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Paper 31
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMCAST CABLE COMMUNICATIONS, LLC,
Petitioner,

v.

PROMPTU SYSTEMS CORP.
Patent Owner.

Case CBM2018-00034
Patent RE44,326 E

Before JAMESON LEE, KARL D. EASTHOM, and
ALEX S. YAP, *Administrative Patent Judges.*

EASTHOM, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Petitioner, Comcast Cable Communications, LLC filed a Petition (Paper 2, "Pet.") seeking a covered business method ("CBM") patent review of U.S. Patent No. RE44,326 E (Ex. 1001, the "'326 patent"), pursuant to § 18 of the Leahy-Smith America Invents Act ("AIA").[1] Petitioner challenges claims 1–21 of the '326 patent (the "challenged claims"). Pet. 1. Patent Owner, Promptu Systems Corp., filed a Preliminary Response. Paper 6.

After the Institution Decision (Paper 9) instituting trial on the challenged claims, Patent Owner filed a Patent Owner Response (Paper 12, "PO Resp."), Petitioner filed a Reply (Paper 15, "Reply"), and Patent Owner filed a Sur-Reply (Paper 17, "PO Sur-Reply"). Pursuant to an order by the panel (Paper 23), the parties filed additional briefing to address the impact of the 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (the "Guidance"), available at https://www.federalregister.gov/documents/2019/01/07/2018-28282/2019-revised-patent-subject-matter-eligibility-guidance, on the instant proceedings, which issued after the Institution Decision. Paper 24 ("Pet. SMG Br."); Paper 25 ("PO SMG Br.").

An Oral Hearing occurred on July 26, 2019. Due to a problem with the court reporting service hired by the Patent Trial and Appeal Board, no transcript of the hearing exists. Patent Owner requested a second oral hearing but later withdrew that request in light of our authorization for the parties to

[1] Pub. L. No. 112-29, 125 Stat. 284 (2011); *see also id.* at 329–31 (providing that the transitional program for covered business method patents will be regarded as a post-grant review under Chapter 32 of Title 35 of the United States Code, and will employ the standards and procedures of a post-grant review, subject to certain exceptions).

provide a list of bullet points they desire to note expressly for consideration by the panel in this Final Written Decision). Paper 27. The parties filed these bullet points for consideration. Papers 28–30.

We have jurisdiction under 35 U.S.C. § 318(a). After considering the evidence, arguments, including arguments at the Oral Hearing and in light of the bullet points of both parties, and for the reasons set forth below, we determine that Petitioner showed by a preponderance of the evidence that claims 1–21 of the '326 patent are unpatentable.

A. 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," reissued from U.S. Patent No. 7,685,523 (the "'523 patent"). Ex. 1001, (64). The '326 patent generally relates to using speech recognition so a user can order video or other information over a typical cable television system or other network. *See* Ex. 1001, (57), 2:5–8.

According to the '326 patent Specification, "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. According further 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. In addition, "[u]ser 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 describes a centralized voice recognition system in some places, in the first substantive sentence of the '326 patent, it

also describes voice recognition 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). It further states "[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).

Figure 3 of the '326 patent appears below:

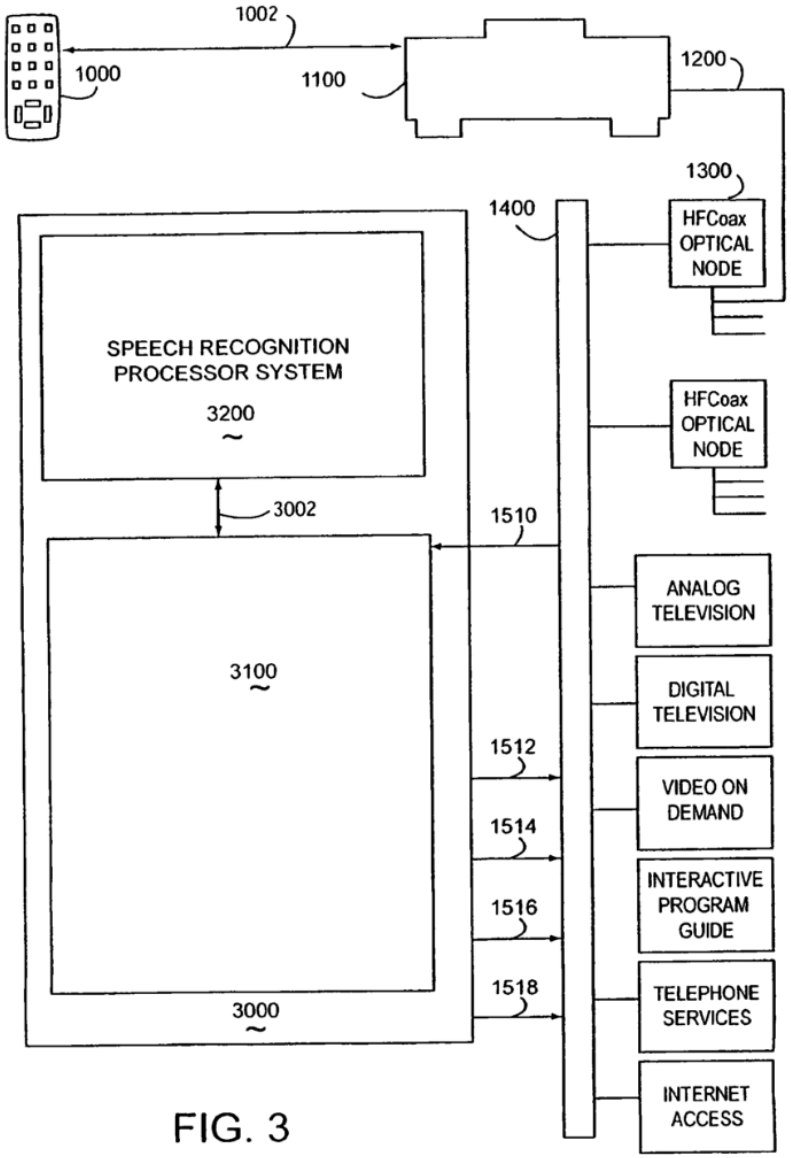

FIG. 3

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.

As indicated above, Figure 3 depicts single remote control device 1000 coupled to single set-top box 1100. 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 embodiment, "commercial" set-top box 1100 receives a wireless signal via coupling 1002 from remote control unit 1000 and then re-modulates it for upstream transmission on cable return path 1200. *See id*. at 11:10–17.

At least one embodiment involves 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 22:3–4. 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 entry points] 1510 by the five to 40 MHz data receiving equipment." *Id*. at 12:14–17. The disclosed invention contemplates a speech processing system that associates only one speech channel per user site: "At least one, and possibly all, of the identified, speech channels may have an associated site" and it "may include at least one computer." *Id.* at 22:42–54.

To begin the process of obtaining content through a system such as that depicted in the embodiment illustrated 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.

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.

Describing the background of the invention ("Background Art" (*id.* at 3:41)), the Specification states "[u]pstream signals in the 5 to 40 MHz band from each subscriber connected to the node are collected, combined, and then sent to the Headend via *either the same fiber used for the downstream video carriers, or a separate fiber*." *Id.* at 3:25–28 (emphasis added). It also states "[d]ownstream control data transmission *typically* occurs in a separate frequency band from the upstream channels." *Id.* at 3:46–47. It further states "[t]ypically, [high frequency cable] networks employ an optical fiber from a central office, or Headend, to a neighborhood node. *The fiber has forward and reverse transmission capability, which can alternatively be accommodated on separate fibers.*" *Id.* at 3:48–51 (emphasis added).

Utilizing aspects of this background technology, the Specification describes as part of the invention employing upstream channels via "the return path." For example, "the speech command which originates at the user site,

often the home of the subscriber, [and] is sent upstream *via the return path* (often five to 40 MHz) in the cable system to a central speech recognition and identification engine." *Id.* at 5:29–32 (emphasis added). Also, "[t]he set-top box 1100 may be used for both upstream and speech command signals." *Id.* at 11:31–33. According to these descriptions, the upstream and downstream path may encompass at least part of the same path (e.g., fibers, cable, channels, set-top box), originating at the user's microphone (first device) and returning to a TV (second device) to provide "Video On Demand, Pay Per View, Channel control, on-line shopping, and the Internet." *See id.* at 5:14–22, Fig. 3.

B. Related Matters

The parties identify several matters related to the '326 patent, including other PTAB proceedings and infringement litigation in a district court. Pet. x; Paper 6, 5–6; Paper 4, 2–3. The same Petitioner as here filed two other petitions challenging claims 1–9, 11–19, and 21 of the '326 patent, and the Board held all challenged claims unpatentable for obviousness: *Comcast Cable Commc'ns, LLC v. Promptu Sys. Corp.*, IPR2018-00342, Paper 54 at 73–74 (PTAB July 18, 2019) (final written decision) (the "'342 IPR" or the "'342 FWD"); *Comcast Cable Commc'ns, LLC v. Promptu Sys. Corp.*, IPR2018-00343, Paper 56 at 73–74 (PTAB July 18, 2019) (final written decision) (the "'343 IPR" or the '343 FWD"). Patent Owner filed notices of appeal in each proceeding. '342 IPR, Paper 56; '343 IPR, Paper 58. The same Petitioner also filed a petition challenging a related patent, which the Board denied, in *Comcast Cable Commc'ns, LLC v. Promptu Sys. Corp.*, CBM2018-00033, Paper 9 at 12 (PTAB October 10, 2019). Patent Owner

also identifies IPR2017-00344 and IPR2017-00345 as involving related U.S. Patent No. 7,047,196. Paper 4, 2.

C. Asserted Ground of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following grounds (Pet. 3–4):

Claims Challenged	Statutory Basis	Ground
1–21	§ 101	Abstract Claiming
1–21	§ 251	Recapture
11 and 21	§ 112, ¶ 2	Indefiniteness

D. Challenged Claims

Independent claims 1 and 12, from which all other challenged claims depend, recite similar subject matter. Claim 1 of the '326 patent reveals the substantial modifications made to claim scope during the reissue proceeding:

> 1. A method [of using a back channel containing a multiplicity of speech channels from a multiplicity of user devices presented to a speech recognition system in a network supporting content delivery] *for speech directed information delivery,* comprising [the steps of]:
>
> [partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels;
>
> processing said multiplicity of received identified speech channels to create recognized speech for each of said received identified speech channels; and
>
> transmitting a unique response to each of said user devices, based upon said recognized speech.]
>
> *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.[2] Reissued independent claim 12 reveals similar changes in claim scope relative to originally issued dependent claim 12. *See id.* at 52:29–54.

E. Claim Construction

The Board interprets claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.300(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–45 (2016).[3] "Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history." *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016).

Petitioner proposes constructions for two terms: "speech recognition engine" and "set-top box" ("STB"). *See* Pet. 15–17. Patent Owner provides a construction for "speech recognition engine" and does not respond to Petitioner's proposals regarding the STB.

Apart from "speech recognition engine" and "network path," no other claim terms require express construction to resolve a controversy. *See Nidec*

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[2] "Matter enclosed in . . . brackets [ ] appears in the original patent but forms no part of this reissue [S]pecification; matter printed in italics indicates the additions made by reissue." Ex. 1001, 1:6–10.

[3] Per recent regulation, the Board applies the district court claim construction standard to petitions filed on or after November 13, 2018. *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 (Oct. 11, 2018) (to be codified at 37 C.F.R. pt. 42). Because Petitioner filed the Petition before November 13, 2018, we apply the broadest reasonable interpretation standard.

Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd., 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) (only claim terms "in controversy" require construction and "only to the extent necessary to resolve the controversy").

1. Speech Recognition Engine

Independent claims 1 and 12, process claims reciting "[a] method for speech directed information delivery," each recite "transferring said speech information" "from said first wireless device via a first network path to a speech recognition engine."

In the Institution Decision, we did not construe the term "speech recognition engine" explicitly, but determined on a preliminary basis for institution purposes that it generally constitutes a "type[] of generic device[]" (Inst. Dec. 30), and more specifically, "a generic, conventional speech recognition engine . . . performing conventional functions as disclosed and claimed" (*id*. at 31–32 (citing Pet. 22–24, 43–46; Ex. 1029 ¶¶ 54–58, 118–121); Ex. 1029 ¶¶ 52–58, 90–99, 170– 182; Ex. 1021, 285, 287)).

Patent Owner contends that "the reissue claims require a 'speech recognition engine' that is accessible to a multiplicity of user devices." PO Resp. 40. Petitioner contends that the "broadest reasonable interpretation" of "speech recognition engine" should be "hardware and/or software used to identify spoken words." Pet. 15–16. Patent Owner relies on a proposed claim construction proposed by Petitioner in a district court proceeding and asserts Petitioner "cannot dispute that the [S]pecification expressly defines 'speech recognition engine' to require the ability to process speech from multiple user devices." PO Resp. 41–42 (citing Ex. 2010, 22). Petitioner maintains its

"proposed construction recognizes that the 'speech recognition engine' can process voice commands from one or more user sites (i.e., the construction permits but is not limited to receiving voice commands from multiple users)." Reply 19.

Patent Owner's construction involves putting a constraint on the connection scheme in the network of the "speech recognition engine." In other words, Patent Owner's construction involves using a generic speech recognition engine "accessible to a multiplicity of user devices" by connecting the speech recognition engine near a network node via a switch, cable splitter, or other circuitry, so that multiple users can access it (similar to the system disclosed in the IBM Technical Disclosure Bulletin ("IBMTDB") discussed below). During the Oral Hearing, Patent Owner verified that its construction seeks to limit the accessibility of the speech recognition engine based on its location or connection in the network, as opposed to limiting the speech recognition functionality itself. *See* Paper 28 (arguing "local (i.e., on a user's device) speech processing remains excluded from the reissue claims"). Patent Owner cites the Specification in an effort to show that the '326 inventors solve prior art problems by providing speech recognition to a collection of users over a network. *See* PO Resp. 43 (quoting Ex. 1001, Abstract, 4:54–56, 4:66–5:1, 5:18–22).

Notwithstanding these disclosures that support providing speech recognition to a variety of users, even if these disclosures relate to the connection or location of the speech recognition engine, this does not mean the term "speech recognition engine" itself carries a definition or construction requiring a specific connection or location. Rather, as Patent Owner makes clear in the issued patent claims prior to reissue, constraints on the

connectivity for a multiple users must result from details recited about the connectivity. For example, prior to reissue, issued claim 1 in the '523 patent recited in the preamble "[a] method of using a back channel containing a multiplicity of speech channels *from a multiplicity of user devices* presented to a speech recognition system in a network supporting content delivery," and the body of claim recited, *inter alia*, "partitioning a received back channel containing *a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels*; processing said multiplicity of received identified speech channels to create recognized speech for each of said received identified speech channels." *Supra* Section I.D (emphases modified).

Patent Owner's claim construction during the district court litigation agrees with our analysis, as Patent Owner proposed construing a "speech recognition engine" as "computer running software that accepts spoken language as input and determines (or identifies) what words and phrases or semantic information are present." Ex. 2010, 20. This construction represents a functional description of a generic speech recognition engine. It does not constrain the functionality to anything more than what an artisan of ordinary skill expects from a generic speech recognition engine (i.e., it recognizes speech). Patent Owner's proposed claim construction in the district court litigation does not constrain the speech recognition engine by any specific connection, network location, or functionality.

The Specification supports the claim construction of a generic speech recognition engine that Petitioner proposes here, and that Patent Owner proposed in the district court. First, as noted above, the Specification specifically contemplates almost any location for a speech recognition engine

in a network "near a wireline node." *Supra* Section I.A; Ex. 1001, 1:38–40 ("*This invention* relates to voice recognition performed *near a wireline node of a network supporting cable television and/or video delivery*." (emphases added)). The Specification also discloses a wide variety of speech recognition engines as background art. Ex. 1001, 1:51–52 ("There have been numerous patents issued regarding voice recognition"), 1:42–2:4 (describing prior art voice recognition systems). The '326 patent does not define a "speech recognition engine," but it generically describes "[t]he speech recognition engine [as] process[ing] speech packets to create speech content and formulate the response to the speech content for each of the user sites." *Id.* at 18:23–25. The '326 patent also describes embodiments that include parallel processors to handle multiple users. *See id.* at Fig. 3 (server farm 3000), 17:60–62 ("[M]any system installations may require multiple AgileTV™ Voice Processing Unit (AVPU) boxes 3000 to meet the performance needs of the subscriber base.").

