

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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COMCAST CABLE COMMUNICATIONS, LLC,  
Petitioner,

v.

PROMPTU SYSTEMS CORPORATION,  
Patent Owner.

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Case No. IPR2018-00342  
Patent No. RE44,326 E

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**PATENT OWNER'S NOTICE OF APPEAL**

Pursuant to 35 U.S.C. §§ 141(c) and 319 and 37 C.F.R. § 90.2(a), Patent Owner Promptu Systems Corporation hereby provides notice that it appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision entered July 18, 2019 (Paper No. 54), and from all underlying orders, decisions, rulings, and opinions relating to U.S. Patent No. RE44,326 set forth in *Inter Partes* Review IPR2018-00342.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), the issues on appeal include, but are not limited to:

- the Board's improper claim construction analysis and determinations for claims 1-9, 11-19, and 21, including, without limitation, the Board's construction of the phrase "network path";
- the Board's improper obviousness analysis and determination that claims 1-7 and 12-17 are unpatentable under 35 U.S.C. § 103 based on Houser;
- the Board's improper obviousness analysis and determination that claims 8, 9, 18, and 19 are unpatentable under 35 U.S.C. § 103 based on Houser and either Banker or Gordon;
- the Board's improper obviousness analysis and determination that claims 11 and 21 are unpatentable under 35 U.S.C. § 103 based on Houser and either Martin or Blahut; and
- any other issues decided adversely to Patent Owner in an order, decision, ruling, or opinion underlying or supporting the Board's final written decision.

A copy of the decision being appealed is attached to this Notice.

Pursuant to 35 U.S.C. § 142 and 37 C.F.R. § 90.2(a), this Notice is being filed with the Director of the United States Patent and Trademark Office, and a copy of this Notice is being concurrently filed with the Patent Trial and Appeal

Board. In addition, a copy of this Notice and the required docketing fees are being filed with the Clerk's Office for the United States Court of Appeals for the Federal Circuit via CM/ECF.

Respectfully submitted,

Date: September 6, 2019

/Joshua L. Goldberg/  
Joshua L. Goldberg, Reg. No. 59,369

**CERTIFICATE OF SERVICE AND FILING**

I hereby certify that on September 6, 2019, in addition to being filed and served electronically through the Board's E2E System, this PATENT OWNER'S NOTICE OF APPEAL was filed and served with the Director of the United States Patent and Trademark Office by hand delivery at the following address:

Office of the General Counsel  
U.S. Patent and Trademark Office  
Madison Building East, Room 10B20  
600 Dulany Street  
Alexandria, Virginia 22314

I also hereby certify that on September 6, 2019, this PATENT OWNER'S NOTICE OF APPEAL and the filing fee, were filed with the Clerk's Office of the United States Court of Appeals for the Federal Circuit via the CM/ECF system.

I also hereby certify that on September 6, 2019, this PATENT OWNER'S NOTICE OF APPEAL was served by electronic mail on counsel for the Petitioner as follows:

James L. Day  
jday@fbm.com

Daniel Callaway  
dcallaway@fbm.com

calendar@fbm.com

Leo L. Lam  
llam@keker.com

Case IPR2018-00342  
Patent No. RE44,326  
Patent Owner's Notice of Appeal

Dated: September 6, 2019

By: /Lisa C. Hines/

Lisa C. Hines  
Litigation Legal Assistant

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, LLP

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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COMCAST CABLE COMMUNICATIONS, LLC,  
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PROMPTU SYSTEMS CORPORATION,  
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Case IPR2018-00342  
Patent RE44,326 E

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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 10,<sup>1</sup> “Pet.”) requesting an *inter partes* review 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 12, “Prelim. Resp.”).

Pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we issued an Initial Decision (Paper 13, “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. 28. *See also* U.S. Patent and Trademark Office, *Guidance on the Impact of SAS on AIA Trial Proceedings* (Apr. 26, 2018) (“SAS Guidance”).<sup>2</sup>

After institution of trial, Patent Owner filed a Patent Owner Response (Paper 22, “PO Resp.”), to which Petitioner replied (Paper 31, “Pet. Reply”). Patent Owner also filed a Sur-Reply (Paper 39, “PO Sur-Reply”).

Petitioner filed a Motion to Exclude evidence (Paper 38), which Patent Owner opposed (Paper 44), which Petitioner replied (Paper 47). 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 52 (“Tr.”).

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<sup>1</sup> On April 12, 2018, we granted Petitioner’s Unopposed Motion to Correct Petition (Paper 8). Paper 9. Our citations and quotations are to the Corrected Petition – Paper 10.

<sup>2</sup> 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* IPR2018-00343. The final decision in IPR2018-00343 is being issued concurrently with this decision. The Board also instituted trial of the '326 patent in a covered business method patent 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.

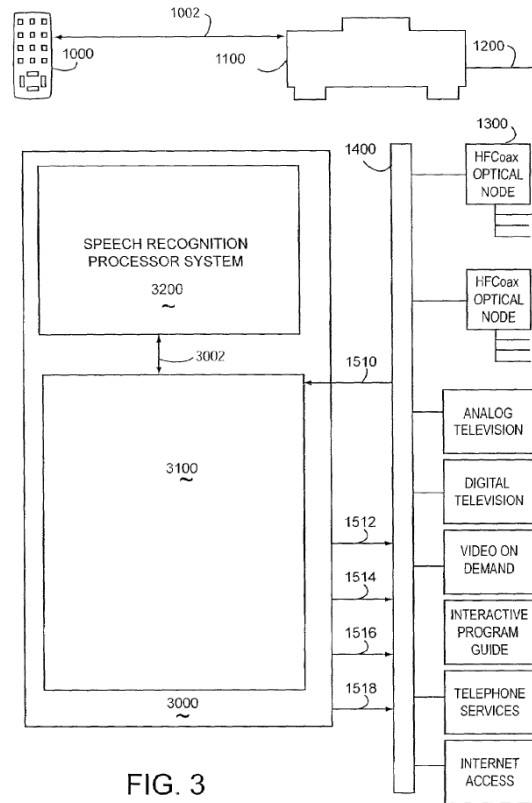


FIG. 3

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:

<b>Exhibit</b>	<b>Reference</b>
1012	United States Patent No. 5,774,859, issued June 30, 1998 (“Houser”).
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. Houser (Ex. 1012)*

Houser describes a “system for controlling a device such as a television and for controlling access to broadcast information such as video, audio, and/or text information.” Ex. 1012, Abstract. Figure 1 of Houser is reproduced below.

