

UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

WHATFIX INC. v. WALKME LTD.,

Case IPR2023-01368, Patent 10,819,664 B2
Case IPR2023-01379, Patent 11,258,732 B2
Case IPR2024-00065, Patent 11,558,317 B2

Patent Owner Demonstrative Exhibits (PODX)
Oral Argument, December 18, 2024, 12:00 pm

Motion to Expunge

- Petitioner relies on Ex1004, Ex1005, Ex1006 "a blog post that I [Senne Symons] wrote in 2017 and a video accompanying the blog post." (Ex1008, Senne Symons Declaration, ¶ 1).
- PO submitted Ex2005 (comments posted for that Blog) with POR.
- Petitioner Objected.
- PO responded with Ex2014 (a supplemental declaration by Mr. Zatkovich, unique for each IPR), and Ex2015, Ex2016, Ex2017 (additional support to authenticate the comments, same for all three IPRs).
- PO submitted proof of response to objection, with copies of documents.
- Petitioner requested PO to expunge, before Reply was submitted.
- PO asked Petition whether "you [Petitioner] intend to move to strike the previously objected-to exhibits [i.e. including Ex2005] these documents [i.e. Ex2014-Ex2017] provided further support for." Petitioner declined to confirm or deny an intention to file a motion to exclude Ex2001-2013 as "unrelated" and "premature". (Oct. 23, 2024 email exchange)
- Petitioner then proffered testimony from Dr. Beigi relying on Ex2014, Ex2015, Ex1016, Ex2017 (See IPR2023-01638, Ex1042, Beigi '664 Reply Decl., ¶ 46; IPR2023-01379, Ex1042, Beigi '732 Reply Decl., ¶ 72; IPR2024-0065, Ex1042, Beigi '317 Reply Decl., 43).
- Dr. Beigi confirmed he relied on each of the Ex2014, Ex2015, Ex2016, and Ex2017 in his deposition: Ex2020:134:15-135:19 (Ex2014), 112:18-113:4 (Ex2015); 113:19-115:5 (2016, 2017).
- Petitioner dropped challenge to Ex2005, but still has Dr. Beigi's Reply Declarations relying upon those exhibits in the case.
- Expungement is inappropriate to remove exhibits that are relied on in the record. PO has no objection to Expunging Ex2018, since Petitioner withdrew objection and did not rely on it.

AGENDA

The WalkMe Patents

Claim Construction

Symons (Ex1004-Ex1010, Ex1033)/Williams (Ex1011)

Allen (Ex1014)

Krishnan (Ex1016-Ex1017)/Radhakrishnan (Ex1016)

Ben-Itzhak (Ex1034)

Dayanandan (Ex1015)

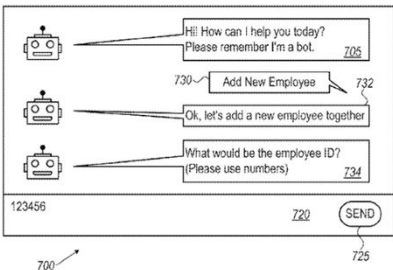
Credibility/Reliability of The Experts

The WalkMe Patents

IPR2023-01368, Ex1001, Patent 10,819,664 B2

(12) United States Patent Nahum et al.		(10) Patent No.: US 10,819,664 B2
		(45) Date of Patent: Oct. 27, 2020
(54) CHAT-BASED APPLICATION INTERFACE FOR AUTOMATION		(58) Field of Classification Search CPC G06F 3/0482; G06F 3/0483; G06F 3/16; G06F 3/167; G06F 9/542; G06F 17/2235; G06F 17/279; G06F 40/10
(71) Applicant: WalkMe LTD. , Tel Aviv (IL)		See application file for complete search history.
(72) Inventors: Nir Nahum , Tel Aviv (IL); Shlomi Sasson , Givat Zeev (IL)		
(73) Assignee: WALKME LTD. , Tel Aviv (IL)		(56) References Cited U.S. PATENT DOCUMENTS 9,509,799 B1 * 11/2016 Cronin H04L 67/32 10,749,823 B1 * 8/2020 Papa G06F 40/295 2003/0058369 A1 * 3/2003 Takechi H04L 12/2805 348/734
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.		(Continued)
(21) Appl. No.: 16/358,467		
(22) Filed: Mar. 19, 2019		OTHER PUBLICATIONS
(65) Prior Publication Data US 2019/0215283 A1 Jul. 11, 2019		ISR for PCT/IL2018/051168, dated Jan. 31, 2019.
Related U.S. Application Data		<i>Primary Examiner</i> — Mahelet Shiberou
(63) Continuation of application No. PCT/IL2018/051168, filed on Nov. 4, 2018.		(57) ABSTRACT A method, apparatus and product for chat-based application interface for automation. Using a natural language interface, receiving user input. Based on the user input, determining an automation process of a computer program having a user interface (UI), to be executed. The automation process is executed by utilizing the UI to input data thereto or execute functionality thereof. Additionally or alternatively, a conversation to be implemented by a natural language interface may be defined. The conversation is configured to obtain from the user one or more values corresponding to one or more parameters. The conversation is associated with a parameterized automation process depending on the one or more parameters. The parameterized automation process is invoked automatically by a natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.
(60) Provisional application No. 62/581,714, filed on Nov. 5, 2017.		
(51) Int. Cl. G06F 3/048 (2013.01) H04L 12/58 (2006.01) G06F 3/16 (2006.01) G06F 40/35 (2020.01) G06F 40/134 (2020.01) G06F 3/0482 (2013.01) G06F 3/0483 (2013.01) G06F 9/54 (2006.01)		
(52) U.S. Cl. CPC H04L 51/02 (2013.01); G06F 3/0482 (2013.01); G06F 3/0483 (2013.01); G06F 3/16 (2013.01); G06F 3/167 (2013.01); G06F 9/542 (2013.01); G06F 40/134 (2020.01); G06F 40/35 (2020.01)		

33 Claims, 14 Drawing Sheets

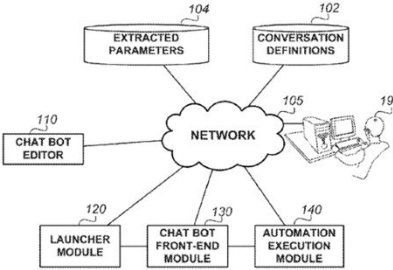


Whatfix Inc. Exhibit 1001 Page 1

IPR2023-01379, Ex1001, Patent 11,258,732 B2

(12) United States Patent Nahum et al.		(10) Patent No.: US 11,258,732 B2
		(45) Date of Patent: Feb. 22, 2022
(54) AUTOMATION PROCESS DEFINITION FOR A NATURAL LANGUAGE INTERFACE		3/16 (2013.01); G06F 3/167 (2013.01); G06F 9/542 (2013.01); G06F 40/134 (2020.01); G06F 40/35 (2020.01)
(71) Applicant: WalkMe LTD. , Tel Aviv (IL)		(58) Field of Classification Search CPC H04L 51/02; G06F 40/134; G06F 3/0482; G06F 3/0483; G06F 3/16; G06F 3/167; G06F 9/542; G06F 16/284; G06F 16/248; G06F 3/04895; G06F 17/279
(72) Inventors: Nir Nahum , Tel Aviv (IL); Shlomi Sasson , Givat Zeev (IL)		See application file for complete search history.
(73) Assignee: WALKME LTD. , Tel Aviv (IL)		
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.		(56) References Cited U.S. PATENT DOCUMENTS 10,839,798 B2 * 11/2020 Krishnan G06F 40/30 2011/0321008 A1 12/2011 Ihoney 2013/0254139 A1 9/2013 Lai 2017/0084273 A1 3/2017 Zohar et al. 2018/0090141 A1 * 3/2018 Periorelli G10L 15/1815 (Continued)
(21) Appl. No.: 17/026,305		OTHER PUBLICATIONS
(22) Filed: Sep. 21, 2020		EPO Search Report for 18874174.8 (dated Jul. 13, 2021).
(65) Prior Publication Data US 2021/0006517 A1 Jan. 7, 2021		<i>Primary Examiner</i> — Mahelet Shiberou
Related U.S. Application Data		(57) ABSTRACT A method, apparatus and product for defining an automation process to be invoked in response to a conversation of a user with a natural language interface. A conversation that is configured to obtain from a user values for parameters and is implemented by a natural language interface is defined. The conversation is associated with the automation process that is configured to utilize a user interface of a computer program to input data thereto or execute functionality thereof. The automation process is a parameterized automation process depending on parameters. The conversation is published to be made accessible to a user via the natural language interface.
(63) Continuation of application No. 16/358,467, filed on Mar. 19, 2019, now Pat. No. 10,819,664, which is a continuation of application No. PCT/IL2018/051168, filed on Nov. 4, 2018.		
(60) Provisional application No. 62/581,714, filed on Nov. 5, 2017.		
(51) Int. Cl. G06F 3/048 (2013.01) H04L 51/02 (2022.01) G06F 3/16 (2006.01) G06F 40/35 (2020.01) G06F 40/134 (2020.01) G06F 3/0482 (2013.01) G06F 3/0483 (2013.01) G06F 9/54 (2006.01)		
(52) U.S. Cl. CPC H04L 51/02 (2013.01); G06F 3/0482 (2013.01); G06F 3/0483 (2013.01); G06F 3/16 (2013.01); G06F 3/167 (2013.01); G06F 9/542 (2013.01); G06F 40/134 (2020.01); G06F 40/35 (2020.01)		

21 Claims, 14 Drawing Sheets

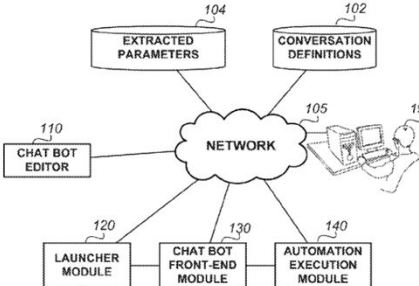


Whatfix Inc. Exhibit 1001 Page 1

IPR2024-00065, Ex1001, Patent 11,558,317 B2

(12) United States Patent Nahum et al.		(10) Patent No.: US 11,558,317 B2
		(45) Date of Patent: *Jan. 17, 2023
(54) INVOKING AN AUTOMATIC PROCESS IN A WEB-BASED TARGET SYSTEM USING A CHAT-BOT		9/542 (2013.01); G06F 40/134 (2020.01); G06F 40/35 (2020.01); H04L 63/0823 (2013.01); (Continued)
(71) Applicant: WalkMe LTD. , Tel Aviv (IL)		(58) Field of Classification Search CPC H04L 51/02; G06F 40/134; G06F 3/0482; G06F 3/0483; G06F 3/16; G06F 3/167; G06F 9/542; G06F 16/284; G06F 16/248; G06F 3/04895; G06F 17/279
(72) Inventors: Nir Nahum , Tel Aviv (IL); Shlomi Sasson , Givat Zeev (IL)		See application file for complete search history.
(73) Assignee: WALKME LTD. , Tel Aviv (IL)		
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.		(56) References Cited U.S. PATENT DOCUMENTS 9,509,799 B1 * 11/2016 Cronin G06F 3/0484 10,749,823 B1 * 8/2020 Papa G06F 16/29 (Continued)
(21) Appl. No.: 17/577,530		<i>Primary Examiner</i> — Mahelet Shiberou
(22) Filed: Jan. 18, 2022		
(65) Prior Publication Data US 2022/0150251 A1 May 12, 2022		(57) ABSTRACT A method, apparatus and product for chat-based application interface for automation. Using a natural language interface, receiving user input. Based on the user input, determining an automation process of a computer program having a user interface (UI), to be executed. The automation process is executed by utilizing the UI to input data thereto or execute functionality thereof. Additionally or alternatively, a conversation to be implemented by a natural language interface may be defined. The conversation is configured to obtain from the user one or more values corresponding to one or more parameters. The conversation is associated with a parameterized automation process depending on the one or more parameters. The parameterized automation process is invoked automatically by a natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.
Related U.S. Application Data		
(63) Continuation of application No. 17/026,305, filed on Sep. 21, 2020, now Pat. No. 11,258,732, which is a (Continued)		
(51) Int. Cl. G06F 3/048 (2013.01) H04L 51/02 (2022.01) G06F 3/16 (2006.01) G06F 40/35 (2020.01) G06F 40/134 (2020.01)		
(52) U.S. Cl. CPC H04L 51/02 (2013.01); G06F 3/0482 (2013.01); G06F 3/0483 (2013.01); G06F 3/16 (2013.01); G06F 3/167 (2013.01); G06F 9/542 (2013.01); G06F 40/134 (2020.01); G06F 40/35 (2020.01)		

20 Claims, 14 Drawing Sheets



Whatfix Inc. Exhibit 1001 Page 1

Representative Claims

‘664 Patent, Claim 1

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.

‘732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

‘317 Patent, Claim 1

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

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

Grounds

Basis	35 USC § (Post AIA)	IPR2023-01368 (USP 10,819,664)	IPR2023-01379 (USP 11,258,732)	IPR2024-0065 (USP 11,558,317)
NOT CHALLENGED		10-11, 17, 24, 27, 32	7-8, 16-17	
Symons Blog (Ex1004) Symons Video (Ex1005/Ex1006 (translation) Williams (Ex1011)	103	Ground 1 1-8, 12-13, 16, 19-23, 26, 29, 31	Ground 1 1-4, 9-14,18-19	Ground 1 1-20
Symons Blog Symons Video Williams Ben Itzhak (Ex1034)	103		Ground 2 6, 16, 21	
Allen (Ex1014)	103	Ground 2 1-8-12-16, 18-23, 25-26, 28-31, 33	Ground 3 1-5, 9-15,18-20	Ground 2 1-20
Allen Dayanandan (Ex1015)	103	Ground 3 9		
Allen, Ben-Itzhak	103		Ground 4 6, 16, 21	
Krishnan (Ex1016/Ex1017) Radhakrishnan (Ex1018)	103	Ground 4 1-8, 12-14, 16, 18-23, 26, 28-29, 31, 33	Ground 5 1-5, 9-15,18-20	Ground 3 1-4, 6-7, 9-12, 14, 16-18

The WalkMe Patents: Technical Problem: User Friendly Defining

IPR2023-01379, Ex1001, '732 Patent, 4:59-61, 5:29-33; 5:38-41

One technical problem dealt with by the disclosed subject matter is to provide for a user-friendly manner of defining functionality of chat bots. In particular, defining automation processes to be invoked by chat bots, either dedicated chat bots, such as implemented on a target system where the functionality is invoked, or even using third-party services, such as FACEBOOK MESSENGER™ are the communication platform for the chat bot service, which later invokes the automation process itself on the target system.

* * *

It may be desired to enable defining the chat bots without the need of using dedicated APIs, programming languages, or the like. It may be desired that non-programmers may be able to define the automations that are invoked by the chat bots.

* * *

Project planning, or the like. Integration of a new system into an organization may be a challenge as it may require migrating large amounts of employees to new platforms, requiring that the users be trained in using the new system.

Quoted in IPR2023-01379, Ex2001, Zatkovich '732 Decl., ¶ 57, see also Paper 17, POR, 13; IPR2024-00065, Ex2002, Zatkovich '317 Decl., ¶ 59, see also Paper 15, POR, 25; IPR2023-01368, Zatkovich '664 Decl., EX 2001, ¶ 65; see also Paper 19, POR, 15

The WalkMe Patents: Technical Problem: Changes to Underlying Platform

Technical Problem: IPR2023-01379, Ex1001, '732 Patent, 5:49-61

Another technical problem may be to enable defining automation processes in a manner that enables them to be implemented even if changes are performed to the underlying platform. For example, it may be desired that the automation process will continue working even in the face of layout modifications of the front-end of the program or website. In some cases, it may be desired to be able to identify elements selected during the definition of the automation process during execution thereof. The identification may be a non-trivial task if no unique identifier exists, as may be the case in many instances. Still, it may be desired to be able to identify such element correctly so as to apply the actions defined by the automation process.

