

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WHATFIX INC.,
Petitioner,

v.

WALKME LTD.,
Patent Owner.

Patent No. 10,819,664

Inter Partes Review No. IPR2023-01368

PETITIONER'S REPLY TO PATENT OWNER RESPONSE

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Petitioner respectfully submits that the Board should cancel every challenged claim. Nothing in the Patent Owner Response (“POR”) compels a different conclusion.

I. CLAIM CONSTRUCTION¹

Patent Owner (PO) asks the Board to rewrite “computer program” to a “‘target system’, which has a functionality that is invoked through its displayed user interface,” and adds unclaimed limitations for good measure. (POR, 27, 1, 2, 5-7 (arguing “separate”/“single” “computer program” with “its own” user interface (UI) on a single computer device).) The Board should decline PO’s invitation.

A. The Board Should Give “computer program” Its Ordinary And Customary Meaning

The ’664 specification—“the single best guide to the meaning of a disputed term” (*Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc))—confirms that “computer program” is nothing more than “instructions carried out by computer(s)”: “[t]he *computer program* product may . . . hav[e] . . . *instructions* thereon for causing *a processor to carry out aspects of the present invention.*” (EX1001, 22:61-65²; EX1036, 110:10-24, EX1042, ¶11 (both experts testifying that a “computer program product” includes a “computer program”).)

¹ The claim construction discussion herein is only for this proceeding.

² All emphasis added, unless otherwise noted.

Indeed, a “computer program” may be “a web-based application, a native mobile application, or a desktop program.” (EX1001, 2:34-36.) And the specification uses “computer program” in connection with “access[ing] other applications, including their UI elements” (EX1001, 13:11-17), accessing “different software tools for different purposes” (8:37-51), and being “loaded onto” multiple computers (24:24-32)—all reflecting the ordinary and customary meaning of “computer program.” (EX1042, ¶¶7-11.)

Extrinsic evidence also confirms the ordinary and customary meaning. The Cambridge and Collins Dictionaries respectively define a “computer program” as “a set of instructions that makes a computer do a particular thing,” and “a set of instructions for a computer to perform some task.” (EX1038; EX1039; EX1042, ¶10.)

B. PO Fails To Show That The Board Should Rewrite “computer program”

First, PO does not identify any “clear” expressions of intent required to redefine “computer program” as it urges. (POR, 27; *Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365-66 (Fed. Cir. 2012) (requiring “clear” expression of intent to meet “exacting” standards).) *Second*, PO’s sole citation does not even define “computer program” but rather describes a “target system”:

The target system, generally referred to as the computer program, may be a website, a web-based system, a native mobile application (e.g.,

executed in a protected sandbox), a desktop application (e.g., executed in a process of a non-sandbox based operating system), or the like. The **target system** may have a user interface, such as a Graphical User Interface (GUI), that the user may utilize in order to activate the functionalities of the target system.

(POR, 27; EX1001, 8:9-16.) And only that “target system” is “*generally* referred to” as a “computer program.” (EX1042, ¶12.)

Third, PO’s attempt to freight in additional unclaimed limitations is unavailing. Nothing supports a “separate”/“single” computer program (POR, 1, 6-7) with “its own” UI (POR, 2) operated on a single computer device (POR, 5-6). And it would be improper to exclude ’664 embodiments (e.g., at 8:37-44 (multiple applications), 13:11-17 (accessing other UI)). *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed. Cir. 2008) (“At leas[t] where claims can reasonably [be] interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment, absent probative evidence on the contrary.”); EX2001, ¶¶66, 90 (Patent Owner’s expert acknowledging that “computer program” includes 8:37-44 and 13:11-17 embodiments); EX1042, ¶13.

II. GROUND 1: THE CHALLENGED CLAIMS ARE UNPATENTABLE OVER SYMONS-WILLIAMS

A. “using a natural language interface” And “natural language conversation” (Elements 1[a]/19[a]/29[b])

1. Symons teaches a “natural language interface” and a “natural language conversation”

PO agrees that Symons discloses a chatbot, but argues that it is not a “natural language interface” or “natural language conversation.” (POR, 35.) Wrong. The Symons Article explicitly discloses a “natural language interface”: “[c]hatbots enable . . . a more intuitive *natural way to interact* with their customers” and “the chatbot collects all the necessary information in a *friendly, interactive manner*.” (EX1004, 2; EX1009, 2.) Baetens confirmed: “the team . . . implemented the chatbot as *an interface for a natural language conversation* with the user.” (EX1010, ¶8; EX1042, ¶¶14-18.)

