

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WHATFIX INC.,
Petitioner,

v.

WALKME LTD.,
Patent Owner.

Case IPR2023-01368

Patent No. 10,819,664 B2

PATENT OWNER'S RESPONSE FOR INTER PARTES REVIEW OF
CLAIMS 1-9, 12-16, 18-23, 25-26, 28-31, 33
OF U.S. PATENT NO. 10,819,664 B2

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EXHIBIT LIST

<u>EXHIBIT NO.</u>	<u>DESCRIPTION</u>
Ex2001	Expert Declaration of Ivan Zatkovich in Support of Patent Owner’s Response with respect to Claims 1-9, 12-16, 18-23, 25-26, 28-31, 33 of U.S. Patent No. 10,819,664 B2 (“ <u>Zatkovich Decl.</u> ”)
Ex2002	<i>Curriculum Vitae</i> of Ivan Zatkovich
Ex2003	Deposition Transcript of Homayoon Beigi, taken on June 26, 2024
Ex2004	Deposition Transcript of Homayoon Beigi, taken on June 27, 2024
Ex2005	Public Comments to S. Symons, "When Chatbots meet RPA bots," https://medium.com/roborana/when-chatbots-meet-rpa-bots-c8b22579f49a , Medium (Oct. 19, 2017) (omitted by Petitioner in Ex1004)
Ex2006	Zatkovich’s Overview of Ex2009, “Simple chatbot” .html Code, and Ex2010, Video of “Simple chatbot” .html Code
Ex2007	Khoros Staff, “Different types of chatbots: Rule-based vs. NLP”, Expert insights, Aug. 29, 2019 (marked as Beigi Ex. 19)
Ex2008	IBM, “What is a chatbot?”, https://web.archive.org/web/20221227051852/https://www.ibm.com/topics/chatbots (archived copy of Dec. 27, 2022).
Ex2009	“Simple chatbot” .html Code, Prepared by Mr. Zatkovich for use in IPRs 2023-01368, 2023-01379, 2024-00065.

<u>EXHIBIT NO.</u>	<u>DESCRIPTION</u>
Ex2010	Video demonstration of the “Simple chatbot” .html Code (Ex2009)
Ex2011	U.S. Patent No. 10,819,664 [Ex1001 in IPR2023-01368]
Ex2012	U.S. Patent No. 11,258,732 [Ex1001 in IPR2023-01379]
Ex2013	[RESERVED]

I. INTRODUCTION

Patent Owner WalkMe Ltd. submits this Patent Owner Response in opposition to Petition (Paper 2) and Institution Decision (“ID”, Paper 12) in IPR2023-01368, with respect to Claims 1-9, 12-16, 18-23, 25-26, 28-31, 33 of Patent 10,819,664 (“’664 Patent”, Ex1001).

The ’664 Patent, broadly speaking, is directed to “using a **natural language interface**” to “receiv[e] input from a user as part of a **natural language conversation**” [a]-[b], “**determining**”, based on the natural language inputs from the user, “an automation process to perform” which is “configured to perform an automation of a **sequence of interactions with a displayed user interface of a computer program** and to **simulate user interactions with the displayed user interface** of the computer program” whose “user interface is **displayed on a screen**” [c]-[e], and then “**executing** the [determined] **automation process**” “comprising **utilizing the displayed user interface of the computer program** to the sequence of interactions” (Ex1001, Claims 1, 19, 29; Fig. 2A, Steps 230, 240, 250; Ex2001, ¶¶71, 75-88).

These claimed processes require “a **natural language interface**”; a separate “**computer program**” (which the ’664 Patent explains is a “**target system**”,

Ex1003, 8:9-13; Ex2001, ¶¶94-95) with its own “**user interface**” that is “displayed on a screen”, and a “**determin[ed]**” “**automation process**” that “simulate[s] user interactions with the displayed user interface of the computer program” and “utilized” during the “executing” process. (Ex2001, ¶¶72-73).

Petitioner WhatFix Inc. (“Petitioner”) has presented a shot gun approach of applying three sets of main references for a total of four grounds, challenging overlapping claim sets but fewer than all claims in the ’664 Patent.¹ None of the references relied upon in any of these grounds are offered as anticipating the claimed inventions. (Petition, 6-7; ID, 9-10). Mr. Zatkovich confirms the references do not anticipate or render obvious any of the challenged claims. (Ex2001, ¶¶380, 96-206 (Ground 1), 207-272 (Ground 2), 273-298 (Ground 3), 299-379 (Ground 4)).

Ground 1 relies on a hodgepodge collection of blog posts and a video demo as “Symons” (as if it were a single primary reference):

¹ Petitioner is not challenging in this proceeding, Claims 10-11/17/24/27/32. In an “afterthought” IPR 2023-01443, Petitioner challenged Claims 10/24, but that proceeding was not instituted. (Ex2003, 16:17-17:8).

- (1) a blog posting by Sennes Symons, from RoboRana, on *Medium* from October 17, 2017 (Ex1004) (“Symons Blog”) to “showcase”/“demo” a **single purpose chatbot** used to “collect all the necessary information” to use to “automate the process of creating an email signature” (Ex1004, 2);
- (2) a video created by Symons and posted on *Vimeo* at the same time (Ex1033; see Ex1008, ¶8) and linked to the Symons Blog, along with selected screen shots (Ex1005) and English language translations made for this litigation (Ex1006, Ex1007) (collectively, “Symons Video”); and
- (3) a separate blog posting by Walter Baetens, a collaborator of Symons from Arinti, a then recently-related entity, from a few days later (“Baetens Blog”), linking to the Symons Blog, and confirming that “**we can’t share much about**

the results of our joint efforts (yet)” other than the “small demo”.² (Ex1009, 2).³

As contemporaneous comments to the Symons Blog confirms (Ex2005), and as Baetens indicate, “Symons” kept secret key details required by the claims, like:

- “which rpa tool and chatbot tool are” used;
- a “description” of what was done “to do this automation”;
- “how does the chatbot trigger the RPA bot”; and
- what makes this “RPA” different than “a simply[sic] program” (Ex2005).

Nobody answered these contemporaneous questions, and Dr. Beigi, Petitioner’s expert, who failed to notice or include these comments in his analysis, was also unable to answer these questions, since in his words, “we only see the video, the actual interaction”, not “the internals of it”. (Ex2003, 213:18-214:9).

² Declarations from Symons (Ex1008), Baetens (Ex1010), the translator (Ex1007) were submitted to authenticate and establish as printed publications the Symons Article, the Symons Video and the Baetens Article. The details of these declarations are not prior art for purposes of these proceedings.

³ All emphasis added unless otherwise stated.

The failure of Symons to provide these details was intentional (as Baetens confirmed) and fatal to Ground 1. Although Symons purports to show a “chatbot” in the “showcase”/“demo” (Ex1004, 2; Ex1009, 2), it remains a mystery as to what was actually built, how it was built and whether it actually used a “natural language interface” relying upon NLP technology to generate a “natural language conversation” as required by [a]/[b] of the claims. (Ex2001, ¶¶104, 156; Ex1009, 2; Ex2005). As Dr. Beigi confirmed, Symons does not disclose “the internals of it”. (Ex2003, 213:18-214:9).

Significantly the disclosed Chatbot-RPA was a single purpose demo “to automate the process of creating an email signature” (Ex1004, 2-3; Ex1009, 2; Ex1008, ¶9; Ex1010, ¶8; Ex1006, 1; Ex1003, ¶68; Ex2001, ¶¶118, 155). Thus, as Mr. Zatkovich explains, the “chatbot” was” only programmed to implement a single RPA, a single conversation thread, and did not offer the user the ability to select from a plurality of RPAs or ‘automation processes’ as discussed in the ’664 Patent (Ex1001, 8:65-9:4, 14:4-12), let alone choose between ‘automation processes’ based on the elements of a natural language conversation in the chatbot.” (Ex2001, ¶118).

As Mr. Zatkovich further explains, the RPA software shown in the Symons Video appears to have been executed on a different device (apparently Symons’

computer), from the user device on which the chatbot was implemented (apparently Vincent de Bei's computer). (Ex2001, ¶¶110, 111 (demonstrating this point using screen shots from Ex1033, and Ex1005, Ex1006); Ex2003, 217:6-220:9 (confirming the video is "unclear", and "conjecture" how the system operated offering different options at 219:24-220:9)).

Further, the RPA process relied upon by Ground 1 did not use a single "computer program" (or target system), but instead, as Mr. Zatkovich explains, "utilize[ed] multiple computer programs – Cronos email signature generator, Internet Explorer, [Microsoft] Word and email client". (Ex2001, ¶171; *see also id.*, ¶¶109-110, 118; Ex1003, ¶¶92, 113 ("Symons interfaces with multiple platforms: email signature platform [Cronos], Microsoft Word, and Microsoft Outlook."); Ex2003, 218:9-13, 217:16-218:2). Thus, as Mr. Zatkovich explains, with respect to [c], the relied upon RPA utilizes "different computer programs, with different displayed user interfaces." (Ex2001, ¶168).

Similarly, he explains with respect to [e]/[f] "Symons does not disclose the execution of the automation process 'utilizing the displayed user interface of the computer program to perform the sequence of interactions', since the sequence of

interaction are utilizing multiple computer programs – Cronos email generator, Internet Explorer, [Microsoft] Word and an email client.” (Ex2001, ¶171).

Ground 1 offers Williams (Ex1011) to argue it would be “obvious” for Symons to “determine to implement an automation process” in [c] in view of Williams teaching “RPA robots are designed to handle multiple requests, executing multiple different types of automation processes” (Ex1003, ¶¶95, 98; Petition, 19-20). But, as Mr. Zatkovich confirms, “[n]either Symons nor Williams suggest using a single chatbot-RPA to handle multiple requests”. (Ex2001, ¶161). At most Williams teaches using chatbots “in a variety of other processes and across industries” (Ex1011, 3), without relating to a single chatbot-RPA handling multiple requests at once. (Ex2001, ¶161). Thus, Williams does not offer any teaching to use to fill this gap in Symons.

As discussed herein and by Mr. Zatkovich, Symons and Williams also do not teach or render obvious the challenged dependent claims. (Ex2001, ¶¶168-200).

Grounds 2/3 fair no better. Allen (Ex1014) is the primary reference and the only reference the ID relied upon to institute. (ID, 13-21). Allen discloses a system called “PLOW”, which is used to train a computer to perform an automated task.

(Ex2003, 252:12-18). Grounds 2/3 and the ID each rely upon a single sentence starting at the bottom of Column 12 that indicates

“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”,

and an example that

“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 the information is provided, PLOW would then perform the steps it was previously taught and complete the transaction”.

Ex1014,12:62-13:1 (quoted in ID, 17).

This scanty disclosure is not sufficient to support Grounds 2/3.

Significantly, the record does not establish that this “conversation” was in fact a “natural language conversation” or that there are two “natural language input[s]” in the same “natural language interface” as required by [a]/[b]. (Cf. Ex2001, ¶¶221-229; Ex1003, ¶155; Petition, 37-38). The question “What is the title of the book?” is taught to be presented using a “form” like FIG. 6 (Ex2003, 257-6:24), which, as Dr. Beigi confirms, is not a “natural language interface”. (Ex2003, 60:24-61:3, 59-60; Ex2001, ¶232 (accord)). Thus, Grounds 2/3 fail to establish that the quoted conversation took place in a “natural language interface” and that both a first and

second natural language input take place on a single natural language interface, as required in [a]/[b]. (Ex2001, ¶¶227-235).

Further, Grounds 2/3 rely upon the GUI 10 of PLOW shown in FIG. 1 as the “user interface of the computer program” in [c]-[f] (Ex1003, ¶162, 164; Ex2003, 265:3-16; Petition, 40-41; ID, 20). But the ’664 Patent clearly defines the “computer program” as a “target system”. (Ex1001, 8:4-16). PLOW is not a “target system” on which the automation process is performed. GUI 10 is not a “user interface of the computer system”. (Ex2001, ¶¶236-244).

Allen also does not teach or render obvious the challenged dependent claims for at least the same reasons and additional reasons set forth herein and by Mr. Zatkovich. (Ex2001, ¶¶271-272, 245-270).

Likewise, Ground 3’s combination of Allen with Dayanandan (Ex2015) fails for the same reasons as Ground 2, as well as the additional reasons set forth herein and by Mr. Zatkovich. (Ex2001, ¶¶273-296). Dayanandan is not analogous art to the ’664 Patent (Ex2001, ¶¶276-287), and Dayanandan fails to teach the missing feature in Claim 9 and thus the combination does not fill the gap. (Ex2001, ¶¶288-296).

Ground 4’s combination of Krishnan (Ex1016) and Radhakrishnan (Ex1018) also fails. (Ex2001, ¶¶299-379). Krishnan merely discloses a chatbot editor that generates a conversation to be implemented utilizing backend systems (Ex1016, 2:33-35) (i.e., an API or the like, not a “displayed user interface”) (Ex2001, ¶345). Ground 4 makes no claim that Krishnan teaches to implement an automated process with the conversation; instead, Radhakrishnan is offered. (Petition, 62-85; Ex1003, ¶¶243-327; *cf.* Ex2003, 280:23-281:4). But, Radhakrishnan is related to a different field of endeavor than the ’664 Patent and addresses different and unrelated problems. (Ex2001, ¶¶324-334; Ex2003, 278:15-24; *Cf.* Petition, 62-85; Ex1003, ¶¶243-334). As such, Radhakrishnan is not analogous art under *Chemours Co. FC v. Daikin Indus.*, 4 F.4th 1370, 1376 (Fed. Cir. 2021).