The description of different types of speech recognition systems, the generic description for processing speech packets for each of the user sites (*id.* at 18:23–25), the disclosure of the *invention* as locating a speech recognition engine anywhere "near a wireline node" (*id.*), and the depiction at Figure 3 of only one user site, reveals that the Specification contemplates a generic speech recognition engine that processes speech from a single user connected in the network. The Specification contemplates modifying the speech recognition engine depending on the number of users, but it does not require reading multiple users into the broadened reissue claims. *See id.* at Fig. 3 (server farm 3000), 17:60–62. Challenged claim 1 tracks this finding, because at most it only requires one user site, by reciting "receiving speech information at a first

[wireless device]," for example, a microphone. Patent Owner agrees that claim 1 requires "a single user's interaction": "[S]imply because the reissue claims are drawn to a single user's interaction with a multi-user system does not mean the claims read on a single-user system." Paper 28, 2.

As indicated above, Figure 3 depicts a single user, even if Figure 3 contemplates more than one user. *See supra* Section IA (noting microphones at a single user site as depicted in Figure 3 and as described in the '326 patent). In light of the Specification, "[t]he speech recognition engine processes speech packets to create speech content and formulate the response to the speech content for each of the user sites" connected in the network, which might be a one. *See* Ex. 1001, 18:23–25. The Specification also contemplates one speech channel for a single user site: "*At least one*, and possibly all, of the identified speech channels *may have an associated user site*." *Id.* at 22:54–55 (emphases added). As reissued, claim 1 does not require identifying a single speech channel.[4]

As indicated above, the '326 patent describes an embodiment of "a speech recognition server array 3200" for handling one or more users. *Id.* at 20:58–59. The Specification states "[e]ach of these arrays will process over 1K speakers concurrently and fit into a single rack mount enclosure." *Id.* at 21:48–49. It refers to the "speech processing system coupled to a wireline node in the network. The wireline node provides multiple received identified

[4] Claim 7 depends from claim 1 and recites "determining a user site associated with a user of said first device." It does not require determining more than one user at respective sites. Also, claim 11 recites "*uniquely identified with* said user device[s]." In other words, claim 11, as reissued, like all the challenged claims, eliminated a previous recitation in the '523 patent claims to plural "device[s]" by eliminating the "s" at the end of "device."

speech channels to the speech processing system." *Id.* at 22:34–36. The Specification also describes using "an AVPU input multiplexor" to render "a high speed speech processing unit capable of processing the data from several nodes." *Id.* at 12:43–47. The Specification explains "the AgileTV™ Voice Processing Unit (AVPU) is a high speed speech processing unit capable of processing data from several nodes." *Id.* at 12:43–45. The Specification also states "[t]he AVPU[]Engine may provide speech recognition and control services for existing services such as Interactive Programming Guides, Video on Demand (VOD) Services or access to the Internet or World Wide Web." *Id.* at 12:61–64. The Specification also describes "an array of processors as shown as 3200 in FIG. 3." *Id.* at 21:1–2.

Patent Owner does not urge a construction for a "speech recognition engine" that requires the disclosed "AVPU" or "an array of processors." *See id.* at 12:43–45, 21:1–2. Patent Owner also does not urge a construction that requires the "speech recognition engine" to include, or be combined with, a "multiplexor," or to include a "high speed speech processing unit," or be capable of providing "control services" or "access to the Internet or World Wide Web." *See id.* at 12:43–45. Hence, the '326 patent describes a "speech recognition server array," a "speech processing system," and an "AVPU Engine" as providing speech recognition for multiple users, and also describes using a multiplexor to handle multiple nodes, but the challenged claims do not recite or require these features of the narrower embodiments (even if the claims do not preclude these described features).

Mr. Lipoff contends "[a] person of ordinary skill in the art would understand the term 'speech recognition engine,' as used in the '326 Patent, to refer broadly to 'hardware and/or software used to identify spoken words.'"

Ex. 1029 ¶ 106; *see* Pet. 15 (citing Ex. 1029 ¶ 106). Mr. Lipoff credibly describes certain narrower embodiments including the array embodiment discussed above (*see* Ex. 1029 ¶¶ 70–72, 108) and cites to passages that describe the speech recognition functionality in more generic terms (*id.* ¶¶ 107–108). For example, Mr. Lipoff refers to the following generic passages in the Specification (Ex. 1029 ¶ 107):

1). "The system can recognize and process speech so that the key words of spoken commands are recognized and displayed." Ex. 1001, 5:33–35;

2) "The speech engine determines the most likely spoken request based on statistical analysis, and may return a text string corresponding to the spoken request." *Id.* at 16:33–36; and

3) "The speech recognition engine processes speech packets to create speech content and formulate the response to the speech content for each of the user sites." *Id.* at 18:23–25.[5]

Given these disclosures, Mr. Lipoff credibly testifies "[t]he claims recite 'recognizing said speech information' 'at said speech recognition engine,' but do not limit the engine to any particular device or technique, and do not identify any particular device or technique for performing speech recognition." Ex. 1029 ¶ 106.

Patent Owner does not challenge this testimony with expert testimony. In support of its construction, Petitioner persuasively contends

[5] Mr. Lipoff does not quote "for each of the user sites" at the end of the sentence, but provides the citation to the sentence. *See* Ex. 1029 ¶ 107. Claim 1 does not recite a "user site," but it implicitly requires at most only one user site, so "each of the user sites" as disclosed in that sentence refers to one site in the context of claim 1.

> [t]he [S]pecification describes several embodiments with "speech engines," some of which contain a "speech processor computer 1520." '326 Patent at 29:4–32:13, 33:8–41:19, Figs. 23–24, 26–31. The [S]pecification also provides examples of speech recognition performed using software and hardware. *Id.* at 1:42–47 (current voice recognition "applications use voice recognition technology running on a computer or voice recognition chip technology"), 1:62–65 ("There is, however, another class of voice recognition technology referred to as natural language, which requires state of the art processing software and hundreds of megabytes of RAM to support.").

Pet. 15–16.

As Petitioner and Mr. Lipoff show, the '326 patent describes several embodiments of speech recognition engines. In other words, the challenged claims recite a "speech recognition engine," instead of a "speech recognition server array," "speech processing system" (Ex. 1001, 20:58–59, 21:48–49), "computer," or "voice recognition chip" (*id.* at 1:42–47). This indicates the claims recite a speech recognition engine that performs the generic function of recognizing speech as Mr. Lipoff contends (*see* Ex. 1029 ¶ 106), thereby covering the several types of speech recognition engines disclosed in the '326 patent.

As discussed above, the '326 patent refers to locating the speech recognition engine at a "central" location in several places. However, as also discussed above, the claims do not specify any location and the Specification describes the *invention* as providing voice recognition anywhere near a wireline node. *See* Ex. 1001, 1:38–40 ("This *invention* relates to voice recognition performed *near a wireline node of a network supporting cable television and/or video delivery*." (emphases added)). The Specification also generally explains "[a]s used herein, *a central location may include a node*, Headend, or metropolitan Headend for a residential broadband network."

Ex. 1001, 12:18–19 (emphasis added). In another place, the '326 patent states "[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). By specifically referring to the *invention* as involving speech recognition without any reference to location, generally referring to where a speech recognition engine "may" be located, and generally defining a central location as near any node in the system, the Specification supports the challenged claims as allowing the speech recognition engine to be located near any node in the network.

Furthermore, Patent Owner contends Petitioner "abandoned" its requirement in district court for a "centralized" location, and Patent Owner contends the panel need not determine if the speech recognition engine must be centrally located. *See* PO Resp. 42 ("[T]he Board need not decide that issue to resolve the instant dispute between the parties."). Although Patent Owner contends the panel need not resolve the "centralized" location issue, as discussed further in the next section, Patent Owner urges the claims otherwise "require remote speech processing accessible to a multiplicity of user devices." *Id.* at 46.

Patent Owner also argues that reading the claims on a "single-user device . . . is baseless" because "[r]eissue claim 1 expressly recites multiple user devices, a 'first device' and a 'second device.'" PO Resp. 40. This argument obfuscates the issue. Petitioner does not attempt to read the claims on a "single-user device." Rather, Petitioner refers to a single user or single user site connected in the network (with that user or site employing both the first and second devices).

The prosecution history supports our analysis and shows a speech recognition engine need not be "accessible to a multiplicity of user devices," contrary to Patent Owner's arguments here. *See* PO Resp. 40. During prosecution of the '523 patent, Patent Owner stated Houser does not disclose or suggest the claimed subject matter of "providing said speech recognition system at a back channel accessible *by a multiplicity of user devices coupled to said network*," as recited in original claim 7. Ex. 1004, 1344 (Patent Owner quoting original claim 7) (emphasis added). Then, in the next sentence, Patent Owner argued "Houser is completely silent about speech recognition system *. . . accessible by a multiplicity of user devices coupled to said network*." *Id.* (emphasis added). Patent Owner argued similarly with respect to original claim 1. *Id.* at 1343 ("Houser has nothing to do with partitioning a received back channel containing a multiplicity of speech channels *from a multiplicity of user devices* into a multiplicity of received identified speech channels.") (emphasis added).

Accordingly, the prosecution history verifies that Patent Owner understood that the claimed "speech recognition system" (now a "speech recognition engine" in that system) does not include the separate requirement of being "accessible to a multiplicity of user devices." This prosecution history likewise verifies that un-recited claim limitations must be employed to provide the requirement urged by Patent Owner, for example, recited limitations in issued claims 1 or 7 of the '523 patent (as Patent Owner understood based on its prosecution history arguments).

Although the speech recognition engine as construed herein does not preclude the capability of handling multiple users, it does not require that capability, contrary to Patent Owner's urging. *See* PO Resp. 40. Therefore, in

light of the discussion above, the speech recognition engine as construed here includes the capability of handling only one user at a time, for example, via an unclaimed multiplexor (*see* Ex. 1001, 12:43–47 (describing "an AVPU input multiplexor" to render "a high speed speech processing unit capable of processing the data from several nodes")), or otherwise.

Apart from arguing a certain connection scheme (i.e., via a "network path" as discussed in the next section) and the "accessible to a multiplicity of user devices" interpretation, Patent Owner does not urge a construction that requires the speech recognition engine itself (i.e., hardware/software) to be capable of handling more than one speech channel *simultaneously*. Neither party explicitly addresses this issue. Nevertheless, to the extent the claimed "speech recognition engine" must be capable of processing one or more users based on internal or external software or hardware, as indicated in the Specification and elsewhere, conventional speech recognition engines at the time of the invention handled multiple users at least one at a time using a multiplexor or otherwise. *See, e.g.*, *infra* Section I.E.3; Ex. 1029 ¶¶ 46, 49, 54, 56–58, 119.[6]

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[6] "Whether [a] structural recitation limits a [method] claim depends on the language of the claim, the specification, prosecution history, and other claims." *Moleculon Research Corp. v. CBS*, Inc., 793 F.2d 1261, 1271 (Fed. Cir. 1986), abrogated on other grounds by *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665 (Fed.Cir.2008) (en banc) ("[D]irect evidence of a fact is not necessary."); *see also E-Pass Tech., Inc. v. 3COM Corp.*, 222 F.Supp.2d 1147 (N.D. Cal. 2003) ("A structural limitation on a method claim is not absolute . . . . As stated before, the size of the card is a structural limitation that is central to the very essence and purpose of the '311 patent—substitutability.") (citing *Moleculon* 793 F.2d at 1271). Here, requiring the "speech recognition engine" of the challenged claims to be capable of processing speech from more than one user site, simultaneously or otherwise, unnecessarily imposes a

Based on the foregoing and the further discussion below, we maintain our initial implicit interpretation in the Institution Decision, namely, the speech recognition engine represents a generic device that performs the basic functions of recognizing speech. *See* Inst. Dec. 30–31. Accordingly, we adopt Petitioner's and Mr. Lipoff's materially same construction, namely a "speech recognition engine" includes 'hardware and/or software used to identify spoken words." Pet. 15; Ex. 1029 ¶ 106.

2. First Network Path and Second Network Path

The parties do not construe explicitly the terms "first network path" and "second network path" as recited in challenged independent claims 1 and 12. Rather than relying on a central location per disclosures of some embodiments in the '326 patent as imposing an implied location for the claimed speech recognition engine as discussed above, Patent Owner relies on these terms as invoking its alleged "accessibility [of the speech recognition engine] to a multiplicity of users" requirement. *See* PO Resp. 37–40. Patent Owner's argument, relying on the recited "first network path" and "second network

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structural limitation in a method that only requires processing speech from one user at most. Patent Owner agrees "the reissue claims are drawn to a single user's interaction." Paper 28, 2. The Specification generally implies that the speech recognition engine must be capable of processing speech from the number of users connected to the network, i.e., a single user in the challenged claims. *See* Fig. 3 (disclosing one user site 1000), 18:54–55 ("At least one, and possibly all, of the identified speech channels may have an associated user site."), 18:12–15 ("A Speech Packet Processor may be centrally located in or near a wireline node specifically to capture and prepare the upstream speech packets that are to be fed to the Speech Recognition Engine."), 18:23–25 ("The speech recognition engine processes speech packets to create speech content and formulate the response to the speech content *for each of the user sites*. (emphasis added)).

path," as precluding "[l]ocal speech processing," further supports our interpretation above that the speech recognition engine itself does not carry a connection requirement for a plurality of users. *See id.* at 39.

In general, without construing the terms, Patent Owner contends the "first network path" and "second network path" somehow require the speech recognition engine to be accessible to a plurality of users. For example, Patent Owner argues "[l]ocal speech processing . . . has not crept back into the claims" based on the recitation of "transferring said speech information . . . to a first network path to a speech recognition engine . . . and effecting information delivery to a second device via a second network path." PO Resp. 37. As discussed above, however, the Specification includes examples of a microphone (first network device) sending wireless signals to a local set-top box (second network device), and a speech recognition engine may be located at or near any node in the system, including at or near a set-top box. *Supra* Sections I.A, I.E.1; PO SMG 5–6 (Patent Owner agreeing the claimed first device (a wireless device) may include a microphone and the second device may include a set-top box: "The claims here recite a specific implementation of remote speech recognition by receiving a spoken command at a wireless device to effect information delivery to a different device . . . . [and] the different device may be a television and set-top box.").

Petitioner persuasively contends "[t]he claims broadly recite a speech recognition engine communicating with devices via network paths, which could be in a local or home network, a cable television network, or any other network." Reply 20. In another instance, Patent Owner agrees location does not play a decisive role in accessibility to a number of users, because Patent Owner argues that even Houser's local set-top box's speech recognition

engine may be accessible to a plurality of users.[7] Specifically, Patent Owner contends that Petitioner

> presents no evidence to support its assertion equating "speech recognition at a terminal unit" with single-user implementations only. For example, one could perform speech recognition at a terminal unit (e.g., on a primary set-top box in a living room) to independently control the television content displayed on other televisions in the same house. This would perform speech recognition at a terminal unit and still support multiple users.

PO Sur-Reply 14 n.4.

The argument above confuses the issues here. Petitioner's single user implementation refers to the claims as reading on a single user site in a network as opposed to requiring multiple user sites in the network. Whether the claims also read on multiple users at a single user site in a network needs no analysis, because it bears no relevance to any issue here.

In any event, Petitioner notes "Patent Owner argued that the Board should adopt [its] proposed construction of 'network path' in the pending IPR proceedings challenging the '326 Patent." Reply 21 (citing '342 IPR, Paper 22 at 11; '343 IPR, Paper 24 at 11). In the related '342 IPR cited by Petitioner, Patent Owner urged the Board to adopt the construction of a "network path" as a "physical route through which data is transmitted from [a] source to [a] destination," a construction Patent Owner urged in the related district court litigation. '342 IPR, Paper 22 at 11. Patent Owner contended "Petitioner agreed to that construction [in the district court litigation], which should also be applied here [in the '342 IPR]." *Id.* Further urging this construction in the related '342 IPR, Patent Owner asserted "there is no reason

[7] The same Houser reference plays a dominant role in the recapture issue below. *Infra* Section IV.

to deviate from what the claim means 'on its face' when, even '[u]nder a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.'" *Id.* (quoting *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016) (citation omitted)). Even though the '342 IPR involves prior art challenges to the same '326 patent involved here, and Houser plays a dominant role in each proceeding (*see supra* note 7), Patent Owner asserted in the '342 IPR "[t]he Board need not construe" a "speech recognition engine." '342 IPR, Paper 22 at 8.

