

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WHATFIX INC.,
Petitioner,

v.

WALKME LTD.,
Patent Owner.

IPR2024-00065
Patent 11,558,317 B2

Before CHARLES J. BOUDREAU, KARA L. SZPONDOWSKI, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

BOUDREAU, *Administrative Patent Judge*.

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

I. INTRODUCTION

Whatfix Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–20 (“the challenged claims”) of U.S. Patent No. 11,558,317 B2 (Ex. 1001, “the ’317 patent”). Paper 2 (“Pet.”). Petitioner filed a Declaration of Dr. Homayoon Beigi (Ex. 1003) in support of the Petition. Patent Owner WalkMe Ltd. did not file a Preliminary Response.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2023). Institution of an *inter partes* review requires that “the information presented in the petition and . . . any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, we determine that there is a reasonable likelihood that Petitioner will prevail with respect to at least one challenged claim. Accordingly, we institute an *inter partes* review.

II. BACKGROUND

A. *Real Parties in Interest*

Whatfix Inc. identifies itself and Whatfix Private Limited as real parties in interest for Petitioner. Pet. 78. WalkMe Ltd. identifies itself as the real party in interest for Patent Owner. Paper 4, 1 (Patent Owner Mandatory Notices).

B. *Related Matters*

The parties indicate that the ’317 patent is involved in *WalkMe Ltd. v. Whatfix Inc.*, No. 1:23-cv-00227-MN (D. Del.). Paper 4, 1; Pet. 79.

The parties also identify as related matters IPR2023-01368, IPR2023-01379, and IPR2023-01443, involving patents related to the '317 patent. Paper 4, 1; Pet. 79.

C. The '317 Patent

The '317 patent, titled “Invoking an Automatic Process in a Web-based Target System Using a Chat-bot,” issued January 17, 2023, from U.S. Patent Application No. 17/577,530, filed January 18, 2022, as a continuation of U.S. Patent Application No. 17/026,305, filed September 21, 2020 (now U.S. Patent No. 11,258,732 (“the '732 patent”)), which was filed as a continuation of U.S. Patent Application No. 16/358,467, filed March 19, 2019 (now U.S. Patent No. 10,819,664 (“the '664 patent”)), which was in turn a continuation of application No. PCT/IL2018/051168, filed November 4, 2018. Ex. 1001, codes (21), (22), (45), (54), (63). The '317 patent also claims priority from U.S. Provisional Application No. 62/581,714, filed November 5, 2017. *Id.* at code (60).

The '317 patent discloses a “technical solution . . . to use a natural language interface to receive input from the user, and based thereon, select an automation process to be executed,” where “[t]he automation process may be executed in a manner that manipulates the [graphical user interface (GUI)] of the target system, in a similar manner to the manner in which the user operates.” *Id.* at 9:3–9.

The '317 patent discloses exemplary embodiments for a non-programmer user to define a flow of conversation for a chat bot. *See, e.g.*, Ex. 1001, Figs. 1–3. For example, a user “may define which questions the bot would ask, which remarks it will make, [and] flow control operations that may be based on evaluated conditions.” *Id.* at 11:56–59. Further, “the user may define for a conversation flow which automation process is

invoked,” or “that a conversation is associated with multiple automation processes, one of which may be selected based on the interaction with the user.” *Id.* at 11:59–65. The automation process may also be defined by a user. *Id.* at 14:37–38.

Figure 2A, reproduced below, shows a flowchart in accordance with an exemplary embodiment:

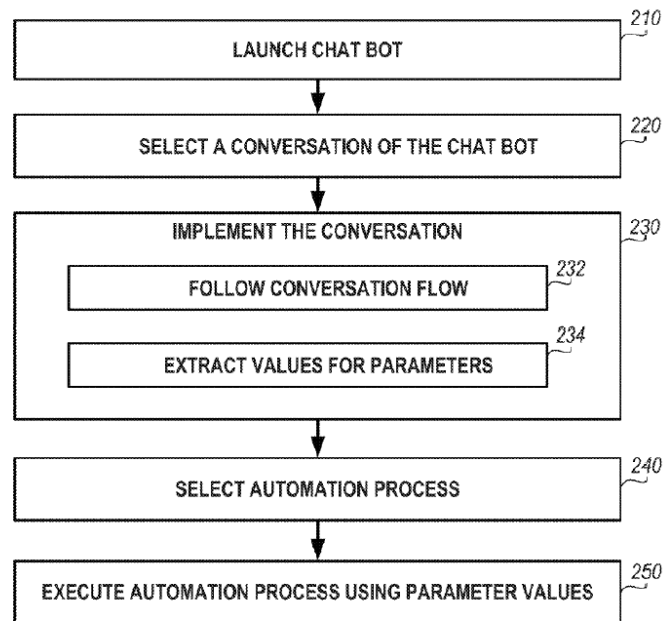


FIG. 2A

Figure 2A, above, shows step 210 (Launch Chat Bot), step 220 (Select a Conversation of the Chat Bot), Step 230 (Implement the Conversation) which further includes Step 232 (Follow Conversation Flow) and Step 234 (Extract Values for Parameters), Step 240 (Select Automation Process), and Step 250 (Execute Automation Process Using Parameter Values). After the chat bot is launched (step 210), the user may interact with the chat bot using natural language processing techniques and the appropriate conversation may be selected (step 220). Ex. 1001, 13:41–51. The user may, for example, “converse with the chat bot using natural language, such as using