In any event, the combination of Krishnan and Radhakrishnan makes no sense and Radhakrishnan does not fill the gaps of Krishnan. (Ex2001, ¶¶335-354).

Ground 4 asserts Krishnan teaches a “natural language conversation” as required in [a]/[b], based on a conversation shown in FIG.1. (Petition, 66-69; Ex1003, ¶251). It offers no alternative obviousness argument on these elements. (Petition, 62-85; Ex1003, ¶¶247-327). Specifically, Ground 4 relies upon Krishnan teaching pushing/clicking a button in FIG. 1 as the “second natural language input”.

(Ex1003, ¶251; Ex1016, 3:3-37, FIG. 1). But, this is not a “natural language input”. (Ex2001, ¶341). As Dr. Beigi explained, if “bots use buttons, then I would say it’s a form” and if “you click yes or no or you select something and then you say next ... that is just a form” as opposed to natural language. (Ex2003, 199:11-200:25; see also 336:5-337:3 (“[L]ike I said, filling [in] a form is not human natural language unless the form is asking you to type in something that it would understand, which would be free form”)). Thus, Ground 4 fails because Krishnan does not disclose a “natural language conversation” including a “second natural language input” as required by [a]/[b]. (Ex2001, ¶¶337-343).

Per Dr. Beigi “Krishnan is silent regarding whether or not its automation process is configured to perform an automation of a sequence of interactions with a displayed UI” for [c] (Ex1003, ¶255). Ground 4 attempts to use Radhakrishnan to fill this, and related gaps, with respect to Krishnan’s buy a book or book a flight processes. (Ex1003, ¶¶253-54, 256-267). But Krishnan is not merely silent on this process. It affirmatively states it uses a backend system to implement such a process, thus teaching away from [c]. (Ex1016, 2:33-35; Ex2001, ¶345).

Radhakrishnan cannot help. It uses its automated process to **“diagnosis” and “correct[]”** (Ex1018, Abstract, quoted in Ex1003, ¶245), not to automate the

process of, e.g., buying a book or a ticket for a flight, like Krishnan. As Mr. Zatkovich explains, (1) Radhakrishnan is not analogous art to the '664 Patent claims (Ex2001, ¶¶324-334), (2) fills none of the gaps left open by Krishnan, and (3) the combination to fill such gaps makes no sense. (Ex2001, ¶¶335-349). Also, (4) the rationale and application of the proposed motivation to combine makes no sense. (Ex2001, ¶¶350-354). Ground 4 also fails. (Ex2001, ¶¶299-379).

Once the full record is considered, it is clear Petitioner has not met its burden. The patentability of all the challenged claims should be confirmed.

II. BACKGROUND

A. The Proceedings

Trial was instituted solely based on Allen (Ex1014) as advanced in Ground 2 against Claim 1. (ID, 13-22). The other claims and other grounds presented were not analyzed. (*Id.*, 22). This is Patent Owner's first substantive submission.

This proceeding is related to IPR2023-01379 (involving U.S. Patent No. 11,258,732, Ex2011) and IPR 2024-00065 (involving U.S. Patent No. 11,558,317,

Ex2012).⁴ The '732 and '317 Patents share a common specification with the '664 Patent (Ex1001). The '664 and '317 Patents relate to the invocation of an automated process by a natural language conversation, as illustrated in Fig. 2A, although the '664 Patent claims includes more and different details than the '317 Patent claims. By contrast, the '732 Patent is related to “defining an automation process” and how the “natural language conversation” which invokes that “automation process” is generated, as illustrated in FIG. 3. These are markedly different inventions.

B. The '664 Patent

As Mr. Zatkovich explains, the '664 Patent includes substantially more relevant disclosure than is discussed by Dr. Beigi or the Petition. (Compare Ex2001, ¶¶65-90; ID, 3-4; *with* Petition, 3-4; Ex1003, ¶¶23-24).

⁴ In Dr. Beigi’s words, an “afterthought” petition involving the '664 Patent (Ex2003, 17:6-8) was also filed. It was discretionarily denied. IPR2023-01443, Paper 11 (March 20, 2024).

1. Claims

The '664 Patent includes 21 claims, of which Claims 1/11/18 are in independent form, and Claim 1 is representative. (ID, 7-8; Ex2001, ¶49). Claim 1 reads as follows:

1. A method comprising:

[a] using **a natural language interface**, receiving input from a user as part of **a natural language conversation** between the natural language interface and the user, [b] wherein the natural language conversation comprises **a first natural language input** from the user, **a natural language feedback** on the first natural language input from the natural language interface, and **a second natural language input** from the user in response to the natural language feedback:

[c] **determining**, based on the first and second natural language inputs from the user, **an automation process** configured to **perform an automation of a sequence of interactions with a displayed user interface of a computer program** and to **simulate user interactions with the displayed user interface of the computer program**, [d] wherein the user interface of the computer program is configured to be displayed on a screen, [e] wherein each interaction of the sequence of interactions comprises an action selected from a group consisting of inputting data to the displayed user interface and executing a functionality of the displayed user interface; and

[f] **executing the automation process**, wherein said executing comprises **utilizing the displayed user interface of the computer program** to perform the sequence of interactions.

(ID, 7-8). See Ex2001, Appendix A and Ex1001 (for the remaining claims, including unchallenged Claims 10-11, 17, 24, 27 and 32)

2. Technical Problem/Solution

The '664 Patent identifies several technical problems that it seeks to address via the claimed invention, including “provid[ing] for a user-friendly manner of defining functionality of chat bots”. (Ex1001, 7:62-64). In this regard, the '664 Patent seeks “to enable defining the chat bots without the need of using dedicated APIs, programming languages, or the like”, and in embodiments so that “non-programmers may be able to define the automation that are invoked by the chat bots.” (*Id.*, 8:32-36).

The '664 Patent also seeks to overcome difficulties in “[i]ntegration of a new system into an organization”, which present challenges associated with “migrating large amounts of employees to new platforms” and “train[ing]” uses on such new platforms (*Id.*, 8:37-44).

The '664 Patent also recognizes as “[a]nother technical problem” challenges to “enable defining automation processes in a manner that enables them to be implemented even if changes are performed to the underlying platform.” (*Id.*, 8:52-55). This later technical challenge can arise when there are “layout modifications of the front-end of the program or website” which can result in difficulties in identifying the correct front-end elements.. (*Id.*, 8:55-64).

Although the '664 Patent also notes “[a]dditional technical problem, solution, and effects may be apparent to a person of ordinary skill in the art in view of the present disclosure” (*Id.*, 11:40-42), neither the Petition, Dr. Beigi nor the ID identified any other problem relevant for this proceeding. (Petition, 3-4; Ex1003, ¶¶23-24; Ex2003, 343:9-22; ID, 3-7).

The '664 Patent offers as one technical solution “[d]efining the automation process based on performing actions in the GUI [to] enable[] the automation process to perform any functionality that the user can perform, without relying on dedicated APIs and without requiring any line of code.” (Ex1001, 9:6-10). “[T]he chat bot may collect information to be used as part of the automation process, such as value to be inputted in input fields, selections to be made in the GUI of the

target system, or the like.” (*Id.*, 9:44-47). Further, “some steps may be associated with performing an action on a GUI element” (*Id.*, 10:12-14).

Another technical solution identified is that “the chat bot may be implemented on a different system than the target system itself, such as a third-party messaging service. As a result, it may be desired to enable the third-party messaging service to invoke the automation process in a simple manner and without relying on coding or on dedicated APIs.” (*Id.*, 9:29-34). This solution may include using a link where “the target system may be opened and the automation process may be executed.” (*Id.*, 9:41-43; Claim 10, 24).

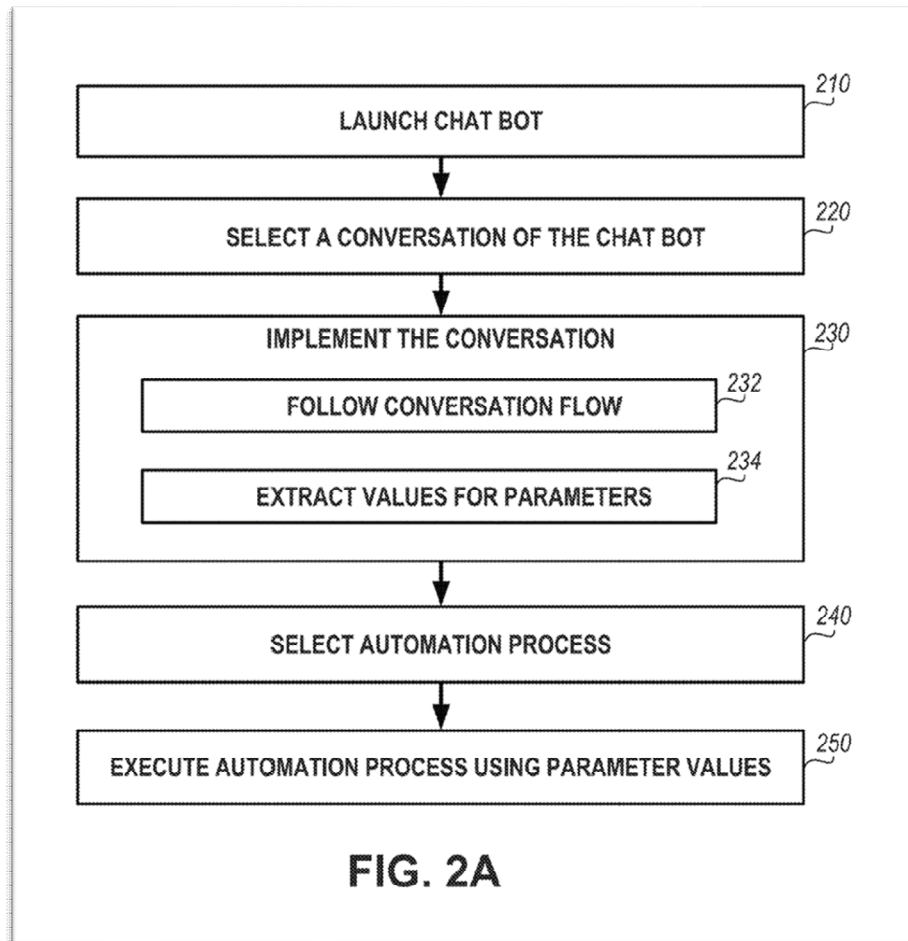
3. The Claimed Invention

To address these and other problems, Claims 1/11/19 can be broken down into three separate processes:

- **[a] & [b]:** “using a **natural language interface**” to “receiv[e] input from a user as part of a **natural language conversation**” including “a first natural language input from the user”, “a natural language feedback on the first natural language input”, and “a **second natural language input** from the user in response to the natural language feedback” (See Ex1001, Step 230; Ex2001, ¶¶72, 75-81);

- [c], [d] & [e]: “**determining**”, based on the natural language inputs from the user, “an **automation process** to perform” which is “configured to perform an automation of a **sequence of interactions with a displayed user interface of a computer program** and to **simulate user interactions with the displayed user interface** of the computer program” whose “user interface is **displayed on a screen**” (See Ex1001, Step 240; Ex2001, ¶¶75, 82-88); and
- [f]: “**executing** the [determined] automation process” “comprising **utilizing the displayed user interface of the computer program** to the sequence of interactions” (See Ex1001, Step 250; Ex2001, ¶¶75, 89-90).

FIG. 2A illustrates these processes as Steps 230/240/250:



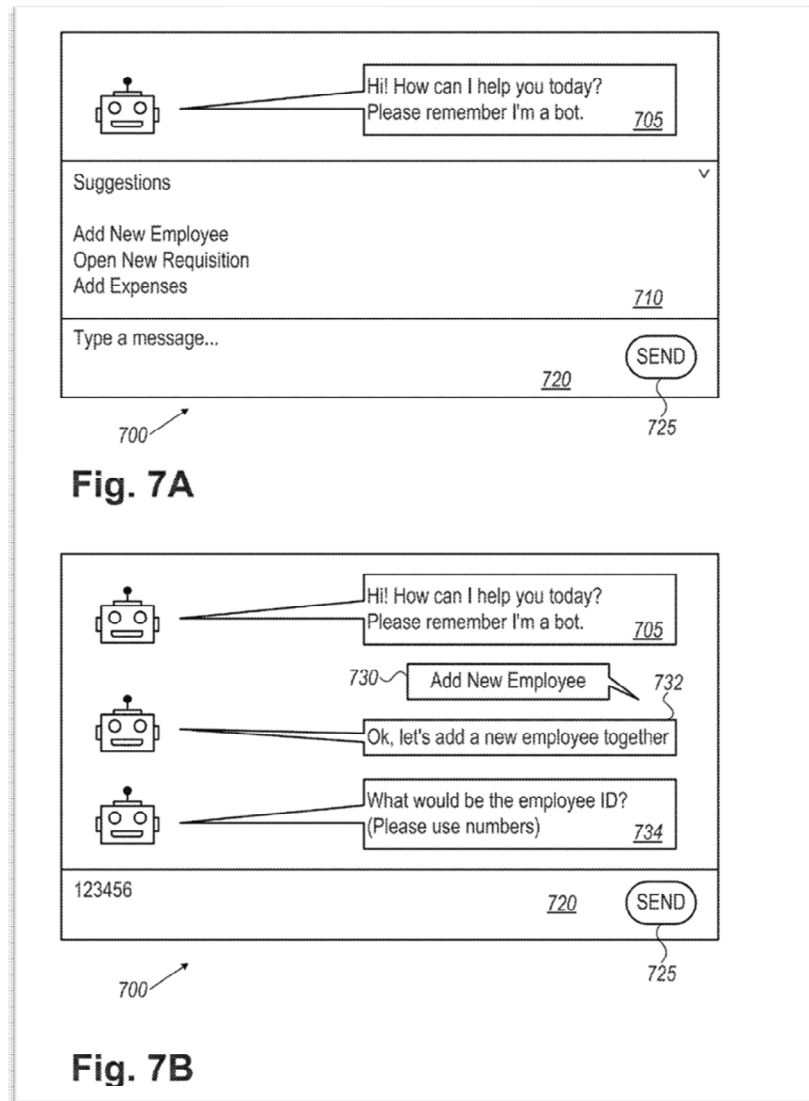
(Ex1001, FIG. 2A).