The Board agreed with, and adopted, Patent Owner's claim construction in the '342 IPR, which the same Petitioner did not dispute there and does not dispute here. '342 IPR, Paper 54 at 15–20; Reply 21.[8] We agree with, and adopt, the Board's analysis and claim construction of a "network path" as a "physical route through which data is transmitted from [a] source to [a] destination," in the '342 IPR. *Id.* The two cases involve the same intrinsic evidence, namely the '326 patent Specification and claims, and we see nothing in this record to deviate from the construction and analysis in the '342 IPR. Although in the '342 IPR Patent Owner also urged the Board to interpret a source and destination as requiring "nodes that both send and receive messages" (*see id.* at 19–20), Patent Owner does not urge that construction of a "node" here. Even if the "node" issue somehow presents a material issue here, no party argues that issue here, and the two cases involve materially the same intrinsic evidence (the '326 patent Specification and claims). No reason exists to deviate from the Board's analysis in the '342 IPR. Therefore, we

[8] The Board employed the same claim construction in the related '343 FWD. '343 IPR, Paper 56 at 16–21; *see supra* Section I.B (Related Matters).

also adopt the Board's rationale and reasoning in the '342 IPR on the "node" issue here. *See id.* at 15–20.

Therefore, the claim construction of a "network path" does not alter the claim construction of a "speech recognition engine." Accordingly, and for the reasons explained in the preceding section, we adopt Petitioner's proposed claim construction of a "speech recognition engine" as supported by the Specification and extrinsic evidence. As we indicated in the previous section, the speech recognition engine represents a generic device that includes "hardware and/or software used to identify spoken words." *Supra* Section I.E.1.

3. Extrinsic Evidence

Extrinsic evidence also supports our claim construction of a speech recognition engine and conforms with the Specification. As noted in the Institution Decision, Mr. Lipoff cites "articles and disclosures attached as Exhibits evidencing known voice recognition technology." Inst. Dec. 32 (citing Ex. 1029 ¶¶ 52–58). Exhibit 1020 represents a "May 1995 article disclosing a remote control with a microphone providing natural voice-control technology to control a digital set-top with menus via control at a headend." Exhibit 1021 represents an "August 1995 IBM Technical Disclosure Bulletin [IBMTDB] disclosing 'methods for using speech recognition to select or modify images, sound, and data transmitted on a cable television system' using a microphone or wireless telephone." Pet. 32 (quoting Ex. 1021, 285).

The 1995 IBMTDB, titled "Speech Recognition Methods for Controlling Cable Television," discloses a centralized "speech recognition system 8 . . . connected to a cable television signal generator" "[a]t a remote

location" relative to a subscriber TV 2, cable box 4, and telephone 5. *See* Ex. 1021, 285, Fig. 1. Three embodiments, illustrated in Figures 1–3, describe centrally located speech recognition system 8, 20, or 29, accessible by multiple users through "the telephone company switch," 7 or 15, or signal splitter 17. *See id.* at 285–286, Figs. 1–3. The embodiment of Figure 3 involves microphone 24 and cable box 25, such that "the user's voice commands are passed unaltered onto a channel or sub-channel of the cable television system, are compressed prior to transmission, are intermixed with transmissions from other users, or are labeled or partly decoded in the home before transmission." *Id.* at 287 (emphasis added). "In general, voice commands are directed from a signal splitter 27 to a speech recognition system 28, which in tum controls a television signal generator 29 and a portion of cable system 30." *Id.* So the IBMTDB discloses a centrally located speech recognition engine accessible to multiple users. *Id.*; Ex. 1029 ¶ 57 (testifying "acoustic data from the user is sent over the cable TV network, either compressed or intermixed with transmissions from other users" in the IBMTDB system), ¶¶ 53–58 (testifying about other known speech recognition technology including the IBMTDB Figure 3).

As noted above, the '326 patent acknowledges the use of known technology in speech recognition. Ex. 1001, 1:42–2:4; Ex. 1029 ¶ 53 ("The '326 [p]atent admits that speech recognition and voice control systems existed in the prior art."). Tracking the title, "System and Method of Voice Recognition Near a Wireline Node of a Network, Supporting Cable Television and/or Video Delivery" (*id.* (54)), the '326 patent specifically states "[t]his *invention* relates to voice recognition

performed near a wireline node of a network supporting cable television and/or video delivery" without any requirement about accessibility to a plurality of users. *Id.* at 1:38–40 (emphasis added).

Accordingly, the recited speech recognition engine represents a generic device for identifying spoken words. *See* Inst. Dec. 30 (determining the claims require "types of generic devices" including "a conventional speech recognition device"). Based on the foregoing discussion and for the reasons explained in the preceding two sections, as Petitioner proposes, a "speech recognition engine" includes "hardware and/or software used to identify spoken words." *See* Pet. 15–16.

II. COVERED BUSINESS METHOD PATENT

Section 18 of the AIA provides for the creation of a transitional program for reviewing covered business method patents and limits review to persons or their privies that have been sued or charged with infringement of a "covered business method patent." AIA § 18(a)(1)(B); *see* 37 C.F.R. § 42.302. In addition,

> the term "covered business method patent" means a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions.

AIA § 18(d)(1); *see* 37 C.F.R. § 42.301(a). A patent need have only one claim directed to a covered business method to be eligible for review. *See* Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention; Final Rule, 77 Fed. Reg. 48,734, 48,736 (Aug. 14, 2012) ("Final Rule").

A. Charged with Infringement

Under 37 C.F.R. § 42.302(a),

> [a] petitioner may not file with the Office a petition to institute a covered business method patent review of the patent unless the petitioner, the petitioner's real party-in-interest, or a privy of the petitioner has been sued for infringement of the patent or has been charged with infringement under that patent.

See AIA § 18(a)(1)(B). Under 37 C.F.R. § 42.302(a), "[c]harged with infringement means a real and substantial controversy regarding infringement of a covered business method patent exists such that the petitioner would have standing to bring a declaratory judgment action."

Petitioner "certifies that it has been sued for infringement of the '326 Patent and therefore satisfies the standing requirement to seek CBM review." Pet. 3 (citing Ex. 1026, 12–14 (Complaint)). Patent Owner does not contest Petitioner's certification.

Based on the foregoing, Petitioner shows persuasively it possesses standing to file the instant Petition for CBM review of the '326 patent.

B. Used in the Practice, Administration, or Management of a Financial Product or Service

A covered business method ("CBM") patent "claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions." AIA § 18(d)(1); 37 C.F.R. § 42.301. The Board must "examine the claims when deciding whether a patent is a CBM patent." *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1340 (Fed. Cir. 2016) (emphasis omitted).

Petitioner points to claims 8 and 18 as each reciting assessing a user's spoken request "to create a ***financial consequence***" and then "***billing*** a user . . . based upon said ***financial consequence***." Pet. 19 (emphasis by Petitioner). Petitioner also points to claims 9 and 19 as each reciting "assessing the user's spoken request 'to create a ***financial consequence***'" and "'communicating said ***financial consequence***' to the user and 'confirming said communicated ***financial consequence*** to create a ***financial commitment***' before 'billing said user based upon said ***financial commitment***.'" *Id.* (quoting claims, Ex. 1001, 51:62–52:4, 53:33–40 (emphasis by Petitioner)).

Based on the foregoing, Petitioner shows that at least one claim of the '326 patent recites "a method . . . for performing data processing or other operations used in the practice, administration, or management of a financial product or service." AIA § 18(d)(1). Patent Owner does not contest the showing.

C. Technological Invention

As quoted above, under AIA § 18(d)(1), "the term 'covered business method patent' . . . does not include patents for technological inventions." Under 37 C.F.R. § 42.301(b), "[i]n determining whether a patent is for a technological invention," the Board considers "whether [1] the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art, and [2] solves a technical problem using a technical solution," respectively, the first and second prongs of the technical invention exception. Both prongs must be met for a claim to fall under the exception. *See id.*; *cf. Fidelity Information Services, LLC, v. Mirror Imaging, LLC*, Case CBM2017-00064, slip op. at 22 (PTAB Apr. 24, 2018) (Paper 26) (" [C]laim 1 . . . does not recite a technological feature that is

novel and unobvious over the prior art [under the first prong of § 42.301(b)]. "Given that determination, we need not reach the second prong of whether the claim solves a technical problem using a technical solution.")

In general, the Office Patent Trial Practice Guide ("TPG") provides the following guidance with respect to claim content that typically would not render a patent a technological invention:

> (a) Mere recitation of known technologies, such as computer hardware, communication or computer networks, software, memory, computer-readable storage medium, scanners, display devices or databases, or specialized machines, such as an ATM or point of sale device.
>
> (b) Reciting the use of known prior art technology to accomplish a process or method, even if the process or method is novel and non-obvious.
>
> (c) Combining prior art structures to achieve the normal, expected, or predictable result of that combination.

TPG, 77 Fed. Reg. at 48,763–64.

With respect to the second prong of § 42.301(b), Petitioner argues "[t]he 'problem' the '326 [p]atent purports to address is providing speech recognition functionality in a cable television system." Pet. 25 (quoting Ex. 1001, 4:54–56). Petitioner contends

> [t]he patent discloses addressing this asserted problem by locating a "speech engine" in the cable network. '326 [p]atent at 49:14–21. But the patent does not identify any technical problem that is solved by the challenged claims. Lipoff Decl. ¶ 122. For instance, the claims say nothing about how to solve any purported "problem" with processing speech in a cable television system. Instead, they broadly recite the steps of (1) receiving speech information from the user, (2) transferring that speech information to a speech recognition engine for recognizing the speech, and (3) "effecting information delivery" based on that recognized speech. Lipoff Decl. ¶ 123. Thus, the claims do not recite a technological

> *solution* to any problem; rather, the claims merely recite well-known steps to achieve the purported goal of the patent (i.e., providing speech recognition functionality in a cable or other video delivery network). *Id*.

Id.

Patent Owner responds that Petitioner fails to "analyze the claims as a whole." PO Resp. 8. Patent Owner relies on "Petitioner's own chief executive," Brian L. Roberts, quoting his statement from a 2004 article, as follows:

> "[O]ne of my favorite" new pieces of technology was a TV remote control that includes a speech recognition feature. Customers would use it to switch stations by saying "Go to ESPN" or "Go to Channel 4," and could call up on their TV screen a listing of all the John Wayne movies available through the on-demand service by saying "John Wayne movies."

See PO Resp. 9 (quoting Ex. 2004, 1).

In discussing technology, Mr. Roberts' statement refers to speech recognition technology without referring to any of the '326 claims, which did not issue until 9 years after the statement. Mr. Roberts does not include an analysis or a relevant statement with respect to CBM eligibility or the breadth of the claims involved here. *See* Ex. 2004. Contrary to the related arguments by Patent Owner, Petitioner shows at least one challenged claim does not solve a technical problem using a technical solution.

As indicated above, Petitioner initially lists the three main steps of claim 1, contending claim 1 does not solve a technical problem. Pet. 25 (citing Ex. 1029 ¶ 123). As Mr. Lipoff explains, "[t]he claims simply recite well-known steps to achieve the purported goal of the patent (i.e., providing speech recognition functionality in a cable or other video delivery network)." Ex. 1029 ¶ 123. Mr. Lipoff adds that the financial activity claims (identified

in the previous section) "similarly do not solve any technical problem," because "[t]hose claims simply recite steps for using voice commands to perform financial transactions, and the steps do not relate to, or purport to solve, any technical problem." *Id.* ¶ 124. As Mr. Lipoff further explains, the '326 patent purports to solve a problem related to providing speech recognition in a cable television system, but the claims do not require a cable system or embrace any proposed solution, and the '326 patent neither describes a particular problem with providing speech recognition to cable television systems nor provides any solution thereto. *See id.* ¶¶ 121–124 (citing Ex. 1001, 4:54–56).

With respect to prior art cable and speech recognition systems, the '326 patent describes the following problems:

> While these innovations [in speech recognition] have been substantial, they do not resolve several central questions of great importance to cable television, video delivery systems, and commerce. There is no present system providing voice recognition to *a collection of users over a cable television network*. There is no present system providing user identification based upon that voice recognition over a network that supports cable television and/or video delivery. There is no present system sufficient for real-time auctions and contracting to be conducted over a cable television and/or video delivery network, based on user identification through voice recognition.

Ex. 1001, 4:52–62 (emphasis added). Notwithstanding the problems noted, challenged claims 1 and 12 do not require "a collection of users," let alone "providing voice recognition to a collection of users over a cable television network." *See id.*; *supra* Section I.E.

Patent Owner describes a "two-fold" technological problem:

> (1) that cable networks did not have speech recognition capabilities that could be provided over a cable or video network,

> Ex. 1001, 2:5–11, and (2) that they did not support multiple users, ... The '326 patent does not take the prior art speech technologies, i.e., a powerful local computer or using a telephone, and apply them to a cable network. Ex. 1001, 1:41–2:4. Instead, it claims the two-network-path solution, discussed above, that the Petition fails to show was known in the art.

PO Resp. 10.

Notwithstanding the disclosure, claim 1 does not require "a cable or video network." *See id.* Also, none of the challenged claims require multiple users. *See supra* Section I.E (claim construction). Regarding the "two-network path" solution, Patent Owner does not explain what problem that solves or why that involves anything more than a conventional network involving different devices communicating with the network over different paths. *See* PO Resp. 2–7; *infra* Section C.2; *supra* Section I.A (noting different paths or frequency allocations were conventional in cable systems); Section I.E (discussing known conventional devices and networks).

Patent Owner refers to a "purport[ed] . . . problem of providing speech processing to multiple users," and argues "this problem can be solved by performing speech recognition on a server." PO Resp. 6 citing Ex. 2011 ¶ 197). Nevertheless, claim 1 does not require a server, multiple users, or the two paths to be different. *See*, *e.g.*, Ex. 1001, 50:56–57 (claim 2, reciting "[t]he method of claim 1, wherein said first network path and said second network path are different paths."); *supra* Section I.E (claim construction). Also, nothing in the '326 patent reveals how the claimed first and second network paths solves any problem.

Further regarding speech recognition and a wireless device, the '326 patent admits as known "voice operated functions using the latest voice recognition technologies," including with "some computers" and "cellular

phones" (i.e., a wireless device). *See* Ex. 1001, 1:42–45; Pet. 5 (citing Ex. 1001, 1:42–2:4, 4:50–52 as "acknowledg[ing] that many voice recognition systems existed in the prior art"), 45 (reading the claimed first and second devices and functions respectively on conventional wireless telephones or microphones and a set-top box, television, or combination of the two and their associated predictable functions (citing Ex. 1023 ¶ 172)). The '326 patent also admits "[t]here has been extensive research into the mechanics of speech recognition. The progress has been sufficient to allow voice trading by stock brokers using their desk top computers." Ex. 1001, 4:49–52.

Petitioner shows that the challenged independent claims require at most the "[m]ere recitation of known technologies, such as computer hardware, communication or computer networks, . . . or specialized machines," "the use of known prior art technology to accomplish a process or method," and/or "[c]ombining prior art structures to achieve the normal, expected, or predictable result of that combination." *See* Pet. 21 (citing Ex. 1029 ¶¶ 54–58, 118–121; Ex. 1021; Ex. 1022); Ex. 1029 ¶¶ 118–124; TPG, 77 Fed. Reg. at 48,763–64. Similar to the challenged independent claims, the challenged financial claims (i.e., claims 8, 9, 18, and 19, *see supra* Section IIB) also merely require the use of known technologies and predictable results.