written text in a messenger-like [user interface (UI)], [or] using oral conversation such as by providing oral instructions that may be translated to text using speech-to-text methods.” *Id.* at 12:15–19. At step 230, the conversation may be implemented, and the chat bot may execute the conversation flow by following the flow defined for that conversation. *Id.* at 13:52–54. At step 240, an automation process may be selected based on the flow of the conversation. *Id.* at 14:12–14. “The automation may be a flow that comprises steps in a predefined order.” *Id.* at 14:40–41. At step 250, the automation process may be executed. *Id.* at 14:21. Certain actions can be defined to cause the corresponding steps to occur in an automation. *Id.* at 14:45–47. For example, the automation process may interact with an element-of-interest on the GUI, such as a clickable object or a button, and simulate a click thereon. *Id.* at 14:64–67; *see also id.* at 15:1–37 (describing additional elements-of-interest and how the automation process interacts with them). In some embodiments, the user may be provided with a link during the chat bot session, and the automation process may be executed after the user clicks on the link. *Id.* at e.g., 16:32–39, Fig. 2B.

The ’317 patent also discloses various schematic illustrations of a user interface by which a user can edit and define a bot (Figures 4A and 4B), edit and define a conversation (Figures 5A and 5B), edit and define an action step (Figure 5C), edit and define a question step (Figure 5D), edit and define a condition step (Figure 5E), and edit and define an automation process (Figure 6). Ex. 1001, 17:39–22:36. One example described in the foregoing figures is to “Add New Employee.” *Id.*

Figure 7A, reproduced below, shows a schematic illustration of a user interface of the user with a chat bot.

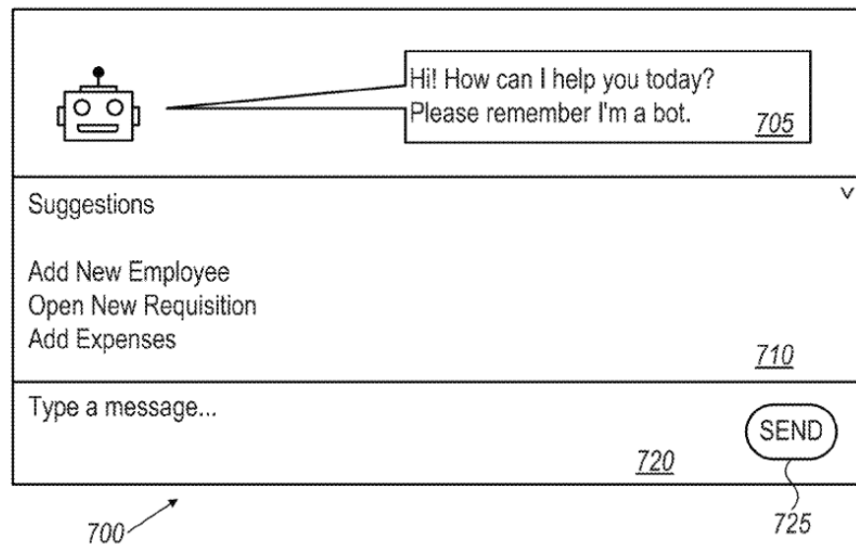


Fig. 7A

Figure 7A, above, shows a user interface of a user conversing with a chat bot after the chat bot has been launched. Ex. 1001, 22:40–43. The chat bot has provided a greeting “Hi! How can I help you today? Please remember I’m a bot.” (message 705), which may be based on the definition of the chat bot. *Id.* at 22:43–46. The chat bot has indicated suggested conversations 710 of “Add New Employee,” “Open New Requisition,” and “Add Expenses.” *Id.* at 22:55–58; *see id.* at 18:5–8. The user may converse with the chat bot by entering a message in text field 720, or speech to text may be used to analyze speech of the user and generate a text string. *Id.* at 22:47–54.

Figure 7B, reproduced below, further shows a schematic illustration of a user interface of the user with a chat bot.