Quoted in IPR2023-01379, Ex2001, Zatkovich '732 Decl., ¶ 58-59, 196, see also Paper 17, POR, 13; IPR2024-00065, Ex2002, Zatkovich '371 Decl., ¶ 60, see also Paper 15, POR, 16; IPR2023-01368, Zatkovich '664 Decl., EX 2001, ¶ 67, see also Paper 19, POR, 16

Technical Solution: IPR2023-01379, Ex1001, '732 Patent, 5:62-6:10

One technical solution provided by the disclosed subject matter may be to use a natural language interface to receive input from the user, and based thereon, select an automation process to be executed. The automation process may 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. As a result, definition of the automation process may be defined by non-programmers.

Defining the automation process based on performing actions in the GUI enables the automation process to perform any functionality that the user can perform, without relying on dedicated APIs and without requiring any line of code. The parameters of the conversation, as well as the flow of the automation process, may be defined using a point and click editor, or other user interface that can be used by any non-programmer users.

Quoted in IPR2023-01379, Ex2001, Zatkovich '732 Decl., ¶ 58-60, 196, see also Paper 17, POR, 14-15; IPR2024-00065, Ex2002, Zatkovich '317 Decl., ¶ 62-63, see also Paper 15, POR, 16-17, 65; IPR2023-01368, Zatkovich '664 Decl., EX 2001, ¶ 69-70, see also Paper 19, POR 16-17, 67

The WalkMe Patents: Technical Problem: Chatbot not on Target System

IPR2023-01379, Ex1001, '732 Patent, 6:26-32-44, 7:9-11

In some exemplary embodiments, 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 third-party messaging service to invoke the automation process in a simple manner and without relying on coding or on dedicated APIs. In some exemplary embodiments, the chat bot service may generate a link, such as a web link (e.g., a link to a website), a deeplink to a mobile application (e.g., waze:// link to the WAZE™ mobile application), a link to a local desktop agent (e.g., walkme:// link to the WALKME™ desktop agent), or the like. The link may be presented to the user in the messaging service and the user may click the link. In response to the link being clicked, the target system may be opened and the automation process may be executed.

In some exemplary embodiments, the chat bot may collect information to be used as part of the automation process, such as values to be inputted in input fields, selections to be made in the GUI of the target system, or the like. The

branching step. Additionally or alternatively, some steps may be associated with performing an action on a GUI element, also referred to as widget. Additionally or alterna-

Quoted in IPR2023-01379, Ex2001, Zatkovich '732 Decl., ¶ 61 (quoting Ex 1001, 6:26-32, 6:39-44, 7:9-11), see also Paper 17, POR, 15-16; IPR2024-00065, Ex2002, Zatkovich '317 Decl., ¶ 65, see also Paper 15, POR 16-17; IPR2023-01368, Zatkovich '664 Decl., EX 2001, ¶ 71, see also Paper 19, POR, 16-17

The WalkMe Patents: FIG. 2A / FIG. 3

FIG. 2A of Each WalkMe Patents

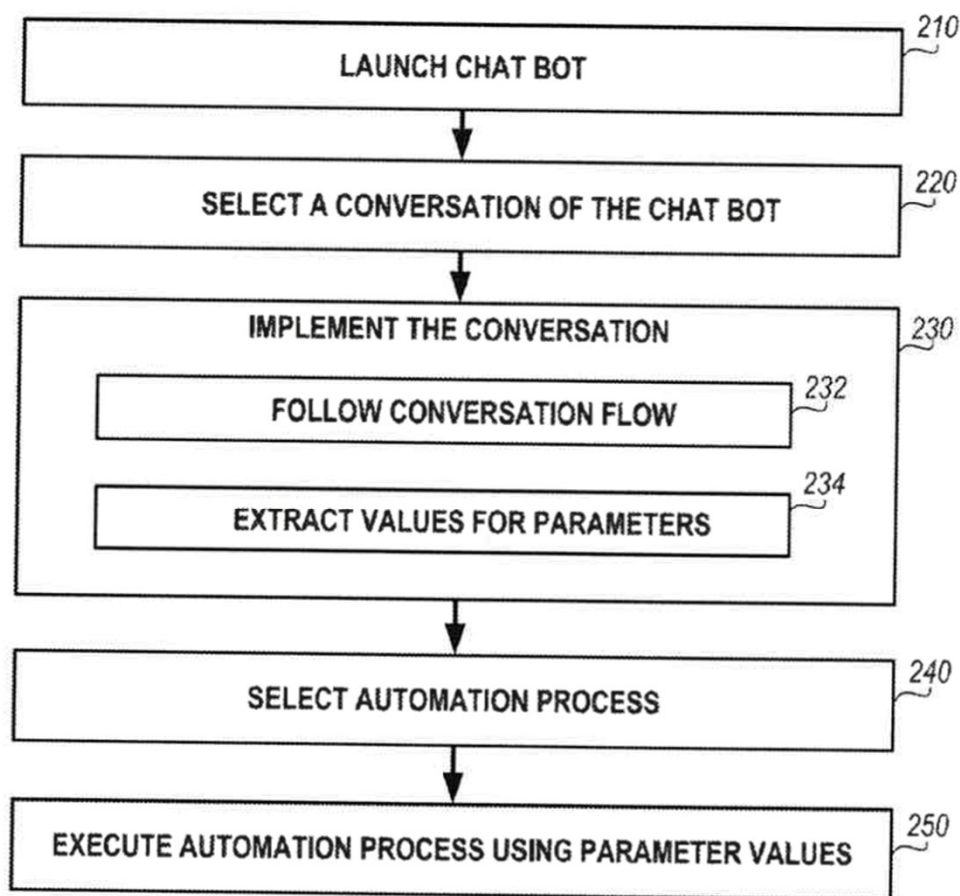


FIG. 2A

FIG. 3 of Walkme Patents

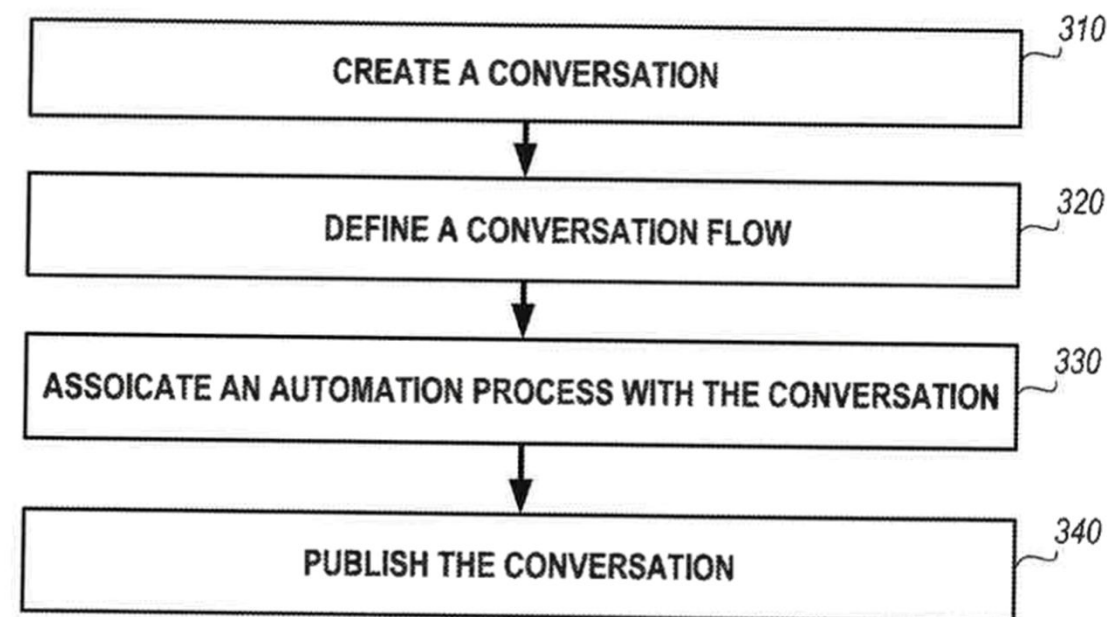


FIG. 3

Shown in IPR2023-01379, Paper 2, Pet., 4; Paper 10, ID, 4 (as well as other IPRs)

Shown in IPR2023-01379, Paper 17, POR, 17-18; Ex2020, Beigi Deposition taken November 11, 2024, 266:15- 267:5 ("I'm saying figure 3 is a more direct specification that is here.")

The WalkMe Patents: FIG. 3 / Claim 1 of '732 Patent

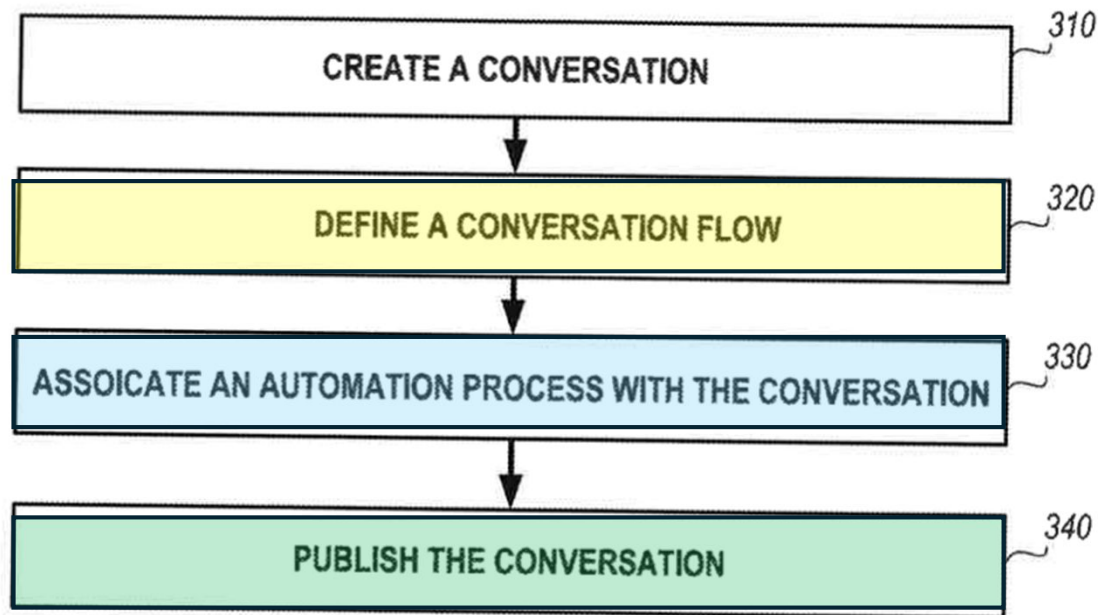


FIG. 3

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] **defining a conversation** to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] **associating the conversation with the automation process**, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] **publishing the conversation** to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

The WalkMe Patents: FIG. 3 / Description

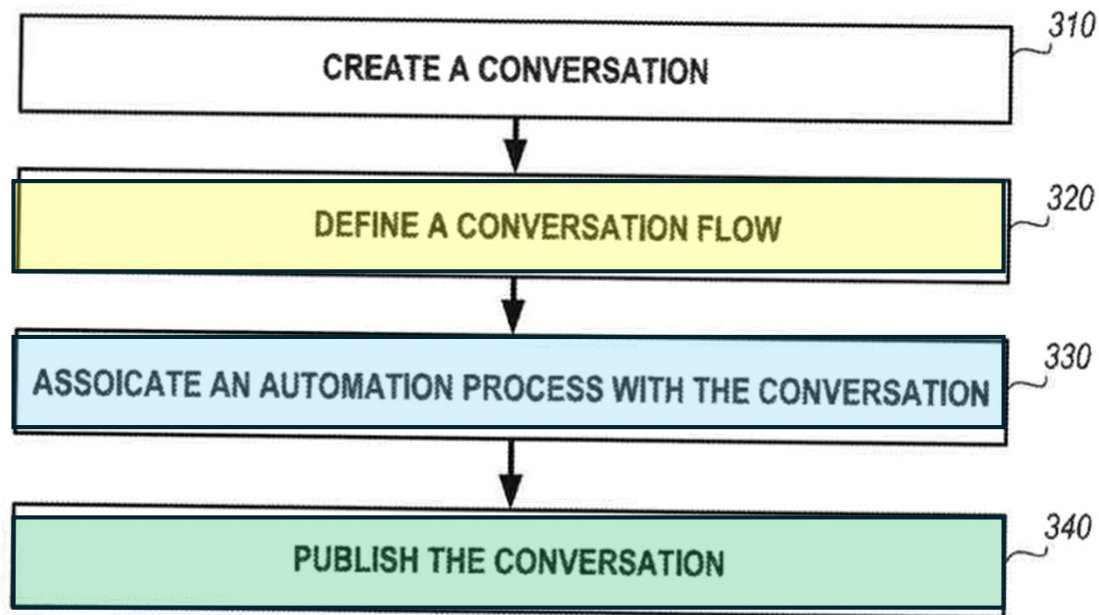


FIG. 3

Referring now to FIG. 3 showing a flowchart of a method, in accordance with some exemplary embodiments of the disclosed subject matter.

On Step **310**, a new conversation is created. The new conversation is to be defined by the administrator user. Additionally or alternatively, the conversation may be an existing conversation that is being updated. In some exemplary embodiments, the conversation may have a name, keywords useful for matching user's response to the conversation, or the like.

On Step **320**, a conversation flow may be defined. The conversation flow may define the announcements of the chat bot, the questions the chat bot asks, the parameters that the chat bot asks for and attempts to retrieve from the user's responses, which may be provided in natural language, the control flow conditions on the conversation flow and the like.

On Step **330**, one or more automation processes may be associated with the conversation. The user may define, for example, using a click-and-point GUI, which automation process would be invoked and when, with respect to the conversation flow. Conversation flows having branch operations may be associated with more than a single automation process. Additionally or alternatively, a plurality of automation processes may be performed sequentially (either immediately one after the other, or with intermediate questions therebetween).

On Step **340**, the conversation may be published and made available to be implemented by a chat bot service. In some exemplary embodiments, the publication may assign the conversation to a specific bot. For example, HR Bot may be assigned several conversations that are different from those of a CRM Bot.

Claim Construction and related disputes

“Computer Program” (‘664/’732)

“a displayed user interface of a computer program”/“the displayed user interface of the computer program” (‘664/’732)

“defining an automation process”/“defining a conversation” (‘732)

Order of steps [a], [b], [d] (‘732)

“At least one of” A “and” B (‘732, claim 3)

“Natural language interface” (‘664, ‘732, ‘317)

“Third-party web-based target system” (‘317)

“Computer Program” ('664, '732)

PO/Zatkovich

“A target system whose functionality is invoked through by the automation process using its displayed user interface, such as a graphical user interface”

IPR2023-01368, Ex2001, '664 Zatk. Decl., ¶ 95, cited by IPR2023-01368, Paper 19, '664 POR, 28; IPR2023-01368, Paper 33, Sur-reply, pg. 5

IPR2023-01379, Ex2001, '732 Zatk. Decl., ¶ 100, cited by Paper 17, POR, pg. 25; Paper 30, Sur-Reply, pg. 5

Petitioner

“A POSITA would have understood that the ordinary and customary meaning of computer program is instructions carried out by computer(s), and the ordinary and customary meaning of displayed user interface of the computer program is displayed user interface of the instructions carried out by computer(s). These constructions are supported by both intrinsic evidence and extrinsic evidence from the perspective of a POSITA.”