2. The claims do not require natural language processing (NLP)

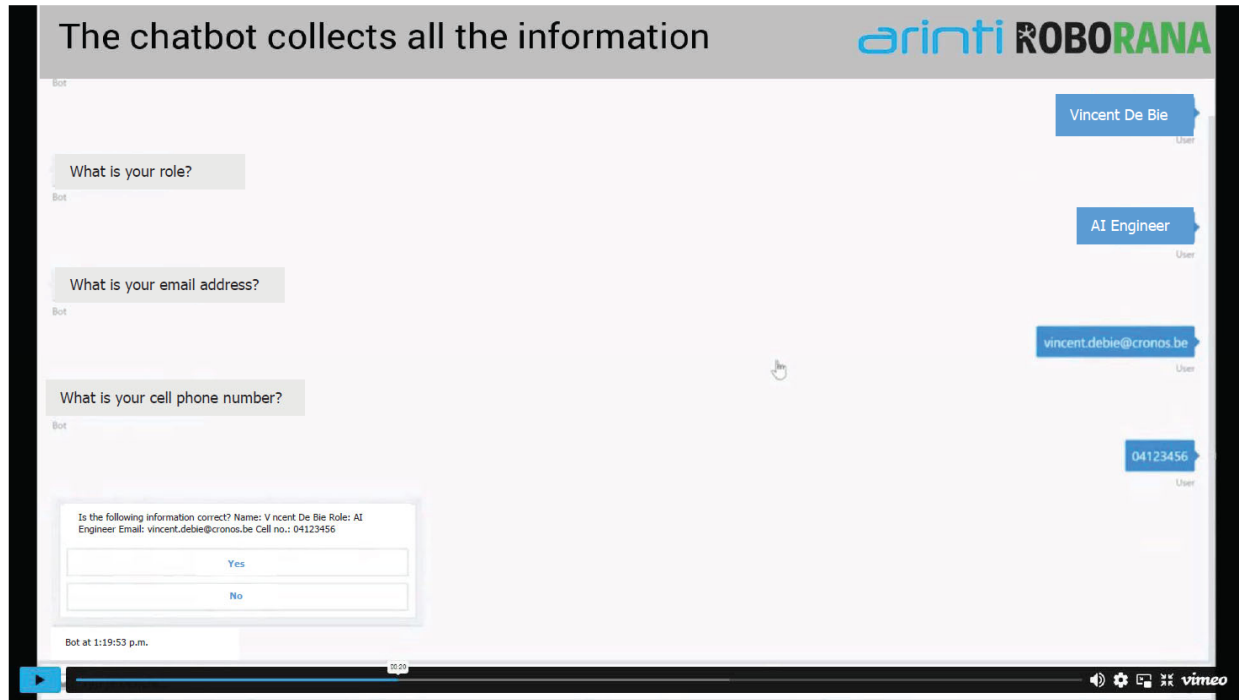
PO argues that “Ground 1 does not establish . . . whether [Symons] actually used a ‘natural language interface’ relying upon *NLP technology* to generate a ‘natural language conversation’.” (POR, 34-35.) Nowhere do the claims recite “natural language processing.” (EX1042, ¶19.)

The terms—“natural language interface” (claimed) and “natural language processing” (not claimed)—also have different meanings. As Dr. Beigi testified, “natural language processing” means “[y]ou spoke with me and I processed that

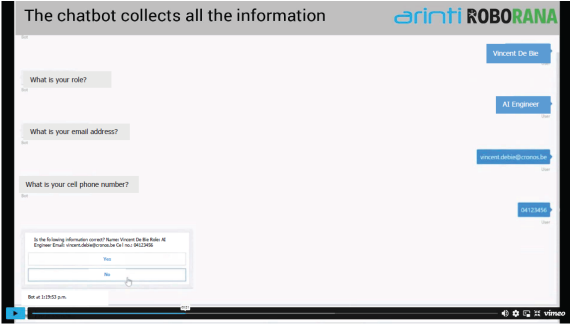
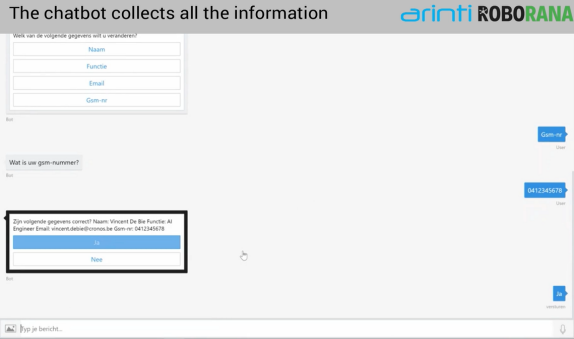
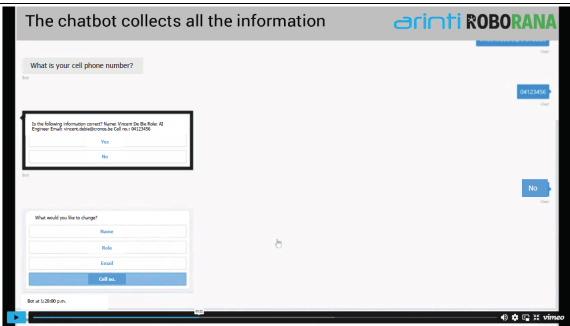
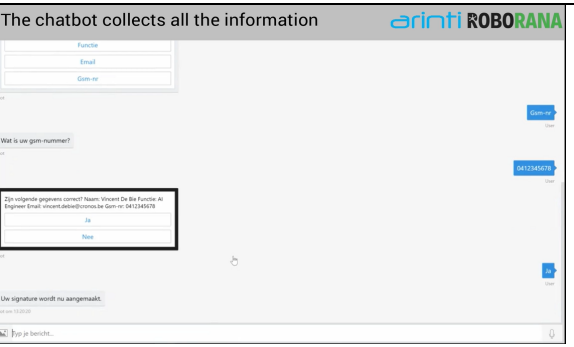
[natural] language, . . . , and I responded to it using again natural language. What natural language processing in the computer science sense is to mimic that kind of processing using machinery or a software.” (EX2003, 63:15-64:17; EX1001, 13:38-43 (“**processing** of the user’s interaction with the chat bot, such as using **Natural Language Processing (NLP)**”); EX1042, ¶¶19-22.) In contrast, a “**natural language interface** is an interface that will *allow you to do natural language communication* with the software.” (EX2003, 63:15-64:17; EX1001, 8:6-8 (“The chat bot may implement a **natural language interface** such as a text-based **conversation**, an oral **conversation**, or the like.”), 19:10-12.) Mr. Zatkovich does not dispute. (EX2001, ¶132 (citing EX2003, 63:15-64:17).) As for the claimed “natural language **feedback**,” it merely requires a response. (Petition, 16-17; EX1042, ¶¶19-23.)

3. Symons teaches NLP even under PO’s construction

Nevertheless, after Symons’ chatbot collects the user’s information, it asks: “[i]s the following information correct?” (below).



(EX1006, 6.) It then presents two different scenarios: the user's input is: (1) "Nee" (No) (left column below); or (2) "Ja" (Yes) (right column below). The chatbot's actions that follow differ between the different scenarios, corresponding to understanding —*i.e., processing*—the input. (EX1042, ¶¶24-27.)