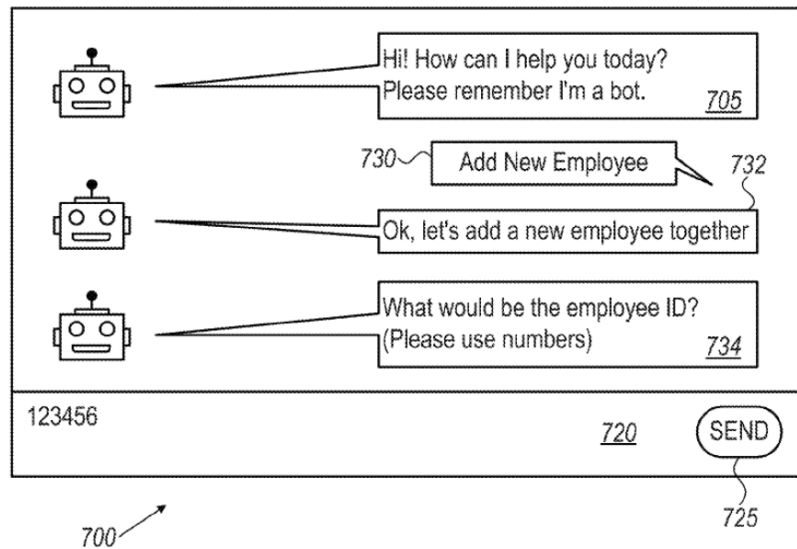


Fig. 7B

In Figure 7B, above, the user has indicated in message 730 that they would like to “Add New Employee.” The chat bot has started to implement the conversation flow of this selected conversation, and responds “Ok, let’s add a new employee together” (message 732) and “What would be the employee ID? (Please use numbers)” (message 734). Ex. 1001, 22:60–66. The user has replied in text field 720 with “123456.” *Id.* at 22:66–67.

D. Illustrative Claim

Of the challenged claims, claims 1, 9, and 16 are independent claims.

Claim 1, reproduced below with bracketed alphanumeric reference identifiers used by Petitioner, is illustrative of the claimed subject matter.

1. A chat-bot program product, wherein the chat-bot program product comprises non-transitory computer readable medium retaining program instructions, which program instructions when read by a processor, cause the processor to:

- [a] receive a user instruction from a user using a natural language interface;
- [b] determine to implement an automation process on a web-based target system in response to the user instruction;
- [c] collect information to be used as part of the automation process; and
- [d] implement the automation process by interacting with a Graphical User Interface (GUI) of the web-based target system and simulating user input to the GUI of the web-based target system, [e] wherein the automation process is performed with respect to third-party web-based target system and [f] without relying on an Application Programming Interface (API) exposed by the web-based target system, [g] wherein the implementation of the automatic process comprises:
 - automatically and without user input, filling in a text input field in the GUI of the web-based target system; and
 - [h] automatically and without user input, interacting with a widget in the GUI to cause the web-based target system to perform a predefined functionality.

Ex. 1001, 25:24–50.

E. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §¹	Reference(s)/Basis
1–20	103	Symons Article, ² Symons Video, ³ Williams ⁴
1–20	103	Allen ⁵

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103, effective March 16, 2013. Because the earliest filing date claimed by the ’317 patent is after that date, we refer to the AIA version of § 103.

² Senne Symons, *When Chatbots meet RPA bots*, available at <https://medium.com/roborana/when-chatbots-meet-rpa-bots-c8b22579f49a> (October 19, 2017) (Ex. 1004). Petitioner contends that the Symons Article is prior art to the ’317 patent at least under 35 U.S.C. § 102(a)(1) as a printed publication or as being otherwise available to the public. Pet. 10.

³ Screenshots from Senne Symons, “RPA meets chatbot: Automatically generate e-mail signature,” Vimeo (2017) (Ex. 1005 (original); Ex. 1006 (English translation)). Petitioner contends that the Symons Video is prior art to the ’317 patent at least under 35 U.S.C. § 102(a)(1) as a printed publication or as being otherwise available to the public. Pet. 10.

⁴ Douglas D. Williams and Ira L. Allen, *Using artificial intelligence to optimize the value of robotic process automation* (IBM 2017) (Ex. 1011). Petitioner contends that Williams is prior art to the ’317 patent at least under 35 U.S.C. § 102(a)(1) as a printed publication or as being otherwise available to the public. Pet. 13.

⁵ Allen et al., US 7,983,997 B2, issued July 19, 2011 (Ex. 1014). Petitioner contends that Allen is prior art to the ’317 patent at least under 35 U.S.C. § 102(a)(1). Pet. 37.

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1–4, 6, 7, 9–12, 14, 16–18	103	Krishnan, ⁶ Radhakrishnan ⁷

Pet. 8–77.

III. ANALYSIS

A. Legal Standards

A patent claim is unpatentable under 35 U.S.C. § 103 if “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” The question of obviousness is resolved based on 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 ordinary skill in the art; and (4) when presented, objective evidence of obviousness or nonobviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

The obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring

⁶ Krishnan et al., US 10,839,798 B2, filed Jan. 30, 2018 (Ex. 1016). Petitioner contends that Krishnan claims priority from a provisional application filed on Nov. 3, 2017, and published on May 9, 2019, and is prior art to the ’317 patent at least under 35 U.S.C. § 102(a)(2). Pet. 58.