These processes specify the following separate components that are required to interact in a specific way to address the stated technical problems, including

- **“a natural language interface”** to receive specified input from the user;

- “a **computer program**” corresponding to the “**target system**” discussed above (Ex1001, 8:9-13 (“The target system, generally referred to as the computer program ...”), with its own “**user interface**” that is “displayed on a screen”; and
- a “**determin[ed]**” “**automation process**” which “simulate user interactions with the displayed user interface of the computer program” and is “utilized” during the “executing” process.

The '664 Patent also provides a “schematic illustration of the user interfaces” including an exemplary chat in Figs. 7A & 7B:



(Ex1001, FIGs. 7A/7B).

C. The Grounds

Trial was instituted on the following grounds:

Ground	Challenged Claims	35 U.S.C. § (Post AIA)	Basis/Reference
1	1-8, 12, 13, 16, 19-23, 26, 29, 31	103	Symons Blog(Ex1004), Symons Video (Ex1005/Ex1006/Ex1007/ Ex1033), Williams (Ex1011)
2	1-8, 12-16, 18-23, 25, 26, 28-31, 33	103	Allen (Ex1014)
3	9	103	Allen, Dayanandan (Ex1015)
4	1-8, 12-14, 16, 18-23, 26, 28, 29, 31, 33	103	Krishnan (Ex1016/Ex1017), Radhakrishnan (Ex1018)

(ID, 9-10; Petition, 7). None of the Grounds rely upon other references (Ex1026, Ex1028-Ex1031) discussed as background by the Petition and Dr. Beigi. (Petition, 2-3 (background), 7 (grounds); Ex1003, ¶¶17-21 (background), 55-62 (art relied upon)).

III. LEVEL OF SKILL IN THE ART

“Factors that may be considered in determining level of ordinary skill in the art include: (1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007) (quoting *Envtl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983)).

Petitioner proposed a POSITA “in the field of the ‘664 patent in 2017 would have [had a] bachelor’s degree in engineering or computer science and two years of experience working on [natural language processing] or automation processes” or “[a]lternatively ... would have [had] five to six years of experience working on NLP or automation processes.” (Petition, 5-6 (citing Ex1003, ¶¶50-52)).

The ID found “Petitioner’s proposal is consistent with the level of ordinary skill in the art reflected by the prior art of record, and, therefore, we adopt Petitioner’s proposed level of ordinary skill in the art for purposes of this Decision.” (ID, 12). But as Mr. Zatkovich explains, this proposed level of skill is inconsistent with Factors (4)-(6). (Ex2001, ¶¶40-45).

The '664 Patent claims relate to a conversation used to invoke an automation process. (Ex2001, ¶41; Ex2003, 280:23-281:10). Thus, experience with chat bots using NLP and automation processes is relevant. (Ex2001, ¶¶40-45).

The proposal is inconsistent with Symons prior art, and Factors (4)-(6). (Ex2001, ¶¶40-45)). Symons and Baeten demonstrated their view that “possibilities to combine RPA bots with chatbots” was something relatively new, involved “evolving rapidly” technologies and not well developed. (Factor 4; Ex2001, ¶42; Ex1004, 1; Ex1009, 2 (a question first asked “a few months ago”); Ex2008, 3). Symons had experience with automated processes (albeit he was only the on the job for less than 3 weeks, Ex1008, ¶¶2-4). For the “showcase”, he had to “join forces with Arinti” a then recently-affiliated company, in order to obtain a “chatbot” to collect the information needed for the Cronos email signature generator. (Ex1004, 1-2; Ex1009, 2).

When he ratified counsel’s proposed level of skill in the art (Ex1003, ¶¶45-47), Dr. Beigi did not account for:

Factor (4): The technology “evolving rapidly” (Ex1004, 1-2; Ex1009, 2; see also Ex2007-Ex2008, discussing “chatbots”; Ex2001, ¶42);

Factor (5): The “sophistication in the technology” was relatively low in November 2017 (Ex2001, ¶41; Ex2003, 191:18-197:5; 141:2-142:9); and

Factor (6): Active works in the field, like Symons, (Ex2003, 112:12-24; Ex2001, ¶43) had less experience than he proposed.

The evidence of record demonstrates a more appropriate level of skill would be **a worker who had some education, formal or informal, in computer science and 1-2 years' work experience with chatbots using NLP and/or automation processes.** (Ex2001, ¶44; Petition, 5-6; Ex1003, ¶46).

Under Patent Owner's more appropriate level, Dr. Beigi's interpretation of what a POSITA would understand are overstated. He expects a POSITA to have "more experience" (like himself) and apply a more "technically correct" (in his view) understanding of the prior art than less skilled authors and artisans would have understood. (*Cf.* Ex2003, 191:18-197:5 (distinguishing Dr. Beigi's "more experience[d] opinion" from authors of a 2019 Blog on "chatbots"); 141:2-142:9 (relying on his understanding of "chatbot" based on Ex1026 (Melendez) to interpret Symons' use of "chatbot", even though Symons, with a recent degree in informatics, was hired as a robotics engineer, and had been employed only a few weeks).

Should the Board continue to apply Petitioner's proposed level, Mr. Zatkovich confirms his analysis would still remain accurate. (Ex2001, ¶45).

IV. CLAIM CONSTRUCTION

Claims should be 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).” 37 C.F.R. §42.100(b). Thus, each claim term should be given its ordinary and customary meaning as understood by a POSITA as of the priority date of the ’664 Patent, in accordance with *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

There are two exceptions: “1) when a patentee sets out a definition and acts as his own lexicographer,” and “2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Disavowal can be effectuated by language in the specification or the prosecution history. *Poly-America, L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1136 (Fed. Cir. 2016). “In either case, the standard for disavowal is exacting, requiring clear and unequivocal evidence that the claimed invention includes or does not include a particular feature.” *Id.*

The Petition and Dr. Beigi construed none of the claim terms, instead adopting (without explaining) the “ordinary and customary meaning” of the terms. (Petition, 6; Ex1003, ¶¶54). Likewise, the ID did not expressly construe any terms. (ID, 12).

Generally, the parties agree that the claim terms used in the ‘664 Patent claims have their “ordinary and customer meanings of terms” as would be understood by a POSITA as of November 5, 2017, with one notable exception. (Ex2001, ¶93).

A. “computer program” and “displayed user interface of the computer program”

The ‘664 Patent adopted a special meaning of “**computer program**” to refer to a “**target system**”, which has a functionality that is invoked through its displayed user interface:

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.

(Ex1001, 8:9-16).

As Mr. Zatkovich confirms, a POSITA as of November 5, 2017 would understand , based on this passage, “computer program” in Claim 1/19/29 refers to a target system whose functionality is invoked through by the automation process using its displayed user interface, such as a graphical user interface. (Ex2001, ¶¶93-95).

Similarly, the “displayed user interface of the computer program”, in Claims 1/19/29 means the user interface of **the target system** that the user may utilize to activate the functionalities of the target system. (Ex2001, ¶95).

V. ALL CHALLENGED CLAIMS ARE VALID

A. Ground 1: Symons and Williams Do Not Disclose or Render Obvious Claims 1-8/12-13/16/19-23/26/29/31

1. Symons

Ground 1 relies upon a collection of publications relating to a “showcase”/“demo” prepared by Mr. Sennes Symons, including a video he posted to Vimeo on October 17, 2017.

On October 17, 2017,⁵ Mr. Symons prepared and published a blog and video to “showcase” a joint effort by his new employer RoboRana and its then “new” fellow Cronos group member Arinti. Symons, a 2017 college graduate, began working for RoboRana earlier that month (Ex1003, ¶22), on the project first thought about by Ariniti “a few months earlier” (Ex1009, 2).

Grounds 1/2 cobble together the October 17 Symons Blog (Ex1004), with the Symons Video (his video (Ex1033), selected screen shots (Ex1005) and English language translations of those screen shots (Ex1006)), and the Baetens Blog to act

^{5 7} November 5, 2017 is the agreed upon earliest effective filing date for this IPR (Petition, 5; Ex1003, ¶22; Ex2001, ¶17).

like this hodgepodge collections of documents is a single “**Symons**” reference. (Ex1003, ¶¶63-69).

Symons and Baetens provide the same short excerpt:

The goal of the showcase is to automate the process of creating an email signature. First, the chatbot collects all necessary information in a friendly, interactive manner. This information gets passed on to the RPA robot, which will then automatically generate the signature, save it, and email it back to the requester. The whole process is completed within a minute. Easy and smooth integration proves a great future for both technologies.

(Ex1004, 2; Ex1009, 2). Baetens also cautioned “[t]hough we can’t share much about the results of our joint efforts (yet), this small demo strongly demonstrates the value in combining these technologies.” (Ex1009, 2).

The Symons Video (Ex1006-Ex1007) likewise provides little, if any, detail on how the underlying chatbot and RPA bot are programmed to operate. As Dr. Beigi explains (Ex1003, ¶67), the Symons Video only shows a video that allegedly “[a]utomatically generate[s an] e-mail signature”. (Ex1006, 1; Ex1003, ¶68; Ex2001, ¶104, 155). At his deposition, Dr. Beigi confirmed that, even now, he does not know how “the internals” of Symons works, and that he never discussed with

Mr. Symons how it works. (Ex2003, 213:18-214:9). In Dr. Beigi’s words, “we only see the video, the actual interaction”, not “the internals of it.” (*Id.*).

Contemporary comments to the Symons Article made on *Medium* illustrate how the relevant audience was left asking:

- “how does the chatbot trigger the RPA bot”,
- “which rpa tool and chatbot tool are” used,
- “give description to do this automation”.

(Ex2005; Ex2001, ¶107). Mr. Zakovich confirmed that none of the Symons references “provide any information on what Dr. Beigi calls the ‘internals’, which, ... Baetens confirmed was intentional.” (Ex2001, ¶104, citing Ex1009, 2).

Mr. Zatkovich summarized the shortcomings of Symons as follows:

- the evidence does not clearly establish whether the Chatbot-RPA discussed in Symons Blog and Baetens Blog, and purportedly demonstrated in Symons Video, was actually built at the time, rather than simply prepared as what Baetens called a “small demo ... [to] demonstrate[] the value in combining these technologies” (Ex1009, 2);
- the disclosed Chatbot-RPA was a single purpose demo “to automate the process of creating an email signature” (Ex1004, 2; Ex1009, 2);
- [although Symons] purports to use a “chatbot” to “collect all the necessary information in a friendly, interactive manner” (Ex1004, 2; Ex1009, 2), it is not

clear that the “chatbot” was in fact a “natural language interface” relying upon NLP technology to generate a “natural language conversation”;

- the “chatbot” was only programmed to implement a single RPA, a single conversation thread, and did not offer the user of selecting from a plurality of RPAs or “automation processes” as discussed in the ’664 Patent (Ex1001, 8:65-9:4, 14:4-12), let alone choose between “automation processes” based on the elements of a natural language conversation in the chatbot;
- the RPA was software that was executed on a different device than the user device on which the chatbot was implemented [(Ex2001, ¶¶118; Ex2003, 219:24-220:5 (Dr. Beigi can’t tell))]; and
- the RPA was software that did not interact with a single target software, like WAZE™ (as discussed [at Ex1001, 9:34-41]), but instead implemented a process invoking at least 3 or 4 different pieces of software and multiple respective user interfaces. [(Ex2001, ¶118; Ex2003, 217:16-218:2, 218:9-13)].

(Ex2001, ¶118).

2. Williams

Ground 1 relies upon an IBM article, Williams (Ex1011), for the proposition that chatbots were known and were used to “trigger an RPA robot to access the appropriate enterprise resource planning (ERP) backend system, validate the caller’s details, retrieve necessary information, and provide status back in real-time to the supplier.” (Ex1011, 2; *cf.* Ex2008, 3 (noting even in 2022 that chatbots have continued to evolve)).

