

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

DIALECT, LLC,
Patent Owner.

IPR2024-00750
Patent 9,031,845 B2

Before HYUN J. JUNG, NEIL T. POWELL, and JON M. JURGOVAN,
Administrative Patent Judges.

JUNG, *Administrative Patent Judge.*

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

I. INTRODUCTION

A. *Background and Summary*

Google LLC (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of an *inter partes* review of claims 1–3, 7, 8, 10, 12, 15, 17–20, 24, 25, 27, 29, 32, 34, and 36 of U.S. Patent No. 9,031,845 B2 (Ex. 1001, “the ’845 patent”). Dialect, LLC (“Patent Owner”) did not file a Preliminary Response.

Under 35 U.S.C. § 314, an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition and for the reasons explained below, we determine that Petitioner has shown a reasonable likelihood of prevailing with respect to at least one of the challenged claims.

Thus, we institute an *inter partes* review of claims 1–3, 7, 8, 10, 12, 15, 17–20, 24, 25, 27, 29, 32, 34, and 36 of the ’845 patent on the only presented challenge. 37 C.F.R. § 42.108(a) (“When instituting . . . review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”); *see also SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

B. *Real Parties in Interest*

Petitioner identifies Google LLC as a real party in interest. Pet. 8. Patent Owner identifies Dialect, LLC as a real party in interest. Paper 5, 2.

C. *Related Matters*

The parties identify *Dialect, LLC v. Google LLC*, 1:23-cv-00378 (D. Del.) and *Dialect, LLC v. Amazon.com, Inc.*, 1:23-cv-00581 (E.D. Va.) as related matters. Pet. 8; Paper 5, 2. According to Petitioner, a motion to transfer to the Northern District of California was granted in the Delaware

proceeding. Petitioner also identifies IPR2024-00746, IPR2024-00747, IPR2024-00748, IPR2024-00749, IPR2024-00751, IPR2024-00752, and IPR2024-00753 as related matters. Pet. 8–9.

D. The '845 Patent (Ex. 1001)

The '845 patent issued on May 12, 2015 from an application filed on February 12, 2010 that is a continuation of an application filed on July 15, 2003 and claims priority to a provisional application filed on July 15, 2002. Ex. 1001, codes (22), (45), (60), (63), 1:5–12.

The '845 patent “relates to the retrieval of online information and processing of commands through a speech interface in a vehicle environment.” Ex. 1001, 1:16–18. Reproduced below is Figure 5 of the '845 patent.