⁷ Radhakrishnan et al., US 10,503,627 B2, filed Oct. 30, 2017, published May 2, 2019 (Ex. 1018). Petitioner contends that Radhakrishnan is prior art to the ’317 patent at least under 35 U.S.C. § 102(a)(2). Pet. 60.

“articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). A patent claim “is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* An obviousness determination based on a combination of references requires finding “both ‘that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (citation omitted); *see KSR*, 550 U.S. at 418. Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements,” but “must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016); *see also In re NuVasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (a finding of a motivation to combine “must be supported by a ‘reasoned explanation’” (citation omitted)).

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3)); *see also Intelligent Bio-Sys.*, 821 F.3d at 1369. Therefore, to prevail in an *inter partes* review, Petitioner must explain how the proposed combinations of prior art would have rendered the challenged claims unpatentable. At this preliminary stage, we determine whether the information presented in the Petition shows there is a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been obvious over the proposed combinations of prior art.

B. Level of Ordinary Skill in the Art

Determining whether an invention would have been obvious under 35 U.S.C. § 103 requires resolving the level of ordinary skill in the pertinent art at the time of the effective filing date of the claimed invention. *Graham*, 383 U.S. at 17. The person of ordinary skill in the art is a hypothetical person who knows the relevant art. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors in determining the level of ordinary skill in the art include the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* One or more factors may predominate. *Id.*

Petitioner contends that a “person of ordinary skill in the art (‘POSITA’) in the field of the ’317 patent would have [had a] bachelor’s degree in engineering or computer science and two years of experience working on NLP [natural language processing] or automation processes” or “[a]lternatively . . . would have [had] five to six years of experience working on NLP or automation processes.” Pet. 6 (citing Ex. 1003 ¶¶ 45–47).

We find Petitioner’s proposal is consistent with the evidence of record, including the asserted prior art and the ’317 patent, and, therefore, we adopt Petitioner’s proposed level of ordinary skill in the art for purposes of this Decision.

C. Claim Construction

In an *inter partes* review, we apply the same claim construction standard as would be used by a district court to construe a claim in a civil action involving the validity or infringement of a patent. 37 C.F.R. § 42.100(b). Under that standard, claim terms are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the

claims, the specification, and the prosecution history of record. *Id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc); *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365–66 (Fed. Cir. 2012). “The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (quoting *Vivid Techs., Inc. v. Am. Sci. Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Petitioner states that it “does not believe any terms require a formal construction” “[f]or purposes of this Petition.” Pet. 6. After reviewing Petitioner’s arguments and evidence, we determine that we do not need to expressly construe any term to resolve any controversy at this stage of the proceeding.

D. Alleged Obviousness Over Allen

Petitioner alleges claims 1–20 of the ’317 patent would have been obvious over Allen. Pet. 37–58. As stated above, Patent Owner did not file a Preliminary Response. Having considered the arguments and evidence before us, we find, for the reasons explained below, that the record establishes a reasonable likelihood that Petitioner would prevail on at least one claim in this asserted ground of unpatentability.

1. Allen

Allen is titled “Interactive Complex Task Teaching System That Allows for Natural Language Input, Recognizes a User’s Intent, and Automatically Performs Tasks in Document Object Model (DOM) Nodes” and is generally directed to a “system which allows a user to teach a computational device how to perform complex, repetitive tasks that the user usually would perform using the device’s graphical user interface (GUI).”

Ex. 1014, codes (54), (57). Allen explains that “[t]he user ‘teaches’ task steps by inputting natural language and demonstrating actions with the GUI.” *Id.* at code (57). “After a complete task has been taught, the system is able to automatically execute the task in new situations.” *Id.*

Figures 2 and 3 show how the system (called “PLOW”) can learn to order a book. Ex. 1014, 5:23–24. Figure 2, reproduced below, shows a graphical user interface. *Id.* at 4:1–2.