As Mr. Zatkovich explains, “[l]ike Symons, Williams is devoid of significant detail aside from broad generalizations about how chatbots and RPA bots might work.” (Ex2001, ¶126). Importantly, he confirms:

- [Williams’] discussion on chatbots does not provide any information as to how conversation flows actually invoke automated process; and
- The disclosed “Intelligent automation continuum,” simply provided a taxonomical definition of RPAs and IPAs, nothing more.

(*Id.*)

Williams does not fill any of the gaps intentionally left open by Symons opaque showcase. (Ex2001, ¶¶127-206).

3. Symons and Williams Do Not Disclose or Render Obvious the Independent Claims

As discussed above, independent Claims 1/19/29 have different preambles, but, for purposes of Ground 1, include the same important concepts missing from Symons and Williams, including:

- Symons does not “us[e] **a natural language interface**” to “receive input from a user as part of a natural language conversation between the natural language interface and the user”, as required by [a]. Although Symons shows a conversation, Ground 1 does not establish it is a “natural language conversation” or uses NLP as both sides recognize is required. (Ex1001, 1:21-29; Ex2001, ¶¶128-150; Ex2003, 63:15-64:17, 139:3-140:10).

- Symons does not “**determin[e]**” based on the conversation “an automation process”, as required by [b]. The disclosed Chatbot-RPA in Symons was admittedly a single purpose demo “to automate the process of creating an email signature” (Ex1004, 2-3; Ex1009, 2; Ex1008, ¶9; Ex1010, ¶8; Ex1006, 1; Ex1003, ¶68). Thus, no “determination” was necessary. While Ground 1 unconvincingly asserts Symons makes such a determination (Petition, 17-19; Ex1003, ¶¶89-94), Williams is also relied upon to try and fill this obvious gap. (Petition, 19-20; Ex1003, ¶¶95-99). But the teaching relied upon in Williams does not teach making a determination of multiple automation processes in a single conversation, and the alleged motivation makes no sense. (Ex2001, ¶¶151-166).
- Symons does not utilize a “user interface” of a single “computer program” as required in [e]/[f]. The automated process in Symons relied upon did not interact with a single target software, like WAZE™ (as discussed in the ’664 Patent, Ex1001, 9:34-41), but instead implemented a process invoking at least 3 or 4 different pieces of software, and multiple respective user interfaces unlike [e]/[f]. (Ex2001, ¶¶167-171; Ex1003, ¶¶93-94, 101-102, 103; Ex2003, 218:9-13, 217:16-218:2).

a. [a]/[b] Symons Does not Disclose a “Natural Language Interface” with a “Natural Language Conversation”

Although Symons purports to show a “chatbot” in the “showcase”/“demo” (Ex1004, 2; Ex1009, 2), Ground 1 does not establish what was actually built, how it was built and whether it actually used a “natural language interface” relying upon

NLP technology to generate a “natural language conversation” as required by [a]/[b] of the claims. (Ex2001, ¶¶128-150; Ex1009, 2; Ex2005). As Dr. Beigi confirmed, Symons does not disclose “the internals of it”. (Ex2003, 213:18-214:9).

Nevertheless, Dr. Beigi assumes (without any support beyond his unique understanding of the term “chatbot”), that the Arinti “chatbot” was in fact a “natural language interface” which relied on natural language processing to understand, process, and generate a response to human natural language input, as both sides recognize is required from the claim. (Ex1003, ¶83; Ex2003, 63:15-64:17; Ex2001 ¶¶135-136). Additionally, while Symons identifies that the showcase used a “chatbot” of Arinti, the record is void, beyond the statement that it is a “chatbot”, to support Dr. Beigi’s assertion that the interface is a “natural language interface ... that will allow you to do natural language communication with the software”. (Ex2003, 63:15-64:17).

But Dr. Beigi's assumption regarding “chatbot” did not consider what a POSITA would think a newcomer, like Symons, using the term in a blog in October 2017 meant by the term “chatbot”. While the use of the term "chatbot" today, after the advent of ChatGPT, may be more likely to imply the use of "natural language" (where the machine understands and reacts to a conversation), as Mr. Zatkovich

explains, “chatbot” in 2017 covered interfaces which did not use "natural language." (Ex2001, ¶¶137-143).

For example, Ex19 from Dr. Beigi’s Deposition (Ex2007) is an August 29, 2019 Blog by Khoros Staff entitled “Different types of chatbots: Rule-based vs. NLP”, Expert insights, Aug. 29, 2019, illustrated how even in 2019 active participants in the field refer to “chatbots” different than Dr. Beigi’s expert opinion. Ex2009 distinguished between Rule-Based Chatbots (which Dr. Beigi equated to a "Form" -- i.e., not natural language interface, Ex2003, 199:11-21), as opposed to NLP chatbots. (See also Ex1003, ¶40 (recognizing similar distinction from prosecution history of ’664 Patent)). That Dr. Beigi disagrees with this distinction is not important. (Ex2003, 191:19-208:20). Rather, it is that others drew the distinction that would inform what a POSITA would think Symons means by the term “chatbot”.

Even IBM, the same organization responsible for Williams, recognized in its “What is a chatbot?” page from 2022 (Ex2008), chatbots can vary in complexity and do not always use natural language processing. (Ex2008, 3; Ex2001, ¶140). Indeed, given the rapidity in which the Arinti-Robarana chatbot was developed by the “new” colleagues (Ex1008, 2), a POSITA would understand that the “chatbot” depicted in

Symons is not necessarily a “natural language interface” as required by the claims of the ’664 Patent. (Ex2001, ¶¶135-144). Dr. Beigi’s assumption is merely conjecture, based on the lack of disclosure on Symons “internals”, “we only see the video, the actual interaction”. (Ex2003, 214:7-9).

Considering that no one knows what Arinti’s chatbot is or how it was generated, that the “showcase”/“demo” was created very quickly, and that there are plenty of uses of the term “chatbot” (which Dr. Beigi admittedly disagrees with), Petitioner has not met its burden of establishing that the chatbot in the “showcase”/“demo” **necessarily used** a “natural language interface”. *Paul Hartmann AG v. Attends Healthcare Prod., Inc.*, No. 2022-1724, 2024 WL 911880 (Fed. Cir. Mar. 4, 2024) (“limitation at issue necessarily must be present” in the combination to be inherent for obviousness; reversing PTAB finding of inherency)

b. [c] Symons Does Not Disclose “Determin[ing] to Implement an Automation Process”

Symons’ Chatbot-RPA was a single purpose demo “to automate the process of creating an email signature” (Ex1004, 2-3; Ex1009, 2; Ex1008, ¶9; Ex1010, ¶8; Ex1006, 1; Ex1003, ¶68). As Mr. Zatkovich explains, the “chatbot” was only programmed to implement a single RPA, a single conversation thread, and did not

offer the user the choice of selecting from a plurality of RPAs or “automation processes” as discussed in the ’664 Patent (Ex1001, 8:65-9:3), let alone choose between “automation processes” based on the elements of a natural language conversation in the chatbot. (Ex2001, ¶¶151-166).

Ground 1 argue it would be “obvious” to modify Symons to “determine to implement an automation process” in [c] in view of Williams (Ex1011, 3) teaching “RPA robots are designed to handle multiple requests, executing multiple different types of automation processes” (Ex1003, ¶¶95, 98; Petition, 19-20). But, as Mr. Zatkovich confirms, “[n]either Symons nor Williams suggest using a single chatbot-RPA to handle multiple requests at once in the same conversation thread”. (Ex2001, ¶165). At most, Williams teaches using chatbots “in a variety of other processes and across industries” (Ex1011, 3), without relating to a single chatbot-RPA handling multiple requests simultaneously. (Ex2001, ¶165). Thus, Williams does not offer any teaching to use to fill this gap in Symons.

c. [c]/[e]/[f] Symons Performs a Sequence of Interaction with Respect to Multiple user interfaces of Multiple Computer Programs

With respect to [c]/[e]/[f], Mr. Zatkovich explains “Symons does not disclose the execution of the automation process ‘utilizing the displayed user interface of the

computer program to perform the sequence of interactions’, since the sequence of interaction are utilizing **multiple** user interfaces of **multiple** computer programs – Cronos email signature generator, Internet Explorer, [Microsoft] Word and email client.” (Ex2001, ¶171).

“[T]he” displayed user interface of “the” computer program utilized by the automation process executed in [f], grammatically, and under the law of antecedent basis, must be the same “displayed user interface” of the same “computer program”, as each of the instances of “displayed user interface” of a/the “computer program” referenced earlier in the claim in [b]/[e]/[f]. (Ex2001, ¶167; *see Tech. Consumer Prods. v. Lighting Sci. Grp. Corp.*, 955 F.3d 16, 22 (Fed. Cir. 2020) (reversing PTAB for misapplying antecedent basis, explaining that “[n]o other heat sink is specified in the claim [and] [c]onsequently, ‘the heat sink’ that is used in the calculation of the height-to-diameter ratio is the same heat sink that is annularly coupled to the heat spreader”); *In re Lemay*, 660 F. App’x 919 (Fed. Cir. 2016) (finding that no substantial evidence supports the Board’s obvious determination when that obvious determination is based on a mapping that runs afoul of a claim’s antecedent basis).

Significantly, the RPA process relied upon by the Petition and Dr. Beigi did not use a single “computer program” (or target system) nor a single “user interface

of a computer program”. As Mr. Zatkvoich explains, Ground 1 compounds this error again in dependent Claims 5/22. (Ex2001, ¶¶175-177).

For example, Dr. Beigi explicitly identified the “sequence of interactions” as including pressing the “Allow access” button on a modal window pop-up:



(Ex1003, ¶103).

As Mr. Zatkovich further explains, the RPA process “utilized multiple computer programs – Cronos email signature generator, Internet Explorer,

[Microsoft] Word and an email client”. (Ex2001, ¶171; *see also id.*, ¶¶109-110, 118; Ex1003, ¶¶92, 113 (“Symons interfaces with multiple platforms: email signature platform [Cronos], Microsoft Word, and Microsoft Outlook.”); Ex2003, 218:9-13, 217:16-218:2).

Thus, as Mr. Zatkovich explains, with respect to [c]/[e]/[f], the relied upon RPA utilizes “different displayed user interfaces of different computer programs.” (Ex2001, ¶171).

For at least these reasons, the Symons-Williams combination fails to teach or render obvious any of the claims in the ’664 Patent. (Ex2001, ¶¶127-171, 205-206).

4. *Dependent Claims*

Ground 1 fails for all the dependent claims at least for the same reasons as the independent claims. (Ex2001, ¶¶205-206). Ground 1’s arguments against following claims fail for at least these additional reasons.

a. *Claims 2/3/20 – Ground 1 Fails to Identify a “chatbot service”*

Claims 2/3/20 each require the use of a “chatbot service”, which Mr. Zatkovich explains includes third party services. (Ex2001, ¶172, citing Ex1001, Claims 2/3/20). Ground 1 does not explain how this element is met (Petition, 23-24; Ex1003, Ex2001, ¶¶172-173), and thus it fails against Claims 2/3/20. 37 C.F.R.

§42.22(a)(2) (requiring a “detailed explanation of the significance of the evidence including material facts”); *Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1373 (Fed. Cir. 2023) (“The burden of production cannot be met simply by throwing mountains of evidence at the Board without explanation or identification of the relevant portions of that evidence. One cannot reasonably expect the Board to sift through hundreds of documents, thousands of pages, to find the relevant facts.”); *Google v. EveryMD.Com, LLC*, IPR2014-00347, Paper 9, 18-19 (PTAB May 22, 2014) (denying institution for merely providing a “repository of all the information that a judge could possibly consider” instead of “focus[ing] on concise, well organized, easy-to-follow arguments supported by readily identifiable evidence of record” as required by the Trial Practice Guidelines).

b. Claim 8 – Williams Does Not Teach a Database Storing Automation Processes, nor Updating Automation Processes Via a GUI

Ground 1 acknowledges that Symons does not teach Claim 8, which requires selecting an automation process from a database updatable by a GUI. Instead, it incorrectly asserts that Williams “Watson Policy Management Library” (WPML) teaches this. (Petition 29-30; Ex1003, ¶118). However, as Mr. Zatkovich explains, WPML stores the RPA processes themselves, not “rules and policy changes outside

of RPA product[s]”. Williams also does not disclose updating WPML via a GUI. (Ex1011, 4; Ex2001, ¶¶181-182). The combination of Williams and Symons fails against Claim 8. (Ex2001, ¶¶178-184).

c. Claim 12 – Symons’ RPA Process Does Not Run on the User’s Device, as Claim 12 Requires

Claim 12 requires the automation process to run a “user device”. In this case, that would be the device of Vincent De Bie, the user of the chatbot shown in Symons. But, as Mr. Zatkovich explains, Symons Video shows the RPA running on on a different device (apparently Symons’ computer). (Ex2001, ¶¶110-111 (demonstrating this point using screen shots from Ex1033, and Ex1005, Ex1006), 187-190; Ex2003, 217-220 (confirming the video is “unclear”, and it would be “conjecture” to discuss how the system operated, offering different options at 219:24-220:9). Symons computer is not the “user device”. Ground 1 fails against Claim 12. (Ex2001, ¶¶185-193).

d. Claim 13 – Using a “voice-based service” Would Not Improve Symons

Claim 13 requires the use of a “voice-based service”. Symons does not use one. As Mr. Zatkovich explains, a POSITA would not have been motivated to use a “voice-based service” as the natural language interface for the conversation in

Symons, since such services were “notoriously poorly suited” to the information sought in Symons and would only add “significant complexity” and lead to “significant errors” during operation. (Ex2001, ¶¶194-199). Ground 1 fails against Claim 13.