Input: “No”	Input: “Yes”
 The chatbot collects all the information What is your name? What is your email address? What is your cell phone number? Is the following information correct? Name: Vincent De Boer, AI Engineer, Email: vincent.deboer@arinti.nl, Cell nr: 0612345678 No Be at 12:00 p.m.	 The chatbot collects all the information Wat is uw naam? Wat is uw functie? Wat is uw e-mail adres? Wat is uw GSM-nummer? Is de volgende informatie correct? Naam: Vincent De Boer, Functie: AI Engineer, Email: vincent.deboer@arinti.nl, GSM-nr: 0612345678 Ja Uw informatie wordt nu aangemaakt. Wat is uw naam? Uw informatie wordt nu aangemaakt. Wat is uw naam?
(EX1006, 7 (chatbot receives “No” input))  The chatbot collects all the information What is your cell phone number? Is the following information correct? Name: Vincent De Boer, AI Engineer, Email: vincent.deboer@arinti.nl, Cell nr: 0612345678 No What would you like to change? Name Function Email Cell nr Call me Be at 12:00 p.m.	(EX1033, 00:28 (chatbot receives “Yes” input))  The chatbot collects all the information Functie Email GSM-nr Wat is uw GSM-nummer? Is de volgende informatie correct? Naam: Vincent De Boer, Functie: AI Engineer, Email: vincent.deboer@arinti.nl, GSM-nr: 0612345678 Ja Uw informatie wordt nu aangemaakt. Wat is uw naam? Uw informatie wordt nu aangemaakt. Wat is uw naam?
(EX1006, 8 (chatbot understands that the information is <u>not</u> correct, and asks the user “What would you like to change?”))	(EX1033, 00:31 (chatbot understands that the information is correct, and states “Uw signature wordt nu aangemaakt”))

 (EX1033, 0:27 (chatbot receives “Gsm-nr” input, understands the input, and asks “Wat is uw gsm-nummer?”))	
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Furthermore, none of PO’s evidence of the definition of “chatbot” is associated with Symons/Baetens. (POR, 36.) EX2007 is a post-dated article about a “bot[] [where] **only** buttons are used”—that is not Symons. (EX2007, 1; *contra* EX1040, 1 (“[t]here are two main approaches to natural language processing: **rule[]-based NLP** and machine-learning-based NLP.”); EX1042, ¶16.)

And EX2008 supports Petitioner’s position. Consistent with the ’664 specification, EX2008 describes older chatbots that “worked well for specific questions and answers on which they had been trained.” (POR, 36-37; EX2008, 2-3.) A POSITA would have expected a chatbot that handles specific questions to use NLP as it would respond with appropriate answers. (EX1042, ¶¶17-18.)

B. “determining . . . an automation process” (Elements 1[c]/19[c]/29[d])

1. The claims do not require multiple automation processes by a single chatbot-RPA that handles multiple requests at once and a single conversation thread

PO tries to save its claims by arguing that the claims require: (1) multiple automation processes; (2) a single chatbot-RPA; (3) handling multiple requests at once; *and* (4) a single conversation thread. (POR, 3, 5, 7, 34.) There are no such requirements in the claim language. (EX1042, ¶¶31-32.)

Dependent claim 8’s “selecting” confirms that “determin[ing]” is broader and includes determining whether to use/invoke a single automation process, *e.g.*, the determination may be invoked by the chat bot receiving responses from the user (“based on the first and second natural language inputs from the user”). (EX1001, 11:51-54 (“a conversation flow [in] which [the] automation process is invoked thereby and which parameters are passed thereto”); EX1042, ¶¶28-30.)

Moreover, the specification supports the claims as encompassing:

- a single automation process (EX1001, 9:65-67 (“*one* or more automation processes”), 19:36-38 (“a specific (*single*) automation process), *also* 14:10-12);
- multiple chatbot-RPAs (17:28-30 (“*HR Bot* may be assigned several conversations that are different from those of a *CRM Bot*”));

- non-simultaneous handling of requests (17:21-24 (“automation processes may be performed *sequentially* (either immediately one after the other, or with immediate questions therebetween”)), 19:38-41); and
- multiple conversation threads (17:28-30, 11:58-59 (“define several different conversation[s] for a single chat bot (e.g., HR Bot”)), 9:64-67). (EX1042, ¶¶31-32.)

2. Symons-Williams teaches multiple automation processes, a single chatbot-RPA that handles multiple requests, and a single conversation thread

Even under PO’s reading of the claim language, Williams discloses “[t]hese chatbots can engage in natural language dialog with the caller *[(single conversation thread)]* and discern, through a series of interactions, the nature of the call *[(multiple requests)]* and then capture information further required to handle the request. The chatbot will then trigger a robot *[(single chatbot-RPA)]*.” (Petition, 18-20 (quoting EX1011, 3)³; EX1011, 3, 5 (describing multiple requests (“obtaining travel and expense and payment status, updating our backend systems, and closing the inquiry”), and multiple automation processes (“RPA operations,”

³ Contrary to PO’s assertions, Williams provided more than definitions. (POR, 33; EX1042, ¶35.)

“robots,” “robotic work dispatching,” “assignment of tasks to robots for execution”)); EX1042, ¶¶33-34.)

3. Symons points a POSITA to Williams

Finally, PO is wrong that Symons’ chatbot was only programmed to implement a single conversation thread. (POR, 37.) The fact that Symons’ chatbot uses NLP confirms that it is not “merely [a] hardwir[ed] conversation,” as Mr. Zatkovich argues. (EX2001, ¶157; Section II.A.3.) A creative POSITA (*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007)) would not have understood Symons’ teachings according to Mr. Zatkovich’s “single purpose . . . chat-RPA bot” with “no need to determine the automation process.” (EX2001, ¶166.) Symons teaches a chatbot-RPA, and its welcome message (“*at this moment* you can only use me to create a new Cronos signature” (EX1006, 2)) suggests combining with teachings of multiple automation processes (Williams). (EX1042, ¶37.)