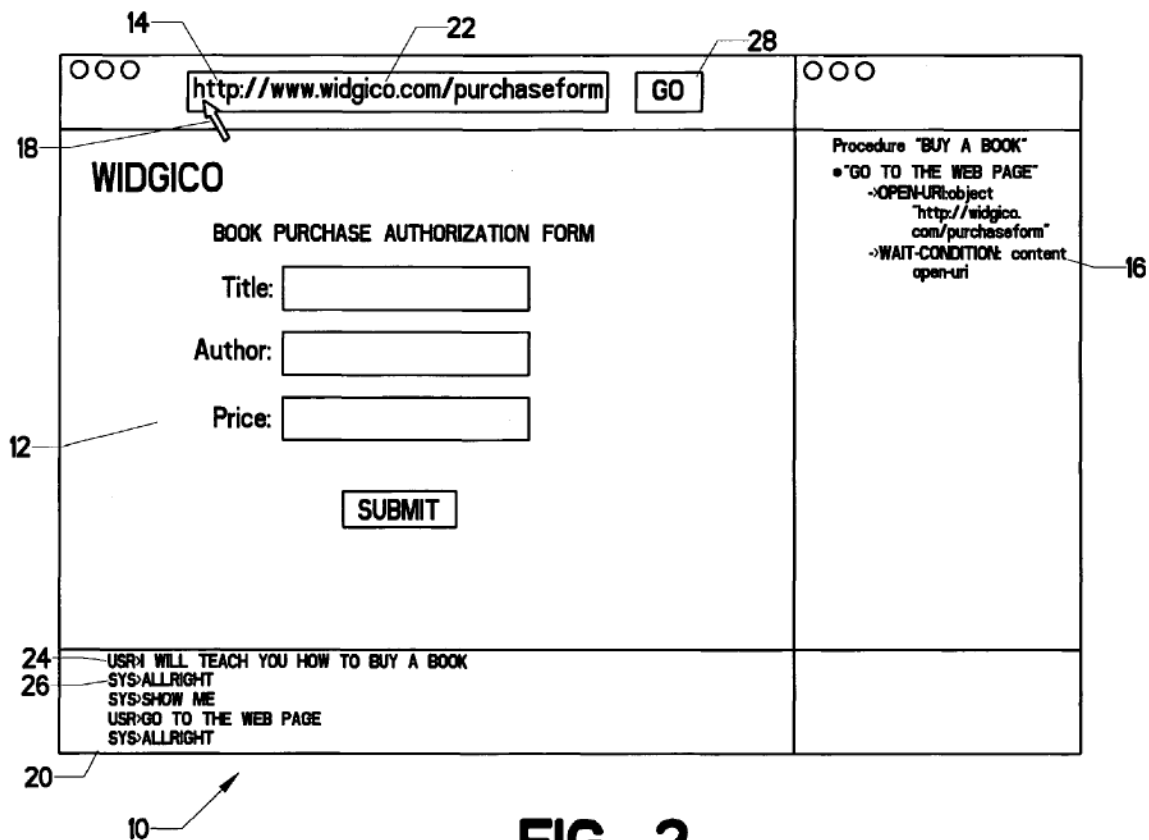


FIG. 2

Figure 2 shows browser display 12, speech interface display 20, and task log 16. The user may type words using a keyboard, or speak the words that will be deciphered with a language recognition software module that will be displayed as user speech 24 in speech interface display 20. *Id.* at 5:24–31. In this example, the system displays “USR>I WILL TEACH YOU HOW

TO BUY A BOOK” in speech interface display 20, where “USR” indicates that the speech was uttered by the user. *Id.* at 5:36–40. The system provides responsive statements back to the user that are displayed as system speech 26 in speech interface display 20, shown in this example as “SYS>ALLRIGHT SYS>SHOW ME,” where “SYS” indicates that the speech was uttered by the computer. *Id.* at 5:41–49. The system’s language understanding module can ultimately determine the user’s intent. *Id.* at 5:52–55. After receiving the statement from the user, the system creates a title for the new process it is about to learn (here, “BUY A BOOK”), and displays the title in task log 16. *Id.* at 5:56–60.

The user further speaks the phrase “Go to this web page,” which is displayed as “USR>GO TO THE WEB PAGE” in speech interface display 20. Ex. 1014, 5:63–65. The system responds “ALLRIGHT,” as shown in speech interface display 20. *Id.* at 5:65–6:3. The user then demonstrates the action rather than speaking. *Id.* at 6:4.

Figure 3, reproduced below, shows a graphical user interface demonstrating the user's actions.