**FIG. 1**

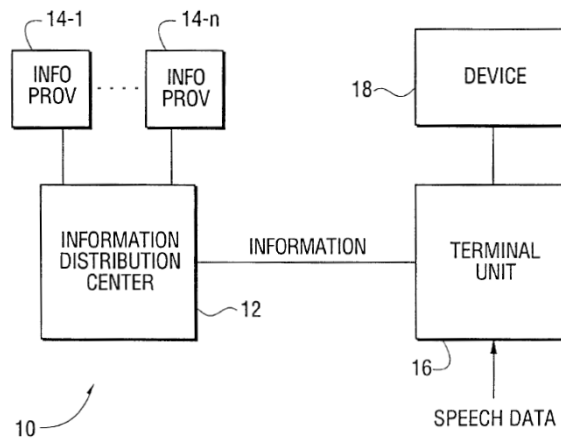
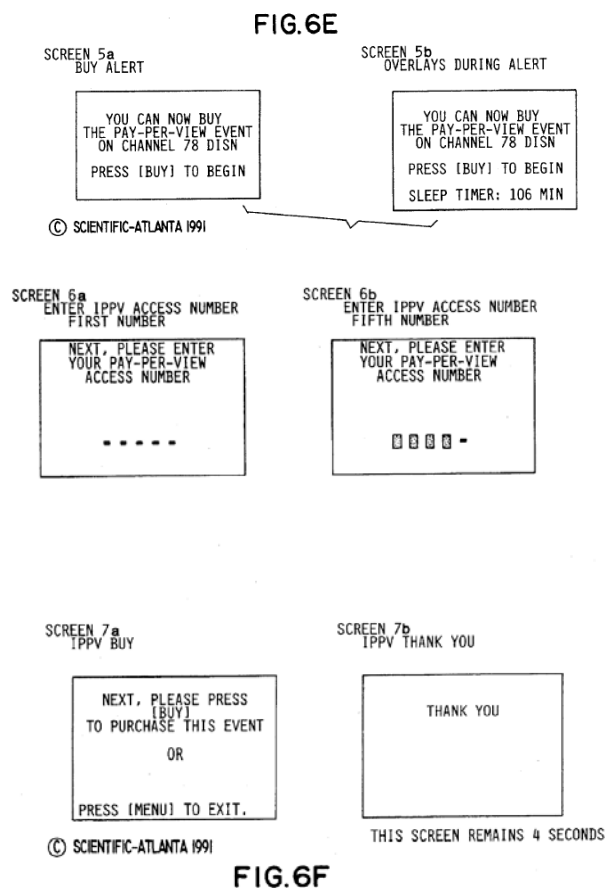


Figure 1 of Houser “is a generalized block diagram of an information system in accordance with” the claimed invention. Ex. 1012, 4:60–61. A remote control, which includes a microphone, captures “sounds and words spoken by a user” and transmits the sound data signals to terminal unit 16. *Id.* at 6:33–7:24. “Terminal unit 16 includes a processor for executing a speech recognition algorithm . . . to recognize, for example, commands for controlling device 18 or commands for accessing information transmitted by information distribution center 12.” *Id.* at 5:62–67. The information is then retrieved from “information distribution center 12[,] which receives information from one or more remotely located information providers 14-1, . . . 14-n[,] and supplies or broadcasts this information to a terminal unit 16.” *Id.* at 5:39–44. “Terminal unit 16 then [] generates a command for controlling device 18.” *Id.* at 5:67–6:2. “Device 18 may be any device [that] is capable of being operated in response to user supplied commands.” *Id.* at 7:27–29.

2. *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.6F**

Figures 6E and 6F 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 discusses how customers can be billed for using the subscription television terminal. *See id.* at 7:58–8:3, 12:1–15.

3. *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.

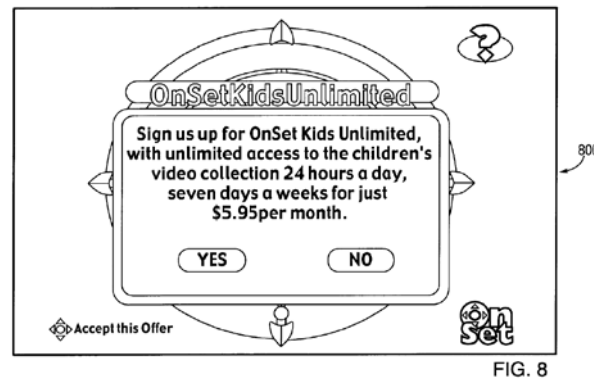


Figure 8 of Gordon shows “a menu that allows a consumer to subscribe to a selected subscription-on-demand service.” *Id.* at 3:40–41. According to Gordon, “through manipulation of the menus, the consumer [can] select[] a programming package [and] become[] a subscriber to that package and [will be] billed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

4. *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 . . . 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, [57], Abstract. Petitioner relies on Martin for its teaching of remote control devices that transmit identifiers. *See* Pet. 45 (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.

5. *Blahut (Ex. 1019)*

Blahut is titled “Restricted Access Remote Control Unit,” and it describes a “device for restricting access to certain programs.” Exhibit 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. *Id.* at 1:8–11. Petitioner relies on Blahut for its teaching of remote control devices that transmit identifiers. *See* Pet. 45 (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, 14–67.

<b>Asserted Grounds</b>		
<b>Reference(s)</b>	<b>Basis<sup>3</sup></b>	<b>Claims Challenged</b>
Houser	§ 103(a)	1–7 and 12–17 <sup>4</sup>
Houser and Banker or Gordon	§ 103(a)	8, 9, 18, and 19
Houser and Martin or Blahut	§ 103(a)	11 and 21

We instituted *inter partes* review of claims 1–9, 11–19, and 21 on all grounds set forth in the above table for these claims. Dec. 28.

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<sup>3</sup> 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.

<sup>4</sup> The Petition states at page 3 that “[a]ll challenged claims (i.e., claims 1-9, 11-19, and 21) are unpatentable as obvious over Houser (Ex. 1012) alone,” but at page 18, and thereafter, the Petition only challenges claims 1–7 and 12–17 as obvious based on Houser alone. We read the Petition as challenging only claims 1–7 and 12–17 based on Houser alone. This is the same position taken in the Decision instituting trial. Dec. 12.

## 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. 8–9 (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 Houser, a person of ordinary skill in the art would have familiarity with decreasing the complexity of user interfaces by “add[ing] a speech recognition interface to a subscriber terminal unit in an information system for implementing spoken control of electronic devices at the subscriber location.” *See Ex. 1012*, 1:59–2:16, 2:19–23.

#### *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,<sup>5</sup> 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. 9–11. 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 11. Patent Owner notes that this was a “compromise” definition agreed to by the parties in district court litigation. *Id.* (citing Ex. 2039, 23). 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 3 (“Nevertheless, even under Patent

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<sup>5</sup> 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.

Owner’s proposed construction, the prior art discloses the same ‘first network path’ and ‘second network path.’ Schmandt Reply Decl. ¶ 5.”).

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 15. 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 2 (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. ¶ 5. 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 Houser. *Id.*; Schmandt Decl. ¶¶ 136, 140–145 (Ex. 1023).

*Id.* at 3. 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 Houser’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.” *Id.* at 15 (citing Ex. 2034); 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) and wireless connections (e.g., signals traveling through air). Ex. 1033 ¶ 7; *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 ¶ 14. 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.* ¶ 16.