B. Ground 2: Allen Does Not Disclose or Render Obvious Claims 1-8, 12-16, 18-23, 25, 26, 28-31, 33

As Ground 2, the Petition and Dr. Beigi assert that Allen (Ex1014) renders obvious Claims 1-8, 12-16, 18-23, 25, 26, 28-31, 33. (Petition, 35-58; Ex1003, ¶¶150-229).

But Ground 2 fails in that it does not identify “**a natural language conversation**” as required by [a]/[b] of the independent claims.

Separately and independently, Ground 2 fails with respect to Allen at least because it has not identified a “**displayed user interface of a computer program**” for which an automation process performs “**an automation of a sequence of interactions with a displayed user interface of a computer program and to simulate user interactions with the displayed user interface of the computer program**” as required by [c]-[f].

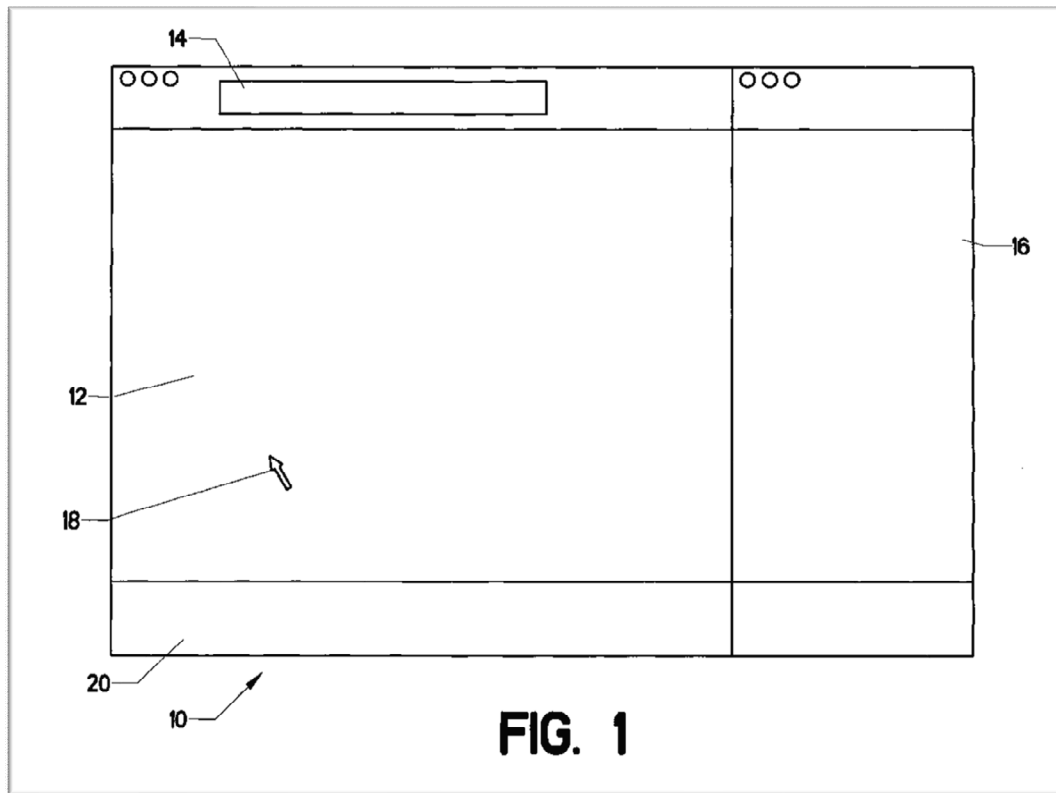
Allen neither discloses nor renders obvious any of the challenged claims.

1. Allen (Ex1014)

Allen is directed towards teaching a computer, the “**Procedural Learning** on the Web” system (“PLOW”) to learn an automated process on the internet. As Dr. Beigi recognizes (Ex1003, ¶150), PLOW is “[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) often but not limited to being a browser.” (Ex1014, Abstract). In Allen, “the user ‘teaches’ task steps by inputting natural language and demonstrating actions with the GUI.” (Ex1014, Abstract; Ex2001, ¶210; Ex1003, ¶150).

The cornerstone of Dr. Beigi’s analysis is that PLOW has a GUI 10, which he concludes is the “displayed user interface of the computer program” allegedly practicing the challenged claims of the ’664 Patent. (Ex2003, 264:18-265:16). As discussed below, it is not the right interface or right computer program.

FIG. 1 of Allen provides a blank GUI of the learning system, while FIGS. 2 and 3 of Allen illustrate how a user would go about teaching the system how to buy a book.

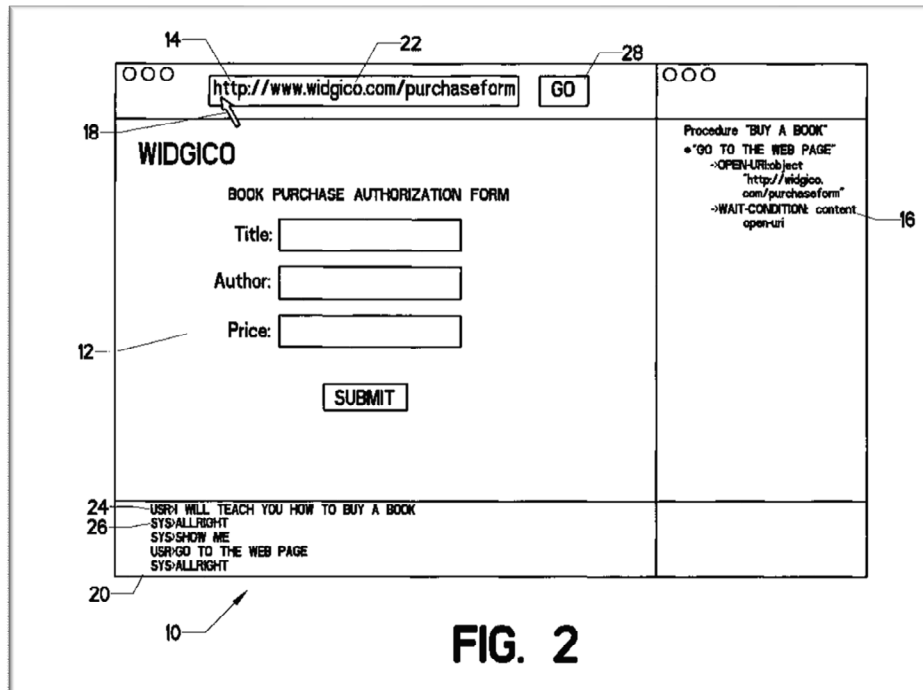


(Ex1014, FIG. 1)

“FIG. 1 shows a representative graphical user interface 10” with a “[b]rowser display 12,” a “URI entry box 14” (allowing for URLs to be input), a “movable cursor 18”, a “task log 16” on the right side which “shows the tasks that have been learned so far **in the learning** sessions”, and a “speech interface display 20” on the “bottom of the display area” which allows “the user to monitor his or her interaction with PLOW”. (Ex1014, 5:6-20).

Allen's disclosure is primarily directed to explaining how PLOW is trained to perform an automated process using GUI 10 of FIG. 1.

To illustrate, the text depicted in the "speech interface display 20" shown in FIG. 2 relates directly to a learning process of PLOW. As the first message, PLOW "displays the message [uttered by the user] 'USR>I WILL TEACH YOU HOW TO BUY A BOOK.'" The label 'USR>' indicates that this is the speech uttered by the user, as understood by the software." (Ex1014, 5:36-39). PLOW then prints out "Alright. Show me." with the label "SYS>". (Ex1014, 5:44-49).



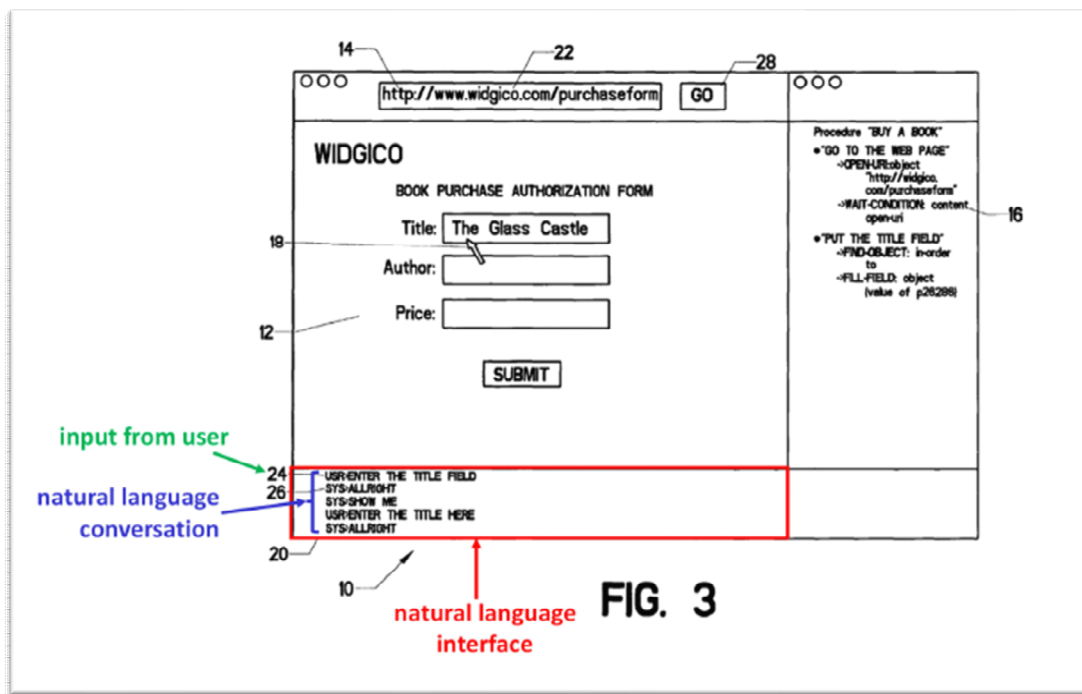
(FIG. 2 of Allen, Ex1014)

As shown in FIG. 2, PLOW “creates a title for the new process it is about to learn and displays the title in task log 16” (in FIG. 2, “Procedure ‘BUY A BOOK’”) (Ex1014, 5:56-60). Because the tasks are displayed in the learning GUI and the task log, “[t]he reader can thereby monitor whether PLOW has correctly understood the present objective.” (Ex1014, 5:60-62).

Dr. Beigi asserts that “[i]t would have been obvious that in order for the user to easily monitor the system’s actions, the system’s actions would have to be displayed” (Ex1003, ¶164). Mr. Zatkovich explains why this is wrong: “Allen is teaching the user is monitoring the training process, not the implementation of the automated process after training. Thus, the teaching of Allen would not inform a POSITA as of November 5, 2017 on how the system’s actions would be displayed (or not displayed) when invoked.” (Ex2001, ¶215).

Mr. Zatkovich further explains how “all of the text in the ‘speech interface display 20’ of FIG. 2 relates to teaching the procedural learning system.” (Ex2001, ¶¶215-217 (discussing Ex1014, 5:63-6:3)). But teaching an automated process is not the subject matter of the ’664 Patent claims.

Dr. Beigi offers a markup of FIG. 3 to assert the conversation presented in the speech interface display 20 as a “conversation implemented by a natural language interface”:



(Ex1003, ¶154, annotating FIG. 3 of Allen, Ex1014).

But this is the wrong conversation. This conversation relates to **training** PLOW how to buy a book from WIDGICO, **not implementing** the process of buying the book. (Ex2001, ¶219 discussing Ex1014, 6:24-31, 6:34-37). Significantly, as Mr. Zatkovich explains “when referencing the conversation which PLOW has after being trained with a user, “ENTER THE TITLE FIELD” and

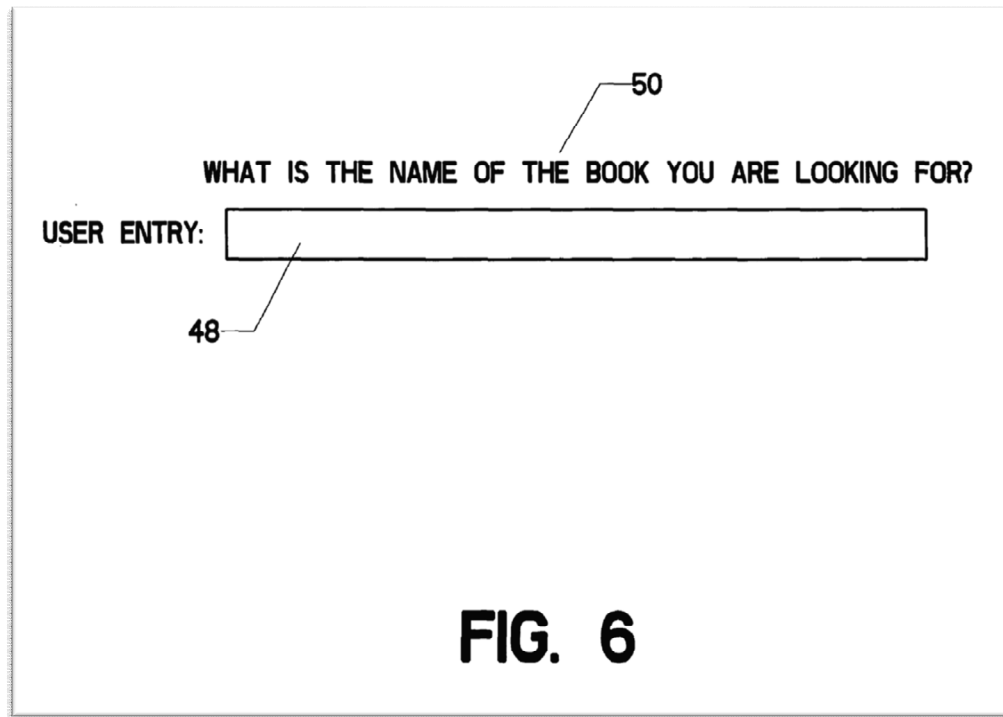
“ENTER THE TITLE HERE” are not part of that conversation shown in FIG. 3.” (Ex2001, ¶220, citing Ex1014, 12:64-13:5).