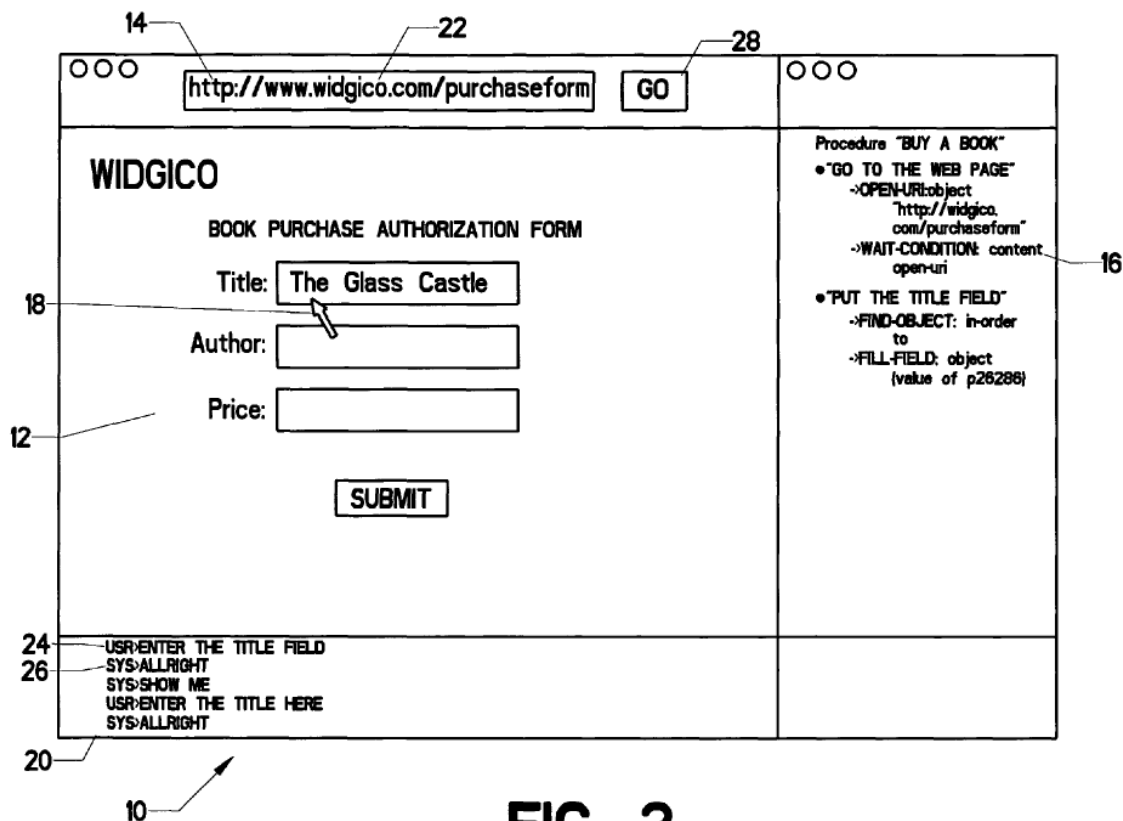


FIG. 3

Figure 3, above, shows, among other things, a graphical user interface with moveable cursor 18 and URI entry box 14. The user moves moveable cursor 18 to URI entry box 14, types input 22 using a keyboard to identify the Uniform Resource Identifier for the desired website (here, www.widgico.com/purchaseform), and presses GO button 28, which causes the web browser to “navigate” to the URI. Ex. 1014, 6:4–11. The system monitors the user actions and stores them, understanding that the typed URI identifies the appropriate website. *Id.* at 6:12–14. Each of the steps is represented in task log 16. *Id.* at 6:14. “The step is stored by PLOW as a series of actions, so that when it is later asked to carry out the process on its

own, the system will execute the same actions.” *Id.* at 6:16–18. The process continues:

The user utters the statement “Enter the title field,” which appears as deciphered text in speech interface display 20. PLOW then responds by issuing the voice-synthesized statement “All right. Show me.” The user moves movable cursor 18 to title entry box 30, while uttering the instruction “Enter the title here.” The system responds by saying “All right.” This indicates that PLOW has understood the last instruction and has recorded the necessary steps. The user then types the desired book title (“The Glass Castle”) into title entry box 30. Task log 16 is updated with a new step and the procedures defining the step.

Id. at 6:30–40. The system, thus, observes the user’s demonstration.

Id. at 6:47–48. The teaching process continues forward, with the user teaching the PLOW system how to finish ordering the book. *Id.* at 6:49–53.

Allen further states that

Once the complete task is learned, the user can employ PLOW’s task database the next time he or she wishes to order a book. The user would only need to say something like “I want to buy a book.” The system would then ask, “What is the title of the book?” Once that information is provided, PLOW would then perform the steps it was previously taught and complete the transaction.

Ex. 1014, 12:62–13:1.

2. Analysis of Independent Claim 1

Petitioner contends that Allen teaches the limitations of independent claim 1. Pet. 37–45. In support, Petitioner identifies certain passages and figures in the reference and explains their significance with respect to the corresponding claim limitations, with additional support from Dr. Beigi’s Declaration, as detailed below. *Id.*

a. Preamble: “A chat-bot program product, wherein the chat-bot program product comprises non-transitory computer readable medium retaining program instructions, which program instructions when read by a processor, cause the processor to:”

Petitioner identifies as the preamble of claim 1 the entire clause “A chat-bot program product, wherein the chat-bot program product comprises non-transitory computer readable medium retaining program instructions, which program instructions when read by a processor, cause the processor to.” Pet. 38–39. Petitioner argues that, “[t]o the extent that the preamble is limiting (which Petitioner does not concede), Allen discloses the preamble.” *Id.* at 39. In support of that contention, Petitioner quotes recitation in claim 1 of Allen of a computer system running software that “includes a natural dialog-based interface whereby said user can communicate with said software using natural dialog-based language.” *Id.* (quoting Ex. 1014, claim 1). Citing Dr. Beigi’s testimony, Petitioner further contends that “[a] computer system comprises a non-transitory computer readable medium retaining program instructions (of the computer program).” *Id.* (citing Ex. 1003 ¶¶ 162–165).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches the recitation that Petitioner identifies as the preamble of claim 1 for purposes of institution.⁸