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*, 550 U.S. at 418. 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 Houser Alone*

Petitioner contends that claims 1–7 and 12–17 are unpatentable over Houser under 35 U.S.C. § 103(a), relying on the supporting testimony of Mr. Schmandt. Pet. 18–23 (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 unpatentable 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 the claims, Petitioner submits that “Houser discloses a method for speech directed information delivery.” Pet. 18 (quoting

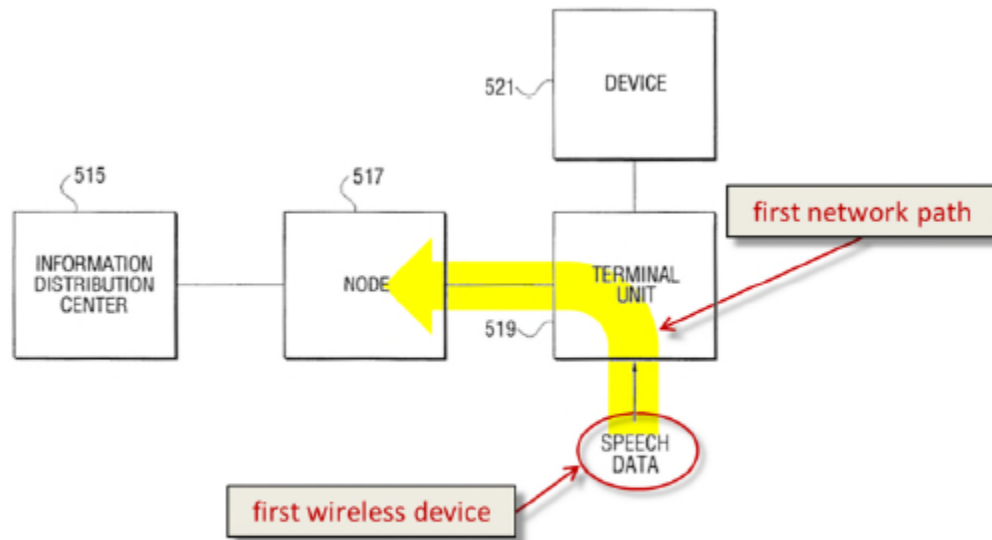
Ex. 1012, Abstract, 1:6–11, 2:19–23). Petitioner quotes Houser’s disclosure of “[t]he present invention adds a *speech recognition interface* to a subscriber terminal unit in an information system for implementing spoken control of electronic devices at the subscriber location and of *access to information transmitted to the subscriber terminal unit.*” *Id.* (quoting with emphasis added, Ex. 1012, 2:19–23).

Petitioner identifies claim 1’s “receiving speech information at a first device, wherein said first device is a wireless device,” as being taught by Houser’s “disclos[ure of] a wireless remote control with a microphone for receiving spoken commands.” *Id.* (quoting Ex. 1012, 4:16–25). According to Petitioner, “Houser’s remote control constitutes the ‘first device’ recited in claim 1,” and the remote control includes a transmitter for transmitting the spoken sounds or words to subscriber terminal unit using radio frequency transmission. *Id.* at 19.

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 “Houser discloses an embodiment in which voice recognition processing is performed at a remote network node (e.g., a remote server),” and within “this embodiment, the user’s speech commands are transmitted from the remote control (‘first wireless device’) to the terminal unit and then to ‘node 517’ for processing by speech recognition circuitry.” Pet. 20 (citing Ex. 1012, 33:49–67, Fig. 15; Ex. 1023 ¶¶ 136–137). Relying on the testimony of Mr. Schmandt, Petitioner reasons that “[a] person of ordinary skill in the art would understand that the extensive discussion of speech recognition in Houser would apply equally to speech recognition carried out at the remote node (i.e., node 517),” and, as such, “the speech

recognition circuitry at node 517 constitutes a ‘speech recognition engine’ as recited in the claim.” *Id.* (citing Ex. 1023 ¶ 137).

To illustrate this position, Petitioner submits an annotated version of Houser’s Figure 15 (*id.* at 21), which we reproduce below:



**Houser Fig. 15 (annotated)**

Petitioner’s annotated Figure 15 (Pet. 21) depicts a first wireless device and first network path. Petitioner identifies the network path disclosed by Houser from the remote control through the terminal unit and then to node 517 (with the “speech recognition engine”) as teaching the claimed “first network path.” Pet. 21 (citing Ex. 1023 ¶ 136). Mr. Schmandt identifies the first network path as depicted above and the claimed speech recognition engine as the speech recognition circuitry described in Houser. Ex. 1023 ¶ 136 (citing Ex. 1012, 33:49–67).

In its Reply, Petitioner argues again that Houser discloses a first network path because “the user’s speech commands are transmitted from the remote control (‘first wireless device’) to the terminal unit and then to ‘node

517' for processing by speech recognition circuitry.” Pet. Reply 5 (citing Ex. 1012, 33:56–61). Petitioner disagrees with Patent Owner’s assessment that the transmission source is terminal 519, not the remote. *Id.* at 6. Instead, according to Petitioner, “Houser discloses a ‘remote control’ that includes a ‘conventional wireless microphone’ and a ‘transmitter’ for transmitting spoken words to the ‘subscriber terminal unit.’ Houser at 15:19-24, Fig. 4 (illustrating the voice remote control transmitting to the set-top box).” *Id.* Petitioner also points to a description in Houser “in which ‘[s]ound or spoken words are received by a subscriber terminal unit’ and then ‘transmitted from subscriber terminal unit 519 to node 517 which includes speech recognition circuitry.’” *Id.* (citing Ex. 1012, 33:55–61, Fig. 15). “Thus,” according to Petitioner, “the remote control is the source of the voice data and node 517 is the destination,” and “[t]he path between them . . . is the ‘first network path’ even under Patent Owner’s proposed construction.” *Id.*

Petitioner next argues in Reply that Houser’s wireless remote 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 7. 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 excludes any device that does not both transmit and receive messages.” *Id.* Petitioner relies on the testimony of Mr. Schmandt, who

testifies “that a network includes nodes that are endpoints,” such as “the television remote control and the television.” Ex. 1033 ¶ 14. Mr. Schmandt similarly testifies that

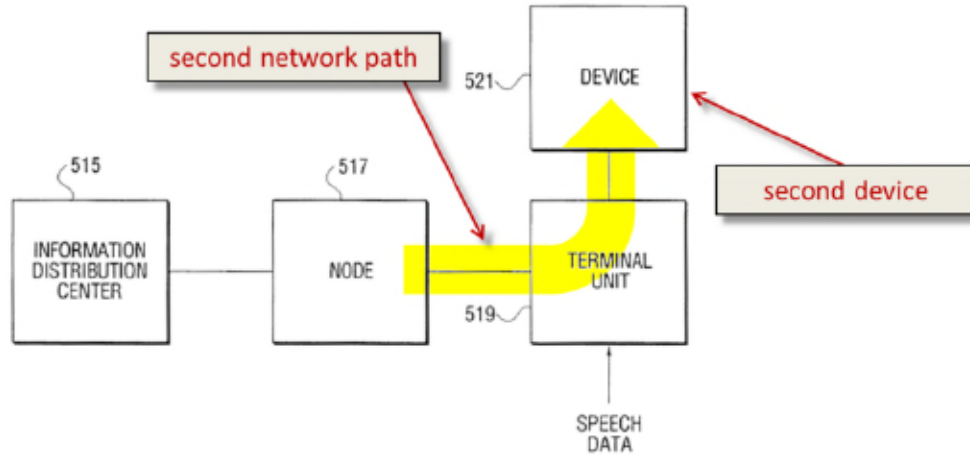
I certainly do not understand, and one of ordinary skill in the art would not understand, that a node is limited to a device that both sends and receives messages, and I did not interpret the term “network path” in the challenged claims to exclude devices that cannot both send and receive messages. It 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.* ¶ 16; Pet. Reply 8. 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 set-top box can be bi-directional or ‘strictly from remote control 1000 to set-top box or appliance 1100.’” Pet. Reply 8 (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.*