C. “utilizing the displayed user interface of the computer program” (Elements 1[f]/19[f]/29[g])

Because PO’s construction of “computer program” is wrong, PO’s argument that Symons-Williams does not teach elements 1[f]/19[f]/29[g] is wrong. (POR, 6-7, 32, 34, 38-39.) (Section I.) Further, claims 1/19/29 do not require utilizing the displayed UI of *only* a single computer program. (EX1042, ¶38.)

Nevertheless, Symons teaches a single RPA software (desktop application) that is a

separate computer program with its own UI (GUI of Symons' RPA (EX1006)) operated on a single device (Symons' computer). (EX1042, ¶¶39-40.)

D. The Board Should Reject PO's Mischaracterization Of The '664 Claims And Symons/Baetens

First, PO attempts to discredit the Symons Video by arguing that the “internals” are not known. (POR, 30-31.) But the Symons Article and Baetens Article provide the level of details needed to show that Symons teaches the claims. As PO acknowledges, the claims broadly require “using a natural language interface,” “determining . . . an automation process,” and “executing the automation process.” (POR, 1.) The *type* of RPA and chatbot tools, *how* Symons built the automation, *how* the chatbot triggers the RPA bot, and *differences* between Symons' RPA and a simple program are not details required by the claims, and are in fact, details missing from the '664 specification. (POR, 4, 31; EX1042, ¶¶41-45.)

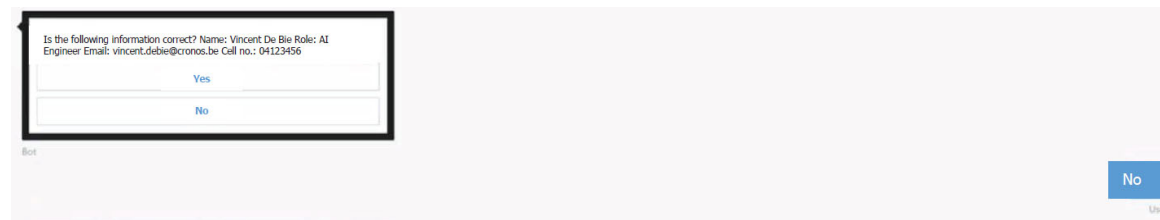
Second, Baetens' “we can't share much about the results of our joint effort (yet)” does not mean the chatbot-RPA had not been developed or that Baetens was intentionally hiding it for that reason. (POR, 4, 30.) Companies do not share low-level details of a developed product for many reasons, including to delay competition even in developed technologies, as Mr. Zatkovich explains. (EX1036, 24:22-26:4.) PO had the opportunity to depose Baetens (and Symons) to understand his comment but failed to do so. (EX1036, 94:17-95:7.) And the same

holds for Mr. Zatkovich’s unsupported contentions (the Symons Video was put together very quickly, the Arinti chatbot was not publicly available, etc.).

(EX2001, ¶¶144; EX1042, ¶¶44-45.)

Third, Mr. Zatkovich’s attempt to prove that the Symons Video was hardcoded fails. He provides no evidence that his computer program “gathered the same information in the same manner” as the Symons Video. (EX2001, ¶146.) He admits that he himself does not know the “internals” such that he does not know whether his computer program operates the same as Symons, and a side-by-side comparison shows that there is no “match” between them. (EX2001, ¶¶104, 156; EX1042, ¶¶46-56.)

Symons



Mr. Zatkovich’s Program



E. “chat bot service” (Claims 2/3)

PO’s lone argument for claims 2/3—that a “chat bot service” requires a third-party service—fails. (POR, 41.) According to the ’664 specification, “[t]he

chat bot may be a service that simplifies the end-user experience” (EX1001, 8:4-6.) And when a service is a third-party service, the term “third-party” is used. (See, e.g., EX1001, 8:24 (“third-party messaging service”).) Regardless, Arinti is a third party to, e.g., RoboRana, as Mr. Zatkovich acknowledges. (EX2001, ¶173; EX1042, ¶¶57-62.)

F. “wherein the database is updatable . . . via a Graphical User Interface (GUI) capable of . . . updating existing automation processes retained therein” (Claim 8)

PO disputes whether Williams’ “database is updatable.” (POR, 42-43.) Williams teaches “*amend[ing]* rules and policy changes” and the “robot then interact[ing] with [the database] to look up and apply rules related to automation processes.” (Petition, 29-30 (citing EX1011, 4).) In order to look up and apply the amended rules, the database must have stored them (*i.e.*, the database is updatable). Additionally, the robots and its rules/policy changes are stored in the same database. (EX1011, 4 (“*[b]usiness processes typically contain rules and policies that must be followed during transaction processing*”).) Moreover, Williams’ “outside of the RPA product” refers to the GUI for updating the database, not the storage of rules and policies. (EX1042, ¶¶64-65.)

And contrary to PO’s arguments (POR, 43), a POSITA would have understood “[t]he text . . . be[ing] changed by simply *logging into* WPML as an

administrator and *editing the [text] field* with new information” as actions that involve a GUI. (EX1011, 4; EX2001, ¶183; EX1042, ¶¶64-65.)

G. “voice-based service” (Claim 13)

PO’s argument that there is no motivation to use a voice-based service because of poor performance and inconvenience is wrong. (POR, 43-44.) The performance of voice-based services at the time of the ’664 alleged invention were comparable to human transcribers. (EX1041, 2 (announcing a voice-based service that achieved the human parity word error rate.) And in some instances (*e.g.*, no convenient access to a keyboard, user not proficient with typing), the benefits of a voice-based service outweigh the small costs. (EX1042, ¶¶67-68.)

H. PO Does Not Dispute That Symons-Williams Teaches Claims 4-7, 16, 20-23, 26, And 31

Because the arguments for the independent claims fail, the Board should cancel these claims.