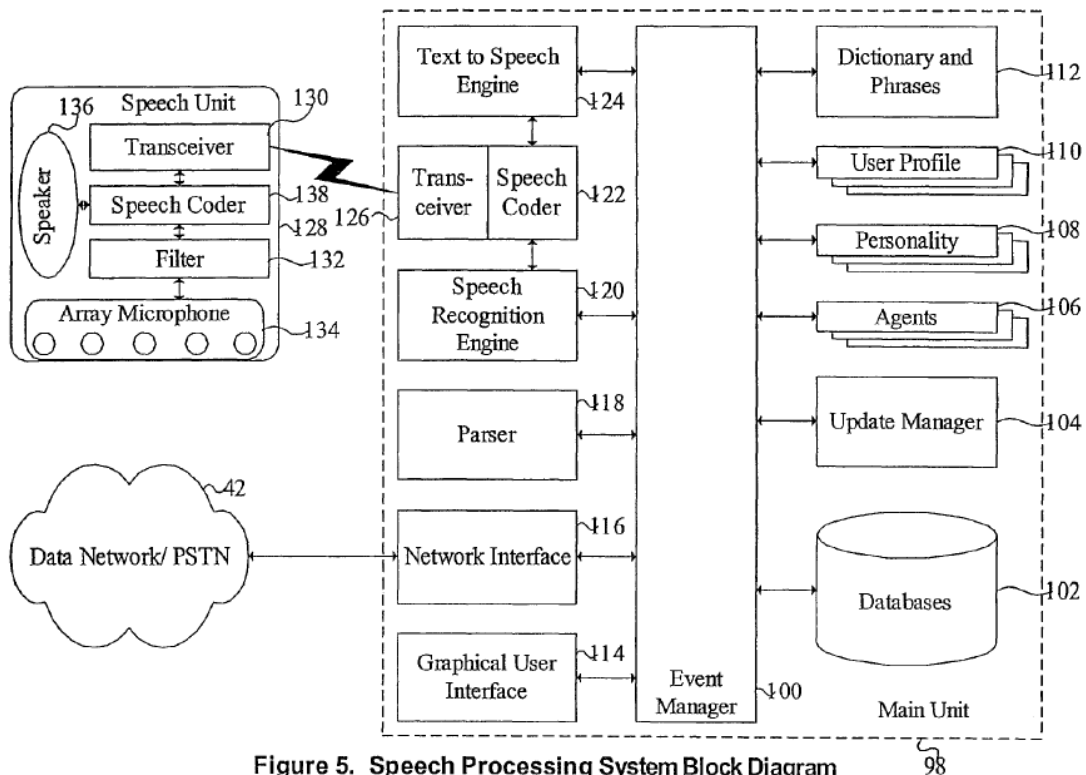


Figure 5 shows “an overall diagrammatic view of the interactive natural language speech processing system.” Ex. 1001, 20:3–6. A user

interfaces with the system through speech unit 128 that includes one or more microphones, such as array microphone 134. *Id.* at 20:28–30. Speech unit 128 can be included in a vehicle, handheld device, or fixed system. *Id.* at 20:39–41, 20:57–61.

The received speech is processed by filters 132 and encoded and compressed by speech coder 138 for transmitting by transceiver module 130 to main unit 98. Ex. 1001, 20:32–36. The communication link between speech unit 128 and main unit 98 can be wired or wireless. *Id.* at 20:42–44.

Compressed and encoded speech received at the transceiver 126 of main unit 98 can be passed to speech coder 122 for decompression and decoding for processing by speech recognition engine 120 that uses data in dictionary and phrases module 112 and data received from agents 106. Ex. 1001, 20:63–67. Parser 118 processes the recognized words and phrases to transform them into complete commands and questions using data supplied by the agents. *Id.* at 21:1–3.

“The agents can then process the commands or questions” and “create queries to local databases 102 or through the network interface 116 to data sources on the Internet 42 or other networks.” Ex. 1001, 21:3–7.

“Commands typically result in actions taken by the system itself (i.e., pause or stop), or to a remote device or data source (i.e., download data or program, or control a local or remote device), through the network interface to the Internet or other data interface.” *Id.* at 21:7–11.

Agents 106 include system agents 150 and domain agents 156. Ex. 1001, 21:60–61, Fig. 6. “Both system agents 150 and domain agents 156 receive questions and commands from the parser 118.” *Id.* at 21:63–64. System agents 150 and domain agents 156 can use criteria

handlers 152, “which may handle specific parameters or values (criteria) used to determine context for questions and commands.” *Id.* at 22:8–12.

Agents 106 can return results of questions as responses to users using system personality 108 and user preferences in user profile 110. Ex. 1001, 20:17–20, 20:22–24, 21:12–15. The response can be presented using speech unit 128 by an agent sending a response string to text to speech engine 124 to create an utterance. *Id.* at 21:15–18. The created utterance can be encoded and compressed by speech coder 122 for transmitting by transceiver 126 to transceiver 130 of speech unit 128. *Id.* at 21:18–22. The utterance can then be decoded and decompressed by speech coder 138 and outputted by speaker 136. *Id.* at 20:36–39, 21:22–24.

E. Illustrative Claim

The ’845 patent includes 36 claims, of which Petitioner challenges claims 1–3, 7, 8, 10, 12, 15, 17–20, 24, 25, 27, 29, 32, 34, and 36. Of the challenged claims, claims 1, 18, and 32 are independent, and reproduced below is claim 1.

1. A mobile system for processing natural language utterances, comprising:
 - one or more physical processors at a vehicle that are programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:
 - receive a natural language utterance associated with a user;
 - perform speech recognition on the natural language utterance;
 - parse and interpret the speech recognized natural language utterance;
 - determine a domain and a context that are associated with the parsed and interpreted natural language utterance;
 - formulate a command or query based on the domain and the context;

determine whether the command or query is to be executed on-board or off-board the vehicle;

execute the command or query at the vehicle in response to a determination that the command or query is to be executed on-board the vehicle; and

invoke a device that communicates wirelessly over a wide area network to process the command or query such that the command or query is executed off-board the vehicle in response to a determination that the command or query is to be executed off-board the vehicle.