⁸ As noted above, Petitioner does not argue that the preamble limits claim 1. We make no determination at this stage of the proceeding whether the preamble of claim 1 is limiting, but we further note that we do not make any determination at this stage whether the recitation “non-transitory computer readable medium retaining program instructions, which program instructions

b. 1[a]: “receive a user instruction from a user using a natural language interface;”

With respect to limitation 1[a], Petitioner again points to the recitation in Allen’s claim 1 of “software [that] includes a ***natural dialog-based interface*** whereby said ***user can communicate with said software*** using natural dialog-based language.” Pet. 39 (quoting Ex. 1014, claim 1 (emphasis added)) (citing Ex. 1003 ¶ 166). Petitioner further identifies speech interface display 20, user speech 24, and system speech 26 in Allen’s Figure 3, along with disclosure in Allen of its system executing steps previously learned based on user instruction, as teaching this limitation. *Id.* at 39–40 (citing Ex. 1014, Fig. 3, 3:44–46, 12:64–65; Ex. 1003 ¶¶ 166–168).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[a] for purposes of institution.

c. 1[b]: “determine to implement an automation process on a web-based target system in response to the user instruction;”

Petitioner argues that Allen discloses various user instructions, in response to which its system determines to implement an automation process on a web-based target system, as recited in limitation 1[b]. Pet. 40 (citing Ex. 1003 ¶ 169). In support, Petitioner cites the example cited in the above overview of Allen in which a user instructs “I want to buy a book”; the PLOW system then asks, “What is the title of the book?”; and once the requested information is provided, the system performs the steps it was previously taught to complete the transaction. Pet. 40–41 (citing Ex. 1014,

when read by a processor, cause the processor to,” following the word “comprises,” is properly considered to be part of the preamble.

12:64–13:1; Ex. 1003 ¶ 169); *see also id.* at 41 (citing Ex. 1014, 12:31–37, Fig. 7; Ex. 1003 ¶ 170). Petitioner further contends that Allen provides another example, using a different automation process, in which the user searches on the mapquest.com website for “hotels near the address ‘1018 E. De Soto St. Pensacola, Fla. 32501-3362’” and the system executes steps it previously learned. *Id.* at 41 (quoting Ex. 1014, 16:33–40) (citing Ex. 1014, 3:44–46; Ex. 1003 ¶ 171).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[b] for purposes of institution.

d. 1[c]: “collect information to be used as part of the automation process; and”

With respect to limitation 1[c], Petitioner argues that “Allen’s system collects information to be used as part of the automation process,” such as by collecting the title of a book from a user in response to the query “What is the title of the book?” Pet. 42 (citing Ex. 1014, 12:65–66). Petitioner asserts that “[t]he title (collected information) is used for buying the book.” *Id.* (citing Ex. 1003 ¶¶ 172–173).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[c] for purposes of institution.

e. 1[d]: “implement the automation process by interacting with a Graphical User Interface (GUI) of the web-based target system and simulating user input to the GUI of the web-based target system, ”

With respect to limitation 1[d], Petitioner argues that Allen’s system “observes the user’s actions and ‘then perform[s] the steps it was previously

taught and complete[s] the transaction,” citing Allen’s disclosure that a user may “instruct[] the system to ‘Enter the title here’ (referring to a book title to be entered in title entry box 30),” after which “[t]he ‘system will utilize the processes previously described to search . . . HTML codes and identify the text object corresponding to the book’s title . . . [and] then submit[] the title as entered by the user.” Pet. 42–43 (quoting Ex. 1014, 12:12–14, 12:19–25, 12:66–13:1) (citing Ex. 1014, 6:61–65; Ex. 1003 ¶ 174). Petitioner argues that Figure 3 of Allen (*see supra* § III.D.1) “illustrates the user input to the GUI of a web-based target system (www.widgico.com) for a book buying task (automation process),” wherein:

The system observes user input to the GUI, such as the user inputting the title in the title entry box 30, navigating to an online vendor site, pulling down and selecting the “Books” category, picking and inputting data in the text entry box 58, actuating the “GO” button, opening a specific book page, identifying the book price, and entering the book price on the purchase form. (EX1014, 12:11-61; EX1003, ¶¶175-176.) The system then performs the steps it was previously taught, so it simulates user input to GUI. (*Id.*, ¶¶176-177.)

Pet. 43.