IPR2023-01368, Ex1042, '664 Reply Beigi Decl., Par. 8

IPR2023-01379, Ex1042, '732 Reply Beigi Decl., Par. 12

Computer Program – ‘664 and ‘732 Spec. Define as “Target System”

IPR2023-01379, Ex1001, ‘732 Patent, 5:6-13

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.

IPR2023-01379, Paper 30, Sur-Reply, 3 (citing Ex1001, 732 Patent, 5:6-13, see also Paper 17, POR 24-27; Accord IPR2023-01368, Paper 33, Sur-Reply, 2-3 (citing Ex1001, ‘664 Patent, 8:9-13); Paper 19, POR, 27-28)

Patentee Acted As His Own Lexicographer (IPR2023-01379, Paper 30, Sur-Reply, 3)

- The intrinsic evidence is clear: the specification expressly equates the term “computer program” to “target systems”: “target systems, generally referred to as the computer program”. (Ex1001, 5:6-7). A Patentee acts as his own lexicographer where, as here, they “clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning” *Thorner v. Sony Computer*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (POR, 23; Reply, 2).
- Moreover, “[t]he 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.” (*Id.*, 5:10-13). Dr. Beigi admitted that “the graphical user interface of the target system is referring to the user interface in a computer program in the claim.” (Ex2020, 261:19-23). He tries to flip the specification’s express language that “[t]he target system [is] generally referred to as the computer program” (Ex1001, 5:6), by claiming a “target system” is merely an example of a “computer program”. (Ex2021, 310:19-311:4).

Dr. Beigi’s Examples of “computer program” don’t use the word “computer Program”

IPR2023-01379, Paper 30, Sur-Reply, at 3-4

To support this contorted read, he asserts “there are other examples”. (Ex2021, 311:2). But, as Dr. Beigi reluctantly admitted, the term “computer program” is absent from the examples list in the Reply, 1 (*citing* Ex1001, 10:11-17, 5:37-51, 21:24-32; Ex1042, ¶¶12-13):

Ex1001	Actual Passage (omitted language in bold)	Dr. Beigi Admission (Ex2021)
10:11-17:	“[t]he agent may access other applications, including their UI elements.”	399:5-8
5:37-51:	“[e]nterprises may use many different software tools for different purposes”.	400:18-403:7
21:24-32:	“[t]he computer readable program instructions may also be loaded onto a computer...”	437:24-438:21

IPR2023-01379, Paper 30, Sur-Reply, at 3-4; accord IPR2023-01368, Paper 33, Sur-Reply, at 3

IPR2023-01379, Paper 30, Sur-Reply, at 4

Petitioner also mischaracterizes the specification discussing “computer program product” (as if it did not use the term “product”) (Reply, 1) and Mr. Zatkovich’s actual testimony at Ex2011, 22:60-65 regarding it, which explains “compute program product” is a “more generic product, which unlike “computer program”, “describe[es] how you might package this particular invention” (Ex1036, 110:1-110:24). Dr. Beigi agreed that it “seems to be a packaging term” (Ex2021, 432:8-17).

IPR2023-01379, Paper 30, Sur-Reply, at 4; accord IPR2023-01368, Paper 33, Sur-Reply, at 3-4

“Computer Program Product” vs. “Computer Program”

IPR2023-01379, Paper 30, Sur-Reply, at 4-5

Claim 18 demonstrates how different terms like “**program instructions**” in its preamble, or “**computer readable program instructions**” (Ex1001, 21:24-32), are used to “**carry out aspects of the present invention**” (Ex1001, 19:63-65; Ex2021, 409:16-410:12). The invention is the automation process interacting with the GUI of “target system”/“**computer program**”, not the “target system”/“**computer program**”, itself. (*See also* ID, 3 (an automation process that “may be executed in a manner that manipulates the [graphical user interface (GUI)] of [a] **target system**, in a similar manner to the manner in which the user operates”) (*citing* Ex1001, 5:62-6:1).)

IPR2023-01379, Paper 30, Sur-Reply, at 4-5; accord IPR2023-01368, Paper 33, Sur-Reply, at 4 referring to Claim 19

IPR2023-01379, ‘732 Patent, Claim 18, 24:23-50

18. A non-transitory computer readable medium for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the non-transitory computer readable medium retaining **program instructions**, which program instructions when read by a processor, **cause the processor to perform:**

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of **a computer program** to simulate sequence of interactions with the displayed user interface of **the computer program** and execute a functionality of **the computer program**, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

discussed in Paper 30, Sur-Reply at 4-5; accord IPR2023-01368, Paper 33, Sur-Reply at 4 referring to Claim 19

IPR2023-01379, Ex1001, 19:60-65, 21:24-32

The present invention may be a system, a method, and/or a **computer program product**. The computer program product may include a computer readable storage medium (or media) having **computer readable program instructions** thereon for causing a processor to carry out aspects of the present invention.

The **computer readable program instructions** may also be loaded onto a computer, other programmable data processing apparatus, or other device to cause a series of operational steps to be performed on the computer, other programmable apparatus or other device to produce a computer implemented process, such that the instructions which execute on the computer, other programmable apparatus, or other device implement the functions/acts specified in the flowchart and/or block diagram block or blocks.

IPR2023-01379, Ex1001, 19:60-65, 21:24-32

“a displayed user interface of a computer program”/
“the displayed user interface of the computer program” ('664, '732)

PO/Zatkovich Proposed Construction

- the “displayed user interface of [a]/[the] computer program” in Claims 1/10-11/18, means “the displayed user interface of the target system that the user may utilize in order to activate the functionalities of the target system.”

(IPR2023-01368, Ex2001, '664 Zatk. Decl., ¶ 95)

(IPR2023-01379, Ex2001, '732 Zatk. Decl., ¶ 100, cited by Paper 17, POR, pg. 25)

Petitioner/Beigi Proposed Construction

- “displayed user interface of the computer program” is “displayed user interface of the instructions carried out by computer(s).”

(IPR2023-01368, Ex1042, '664 Reply Beigi Decl., ¶ 8)

(IPR2023-01379, Ex1042, '732 Reply Beigi Decl., ¶ 12)

‘664 and ‘732 Patents – “the displayed user interface of the computer program” must be the same displayed user interface of the same computer program

‘664 Patent, elements [c]-[f]

Petitioner’s read violates the law of antecedent basis, which is clear. [c-f] read as follows:

[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.

(Markup added).

Here, “**the displayed user interface** of **the computer program**” which the automation process “simulate sequence of interactions with” and “**the computer program**” which the automation process “execute a functionality” must be the same displayed user interface and the same computer program as “**a displayed user interface** of **a computer program**” which the automation process utilizes earlier in the claim. (See, e.g., caselaw in POR, 39).

(IPR2023-01368, Paper 33, PO Sur-Reply, at 5-6), see also Paper 19, POR, 14-15

‘732 Patent, element [c]

Petitioner’s read violates the law of antecedent basis, which is clear. [c] reads as follows:

wherein the automation process is configured to utilize **a displayed user interface** of **a computer program** to simulate sequence of interactions with **the displayed user interface** of **the computer program** and execute a functionality of **the computer program**, wherein the automation process is a parameterized automation process depending on the one or more parameters;

(Markup added).

Here, “**the displayed user interface** of **the computer program**” which the automation process “simulate[s] sequence of interactions with” and “**the computer program**” which the automation process “execute[s] a functionality of” must be the same displayed user interface and the same computer program as “**a displayed user interface** of **a computer program**” which the automation process utilizes earlier in the claim. (See, e.g., caselaw at POR, 51).

(IPR2023-01379, Paper 30, PO Sur-Reply, at 6), see also Paper 17, POR, 12

“defining an automation process”/“defining a conversation” (‘732)

PO/Zatkovich

Defining: generating by a non-programming user via a user interface a flow in a manner practicable by novices and non-programmers without needing to use dedicated APIs, programming languages or the like

IPR2023-01379, Ex2001, ‘732 Zatk. Decl., ¶ 100-105

Defining an automation process: generating by a non-programming user via a user interface an automation process flow including a sequence of interactions in a manner practicable by novices and non-programmers without needing to use dedicated APIs, programming languages or the like

IPR2023-01379, Ex2001, ‘732 Zatk. Decl., ¶ 100, 106

Defining a conversation: generating a conversation flow and its associated parameters (to be implemented by a natural language interface) by a user via software operating on the user device in a manner practicable by novices and non-programmers without needing to use dedicated APIs, programming languages or the like

(IPR2023-01379, Ex2001, ‘732 Zatk. Decl., ¶ 100, 107)

Dr. Beigi

1. **A POSITA Would Have Understood “defining,” “defining an automation process,” And “defining a conversation” According To Their Ordinary And Customary Meanings**

19. A POSITA would have understood that the ordinary and customary meaning of “defining” is “configuring.” This construction is supported by the intrinsic evidence and extrinsic evidence from the perspective of a POSITA.

IPR2023-01379, Ex1042, ‘732 Reply Beigi Decl., ¶ 19

27. Finally, I disagree with Mr. Zatkovich’s proposed constructions because it is unclear what “in a manner practicable by novices and non-programmers without needing to use dedicated APIs, programming languages or the like” means. Mr. Zatkovich’s constructions of “defining an automation process” and “defining a conversation” are wrong for the same reasons.

IPR2023-01379, Ex1042, ‘732 Reply Beigi Decl., ¶ 27

Defining must mean something more than “configuring”

‘732 Patent, Claim 1

1. A method for **defining an automation** process, wherein the automation process is **configured** to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] **defining a conversation** to be implemented by a natural language interface, wherein the conversation is **configured** to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

Construing “defining” as merely meaning “configuring” (Reply, 3), ignores the term “configured” already in the claims. The unrebutted presumption remains: “the use of these different terms in the claims connotes different meanings”. *CAE Screenplates, Inc. v. Heinrich Fiedler*, 224 F.3d 1308, 1317 (Fed. Cir. 2000).

IPR2023-01379, Paper 30, Sur-Reply, 7

Petitioner’s reliance on 9:4-5 (“Chat Bot Front-End Module 130 may be **configured to enable a User 190 to interact with a chat bot”) and 9:27-29 (“Automation Execution Module 140 may be **configured** to execute, on the client-side, the automation process”) to argue PO “improperly exclude embodiments in the ’732 specification” (Reply, 3) is misplaced.** Neither passage use the term “defining”, much less discuss “**defining an automation process**” nor “**defining a conversation**”.

IPR2023-01379, Paper 30, Sur-Reply 8

Defining as used involves “user friendly” and “without a dedicated API” or “any line of code” and by a “user”

‘732 Patent, Claim 1

1. A method for **defining an automation** process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] **defining a conversation** to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

Petitioner’s reliance on 5:49-61 (Reply, 4) is again misplaced. Dr. Beigi admitted, 5:49-61 relates to part of a discussion of a technical problem sought to be addressed, which was identified as a “non-trivial task[]” (Ex2021, 336:15-25). **Petitioner ignores the technical solution discussed in its continuation at 5:62-6:2.** Dr. Beigi recognizes with respect to “[d]efining the automation process based on performing actions in the GUI” ([c]), 5:49-61’s technical solution “**enables the automation process to perform any functionality that the user can perform without relying on dedicated APIs and without requiring any line of code, yes.**” (Ex2021, 342:22-343:14). Thus, the claimed solution is “defining” “without relying on dedicated APIs and without requiring any line of code”. (*Id.*)

IPR2023-01379, Page 30, Sur-Reply, 8

The ID is consistent with PO’s construction:

The ’732 patent discloses exemplary embodiments for **a non-programmer user to define** a flow of conversation for a chat bot. *See, e.g.*, Ex. 1001, Figs. 1–3. For example, **a user “may define** which questions the bot would ask, which remarks it will make, [and] flow control operations that may be based on evaluated conditions.” *Id.* at 8:46–49. Further, “**the user may define** for a conversation flow which automation process is invoked,” or “that a conversation is associated with multiple automation processes, one of which may be selected based on the interaction with the user.” *Id.* at 8:49–55. The automation process may also be **defined by a user.** *Id.* at 11:27–28. (ID, 3-4; *see* Ex2020, 270:24-272:3 (admitting the Board properly understood that the disclosure involving a user in the definition process: “With respect to the conversation flow, **a user may define a conversation**, yes”)).

IPR2023-01379, Paper 30, Sur-Reply 8-9

Order of steps [a], [b], [d] ('732 Patent)

PO/Zatkovich

the claims require that the “defining” step in element [a] to be performed prior to the “associating” step in elements [b] & [c], both of which are required to be performed prior to the “publishing” step in elements [d] & [e] (IPR2023-01379, Paper17, POR, p.31)

- **[a] must precede [b]:**
 - “[A]ssociating the conversation with the automation process includes associating parameters of the automation process with the parameters of the defined conversation” (Ex2001, ¶ 123)
 - Dr. Beigi confirmed: “you have to define the conversation in a way that is aware of the parameters of the automation process”. (Ex2021, 359:20-22)
- **[d] cannot happen until after [a] and [b]:**
 - Dr. Beigi confirmed: “I believe the defining and associating are -- they need each other. You can't do one without the other. And **then** you do the publishing.” (Ex2021, 369:6-9)

Petitioner/Dr. Beigi

“[T]he conversation can be associated with the automation process, whether defined before or after”

- IPR2023-01379, Paper 25, Reply, pg.5
- “Claim 1 of the '732 recites three steps: a “defining” step, an “associating” step, and a “publishing” step. I have been informed without clear language in the claim, the order of the elements listed in a claim alone does not impose a specific order. And the claim does not include language that requires a specific order, especially not the order that Mr. Zatkovich argues is required”
 - IPR2023-01379, Ex1042, ¶ 28
- “The claims do not involve functionality that requires a specific order. Thus, the claims encompass the conversation being “associat[ed]” with the automation process whether “defining” occurs before or after.”
 - IPR2023-01379, Ex1042, ¶ 29 (brackets in original); See Petitioner’s DX, slide 29

Order of steps [a], [b], [d] ('732 Patent)

PO/Zatkovich Proposed Construction

the claims require that the “defining” step in element [a] to be performed prior to the “associating” step in elements [b] & [c], both of which are required to be performed prior to the “publishing” step in elements [d] & [e] (IPR2023-01379, Paper17, POR, p.31)

- **[a] must precede [b]:**
 - “[A]ssociating the conversation with the automation process includes associating parameters of the automation process with the parameters of the defined conversation” (Ex2001, ¶ 123)
 - Dr. Beigi confirmed: “you have to define the conversation in a way that is aware of the parameters of the automation process”. (Ex2021, 359:20-22)
- **[d] cannot happen until after [a] and [b]:**
 - Dr. Beigi confirmed: “I believe the defining and associating are -- they need each other. You can't do one without the other. And **then** you do the publishing.” (Ex2021, 369:6-9)

Petitioner/Beigi Proposed Construction

“[T]he conversation can be associated with the automation process, whether defined before or after”