As for claim 1’s additional requirement of “recognizing said speech information and effecting information delivery to a second device via a second network path,” Petitioner identifies Houser’s recognition of speech commands using speech recognition circuitry (“speech recognition engine”) at network node 517. Pet. 21 (quoting Ex. 1012, 33:56–61). Petitioner

identifies “controlled device 521” as the claimed second device, and further provides annotated Figure 15 below to identify the second network path.



**Houser Fig. 15 (annotated)**

Petitioner’s annotated Figure 15 (Pet. 22) depicts a highlighted second network path leading to device 521, which Petitioner identifies as the claimed second device. Relying on the testimony of Mr. Schmandt, Petitioner identifies the second network path as the path from node 517 through terminal unit 519 to controlled device 521. Pet. 22 (citing Ex. 1023 ¶ 140). Mr. Schmandt testifies that a person of ordinary skill in the art would have recognized that “Houser discloses transmitting commands (‘effecting information delivery’) from node 517 to controlled device 521 (‘second device’)” because Houser describes “that once the speech recognition circuitry generates ‘commands according to the sounds or spoken words,’ [n]ode 517 transmits the command(s) to controlled device 521 via subscriber terminal unit 519 to controlled device 521.” *Id.*; Ex. 1023 ¶ 140 (quoting Ex. 1012, 33:56–53).

In its Reply, Petitioner again stresses that nothing prevents Houser’s device 521 from being the claimed second device because unidirectional

devices are not excluded from the proper definition of a network. Pet. Reply 10. Petitioner reiterates that “Patent Owner’s unreasonably narrow definition of ‘network’ is not consistent with the understanding of a person of ordinary skill in the art and is contradicted by the ’326 Patent and Patent Owner’s own evidence.” *Id.* (citing Ex. 1033 ¶¶ 12–16).

Petitioner, and Mr. Schmandt, alternatively contend that “the claimed second device could also be terminal unit 519,” wherein “the second network path would be the path from node 517 to terminal unit 519,” “because node 517 transmits the recognized commands to device 521 ‘via subscriber terminal unit 519,’” as disclosed by Houser. Ex. 1023 ¶ 141. Mr. Schmandt also testifies that “the second device could be the combination of the subscriber terminal unit and the device (e.g., set-top box and television), in which case the second network path would be the path from node 517 to the combination of terminal unit 519 and controlled device 521.” *Id.*

Petitioner also contends that in addition to the “second network path” examples illustrated above, an alternative “second network path” exists in Houser from “information distribution center 515” (source) to “device 521” (destination). Pet. 22–23; Pet. Reply 10 (citing Ex. 1023 ¶¶ 142–143; Ex. 1033 ¶ 5). Petitioner focuses on the claim language, noting that the challenged claims require “effecting information delivery *to a second device* via a second network path.” Pet. Reply 10 (quoting Ex. 1001, 50:43–44 (claim 1), 52:48–49 (claim 12)). Thus, according to Petitioner, “[e]ven if all channels are broadcast from the information distribution center, it is the user’s voice command that causes the subscriber unit to tune to a particular channel thereby ‘effecting information delivery to a second device’ such as a



television or video-recorder.” *Id.* (citing Ex. 1023 ¶¶ 143–144). Petitioner further explains that Houser “states that ‘pay-per-view programming’ can be requested by voice command—again, ‘effecting information delivery to a second device’ (e.g., television).” *Id.* at 10–11 (quoting Ex. 1012, 32:12–36).

Claim 12 is similar in scope to claim 1, in that claim 12 requires “[a] method for speech directed information delivery,” and an identical “receiving speech” step. *See* Pet. 29; 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.” Pet. 29; Ex. 1001, 50:29–54. Petitioner relies on Houser’s remote node embodiment, wherein “the voice command is transmitted to node 517 for speech recognition processing.” Pet. 29 (citing Ex. 1012, 33:56–61, 5:62–67, 15:7–18, 15:29–34, 15:42–46, 16:47–50, 16:58–17:7, 17:8–15). “Thus,” according to Petitioner, “Houser discloses ‘transferring said speech information in an unrecognized state.’” *Id.* (citing Ex. 1023 ¶ 123).

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 30. Petitioner relies on Houser’s disclosure of a television for the “second device,” or controlled device. *Id.* (citing Ex. 1012, 7:30–33). 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 subscriber television network of Houser, was ‘capable of

displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio.” *Id.* (quoting Ex. 1023 ¶ 178). Patent Owner does not challenge these unique limitations found in claim 12, and we find persuasive Petitioner’s argument and evidence for these claim 12 limitations.

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. PO Resp. 12–19. In particular, Patent Owner first argues that elements of Petitioner’s proposed first and second network paths “are outside of the network.” *Id.* at 12. More specifically, Patent Owner contends that Houser’s “remote” (first wireless device) is actually “outside the network” and Petitioner fails to identify any “disclosure of the remote being inside the network.” *Id.* at 12–13. Patent Owner further alleges that “Houser discloses that the transmission source is the terminal 519, not the remote.” *Id.* at 13 (citing Ex. 1012, 33:56–57). Thus, Patent Owner argues that Houser’s physical route for transmitting data from a source to a destination, “is the physical route connecting terminal unit 519 (the source) to node 517 (the destination).” *Id.*

In its Sur-Reply, Patent Owner further argues that the remote and controlled device 521 of Houser are not part of a network path because these devices are not nodes on a communication network. PO Sur-Reply 4–6. Patent Owner analogizes that although 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. *Id.* at 4. According to Patent

Owner, “the terminal unit itself performs the speech recognition,” and “[t]hus, the audio signal from the remote never goes beyond the terminal unit and onto the network.” *Id.* at 5 (citing Ex. 1012, 15:41–46). Patent Owner further contends, “in Houser, it is the subscriber terminal unit, not the remote, that is the endpoint on the network.” *Id.* at 6.