III. GROUND 2: THE CHALLENGED CLAIMS ARE UNPATENTABLE OVER ALLEN

A. “using a natural language interface, receiving input from a user” (Elements 1[a]/19[a]/29[b])

PO’s lone argument is that Allen’s displays are not a “natural language interface” because they are used only for training, not executing an automation process. (POR, 49, 52-53.) Incorrect. Allen discloses a “method for learning and *executing executable tasks* using language . . . comprising: . . . providing software

running on said computational device and supported *GUI-based interaction with said user*; . . . wherein said software includes a *natural dialog-based interface* whereby said user can communicate with said software using natural dialog-based language.” (EX1014, 18:38-49.) And several other disclosures support the same. (EX1014, Abstract (“system . . . perform[s] . . . tasks that the user usually would *perform using the device’s graphical user interface (GUI)*.”); also 1:50-52 (describing invention as using “any computational device employing a graphical user interface (‘GUI’)”), 15:24-40 (describing system and user working together, where “the user can readily *observe the [system’s] mistake* and take action to correct it.”).) PO has no real response. (EX1042, ¶¶70-74.)

B. “natural language conversation comprises a first natural language input from the user, a natural language feedback . . . , and a second natural language input” (Elements 1[b]/19[b]/29[c])

PO’s argument that Allen’s natural language interface for obtaining the “first natural language input” is not the same as for the “natural language feedback” and the “second natural language input” is incorrect. (POR, 8, 54.) As Dr. Beigi explained, the conversation at 12:62-13:1 is a single conversation involving a “natural dialog-based interface” that “us[es] natural dialog-based language.” (EX1014, 18:47-49; EX1003, ¶155; EX1042, ¶75.)

Moreover, PO’s reliance on Allen’s Figure 6 is misplaced. (POR, 8, 51.) The question in Figure 6 (“What is the name of the book you are looking for?”) is

different from the question (“What is the title of the book?”) of the 12:62-13:1 conversation. PO agrees. (POR, 55-56 (“FIG. 6 . . . is separate from the conversation used to obtain the input of ‘I would like to buy a book,’ and occurs in a different interface”).) Further, the Petition did not rely on Figure 6 because it relates to training, not executing the automation process. (EX1014, 10:25-30 (“observing the user’s actions in *teaching* the step”).) And PO’s assertions that Dr. Beigi stated that Figure 6 is not a “natural language interface” is false. (POR, 8 (citing EX2003, 60:24-61:3, 61:59-60), 50 (citing EX2003, 257:20-24).) The questions that PO asked were regarding “a form where you fill in name, address, telephone number” and “an example of how the system asked it using the word ‘name’ instead of ‘title’”—these are not questions about Figure 6. (EX1042, ¶¶76-77.)

C. “an automation process configured . . . to simulate user interactions with the displayed user interface of the computer program” And “executing a functionality of the displayed user interface” (Elements 1[f]/19[f]/29[g])

PO makes three unavailing arguments why Allen does not teach elements 1[f]/19[f]/29[g].

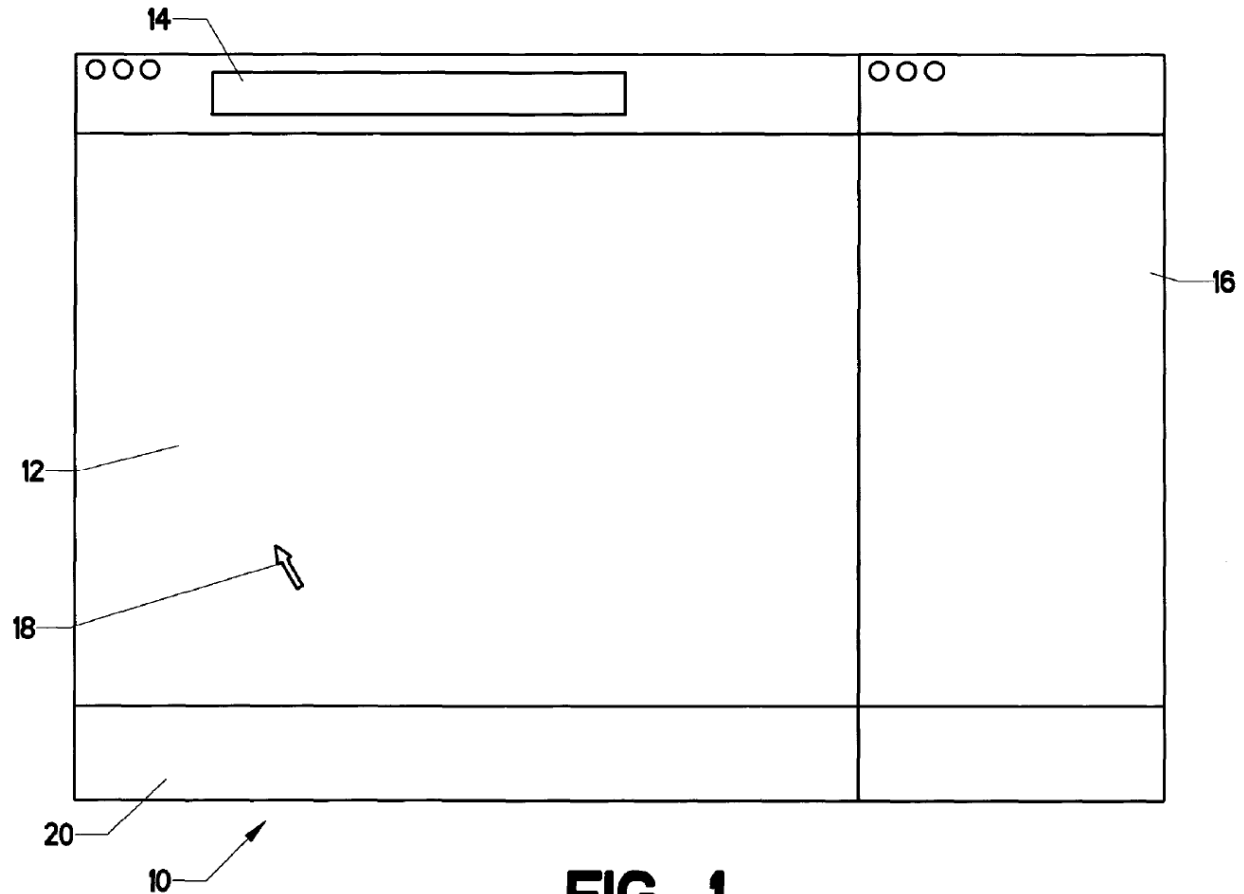
First, PO’s argument that Allen does not teach a “computer program” is based on its incorrect claim construction. (POR, 9, 58; Section I.) But even then, Allen’s PLOW is a single software (desktop application) that is a separate

computer program with its own UI (*see* Figure 1) “running on a user’s computer” (single device). (EX1014, 4:63-66; EX1042, ¶¶78-79.)