- IPR2023-01379, Paper 25, Reply, pg.5
- IPR2023-01379, Ex1042, ¶ 28-29

FIG. 3 / Claim 1 of '732 Patent

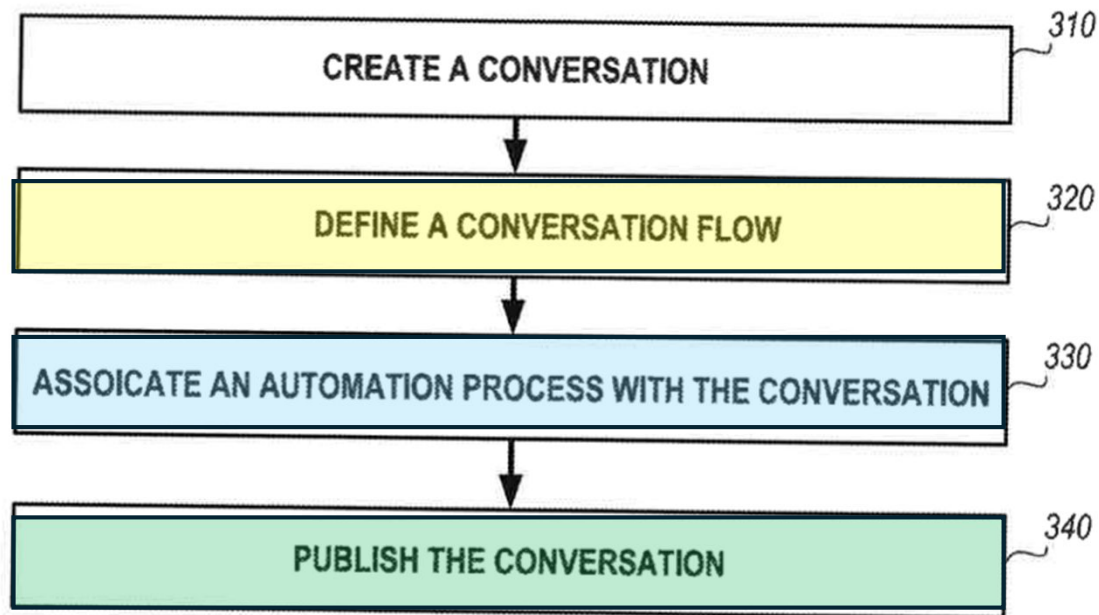


FIG. 3

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] **defining a conversation** to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] **associating the conversation with the automation process**, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] **publishing the conversation** to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

Shown in IPR2023-01379, Paper 17, POR, 17-18

FIG. 3 / Description

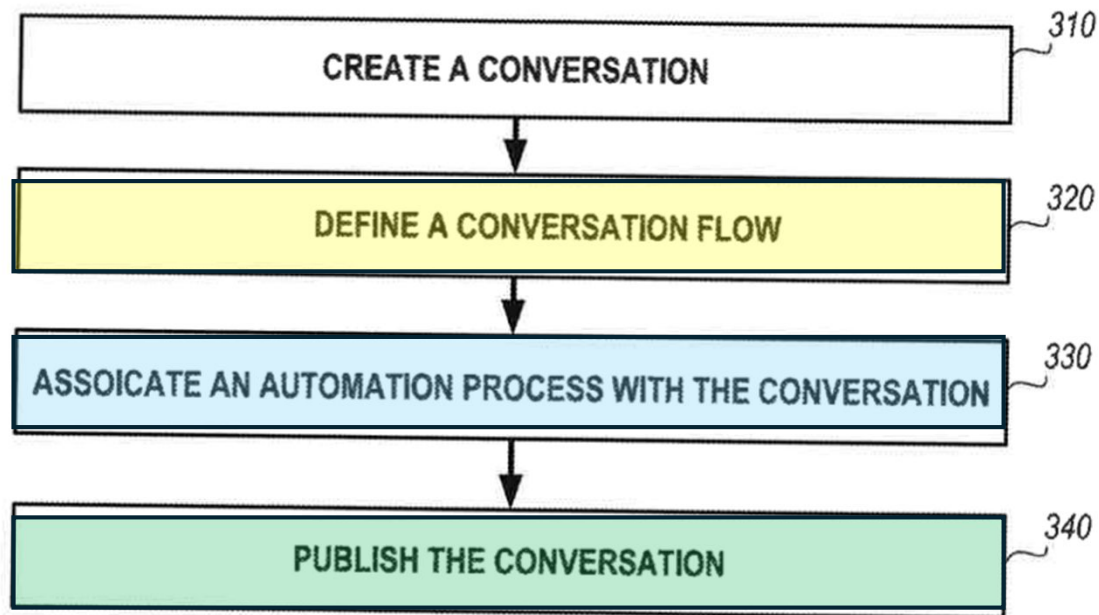


FIG. 3

Shown in IPR2023-01379, Paper 17, POR, 17-18

Referring now to FIG. 3 showing a flowchart of a method, in accordance with some exemplary embodiments of the disclosed subject matter.

On Step **310**, a new conversation is created. The new conversation is to be defined by the administrator user. Additionally or alternatively, the conversation may be an existing conversation that is being updated. In some exemplary embodiments, the conversation may have a name, keywords useful for matching user's response to the conversation, or the like.

On Step **320**, a conversation flow may be defined. The conversation flow may define the announcements of the chat bot, the questions the chat bot asks, the parameters that the chat bot asks for and attempts to retrieve from the user's responses, which may be provided in natural language, the control flow conditions on the conversation flow and the like.

On Step **330**, one or more automation processes may be associated with the conversation. The user may define, for example, using a click-and-point GUI, **which automation process would be invoked** and when, with respect to the conversation flow. **Conversation flows having branch operations may be associated** with more than a single automation process. Additionally or alternatively, a plurality of automation processes may be performed sequentially (either immediately one after the other, or with intermediate questions therebetween).

On Step **340**, the conversation may be published and made available to be implemented by a chat bot service. In some exemplary embodiments, the publication may assign the conversation to a specific bot. For example, HR Bot may be assigned several conversations that are different from those of a CRM Bot.

FIG. 3 / Description

IPR2023-01379, Paper 30, Sur-Reply, 10

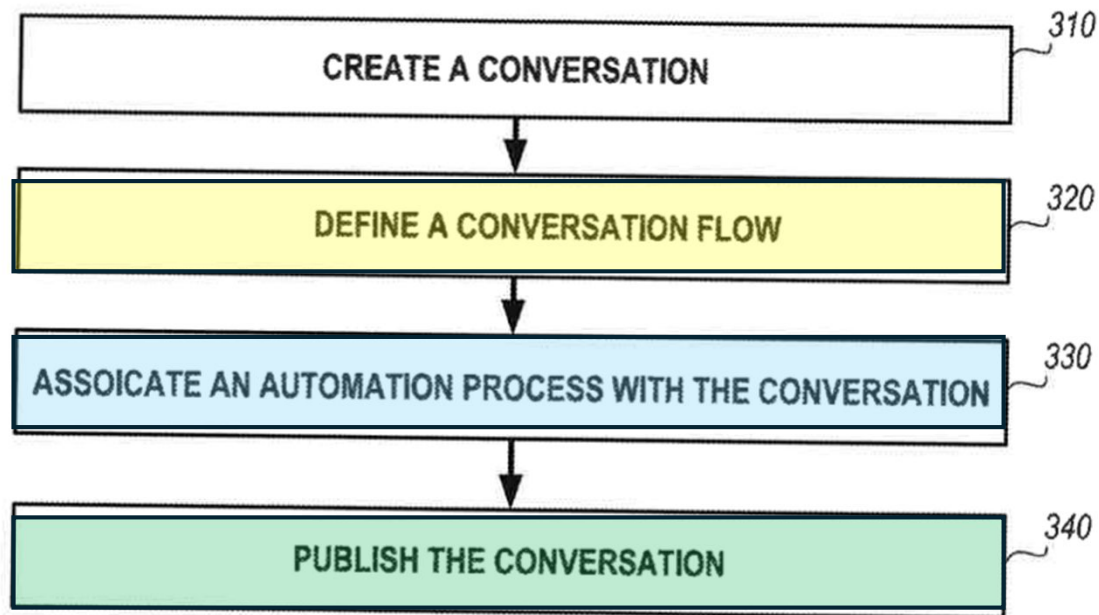


FIG. 3

Fig. 3 confirms the order of operation. The claimed automation process is “a parameterized automation process depending on the one or more parameters”. (Ex2001, ¶123). In [a] a conversation is defined which “is configured to obtain from the user one or more values to one or more parameters” “includes establishing the parameters to be obtained during a conversation (once implemented)” (*Id*). Dr. Beigi confirmed, “you have to define the conversation in a way that is aware of the parameters of the automation process”. (Ex2021, 359:20-22). Then, [b] “associating the conversation with the automation process’ includes associating parameters of the automation process with the parameters of **the defined** conversation” (Ex2001, ¶123; Accord Ex2021, 368:16-22). By Petitioner’s own logic, the conversation, and its one or more parameters, **must have been defined before** any association could be made between the automation process parameters and the defined conversation parameters. Similarly, Dr. Beigi confirmed that publication cannot happen until after the “defining” and “associating” are complete. (Ex2021, 369:6-9, 372:17-24). Order matters.

‘732 Patents – Dr . Beigi Agrees that “the automation process” is the same automation process as “an automation process” and “the conversation” is the same conversation as “a conversation”

‘732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

Antecedent Basis (IPR2023-01379, Paper 30, Sur-Reply, 7)

In virtually every other instance where the claim provided antecedent basis for “the” something, based on an earlier reference of “a” something, Dr. Beigi reluctantly admitted they had to be the same. (*See* Ex2021, 379:20-25/381:10-12/383:13-18 (automation process); 380:16-17 (conversation)). But when it comes to “displayed user interface” and “computer program”, Dr. Beigi attempts to distinguish “a” displayed user interface of “a” computer program from “the” displayed user interface of “the” computer program. (Ex2021, 388:10-12 (“it makes a distinction between “a” and “the.” Otherwise, it would have said “the” from the beginning”)). This contradiction with fundamental rules of grammar, antecedent basis and his own interpretation of other claim terms, strains Dr. Beigi’s credibility. It is also incorrect.

Petitioner's/Dr. Beigi's Analysis on "order" is "nonsense" (IPR2023-01379, Sur-Reply, 9-10)

IPR2023-01379, Reply, 6

- "in order for Symons' RPA to automatically generate an email signature, its automation process must have been defined"

IPR2023-01379, Reply, 4-5, citing Ex1042, ¶28).

- "Here, the conversation can be associated with the automation process, whether defined before or after."

Ex2021, Dr. Beigi Depo. Nov. 12, 357:3-8

- "they [the automation process and the conversation] both need to exist"

“At least one of” A “and” B (‘732, Claims 3/13)

PO/Zatkovich

- “at least one message element and at least one condition element”

2023-01379, Paper 17, POR, pg. 55

- “grammatical principals confirm that ‘at least one of’ modifies each member of the list.”

2023-01379, Ex2001, Zatkovich Decl., ¶ 126

Petitioner/Dr. Beigi

5. **Claim 3: “The method of claim 2, wherein the conversation elements comprise at least one of: a message element and a condition element.”**

Claim 3 requires “at least one of: a message element and a condition element,” which means having one satisfies the claim. (EX1003, ¶104.)

2023-01379, Petition, Paper 2, p. 24

5. **Claim 3: “The method of claim 2, wherein the conversation elements comprise at least one of: a message element and a condition element.”**

105. Claim 3 requires “at least one of: a message element and a condition element,” which means having one (a message element, a condition element, or both) satisfies the claim.

Beigi Decl., Ex1003, ¶ 105

The Law

***SuperGuide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 886 (Fed. Cir. 2004)**

- “The phrase ‘**at least one of**’ **precedes** a **series of categories** of criteria, and the patentee used the term ‘**and**’ to separate the categories of criteria, which connotes a conjunctive list. ... Applying [Strunk and Wright’s] grammatical principle here, the phrase ‘at least one of’ modifies each member of the list, i.e., each category in the list.

***Fujifilm Corp. v. Motorola Mobility LLC*, 2015 WL 1265009, at *8, (N.D. Cal. Mar. 19, 2015)**

- “*SuperGuide* did not erect a universal rule of construction for all uses of ‘at least one of’ in all patents, however.” (IPR2023-01379, Paper 25, Reply at 5)
- “[T]he modes of operation listed in the 'menu comprising' limitation (i.e. 'transit image mode,' 'receive mail mode,' and 'transmit mail mode') are **not categories comprised of 'many possible values'** that users must choose 'at least one of' for the invention's purpose to be served”

The claimed “conversation elements” are analogous to the “categories” “with many possible values” in *Superguide*, not the “modes of operation” in the “menu” in *Fujifilm*.

2023-01379, Paper 30, Sur-Reply, 10-11 ; Paper 25, Reply, 5-6

“Natural language interface” (‘664, ‘732, ‘317)

PO/Zatkovich

- “[T]he claimed “natural language interface” must rely on natural language processing to understand, process, and generate a response to human natural language input.”

Ex2001, '732 Zatkovich Decl. ¶ 169
Ex2003, Beigi 6/25/2024 Depo. 63:15-64:17
Both cited in IPR2023-01379, Paper 17, POR at 46

Petitioner

Natural Language Processing (NLP)”). In contrast, a “*natural language interface* is an interface that *allows you to do natural language communication* with the software.” (EX2003, 63:15-64:17; EX1001, 5:6-8 (“The chat bot may implement a *natural language interface* such as a text-based *conversation*, an oral *conversation*, or the like.”), 16:10-12.) Mr. Zatkovich does not dispute. (EX2001, ¶158 (citing EX2003, 63:15-64:17); EX1042, ¶¶51-55.)

IPR2023-01379, Paper 25, Pet. Reply, pg. 8-9 (citing Ex2003, 63:15-64:17)

Dr. Beigi's on Natural Language Interface requiring NLP

Ex2003, Dr. Beigi Deposition taken June 25, 2024, 63:15-64:17

Q. Okay. So when you talk to other people about natural language processing, what is it that you understand it to mean, in your own words, not the expert reports? I just want to know how would you understand that as someone that is a technical person at Recognition Technology talking to other people who you're working on with on natural language processing?

A [Dr. Beigi]: Exactly what you just did. You spoke with me and I processed that language, which is a 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.

Q: And what would be a natural language interface to the same group of people?

A [Dr. Beigi]: I'm not defining this. I'm just explaining what a natural language interface to -- to us means. A natural language interface is an interface that will allow you to do natural language communication with the software.

Ex2020, Dr. Beigi Deposition taken November 11, 2024, 82:21-84:12

Q. And if the PTAB were to adopt your claim construction, do you think that what Mr. Zatkovich programmed in that exhibit meets claim 1 of the '664 patent?

MS. NGUYEN: Objection, form.

A [Dr. Beigi]: I don't believe it will.

Q: And why not?

A [Dr. Beigi]: Because Mr. Zatkovich, as we required, did not use natural language processing, and in this context, we are talking about the context of this patent, we are talking about a chatbot. And we are requiring natural language processing, which you just stated, and since Mr. Zatkovich does not use natural language processing, it does not qualify.

Q. Okay. But my question wasn't that it required that. I said if we adopt your claim construction. So my question was, and if the PTAB were to adopt your claim construction, do you think what Mr. Zatkovich programmed in that exhibit meets claim 1 of the '664 patent? So I want to know under your claim construction.

MS. NGUYEN: Objection, form.

A [Dr. Beigi]: In light of the specifications, no. Because the claims come in light of the specifications. The specifications multiple times speak about a chatbot, and in -- in a chatbot, and they do talk about natural language processing. So even reading that portion of it, the way I was just constructing it, that's just one portion of the claim. You have to look at the claims as a whole. You have to look at the claims in light of the specifications. And, again, under that construct, with the -- in light of the specifications and the rest of the claims, it does not qualify

Forms and buttons

“Form”: Ex2003, Dr. Beigi Deposition, taken June 25, 2024, at 200:11-25

Q. But you can use a **rule-based bot** which asks in text form a question in natural language **without using natural language processing**, right?

Dr. Beigi: That's a form. Have you filled out forms online? They ask you a question in English, and you click yes or no or you select something and then you say next. To me -- you're asking my opinion.

Q. Yeah.

Dr. Beigi: Not his opinion, of course. He's said it already. **In my opinion, that is just a form.** And that's why I said it's a very loaded question.

“Button”: Ex2003, Dr. Beigi Deposition, taken June 25, 2024, at 199:11-21

Q. Okay. But it is possible as late as 2019 to have a chatbot which is a **rule-based chatbot** that does not use NLP; is that correct?