Second, Patent Owner argues that the device 521 is outside the network and thus not part of a second network path as required by claims 1 and 12. PO Resp. 13–14 (“Petitioner points to no disclosure of element 521 (e.g., the television) being included on the network. Indeed, Houser discloses that node 517 has connections with terminal units like 519, not the device 521.”) (internal citations omitted). Patent Owner contends that Houser’s physical route for transmitting data from a source to a destination, “is the physical route connecting node 517 (the source) to terminal unit 519 (the destination).” *Id.* at 14. Patent Owner contends that a network path must be a path or physical route of travel between two nodes within a network as Petitioner purportedly advocated in claim construction briefing before the district court. *Id.* at 14–15. According to Patent Owner, “Houser only discloses that terminal unit 519, not the wireless remote or device 521, is connected to node 517 and can receive messages and put messages on the network.” *Id.* at 15 (citing Ex. 1012, 33:60–67. In its Sur-Reply, Patent Owner contends “that the terminal unit 519 is the endpoint of the network.” PO Sur-Reply 8.

Patent Owner additionally argues that “the petition fails to establish the wireless remote is a node on the network,” because in the description of the Figure 4 embodiment, “the remote only sends the analog signal, which the terminal unit must then convert to digital.” PO Resp. 15 (citing

Ex. 1012, 15:19–29). “[Because] the remote only has transmission and not reception capabilities,” Patent Owner argues that “it clearly cannot ‘receive[] messages from the network and . . . put messages on the network,’ Ex. 2034 at 32:17-19, and thus cannot be a node under Schmandt’s definition.”

PO Resp. 15. With respect to device 521, Patent Owner makes a similar argument that device 521 is not “a node on the network” because device 521 does not receive and put messages on the network. *Id.* at 16.

Patent Owner further argues that Houser does not disclose using recognized speech to deliver information from the information distribution center to the controlled device because “Houser” instead “discloses changing which *broadcast* content the controlled device is tuned to.” PO Resp. 18. Patent Owner similarly argues that “all broadcast content is available to all subscriber terminal units” and that “nothing done by the subscriber units in any way impacts what content the information distribution center delivers.” *Id.* at 19. Thus, Patent Owner concludes that “the petition fails to establish that ‘Houser also discloses using the recognized speech to deliver information from the information distribution center to the controlled device.’” *Id.*

### *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. 23. 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 25 (citing Ex. 2032 ¶¶ 8–16). 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. 26.

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 28. 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. 29. 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. 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 “[t]he AgileTV system was widely praised within the industry because it provided advantages that previously were unavailable.” PO Resp. 30 (emphasis omitted) (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. 30 (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 31 (citing Ex. 2032 ¶ 24; Ex. 2020, 7).

Patent Owner also alleges that Comcast praised the AgileTV system. PO Resp. 31. 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 32 (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 33 (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 33–34. 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 34 (citing Ex. 2032 ¶¶ 31–32; Exs. 2026–2029).

Patent Owner claims that Comcast copied the claimed invention. 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. PO Resp. 34 (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 34–35. Patent Owner alleges that “Comcast’s X1 System practices the invention claimed in the ’326 patent.” *Id.* at 35 (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. 32–33 (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 the necessary nexus between its secondary considerations evidence and any allegedly novel aspect of the challenged claims.” Pet. Reply 13. Regardless, Petitioner contends the evidence is “weak” and therefore “cannot overcome Petitioner’s ‘strong *prima facie* showing’ of



obviousness.” *Id.* (citation omitted).

Petitioner disagrees that a nexus should be presumed because Patent Owner has not established that the AgileTV system embodies the claimed invention. *Id.* at 14. 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 “[h]e makes no attempt to show that the elements of the challenged claims were embodied in the AgileTV system or that it was ‘coextensive’ with the challenged claims.” Pet. Reply 14, n.5 (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 16. Specifically, Petitioner argues:

Patent Owner asserts that the claimed invention of the ’326 Patent was “[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 26. It makes no attempt to tie the secondary considerations evidence to these purportedly novel aspects of the challenged claims.

*Id.* Petitioner also contends that the purported invention was known in the prior art, and Patent Owner fails to establish a nexus between its secondary considerations evidence and any novel aspect of the claimed invention. *Id.*

at 16–17.

Petitioner next challenges the contention that the AgileTV system satisfied a long-felt but unresolved need. Pet. Reply 17. 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.* at 18. 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 alleges 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 system in Comcast’s own network because “Comcast rejected Patent Owner’s product.” *Id.* (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 18–20. 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 in this proceeding already taught the same features. *Id.* at 19. Likewise, Petitioner contends that Comcast’s “praise [of] the AgileTV system suffers the same defect—the cited statements all relate to spoken search functionality in the prior art.” *Id.* at 19–20.

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.* at 20 (citing Ex. 2009, 1–2). Further, the Petitioner argues that

“the press release itself identifies purported advantages of the AgileTV system outside the scope of the challenged claims.” *Id.* 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 nothing more than an extremely limited test that did not fail—not ‘industry praise’ for its product.” *Id.* at 21.

Petitioner next argues that the challenged claims are not commercially valuable and that the invention has not been commercially successful. Pet. Reply 21. Petitioner first notes that “[t]he consideration paid by Comcast under the License and Development Agreement was a loan to Patent Owner that it 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 “after failing to win Comcast’s business, Patent Owner dropped its television product and shifted to an automobile product instead (i.e., a product not covered by the ’326 Patent).” *Id.* at 21–22. Petitioner also notes that Comcast did not license the challenged claims, but instead conducted a limited evaluation of the AgileTV system. *Id.* at 22–23. Further, Petitioner notes that “[t]he license could not have signified any ‘recognition and acceptance’ of the challenged claims because they did not yet exist.” *Id.* at 23 (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.” *Id.* at 22. 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.9.

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 24. As explained below, we agree with Petitioner that Mr. Chaiken’s testimony “that unidentified ‘acquaintances’ told him ‘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 nonobviousness, we determine that Petitioner has established by a preponderance of the evidence that claims 1 and 12 would have been obvious over Houser.

Petitioner persuasively shows on the final record that a person of ordinary skill in the art would have understood Houser’s disclosure of a wireless remote control with a microphone for receiving spoken commands teaches receiving speech information at a first device, wherein said first device is a wireless device. Pet. 18–20; Ex. 1012, 4:16–25.

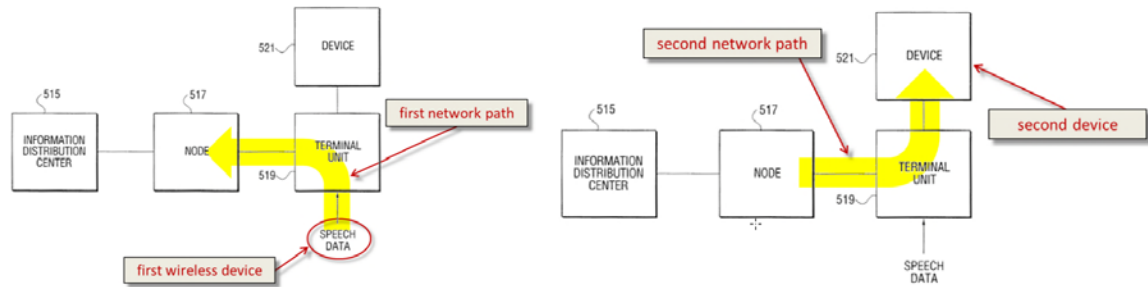
Claims 1 and 12 next require “transferring said speech information from said first wireless device via a first network path to a speech recognition engine,” and we are persuaded by Petitioner’s contention that “Houser discloses an embodiment in which voice recognition processing is performed at a remote network node (e.g., a remote server),” and within

“this embodiment, the user’s speech commands are transmitted from the remote control (‘first wireless device’) to the terminal unit and then to ‘node 517’ for processing by speech recognition circuitry.” Pet. 20 (citing Ex. 1012, 33:49–67, Fig. 15; Ex. 1023 ¶¶ 136–137).