Ex. 1001, 32:30–57.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Cooper	US 6,757,362 B1, filed Mar. 6, 2000, issued June 29, 2004	1005
Julia	US 7,036,128 B1, filed Aug. 9, 2000, issued Apr. 25, 2006	1004
Coffman	WO 00/20962, published Apr. 13, 2000	1003

Petitioner contends that Coffman is prior art under § 102(b) and Julia and Cooper are prior art under § 102(e).¹ Pet. 11. Petitioner also provides a Declaration of Christopher M. Schmandt. Ex. 1002.

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’845 patent issued from an application that claims priority before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their pre-AIA versions. *See also* Pet. 8 n.2 (“All cites in this Petition to §§ 102 and 103 are to pre-AIA §§ 102 and 103.”).

G. Asserted Ground

Petitioner asserts that claims 1–3, 7, 8, 10, 12, 15, 17–20, 24, 25, 27, 29, 32, 34, and 36 are unpatentable on the following ground:

Claims Challenged	35 U.S.C. §	References/Basis
1–3, 7, 8, 10, 12, 15, 17–20, 24, 25, 27, 29, 32, 34, 36	103(a)	Coffman, Julia, Cooper

Pet. 11.

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

Petitioner contends that the challenged claims of the ’845 patent are unpatentable under § 103. Pet. 11. A claim is unpatentable under § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying

factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations.² *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Whether a combination of elements produces a predictable result weighs in the ultimate determination of obviousness. *Id.* at 416–417.

B. Level of Ordinary Skill in the Art

Petitioner argues that a person of ordinary skill in the art would have possessed a bachelor’s degree in electrical engineering or computer science, and two years of work experience in the field of speech- and natural language-interfaces for interacting with and directing computer systems and software, including speech recognition and processing (and more experience could substitute for less formal education, and vice versa).

Pet. 15–16 (citing Ex. 1002 ¶¶ 11–15).

Because Patent Owner did not file a preliminary response, the record does not yet present an alternative proposed level of ordinary skill in the art or a dispute regarding Petitioner’s proposed skill level. Therefore, based on the preliminary record, we adopt Petitioner’s asserted level of ordinary skill to determine whether there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition.

² The record as yet does not include any objective indicia of non-obviousness.

C. Claim Construction

In an *inter partes* review, the claims are construed

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b) (2021); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner states that “[e]xpress claim construction is unnecessary because the prior art renders the challenged claims obvious under any reasonable construction” but “reserves its right to respond to Patent Owner’s claim construction arguments.” Pet. 17.

At this preliminary stage, we determine that express claim interpretation is not necessary to determine whether Petitioner shows a reasonable likelihood of prevailing. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms that . . . are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

D. Asserted Obviousness Based on Coffman, Julia, and Cooper

1. Coffman (Ex. 1003)

Coffman “is directed to a CVM (conversational virtual machine).” Ex. 1003, 1:8–9. Coffman’s “CVM utilizes conversational subsystems (which may be local or distributed) including speech recognition, speaker recognition, text-to-speech, natural language understanding and natural dialog generation engines to understand and generate dialog between [] user

and machine.” *Id.* at 5:1–4; *see also id.* at 6:32–7:4 (“For example, a mouse click or pointer/stylus pointing action followed by the command ‘I would like to open this’ is disambiguated into a set of attribute value pairs:

Command: open, Object: Windows or task selected by the last mouse click.”).

“The CVM system may be built on top of a conventional OS and APIs 15 and conventional device hardware 16 and located on a server or any client device (PC, PDA, Pvc).” Ex. 1003, 13:1–3.

Reproduced below is Figure 4 of Coffman.