Dr. Beigi: That's **more like a form**. That is a form. I would call that a form.

Q. Does it have to be a form in order to be rule-based?

Dr. Beigi: If it's the way he's defined it, **which is often these bots use buttons, then I would say it's a form.**

“Third-party web-based target system” (‘317)

PO/Zatkovich

- **Third-party:**
 - “Consistent with what a POSITA as of November 5, 2017 would understand, a “third-party” system is a **different and unaffiliated program/system**, which seems to be undisputed.” IPR2024-00065, Ex2002, Zatkovich Decl., ¶ 71.
 - The ‘317 Patent is specifically tackling the problem where “the target system may be **owned by a third-party**...”. ‘317 Patent, Ex1001, 11:19-20
- **Web-based:**
 - In line with the “plain and ordinary meaning,” a “web-based target system” **requires usage of the internet**. Indeed, the specification differentiates between “a website, a web-based system” and “a desktop application”. ‘317 Patent, Ex1001, 8:13-18

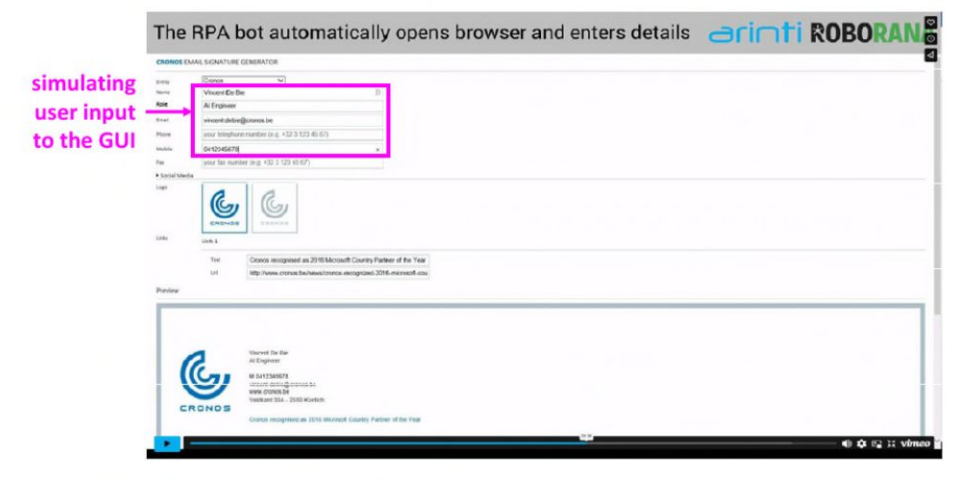
Dr. Beigi

- **Third-party:**
 - For “third party”: “ownership is immaterial. It’s the management of that library and how you do – you know, whether it’s a separate library or not, just that the separation makes it third-party. It’s in the way they communicate”. IPR2024-00065, Second Beigi Depo., Ex2020, 155:1-155:6
- **Web-based:**
 - Williams’ “work through system’s graphical interfaces, including web browsers” and thus teaches “a third-party web-based target system.” IPR2024-00065, Ex1042, Beigi Reply Decl., ¶ 32-34.
 - In Symons’ video (Ex. 1006, 11), where “the RPA bot automatically opens the browser and enters the details ... would be an example of a web-based target system” IPR2024-00065, Ex2020, Second Beigi Depo., 166:23-167:1

See also IPR 2024-00065 , Paper 28, Sur-Reply, 1-2

IPR2024-00065, Ex2003, ¶188

88. “The RPA bot automatically opens browser and enters details.” (EX1006, 11.) As shown in the screen (annotated below), the RPA bot enters the user’s name “Vincent De Bie” in the name input field of the GUI and “Engineer” in the job role input field (annotated below). (*Id.*, 10). The RPA bot also enters the user’s email address “vincent.debie@cronos.be” in the email address input field and mobile number “0412345678” in the mobile number input field. (*Id.*, 12.)



IPR2024-00065, Ex2020, Second Beigi Depo., 166:23-167:1

A. Well, I can -- paragraph 88 of my declaration (as read), The RPA bot automatically opens the browser and enters the details. Which is basically the title of the figure that's thereto and enters the details -- opens the browser and enters the details, basically, that would be an example of a web-based target system. That's an example.

Dr. Beigi's testimony regarding "third-party" ('317)

Q. So when you talk about a third-party service -- messenger service -- a third-party messenger service, does ownership matter?

A. No.

Q. Okay. Is there a unique definition of "third-party" to the people that work with NLPs than with respect to the rest of the world?

MS. NGUYEN: Objection, form.

A. Who is the rest of the world? What do you mean by that?

Q. People that speak the English language.

A. The English language? My understanding is that "third-party" means not you, not the individual --

Q. Or someone affiliated with you?

A. No, no. Because especially in computer science, a third party doesn't -- definitely does not mean that.

In computer science, which is the scope of what we are looking at, a third-party module, a third-party library, a third-party

H. Beigi - 11.11.24

ownership is immaterial. It's the management of that library and how do you -- you know, whether it's a separate library or not, just that that separation makes it third-party. It's in the way they communicate.

IPR2024-00065, Ex2020, Dr. Beigi Deposition taken Nov. 11, 2024
at 154:4-155:6

“third party” means “unrelated” not merely “separation”

IPR2024-00065, Paper 28, Sur-Reply, 2

Dr. Beigi also took the leap that a “third party” does not refer to ownership or affiliation, but is about “management of that library... just that that separation makes it third-party”. (Ex2020, 154:4-155:6). This is not the ordinary meaning, nor one based on the disclosure. See, e.g., *Reshare Commerce, LLC v. State Farm Mutual Auto. Ins.*, Civil No. 11-2617-ADM-JJG, D.I. 137, at 15-17 (D. Minn. Nov. 21, 2012) (recognizing “unrelated” best captures the meaning of the term “third-party” as used in the claims and the specification; construing “third party” as “unrelated to the supplier”); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (internal citations omitted) (“The construction that stays true to the claims language and most naturally aligns with the patent’s description of the invention will be, in the end, the most correct construction.”). The ‘317 Patent is specifically tackling the problem where “the target system **may be owned by a third-party...**”. (Ex1001, 11:19-20). The technical solution offered to this problem, is “enabl[ing] the automation process to perform any functionality that the user can perform without relying on dedicated APIs and without requiring any line of code.” (Ex2021, 342:22-343:14).

Symons Article (Ex1004)/Symons Video (Ex1005, 1006)/Williams (Ex1011)

Basis	35 USC § (Post AIA)	IPR2023-01368 (USP 10,819,664)	IPR2023-01379 (USP 11,258,732)	IPR2024-0065 (USP 11,558,317)
NOT CHALLENGED		10-11, 17, 24, 27, 32	7-8, 16-17	
Symons Blog (Ex1004) Symons Video (Ex1005/Ex1006 (translation) Williams (Ex1011)	103	Ground 1 1-8, 12-13, 16, 19-23, 26, 29, 31	Ground 1 1-4, 9-14,18-19	Ground 1 1-20
Symons Blog Symons Video Williams Ben Itzhak (Ex1034)	103		Ground 2 6, 16, 21	

Symons Article (Ex1004)/Symons Video (Ex1005/Ex1006)/Williams (Ex1011)

Ex1004 (Symons Article/Blog)

When Chatbots meet RPA bots

 Senne Symons · Follow
Published in RoboRana
2 min read · Oct 19, 2017

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The technology landscape has been evolving rapidly in the last years. New technologies have been emerging, older technologies have been maturing and new concepts have been discovered. Some of the newer technologies have a promising future, such as Robotics Process Automation (RPA), Chatbots and Artificial Intelligence (AI).

At [RoboRana](#), part of the iBizz cluster within the [Cronos Group](#), we focus on delivering RPA technology to a wide spectrum of clients across different sectors. The RPA sector has been growing fast and we are constantly exploring new possibilities.

ROBORANA

We 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. Both

Ex1005 (Symons Video)/ Ex1006 (translation)



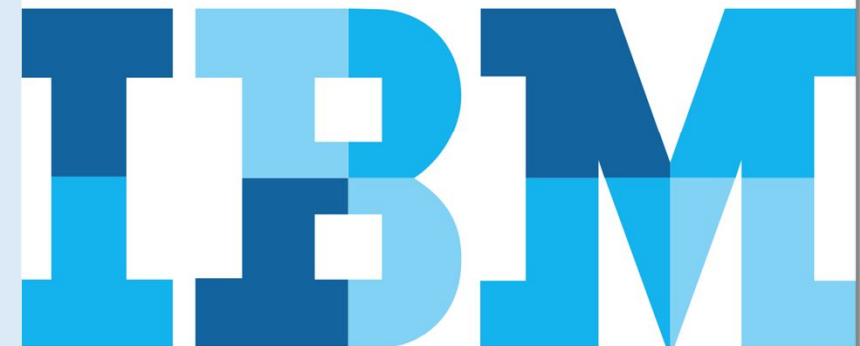
Ex1011 (Williams)

IBM Global Business Services
White paper

September 2017

Using artificial intelligence to optimize the value of robotic process automation

The biggest payoff occurs when robotic process automation (RPA) and artificial intelligence (AI), or cognitive computing—two complementary forms of automation—are integrated to drive cognitive automation.



IBM

Symons Article (Ex1004): Missing Comments (Ex2005 (comments)/Ex2015, Ex2016,Ex2017/Ex1008 (Symons Decl.))

Ex1004 (Symons Article/Blog)

When Chatbots meet RPA bots

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Ex2005 (Comments)

When Chatbots meet RPA bots

Senne Symons · Follow
Published in RoboRana · 2 min read · Oct 19, 2017

29 3

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ROBORANA

Responses (3)

What are your thoughts?

MOST RELEVANT

neha negi
almost 6 years ago
Hi, saw the video, but wanted to know how does the chatbot trigger the RPA bot?

Thanks
2 Reply

Sachin Prakash
about 6 years ago
which rpa tool and chatbot tool are you used and give description to do this automation

Reply

Esteban
about 6 years ago
interesting... but I seems that RPA is a simply program! or what is the big difference between RPA and simply program?

Reply

Ex1008 (Symons Decl.)

I, Senne Symons, declare as follows:

1. I provide this declaration about a blog post that I wrote in 2017 and a video accompanying the blog post. While I was compensated for my time in preparing this declaration, I have no stake in the outcome of this proceeding nor am I being compensated for my testimony. The statements in this declaration are based on my own personal knowledge and recollection.

2. From October 2017 to January 2021, I was a Robotic Process Automation (RPA) Developer and Business Analyst at RoboRana. RoboRana is a Belgium and Netherlands based company that focuses on developing intelligent automation such as Robotics Process Automation (RPA). My job responsibilities included communicating with customers and building automations. Since January 2021, I have been an Intelligent Automation Solution Architect at RoboRana.

3. My educational background is as follows: I obtained a Professional Bachelor Degree in Applied Informatics in 2017 from UC Leuven-Limburg in Belgium.

4. I have examined and reviewed the following:

- <https://medium.com/roborana/when-chatbots-meet-rpa-bots-e8b22579f49a> ("Chatbot-RPA Email Signature Article" or "Symons Article", Exhibit A)
- <https://vimeo.com/238927879> ("Chatbot-RPA Email Signature Video" or "Symons Video", Exhibit B)

Symons Article (Ex1004): Corroborating Evidence: (Baetens Blog (Ex1009); Baetens Declaration (Ex1010))

Ex1004 (Symons Article/Blog)

When Chatbots meet RPA bots



Senne Symons · Follow
Published in RoboRana
2 min read · Oct 19, 2017

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Whatfix Inc. Exhibit 1004 Page 1

Ex1009 (Baetens Blog)

When Chatbots meet RPA bots



Wouter Baetens · Follow
Published in Chatbots Life
3 min read · Oct 20, 2017

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An AI love story



[Source](#)

https://chatbotlife.com/when-chatbots-meet-rpa-bots-c5f71e462e6

Whatfix Inc. Exhibit 1009 Page 1

Ex1010 (Baetens Decl)

I, Wouter Baetens, declare as follows:

1. I provide this declaration about a blog post that I wrote in 2017 and a video accompanying the blog post. I was not compensated for my time in preparing this declaration, I have no stake in the outcome of this proceeding, and I am not being compensated for my testimony. The statements in this declaration are based on my own personal knowledge and recollection.

2. From February 2017 to September 2021, I was a Managing Partner at Arinti. Arinti is a company that focuses on transforming data using artificial intelligence (AI); one example application includes conversational AI bots. My job responsibilities included managing the business (such as managing the sales effort, managing the team, managing different projects, managing different partnerships, and growing the business overall).

3. My educational background is as follows: I obtained a Bachelors Degree in Economics with a specialization in Human Resources Management in 2010 from Hogeschool University in Brussels. I obtained a Masters Degree in Human Resources Management in 2011 from Hogeschool University in Brussels. I have also obtained several AI-related certifications, such as a Microsoft Azure Certification and an Agoria AI Certification.

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

PODX - 42

Symons Video (Ex1005, screenshots):

Related Evidence: Ex1006 (Translation) with Ex1007 (Translator Decl.);
Ex1033 (actual video)

Ex1005 (Screenshots)



Whatfix Inc. Exhibit 1005 Page 1

Ex1006 (Translation)



Whatfix Inc. Exhibit 1006 Page 1

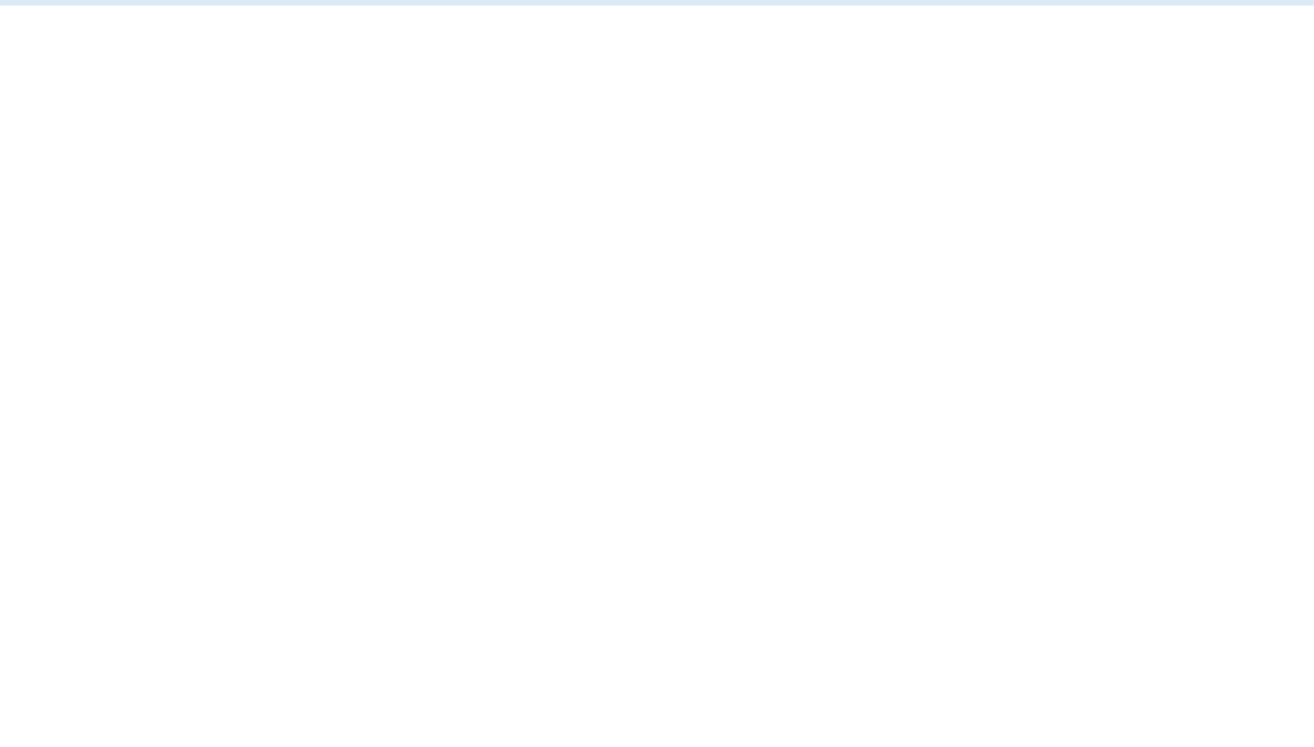
Ex1033 (Actual Video)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