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. 15 (“the remote only has transmission and not reception capabilities”). 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 ¶ 16. 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 ¶¶ 6–10; 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 Houser. Petitioner’s annotated Figure 15 (Pet. 21–22) of Houser and corresponding analysis explain how Houser teaches both a first wireless device and first network path, as well as a second network path leading to device 521, which Petitioner identifies as the claimed second

device.



Houser Fig. 15 (annotated)

Houser Fig. 15 (annotated)

Petitioner’s annotated Figures 15 (Pet. 21–22) of Houser depict a first network path and second network path. Houser discloses that the user’s speech commands are transmitted from the remote control (“first wireless device”) to the terminal unit and then to “node 517” for processing by speech recognition circuitry. Ex. 1012, 33:56–61. The transfer of Houser’s speech commands reads on the claimed “transferring of said speech information.” As illustrated above, we agree with Petitioner that the path from the remote control (“first wireless device”) through the terminal unit and then to node 517 (with the “speech recognition engine”) constitutes the claimed “first network path.” See Ex. 1023 ¶ 136.

With regard to Patent Owner’s arguments, we are not persuaded that the remote is outside the network within the first network path identified by Petitioner. Patent Owner argues that the remote control is not in the network path because “the transmission source is the terminal 519, not the remote.” PO Resp. 13. We disagree because Houser discloses a “remote control” that includes a “conventional wireless microphone” and a “transmitter” for transmitting spoken words to the “subscriber terminal unit.” Ex. 1012, 15:19–24, Fig. 4 (illustrating the voice remote control transmitting to the set-top box). Houser also discloses embodiments in which “[s]ound or spoken words are received by a subscriber terminal unit” and then “transmitted from

subscriber terminal [unit] 519 to node 517 which includes speech recognition circuitry.” *Id.* at 33:55–61, Fig. 15. Thus, we determine that the remote control is the source of the voice data, or information, and node 517 is the destination. 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.

Patent Owner’s arguments do not persuasively rebut Petitioner’s contentions or explain why the speech data originating at the first wireless device (remote control),<sup>6</sup> which is “received by a subscriber terminal unit 519” for transmission “to node 517 which includes speech recognition circuitry,” fails to meet the claim requirement of “transferring said speech information from said first wireless device via a first network path to a speech recognition engine.” Ex. 1012, 33:55–59; Ex. 1001, 50:39–41. Petitioner has presented persuasive evidence and testimony from Mr. Schmandt explaining why these claim elements are taught by Houser. *See also* Pet. Reply 5–10; Ex. 1023 ¶¶ 136–144.

Patent Owner additionally argues that the device 521 is outside the network and thus not part of a second network path as required by claims 1 and 12. PO Resp. 13–14 (“Petitioner points to no disclosure of element 521 (e.g., the television) being included on 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

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<sup>6</sup> Patent Owner’s infringement contentions in related district court litigation for the ’326 patent included a wireless remote in the “first network path” as the claimed “first device.” Ex. 1021, 83.

second network path.” Houser discloses that once the speech recognition circuitry generates “commands according to the sounds or spoken words,” “[n]ode 517 transmits the command(s) to controlled device 521 via subscriber terminal unit 519 to controlled device 521.” Ex. 1012, 33:56–63. The destination is controlled device 521 and the commands effect information delivery as claimed.

Patent Owner again suggests that because terminal unit 519 acts as a transfer, then device 521 cannot be considered the destination of the second network path. *See* PO Resp. 14 (“Houser discloses that node 517 has connections with terminal units like 519, not the device 521,” thus, Patent Owner contends Houser’s “physical route connect[s] node 517 (the source) to terminal unit 519 (the destination).”). But, considering the plain meaning of the claim language, and considering Houser’s disclosures cited above, we determine that Patent Owner’s arguments do not persuasively explain why device 521 would be outside the second network path identified by Petitioner (Pet. 21–22), or why controlled device 521 is not a proper destination. Claim 1 requires “effecting information delivery to a second device via a second network path” and this operation is taught by Houser as Petitioner and Mr. Schmandt explain, as summarized above. *See* Ex. 1023 ¶¶ 139–145; Pet. Reply 8–10.

We also agree with Petitioner and Mr. Schmandt that “[e]ven if all channels are broadcast from the information distribution center, it is the user’s voice command that causes the subscriber unit to tune to a particular channel thereby ‘effecting information delivery to a second device’ such as a television or video-recorder.” Pet. Reply 10 (citing Ex. 1023 ¶¶ 143–144). Similarly, Houser’s requesting of pay-per-view programming by voice



command effects information delivery to a second device. *Id.* at 10–11.

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. 25. 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 ¶¶ 8–12.

To establish the relationship between the claims of the '326 patent and

the AgileTV system, Patent Owner relies on two pieces of evidence and 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. 24) 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 affect the video on demand [VOD] content provided from the VOD server over a second path (in red).” PO Resp. 23. 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 page 24 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 page 24 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 17. 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 any commercial embodiment of the AgileTV system actually implemented the architecture depicted in the figure found at page 24 of the Response. *See* PO Sur-Reply 17; *see also* PO Resp. 23–24; Ex. 2032 ¶¶ 8–9 (Mr. Chaiken citing no evidence to support his testimony related to the

function of AgileTV and not discussing Exhibit 2006 or the figure at page 24 of the Response). Patent Owner simply failed to tie the figure appearing at page 24 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 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. 28–29). Patent Owner asserts that its invention satisfied a long-felt but unresolved need, i.e.,

“for using voice recognition in cable systems.” PO Resp. 28. 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.” PO Resp. 29. 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. 29 (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 1995, Houser provided detailed disclosures for voice recognition technology that could be integrated in subscription television systems. *See Ex. 1012*, 1:1–20.

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. 29* (“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* IPR2018-00343, Paper 56 (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 20 (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. 31 (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. 34–35 (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 21–23. 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 Houser’s remote node embodiment, wherein “the voice command is transmitted to node 517 for speech recognition processing,” as teaching “transferring said speech information in an unrecognized state.” Pet. 29 (citing Ex. 1012, 33:56–61, 5:62–67, 15:7–18, 15:29–34, 15:42–46, 16:47–50, 16:58–17:7, 17:8–15). Petitioner relies on Houser’s disclosure of a television for the “second device,” or controlled device. *Id.* (citing Ex. 1012, 7:30–33). We agree that “[a] person of

ordinary skill in the art would have known that a television, in the subscriber television network of Houser, was ‘capable of displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio.’” *Id.* (quoting Ex. 1023 ¶ 178). Petitioner also establishes how Houser teaches that “said first network path and said second network paths are different,” “whereas Houser’s “‘first network path’ . . . goes from the remote control to the subscriber terminal unit to node 517 and the ‘second network path’ begins either at node 517 or the information distribution center and goes through the subscriber terminal unit to the controlled device (e.g., television).” Pet. 23–24. 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 Houser.