For example, claim 8 recites "[t]he method of claim 1, further comprising the steps of: assessing a response identified as to a user device comprising any of said first device and said second device to create a financial consequence; and billing a user associated with said user device based upon said financial consequence." As such, claim 8 recites additional steps that involve using generic well-known devices for billing a user. Accordingly, considering the steps of claim 1, Petitioner shows sufficiently that at least

claim 8 reads on combining a known wireless device such as a wireless remote control with a microphone to transfer speech data to a known speech recognition engine to accomplish information data transfer to a known television or set-top box, and billing a user for the information transfer. *See* Pet. 13, 24–25.

Based on the foregoing, Petitioner persuasively shows that at least one challenged claim of the '326 patent does not recite a technological feature that exempts the '326 patent from CBM review under 37 C.F.R. § 42.301(b).

D. Conclusion—A Covered Business Method Patent

The Board may institute a CBM patent review based on the eligibility of a single claim because § 18(d)(1) of the AIA indicates CBM *patent* eligibility if at least one claim directs its subject matter to a CBM. *See* 35 U.S.C. § 324(a); Final Rule, 77 Fed. Reg. at 48,736 (Response to Comment 8). In view of the foregoing, on this preliminary record, the '326 patent constitutes a CBM patent under AIA § 18(d)(1).

III. 35 U.S.C. § 101

A. 35 U.S.C. § 101—Principles of Law

A patent-eligible invention must claim a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court interprets § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, the Court sets up a two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with this framework, a tribunal first determines

what concept the claim is "directed to." *See id.* at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, i.e., the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices, *Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611; mathematical formulas, *Parker v. Flook*, 437 U.S. 584, 594–95 (1978); and mental processes, *Gottschalk v. Benson*, 409 U.S. 63, 69 (1972). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 187; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). On the other hand, the Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g.*, *id*. at

187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, a tribunal turns to the second step of the *Alice* and *Mayo* framework, where it "must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (some quotation marks omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.* In determining whether a method or process claim recites an abstract idea judicial exception, during the inquiry, a tribunal must examine the claim as a whole. *Alice*, 573 U.S. at 218 n.3. "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.* at 222.

The two steps *Alice* outlines may involve "overlapping scrutiny of the content of the claims." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). The Guidance (*see supra* Section I) similarly refers to "the recognized overlap in the steps depending on the facts of any given case." Guidance, 83 Fed. Reg. at 53.

According to *Elec. Power*, under *Alice*, "the first-stage inquiry" involves

> looking at the "focus" of the claims, their "character as a whole," and the second-stage inquiry (where reached) as looking more precisely at what the claim elements add—specifically, whether, in the Supreme Court's terms, they identify an "inventive concept" in the application of the ineligible matter to which (by assumption at stage two) the claim is directed.

Elec. Power, 830 F.3d at 1353 *(*citing, *inter alia*, *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016)).

B. USPTO 2019 Revised Patent Subject Matter Eligibility Guidance

As indicated above, the PTO recently published revised USPTO § 101 Guidance. Under the Guidance, in Step 2A, the PTO determines (under two prongs) whether the claim recites the following:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activities such as a fundamental economic practice, or mental processes) (Prong One); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a}-(c), (e}-(h) (9th ed Rev. 08.2017, Jan. 2018)) (Prong Two).

See Guidance, 84 Fed. Reg. at 51–55.

In Step 2B, only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, then the PTO determines whether the claim

> (3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Guidance, 84 Fed. Reg. at 56.

C. Section 101 Challenge

1. Statutory Claims and Guidance Step 1

Alice involves determining whether the claims recite an exception to an otherwise statutory category under 35 U.S.C § 101. *See Alice*, 573 U.S. at 216–17. Similarly, under the Guidance, the PTO first determines "whether the claim is to a statutory category (Step 1)." Guidance, 84 Fed. Reg. at 53. Here, the challenged claims recite a statutory process, namely a process "for speech directed information delivery," including "receiving speech information at a first device . . . , transferring said speech information . . . to a speech recognition engine; and . . . effecting information delivery to a second device." *See* Ex. 1001, 50:27–44; Pet. 36.

2. USPTO Guidance Step 2A, Prong 1
Whether Challenged Claims Recite an Abstract Idea

"The § 101 inquiry must focus on the language of the [a]sserted [c]laims themselves." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016); *see also Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) (admonishing that "the important inquiry for a § 101 analysis is to look to the claim"); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014) ("We focus here on whether the claims of the asserted patents fall within the excluded category of abstract ideas."). "An abstract idea can generally be described at different levels of abstraction." *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016).

As noted above, under *Alice*, determining whether a process claim recites an abstract idea requires examining the claim as a whole under the first step of *Alice*. Stated differently, according to *Elec. Power*, under *Alice*, "the

first-stage inquiry" involves "looking at the 'focus' of the claims, their 'character as a whole,'" *Elec. Power*, 830 F.3d at 1353 (citing, *inter alia*, *Enfish*, 822 F.3d at 1335–36). Courts have recognized numerous categories of abstract ideas, such as "methods of organizing human activity," *Intellectual Ventures I LLC v. Capital One Bank (USA), N.A.*, 792 F.3d 1363, 1367 (Fed. Cir. 2015), "a fundamental economic practice long prevalent in our system of commerce," *Alice*, 573 U.S. at 217 (quoting *Bilski*, 561 U.S. at 609 (Stevens J. concurring)), and steps "done mentally" that "can be carried out in existing computers long in use," *Benson*, 409 U.S. at 67. The Guidance similarly provides certain groupings of abstract ideas based on what the claim recites: mathematical concepts, certain methods of organizing human activity, such as fundamental economic principles or practices, and mental processes.[9] 84 Fed. Reg. at 52.

Addressing claim 1's character as a whole and specific recitations therein, Petitioner submits it "broadly recites the steps performed in placing an order for a delivery." Pet. 36. Petitioner contends claim 12 adds "only two implementation details" to claim 1 without "chang[ing] the abstract nature of what is claimed." *Id.* at 41. Petitioner contends the dependent challenged claims do not "convert the underlying abstract idea to patent-eligible subject matter." *Id.* at 42. Finally, Petitioner contends all the challenged claims recite "'purely functional and generic' computer technologies" that "fail to add an

[9] The Guidance also advises that the "*Alice* Step 1" analysis should exclude analysis of whether elements represent well-understood, routine, and conventional activity. Guidance, 84 Fed. Reg. at 55. "[R]evised Step 2A specifically excludes consideration of whether the additional elements represent well-understood, routine, conventional activity. Instead, analysis of well-understood, routine, conventional activity is done in Step 2B." *Id*.

inventive concept to the abstract idea." *Id.* at 43 (quoting *Alice*, 573 U.S. at 226).

Addressing the Guidance, Petitioner asserts "[t]he challenged claims fall into . . . certain methods of organizing human activity[] because they are directed to . . . using speech recognition to process a transmitted order to deliver information." Pet. SMG Br. 2–3 (citing Pet. 37, 41; Inst. Dec. 24–26, 29). Petitioner also contends "[t]he Petition specifically identifies examples of people making mail-order catalog purchases, dialing directory assistance, and ordering food for home delivery," and notes the Guidance includes "sales activities" as "examples of commercial interactions and managing interactions between people." *Id.* at 3. As a specific "example" of claims "that . . . add only insignificant limitations to the patent-ineligible abstract idea of processing an order for delivery," Petitioner asserts "dependent claims 8–9 and 18–19 recite the abstract and uninventive concept of allowing the user to place an order and then billing for it." *Id.*

Petitioner additionally asserts "[t]he claims also implicate Group (c) (mental processes) by using existing speech recognition technology to automate mental processes long performed by humans." *Id.* at 3–4 (citing Pet. 37, 40; Inst. Dec. 25). Petitioner explains "[t]he claims recite automating the mental process of taking an order for delivery." *Id.* at 4.

Petitioner explains further that the claims involve "basic steps for placing an order [by telephone] to request delivery of a product or service have existed for many decades (at least)." Pet. 37. Petitioner similarly analyzes the steps of claim 1 as "broadly directed to the concept of:

(1) receiving a spoken request, (2) transferring the request to another location where it can be understood, and then (3) delivering the requested information." *Id.* at 36–37 (citing Ex. 1029 ¶ 152).

Petitioner quotes the '326 patent Specification to support its contention regarding the ordering and delivery of information embraced by the challenged claims: "In these 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 37 n.8 (quoting Ex. 1001, 5:14–18).

Further discussing the concept of ordering and delivering information, Petitioner relates the focus of the claims to mail order catalogs and telephone orders, as follows:

> [M]ail order catalog companies have existed for more than a century and began accepting telephone ordering (i.e., "speech information") shortly after telephone service became wide-spread. [Ex. 1029] ¶ 153. As in claim 1, ordering a product by telephone involves the steps of: (1) receiving a spoken request (i.e., the caller speaks into the telephone); (2) transferring the request to another location where it can be understood (i.e., the request is transmitted over the telephone line to the merchant who determines what specific product is being requested); and then (3) delivering the requested information (i.e., the merchant sends the requested product for delivery). *Id.* ¶ 153. People have also performed these same basic steps for decades when using telephone directory assistance or ordering food for home delivery. *Id.* ¶¶ 153–154.

Id. at 37.

Focusing on specific recitations in claim 1, Petitioner contends "receiving speech information" and "'transferring said speech information' to speech recognition engine" involves "no more than 'collecting

information.'" Pet. 40 (quoting *Elec. Power*, 830 F.3d at 1353). According to Petitioner, "[t]he recited 'speech recognition engine' merely processes the speech information." *Id.* (citing Ex. 1001, 50:42–43).[10] Petitioner analogizes such processing and analyzing of speech information to claimed steps involved in *Elec. Power*, 830 F.3d at 1353, wherein the court noted "we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." Pet. 40 (quoting *Elec. Power*, 830 F.3d at 1353). In other words, Petitioner contends the limitations of "receiving speech information" and "recognizing" the speech, recite mental processes, and serve as part of a fundamental economic practice involving "effecting information delivery" under the final step of claim 1 (which requires the earlier steps of "receiving speech information," and "transferring" and "recognizing" it, to "effect[] information delivery"). *See id.*; *see also* Pet. SMG Br. 3–4.

In particular with respect to the final step of claim 1, "effecting information delivery to a second device via a second network path," Petitioner relies on *Elec. Power* for its reasoning that "we have recognized that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis."

[10] The analysis of the "speech recognition engine" properly belongs under Guidance Step 2A, prong two, and Step 2B, as addressed below, but our reviewing court and the Guidance recognizes the analysis sometimes involves and requires some overlap under *Alice*, as noted above in Section III.A. *See, e.g.*, *Elec. Power*, 830 F.3d at 1353.

Pet. 40 (quoting *Elec. Power*, 830 F.3d at 1353).[11] Petitioner compares steps of claim 1, including the final step, and similar steps in claim 12 to "delivering rented digital data to a user." *See id.* at 38 (citing *Dish Network Corp. v. Customedia Techs., L.L.C.*, CBM2017-00031, Paper 10 at 18–19 (PTAB July 18, 2017) (reasoning "that 'delivering rented digital data to a user' is little more than a generic 'computerization' of 'the well-known and long-established concept of renting media content such as videos'")), 41–42 (similar analysis for claim 12).

In other words, as indicated above, Petitioner alleges specific claim steps and the claims as a whole, respectively recite and focus on, mental steps of processing speech information and a fundamental economic contractual or commercial practice of placing an order to effect product delivery. *See* Pet. SMG Br. 3–4; Pet. 37 ("People have also performed these same basic steps for decades when using telephone directory assistance or ordering food for home delivery." (citing Ex. 1029 ¶¶ 153–154)). Stated another way, the step of "recognizing said speech information and effecting information delivery," as independent claims 1 and 12 each recite, constitutes mental steps of processing speech information and a fundamental economic activity of delivering an order. *See* Pet. SMG Br. 3–4 ("The challenged claims fall into . . . certain methods of organizing human activity . . . because they are directed to the abstract idea of using speech recognition

[11] These network paths and first and second devices discussed below, like the speech recognition engine, properly fall under the analysis of the next prong and next step under the Guidance, but as indicated above, Petitioner presents an overlapping analysis that our court and the Guidance recognizes as proper or required in some cases. *See supra* note 10.

to process a transmitted order to deliver information," and "[t]he claims recite automating the mental process of taking an order for delivery.").

Petitioner explains why independent claim 12 does not alter the basic abstract nature of claim 1. For example, Petitioner contends claim 12 "recites the same method steps of claim 1, adding only two implementation details: (1) the information is delivered to a 'second device capable of displaying' moving and still images and 'playing' audio; and (2) the two network paths are 'different.'" *Id.* at 41. Petitioner analogizes claim 12 as similar to

> placing an order by telephone (i.e., "first device") for delivery of a 35-mm film, video cassette, digital video disc, etc. to be played on a film projector, VCR, DVD player, etc. (i.e., "second device"). The "first network path" for ordering (e.g., telephone line) is "different" than the "second network path" for delivery (e.g., U.S. mail, etc.).

Id. (citing Ex. 1029 ¶¶ 156–157).

Petitioner similarly analyzes dependent claims 2–11 and 13–21 and contends they "recite parallel additional limitations—all of which are implementation details that cannot convert the underlying abstract idea to patent-eligible subject matter." Pet. 41–42 (addressing claims 2–11, 13–21 citing Ex. 1029 ¶¶ 158–168).

As one example, claim 7, which depends from claim 1, follows:

> 7. [A method for controlling a speech recognition system coupled to a network.] *The method of claim 1, further comprising at least one of* the steps of:
>
> [processing a multiplicity of received identified speech channels to create a multiplicity of recognized speech;
>
> responding to said recognized speech to create a recognized speech response that is unique to each of said multiplicity of recognized speech; and

> providing said speech recognition system at a back channel accessible by a multiplicity of user devices coupled to said network]
>
> *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, 51:2–43. Claim 7 only requires determining a user site merely by using one of the recited "determining" steps. Claim 17 recites similar limitations. Claims 10 and 20 require "identifying said user based upon recognized speech and based upon said user profile list," wherein "said user profile list contain[s] at least one user profile."

Petitioner contends "[c]laims 7 and 17 and claims 10 and 20 recite several different ways to identify the user site sending the request, which is no more than computerization of recognizing a frequent customer by voice or simply stating: 'May I ask who's calling?'" *Id.* at 43. As noted above, Petitioner summarizes the dependent claims as reciting further limitations directed to mental processes and fundamental economic practices (including commercial interactions), without altering the character of the abstract idea recited in independent claims 1 and 12. *See* Pet. SMG Br. 3–4 (summarizing claims as reciting limitations falling into the two categories). As recited in these claims, fundamental economic practices, including commercial or contractual practices, include transmitting a spoken order for information, processing the order, and delivering the information (using different ordering

and delivering paths with respect to claims 17 and 20, similar to claim 12), while determining a user cite by recognizing one or more frequent customers associated with the spoken order, a mental process. *See* Pet. 43; Pet. SMG Br. 3–4.

Claims 10 and 20 further recite limitations directed to "a user profile list" and using the list and speech to recognize a user. As noted above, Petitioner contends the dependent claims do not alter the basic character of the abstract idea recited in the independent claims. *See* Pet. 43; Pet. SMG Br. 3–4. In other words, "identifying said user based upon recognized speech and based upon said user profile list" according to claims 10 and 20 recites a mental process of recognizing a customer by collecting and analyzing data in a list. *See Smart Sys. Innovations, LLC v. Chi. Transit Auth.*, 873 F.3d 1364, 1371 (Fed. Cir. 2017) (noting a prior holding wherein "claims directed to the collection, storage, and recognition of data are directed to an abstract idea" (citing *Elec. Power Grp.*, 830 F.3d at 1353 (indicating "collecting information" may be "within the realm of abstract ideas" in some circumstances)); Pet. 41–42 (addressing dependent claims (citing Ex. 1029 ¶¶ 158–168)); Pet. SMG Br. 3–4.

Petitioner also contends dependent claims 8–9 and 18–19 recite financial limitations "that clearly recite commercial interactions falling within Group (b)," i.e., they recite limitations of a fundamental economic practice "of allowing the user to place an order and then billing for it" and the mental process of "taking an order for delivery." Pet. SMG Br. 3–4.