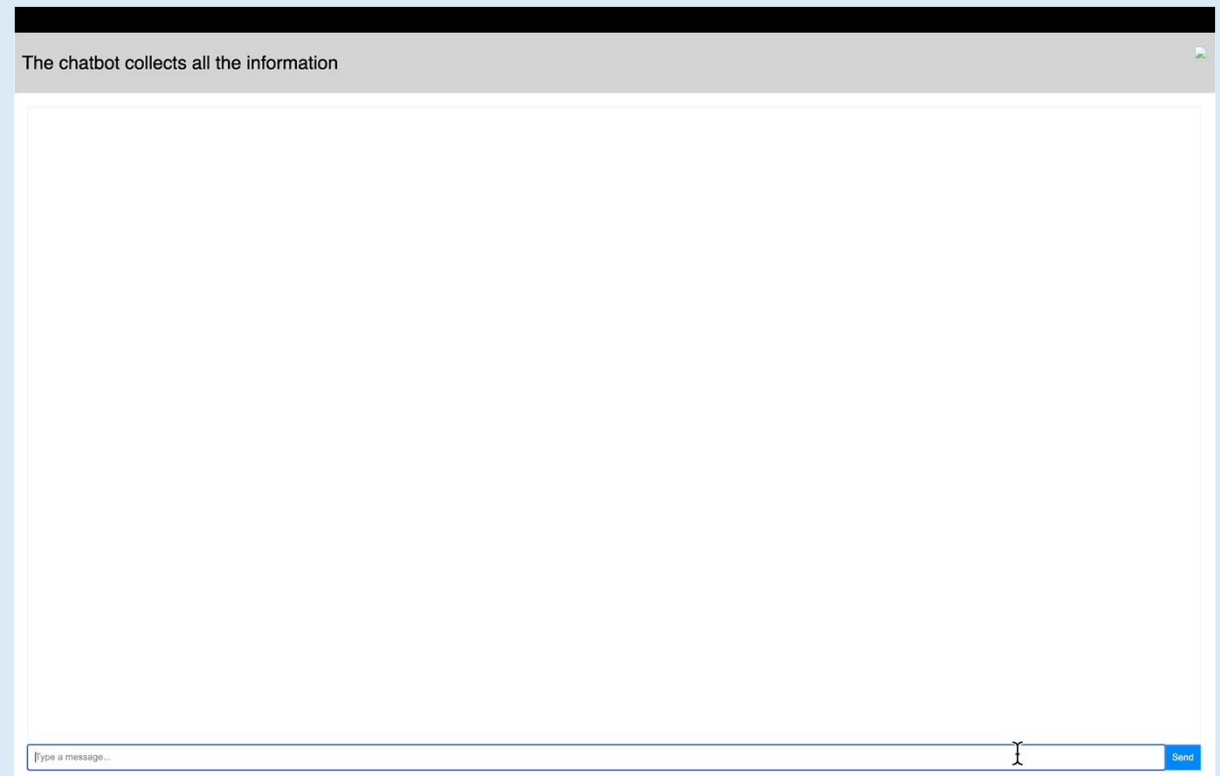
PODX - 43

Symons Video (Ex1033) / Zatkovich Demo (Ex2010)

Ex1033 (Symons Video)



Ex2010 (Zatkovich Demo)



Ex1004: Senne Symons Blog: “When Chatbots meet RPA bots”

As presented in each petition as Ex1004

When Chatbots meet RPA bots

 Senne Symons · Follow
Published in RoboRana
2 min read · Oct 19, 2017

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technologies have their specific advantages and combining them to automate processes can tremendously boost productivity in multiple organizations.

Chatbots enable organizations to offer a more intuitive, natural way to interact with their customers. By handling and structuring problems and questions quicker, it greatly reduces waiting times and improves customer satisfaction. Eventually, a chatbot powered by AI will become indistinguishable from a human, leading to reduced costs and higher productivity.

On the other hand, **Robotics Process Automation (RPA)** allows organizations to execute manual processes much faster, more accurate and reliable. A RPA bot can mimic the users actions and thus enables organizations to automate repetitive tasks and ensures that those tasks are always executed with the same consistency and precision. It reduces costs and human efforts by running automated processes 24/7/365 and by adding a virtual workforce that work alongside the process owners.



The goal of the showcase is to automate the process of creating an email signature. First, the chatbot collects all the 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.

Have a look at the video of the automated process below!

 When chatbots meet RPA bots
Open in app  
 Search Medium 

RPA meets chatbot

Automatically generate e-mail signature

00:01



Written by Senne Symons

19 Followers · Editor for RoboRana

Ex1004: Senne Symons Blog: “When Chatbots meet RPA bots”

Missing from Petition, Included as Ex2005 by Patent Owner in each IPR

When Chatbots meet RPA bots

Medium

Search

When Chatbots meet RPA bots

Senne Symons · Follow

Published in RoboRana · 2 min read · Oct 19, 2017

29

3

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Responses (3)

What are your thoughts?

MOST RELEVANT

neha negi

almost 6 years ago

Hi, saw the video, but wanted to know how does the chatbot trigger the RPA bot?

Thanks

2

Reply

Sachin Prakash

about 6 years ago

which rpa tool and chatbot tool are you used and give description to do this automation

Reply

Esteban

about 6 years ago

interesting... but I seems that RPA is a simply program! or what is the big difference between RPA and simply program?

Reply

Responses (3)

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DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

PODX - 46

Ex1004: Senne Symons Blog: “When Chatbots meet RPA bots”

Missing from Petition, Comments Ex2005, Ex2015 and Ex2016

Responses (3)

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MOST RELEVANT

n

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Reply

7/29/24, 11:38 AM

Hi, saw the video, but wanted to know how does the chatbot trigger the RPA bot? | by neha negi | Medium

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Sign in

Medium

Search

When Chatbots meet RPA bots

Senne Symons

29

3

n

neha negi · Follow

1 min read · Sep 10, 2018

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Hi, saw the video, but wanted to know how does the chatbot trigger the RPA bot?

Thanks

2

n

Written by neha negi

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7/29/24, 11:39 AM

which rpa tool and chatbot tool are you used and give description to do this automation | by Sachin Prakash | Medium

When Chatbots meet RPA bots

Senne Symons

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Sachin Prakash · Follow

1 min read · Jun 9, 2018

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which rpa tool and chatbot tool are you used and give description to do this automation

Chatbots

Rpa

Uipath

Written by Sachin Prakash

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Symons/Baetens Offered Limited Disclosure of What Its Showcase Actually Did

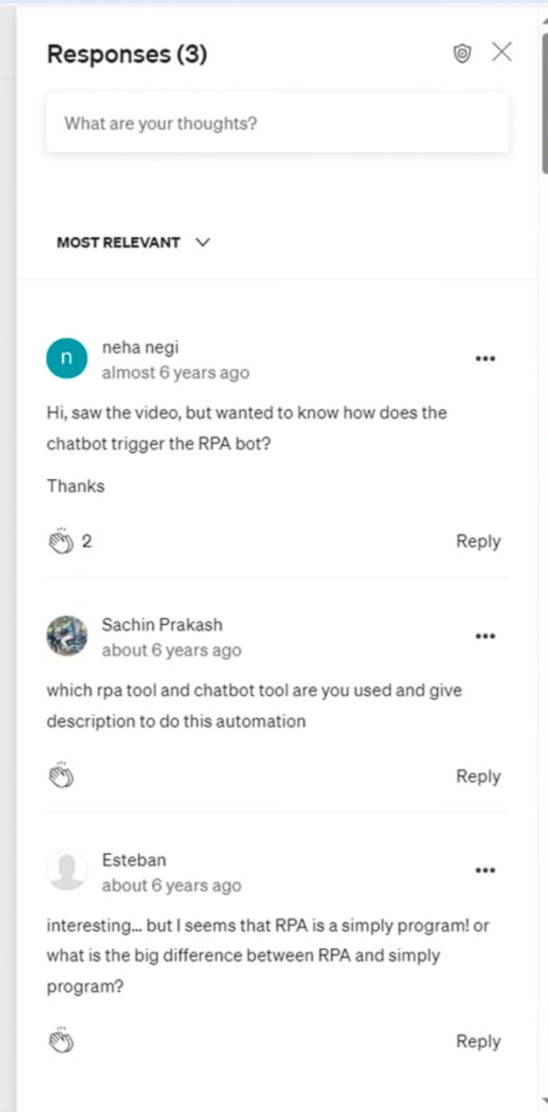
Symons and Baetens provide the same short excerpt:

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).

IPR2023-01368, Paper 19, POR, 30 ; IPR2023-01379, Paper 17, POR, 33 ; IPR2024-00065, Paper 15, POR, 25-26 (all PORs quoting Ex1004, 2; Ex1009, 2)

Symons Blog and Video offer no details on the “internals” and Baetens confirms it was intentional



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).

As **Dr. Beigi** explains (Ex1003, ¶167), the Symons Video only shows a video that allegedly “[a]utomatically generate[s an] e-mail signature”. (Ex1006, 1; Ex1003, ¶168; 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.*).

Mr. Zatkovich 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).

IPR2023-01368, Paper 19, POR, at pp.30-31

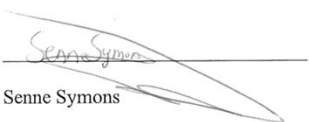
Ex1008 (all IPRs), Declaration of Senne Symons

- I, Senne Symons, declare as follows:
- I provide this declaration about a blog post that I wrote in 2017 and a video accompanying the blog post. While I was compensated for my time in preparing this declaration, I have no stake in the outcome of this proceeding nor am I being compensated for my testimony. The statements in this declaration are based on my own personal knowledge and recollection.
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 - <https://vimeo.com/238927879> (“Chatbot-RPA Email Signature Video” or “Symons Video”, Exhibit B)
 - <https://chatbotslife.com/when-chatbots-meet-rpa-bots-c5f71e462e6> (“Baetens Article”, Exhibit C)Exhibit A is a true and correct copy of an article titled “When Chatbots meet RPA bots.” I am the author of this article (“Chatbot-RPA Email Signature Article”). It was published and made publicly available online at <https://medium.com/roborana/when-chatbots-meet-rpa-bots-c8b22579f49a> at least as early as October 19, 2017. The October 19, 2017 date on Exhibit A accurately reflects the date that I posted the article.
 - The Chatbot-RPA Email Signature Article was published and made publicly available on Medium’s website. Medium is an online social publishing platform that is free and available to anyone in the public. It was known in the industry at the time for publishing blog posts, and interested members in the public would have searched for (e.g., using the Medium’s search bar and/or a Google search) and found my blog post. I signed up for a free (basic) Medium account and posted the Chatbot-RPA Email Signature Article as my first post on Medium. To the best of my knowledge, my blog post has been available on Medium’s website since I posted it on October 19, 2017.
 - The Chatbot-RPA Email Signature Article describes and includes a video (“ChatbotRPA Email Signature Video”) that demonstrates the email signature Chatbot-RPA. I created the video from my laptop computer. The video was published and made publicly available online at <https://vimeo.com/238927879> at least as early as October 19, 2017. Exhibit B is a true and correct copy of screenshots taken from the ChatbotRPA Email Signature Video.
 - The Chatbot-RPA Email Signature Video was published and made publicly available on Vimeo’s website. Vimeo is an online video sharing platform that is free and available to anyone in the public. It was known in the industry at the time for posting videos, and interested members in the public would have searched for (e.g., using Google search) and found my video. I used the company’s (RoboRana’s) Vimeo account to upload the Chatbot-RPA Email Signature video. To the best of my knowledge, the video has been available on Vimeo’s website since I uploaded it on October 19, 2017.
 - In Exhibits A and B, the developed Chatbot-RPA automatically created an email signature using information collected by the chatbot. The chatbot interacted with the user to collect all the necessary information. Once the information was collected, the RPA bot was triggered. The RPA bot automatically generated the email signature, saved it, and emailed it back to the user. My job was to implement the RPA bot to automatically generate the email signature without using an application programming interface.
 - Exhibit C is a true and correct copy of an article titled “When Chatbots meet RPA bots.” Wouter Baetens is the author of this article (“Baetens Article”). I worked with Mr. Baetens in the development of the email signature

Chatbot-RPA. The Baetens Article includes a link to the ChatbotRPA Email Signature Article that I authored and a link to the Chatbot-RPA Email Signature Video that I created. (Exhibit C, 2-3.)

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code.

Dated: 06/07/2023


Senne Symons
in Leuven, Belgium

Key Takeaways of Symons

For All IPRs

- 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);
- ***
- the “chatbot” was only programmed to implement a single RPA, a single conversation thread, and did not offer the user to select from a plurality of RPAs or “automation processes” as discussed in the ’732 Patent (Ex1001, 5:62-6:1), let alone choose between “automation processes” based on the elements of a natural language conversation in the chatbot;
 - the RPA was executed on a different device than the user device on which the chatbot was implemented; and
 - the RPA did not interact with a single target software, like WAZE™ (as discussed in the ’732 Patent, Ex1001, 6:31-37), but instead implemented a process invoking at least 3 or 4 different pieces of software.

IPR2023-01368, Paper 19, POR, 31-32 ; IPR2023-01379, Paper 17, POR, 34-36 ; IPR2024-00065, Paper 15, POR, 27-28

Additional By IPR

IPR2023-01379, ‘732 Patent:

- while it purports to use a “chatbot” to “collect all the necessary information in a friendly, interactive manner”, there is no discussion of how the conversation of the chatbot was defined, if it was associated with the automation process before or after the conversation was generated, and if the conversation was published; rather the suggestion was that the conversation was programmed using code, in contrast to the user-friendly definition process as discussed in the ’732 Patent (Ex1001, 4:59-61, 5:29-33);

IPR2023-01368, ‘664 Patent:

- while it 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 RPA was software that 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.

IPR2024-00065: ‘317 Patent:

- while it 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 obtain a user “instruction” and make a determination based on the instruction;

GROUND 1: Symons/Williams Fails To Meet Claims 2/12 and their dependent claims 3-4/13-14 of the ‘732 Patent

‘732 Patent, Claims 2/12/19, 3-4/13-14

2. The method of claim 1, wherein said defining comprises determining a conversation flow, wherein the conversation flow defines an order between conversation elements, wherein the conversation elements comprise at least a question element and an action element, wherein the action element is associated with automation process.

12. The computerized apparatus of claim 11, wherein said defining comprises determining a conversation flow, wherein the conversation flow defines an order between conversation elements, wherein the conversation elements comprise at least a question element and an action element, wherein the action element is associated with automation process.