Second, PO repeats its argument that Allen’s automation process is not displayed when executed. (POR, 48.) PO is wrong. (Section III.A.)

Third, PO does not dispute that Allen “simulat[es] user interactions” with browser display 12, but instead argues that browser display 12 is not a displayed UI “of the computer program.”⁴ (POR, 58.) Figure 1 (below) shows that browser 12 (left) is part of GUI 10 (single UI), which is a displayed UI of PLOW. (EX1014, Fig. 1, 5:6-8; EX1042, ¶¶79-80, 82.)

⁴ Dr. Beigi did not testify that a non-website (including PLOW) is excluded from being a target system. (POR, 59 (citing EX2001 of IPR2024-00065, ¶242).)

**FIG. 1**

Finally, PLOW's functionality is executed by interaction with its displayed UI.⁵ The system executes the book buying task through interaction (inputting the title in the title entry box 30, pulling down and selecting the "Books category," etc.) with GUI 10. (EX1014, 12:11-61.) This interaction with GUI 10 is part of

⁵ The claimed "functionality" is "of the displayed user interface"—not "of the target system," as Mr. Zatkovich incorrectly alleges. (EX1001, Claim 1; EX2001, ¶241.)

“**PLOW** . . . perform[ing] the steps it was previously taught and **complet[ing] the transaction**” (buying the book). (EX1014, 12:66-13:1; EX1042, ¶81.)

D. Claims 2/3, Claims 4/21, Claims 5/22, And Claim 14

PO’s arguments are repeat arguments for these claims. (POR, 60-61.) The Board should again reject PO’s arguments. (Sections II.E, III.B, III.C, .; EX1042, ¶¶84-86, 89.)

E. “updating existing automation processes” (Claim 8)

PO next argues that Allen does not teach claim 8 because “updating [an] existing automation process” does not encompass adding a step. (POR, 61.) However, the ’664 specification identifies “adding new steps” as an example of “any update[] made to the automation process,” showing that PO is wrong as to the scope of the claim. (EX1011, 22:22-23; EX1042, ¶¶87-88.)

Further, Allen “add[s] a new step **to the [(existing)] process of buying a book**, such as going to a particular web page” undercutting Mr. Zatkovich’s focus on an existing automation process. (EX2001, ¶260; EX1014, 8:18-21; *see also* EX1014, 12:35-37 (describing a “new sub-task”); *also* 11:14-18 (“introduc[ing] another step or sub task”); EX1042, ¶¶87-88.)

F. “wherein the displayed user interface of the computer program is a user interface of a web browser, wherein said executing the automation process comprises activating the web browser to cause the displayed user interface to be displayed” (Claims 18/28)

PO’s arguments for claims 18/28 fail because it assumes that the web browser must be activated prior to the displayed UI being displayed. (POR, 62.) Unlike claim 15, nothing in claims 18/28 recites “prior to.” Regardless, Allen’s browser display 12 is a “user interface of a web browser” (which PO does not dispute). (Petition, 53-55.) The automation process navigates to the URI (activates the web browser), which causes the browser display 12 to display Amazon/Widgico (the UI of the web browser to be displayed). (EX1014, 6:4-12; EX1042, ¶¶90-91.)

G. PO Does Not Dispute That Allen Teaches Claims 6, 7, 12, 13, 15, 16, 19, 20, 23, 25, 26, 30, 31, And 33

Because PO fails to refute Petitioner’s showing for the independent claims, the Board should cancel these claims. (Sections III.A-III.C.)

IV. GROUND 3: THE CHALLENGED CLAIMS ARE UNPATENTABLE OVER ALLEN-DAYANANDAN

A. Dayanandan Is Analogous Art

Dayanandan and claim 9 of the ’664 are directed to the same field of endeavor (same function and structure). Like claim 9’s “identifying [an] element in [a] displayed user interface,” Dayanandan’s application development involves

“identify[ing] one or more data objects to be mapped or associated with one or more *GUI screens* of the application.” (EX1015, Abstract; EX1042, ¶92.)

Dayanandan is also reasonably pertinent to the ’664 problems. The ’664’s problems include “be[ing] able to identify [] elements correctly,” such as when “changes are performed to the underlying platform.” (EX1001, 8:52-64.) Dayanandan similarly recognizes identifying elements correctly by determining the “best match.” (EX1015, 21:51-22:53; EX1042, ¶¶93-94.)

B. “the element in the displayed user interface” (Claim 9)

PO disputes claim 9 solely on its incorrect interpretation of “element.” (POR, 64-65.) Claim 9 merely requires that the “element” be “in the displayed user interface.” It is not limited to a specific type of object and does not exclude abstract objects. (EX1042, ¶95.)

Nevertheless, PO’s argument that Dayanandan discloses identifying abstract objects is irrelevant as it relates to a “new data object” (of step 314), which is different from the “available data object” (steps 310 and 312) of the Petition’s theory. (POR, 65 (citing EX1015, 24:6-8); EX1042, ¶96.)