Still further, Petitioner contends, “[t]o the extent that Allen does not disclose performing an automation of a sequence of interactions with a displayed UI of the computer program and simulating user interactions with the displayed UI, it would have been obvious,” citing disclosure in Allen that a GUI “is preferably provided so that the *user can easily monitor [the system’s] actions.*” Pet. 43 (quoting Ex. 1014, 4:66-5:1 (emphasis added)). According to Petitioner, “[i]t would have been obvious that in order for the user to easily monitor the system’s actions, the system’s actions have to be

displayed and involve interaction with a GUI.” *Id.* (citing Ex. 1003 ¶¶ 178–179).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[d] for purposes of institution.

f. 1[e]: “wherein the automation process is performed with respect to third-party web-based target system and”

Regarding limitation 1[e], Petitioner contends that, “[i]n Allen, an automation process ‘involv[ing] web-based operations . . . can be configured to run within a web browser,” and “Allen discusses example web-based target systems that are third-party web-based target systems:

www.widgico.com, www.amazon.com, www.mapquest.com.” Pet. 44 (quoting Ex. 1014, 4:61–63) (citing Ex. 1014, 6:6–10, 6:14–16, 6:24–26, 11:44–50, 12:31–33, 16:35–38, Figs. 3, 7, 12; Ex. 1003 ¶¶ 180, 181).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[e] for purposes of institution.

g. 1[f]: “without relying on an Application Programming Interface (API) exposed by the web-based target system”

Regarding limitation 1[f], Petitioner contends “Allen’s system ‘function[s] in a **web-based environment** in which **information is transferred using HTML, XHTML, CSS, and/or scripts.**”” Pet. 44 (quoting Ex. 1014, 3:26–31 (emphasis added)) (citing Ex. 1003 ¶ 182). Petitioner points out that Allen discloses that “[t]he ‘user “teaches” task steps by inputting natural language and demonstrating actions with the GUI,”” which, according to Petitioner, “means the automation process is defined to perform

any functionality that a non-programmer user can perform in the GUI.” *Id.* (quoting Ex. 1014, code (57); Ex. 1003 ¶ 182). Thus, Petitioner argues, “the executing is performed without utilizing an API of the computer program and without requiring the user provide any line of code.” *Id.* (citing Ex. 1003 ¶ 182).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[f] for purposes of institution.

h. 1[g]: “wherein the implementation of the automatic process comprises: automatically and without user input, filling in a text input field in the GUI of the web-based target system; and”

Regarding limitation 1[g], Petitioner contends “Allen’s system is taught how to execute actions with a GUI, including typing into an input field,” where “[e]ach interaction comprises filling in a text input field of the GUI automatically and without user input.” Pet. 45 (citing Ex. 1014, 7:43–45; Ex. 1003 ¶ 183).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[g] for purposes of institution.

i. 1[h]: ““automatically and without user input, interacting with a widget in the GUI to cause the web-based target system to perform a predefined-functionality.”

Regarding limitation 1[h], Petitioner contends “Allen’s system is taught how to execute actions with a GUI, including clicking a GUI button using a mouse, moving a mouse cursor, pulling down a drop-down box, typing into an input field, and waiting for a web page to load,” where

“[e]ach interaction comprises interacting with a GUI element (widget) automatically and without user input.” Pet. 45 (citing Ex. 1014, code (57), 6:5–7, 6:10–11, 6:20–22, 7:43–45, 12:38–41, 12:45–46; Ex. 1003 ¶¶ 186–188).

Based on our review and consideration of the current record, we determine that Petitioner has sufficiently shown that Allen teaches limitation 1[h] for purposes of institution.

j. Conclusion Regarding Independent Claim 1

For the reasons set forth above, we determine that Petitioner has sufficiently shown at this stage of the proceeding that Allen teaches each of the limitations of claim 1 and that the information presented in the Petition demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103 over Allen.

E. Remaining Challenges

As set forth in Section II.E. above, Petitioner additionally challenges claims 2–20 as unpatentable over Allen; claims 1–20 as unpatentable over the Symons Article, Symons Video, and Williams; and claims 1–4, 6, 7, 9–12, 14, 16–18 as unpatentable over Krishnan and Radhakrishnan (*see* Pet. 8–37, 45–77), which contentions are unchallenged on the record before us. Because we determine above that Petitioner demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the ’317 patent, we institute *inter partes* review on all claims and grounds. *See* 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.”).

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition, we determine Petitioner has established a reasonable likelihood of prevailing on its assertion that at least one claim of the '317 patent is unpatentable, and we institute an *inter partes* review on all the challenged claims and on all grounds presented in the Petition. *See* 37 C.F.R. § 42.108(a).

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to the challenged claims of the '317 patent and on all grounds of unpatentability presented in the Petition; and

FURTHER ORDERED that *inter partes* review is commenced on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

IPR2024-00065
Patent 11,558,317 B2

For PETITIONER:

Alex S. Yap
Mehran Arjomand
Jean Nguyen
MORRISON & FOESTER LLP
ayap@mofo.com
marjomand@mofo.com
jnguyen@mofo.com

For PATENT OWNER:

Kim Kennedy
George Stamatopoulos
KOBRE & KIM LLP
kim.kennedy@kobrekim.com
george.stamatopoulos@kobrekim.com