IPR2023-01379, Paper 17, POR, 53-55:

Claims 2/12 and dependent claims 3-4/13-14:

“As Mr. Zatkovich confirms, “Symons does not disclose how its conversation was generated, let alone if it defined a question element or an action element, or the order in which such elements are presented.” (Ex2001, ¶234; see also Ex2001, ¶¶229-237). ***

As Mr. Zatkovich explains, simply because “Symons displays questions sequentially (first, ‘What is your name?’, next ‘What is your role?’, then ‘What is your email address?’ and then ‘What is your cell phone number?’), does not mean that there is necessarily a user defined order.” (Ex2001, ¶238 (citing example)). Ground 1 also identifies “actions” in the automation process instead of action elements. (Petition, 22-23; Ex1003, ¶98). ***

Ground 1’s reliance on Williams to fill the gap fails. First, the explanation is completely divorced from the claim (see Petition, 23-24). Mr. Zatkovich confirms: “Williams provides no disclosure on how to define a conversation. Indeed, Dr. Beigi does not even offer Williams to meet [a]. (Ex1003, ¶¶83-89).” (Ex2001, ¶242). Moreover, even the proposed modification of “generating letterhead” (Ex1003, -54-¶103), which has no basis in Symons or Williams, does not meet the claim: the proposed combination “would not require the conversation to be changed at all or defining of a separate conversation flow, since the information for letterhead is the same” (Ex2001, ¶243; see also id. ¶240 (“selecting a conversation based on user input” “does mean the conversation necessarily determines a conversation flow”).”)

GROUND 1: Symons/Williams Fails To Meet Claims Claims 3/13 of the ‘732 Patent

‘732 Patent, Claims 3/13

3. The method of claim 2, wherein the conversation elements comprise at least one of: a message element and a condition element.
13. The computerized apparatus of claim 12, wherein the conversation elements comprise at least one of: a message element and a condition element.

IPR2023-01674, Paper 17, POR, 55-56:

Claims 3/13:

“Claims 3/13 require that the conversation in Claims 2/12 also includes at least one “message element” and at least one “condition element”. Ground 1 asserts Claims 3/13 only require at least one “message element” or at least one “condition element” and asserts Symons includes a “message element” and relies upon Williams as including “conditional logic”. (Petition, 24-25; Ex1003, ¶¶105-106).

Ground 1’s construction is contrary to Federal Circuit precedent. *SuperGuide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 886 (Fed. Cir. 2004). Consistent with the plain and ordinary meaning, Claims 3/13 requires both at least one “message” elements and at least one “condition” elements. (Ex2001, ¶¶126-134, 246, 248-249).

Ground 1 does not offer both elements in Symons, and its reliance on William’s teaching “conditional logic” (Ex1003, ¶106) is misplaced and untethered to any particular proposed modification in Symons. Williams’ teaching that Intelligent Automation can “perform actions based upon observations and conditional logic” (Ex1003, ¶106, quoting Ex1011, 5), is also untethered and regards a process, not a conversation, as Mr. Zatkovich explains. (Ex2001, ¶252).

Ground 1 also fails to provide reasoning for modifying the conversation shown in the Symons Video to include conditional logic, which would have been unnecessary. (See Ex1033; Ex2001, ¶253). See *Google v. EveryMD.Com, LLC*, IPR2014-00347, Paper 9, 18-19 (denying institution for merely providing “repository of all the information that a judge could possible consider” instead of “focus[ing] on concise, well organized, easy-to-follow arguments supported by readily identifiable evidence of record”).”

“At least one of” A “and” B (‘732, Claims 3/13)

PO/Zatkovich

- “at least one message element and at least one condition element”

IPR 2023-01379 Paper 17, POR, pg. 55

- “grammatical principals confirm that ‘at least one of’ modifies each member of the list.”

IPR 2023-01379 Ex2001, Zatkovich Decl., ¶ 126

Petitioner/Dr. Beigi

5. **Claim 3: “The method of claim 2, wherein the conversation elements comprise at least one of: a message element and a condition element.”**

Claim 3 requires “at least one of: a message element and a condition element,” which means having one satisfies the claim. (EX1003, ¶104.)

2023-01379, Petition, Paper 2, p. 24

5. **Claim 3: “The method of claim 2, wherein the conversation elements comprise at least one of: a message element and a condition element.”**

105. Claim 3 requires “at least one of: a message element and a condition element,” which means having one (a message element, a condition element, or both) satisfies the claim.

Beigi Decl., Ex1003, ¶ 105

The Law

***SuperGuide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 886 (Fed. Cir. 2004)**

“The phrase ‘**at least one of**’ precedes a series of **categories** of criteria, and the patentee used the term ‘**and**’ to separate the categories of criteria, which connotes a conjunctive list. ... Applying [Strunk and Wright’s] grammatical principle here, the phrase ‘at least one of’ modifies each member of the list, i.e., each category in the list.”

***Fujifilm Corp. v. Motorola Mobility LLC*, 2015 WL 1265009, at *8, (N.D. Cal. Mar. 19, 2015)**

“*SuperGuide* did not erect a universal rule of construction for all uses of ‘at least one of’ in all patents, however.”

“[T]he modes of operation listed in the 'menu comprising' limitation (i.e. 'transit image mode,' 'receive mail mode,' and 'transmit mail mode') are **not categories comprised of 'many possible values'** that users must choose 'at least one of' for the invention's purpose to be served”

The claimed “conversation elements” are analogous to the “categories” “with many possible values” in *Superguide*, not the “modes of operation” in the “menu” in *Fujifilm*.

GROUND 1: Symons/Williams Fails To Meet Claims Claims 4/14 of the '732 Patent

'732 Patent, Claims 4/14

4. The method of claim 2, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

14. The computerized apparatus of claim 12, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

IPR2023-01674, Paper 17, POR, 57-58:

Claims 4/14:

“Ground 1, recognizing “Symons is silent”, argues Claims 4/14 would be obvious based on Williams, because “Williams’ system handles multiple user requests”, namely “setting up a payment for the payment transaction” and “a second automation process for automatically filling in an electronic medical record for the healthcare record transaction.” (Ex1003, ¶109, 107; Petition 25-26; Ex2001, ¶257). But “[n]either Symons nor Williams suggest using a single chatbot-RPA to handle multiple requests in the same conversation. Instead, Williams is directed at most to using chatbots ‘in a variety of other processes and across industries’ (Ex1011, at 3), without relating to a single chatbot-RPA handling multiple requests at once.” (Ex2001, ¶205). Nor, as Mr. Zatkovich explains, does Williams teach that these two actions are “in the same conversation, or even in the same conversation as the -57-signature generation and ... ‘selectively invoked’ based on the user input.” (Ex2001, ¶258).

Ground 1 offers no motivation to modify Symons’ conversation to include additional actions (let alone payment and medical record actions). (Petition, 26; Ex1003, ¶110). Symons is solely directed to providing a chat for an email signature (and nothing more). (Ex1004-1007, Ex1033; Ex2001, ¶257).”

GROUND 1: Symons/Williams Fails To Meet Claims 9 of the ‘732 Patent

‘732 Patent, Claim 9

9. The method of claim 1, wherein the automation process is configured to execute a new functionality of the computer program, wherein the new functionality is defined based on the values to the one or more parameters, without relying on a dedicated Application Programming Interface (API) of the computer program.

IPR2023-01674, Paper 17, POR, 58:

Claim 9:

“Ground 1 provides no explanation why a POSITA would have been motivated to modify Symons to expand the functionality of the computer programs identified, (including the Chronos email signature generator) to “execute a new functionality” as Claim 9 requires, nor how, given the opaque nature of the Symons disclosure, the email signature generator would have been modified (Petition, 27-29; Ex1003, ¶¶111-116; Ex2001, ¶¶261-263). Instead, as Mr. Zatkovich explains, a POSITA would, choose alternative means over modifying the functionality of the Cronos Signature generator, or Word. (Ex2001, ¶262).

Williams (Ex1011): Portions cited in Petitions

Williams, at 3

On-ramp to non-digital process inputs

These chatbots can engage in natural language dialog with the caller and discern, through a series of interactions, the nature of the call and then capture information required to further handle the request. The chatbot will then trigger a robot, passing the required information to the robot to complete the request.

Today, IBM is using chatbots for vendor inquiry helpdesk where it replaces a human agent to interface with suppliers who want to understand the status of their payments. Using chatbots, we have replaced the call center agent and now use a virtual agent to interact directly with the supplier. Through several scripted questions, the virtual agent can surmise that the supplier is asking for status on their payment and, thus, 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. The chatbot then closes the call and updates the ticket management system used to track call center activities.

Chatbots can be used in a variety of other processes and across industries such as mortgage, banking, insurance, healthcare and others to help reinvent call center operations.

Williams, at 4

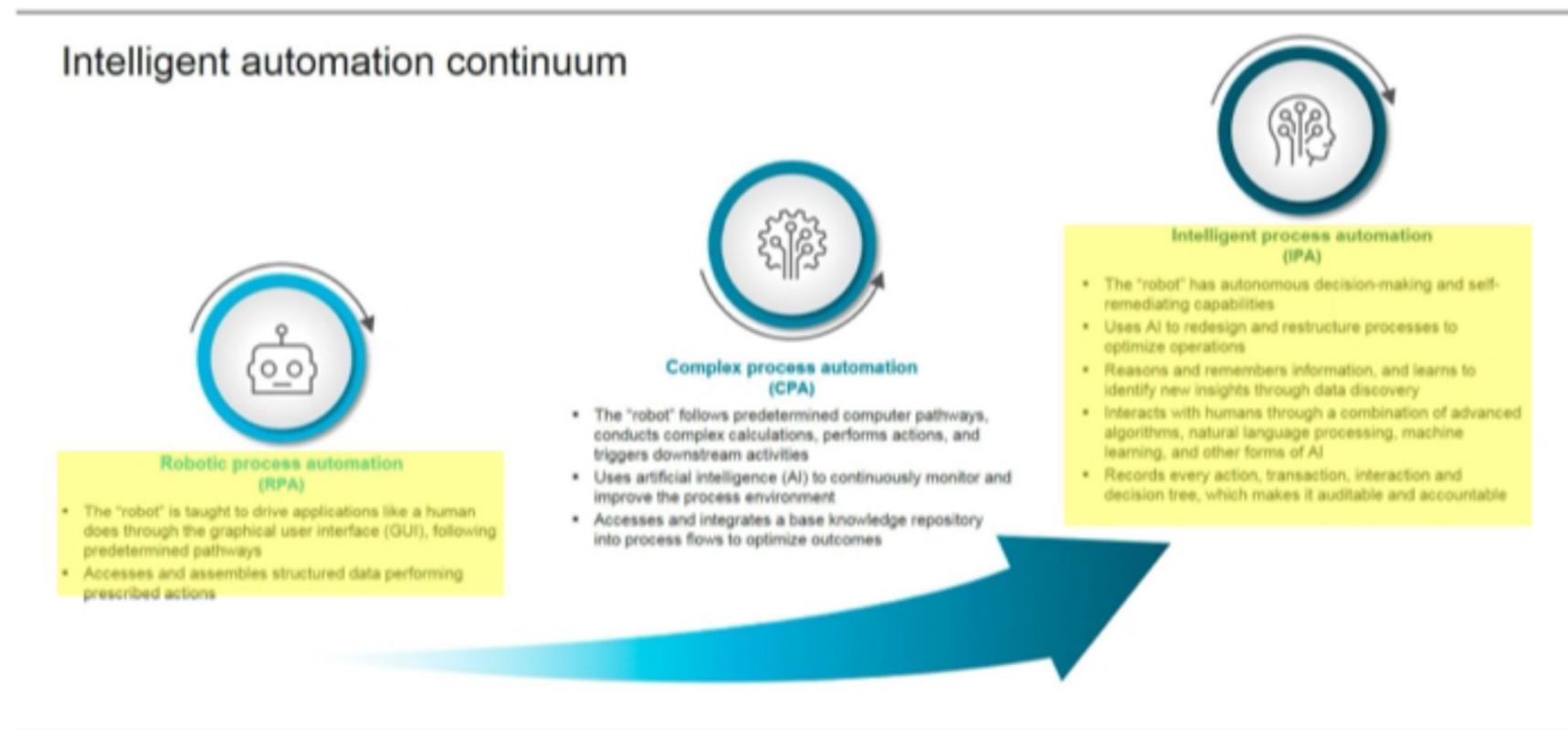


Figure 1. This diagram shows IBM's intelligent automation continuum.

Cited in IPR2023-01379 Ex1003, ¶¶102, 104, 107, 111 ; IPR2023-01368 Ex1003, ¶¶95, 99, 121 ; IPR2024-00065 Ex1003, ¶¶69, 78, 80, 82, 107

Key Takeaways of Williams

As Mr. Zatkovich's explains:

Like Symons, Williams is devoid of significant detail aside from broad generalizations about how chatbots and RPA bots might work.

- The discussion on chatbots does not provide any information as to how:
 - “conversation flows are generated or associated with an automation process; “ [**For the ‘732 Patent**]
 - “how conversation flows actually invoke automation process” [**For the ‘664 and ‘317 Patent**]
- The discussion on chatbots does not suggest that a single conversation of a chatbot can be associated to a plurality of RPAs, and the provided example (the supplier asking for their payment status, as a single RPA) suggests otherwise [**For the ‘732 Patent**]; and
- The disclosed “Intelligent automation continuum”, simply provided a taxonomical definition of RPAs and IPAs, nothing more. [**For all 3 Patents**]

IPR2023-01379, Ex2001, Zatkovich Decl., ¶ 163; IPR2023-01368, Ex2001, Zatkovich Decl., ¶ 126; IPR2024-00065, Ex2002, Zatkovich Decl., ¶ 115

GROUND 1: Symons/Williams Fails To Meet Claims 1/19/29 of the '664 Patent

'664 Patent, Claim 1

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.

Symons either alone (or with Williams) does not meet Claim 1 (or 19/29) of the '664 Patent (IPR2023-01368, Paper 19, '664 POR, 33-34. 34-37 ([a]), 37-38 ([c]), 38-41 ([c]/[e]/[f]))

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).

All the claims require a “natural language interface”

‘664 Patent, Claim 1

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.

‘732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

[a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;

[b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and

[d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

‘317 Patent, Claim 1

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

[a] receive a user instruction from a user using a natural language interface;

[b] determine to implement an automation process on a web-based target system in response to the user instruction;

[c] collect information to be used as part of the automation process; and

[d] implement the automation process by interacting with a Graphical User Interface (GUI) of the web-based target system and simulating user input to the GUI of the web-based target system, [e] wherein the automation process is performed with respect to third-party web-based target system and [f] without relying on an Application Programming Interface (API) exposed by the web-based target system, [g] wherein the implementation of the automatic process comprises:

automatically and without user input, filling in a text input field in the GUI of the web-based target system; and

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

Dr. Beigi admits “natural language interface” requires “natural language processing” (IPR2023-01368, Paper 33, Sur-Reply, 9-11)

Sur-Reply, 9-10 (citing Petition, ID, Ex1003 (Dr. Beigi Decl.), Ex2003 (Dr. Beigi 1st Depo), POR)

Symons does not explain how the “chat bot” was generated, or if it uses NLP, as Dr. Beigi during his first deposition recognized would be required for a “natural language interface”. (POR, 34-37; Ex2003, 63:15-64:17). That a “natural language interface” required use of NLP was well established by the Petition, ID, and Dr. Beigi through his first Deposition. This was consistent with Dr. Beigi (Ex1003, ¶51), the Petitioner (Petition, 5-6), and the ID (12) defining a POSITA having “experience working on NLP and automation processes”. The Petition/Dr. Beigi devoted as much word count discussing NLP as they did the Patent. (Petition, 2-3; Ex1003, ¶17). It is also consistent with the specification and the ID’s description of the ‘664 Patent. (See Ex1001,13:33-43; ID, 4 (“the user may interact with chat bot using natural language processing techniques”)).

Sur-Reply, 10 (Citing Reply)

In the Reply, Petitioner/Dr. Beigi reformulates the construction of “natural language interface” to no longer require “natural language processing”.