*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, the information presented by Petitioner establishes by a preponderance of the evidence that these claims would have been obvious over Houser. *See* Pet. 23–34; Ex. 1023 ¶¶ 147–194, 169. 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 Houser discloses this limitation whereas Houser’s “‘first network path’ . . . goes from the remote control to the subscriber terminal unit to node 517 and the ‘second network path’ begins either at node 517 or the information distribution center and goes through the subscriber terminal unit to the controlled device (e.g., television).” Pet. 23–24.

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 Houser discloses this limitation. *Id.* at 24, 31 (“Houser discloses a first device (i.e., remote control) that is different than the second device (i.e., controlled device).” (citing Ex. 1023 ¶¶ 154–155)).

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 Houser discloses this limitation whereas Houser uses spoken search commands to identify video programming and then displays several records that satisfy a query in a manner to allow user selection. *Id.* at 25–26, 32 (citing Ex. 1012, 30:19–64, 15:55–59, 32:12–36, 31:3–5, 5:40–50; Ex. 1023 ¶¶ 157–159).

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 Houser discloses this limitation whereas Houser’s speech transfer from the remote control to the speech recognition engine for speech processing is in “an unrecognized state” as claimed. *Id.* at 26, 32 (citing Ex. 1012, 33:56–61; Ex. 1023 ¶ 161).

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 Houser discloses these limitations whereas Houser’s wireless remote control is an “input” for spoken commands that are then “output” to the subscriber terminal. *Id.* at 27 (citing Ex. 1012, 4:16-25, 15:20–24, 16:51–55, 2:19–23, Figs 2C, 4–6; Ex. 1023 ¶¶ 163–167). Further, Petitioner shows how the voice commands cause the information distribution center to deliver video information, such as television programs, to the subscriber terminal unit and controlled device. *Id.* (citing Ex. 1012, 5:40–50, 15:55–59, 30:19–22, 30:26–42, 30:61–64; Ex. 1023 ¶ 166).

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 14 (“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 Houser alone teaches the requirement

found in claims 7 and 17<sup>7</sup> 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 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 Houser to meet the “at least one of” claim language. Petitioner, and Mr. Schmandt, contend Houser teaches “determining a user site associated with a user of said first device.” Pet. 28 (citing Ex. 1023 ¶¶ 168–169).

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

After performing speech recognition processing, the remote node transmits the recognized command back to the subscriber terminal unit. *Id.* To do so, the remote node must determine the

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<sup>7</sup> 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 Houser alone, but our analysis here is equally applicable to Petitioner’s challenges of claims 9 and 19 addressed below.

“user site associated with” the user that issued the speech command using “said first device” (i.e., remote control 166). Schmandt Decl. ¶ 169. Thus, Houser discloses “determining a user site associated with a user of said first device,” as recited in claim 7.

Pet. 28. Mr. Schmandt explains that “Houser discloses a system in which multiple different users at multiple different locations all access the same remote network node to perform speech recognition processing.” Ex. 1023 ¶ 169. Mr. Schmandt relies on Figure 15 of Houser, which shows an implementation in a subscription television system where node 517 is an off-premises device connected to a plurality of subscriber terminal units that access node 517 on a time-sharing basis. *Id.* (citing Ex. 1012, 33:61–67). Based on these disclosures, Mr. Schmandt concludes,

[a] person of ordinary skill in the art would know that the remote node (node 517) would have to determine the particular subscriber system issuing a particular voice command so that the recognized command could be transmitted back to the correct subscriber terminal unit . . . . Thus, Houser discloses determining a user site, and the user site is associated with a user of said first device (remote control).

Ex. 1023 ¶ 169 (citing Ex. 1012, 15:20–24). 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, but “the petition does not explain why this feature would be inherent.” PO Resp. 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 Houser and



Petitioner failed to explain why this feature would be inherent. After considering the final record before us, we determine Petitioner has shown by a preponderance of the evidence that Houser teaches a user site associated with a user of said first device as required by the claim language. As noted above, Petitioner, and Mr. Schmandt, establish that Houser's "remote node [node 517] transmits the recognized command back to the subscriber terminal unit," and that "[t]o do so, the remote node must determine the 'user site associated with' the user that issued the speech command." Pet. 28; Ex. 1023 ¶ 169. We find Patent Owner's attorney argument to the contrary unpersuasive. Thus, based on the final record, Houser teaches determining a user site associated with a user of said first device (remote control), as required by claim 7 and as similarly required by claims 9, 17, and 19.

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 Houser.

*3. Obviousness Ground Based on Houser and Either Banker or Gordon*

Claims 8 and 9 each depend from claim 1, and claims 18 and 19 each depend from claim 12. Petitioner contends that claims 8, 9, 18, and 19 are unpatentable over Houser and either Banker or Gordon under 35 U.S.C. § 103(a), relying on the supporting testimony of Mr. Schmandt. Pet. 34–43 (citing Ex. 1023 ¶¶ 198–232). We have reviewed the complete record, and we are persuaded, notwithstanding Patent Owner’s arguments discussed below, that Petitioner has established the unpatentability of these claims by a preponderance of the evidence.

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 Houser teaches this limitation. Pet. 35. “In particular, Houser discloses that a viewer can issue voice commands to select and order pay-per-view movies.” *Id.* (citing Ex. 1012, 32:12–36, Fig. 14). A viewer verbally selects a pay-per-view item, thus the user assesses a recognized voice command associated with a particular user device to “create a financial consequence” (i.e., purchase of a pay-per-view movie), as recited in the claim. *Id.* (citing Ex. 1023 ¶ 199).

The next limitation of claim 8 requires “billing a user associated with said user device based upon said financial consequence.” Petitioner contends that Houser teaches this limitation. Pet. 35–36 (citing Ex. 1023 ¶ 200; Ex. 1012, 32:19–31 (emphasis omitted)). Alternatively, Petitioner relies on either Banker or Gordon combined with Houser for teaching this limitation. Petitioner points to Houser’s disclosure that once a viewer selects a pay-per-view movie to purchase, billing information is generated so

that the user can be billed for the purchase. *Id.* (citing Ex. 1012, 32:19–31). Petitioner also argues that “Houser can be combined with either the Banker or Gordon prior art patents to disclose the ‘assessing’ and ‘billing’ steps of claim 8.” *Id.* 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 36–37 (citing Ex. 1016, 16:43–50, 16:62–17:1, Fig. 6F, 16:51–55 (“the 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 37 (citing Ex. 1016, 16:67–17:1). After pressing a buy key, the user is billed. *Id.* “Thus,” Petitioner establishes how “Banker discloses the ‘assessing’ and ‘billing’ steps recited in claim 8.” *Id.* (citing Ex. 1023 ¶ 202). 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, 9:64–10:9, Figs. 3B, 8).