To demonstrate that Allen teaches a “natural language conversation” as required in [a]/[b], Ground 2 and the ID relied upon the discussion outlined starting in Col. 12, line 62 which states:

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.

(Ex1014, 12:62-13:1; ID, 17).

As Dr. Beigi recognized during his deposition, “What is the title of the book?” is presented to the user using a form like the one shown in FIG. 6 (Ex2003, 257:20-24):



(Ex1014, FIG. 6). This question is not presented as in the “natural language interface” marked in red by Dr. Beigi in FIG. 3 above.

Additionally, while Allen teaches that the system can “perform the steps it was previously taught”, it provides little detail on how the system executes such steps. (Ex1014, 12:66-13:1). For example, as Mr. Zatkovich confirms, “Allen does not disclose performing a simulation of the PLOW system like the ’664 Patent”. (Ex2001, ¶222).

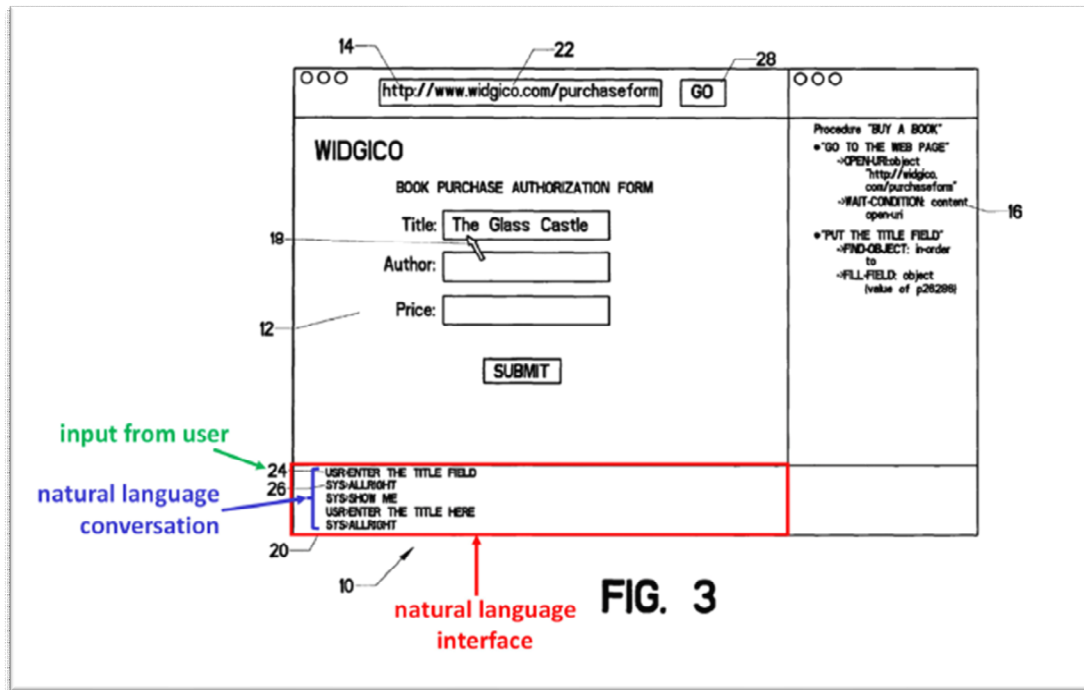
2. **Allen Does Not Disclose Nor Render Obvious Claims 1, 11, 18**

a. ***[a]/[b] - Allen Does Not Disclose Using a “natural language interface” to Have a “natural language conversation” with First and Second Natural Language Inputs***

Ground 2 also fails in that it does not identify “**a natural language conversation**” as required by **[a]/[b]** of the independent claims.

[a]/[b] require “using **a natural language interface**, receiving input from a user as part of the **natural language conversation** between **the natural language interface** and the user”, and further confirm that “the natural language conversation comprises” two “**natural language input[s]**”, and “a natural language feedback on the first natural language input from the natural language input”. (Ex1001, Claims 1, 19, 29).

However, Ground 2 does not identify “a natural language conversation” in a “natural language interface” as required by **[a]/[b]**. As to **[a]**, Dr. Beigi points to a training conversation to disclose a “natural language conversation” and “speech interface display 20” in Figure 3 to disclose the “claimed natural language interface”:



(Ex1003, ¶154, annotating FIG. 3 of Allen, Ex1014).

However, as Mr. Zatkovich explains (Ex2001, ¶¶229), “the ‘input from user’, ‘natural language conversation’ and ‘natural language interface’ identified by Dr. Beigi are used to **train** the PLOW system, not to conduct a natural language conversation which seeks to invoke performing a task.” In other words, it is the **wrong** conversation.

For [b], requiring the conversation to include a “first natural language input”, a “natural language feedback”, and a “second natural language input”, Dr. Beigi relies upon the discussion outlined starting in Col. 12, line 62 which states:

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.

(Ex1014, 12:62-13:1) (cited by Ex1003, ¶155). This cryptic discussion is not enough to meet the elements of the claimed "natural language conversation".

Per Dr. Beigi, "I want to buy a book" is the "first natural language input from the user", the "system's response is natural language feedback on the first natural language input from the natural language interface", and "the user's answer [the title of the book] is a second natural language input from the user." (Ex1003, ¶155; Petition, 38). Notably, Dr. Beigi contends only that the natural language interface is used to obtain the first input (e.g., the command to begin the book buying process), and does not argue that it is used provide the first natural language feedback or obtain the second natural language input as part of the same conversation, as the claims require.

Significantly, as Dr. Beigi confirmed in his deposition, the question “What is the title of the book?” in Allen is presented to the user using a form like the one shown in FIG. 6 (Ex2003, 257:20-24):

FIG. 6 is a diagram of a user entry form. It consists of a rectangular box containing the text "WHAT IS THE NAME OF THE BOOK YOU ARE LOOKING FOR?" in all caps. Below this text is a horizontal rectangular input field. To the left of the input field is the label "USER ENTRY:". A line with the number "48" points to the input field. Another line with the number "50" points to the question text above the input field.

(Ex1014, FIG. 6). As shown in FIG. 6, the user entry field in the form would be used to obtain the title of the book (and other information obtained by PLOW). As Dr. Beigi conceded, however, a form is not a natural language conversation. (See Ex2003, 60:24-61:3). Mr. Zatkovich agrees. (Ex2001, ¶¶134, 232).

Additionally, regardless of whether FIG. 6 is considered to be a “conversation” or “natural language interface”, it is separate from the conversation

used to obtain the input of “I would like to buy a book”, and occurs in a different “interface”, and thus does not meet the claim elements which requires the input to be received from the same “natural language interface” as part of the same “natural language conversation”. (Ex2001, ¶¶233-234).

Accordingly, Ground 2 fails to identify teaching in Allen of the claimed natural language conversation comprising both a first and second natural language input taking place on a single natural language interface as required in [a]/[b]. (Ex2001, ¶¶227-235).

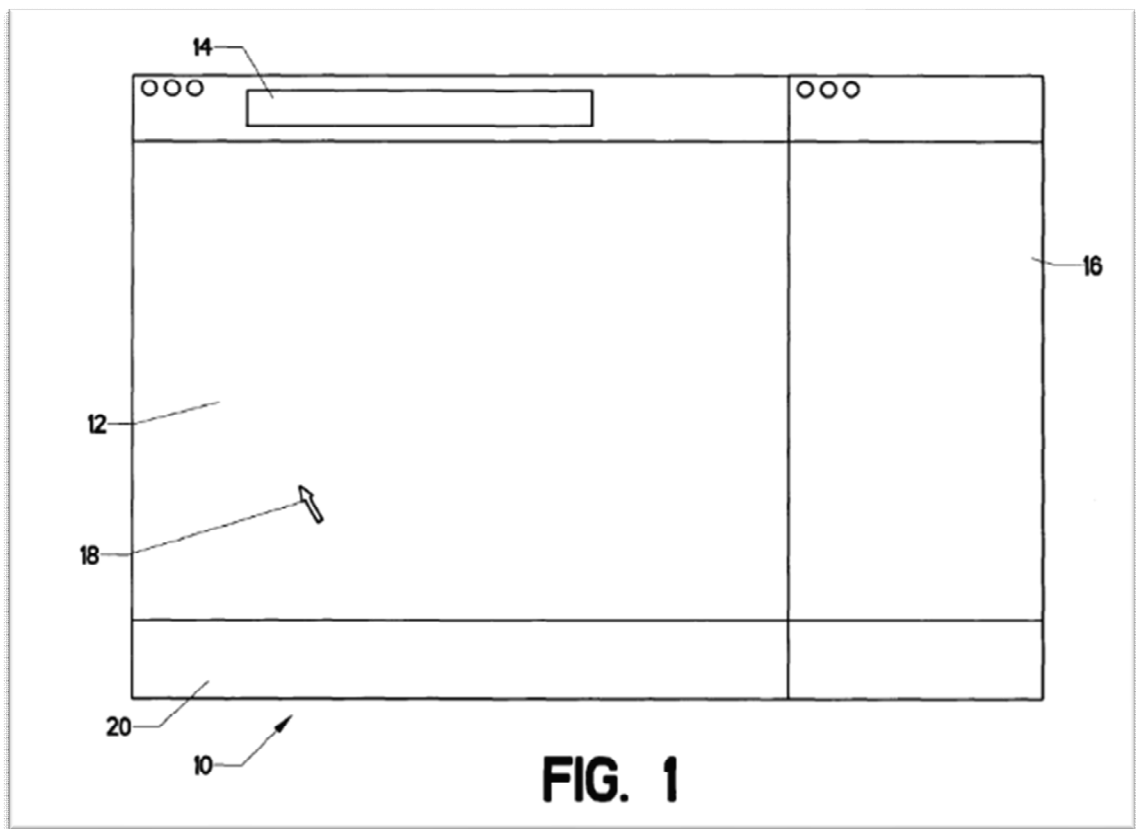
b. [c]-[f] Ground 2 Relies on GUI 10 of PLOW as the “displayed user interface” of the “computer program”, But This Read Fails

Separately and independently, Ground 2 fails to identify Allen teaching a **“displayed user interface of a computer program”** for which an automation process performs **“an automation of a sequence of interactions with a displayed user interface of a computer program and to simulate user interactions with the displayed user interface of the computer program”** as required by [c]-[f].

[c]-[f] require “executing” an “automation process configured to perform an automation of a sequence of interactions with a displayed user interface of a

computer program” “on a screen” “and to simulate user interactions with the displayed user interface of the computer program”.

Ground 2 identifies for these elements the “displayed UI of the computer program” as “browser display 12, which is part of the GUI 10 (displayed UI) ... as shown in Fig. 1 (below)”:



(Petition, 53; Ex1003, ¶162; *see also* ¶164 (“As discussed above, the system's actions are performed in browser display 12 (displayed UI).”); Ex1003, ¶162; Ex2003, 265:3-16 (“in Element 1C ... [Dr. Beigi’s read] is that ... the computer

program is PLOW, and the displayed user interface is the interface shown in Figure 1”, “That’s what I use on Page 86. I use Figure 1”). The Board similarly adopted this construction. (ID, 20).

But PLOW is not “a computer program” within the meaning of the ’664 Patent, and the browser display 12 (displayed UI) of GUI 10 of PLOW is not a “displayed user interface” of the computer program. As discussed, the ’664 Patent clearly defines the term “computer program” “refer[] to” the “target system”; and the sequence of interactions must “activate the functionalities of the target system”. (Ex1001, 5:1-13).

As Mr. Zatkovich explained, “a POSITA as of November 5, 2017 would understand that PLOW is not a target system which has a functionality that is executed by interaction with the displayed user interface. The browser 12 simply provides a means to display the user interface of various websites during training in accordance with HTML code transmitted by the websites. The process of “buying a book” relied upon by Dr. Beigi [for **[b]/[c]** at Ex1003,] Par. 155-164, is performed at the website, not by PLOW.” (Ex2001, ¶¶240).