As another set of examples, with respect to claims 5, 15, 11, and 21, Petitioner summarizes the claims as being directed to processing speech information "in an 'unrecognized state' to be recognized by the person

receiving the [telephone] order 'based upon natural language.'" *See* Pet. 42. As indicated above, Petitioner generally characterizes recognizing and processing speech as reciting mental steps. *See* Pet. 40 (citing *Elec. Power*, 830 F.3d at 1353 ("[W]e have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.")); Pet. SMG Br. 3–4 (asserting the claims recite a mental process).

The Specification does not discuss specifically what an "unrecognized state" encompasses, but it implies that the system stores recognized commands for comparison to a user's commands (which, in one embodiment, the remote control digitizes before sending). *See, e.g.*, Ex. 1001, 15:42–16:31, 19:27–60; 24:1–59. If the disclosed system does not recognize a user's speech command initially (i.e., an unrecognized command), it may perform steps, in one embodiment, to ascertain the user's intent. *See id.* at 19:27–60. Petitioner's arguments show that "natural language" constitutes at least one form of an unrecognized state, consistent with the Specification. *See id.*; Pet. 46 ("The '326 Patent itself admits that prior art systems could recognize speech in 'an unrecognized state' (claims 5 and 15) 'based upon natural language' (claims 11 and 21), and the patent does not purport to disclose any new technique or approach for doing so." (citing Ex. 1029 ¶¶ 93, 99, 176, 182)).

Patent Owner responds "the same claimed concepts also support the finding that the claims are not directed to 'placing an order and having something delivered,' as the Petition asserts (Pet. 2), under *Alice* step 1." PO Resp. 13. Addressing the Guidance, Patent Owner argues that the claims do not recite an abstract idea. According to Patent Owner, the independent

claims of the ’326 patent “do not recite any judicial exception” and “do not recite any abstract idea from the *Guidance*.” PO SMG Br. 2. Patent Owner asserts “the claims do not recite placing an order for delivery.” *Id.* at 3. Also, Patent Owner contends “dependent claim 4 proves that the claims can be used for other things like video searching.” *Id.* Patent Owner also argues “the functionality of the ‘speech recognition engine,’ and how that engine receives and transmits information from and to the user sites along ‘network paths,’ has nothing to do with any abstract idea or other judicial exception.” *Id.*

Patent Owner’s arguments do not undermine Petitioner’s showing. Patent Owner’s argument that “the claims do not recite placing an order for delivery” present a literal argument about what the claims “recite” that does not explain whether and how Petitioner mischaracterizes claim 1, or any claim, as a whole. *See* PO SMG Br. 2. Regarding claim 4, it merely recites a type of information, “video search information,” a mental construct, and the claim does not specify how to use the search information. Based on the foregoing discussion, Petitioner persuasively shows that specific claims recite steps directed to a fundamental economic practice including commercial or contractual interactions and a mental process.

The thrust of Patent Owner’s remaining arguments relate to the analysis under Step 2A, prong 2, addressed in the next section. *See supra* notes 11, 12. In summary, Petitioner persuasively shows the challenged claims recite a method of organizing human activity such as a fundamental economic commercial or contractual practice that includes effecting the delivering a product (information) based on a spoken request for the product. Petitioner persuasively shows that the limitations recited in all of the challenged claims, “receiving speech information” and “recognizing said speech information”

further recite a mental process of hearing and processing speech that humans have been performing forever. Petitioner also persuasively shows the recited "effecting information delivery" step recites a fundamental economic practice, similar to delivering products in a catalog or delivering or renting video information. *See* Pet. 38 (citing *Dish Network Corp. v. Customedia Techs., L.L.C.*, Case CBM2017-00031, Paper 10 at 18–19 (PTAB July 18, 2017)). Petitioner also shows that none of the challenged claims alter the basic abstract character of the claims. Pet. 41–42 (addressing claims 2–11, 13–21 citing Ex. 1029 ¶¶ 158–168).

Petitioner summarizes that claim 1 "as a whole is 'clearly focused on the combination of those abstract-idea processes.'" *Id*. at 40–41 (quoting *Elec. Power*, 830 F.3d at 1353 (indicating "a process of gathering and analyzing information of a specified content, then displaying the results" under circumstances including "no inventive technology for performing those functions" may be "directed to an abstract idea")). According to our reviewing court, as Petitioner contends, combining several abstract ideas does not render the combination any less abstract. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) ("Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract."); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (patent-ineligible claims directed to a combination of abstract ideas). Also, summarizing the recitations involved in different levels of abstraction does not undermine Petitioner's showing. *Apple, Inc. v. Ameranth Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016) ("An abstract idea can generally be described at different levels of abstraction.").

As indicated above, Patent Owner's arguments directed to the first device, the second device, the speech recognition engine, and other recitations in the dependent claims, relate to the second prong of the inquiry, i.e., "additional elements," discussed in the next two sections. *See* Guidance, 84 Fed. Reg. at 55 n.24.

3. USPTO Guidance Step 2A, Prong 2
Integration of the Abstract Ideas into a Practical Application

The challenged claims recite limitations beyond the judicial exception-i.e., "additional elements." Guidance, 84 Fed. Reg. 54. As Petitioner shows and as discussed herein, these additional elements do not integrate the recited judicial exception into a practical application. *See id.* at 55 nn.25 & 27–32 (citing MPEP §§ 2106.05(a)–(c), (e)–(h)). Under the Guidance, the "additional elements" may integrate the judicial exception when they reflect an improvement to technology or a technical field singly or as a combination. *See id.* at 55.

Petitioner argues that the challenged claims do not recite limitations integrating the abstract idea into a practical application. Petitioner explains "the challenged claims do not improve any technology or solve any technical problem; they instead use generic computer technology (i.e., devices, network paths, and [a] speech recognition engine) to implement the abstract idea of ordering information for delivery." Pet. SMG Br. 5–6. According to Petitioner, "[t]hat this abstract process is automated using conventional networked 'devices' and a computerized 'speech recognition engine' does not remove it from the realm of abstract ideas." Pet. 41 (citing *Alice*, 573 U.S. at 222–26; *Dish Network*, CBM2017-00031, Paper 10 at 18–19); *accord id.* at 40 (citing *Elec. Power*, 830 F.3d at 1353). Petitioner contends that the "first network path" and "second network path" recite "'components . . . at a high

level of generality and are merely invoked as tools to perform' the transmitting part of the abstract idea." Pet. SMG Br. 6 (citing USPTO Subject Matter Eligibility Exam 42).

Addressing the dependent claims, Petitioner summarizes as follows: "The limitations of the dependent challenged claims similarly recite (or incorporate) conventional, generic components or steps that are not inventive and do not change the abstract nature of the claims." Pet. 45–46 (citing Ex. 1029 ¶¶ 90–93, 173–176, 182). As an example, addressing claims 2–4 and 14–14, Petitioner contends "[r]equiring that the first device and second device 'are different devices' (claims 3 and 13), that the 'network paths are different' (claims 2 and 12), or that the requested information is 'video information' (claims 4 and 14) does not add any technical innovation to the underlying abstract idea." *Id.* at 46.

As determined above, individual steps and the claims as a whole focus on the abstract idea of a fundamental economic process and mental step. The claims recite transmitting a spoken order for information, processing the order using generic speech recognition software, and delivering the information using generic devices and network paths. *See id.* at 37 ("These basic steps for placing an order to request delivery of a product or service have existed for many decades (at least).") & n.8 (quoting the Specification). As stated above, the inquiry here under the Guidance involves analyzing the recited claim steps for "any additional elements . . . beyond the judicial exceptions" to determine if "those additional elements individually and in combination . . . integrate the exception into a practical application." Guidance, 84 Fed. Reg. at 54–55.

As noted above under prong 1 of Step 2A, Patent Owner argues "the functionality of the 'speech recognition engine,' and how that engine receives

and transmits information from and to the user sites along 'network paths,' has nothing to do with any abstract idea or other judicial exception." PO SMG Br. 4. Patent Owner contends "[t]he claims here recite a specific implementation of remote speech recognition by receiving a spoken command at a wireless device to effect information delivery to a different device." PO SMG Br. 5. Regarding the "first device" and "second device" recited in claims 1 and 12, Patent Owner contends that "while not expressly required until dependent claims 6 and 16, the first device may be a remote control (i.e., a device 'used for input and output for control purposes'), and the different [second] device may be a television and set[-]top box." *See id.*

Further, Patent Owner contends

> [t]he claims even further limit that specific implementation of speech recognition to one specific solution using two network paths: (1) a first path to transfer the received speech information to a speech recognition engine, and (2) a second path to deliver information to the second device. *See* POR at 3–5; Ex. 1001, 50:23–44. This combination of claim elements recites a practical application of any judicial exception Comcast may assert. Indeed, this combination of elements, tied to a practical application, makes the claims more than a mere "drafting effort designed to monopolize the judicial exception." *Guidance* at 54.

Id. at 5–6.

As Patent Owner recognizes, "Step 2A specifically excludes consideration of whether the additional elements represent well-understood, routine, conventional activity; that analysis occurs in Step 2B." *Id.* at 4. Nevertheless, Patent Owner's arguments do not undermine Petitioner's showing.

As Patent Owner states, the claimed first device may include a remote control device, and the claimed second device may include a television set-top

box. PO SMG 5–6. These claimed additional devices represent generic devices, as does the speech recognition engine as construed above. *See* Section I.E. Also, and as explained further below, with a microphone on a first network path and a set-top box in the second network path, Petitioner shows the first and second network paths represent generic network paths connecting generic devices to a generic speech recognition device. *See* Ex. 1001, Figs. 1 and 2 (showing generic cable networks with set-top boxes); *supra* Section 1.A (describing microphones as part of a network path); *infra* Section IV (addressing the breadth of the claims under recapture). With respect to different network paths as claims 2 and 12 require, the Specification admits "[d]ownstream control data transmission typically occurs in a separate frequency band from the upstream channels." Ex. 1001, 3:46–47. The claims here do not recite different frequency bands, indicating the generic nature of the same or different network paths (depending on the claim).

In addition, the Specification explains networks typically use the same or different fibers and cables with multiplexing schemes to manage upstream and downstream transmission:

> Typically, HFC networks employ an optical fiber from a central office, or Headend, to a neighborhood node. The fiber has forward and reverse transmission capability, which can alternatively be accommodated on separate fibers. Wavelength Division Multiplexing (WDM) can be used to implement both on a single fiber. At the node, coaxial cable connects the users through a shared frequency division multiplexing (FDM) scheme with contention resolution protocols used to manage upstream data flows.

Ex. 1001, 3:48–56. The generic network paths in the challenged claims fail to specify optic cables, coaxial cables, or multiplexing schemes.

None of the challenged claims require any improvement over a conventional or generic speech recognition engine, as construed above. *See supra* Section I.E. And no claims require an improvement over a conventional or generic first device, a second device, a first network path, or a second network path. *See* Pet. 45–46; *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257–58 (Fed. Cir. 2014) (discussing an improvement to hyperlink protocol), cited in Guidance, 84 Fed. Reg. at 55 n.25; *see also* MPEP § 2106.05(a).

Challenged independent claims 1 and 12 recite "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*."[12] (Emphasis modified to reissue challenged claims 1 and 12). As indicated above and in light of the Specification, this recitation shows a generic first device connected to a speech recognition engine over a first network path, with a generic second device connected to the speech recognition over a second network device.[13]

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[12] Claim 2 depends from claim 1, and like independent claim 12, adds "wherein said first network path and said second network path are different."

[13] Even though the claimed concept includes speech recognition (i.e., "a speech recognition engine"), "claims are not saved from abstraction merely because they recite components more specific than a generic computer." *See BSG Tech. v. BuySeasons, Inc.*, 899 F.3d 1281, 1286 (Fed. Cir. 2018) (citing *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 612–13 ("holding claims were directed to an abstract idea despite the claims' recitation of telephone units and servers"); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) ("holding claims were directed to an abstract idea despite the claims' recitation of a scanner")).

Again, these network paths, although different, represent generic paths, with the first path including a wireless portion, but with no other requirement or specificity, for example, the carrier frequency, the bandwidth, the modulation scheme, the multiplexing scheme, or even whether or not the claims require a physical cable path or optical path. The claims also do not require or preclude the paths from overlapping to some extent. *See* PO Resp. 5 (annotating hypothetical red and blue network paths in Figure 3 of the '326 patent as partially overlapping through what the Specification describes as through "a high speed physical transport 1400" in one embodiment (Ex. 1001, 7:16–17)); *supra* Section I.A (finding the Specification does not require the entirety of the paths to be different, noting for example, "each subscriber" sends signals to "the Headend via *either the same fiber used for the downstream video carriers, or a separate fiber*." (citing Ex. 1001, 3:25–28 (emphasis added)).

Patent Owner also argues as follows:

> The claims also recite additional features that the patent identifies as inventive and/or improving the technology. For example, claims 4, 6, 12, 14, and 16 further capture the concept of providing speech recognition in a video or cable television network, which the patent discloses as inventive. Ex. 1001, 4:53-59. Claims 7–11 and 17–21 further capture the concept of determining a user device, which the patent discloses as inventive and advantageous. *Id.* at 6:55–60; 10:20–38, 14:18–23. And claims 10 and 20 further capture to concept of identifying the user based on speech, which the patent discloses as inventive and advantageous. *Id.* at 4:56–62; 5:1–6; 18:30–35.

PO Resp. 13.

Patent Owner's arguments do not undermine Petitioner's showing. The argument that "claims 4, 6, 12, 14, and 16 further capture the concept of providing speech recognition in a video or cable television network, which the

patent discloses as inventive," merely shows that the disclosure contemplates a speech recognition engine with video and cable. The claims do not recite or require any improvement in video, cable, or a speech recognition engine. Video information simply constitutes a generic type of information transmitted for years over television. The claims do not specify if the information includes analog or digital information. Also, none of the claims specifically recite cable, contrary to Patent Owner's arguments. For example, claim 6 recites "wherein said information delivery is to said second device which comprise a television and STB." This claim at most recites generic equipment that theoretically could be used in a a generic cable system, without requiring an improvement in television or TV technology. At best, the "additional element does no more than generally link the use of a judicial exception to a particular technological environment or field of use," i.e., cable television. *See* Guidance, 84 Fed. Reg. 55.

The argument that "[c]laims 7–11 and 17–21 further capture the concept of determining a user device, which the patent discloses as inventive and advantageous" also does not undermine Petitioner's showing. PO Resp. 13. The '326 patent Specification states "[t]here is no present system *providing voice recognition to a collection of users* over a cable television network. There is no present system providing user identification based upon *that voice recognition over a network that supports cable television and/or video delivery*." Ex. 1001, 4:54–59 (emphases added). Although the '326 patent describes "providing voice recognition to a collection of users over a cable television network" as lacking in prior art systems, claims 7–11 and 17–21 do not require "providing voice recognition to a collection of users," let alone voice recognition of a user in a cable television system. Rather, these

claims essentially only require recognizing (by voice recognition or otherwise) a user at a single user site.

Furthermore, under Petitioner's abstract idea analysis, given the breadth of claims 7–11 and 17–21, recognizing a frequent customer and associating the user with something else like a generic device amounts to merely recognizing a sole customer. Even if the claims somehow require recognizing more than one customer and associating a device with that customer, people have been recognizing others based on speech for a long time. The claims do not improve upon any computer functionality. The additional elements of the challenged claims individually and as a combination do not integrate the exception into a practical application, mainly because they rely on conventional or generic components and network configurations. The additional elements do not improve upon the functioning the conventional or generic speech recognition engine and network paths, as recited in the challenged claims.

In summary, Petitioner shows that the additional elements recited in the challenged claims do not integrate the recited judicial exception into a practical application.

4. *Alice-Mayo*, Second Step, Guidance, Step 2B, Inventive Concept

The second step of the *Alice* inquiry, a tribunal must "scrutinize the claim elements more microscopically" for additional elements that might be understood to "transform the nature of the claim" into a patent-eligible application of an abstract idea. *Elec. Power*, 830 F.3d at 1353–54. In other words, the inquiry involves whether the claims include an "inventive concept," i.e., an element or combination of elements sufficient to ensure that the patent in practice amounts to significantly more than a patent on the

abstract idea itself. *Alice*, 573 U.S. at 220–22. The relevant inquiry includes whether "additional substantive limitations . . . narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself." *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341, 1345 (Fed. Cir. 2013) (internal quotations and citation omitted).