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 Houser’s disclosure of a payment for a movie-on-demand as creating a financial consequence. Pet. 38 (Ex. 1023 ¶ 207). Petitioner also shows how Banker and Gordon disclose “assessing” a response to “create a financial consequence,” and then displaying this “financial consequence.” *Id.* at 38–40 (Ex. 1023 ¶¶ 207–211); Pet. 38–39 (“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. 40–41. 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 Houser, involves informing the user that they are making a purchase and confirming their intent.” *Id.* at 40. 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 ¶ 214); *see id.* at 40 (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 Houser’s pay-per-view system, or, alternatively, Banker and Gordon also disclose billing the subscriber for a pay-per-view purchase. *Id.* at 41 (Ex. 1023 ¶ 216); *see id.* at 41 (“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. 41–42. 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 42. 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 Houser with the above-noted teachings of either Banker or Gordon. *Id.* at 42–43 (citing Ex. 1003 ¶¶ 78–81). Each reference provides similar interfaces for interactive television networks and cable networks in particular, as well as providing pay-per-view functionality. Ex. 1012, Abstract; Ex. 1016, Abstract; Ex. 1017, 2:41–63, 1:8–14. 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 Houser. Ex. 1023 ¶ 233. As argued by Petitioner, “Banker and Gordon both teach user interfaces for implementing pay-per-view and video-on-demand systems on cable networks,” and both references teach the benefits of user interfaces that minimize the chances of unauthorized accidental purchases. Pet. 43 (citing 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; Ex. 1023 ¶ 234). 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 Houser 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 Houser.” Ex. 1023 ¶ 234.

Patent Owner alleges that Petitioner fails to articulate a motivation to combine the features of the prior art to yield the claimed invention. PO Resp. 21. According to Patent Owner, “the petition only provides a general

statement about similarities between the references and Houser, but no explanation of why any specific modification would be made.” *Id.*

We disagree, and we find Petitioner’s contentions specific and persuasive. Houser discloses that its voice-controlled system for retrieving digital programming can be used in pay-per-view applications, and both Banker and Gordon teach user interfaces for implementing pay-per-view and video-on-demand systems on cable networks. Pet. 42–43; Ex. 1023 ¶¶ 233–234. Integrating either Banker or Gordon’s interface, which allows for purchases, but minimizes the chances of unauthorized accidental purchases, would enhance Houser’s existing voice-controlled system for retrieving digital programming. *See id.*; Pet. Reply 12. Further, Patent Owner’s general arguments do not specifically address each of the reasons provided in the Petition for making the combinations of references as proposed by Petitioner. For example, “Houser discloses that its voice-controlled system for retrieving digital programming can be used in pay-per-view applications,” such as in Banker and Gordon, which “both teach user interfaces for implementing pay-per-view and video-on-demand systems on cable networks.” Pet. 42–43.

Based on the final record, Petitioner has established a persuasive rationale for combining the teachings of references as proposed in the Petition. *See* Pet. 42–43. The evidence of obviousness before us is strong.

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 Houser and either Banker or Gordon.

*4. Obviousness Ground Based on Houser and Either Martin or Blahut*

Claim 11 depends from claim 1, and claim 21 depends from claim 12. Petitioner asserts that claims 11 and 21 are unpatentable over Houser and either Martin or Blahut under 35 U.S.C. § 103(a), relying on the supporting testimony of Mr. Schmandt. Pet. 43–46 (citing Ex. 1023). For this ground, Petitioner relies on either Marin or Blahut combined with Houser for teaching remote control devices that transmit identifiers. Pet. 45 (citing Ex. 1023 ¶ 242). 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 Houser 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 Houser for its teaching of responding to recognized speech based upon natural language. Pet. 44 (citing Ex. 1012, 30:26–31, 30:47–64, 31:3–5). Petitioner contends that “[o]nce the voice command is recognized, the Houser 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.* Thus, Houser teaches using the recognized speech to provide a response uniquely identified with the requesting user. *Id.* at 45.

Petitioner then alternatively contends that one of skill in the art would have combined Houser 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 Houser 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 Houser with either Martin or Blahut would render this claim obvious. [Ex. 1023] ¶¶ 243, 249–250.

Pet. 45.

Petitioner further establishes persuasively that a person of ordinary skill in the art would have been motivated to combine the teachings of Houser with either Martin or Blahut. *Id.* at 46–47 (citing Ex. 1023 ¶¶ 249–250). 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 46. 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 47 (citing Ex. 1019, 1:21–30; Ex. 1023 ¶ 250). 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 Houser.” *Id.* at 46 (citing Ex. 1023 ¶ 249).

Patent Owner contends Petitioner’s motivations for combining Houser with Martin or Blahut are facially deficient. PO Resp. 21. Patent Owner argues that “the petition likewise only provides a general statement about similarities between references, but no explanation of why any specific modification would be made.” *Id.* We disagree.

Petitioner has persuasively established a reasoned rationale for combining the references supported by the final record. Pet. 45–47. Petitioner explains that “all three references disclose remote controls wirelessly communicating with television set-top boxes, and a skilled artisan would have been motivated to use a unique remote control identifier, as taught by Martin or Blahut, in Houser’s remote control.” Pet. Reply 12–13. Petitioner explains that use of such a unique identifier would allow the system to limit what channels or functions are available to a particular remote control user, such as a child, as explained by Mr. Schmandt and as described in Blahut. Ex. 1019, 1:21–30; Ex. 1023 ¶ 250 (“In such a combined system, the unique identifier of the remote control would also be sent along with the voice command to determine whether the particular remote control (and thus the user of that control) could perform certain operations.”).

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 Houser and either Martin or Blahut.

### III. MOTION TO EXCLUDE

Petitioner filed a Motion to Exclude evidence (Paper 38), which Patent Owner opposed (Paper 44), which Petitioner replied (Paper 47). 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 38, 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. Paper 38, 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 44, 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. Paper 22, 30.

We deny Petitioner’s request to exclude Exhibit 2009. Patent Owner contends, and we agree, that this exhibit meets the hearsay exception for business records. Paper 44, 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 that 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 44, 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 38, 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 44, 6.

We deny Petitioner’s request to exclude Exhibit 2010. This exhibit meets the hearsay exception for business records, and 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 system. 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, “[t]he article (which does not identify an author) primarily discusses AgileTV and its then-contemplated trial with a small cable company called Sunflower Broadband.” Paper 38, 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 44, 13. We agree this statement 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 Houser.

Petitioner has proven that claims 8, 9, 18, and 19 would have been obvious over Houser and either Banker or Gordon.

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

Petitioner’s Motion to Exclude (Paper 38) 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

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evidence that claims 1–9, 11–19, and 21 are unpatentable;

FURTHER ORDERED that Petitioner’s Motion to Exclude (Paper 38) 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.

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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