By way of illustration, neither the “book buying task” nor the “search on a website known as MAPQUEST” that Dr. Beigi relies upon (Ex1003, ¶¶157, 158),

are performed by PLOW. As Mr. Zatkovich confirms, “[i]nstead, Allen discloses that the user teaches PLOW to purchase books at Widgico.com (Ex1014, FIG. 3) and Amazon.com (Ex1014, FIG. 6) and to perform MapQuest searches on “MapQuest.com”.” (Ex2001, ¶241; *see also* Ex1003, ¶160, citing Ex1014, 12:12-14, 12:19-25).

In IPR2024-00065, Petitioner (and Dr. Beigi) implicitly (if not explicitly) recognize that PLOW is not a target system, as they do not attempt to read that the element on PLOW in his analysis of U.S. Patent No. 11,558,317. (IPR2024-00065, Ex1003, ¶¶170, 171, 181). Widgico is clearly not being asserted as the “computer program” for purposes of his analysis. (Ex2003, 261:23-11; 264:8-17).

Thus, Ground 2 fails as PLOW is not a “computer program” (a target system) and GUI 10 is not the claimed “displayed user interface” with which the automation process performs the “sequence of interactions”. (Ex2001, ¶¶223-244).

3. Dependent Claims

Ground 2 fails for all the dependent claims fails at least for the same reasons as the independent claims. (Ex2001, ¶¶271-272). Ground 2's arguments against following claims fail for at least these additional reasons.

a. Claims 2/3/20 – Ground 2 Fails To Identify a “chatbot service”

Claims 2/3/20 each require the use of a “chatbot service”, which Mr. Zatkovich explains includes third party services. (Ex2001, ¶¶244-245). Ground 2, however, does not point to any “chatbot service”, and thus fails against Claims 2/3/20. (Pet. 42-43; Ex1003, ¶¶168-169; Ex2001, ¶¶247-251).

b. Claims 4-5/21-22 – Ground 2 Identifies Input Fields and GUI Elements Which Are Not Part of the Asserted “displayed user interface”.

Claims 4/21 require that the “displayed user interface” of the computer program (asserted as GUI 10 of PLOW, Ex1003, ¶162; Ex2003, 265:3-16) comprises “one or more input fields”, and Claims 5/22 requires that it comprises “one or more interactable GUI elements.” (Ex1001, 25:48-57, 27:39-44). However, as Mr. Zatkovich explains, Ground 2 identifies the input fields and interactable GUI elements in the displayed user interface of Widigico, which is not the asserted

computer program. (Petition 44-45; Ex1003, ¶¶173-175). As Mr. Zatkovich explains, this assertion accordingly fails. (Ex2001, ¶¶255-257).

c. Claim 8 – Allen Does Not Teach Updating Automation Processes After They Are Defined

Claim 8 requires “updating existing automation processes”. Ground 2 points to adding a step in the process of being taught (adding the step of going to a webpage is the first step in creating the process of buying a book) instead of updating an existing one. (Petition 49; Ex1003, ¶¶187-188; Ex2001, ¶¶258-261, *citing* Ex1014, 8:18-21 *and* FIG. 2, 5:63-6-3). This argument also fails.

d. Claim 14 – Allen Does Not Disclose Obtaining the Asserted Second Natural Language Input as Part of a Natural Language Conversation Using a Natural Language Interface

Claim 14 requires determination of a parameter for an automation process based on a second natural language input. As discussed, however, the second natural language input (the title of the book (Petition 51; Ex1003, ¶¶193-194)) is not obtained via the asserted natural language interface in a natural language conversation, but instead via a form. (Ex2001, ¶¶262-265).

e. Claims 18/28/33 – GUI 10 and Browser 12 Are Displayed Prior To, and Not Activated By, the Automation Process

Ground 2 provides no basis to assert that Allen discloses “activating the web browser” to cause “the displayed user interface to be displayed” as part of the automation process, as Claims 18/28/23 require. (*Cf.* Petition 54-55; Ex1003, ¶¶200-202). Instead, as Ground 2 acknowledges with respect to Claim 15, GUI 10 (which includes browser 12) is displayed prior to any user input (and thus any automation process) (Petition 51-52; Ex1003, ¶¶196-197; Ex2001, ¶¶266-270).

C. Ground 3: Allen and Dayanandan Do Not Render Obvious Claim 9

The combination in Ground 3 of Allen (Ex1014) and Dayanandan (Ex1015) fails, in addition to the reason set forth in Ground 2 (Ex2001, ¶¶297-298), because (1) Dayanandan is not analogous art under *Chemours Co. FC v. Daikin Indus.*, 4 F.4th 1370, 1376 (Fed. Cir. 2021)(Ex2001, ¶¶276-287); and (2) Dayanandan does not actually teach the missing elements from Allen (Ex2001, ¶¶288-296).

1. Dayanandan (Ex1015)

Dayanandan, as Mr. Zatkovich explains, is directed towards “automating application development” (Ex1015, Abstract) and discloses matching UI element of

a mocked-up GUI with pre-defined data objects. (Ex1015, 8:17-19; Ex1015, 22:15-16; Ex2001, ¶¶275, 281).

2. Dayanandan (Ex1015) Is Not Analogous Art To the '664 Patent

“In deciding whether a reference is from a relevant art [for purposes of determining obviousness], it is key to first determine whether the reference is within the inventor's field of endeavor, and if not, "whether the reference is reasonably pertinent to the particular problem confronting the inventor."” *Chemours*, 4 F.4th 1370, 1376 (Fed. Cir. 2021).

Petitioner’s papers are void of any arguments or evidence to establish Dayanandan is analogous art. (Pet. at 58-62-85; Ex1003, ¶¶ 230-242). As Mr. Zatkovich explains, Dayanandan is not analogous art with the '664 Patent. (Ex2001, ¶¶276-287).

It is in a different field of endeavor than the '664 Patent. The '664 Patent is directed utilizing a chatbot and GUI to perform an automated process on existing target systems and their GUIs. (Ex2001, ¶¶278-280; Ex1001, 8:65-9:13, (Claims 1/19/29). By contrast, Dayanandan it is directed to application development of new systems and mockups of future GUIs (Ex1015, Abstract, 2:10-14; Ex2001, ¶281). These are clearly different fields of endeavors. (Ex2001, ¶¶278-292).

Dayanandan is also not reasonably pertinent to the problems facing the '664 inventors. It was not directed to making chatbots and automation processes easier to program for non-programmers like the '664 Patent. (Ex2001, ¶¶283-287; Ex1001, 8:4-8). Instead, Dayanandan was aimed at improving the typical application development life cycle, and mapping new “mock up” GUIs to existing GUIs. (2001, ¶¶284; Ex1015, 21:21-22:59). This is a very different set of problems than the '664 Patent. (Ex2001, ¶¶283-287).

Dayanandan thus fails both parts of the *Chemours* test, and is not analogous art or available for use in an obviousness analysis for the '664 Patent claims. (Ex2001, ¶¶276-287).

3. Ground 3 Does Not Demonstrate Dayanandan Teaches the Missing Elements of Claim 9

Ground 3 is also deficient since it does not establish that Dayanandan actually teaches the elements of Claim 9. (Petition, 58-62; Ex1003, ¶¶232, 239-240).

As Mr. Zatkovich explains, Dayanandan does not actually teach:

- identifying the element based on a plurality of parameters of the element;
- identifying the element in the displayed user interface;
- comprises computing a similarity score for each element in the displayed user interface using the plurality of parameters of the element; or
- selecting a selected element having a highest similarity score.

(Ex2001, ¶¶291).

As Mr. Zatkovich explains, “Dr. Beigi confuses [the] teachings [of Dayanandan, from Columns 21-22,] and erroneously assumes that Dayanandan teaches “data vector object” that represents GUI elements, and not abstract data objects.” (Ex2001, ¶295). By misreading this aspect of Dayanandan, Dr. Beigi erroneously “assumes that [Dayanandan] compares elements to elements, while in fact it compares a data object with a potential screen” to “fetch the data to be displayed by the GUI screen from the data object”. (Ex2001, ¶294, quoting Ex1015, 24:6-8). When this error in his analysis is accounted for, as Mr. Zatkovich explains, Dayanandan, fails to teach the above listed elements of Claim 9 (Ex2001, ¶291) and Ground 3 thus fails. (Ex2001, ¶¶288-296).

D. Ground 4: Krishnan and Radhakrishnan Do Not Render Obvious Claims 1-8, 12-14, 16, 18-23, 26, 28, 29, 31 and 33

The combination of Krishnan (Ex1016) and Radhakrishnan (Ex1018) in Ground 4 also fails.

Krishnan merely discloses a chatbot editor that generates a conversation to be implemented utilizing backend systems (i.e., using a script, an API or the like, not a “displayed user interface”). Neither the Petition nor Dr. Beigi claim that Krishnan

teaches to implement, let alone “invoke”, an automated process with the conversation; instead, that is what Radhakrishnan is offered for. (Petition, 62-85; Ex1003, ¶¶243-327; *cf.* Ex2003, 280:23-281:4). This combination would not have been obvious to a POSITA, and, in any event, makes little sense.

As Mr. Zatkovich explains, Radhakrishnan is related to a different field of endeavor than the '664 Patent (Ex2001, ¶¶326-330) and is not reasonably pertinent to the problems faced by the inventors of the '664 Patent. (Ex2001, ¶¶331-334; *see also* Ex2003, 278:15-24; *Cf.* Petition, 62-85; Ex1003, ¶¶243-327). As such, Radhakrishnan is not analogous art. *Chemours Co. FC v. Daikin Indus.*, 4 F.4th 1370, 1376 (Fed. Cir. 2021).

In any event, the combination of Krishnan and Radhakrishnan makes no sense and does not fill the gap in Krishnan of not teaching the claimed “natural language interface” with two “natural language input[s]” as required in [a]/[b]; or “executing” an “automation process configured to perform an automation of a sequence of interactions with a displayed user interface of a computer program and to simulate user interactions with the displayed user interface of the computer program” by “utilizing the displayed user interface of the computer program to perform the sequence of interactions” as required by [c]/[f] of Claims 1/19/29. (Ex2001, ¶¶335-

349). A POSITA would also not have been motivated to make a relevant combination. (Ex2001, ¶¶350-354).

1. Radhakrishnan Is Not Analogous Art

Under *Chemours.*, 4 F.4th at 1376, Radhakrishnan is also not analogous art to the '664 Patent claimed invention. Ground 4 does not offer any analysis to support the assertion that Radhakrishnan is analogous art to the '664 Patent claims. (Cf. Petition, 56-84; Ex1003, ¶¶219-274).

a. *Radhakrishnan Is Not In The Same Field As The '634 Patent Claims*

The '664 Patent claims determine and execute an automation process comprising a sequence of interactions with a displayed user interface of a target program based on natural language inputs received from a user from a natural language interface. (Ex1001, Claims 1, 19, 29). In particular, the '664 Patent utilize “a natural language interface to receive input from the user, and based thereon, select an automation process to be executed” “in a manner that manipulates the GUI of the target system, in a similar manner to the manner in which the user operates”. (Ex1001, 8:66-9:4).

In stark contrast, Radhakrishnan is “directed to providing a robotic process automation enabled **file diagnosis and correction.**” (Ex1018, Abstract; *see also* Ex1018, 6:50-61 (providing an “automation error diagnosis and correction system and environment” (FIG. 1) and flows “for automation error diagnoses and correction” (FIGs. 2 and 3).

As Mr. Zatkovich confirms, this is a different field of endeavor than the ’664 Patent claims. (Ex2001, ¶¶326-330).

b. ***Radhakrishnan Is Not Reasonably Pertinent To The Problems Faced By The Inventors Of The ’664 Patent Claims***

Radhakrishnan is also not reasonably pertinent to the problems faced by the inventors of the ’664 Patent. As Dr. Beigi replied when asked if Radhakrishnan addresses the “technical problem dealt with by the disclosed subject matter is to provide for a user-friendly manner of defining functionality of chatbots”: **“Radhakrishnan doesn’t handle chatbots”**. (Ex2003, 273:1-22). Dr. Beigi also agreed that **“Radhakrishnan does not address automation processes that would be invoked by a chatbot”**. (Ex2003, 278:15-24). As Mr. Zatkovich explains, a POSITA would accordingly “understand that the techniques disclosed by

Radhakrishnan are not pertinent to the problems sought to be tackled in the '664 Patent". (Ex2001, ¶332; *id.*, ¶¶331-334).

For at least these reasons, Radhakrishnan is not analogous art to the '664 Patent. (Ex2001, ¶¶324-334).

2. Modifying Krishnan Based On Radhakrishnan Will Not Meet The Claims and In Any Event Makes No Sense

Neither Krishnan nor Radhakrishnan teach:

- A “natural language conversation” with two “natural language input[s]” as required by [a]/[b]; or
- “executing” an “automation process configured to perform an automation of a sequence of interactions with a displayed user interface of a computer program and to simulate user interactions with the displayed user interface of the computer program” by “utilizing the displayed user interface of the computer program to perform the sequence of interactions” as required by [c]/[f] of Claims 1/19/29.