Similar to the second step of *Alice-Mayo*, under the Guidance, to determine whether a claim provides an inventive concept, the additional elements are considered—individually and in combination—to determine whether they (1) add a specific limitation beyond the judicial exception other than something "well-understood, routine, conventional" in the field or (2) simply append well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. Guidance, 84 Fed. Reg. at 56.

"For the role of a computer in a computer-implemented invention to be deemed meaningful in the context of this analysis, it must involve more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction*, 776 F.3d at 1347–48 (quoting *Alice*, 573 U.S. at 225). "To save a patent at [*Alice*] step two, an inventive concept must be evident in the claims." *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

Scrutinizing the recited method claims, for the reasons explained above, Petitioner contends that the claimed elements, viewed individually and as an ordered combination, do not transform the nature of the claims into patent-eligible application of an abstract idea. *See* Pet. 43–46. As determined above in the previous section, Petitioner explains that claims 1

and 12 are directed to an abstract idea and require no more than generic, conventional computer technology—e.g., a generic "first device," which may include a conventional wireless telephone or microphone, a generic "second device," which may include a generic or conventional television or STB, and a generic or conventional speech recognition engine, with each performing conventional functions as disclosed and claimed. *See* Pet. 22–24 (citing Ex. 1029 ¶¶ 54–58, 118–121), 43–46 (citing Ex. 1029 ¶¶ 90–99, 170–182); Ex. 1029 ¶¶ 52–58 (citing articles and disclosures attached as Exhibits evidencing known voice recognition technology); Ex. 1020 (May 1995 article disclosing a remote control with a microphone providing natural voice-control technology to control a digital set-top with menus via control at a headend); Ex. 1021, 285, 287 (August 1995 IBM Technical Disclosure Bulletin disclosing "methods for using speech recognition to select or modify images, sound, and data transmitted on a cable television system" using a microphone or wireless telephone). Petitioner also shows that the challenged dependent claims embrace the use of prior art conventional technology that fail to alter the nature of the claims because they fail to add any technological improvement. *See* Pet. 45–46.

As indicated above, Petitioner contends challenged independent claim 12 focuses on the abstract idea of using speech recognition to process a transmitted order to deliver information using different ordering and delivery paths. *See id.* Petitioner also explains that the challenged dependent claims focus on the abstract idea of using speech recognition to process a transmitted order to deliver information, using different ordering and delivery paths with respect to claims 2, 3, 4, and 12–21; billing a user with respect to claims 8, 9, 18, and 19; requiring a financial commitment with

respect to claims 9 and 19; providing certain types of information (e.g., video, images, audio) with respect to claims 4 and 14; and recognizing the user or user device via speech recognition with respect to claims 5, 7, 10, 11, 15, 17, 20, and 21. *See id.* at 42–43. Similar to limitations recited in claim 12, claims 6, 13, and 16 require different devices or types of generic devices that fail to alter the basic abstract idea underlying claims 1 and 12. *See id.* at 41, 43.

In addition, Petitioner contends the challenged claims involve automation using conventional networked devices and a conventional speech recognition device, which does not remove the challenged claims from the realm of abstract ideas. *See* Pet. 35–36, 38–43; *Alice*, 573 U.S. at 217–221; *Elec. Power.*, 830 F.3d at 1354 (noting "the two stages [of *Alice*] involve overlapping scrutiny of the content of the claims"). As summarized in *Elec. Power*, "the focus of the claims is not on . . . an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools." 830 F.3d at 1354.

Patent Owner asserts as follows:

> First, the claims recite how the implementation was designed to support multiple users in an information delivery network. POR at 2–7. Second, the claimed implementation was not routine or conventional. The conventional wireless device effecting the delivery of information to a different device was a standard remote control that sent information to a user's television or set top box, and the ability to control information delivery by speaking into a remote or other wireless device (for sending speech information to a remote speech processing engine) has only recently entered widespread use. But the '326 patent claims priority back to the year 2000: 15 years before Comcast released its X1 system. Comcast improperly conflates obviousness with its analysis of what was routine/conventional.

PO SMG Br. 7.

Patent Owner also argues that the claims recite an inventive concept under step 2 of *Alice*: "The two-network-path method for providing speech directed information delivery using a remote system recited by the ordered combination of the claim elements in claims 1 and 12 of the '326 patent, which the patent and its provisional assert is an inventive concept, makes the claims patent eligible." PO Resp. 13. Patent Owner also analogizes its claims as similar to those involved in *BASCOM* and involving "claims being eligible under *Alice* step two." *Id.* (citing *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016); *Enfish*, 822 F.3d at 1337).

Patent Owner's arguments do not undermine Petitioner's showing that the claims recite conventional well-understood routine devices, for the reasons discussed above. The arguments assume the claims require "a remote speech processing engine," and they do not. *See supra* Sections I.A, I.E; *infra* Section IV. As noted at several instances in this Final Written Decision, the first substantive sentence of the '326 patent states "[*t*]*his invention* relates to voice recognition *performed near a wireline node* of a network supporting cable television and/or video delivery." Ex. 1001, 1:38–40 (emphasis added). The Specification contemplates local or remote processing near a wireline node.

Also, the claims do not require supporting multiple users, but even if they do, the record shows that conventional cable systems supported multiple users. *See* Ex. 1029 ¶¶ 52–58, 169–182 (testifying about conventional technology, including conventional television networks); Ex. 1021 (IBMTDB); *supra* Section I.E (claim construction describing IBMTDB

(Ex. 1021) as disclosing conventional cable television with a remote speech recognition engine).

Although Patent Owner agrees that standard remote controls or set-top boxes represent conventional devices (PO SMG Br. 7), Patent Owner also agrees the claims read on or include those devices. *See id.* at 5 ("[W]hile not expressly required until dependent claims 6 and 16, the first device may be a remote control (i.e., a device 'used for input and output for control purposes'"), and the different [second] device may be a television and set[-]top box"). Even though the '326 patent claims priority to the year 2000, as explained above, Petitioner shows persuasively that the claims embrace standard and generic cable technology, microphones, speech recognition engines, and set-top boxes, all well-understood, routine, and conventional, existing at the time of the invention. *See* Pet. 22–24 (citing Ex. 1029 ¶¶ 54–58, 118–121), 43–46 (citing Ex. 1029 ¶¶ 90–99, 170–182); Ex. 1029 ¶¶ 52–58 (citing articles and disclosures attached as Exhibits evidencing known voice recognition technology); Ex. 1020 (May 1995 article disclosing a remote control with a microphone providing natural voice-control technology to control a digital set-top with menus via control at a headend); Ex. 1021, 285, 287 (August 1995 IBM Technical Disclosure Bulletin disclosing "methods for using [a remote] speech recognition to select or modify images, sound, and data transmitted on a cable television system" using a microphone or wireless telephone); *supra* Section I.E.

Addressing Patent Owner's argument based on *BASCOM*, Petitioner distinguishes it on several fronts, as follows:

> According to [*BASCOM*], "[t]he inventive concept described and claimed in the [challenged] patent is the installation of a filtering tool at a specific location, remote from the end-users,

> with customizable filtering features specific to each end user." 827 F.3d at 1350. Here, the challenged claims of the '326 Patent do not recite any limitation comparable to the [*BASCOM*] claims' explicit requirement of "installation of a filtering tool at a specific location" that is "remote from the end-users." *Cf.* '326 Patent at claims 1, 12. Nor has Patent Owner attempted to amend the claims to impose such limitations.
>
> [*BASCOM*]] also found that the patent at issue there claimed "a technology-based solution . . . to filter content on the Internet that overcomes existing problems with [prior art] Internet filtering systems." 827 F.3d at 1351. Unlike the patent in [*BASCOM*], there is no discussion in the '326 Patent of any particular problems with prior art methods that would be solved by transmitting information to and from a speech recognition engine via first and second network paths. Lipoff Decl. ¶¶ 122–124. While Patent Owner refers to a "two-network path solution," it does not identify any particular problem overcome by this purported solution.

Reply 8.

As Petitioner argues, the claims here do not require any specific location for the generic speech recognition engine. Moreover, even if somehow something limits a speech recognition to be located remotely, as discuss above, that feature already existed as a conventional cable feature in the prior art. *See, e.g.*, Ex. 1020 (May 1995 article disclosing a remote control with a microphone providing natural voice-control technology to control a digital set-top with menus via control at a headend); Ex. 1021, 285, 287 (August 1995 IBM Technical Disclosure Bulletin disclosing "methods for using [a remote] speech recognition to select or modify images, sound, and data transmitted on a cable television system" using a microphone or wireless telephone); *supra* Section I.E. Unlike the claims in *BASCOM*, the claims do not require "customizable [speech recognition] features specific to each user."

Finally, as Petitioner argues, unlike in *BASCOM*, the '326 patent does not refer to a two-network path solution as overcoming any problem. It does

not even refer to a two-network path, other than describing prior art cables or configurations, and referring to such known generic "forward and backward paths" as "loops herein." *See, e.g.*, Ex. 1001, 3:26–27, 3:47–58, 4:25–30; *supra* Sections IA, I.E.1. As also discussed above, the '326 patent describes server arrays of processors for speech recognition to handle a multiplicity of back channels, using one channel for each user, which appears to be part of any solution described, but not claimed. *See supra* Sections I.A, I.E.1; Ex. 1001, claim 1 (bracketed portion, indicating deleted matter from the '523 patent claims, formerly reciting "partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels").

Patent Owner also refers to disclosed embodiments and litigation remarks by Petitioner as showing what "the '326 claims are based on." *See* PO SMG Br. 7 (citing Ex. 2010, 15). However, Patent Owner characterizes "[t]hese bespoke components" as those components "upon which the claims are based." *Id.* Nevertheless, the claims do not require the disclosed components, even if based on some disclosed components for written description or other purposes. In any event, as Petitioner persuasively shows "with the exception of generic computer-implemented steps, there is nothing in the claims themselves that forecloses them from being performed by a human, mentally or with pen and paper." *Intellectual Ventures I v. Symantec*, 838 F.3d 1307, 1318 (Fed. Cir. 2016); Reply 6–7 (quoting same).

5. Conclusion–Non-Statutory Subject Matter

Based on the foregoing discussion and a review of the record, Petitioner shows by a preponderance of evidence that challenged claims 1–

21 recite abstract concepts and do not recite patent-eligible subject matter. *See Alice*, 573 U.S. at 224–25.

IV. 35 U.S.C. § 251

A. 35 U.S.C. § 251—Principles of Law

Section 251 permits a patentee to seek a reissue of a patent where, "through error," the patentee originally claimed "less than he had a right to claim." *In re Mostafazadeh*, 643 F.3d 1353, 1358 (Fed. Cir. 2011). However, "[t]he recapture rule bars a patentee from recapturing subject matter, through reissue, that the patentee intentionally surrendered during the original prosecution in order to overcome prior art and obtain a valid patent." *In re Youman*, 679 F.3d 1335, 1343 (Fed. Cir. 2012) (citing *In re Mostafazadeh*, 643 F.3d at 1358).

The recapture rule involves a three-step process to determine (1) whether and in what aspect, the reissue claims are broader than the patent claims; (2) the reissue claims' broader aspects relate to surrendered subject matter; and (3) the reissue claims materially narrow the claims relative to the claims prior to the surrender such that full or substantial recapture of the subject matter surrendered during prosecution is avoided. *See Youman*, 679 F.3d at 1343–47; *Mostafazadeh*, 643 F.3d at 1358–59 (citing *In re Clement*, 131 F.3d 1464, 1468–70 (Fed. Cir. 1997)).

Under the second step, "to determine what the applicants surrendered, we look to the change of scope between the original and patented claim . . . and the accompanying arguments applicants made during the original prosecution." *Youman*, 679 F.3d at 1344 ("We have consistently held that when a patentee narrows the original claim in an effort to overcome a prior art

rejection and makes arguments in support, the patentee surrenders the subject matter broader than the patented claim.").

Under the third step,

> the court must "determine whether the surrendered subject matter has crept into the reissue claim." [*Clement*, 131 F.3d at 1469.] In discussing this third step, it is important to distinguish among the original claims (i.e., the claims before the surrender), the patented claims (i.e., the claims allowed after surrender), and the reissue claims. Violation of the rule against recapture may be avoided under this final step of the analysis if the reissue claims "materially narrow" the claims relative to the original claims such that full or substantial recapture of the subject matter surrendered during prosecution is avoided.

Mostafazadeh, 643 F.3d at 1358.

In summary, under the third step, the material narrowing must relate to the surrendered subject matter to avoid recapture. *Id.*; *Youman*, 679 F.3d at 1347–48.[14]

B. Section 251 Challenge

Petitioner contends under the first step that during the reissue proceeding, Patent Owner broadened the issued claims of the '523 patent. Essentially, Petitioner contends that Patent Owner removed limitations recited in the '523 patent claims directed at least to receiving and processing speech from "a multiplicity of user devices." *See* Pet. 28–29. Section I.A *supra* reveals the broadening changes to claim 1. Reissued claim 11, which depends from claim 1, and independent 12, depicted below with changes to

[14] Here, no party asserts that the present situation involves "overlooked aspects." *See Youman*, 679 F.3d at 1347 (citing *Mostafazadeh*, 643 F.3d at 1360).

the originally issued claims, reveal materially the same broadening changes as claim 1:

> 11. [An apparatus for speech recognition in a network] *The method of claim 1, further* comprising *the steps of providing:*
>
> [a speech recognition system coupled to said network for receiving a back channel from a multiplicity of user devices;
>
> a back channel receiver for receiving said back channel;
>
> a speech channel partitioner for partitioning said received back channel into a multiplicity of received identified speech channels;
>
> a processor for processing said multiplicity of said received identified speech channels to create] *responding to* recognized speech [for each of said received] identified [speech channels; and
>
> responding] *as* to said [recognized speech] *first device based upon natural language* to create a [unique] response [for transmission to each of] *uniquely identified with* said user device[s].

> 12. [The apparatus of claim 11, said processing] *A method for speech directed information delivery* comprising [means for]:
>
> [determining a user associated with a user device from said received identified speech channel;
>
> determining said associated user from said recognized speech;
>
> determining said associated user from said recognized speech and a speaker identification library;
>
> determining said associated user from said recognized speech and a speech recognition library; and
>
> determining said associated user from an identification within said speech channel]
>
> *receiving speech information at a first device, wherein said first device is a wireless device;*
>
> *transferring said speech information in an unrecognized state from said first 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, wherein said second device is capable*

> *of displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio; wherein said first network path and said second network paths are different.*

Ex. 1001, 52:12–54.

Based on the foregoing, and a review of the record, Petitioner shows persuasively that the challenged claims recite broader aspects by eliminating at least these following steps: "partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech" (issued claim 1) and "a speech recognition engine coupled to said network for receiving a back channel from a multiplicity of user devices" (issued independent claim 11 and claim 12 dependent therefrom). Patent Owner agrees that the reissue claims are broader than the claims of the original patent under the first recapture step. PO Resp. 23 (Patent Owner "admits, as did its prosecuting attorney when seeking reissue, that the '326 Patent claims are broader in scope than the Original Patent claims" under "[s]tep one of the recapture analysis"); Reply 23 (noting Patent Owner does not dispute the reissue claims meet the first recapture step).

Under the second step, a tribunal must determine if "the broader aspects relate to the surrendered subject matter." *Mostafazadeh*, 643 F.3d at 1358. Petitioner contends Patent Owner surrendered the "the subject matter of a single user configuration" during prosecution. *See* Pet. 30–31 (citing Ex. 1029 ¶132). In other words, Petitioner contends that Patent Owner distinguished the prior art by relying on multiple user devices as recited in the claims during prosecution of the '523 patent. *See id.* Patent Owner then added broader features during reissue that only require a single user

configured in a network (e.g., "receiving speech information at a first device" in independent claims 1 and 12). *See id.* These broader features aspects relate to the surrendered "subject matter of a single user configuration." *See id.* Patent Owner, on the other hand, for a number of reasons, contends it did not surrender "any subject matter." PO Resp. 24.