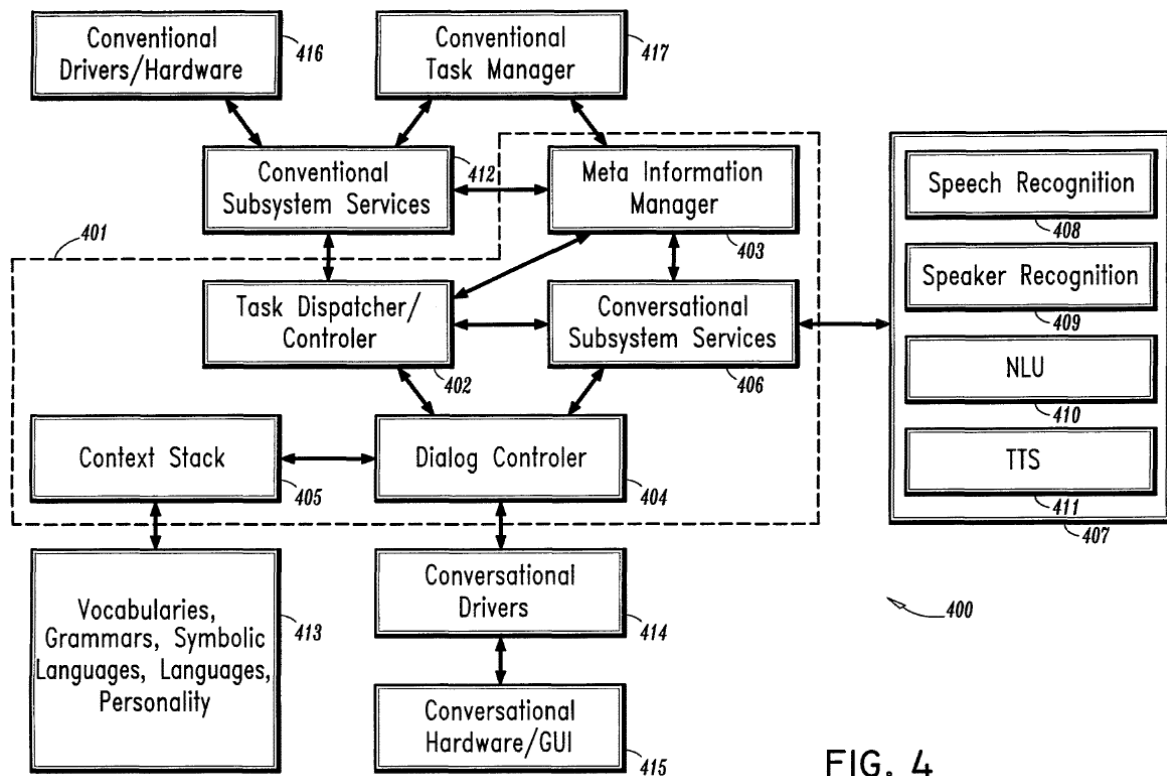


FIG. 4

Figure 4 shows conversational system 400. Ex. 1003, 10:3, 28:22. CVM 401 manages conversational system 400 that generally includes conventional and conversational subsystems. *Id.* at 28:22–24. CVM 401 includes task dispatcher/controller 402, meta information manager 403, dialog controller 404 (or dialog manager), context stack 405, and

conversational subsystem services manager 406. *Id.* at 28:24–27. “CVM 401 operates by converting conversational and conventional input streams into multiple actions and produces sorted output to a user through conversational and/or conventional output streams.” *Id.* at 28:29–31.

Conversational system 400 also has conversational resource subsystems (or engines) 407 including speech recognition system 408, speaker recognition system 409, natural language understanding and natural language parsing system 410, and a text-to-speech synthesis (“TTS”) system 411. Ex. 1003, 29:1–4. CVM 401 locates requested conversational subsystem 407 through the conversational subsystem services manager 406, drives the execution, and returns the appropriate results. *Id.* at 29:7–9.

“The core of the CVM 401 is the context stack 405 which operates and is managed under the control of the dialog controller 404.” Ex. 1003, 29:18–19.

[C]ontext stack 405 accumulates the context (i.e., full query arguments list of attribute value n-uples, and state/mode) of each active process with an activated discourse (i.e., conversational interaction associated with a given task/process/thread) along with any data files 413 (or at least identifiers of such conversational arguments) for the different engines that may be needed for input understanding (e.g., files or arguments that the engines use for performing their respective tasks such as active FSG, topic, vocabulary, HMM (hidden markov models), voiceprints, language models or possible queries for a speech input). In other words, the term “context” refers to the state of each discourse (whether active or nonnative), which keeps track of the past history of the discourse, its current state, and the specific characteristics and full query arguments of the corresponding task (e.g, vocabulary file, language model, parsing, tags, voiceprint, TTS rules, grammar, NLU etc. of each active task/process) along with any data needed for input understanding.

Id. at 29:21–32. “Queries can be decoded, parsed and then translated into a logic combination of queries (symbolic query) using NLU technology.” *Id.* at 51:12–14; *see also id.* at 3:18 (“NLU (natural language understanding)”).

Reproduced below is Figure 6 of Coffman.

