. Paper 46, 4 (citing FRE 803(6)). Notably, we have not cited these specific exhibits in our Final Decision, although each has been considered in our analysis.

Exhibits 2009 and 2021 – Press Releases

Exhibits 2009 and 2021 all purported press releases. Petitioner argues these exhibits should be excluded as inadmissible hearsay under FRE 801–

803. Patent Owner cites Exhibit 2009 to show that it actually received the award described in the draft press release. PO Resp. 29.

We deny Petitioner's request to exclude Ex. 2009. Patent Owner contends, and we agree, that this exhibit meets the hearsay exception for business records. Paper 46, 5 (citing FRE 803(6)). Notably, we have weighed Petitioner's concerns in our analysis above. For example, by failing to produce the actual award for which Exhibit 2009 describes, including the criteria for the award or linking the award to the innovative features of the invention, we have not given significant weight to Exhibit 2009 as evidence of industry praise.

Exhibit 2021 is a news article containing a press release related to AgileTV obtaining investor funding. Patent Owner claims that the document contains non-hearsay, relevant evidence. Paper 46, 5–6. Because the fact that AgileTV obtained investor funding is not disputed, and because we do not rely on Exhibit 2021 in our final decision, we deny Petitioner's motion to exclude Exhibit 2021 as moot.

Exhibit 2010 – Market Research Reports

Exhibit 2010 is an internal AgileTV email attaching documents "summarizing various aspects of usability and market research" regarding its television product. Petitioner contends that the email and attachments are hearsay. Paper 40, 4.

Patent Owner responds that "the email and its attachments fall within the business records exception to hearsay overcoming Comcast's objection. Fed. R. Evid. 803(6)." Paper 46, 6.

We deny Petitioner's request to exclude Ex. 2010. This exhibit meets

the hearsay exception for business records, whereas Patent Owner established a sufficient foundation for its admissibility under the exception.

Exhibits 2011 and 2015 – Internal AgileTV Emails Regarding Comcast

Exhibit 2011 is an email from AgileTV's then-CEO Paul Cook to "All Employees." Mr. Cook's email forwards an email from Mr. Chaiken purporting to recount statements made by certain Comcast employees. Ex. 2011, 1. Exhibit 2011 is proffered by Patent Owner to show Comcast's interest in the AgileTV product. We do not believe an email summarizing alleged statements by numerous Comcast employees to fall within the business records exception to the hearsay rule. Because the only relevant purpose of this exhibit is for the content of the third party statements, we agree with Petitioner that Exhibit 2011 should be excluded for the hearsay contained therein.

Exhibit 2015 is an email from Mr. Cook to "All Employees," and the "Weekly Update" email purports to recount conversations with certain Comcast employees. Ex. 2015, 1. Patent Owner cites this exhibit to support its contention that "Comcast expressed an intent to invest in AgileTV and deploy the AgileTV solution for Comcast's 21 million subscribers." PO Resp. 31–32. This email appears to be a regular weekly email update made in the normal course of business as conveyed by Mr. Cook. Accordingly, we determine Exhibit 2015 falls within the exception to the hearsay rule for normally recorded business documents.

Ex. 2024 – Article Regarding Comcast

Exhibit 2024 is an online article entitled "A Voice in the Navigation

Wilderness." Patent Owner cites the article to support its assertion that "the AgileTV solution was successfully deployed and tested in the Comcast system." Paper 22, 34. According to Petitioner, "the article (which does not identify an author) primarily discusses AgileTV and its then-contemplated trial with a small cable company called Sunflower Broadband." Paper 40, 5–6. Petitioner complains that the statements related to Promptu being in the field "is not attributed to anyone at Comcast—indeed, no Comcast representatives are mentioned or quoted in the article." *Id.* at 6. Thus, according to Petitioner, "[t]he article is an out-of-court statement offered to prove the truth of the matter asserted therein." *Id.*

Because we do not rely on Exhibit 2024 in our Final Decision, we deny Petitioner's request to exclude this exhibit as moot.

Exhibit 2032 – Portions of the Chaiken Declaration

Exhibit 2032 is the declaration of Patent Owner's former CTO David Chaiken. Ex. 2032 ¶ 3. Petitioner contends that in Paragraph 34, Mr. Chaiken testifies that "acquaintances of mine . . . told me they confused Comcast's functionality with the AgileTV solution." This statement is being used to prove copying by Petitioner – the truth of the matter asserted. Paper 46, 13. We agree this is impermissible hearsay that should be excluded. Further, this is not the type of information an expert witness would normally rely upon (uncited sources conveying speculative information) in forming an opinion.

IV. SUMMARY

For the foregoing reasons, we determine that Petitioner has proven by a preponderance of the evidence that claims 1–7 and 12–17 would have been obvious over Julia.

Petitioner establishes that claims 8, 9, 18, and 19 would have been obvious over Julia and either Banker or Gordon.

Petitioner has proven that claims 11 and 21 would have been obvious over Julia and either Martin or Blahut.

Petitioner's Motion to Exclude (Paper 40) is granted-in-part and denied-in-part. Specifically, the hearsay statements in Exhibit 2032 ¶ 34 are excluded; the request to exclude Exhibit 2011 is granted; and, the request to exclude Exhibits 2024, 2015, 2010, 2021, 2009, 2001, 2002, and 2003 is denied.

V. ORDER

Accordingly, it is:

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1–9, 11–19, and 21 are unpatentable;

FURTHER ORDERED that Petitioner's Motion to Exclude (Paper 40) is *GRANTED-IN-PART* and *DENIED-IN-PART*; and

FURTHER ORDERED that because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

For PETITIONER:

James Day
Daniel Callaway
FARELLA BRAUN + MARTEL LLP
jday@fbm.com
dcallaway@fbm.com

Leo Lam
KEKER, VAN NEST & PETERS LLP
llam@kvn.com

For PATENT OWNER:

Joshua Goldberg
Jacob Schroeder
Cory Bell
Daniel Klodowski
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP
joshua.goldberg@finnegan.com
jacob.schroeder@finnegan.com
cory.bell@finnegan.com
daniel.klodowski@finnegan.com