Typically, "[t]o determine whether an applicant surrendered particular subject matter, we look to the prosecution history for arguments and changes to the claims made in an effort to overcome a prior art rejection." *Mostafazadeh*, 643 F.3d at 1360 (citing *Clement*, 131 F.3d at 1468). During prosecution, Patent Owner inserted language from the preamble into the body of claim 1 of the '523 patent. Patent Owner does not dispute that it amended claim 1 to clarify that it requires the underlined portion of "partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels," but contends claim 1 already expressly recited the element in the preamble. *See* PO Resp. 24–25. Even in the absence of any amendments, a tribunal must investigate "*arguments* . . . made in an effort to overcome a prior art rejection." *See Hester Indus., Inc. v. Stein, Inc.*, 142 F.3d 1472, 1480 (Fed. Cir. 1998) (quoting *Clement*, 131 F.3d at 1469 (emphasis by *Hester*) ("This statement in *Clement* indicates that a surrender can occur by way of arguments *or* claim changes made during the prosecution of the original patent application.").

In particular, quoting the prosecution history of the '523 patent (Ex. 1004), Petitioner contends

> the applicants amended claim 1 to clarify that it requires "partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a

> multiplicity of received identified speech channels." [Ex. 1004] (Original Patent File History), 1337 (added language underlined). They then argued that "Houser has nothing to do with partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels." *Id*. at 1343; *see also id*. at 1343–44 ("[B]ecause Houser's teachings are concerned necessarily with the speech recognition processing being performed on the subscriber's terminal unit, Houser's teachings [are] totally irrelevant to the claimed features of Claim 1."); 1344 (distinguishing claim 7 and arguing "there is no notion in Houser whatsoever about the speech recognition system being accessible to a multiplicity of user devices, when the processing occurs on the subscriber's terminal unit."). Based on the applicant's amendments and arguments, the examiner allowed the claims of the original '523 Patent.

Pet. 30–31 (citing Ex. 1029 ¶ 133).

As Petitioner contends, during prosecution, "[t]o overcome the examiner's rejection based on Houser, the applicants amended claim 1 to clarify that it requires "partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels." *See* Pet. 31 (quoting Ex. 1004, 1337). During prosecution, Patent Owner also argued that independent claims 7 and 11, containing materially similar limitations, overcame the prior art for materially the same reasons as claim 1. *See* Ex. 1004, 1337–45.

Patent Owner contends the preamble of claim 1 of the '523 patent before the clarifying amendment already contained the phrase "containing a multiplicity of speech channels from a multiplicity of user devices," so Patent Owner contends it "did not add this element to secure allowance of the claims—the examiner believed original claim 1 included this element and that

Houser disclosed it." PO Resp. 26. Contrary to this argument, nothing indicates the Examiner "believed original claim 1 included this element." In any event, the parties agree that the amendment clarified claim 1. *See* PO Resp. 26 ("Thus, '[i]t should be appreciated that Claim 1 was amended for clarification purposes only . . . .'" (quoting Ex. 1004, 1341)); Pet. 30–31 (quoted above). Also, as Petitioner explains, "[t]he amendment also confirms that the applicants did not believe the examiner understood the preamble to be limiting. If they had, there would have been no reason to make the 'clarifying' amendment." Reply 14 (noting the Examiner "did not provide any citation to Houser following the preamble," asserting this "reflect[s] that the examiner did not read the preamble as a limitation Houser had to disclose to anticipate"); *see* Ex. 1004, 1305–06 (showing no citation to Houser after the preamble and in contrast, citations after all the other claim limitations).

Other than inserting the preamble phrase of "containing a multiplicity of speech channels from a multiplicity of user devices" into the body of claim 1 during prosecution, the claims did not change appreciably during prosecution of the '523 patent. *See* Ex. 1004, 1337–40 (prosecution history showing changes to claims). Accordingly, with the exception as to the preamble noted, the claims as issued in the '523 patent serve as the reference point for analysis of recapture here. Inspection of reissued claim 1 (*supra* Section I.D) reveals that Patent Owner removed the entire partitioning portion, including underlined claim limitation added during prosecution of the '523 patent application as a clarification to overcome the prior art (i.e., "<u>containing a multiplicity of speech channels from a multiplicity of user devices</u>"). *See* Ex. 1004, 1337; Ex. 1001, 50:34–44 (claim 1). Similarly, inspection of the other reissue claims challenged here reveals Patent Owner removed materially

similar limitations that it argued overcame the prior art with respect to claims 7 and 11 during prosecution of the '523 patent. *See* Ex. 1004, 1337–45; Ex. 1001, 51:24–43 (claim 7), 52:12–28 (claim 11). The broader single user speech channels and devices of the reissue claims per these removed "multiplicity of speech channel" and "multiplicity of user devices" delimitations relate to the surrendered subject matter of what we refer to here, for short-hand purposes, as a single user or single user site limitation.

To clarify the analysis, the surrendered single user site limitation refers to reading the challenged claims to cover a single user site in the network of the method for speech directed information. During prosecution of the '523 patent, as discussed further below, Patent Owner argued the prior art did not cover multiple user sites in the network of the method for speech directed information, as discussed further below. *See* Ex. 1004, 1342–43.

Patent Owner argues it did not surrender anything because Patent Owner did not clearly "admit" Houser discloses a claim element, and it did not "clearly and unmistakably" surrender anything to overcome Houser. PO Resp. 30–34. Patent Owner similarly argues Houser does not anticipate the claims, so no recapture occurred. *See* Sur-Reply 17–18. Patent Owner also contends "[i]f anything was surrendered, it was speech recognition processing at a terminal unit (or 'local speech processing') which was repeatedly admitted as having been both disclosed in Houser and outside the scope of the plain language of the claims." PO Resp. 34. Patent Owner also argued it "did not surrender specific type of back channel, or a specific type of partitioning, as [Petitioner] argues [Pet. 30], because [Patent Owner] never argued that Houser disclosed receiving *any* back channel or performed *any* partitioning." *Id.* at 35.

Under the second step, "[t]he recapture rule is triggered only where the reissue claims are broader than the patented claims because the surrendered subject matter has been reclaimed in whole or substantial part (i.e., an added limitation has been eliminated or revised)." *Mostafazadeh*, 643 F.3d at 1360. Here, Patent Owner eliminated limitations that Patent Owner argued distinguished Houser, namely, the limitation of "a received back channel containing a multiplicity of speech channels from a multiplicity of user devices" as recited in claim 1 and similar limitations in issued claim 7 of the '523 patent.

To overcome Houser with respect to claim 1 during prosecution of the '523 patent application, Patent Owner focused on the *multiple user* limitations, as Patent Owner's prosecution arguments reproduced below show:

> [B]ecause Houser's teachings are concerned necessarily with the speech recognition processing being performed on the subscriber's terminal unit, Houser's teachings is [sic] totally irrelevant to the claimed features of Claim 1. For example, *Houser has nothing to do with partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels*. Because Houser is completely silent on such claimed feature, Houser simply could not enable Claim 1.

Ex. 1004, 1342–43 (emphases added). This passage shows that Patent Owner argued a distinction over Houser based on the limitation of "partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices," as recited in issued claim 1 of the '523 patent.

With respect to issued claim 7 of the '523 patent, during prosecution, Patent Owner argued a similar distinction, after noting the similarities between claims 1 and 7:

> Claim 7 recites features which are similar to claim 1. Based on a similar rationale, Houser does not disclose, teach or suggest the subject matter of claim 7. For example, Claim 7 recites "providing said speech recognition system at a back channel accessible *by a multiplicity of user devices coupled to said network*." Houser teaches speech recognition processing at the subscriber's terminal unit and is completely silent about a speech recognition system . . . accessible by a multiplicity of user devices coupled to said network. As shown above, there is no notion in Houser whatsoever about the speech recognition system being accessible to a multiplicity of user devices, when the processing occurs on the subscriber's terminal unit.

Ex. 1004, 1344 (emphasis added). Patent Owner's arguments show it argued a distinction over Houser based on the limitation of "providing said speech recognition system at a back channel accessible by a multiplicity of user devices coupled to said network," as recited in claim 7. *Id.* After reciting that limitation, Patent Owner argued "Houser . . . is completely silent about a speech recognition system . . . *accessible by a multiplicity of user devices coupled to said network*." *Id.* (emphasis added). Patent Owner advanced the same "rationale" for independent claim 11, which contained a similar limitation, as it did for claims 1–6. *Id.* at 1339, 1334.

As indicated above (Section I.E.1 (Claim Construction)), the prosecution history arguments by Patent Owner about a "speech recognition system" as recited in '523 patent claim 7 correlates to what Patent Owner urges here must be included in the claim construction of a "speech recognition engine." *See* PO Resp. 40 ("Moreover, the reissue claims require a 'speech recognition engine' that is accessible to a multiplicity of user devices."). Therefore, Patent Owner seeks to recapture by claim construction what it surrendered during prosecution of the '523 patent, and the prosecution history verifies that Patent Owner understood the claimed speech recognition system

(and a speech recognition engine) did not require being "accessible to a multiplicity of user devices"—because claims 1 and 7 of the '523 patent specifically included that requirement.

By focusing on the lack of a plurality of speech channels and user devices in Houser to distinguish the claims, the record shows that Patent Owner clearly conceded that Houser discloses a single user site in a network—i.e., *regardless* of the location of the speech recognition engine.[15] The prosecution arguments Patent Owner advanced with respect to claim 7 (quoted above) bolster the finding here, as does the amendment made during prosecution to ensure the language from the preamble of claim 1 about a "multiplicity" also appeared in the body of the claim. *See* Reply 13–17 (noting Patent Owner made the same argument for claim 7). As an example, as quoted above, to distinguish claim 7 (which Patent Owner asserted as allowable for similar reasons to claim 1), Patent Owner argued "Houser teaches speech recognition processing at the subscriber's terminal unit and is completely silent about a speech recognition system . . . accessible by a multiplicity of user devices coupled to said network." Ex. 1004, 1344.

This argument refers to "speech recognition processing at the subscriber's terminal unit" only to show *why* such a unit does not teach or suggest "a speech recognition system . . . accessible by a multiplicity of user

---

[15] As noted above in Section I.E.2 (Claim Construction), Patent Owner now argues Houser's local speech processor could have processed input from multiple users located at the site. *See* PO Sur-Reply 14 n.4. Patent Owner did not make this argument (or concession) during prosecution, so it does not bear on what Patent Owner surrendered during prosecution. In addition, the argument obscures the issue concerned with reading the challenged claims on a surrendered single site connected in a network (i.e., regardless of the number of users at that single site).

devices coupled to said network." *Id.* In other words, Patent Owner disclaimed clearly and unequivocally a single user site network configuration by emphasizing "Houser . . . is completely silent about a speech recognition system . . . accessible by a multiplicity of user devices coupled to said network." *Id.*

The arguments advanced with respect to claim 1 during prosecution support this understanding. Patent Owner argued "*because* Houser's teachings are concerned necessarily with the speech recognition processing being performed on the subscriber's terminal unit, Houser's teachings is [sic] totally irrelevant to the claimed features of Claim 1." Ex. 1004, 1342–43 (emphasis added). Immediately after this "because" statement, Patent Owner argued "[f]or example, Houser has nothing to do with *partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels*. Because Houser is completely silent on such claimed feature, Houser simply could not enable Claim 1." *Id.* As seen, immediately after specifying Houser's "silen[ce] on such claimed feature" including "a multiplicity of user devices," Patent Owner argued "Houser simply could not enable Claim 1." *Id.* at 1343. Hence, similar to the argument Patent Owner advanced for allowance of claim 7, the location based argument in the "because" statement Patent Owner advanced for allowance of claim 1 merely served to preface an evidentiary basis as to why Houser has "nothing to do with . . . *a multiplicity of user devices*. . . . [and] simply could not enable Claim 1." *Id.* (emphasis added).

According to *Hester*, "[t]here is no unfairness in binding the patentee to *deliberate assertions made in order to obtain allowance of the original patent*

claims over the prior art." *Hester*, 142 F.3d at 1481 (emphasis added). Although Patent Owner stresses "[t]here was no surrender of claim scope by argument because [Patent Owner] never admitted that Houser disclosed any claim element" (PO Resp. 32), *Hester* shows that Patent Owner's "deliberate assertions . . . to obtain allowance" over Houser constitute a disclaimer under the recapture rule. *See Hester*, 142 F.3d at 1481.

Regarding the location (i.e., "at the subscriber's terminal unit"), Patent Owner contends "[i]f anything was surrendered, it was speech recognition processing at a terminal unit (or 'local speech processing') *which was repeatedly admitted as having been both disclosed in Houser* and outside the scope of the plain language of the claims." PO Resp. 34 (emphasis added). Patent Owner does not hedge in its Sur-Reply (i.e., does not repeat "[i]f anything was surrendered"). Rather, Patent Owner argues "[r]eading [Patent Owner's] five-page remarks to the examiner's Office Action in their entirety . . . shows Houser was distinguished because it describes performing speech recognition locally, at the user's terminal device, not at a remote speech recognition engine, as claimed." PO Sur-Reply 13 (citing Ex. 1004, 1341–45).

This line of argument does not help Patent Owner. Even if Patent Owner surrendered clearly and unequivocally a local user site configuration that includes a speech recognition engine, that surrender does not mean that Patent Owner failed to surrender the single user network configuration by arguing clearly and unequivocally that "Houser . . . is completely silent about a speech recognition system . . . accessible by a multiplicity of user devices coupled to said network." Ex. 1004, 1344. Patent Owner clearly surrendered a single user network configuration based on that argument and others.

Despite admitting "Houser was distinguished because it describes performing speech recognition locally" (PO Sur-Reply 13), Patent Owner also argues it "could not surrender what it never claimed to possess," contending that it did not "admit" anything about "local" speech processing, rather it "simply acknowledged that the '326 Patent does not perform speech recognition at a terminal unit" (*id.* at 14–15). Patent Owner attempts to support this argument with the following disclosure in the Specification: "[The invention] is unique in that the speech command which originates at the user site, often the home of the subscriber, is sent upstream via the return path (often five to 40 MHz) in the cable system to a central speech recognition and identification engine." *Id.* at 15 (citing Ex. 1001, 5:18–22) (bracketed information supplied by Patent Owner). But Patent Owner's supplied bracketed information does not accurately tell the story, because the full quote begins with "[t]his system" instead of "[t]he invention," and "[t]his system" refers back to the previous sentence, which begins with "*these embodiments* of the invention." Ex. 1001, 5:14–22 (emphasis added). Moreover, as we determine above (*supra* Sections I.A., I.E), the Specification contemplates a speech recognition engine connected near any node, including a local node. Furthermore, the Examiner deemed the '523 patent claims to cover a single local site network configuration by reading the claims on Houser, as Patent Owner acknowledges. *See* Ex. 1004, 1305–09; PO Sur-Reply 13–14. As indicated above in several places, the first substantive sentence of the '326 patent states "[*t*]*his invention* relates to voice recognition *performed near a wireline node* of a network supporting cable television and/or video delivery." Ex. 1001, 1:38–40 (emphases added); *supra* Sections I.A, I.E.1. In other words, "this invention" includes a speech recognition engine connected near

any node according to the Specification, contrary to Patent Owner's argument that it did not "possess" that feature. *See* PO Sur-Reply 15.

Patent Owner also argues that Petitioner did not assert in the related '342 IPR that Houser anticipates the reissue claims, so this shows no recapture occurs here. *See* PO Sur-Reply 17–18. But regardless of whether Houser anticipates or renders obvious the claims, Patent Owner disclaimed subject matter via "deliberate assertions" to overcome Houser. *See Hester*, 142 F.3d at 1481. Patent Owner does not provide a precedential case citation or any citation supporting the argument that the recapture rule also requires a separate finding or trial to show that the reissued claims anticipate the prior art that Patent Owner distinguished during prosecution. Such a requirement facially renders the recapture rule useless as a separate tool of invalidity under equity principles.