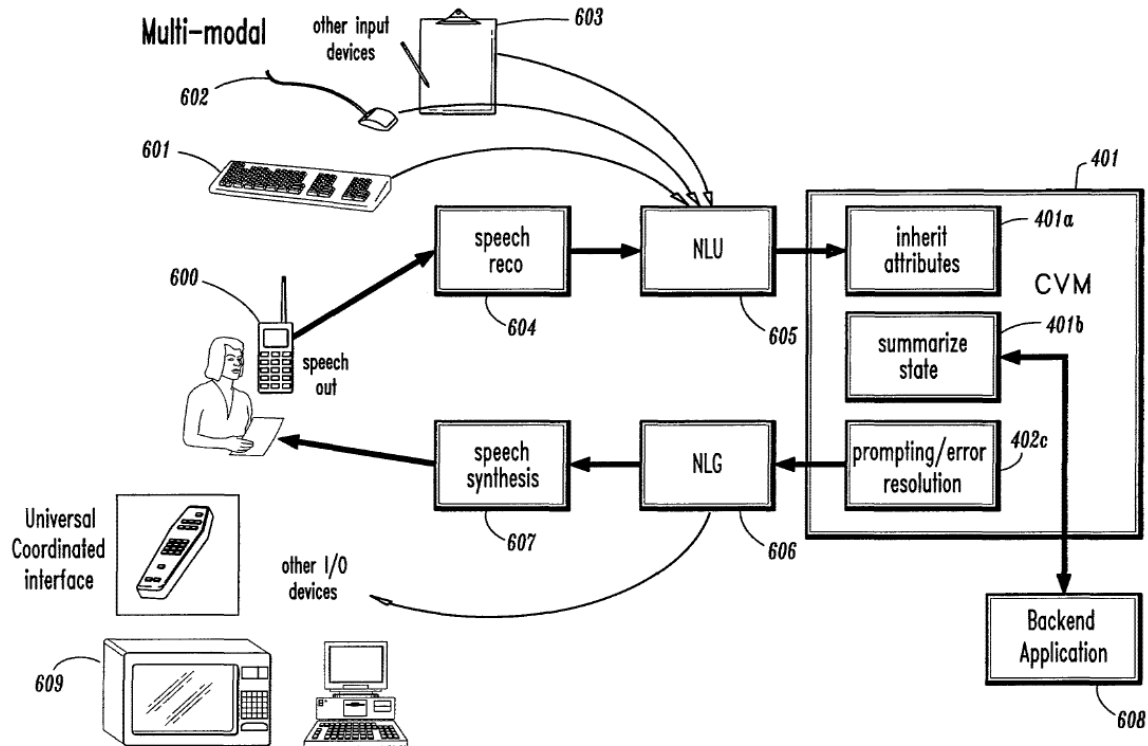


FIG. 6

Figure 6 shows “a general conversational user interface and input/output process.” Ex. 1003, 10:7–8, 37:14–15. “As illustrated, a conversational input interface . . . can process multi-modal input, that is, files/streams/resources, speech via a phone 600, keyboard 601, pointing devices 602, handwriting devices 603, including natural interfaces.” *Id.* at 37:15–18. “[A]ll the input and output events across all the modalities are caught and transferred to the dialog manager (that also stores it appropriately in the context stack).” *Id.* at 37:18–20. “Spoken input from a speech client (e.g., telephone 600) is subject to a speech recognition process 604 and other

input (e.g., keyboard, mouse clicks etc) are subject to NLU processing 605.”
Id. at 37:20–22.

“When a user interacts with the collection of devices, the interaction may always be via a central unit such as a PVA (personal vehicle assistant) 710 in a car, or a speech browser 713.” *Id.* at 55:27–28; *see also id.* at 56:22–24 (“It does not matter if your desktop PC runs a CVM since you have, in your car, a conversational PDA, a conversational car PC (PVA, Personal Vehicle Assistant) and a conversational smart phone.”).

2. *Julia (Ex. 1004)*

Julia particularly relates to “a variety of software-based architectures for communication and cooperation among distributed electronic agents to incorporate elements such as GPS or positioning agents and speech recognition into a highly mobile computing environment.” Ex. 1004, 1:21–26. According to Julia, “[u]tilizing speech, 2D and 3D gesture, and natural language recognition and understanding, the interface allows the driver to interact with the navigation system.” *Id.* at 5:3–7.