V. GROUND 4: THE CHALLENGED CLAIMS ARE UNPATENTABLE OVER KRISHNAN-RADHAKRISHNAN

A. Radhakrishnan Is Analogous Art

Radhakrishnan and the ’664 are directed to the same field of endeavor. As PO admits, the ’664’s relates to executing an automation process comprising a

sequence of interactions with a displayed UI. (POR, 67.) Similarly, Radhakrishnan relates to “interactions of a *robotic process automation module* with a user interface of an application to *simulate user operations with [a] user device*.” (EX1018, Abstract.) PO’s attempt to narrow Radhakrishnan’s field of endeavor to one specific example is improper. *In re Deminski*, 796 F.2d 436, 442 (Fed. Cir. 1986) (finding that the “field of endeavor” inquiry focuses on the broad scope of the field and not the specific problem being solved.); (EX1042, ¶¶97-99.).

Further, both the ’664 and Radhakrishnan problems pertain to an automation process performing user tasks to improve the user experience. (EX1001, 8:4-6 (“simplif[ying] the end-user experience by collecting data from him and executing a predefined automation flow.”); EX1018, 1:7-9 (“computer systems are relied upon to complete various tasks and increase user and/or process efficiency.”); EX1042, ¶100.)

B. “wherein the natural language conversation comprises . . . a second natural language input” (Elements 1[b]/19[b]/29[c])

PO only disputes whether Krishnan’s button inputs for destination 130 is a “second natural language input.” (POR, 71.) But an “input” that is part of a “natural language conversation” is a “second natural language input.”

Additionally, Krishnan teaches receiving the input for destination 130, “dates of travel,” and “credit card information” via typed words. (EX1016, 3:1-3, 11:4-6 (“the user typ[es] in ‘Europe’”); EX1042, ¶¶101-103.)

C. “executing the automation process, wherein said executing comprises utilizing the displayed user interface of the computer program” (Elements 1[f]/19[f]/29[g])

PO arguments are wrong. *First*, PO is wrong that Krishnan uses only a backend system and teaches away from utilizing a displayed UI. (POR, 11, 65, 72-73.) Krishnan at 2:33-35 (cited by PO) states “one or more backend databases *or other information processing systems*.” The phrase “other information processing systems” encompasses non-backend databases. Additionally, in Krishnan, the “chat bot may respond to customer input by retrieving *[(backend database)]* and providing the requested information, requesting additional input or information from the user *[(chat bot)]*, or performing an action *[(automation process)]* and providing the user with status updates about the progress of the action.” (EX1016, 2:40-44.) It would have been obvious for the automation process to use a displayed UI. (Petition, 70-71.) Thus, PO is wrong that a backend database and a displayed UI cannot be used together. (EX1042, ¶¶104-105.)

Second, PO does not dispute that Radhakrishnan utilizes a displayed UI, but instead argues that it is only for operations of the user, not the RPA. PO’s reason—that Radhakrishnan’s “within a virtual environment” is not displayed—is wrong. (POR, 74.) A “virtual environment” refers to whether the interactions are computer simulated, not whether they are displayed. And Radhakrishnan states that “the RPA module interacts directly with *a presentation layer [(displayed UI)]*

of the application *within a virtual environment.*” (EX1018, 11:41-47; *also* 5:49-50 (“bots” are “trained to mimic user activity *directly with a UI*”), 5:10-12, 6:29-34; EX1042, ¶¶107-108.)

Third, PO argument is wrong that generation of an operation record in Radhakrishnan means that it does not execute an automation process using a displayed UI. (POR 73.) Radhakrishnan’s “RPA module . . . *reproduce[s]* . . . the *actual user operations to [] populate the operation record.*” (EX1018, 11:52-60.) Thus, the RPA uses the displayed UI to generate the operation record. (EX1042, ¶106.)

D. Motivation To Combine Krishnan And Radhakrishnan

As the Petition and Dr. Beigi explained, a POSITA would have been motivated to combine Krishnan’s teachings of a chat bot and automation process with Radhakrishnan’s teachings of an automation process that utilizes a displayed UI. (Petition, 65-73; EX1003, ¶¶246-267.) PO’s rebuttal—that Krishnan’s use of a backend database makes the combination more costly and less efficient—fails to address the Petition’s obviousness theory. (POR, 75-76.) The obviousness combination does not replace Krishnan’s database or access it with a displayed UI. (EX2001, ¶¶307, 353.) It is the automation process that is tied to the displayed UI, and Radhakrishnan teaches the motivation to using RPA and interacting with a

displayed UI.⁶ (EX1018, 6:21-25 (“reduces the amount of computing resources”), 6:38-42 (describing RPA and its interaction with the displayed UI as reducing waiting time), 6:25-29; EX1042, ¶¶109-114.)

E. “the chat bot service is configured to prompt the user to provide a value for the parameter, wherein said executing comprises utilizing the value of the parameter” (Claims 3/20)

With no viable arguments on the merits, PO resorts to accusing Petitioner of ignoring the proposed combination, and then argues that Radhakrishnan *alone* does not utilize values from a natural language conversation. (POR, 76.) The Board should reject PO again ignoring Petitioner’s obviousness combination. (EX1042, ¶115.)

F. Claims 4/21, Claims 5/22, And Claim 16

PO reuses yet another failed argument, this time the “virtual environment” argument. (POR, 77-79.) PO also argues that Radhakrishnan *alone* does not utilize values from a natural language conversation. (POR, 77.) PO’s arguments are wrong. (Sections V.B, V.E; EX1042, ¶¶116-117, 124.)

⁶ PO is incorrect that motivation must appear in the reference (Krishnan) itself. (POR, 75); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1276 (Fed. Cir. 2004).

G. “the database is updatable . . . via a Graphical User Interface (GUI) capable of . . . updating existing automation processes” (Claim 8)

Radhakrishnan’s disclosures of recording for “further training” of the bots means the bots have already been trained (existing automation process) and are additionally trained (updated), as explained in the Petition. (Petition, 79.)

“[T]hese bots can be ‘trained’ or essentially programmed to execute tasks simply by even a non-tech-savvy user through the use of *simple drag and drop task functionality [(via a GUI)]* or configuration wizards.” (EX1018, 5:59-64; EX1042, ¶¶118-121.)