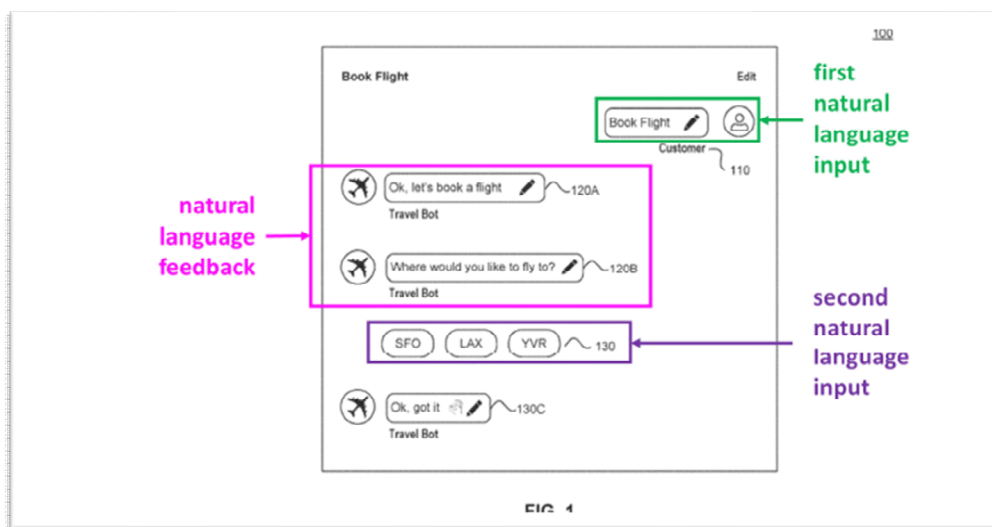
a. Independent Claims 1/19/29

i. [a]/[b]- Krishnan's "SFO", "LAX", "YVR"

Buttons Are Not a "second natural language input"

[a]/[b] of Claims 1/19/29 require that the natural language interface "receives input from a user as part of a natural language conversation" which "comprises a first natural language input from the user, a natural language feedback on the first natural language input from the natural language interface, and a second natural language input from the user in response to the natural language feedback." (Ex1001, Claim 1, 19, 29).

Ground 4 relies upon the following markup of Fig. 1 of Krishnan (Ex1016) found in Ex1003, ¶251:



The purported “second natural language input” are three buttons from which “the user may select one of the provided options for a destination 130 (e.g., by clicking on a button” (Ex1016, 3:3-7).

But what Krishnan describes is not a “natural language input”.

As Dr. Beigi explained, in his opinion, if “bots use buttons, then I would say it’s a form” and if “you click yes or no or you select something and then you say next ... that is just a form” as opposed to natural language. (Ex2003, 199:11-200:25; see also 336:5-337:3 (“[L]ike I said, filling in a form is not human natural language unless the form is asking you to type in something that it would understand, which would be free form”).

Mr. Zatkovich confirm “[i]n my opinion, a POSITA as of November 5, 2017 would understand that “clicking on a button” is not a natural language input.” (Ex2001, ¶341).

Ground 4 offers no alternative beyond this Figure to meet these elements. (Petition, 65-69; Ex1003, ¶¶247-252). Thus, Ground 4 fails. (Ex2001, ¶¶337-343).

ii. *[c]/[d]/[f]- Radhakrishnan Does Not Fill the Holes
in Krishnan Regarding an Automation Process*

[c]/[d]/[f] of claims 1, 19 and 29 require “determining” [c] and “executing” [f] an “automation process configured to perform an automation of a sequence of interactions” by “utilizing” [f] a “displayed user interface of a computer program” [c] & [f] which is “configured to be displayed on the screen” [d] and “to simulate user interactions with the displayed user interface of the computer program” [c]. (Ex1001, Claims 1, 19, 29; Ex2001, ¶344).

Ground 4 relies upon Krishnan’s “flight booking task (automation process)” according to Dr. Beigi (Ex1003, ¶¶253-254). But, as Mr. Zatkovich explains, “a POSITA as of November 5, 2017 would understand Krishnan implements the flight booking task in the same way that it obtains information—by directly accessing ‘one or more backend databases or other information processing systems’ and updating such ‘backend databases and other information processing systems.’” (Ex2001, ¶345, quoting Ex1016, 2:33-35). Thus, Krishnan does not disclose invoking an “automation process” that utilizes a “displayed user interface of a computer program”. As Mr. Zatkovich explained, “[i]t simply disclose another way of

gathering information from a user to carry out system functionality (flight booking).” (Ex2001, ¶345).

Dr. Beigi acknowledges that “Krishnan is silent regarding whether or not its automation process is configured to perform an automation of a sequence of interactions with a displayed UI” (Ex1003, ¶255) and attempts to use Radhakrishnan to fill this, and related gaps between Krishnan and the claims of the ’664 Patent. (Ex1003, ¶¶256-267). Krishnan is not merely “silent” as Dr. Beigi suggest, but actually teaches to use “back-end” systems (Ex1016, 2:33-35), and thus against using a displayed UI. (Ex2001, ¶¶346-347). *See Chemours Co. FC, LLC v. Daikin Indus.*, 4 F. 4th 1370, 1376 (Fed. Cir. 2021) (reversing Board decision where “express disclosure” “teaches away from the claimed invention” and the Board “did not adequately grapple with why a skilled artisan would find it obvious “ to make the proposed combination.)

Moreover, to the extent Dr. Beigi asserts that Radhakrishnan discusses “simulat[ing] user operations with the user device” (Ex1003, ¶256), as Mr. Zatkovich explains, Radhakrishnan “does so in order to ‘generate an operation record for automatically generating and transmitting a diagnosis’ (Ex1018, Abstract), not in order to perform an automation process again or to later be invoked

by a natural language conversation. Instead, the end use of the recorded operations is for inclusion in a ‘support ticket’.” (Ex2001, ¶347, citing Ex1018, 12:37-46).

With respect to [d] & [f], Dr. Beigi cites Radhakrishnan’s discussion of how the RPA module can “mimic” the user activity and “may act as a mirror of the actual user operations” (Ex1003, ¶¶260, 266, citing Ex1018, 5:49-56, 11:29-36). Contrary to Dr. Beigi’s conclusion that “mirroring means the RPA module are performing the same operations as the use’s operations, which means the RPA module’s operations are displayed on a screen” (Ex1003, ¶260), Radhakrishnan explains that the RPA module works “within a virtual environment” (i.e., not displayed on a screen):

In some embodiments, the RPA module interacts directly with a presentation layer of the application **within a virtual environment**. In this way, the RPA module can execute an operation while simulating a user interaction with the application. In some embodiments, the RPA module may transmit an input signal to the application that simulates a user interaction with a user interface.

(Ex1018, 11:41-47).

Thus, even the combination of Krishnan and Radhakrishnan does not discloses [c]/[d]/[f]. (Ex2001, ¶¶344-349).

iii. *A POSITA Would Not Have Been Motivated to
Combine Krishnan and Radhakrishnan*

Ground 4 rely upon Krishnan teaching “greater convenience for users and lower costs for an organization...” (Petition 70; Ex1003, ¶257) to support the alleged motivation to combine. But, notwithstanding Dr. Beigi’s irrelevant effort to find support for Krishnan’s claims in its priority document (Ex1017) (see Ex1003, ¶¶243),⁶ the ‘550 Application does not include this alleged motivation and thus it is not part of the prior art. (*Compare* Ex1016, 2:7-11 *with* Ex1017; Ex1003, ¶257).

Their reliance on Radhakrishnan teaching **its** RPAs “reduce” usage of “computing resources required to executing tasks when compared with” using an “API” (Ex1018, 6:21-34) also does not support the combination. As Mr. Zatkovich explains, reducing computing resources is a benefit of Radhakrishnan’s “error detection” function, **not of using RPAs generally**, which are “typically more resource-intensive than API calls” (Ex2001, ¶352)..

⁶ The proper inquiry is whether the passages Dr. Beigi relies on find support in the provisional, not whether the Krishnan’s claims were supported, as Dr. Beigi attempts to establish.

Contra the Petition and Dr. Beigi, as Mr. Zatkovich confirmed, a POSITA would not want to replace Krishnan's direct backend processes, since Krishnan's existing solution worked and would have been more cost-effective in Krishnan's environment. (*Id.*, ¶¶350-354).

3. Dependent Claims

Ground 4 fails for all the dependent claims fails at least for the same reasons as the independent claims. (Ex2001, ¶¶378-379). Ground 4's arguments against following claims fail for at least these additional reasons.

a. Claims 3/19 – Ground 4 Forgets Its Proposed Obviousness Teaching and Fails to Show That Radhakrishnan Uses Values From a Natural Language Conversation

Rather than explain how Radhakrishnan uses values obtained from a natural language conversation, Ground 4 relies solely on Krishnan, ignoring its proposed obviousness combination. (Petition, 74-75; Ex1001, ¶ 270). As Mr. Zatkovich explains, Radhakrishnan offers no teaching to use values in an automation process, but simply replicates user activity in a virtual environment, and the combination would not be obvious. (Ex2001, ¶¶355-357).

b. Claims 4/21 and 5/22 – Radhakrishnan Does Not Teach Executing an Automation Process Using a GUI, nor Based on “data received by the natural language interface”

Claims 4/21 and 5/22 require the displayed user interface (which must be configured to be displayed on a screen ([d]) to be a graphical user interface). However, as discussed with respect to the independent claims, Radhakrishnan teaches “mirroring” user activity in a “parallel” virtual environment to generate an operation record, and these claims are not met. (Ex2001, ¶¶358-362). As Mr. Zatkovich explains, contrary to Ground 4’s assertion, Radhakrishnan does not teach interacting with a GUI based on “data received by the natural language interface” as claims 4/21 (and their dependent claims 5/22) require. (Ex2001, ¶¶358-362).

c. Claim 8 – Krishnan and Radhakrishnan Do Not Disclose a Database of User-Defined Automation Processes “updatable ... via a GUI”, nor “updating existing automation processes therein”.

Ground 4 fails for at least two reasons. (Ex2001, ¶¶355-360). First, Ground 4 does not assert that Krishnan or Radhakrishnan teaches a database storing user-defined automation processes which is updatable “via a GUI”, as the claims require. (Petition, 78-79; Ex1003, ¶¶281-284; Ex2001, ¶365). Second, contra Ground 4, as

Mr. Zatkovich explains, Radhakrishnan discloses, consistent with its asserted goal of error correction, “how bots can capture tasks”, not updating a capture task or later modifying it. (Ex2001, ¶366). Ground 4’s motivation fails for the same reasons as discussed above. (Ex2001, ¶367).

d. Claim 12 – A POSITA Would Not Have Been Motivated to Perform Krishnan’s Flight Booking Task on a Client Device of the User of the Chatbot

Even assuming that the Krishnan-Radhakrishnan combination discloses performing a flight booking task using a GUI, this does not mean that it would be performed on the device of the user using Krishnan’s chatbot, as Claim 12 requires. Ground 4 provides no explanation for why Krishnan would perform a flight booking process on a client device. (Petition 79; Ex1003, ¶285). Instead, as Mr. Zatkovich confirms, a POSITA would not be motivated to perform Krishnan’s flight booking task on a client device, given Krishnan’s explicit teaching to use backend databases. (Ex2001, ¶¶369-372; Ex1016, 2:27-35; Ex1017, [0002]). Thus, Ground 5 fails with respect to Claim 12 also.

e. Claims 16/26/31 and 18/28/33 – Radhakrishnan Operates in a “virtual environment”, and Does Not

***Disclose Causing a Web Browser to be Displayed as Part
of an Execution Process***

As discussed with respect to the independent claims, Radhakrishnan teaches “mirroring” user activity in a “parallel” virtual environment to generate an operation record, and these claims, which require a display to a user, are not met. (Ex2001, ¶¶373-366). Moreover, Ground 4 points to no teaching in Radhakrishnan to show that “executing the automation process ... activat[es] the web browser to cause the displayed user interface to be displayed” but relies only on Mr. Beigi’s bald assertion that “the web browser would need to be activated”. (Petition 82; Ex1003, ¶295). Besides lacking any evidentiary support, this is not true. (Ex2001, ¶375). As Mr. Zatkovich explains, a web browser can be active (and displayed) prior to an automation process being performed, and need not be invoked as part of the automation process. (Ex2001, ¶375). Thus, Ground 4 fails with respect to Claims 16/26/31, and 18/28/33. (Ex2001, ¶¶373-366).

VI. CONCLUSION

For the foregoing reasons, and the reasons set forth in supporting declaration of Ivan Zatkovich (Ex2001), Claims 1-9, 12-16, 18-23, 25-26, 28-31, 33 of the '664 Patent should be found not unpatentable.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. §42.24(d), I hereby certify that the foregoing

PATENT OWNER'S RESPONSE FOR *INTER PARTES* REVIEW OF

CLAIMS 1-9, 12-16, 18-23, 25-26, 28-31, 33 OF U.S. PATENT NO. 10,819,664

B2 contains 13,276 words, excluding the parts of the reply exempted by 37 C.F.R.

§42.24(c), as measured by the word-processing system used to prepare this paper.

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CERTIFICATE OF SERVICE

The undersigned hereby confirms that the foregoing **PATENT OWNER'S
RESPONSE FOR INTER PARTES REVIEW OF CLAIMS 1-9, 12-16, 18-23,
25-26, 28-31, 33 OF U.S. PATENT NO. 10,819,664 B2** was caused to be served
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