In one embodiment, Julia describes “a human-machine interface for a mobile computing environment such as a car environment or a portable computing device” and “provides a natural interface that allows, for example, a driver to interact with the navigation system.” Ex. 1004, 30:25–30. Julia describes as an example that “the driver or the passengers can interact with the navigation system, and the system can in turn take advantage of GPS information to plan a route and get location-specific information from local or remote databases displayed on the map.” *Id.* at 31:18–24, Fig. 17. “[I]n response to a user voice command such as ‘I want to go to SRI on Ravenswood Avenue in Menlo Park,’ one or more GPS agents, map database agents (and/or online search agents), and multimodal

map interface agents would preferably collaborate to ascertain the user's current location and display a suggested route from there to the desired destination.” *Id.* at 31:24–30.

3. *Cooper (Ex. 1005)*

Cooper “relates to a computer-based, personal virtual assistant for managing communications and information.” Ex. 1005, 1:13–15. “A user can filter, or tag, the messages the user wants to access by providing additional descriptive information to the VA.” *Id.* at 50:33–35; *see also id.* at 4:21 (“virtual assistant (‘VA’) system”), 6:55–58 (describing the VA interfacing with a Microsoft Exchange server). “For example, if a user instructs the VA to ‘Read my new messages, the VA reads all new messages beginning with the first new message.’” *Id.* at 50:35–40. The user can also instruct the VA to read messages from a certain sender or urgent messages. *Id.* at 50:36–40, 52:1–18.

4. *Independent Claim 1*

Petitioner argues that Coffman discloses a “mobile system for processing natural language utterances” because Coffman discloses a Personal Vehicle Assistant (“PVA”) running a CVM. Pet. 23–24 (citing Ex. 1002 ¶ 58; Ex. 1003, 55:27–28, 56:21–25³).

For “one or more physical processors at a vehicle that are programmed to execute one or more computer program instructions,” Petitioner argues that one of ordinary skill in the art would have understood and found obvious that Coffman’s PVA includes one or more processors programmed to execute computer program instructions. Pet. 24–25 (citing

³ Like Petitioner, we cite to the page numbering of the exhibit, not the exhibit page numbers.

Ex. 1002 ¶ 59; Ex. 1003, 13:1–3 (“The CVM system may be built on top of a conventional OS and APIs 15 and conventional device hardware 16 and located on a server or any client device (PC, PDA, Pvc).”).

For “when executed, cause the one or more physical processors to receive a natural language utterance associated with a user,” Petitioner argues that “Coffman describes receiving spoken input from a person” that would be a “natural utterance.” Pet. 25–28 (citing Ex. 1002 ¶¶ 62, 64; Ex. 1003, 5:1–4, 6:32–7:3, 8:24–27, 16:35–17:7, 37:14–22, 37:29–32, 41:2–5, 45:2–3, 48:1–3, 53:8–10, 53:22–28, 56:11–15, 56:25–57:2, 57:5–9, 57:17–20, 58:30–32, Fig. 6); *see also id.* at 34 (arguing use of natural language utterance for a spreadsheet application would have been understood or obvious) (citing Ex. 1002 ¶ 75; Ex. 1003, 57:18–20, 58:30–32), 34–36 (arguing use of natural language utterance for a search application would have been understood) (citing Ex. 1002 ¶¶ 76, 77; Ex. 1003, 8:24–27, 15:13–16:24, 29:1–4, 51:8–15, Fig. 4). Petitioner also argues that Julia confirms it would have been obvious to receive a natural language utterance for a vehicle navigation application. *Id.* at 28–29 (citing Ex. 1002 ¶ 65; Ex. 1004, 5:3–7, 30:25–45, 31:18–31, Fig. 17).

Petitioner further argues that Coffman generally describes accessing an e-mail application but does not specify natural language utterance from a user for accessing the application. Pet. 31 (citing Ex. 1002 ¶ 70; Ex. 1003, 56:11–12, 57:17–18). In Petitioner’s view, it would have been obvious to access an e-mail application by voice in Coffman because Cooper expressly describes voice-enabled e-mail application accessible over a communications network. *Id.* at 31–32 (citing Ex. 1002 ¶ 70; Ex. 1005, 1:27–30, 6:55–58, 50:33–40, 52:1–18).

Petitioner argues that Coffman’s Figures 4 and 6 and its associated description disclose causing a processor to “perform speech recognition on the natural language utterance.” Pet. 37 (citing Ex. 1003, 10:28–30, 29:1–4, 37:14–22, 38:9–11, Figs. 4, 6). For “parse and interpret the speech recognized natural language utterance,” Petitioner argues that Coffman’s natural language understanding and natural language parsing system 410 and parsing and translating process teach the limitation. Pet. 37–39 (citing Ex. 1002 ¶¶ 79–81; Ex. 1003, 6:32–7:3, 24:31–25:9, 29:1–4, 36:31–32, 37:2–4, 40:12–15, 42:1–7, 51:12–14, 52:12–14, 57:22–27, Fig. 4).