H. “said executing is performed on a client device of the user” (Claim 12)

For claim 12, PO just repeats its arguments regarding Krishnan’s backend database. (POR, 78.) Mr. Zatkovich’s additional argument that a client device does not have access to a backend database is flawed and contrary to the ’664. (EX2001, ¶372; EX1001, 14:29-32 (“[t]he definitions of the automation process may be stored in a database and retrieved on the client-side for execution”).) These arguments should be rejected. (Section V.C; EX1042, ¶¶122-123.)

I. “said executing the automation process comprises activating the web browser to cause the displayed user interface to be displayed” (Claims 18/28)

PO repeats its failed argument that claims 18/28 require “prior to.” (POR, 79; Section III.F.) PO’s other argument that a web browser can be active before

the automation process is executed also fails since the RPA begins operating at the “first operation” and “reproduces the actual operations of the user in real-time.” (EX1018, 2:4-6, 11:22-23; EX1042, ¶¶125-127.)

J. PO Does Not Dispute That Krishnan-Radhakrishnan Teaches Claims 2, 6, 7, 13, 14, 23, 26, 28, 29, 31, And 33

PO fails to refute Petitioner’s showing for the independent claims and does not separately challenge these claims, which the Board should cancel. (Section V.)

VI. LEVEL OF ORDINARY SKILL IN THE ART

A. Petitioner’s POSITA Level Is Proper

Petitioner’s proposed POSITA level is supported by the evidence. (Petition, 5-6.) Importantly, the record shows that the key aspects of the art—chatbots, RPAs, and their combinations—were well known by 2017, and thus point to a higher POSITA level. For example, Arya describes chatbots in 1994/1995 that used NLP, and Ferscht describes RPAs in 2012. (EX1032, 3; EX1028, 4.) Similarly, Allen and LeClair showed the combination in 2007 and 2015, respectively. (EX1014; EX1031, 4, 12-13; EX1042, ¶¶128-130.)

Rather than address the evidence, PO resorts to mischaracterizing the art. PO’s cited statements (POR, 24) from Symons and Baetens refer to the RoboRana-Arinti *collaboration*, not the chatbot-RPA combination, as being new. (EX1004, 1 (“*[w]e decided to join forces with Arinti*, specialized in chatbot and AI technologies within the Cronos Group, to explore the possibilities to combine RPA

bots with chatbots.”); EX1009, 2 (“*[a]s soon as we’ve heard about our new colleagues at RoboRana*, we’ve been figuring out how to combine these technologies”).) And Symons’ “evolving rapidly” statement refers to the general “technology landscape” (“[n]ew technologies” and “older technologies”)—not the chatbot-RPA combination. (EX1004, 1; EX1042, ¶¶131-132.)

As for Symons’ experience, instead of taking the opportunity to find out from Symons himself, PO improperly assumes that Symons’ experience before his job at RoboRana does not count. (POR, 25.) Even PO’s own expert testified that he counted time before his first job (while in school) as “experience.” (EX1036, 16:7-25; EX1042, ¶133.)

B. The Board Should Reject PO’s Proposed POSITA Level

The evidence does not support PO’s proposed POSITA level (as discussed above), and it is unclear what “some education, formal or informal” or “some” work experience means. (POR, 25; EX2001, ¶44; EX1042, ¶134.)

In any event, the parties do not dispute that the outcome would be the same regardless of which POSITA level the Board adopts. (POR, 25; EX1042, ¶135.)

VII. THE BOARD SHOULD GIVE LITTLE/NO WEIGHT TO MR. ZATKOVICH’S OPINIONS

The Board should give little-to-no weight to Mr. Zatkovich’s testimony.

First, PO relies on Mr. Zatkovich’s opinions to support its narrowing of the claims in view of the meanings of “natural language interface” and “computer

program.” But Mr. Zatkovich did not consider any dictionary definitions despite admitting that he knew of such a claim construction requirement. (EX1036, 15:9-13.)

Second, Mr. Zatkovich frequently contradicts his own testimony. For example, Mr. Zatkovich argues that the “natural language interface” must be implemented on the “target system” / “computer program” (EX2001, ¶118), but takes a different position in paragraph 50 of his declaration (EX2001, ¶50). As another example, Mr. Zatkovich criticizes Symons for its chatbot and automation process allegedly being executed on different devices, but then testifies that there was no such requirement for claim 1. (EX1036, 55:25-56:9.) And in yet another example, Mr. Zatkovich testified that his computer code is a “match” to the Symons Video and transmits information collected by the chatbot to an RPA server using the POST a URL method. (EX2006, 6.) But when asked during his deposition, he testified that “[i]t’s not clear” whether the chatbot transmits information to an RPA server and “[n]either I nor Dr. Beigi could make that determination as to how or if that information is transmitted.” (EX1036, 120:13-21.)

Third, Mr. Zatkovich also draws unsupported conclusions. For example, Mr. Zatkovich alleges that the Symons “video was put together very quickly (less than 17 days after Mr. Symons began working at Roborana as a ‘showcase’)” and

that “the Arinti chatbot . . . was not publicly available at the time.” (EX2001, ¶144.) But Mr. Zatkovich did not point to any evidence that supported his assumptions, and when asked, admitted that “it’s possible” that other assumptions could have been made. (EX1036, 125:7-16.)

VIII. CONCLUSION

Petitioner respectfully requests cancellation of the challenged claims of the ’664 patent.

Dated: October 17, 2024

Respectfully submitted,

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Certification of Word Count (37 C.F.R. § 42.24)

I hereby certify that this PETITIONER’S REPLY TO PATENT OWNER RESPONSE has 5,576 words (as counted by the “Word Count” feature of the Microsoft Word™ word-processing system), exclusive of “a table of contents, a table of authorities, a listing of facts which are admitted, denied, or cannot be admitted or denied, a certificate of service or word count, or appendix of exhibits.”

Dated: October 17, 2024

By /s/ Jean Nguyen

Jean Nguyen

Certificate of Service (37 C.F.R. § 42.6(e)(4))

I hereby certify that the attached PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE was served on the below date on the Patent Owner via e-mail (by consent) to the following counsel of record for the Patent Owner:

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