In any event, to the extent a separate finding of invalidity might be relevant in the recapture issue here, in the '342 IPR, the Board determined in a final written decision that Petitioner showed Houser rendered claims 1–7 and 12–17 of the '326 patent claims obvious. *See* '342 IPR, Paper 54 at 73. The '342 IPR final written decision also implies Houser discloses each claim element, finding obviousness over Houser alone, without discussing any modifications to Houser.[16] Also, Petitioner contends that asserting obviousness does not mean Houser fails to anticipate. *See* Reply 21 n.8. And as Patent Owner notes, Petitioner "responds that it 'does contend that Houser

[16] In the '342 IPR FWD, the Board determined obviousness based on a finding of a remote speech recognition engine at node 517 in Houser in one embodiment ('342 IPR, Paper 54 at 22, 21–60), and the Board also found that Houser discloses a local speech recognition engine at set-top box terminal unit 16 in another embodiment (*id.* at 9). *See* Ex. 1006, Fig. 1, Fig. 15.

anticipates the claims of the ’326 Patent as explicitly stated in its invalidity contentions in the related litigation.’” PO Sur-Reply 17–18 (quoting Reply 21 n.8).

In addition, *Mostafozadeh* states, as quoted above, that a patentee triggers “[t]he recapture rule . . . only where the reissue claims are broader than the patented claims because the surrendered subject matter has been reclaimed in whole or substantial part (i.e., an added limitation has been eliminated or revised).” *Mostafazadeh*, 643 F.3d at 1360. Here, the reissue claims reclaim broader aspects of the single user network configuration after Patent Owner eliminated requirements for multiple speech channels and user devices that Patent Owner argued distinguish over Houser, and Houser fairly teaches the single user configuration now claimed in the reissue claims, as the final written decision in the ’342 FWD indicates. *See* ’342 IPR, Paper 54 at 39–60.

Furthermore, *Hester* indicates that a patent owner cannot avoid recapture simply by avoiding an anticipation rejection, especially here where Patent Owner did not confine its prosecution history arguments to a lack of anticipation. For example, Patent Owner argued Houser is “*totally irrelevant* to the claimed features” and “has *nothing to do with* partitioning a received back channel containing a multiplicity of speech channels from a multiplicity of user devices into a multiplicity of received identified speech channels.” Ex. 1004, 1343 (emphasis added). Patent Owner similarly argued “nowhere does Houser *disclose or suggest* transmitting a unique response to each of said *user devices* based upon the recognized speech, which was created for each of

the received identified speech *channels*, as explicitly recited in Claim 1." *Id.* (emphases added).[17]

Patent Owner's prosecution history arguments asserting what Houser fails to disclose or suggest track the prosecution arguments advanced in *Hester*. *See Hester*, 142 F.3d at 1476 (Patentee "Williams placed even greater reliance on the 'solely with steam' and 'two sources of steam' limitations in an attempt to overcome *the obviousness* rejection" and then Williams essentially repeated the arguments during an appeal to the Board, asserting "the two sources of steam interact to provide a 'synergy' that is '*novel and nowhere suggested* in any of the cited [prior] art.'" (emphases added)). *Hester* also reasons "[t]here is no unfairness in binding the patentee to *deliberate assertions made in order to obtain allowance of the original patent claims over the prior art*." *Id.* at 1481 (emphasis added).

Based on the foregoing discussion, Petitioner shows persuasively that Patent Owner surrendered claim scope of a single user network configuration to distinguish Houser during prosecution and reclaimed that single user network configuration so that the challenged claims here relate to the surrendered subject matter under the second recapture step.

Under the third step, Petitioner contends "a limitation that is added during prosecution to overcome prior art ***cannot be entirely eliminated*** on reissue because doing so would constitute recapture of the surrendered subject

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[17] In each of the '326 patent's challenged reissue claims, Patent Owner eliminated references to plural "user devices." *See, e.g.*, Ex. 1001, claim 11 (reproduced above, with brackets indicating deleted text and italics indicating added text: "*as* to said [recognized speech] *first device based upon natural language* to create a [unique] response [for transmission to each of] *uniquely identified with* said user device[s]").

matter." Pet. 32 (quoting *Mostafazadeh*, 643 F.3d at 1359) (emphasis by Petitioner). Petitioner contends the '326 patent applicants "entirely eliminat[ed] the limitation requiring processing speech data from 'a multiplicity of user devices,' which was required by all of the original '523 Patent claims." *Id.* (citing Ex. 1029 ¶¶ 135, 146). Accordingly, under the third step, Petitioner contends "the surrendered subject matter has crept into the [challenged] reissue claim[s]," *see Clements*, 131 F.3d at 1469, amounting to a "full or substantial recapture of the subject matter surrendered during prosecution." *Mostafazadeh*, 643 F.3d at 1358. *See* Pet. 31–34.[18]

Patent Owner contends "even if there was some surrender, the reissued claims did not recapture what was surrendered because they expressly require remote speech processing." PO Resp. 38. Under one argument, Patent Owner relies on its claim construction proposal that a "speech recognition engine" must be "accessible to a multiplicity of user devices." *Id.* For the reasons explained herein and above (Section I.E (Claim Construction)), the record does not support Patent Owner's claim construction of a "speech recognition engine," and Patent Owner's arguments during prosecution reveal that a

[18] In its Sur-Reply, Patent Owner argues "the issue is whether the speech recognition engine is local—*i.e., on—the claimed first device*." PO Sur-Reply (citing PO Response, 37–38). This argument constrains "local" to "the claimed first device," which includes a disclosed microphone, rather than constraining "local" to a user's home, including a set-top box, or Houser's terminal unit. This Sur-Reply argument appears to be a mistake by Patent Owner, because Patent Owner otherwise recognizes the claimed first device (a wireless device) may be a microphone. *See* PO SMG Br. 5–6 ("The claims here recite a specific implementation of remote speech recognition by receiving a spoken command at a wireless device to effect information delivery to a different device.").

"speech recognition engine" need not be "accessible to a multiplicity of user devices." *See supra* Section I.E; PO Resp. 40; Ex. 1004, 1344.

Under a second argument, Patent Owner argues the reissue claims require a remote speech processor because the reissue claims recite "transferring said speech information . . . to a first network path to a speech recognition engine . . . and effecting information delivery to a second device via a second network path." *See* PO Resp. 37. Patent Owner maintains "even if there was some surrender, the reissued claims did not recapture what was surrendered because *they expressly require remote speech processing*." *Id.* at 38 (emphasis added). In a similar argument, Patent Owner contends "[t]he original and issued claims required speech recognition processing to occur at a location remote from a user device," and "[t]he same concept remains in reissued claim 1, which requires that the speech recognition engine receive speech information from a first device via a first network path and effect information delivery to a second device via a second network path." *Id.* at 39. According to Patent Owner, based on these "network path" limitations, "Houser remains excluded from the claims." *See id.*

As indicated above, with respect to the last argument, Petitioner need not show that Houser anticipates the claims to show recapture. Patent Owner argues Houser does not anticipate as a vehicle to show "[l]ocal speech processing, to the extent that [it] is held to have been surrendered, has not crept back into the claims." *See* PO Resp. 37. But even if we adopt Patent Owner's theory that Patent Owner only surrendered local speech processing, local speech processing clearly has crept back into the claims, because the "network path" does not preclude local speech processing (or a single user site), contrary to Patent Owner's arguments (*see id.* at 37–38), and according

to the claim construction above (*supra* Section I.E). Also, as noted above and assuming relevance to recapture here, the Board determined Houser renders the reissue claims obvious in a final written decision in the '342 IPR.

Moreover, as construed above, the claimed first and second network paths do not constrain the speech recognition as argued by Patent Owner. *See supra* Section E.2. Nothing in the claims requires remote speech processing. As Petitioner also explains, Patent Owner fails to provide a claim construction for a "first network path" or a "second network path" and fails to explain how a network path requires a remote "speech recognition engine." *See* Reply 20–21 & n.7. Of course, Petitioner bears the burden of showing unpatentability, but nothing in claim 1 or claim 12 requires a remote "speech recognition engine" based on the "network path" recitations, as Petitioner argues, and as we construed the terms above. *See supra* Section I.E; Reply 5 ("[T]he patent does not use the term 'network path' (except in the claims) and never refers to a 'two-network-path' solution to any purported problem.").

As Petitioner persuasively argues,

> Patent Owner never proposes a construction of the term "network path" to support its argument, and indeed did not include such a limitation in the agreed construction in the related district court action (i.e., "physical route through which data is transmitted from [a] source to [a] destination"). Ex. 1034 at 20. The claims broadly recite a speech recognition engine communicating with devices via network paths, which could be in a local or home network, a cable television network, or any other network. The claims do not impose any particular limitation on the location of the speech recognition engine (remote or local), and it would be inappropriate for the Board to rewrite the claims to add such a limitation now.

Reply 20–21 (internal and external footnote omitted).[19]

Petitioner persuasively shows that Patent Owner entirely eliminated the noted multiple user device and channel limitations during the reissue proceeding that Patent Owner argued overcome the prior art during prosecution. Accordingly, nothing in those eliminated steps exist for Patent Owner to narrow to avoid recapture per the third step. *See Mostafazadeh*, 643 F.3d at 1361 ("[T]he recapture rule is violated when a limitation added during prosecution is eliminated entirely, even if other narrowing limitations are added to the claim. If the added limitation is modified but not eliminated, the claims must be materially narrowed relative to the surrendered subject matter such that the surrendered subject matter is not entirely or substantially recaptured."); *Youman*, 679 F.3d at 1345 ("where the patentee eliminates the added limitation in its entirety . . . it is clear that the surrendered subject matter has been recaptured").

Petitioner also contends that the reissue claims do not involve "overlooked" aspects, which include "patentably distinct (1) inventions; (2) embodiments; or (3) species not originally claimed–-not mere incidental features of the originally-claimed invention." Pet. 33 n.7 (citing *Mostafazadeh*, 643 F.3d at 1360). Petitioner shows persuasively that the claims recite broad generic aspects of the disclosed invention, instead of patentably distinct inventions, embodiments, or species relative to the originally issued claims. Patent Owner does not address this point.

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[19] In omitted footnote 7 of the Reply, Petitioner contends "Patent Owner argued that the Board should adopt this proposed construction of 'network path' in the pending IPR proceedings challenging the '326 Patent." Reply 21 n.7 (citing '342 IPR, Paper 22 at 11; '343 IPR, Paper 24 at 11).

Based on the foregoing discussion, Petitioner shows by a preponderance of evidence that claims 1–21 impermissibly recapture surrendered subject matter.

V. 35 U.S.C. § 112, ¶ 2

Citing *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2123 (2014) and *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir. 2014), Petitioner contends claims 11 and 21 are indefinite. *See* Pet. 46–49. Claim 11 recites "[t]he method of claim 1, further comprising the steps of providing: 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 (bracketed information and emphasis omitted, emphasis added). Claim 21 similarly recites "[t]he method of claim 12, further comprising the steps of: responding to recognized speech identified as to said first device based upon natural language to create a response uniquely identified with *said user device*." *Id.* at 53:47–50 (emphasis omitted).

Petitioner contends "said user device" lacks antecedent basis, rendering claims 11 and 21 indefinite. As Petitioner contends, claim 11 refers back to claim 1, and neither claim recites a "user device." Pet. 47. Rather, claim 1 recites a "first device" and a "second device." *Id.* Similarly, claim 21 refers back to claim 12, and neither claim recites a "user device." *Id.* at 48–49. Rather, claim 12 recites a "first device" and a "second device." *See id.* at 48 (arguing "claim 21 suffers from the same defect" as claim 11).

Therefore, according to Petitioner, "said user device" may refer to the "first device" or the "second device," or it may introduce a separate device (i.e., a user device). *See id.* at 48. According to Petitioner, "[t]here is no basis in the claim language, [S]pecification, or prosecution history for a person of

ordinary skill in the art to resolve the ambiguity created by this defect." *Id.* at 47–48 (citing Ex. 1029 ¶¶ 188–191). Petitioner concludes "the meaning of the claim language is unclear and also fails to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id.* at 48 (citing Ex. 1029 ¶ 193).

Patent Owner contends under *Nautilus*, "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." PO Resp. 47–48 (quoting *Nautilus*, 572 U.S. at 901). Patent Owner contends *Nautilus* applies to issued patents, and under this standard, the claims are not indefinite. *See id.*

According to Patent Owner, the term "said user device," despite lacking an antecedent basis, clearly refers to "a user device." PO Resp. 50. Yet on the same page, Patent Owner states "it is clear . . . that 'said user device' refers to the 'first device' and 'second device,'" as recited in claims 1 and 12. *Id.* So Patent Owner does not state unequivocally whether "said user device" refers to "a user device," the "first device," or the "second device" of claim 1. Petitioner points to this inconsistent position. Reply 23–24 ("Patent Owner further confirms that the antecedent basis is not 'clear' by arguing elsewhere in its response that the term 'said user device' does not mean the 'first device' and 'second device' but instead means 'a user device,' which is different and broader than its first proposed construction."). In its Sur-Reply, Patent Owner does not contend the term includes "a [separate] user device" and instead argues "one of skill in the art would understand 'said user device' in dependent claims 11 and 21 refers to either of the two user devices (a 'first

device' or 'a second device') recited in independent claims 1 and 12, respectively." PO Sur-Reply 24.

In any event, Petitioner shows that "said user device" may refer to the "first device" or the "second device," or it may introduce a separate device (i.e., a user device). *See* Pet. 48. Even if *Nautilus* applies, Petitioner shows that claims 11 and 21 are indefinite, because they "fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." PO Resp. 47–48 (quoting *Nautilus*, 572 U.S. at 901).[20] One of skill in the art would not have "reasonable certainty" of whether a method for speech directed information delivery infringes claims 11 and 21 by using only a first device and a second device on the one hand, or whether on the other hand, the method infringes only by using a first device, a second device, and a third "user device." In addition, even if "said user device" only refers back to either the first device or the second device as Patent Owner argues, one of skill in the art would not be reasonably certain of which one to identify to avoid infringement per the phrase "uniquely identified with said user device," as recited in claims 11 and 21.

Based on the foregoing discussion and review of the record, Petitioner persuasively shows that claims 11 and 21 are indefinite under *Nautilus* and *Packard*.

[20] Patent Owner's arguments assume *Nautilus* applies a stricter standard than *Packard*. *See id.* Regardless, Petitioner shows that the claims lack clarity under *Packard* for the same reasons that the claims lack reasonable certainty under *Nautilus*.

VI. CONSTITUTIONAL CHALLENGES

Patent Owner contends this CBM proceeding "violates both the Takings and Due Process clauses of the Constitution by its retroactive application to patents whose disclosures published before the AIA was enacted." PO Resp. 55. As Petitioner points out, however, the '326 patent issued after the CBM proceedings became effective, so this CBM proceeding does not constitute a retroactive application with respect to the '326 patent. Reply 25 ("[T]he AIA's CBM procedure was implemented in September 2012 and therefore *was in place* when the '326 Patent issued in June 2013.").

Even for retroactive applications of the AIA, our reviewing court recently held "the retroactive application of IPR proceedings to pre-AIA patents is not an unconstitutional taking under the Fifth Amendment."). *Celgene Corp. v. Peter*, 931 F.3d 1342 (Fed. Cir. 2019). Then, after *Peter*, in a situation similar to the timing involved here, our reviewing court determined "[w]e need not reach the merits of the issue, . . . because the [challenged] patent issued . . . almost three years *after* passage of the AIA and almost two years after the first IPR proceedings began." *Anthrex, Inc. v. Smith & Nephew, Inc.*, No. 2018-1584, 2019 WL 3938271, at *8 (Fed. Cir. Aug. 21, 2019) (also noting "even if Arthrex's patent had issued prior to the passage of the AIA, our court recently rejected arguments similar to Arthrex's in *Celgene Corp. v. Peter*[, 931 F.3d 1342 (Fed. Cir. 2019)]").

VII. CONCLUSION[21]

In summary:

Ground	Basis	Claims	Claims Shown Unpatentable	Claims Not shown Unpatentable
Abstract	§ 101	1–21	1–21	None
Recapture	§ 251	1-21	1–21	None
Indefiniteness	§ 112, ¶ 2	11 and 21	11 and 21	None
Overall Outcome			1–21	None

VIII. ORDER

In consideration of the foregoing, it is hereby

ORDERED that claims 1–21 of the ’326 patent are unpatentable; 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.

[21] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this Decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

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