For “determine a domain and a context that are associated with the parsed and interpreted natural language utterance,” Petitioner argues that Coffman’s conversational system includes a context stack to track each active process, such as an application process, and that the process of matching a parsed utterance involves searching entries in the context stack to find an acceptable match. Pet. 39–40 (citing Ex. 1002 ¶¶ 82–85; Ex. 1003, 29:18–30:10, 37:20–26, 40:12–15, 41:2–5, 42:1–5, 51:12–14).

Petitioner also argues that Coffman’s applications provide data that would have been understood to comprise domain-specific information and that matching a context involves “a specific area of functionality, such as subject matter or particular device.” Pet. 40–41 (citing Ex. 1002 ¶¶ 86, 87; Ex. 1003, 12:26–30, 30:4–10, 42:1–5), 42–43 (citing Ex. 1002 ¶¶ 88, 89; Ex. 1003, 5:15–18, 13:8–13, 30:8–10, 42:1–5, 51:12–14). Petitioner further argues that the ’845 patent “describes ‘domain’ broadly as an area of functionality.” *Id.* at 41 (citing Ex. 1002 ¶ 87).

For “formulate a command or query based on the domain and the context,” Petitioner argues that Coffman describes opening an application

based on the matched context and voice request, for example, “I would like to open this.” Pet. 43–45 (citing Ex. 1002 ¶ 90).

For “determine whether the command or query is to be executed on-board or off-board the vehicle,” Petitioner argues that Coffman discloses CVM 704 that acts as an arbitrator between applications and devices of a distributed system, keeps track of both local and network-distributed applications, and parses and dispatches commands to the devices through its context stack. Pet. 45–47 (citing Ex. 1002 ¶¶ 91–92; Ex. 1003, 19:26–20:2, 23:29–31, 55:12–21, 55:27–30, Fig. 7). Petitioner also argues that the central unit of the distributed system can be an in-vehicle PVA with devices both on-board and off-board the vehicle. *Id.* at 47 (citing Ex. 1002 ¶ 93; Ex. 1003, 55:27–28, 56:16–57:9, Fig. 7). Petitioner further argues that commands based on natural language utterances would have been obvious. *Id.* at 47–48 (citing Ex. 1002 ¶ 93; Ex. 1003, 8:24–27, 51:8–15, 57:18–20, 58:30–32; Ex. 1004, 31:18–31; Ex. 1005, 50:33–40, 52:1–18; Ex. 1009, 23).

According to Petitioner, one of ordinary skill in the art would have understood or found obvious that Coffman or Coffman combined with Julia determines whether command or queries are to be executed on-board or off-board a vehicle. Pet. 48–49 (citing Ex. 1002 ¶¶ 94, 95; Ex. 1003, 58:3–11). Petitioner notes that Coffman does not make clear whether its PC runs its own CVM but the limitation would have still been obvious. *Id.* at 49–51 (citing Ex. 1002 ¶¶ 96, 97; Ex. 1003, 19:26–29, 27:28–30, 28:24–27, 56:22–25).

For “execute the command or query at the vehicle in response to a determination that the command or query is to be executed on-board the vehicle,” Petitioner argues that one of ordinary skill in the art would have understood and found obvious that Coffman’s PVA determining the

appropriate device and application for executing, for example, turn by turn navigation or phone call, would have been executed on-board the vehicle and in response to the determination. Pet. 51–52 (citing Ex. 1002 ¶ 98; Ex. 1003, 23:29–31, 37:2–3, 40:15–19, 55:27–30, 56:16–57:21, 58:9–11).

For “invoke a device that communicates wirelessly over a wide area network to process the command or query such that the command or query is executed off-board the vehicle in response to a determination that the command or query is to be executed off-board the vehicle,” Petitioner argues that Coffman describes using well-known techniques to interact wirelessly with off-board applications on a desktop PC, such as spreadsheet and e-mail applications. Pet. 52–53 (citing Ex. 1002 ¶¶ 99, 100; Ex. 1003, 56:11–12, 56:16–57:21, 58:30–32). Petitioner also argues that Coffman describes connecting with the desktop PC via a smartphone and accessing information via PSTN 1002 and internet 1003, thereby teaching “invoke a device that communicates wirelessly over a wide area network.” *Id.* at 53–54 (citing Ex. 1002 ¶¶ 101; Ex. 1003, 63:3–6).

a) Reason to Combine

Petitioner argues that Coffman, Julia, and Cooper are analogous art because they are in the same field and would have been reasonably pertinent to the problems of the ’845 patent. Pet. 30 (citing Ex. 1001, 1:16–25; Ex. 1002 ¶ 67; Ex. 1003, code (57); Ex. 1004, 5:1–7), 32–33 (citing Ex. 1001, 1:16–25; Ex. 1002 ¶ 72; Ex. 1005, 1:27–31).

According to Petitioner, it would have been obvious to combine Coffman’s PVA and conversational system with Julia’s vehicle navigation application. Pet. 30 (citing Ex. 1002 ¶ 66). Petitioner also argues that the proposed combination would have been known prior art elements and techniques combined according to known methods to yield predictable

results. *Id.* (citing Ex. 1002 ¶ 66). Petitioner further argues that one of ordinary skill in the art would have been motivated to combine Coffman and Julia because Julia provides further details about how a user provides spoken input for a navigation application and because Julia would have improved Coffman. *Id.* at 30–31 (citing Ex. 1002 ¶ 68; Ex. 1009, 7, 18).

Also, according to Petitioner, the proposed combination of Coffman’s PVA and conversational system with Cooper’s voice-enabled email application would have been combining known prior art elements and techniques according to known methods to yield predictable results. Pet. 32 (citing Ex. 1002 ¶ 71). Petitioner argues that Cooper discloses another example of receiving a natural language utterance. *Id.* (citing Ex. 1002 ¶ 71). Petitioner also argues that one of ordinary skill in the art would have been motivated to combine Coffman and Cooper because Cooper provides additional details about how a user interacts with an email application using natural language utterances and Cooper would have improved Coffman. *Id.* at 33 (citing Ex. 1002 ¶ 73).

Petitioner further argues that one of ordinary skill in the art would have had a reasonable expectation of success in combining Coffman with both Julia and Cooper because the combinations would have involved applying known technologies and techniques. Pet. 31 (citing Ex. 1002 ¶ 69), 34 (citing Ex. 1002 ¶ 74).

b) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the present record, Petitioner shows a reasonable likelihood of prevailing in its challenged to claim 1 as unpatentable over Coffman, Julia, and Cooper.

5. *Remaining Challenges*

Petitioner argues with citations to the record that claims 2, 3, 7, 8, 10, 12, 15, and 17 that depend directly or indirectly from claim 1 would have been obvious in view of Coffman, Julia, and Cooper. Pet. 55–69. Petitioner also argues with reference to its arguments for claims 1–3, 7, 8, 10, and 12 that independent claim 18 and its dependent claims 19, 20, 24, 25, 27, and 29 would have also been obvious in view of its proposed combination. *Id.* at 70 (citing also Ex. 1002 ¶¶ 127–134). Petitioner further argues with citations to the record that independent claim 32 and its dependent claims 34 and 36 are unpatentable over its proposed combination. *Id.* at 70–79.

For the reasons discussed above, we preliminarily determine that Petitioner demonstrates a reasonable likelihood of prevailing with respect to its challenge to independent claim 1. We, therefore, institute review on all challenged claims on the only ground set forth in the Petition. 37 C.F.R. § 42.108(a); *see also SAS*, 138 S. Ct. at 1354.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and the cited evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in proving that at least one of claims 1–3, 7, 8, 10, 12, 15, 17–20, 24, 25, 27, 29, 32, 34, and 36 of the '845 patent is unpatentable, and thus, we institute an *inter partes* review of all challenged claims on all presented challenges. 37 C.F.R. § 42.108(a).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–3, 7, 8, 10, 12, 15, 17–20, 24, 25, 27, 29, 32, 34, and 36 of U.S. Patent No. 9,031,845 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 9,031,845 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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Patent 9,031,845 B2

For PETITIONER:

Heidi L. Keefe
Andrew C. Mace
COOLEY LLP
hkeefe@cooley.com
amace@cooley.com

FOR PATENT OWNER:

Wayne M. Helge
James T. Wilson
NOSSAMAN, LLP
whelge@nossaman.com
jwilson@nossaman.com