Sur-Reply, 10 (Citing Ex2020 (Dr. Beigi 2d Depo))

This is wrong. Notwithstanding his Reply Declaration (Ex1042, ¶¶48-55), in his latest deposition, Dr. Beigi confirmed his opinion that Mr. Zatkovich’s demo (Ex2006) did not meet claim 1 because it does not use NLP (Ex2020, 83:25-84:12) (“the specifications multiple times speak about a chatbot and in a chatbot and they do talk about natural language processing [...] we are talking about a chatbot, and we are requiring natural language processing”). *See also, id.*, 275:19-277:10 (“So here, it establishes that natural language processing is used”); *Cf. id.*, 73:23-74:2 (regarding “natural language feedback”: “So there is the input and then there is the feedback. So the natural language processing is utilized to make some such feedback for – to understand the input.”)

IPR2023-01368, Paper 33, Sur-Reply, 9-10

GROUND 1: Symons/Williams Fails To Meet Claims 1/11/19 of the ‘732 Patent

‘732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

“Both sides recognize that the claimed “natural language interface” must rely on natural language processing to understand, process, and generate a response to human natural language input. (Ex2001, ¶ 169; Ex2003, 63:15-64:17)).” IPR2023-01379, Paper 17, ‘732 POR, 46

Petitioner has not met its burden of establishing that the chatbot in the “showcase”/“demo” necessarily used a “natural language interface”, in view of the following evidence of record:

- nobody knows what Arinti’s chatbot is;
- nobody knows how it was generated,
- the “showcase”/“demo” was created very quickly, and
- there are many uses of the term “chatbot” not utilizing NLP (which Dr. Beigi admittedly disagrees with).

See Paul Hartmann, 2024 WL 911880.

IPR2023-01379, Paper 17, ‘732 POR, 50

Symons passage on Chatbots does not mean the Arinti Chatbot “Necessarily” used NLP

Chatbots enable organizations to offer a more intuitive, natural way to interact with their customers. By handling and structuring problems and questions quicker, it greatly reduces waiting times and improves customer satisfaction. Eventually, a chatbot powered by AI will become indistinguishable from a human, leading to reduced costs and higher productivity.

Ex1004, 2

GROUND 1: Symons/Williams Fails To Meet Claims 1/19/29 of the ‘664 Patent

‘664 Patent, Claim 1

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.

As labelled in; IPR2023-01368, Paper 12, ID, pg. 7-8

Symons Does Not Disclose “Determin[ing] ... an Automation Process” (1[c]/19[c]/29[d])

IPR2023-01368, Paper 19, '664 POR, 34:

- 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).

IPR2023-01368, Paper 33, Sur-Reply, 11-12:

- The issue is not whether the claims require multiple automation processes, or a single chatbot-RPA handling multiple requests at once in a single conversation thread as Petitioner contends. (Reply, 9) Rather, as Petitioner admits, Symons’ Chatbot-RPA is a single-purpose demo to “automate the process of creating an email signature” (Petition, 10; Ex1004, 2; Ex1003, ¶67). Consequently, **the Symons chatbot does not offer the user the choice of selecting an automation process** (Ex1001, 8:65-9:4), **let alone a choice between automation processes “based on the first and second natural language inputs from the user”** as recited in 1[c]/19[c]/29[d]. (Ex2001, ¶¶151-166).

Symons: Claim 8’s use of “selecting” does not render Claim 1’s use of “determining” superfluous

Ex1001, ‘664 Patent, Claim 1

1. A method comprising: ***

[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

*** .

Ex1001, ‘664 Patent, Claim 8

8. The method of claim 1,

wherein said **determining** comprises **selecting** the automation process **from a database retaining a plurality of user-defined automation processes**;

wherein the database is updatable by one or more users via a Graphical User Interface (GUI) capable of defining new automation processes and updating existing automation processes retained therein.

Petitioner argues that claim 8’s “selecting” confirms that “determ[ing] is broader and includes determining whether to use/invoke a single automation process” (Reply, 9). But “**determining**” in claim 1 must only be broader than the specific form of “**determining**” recited in claim 8, which requires **a specific database that is updatable via a GUI capable of defining new automation processes and updating existing automation processes**. See *Liebel-Flarsheim v. Medrad*, 358 F.3d 898, 910 (Fed. Cir. 2004). More importantly, claim 8 demonstrates that **determining includes selecting**, consistent with PO’s construction.

Like the internals of Symons, the Reply has no explanation of how the cited embodiments (Reply 9-10) relate to [c]. In any event, not every claim needs to encompass every disclosed embodiment in the specification.

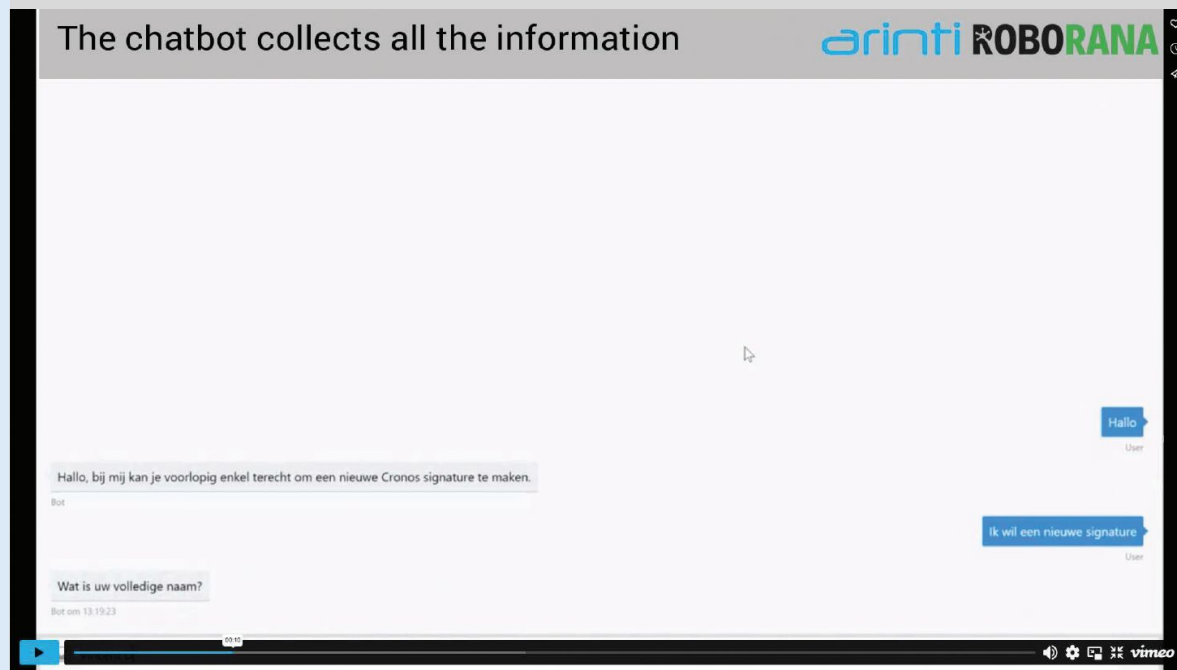
IPR2023-01368, Paper 33, Sur-Reply, 12

Symons Is a Single Purpose Chatbot

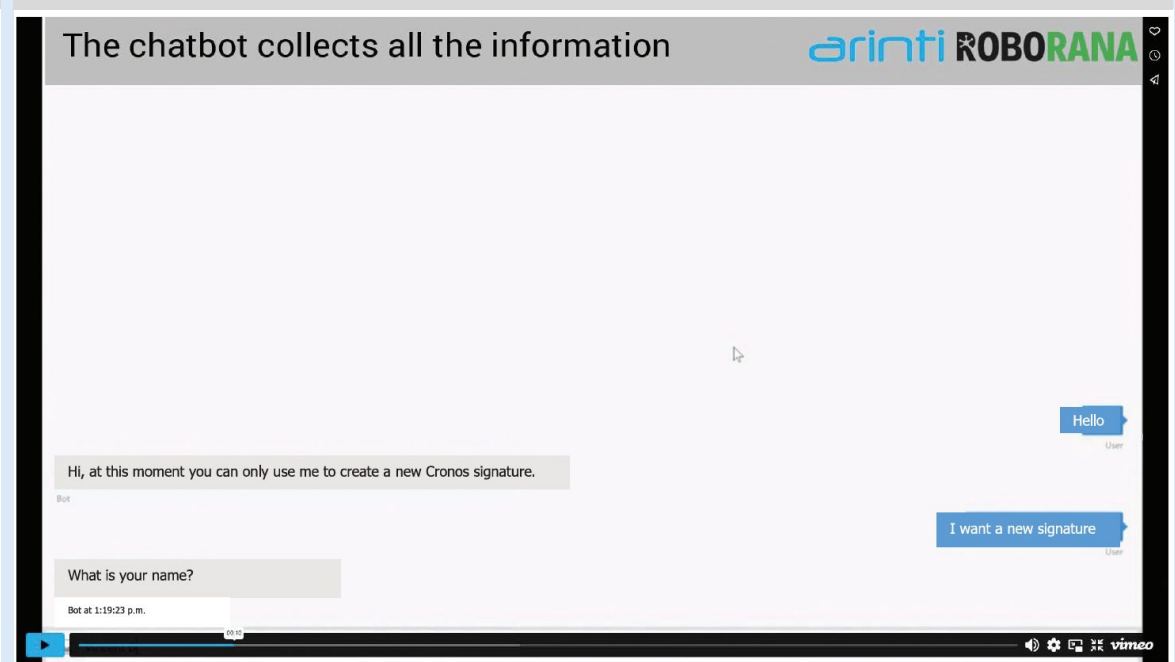
Ex1004, 2; accord Ex1009, 2

The goal of the showcase is to automate the process of creating an email signature.

Ex1005, 3



Ex1006, 3(Translation)



The Petition Does Not Demonstrate that Williams (Ex1011) Fills The Gap For “Determining”

IPR2023-01368, Paper 2, Petition, 19-20

To the extent that Symons does not determine an automation process, it would have been obvious in view of Williams. (EX1003, ¶95.) Williams discloses a method comprising “chatbots [that] engage[s] in natural language dialog with the caller and discern, through a series of interactions, the nature of the call and then capture information required to further handle the request. The chatbot will then trigger a robot, passing the required information to the robot to complete the request.” (EX1011, 3 (emphasis added)).

A POSITA would have been motivated to have a chatbot that discerns the user’s intent (the nature of the call) so that the RPA can handle multiple requests, improving the costs, time, and capabilities. (EX1003, ¶¶95-96.) RPA robots are designed to execute multiple different types of automation processes, so combining Symons and Williams, both which disclose chatbots-RPA bot systems, is a natural extension of exploiting the full capabilities of RPA. (Id., ¶¶97-99.) The Symons-Williams combination results in a chatbot-RPA bot system capable of handling a user request for automated email signature generation along with other requests, such as automated generation of an electronic letterhead or an electronic invoice. (Id., ¶98.) The ability to handle multiple requests would expand the capabilities and flexibilities of the chatbot-RPA bot without requiring much effort and with a reasonable expectation of success. (Id., ¶99.)

IPR2023-01368, Paper 19, '664 POR, 38

Neither 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.

Symons—as relied upon in the Petitions—uses different GUIs from different computer programs ('664[c]-[f])

**IPR2023-01368, Ex1001, '664 Patent, Claim 1
(cited in Paper 19, '664 POR, 38-41)**

1. A method comprising:...

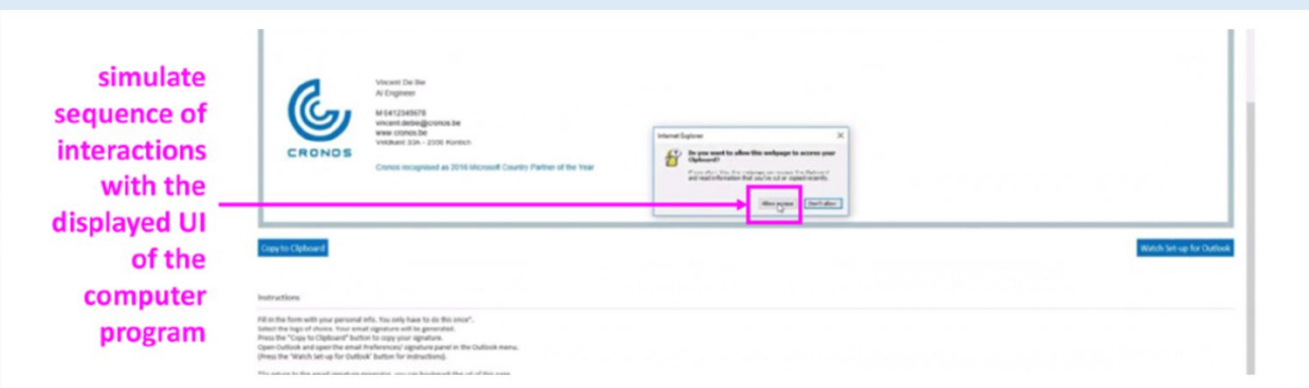
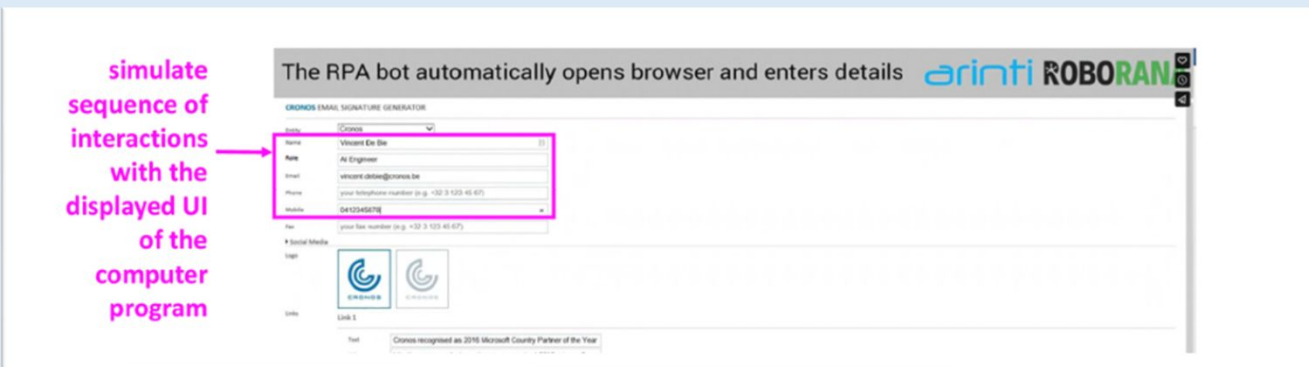
1[c]: “determining, based on the first and second natural language inputs from the user, an automation process configured to perform an automation of a sequence of interactions with **a displayed user interface of a computer program** and to simulate user interactions with the displayed user interface of the computer program,”

1[d]: “wherein the user interface of the computer program is configured to be displayed on a screen,”

1[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”

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

**IPR2023-01368, Paper 2, Petition, 18, 22;
Ex1003, '664 Beigi Decl., ¶ 103**



‘664 and ‘732 Patents – “the displayed user interface of the computer program” must be the same displayed user interface of the same computer program

‘664 Patent, elements [c]-[f] (IPR2023-01368, Paper 33, Sur-Reply, 5-6)

Petitioner’s read violates the law of antecedent basis, which is clear. [c-f] read as follows:

[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.

(Markup added).

Here, “the displayed user interface of the computer program” which the automation process “simulate sequence of interactions with” and “the computer program” which the automation process “execute a functionality” must be the same displayed user interface and the same computer program as “a displayed user interface of a computer program” which the automation process utilizes earlier in the claim. (See, e.g., caselaw in POR, 39).

‘732 Patent, element [c] (IPR2023-01379, Paper 30, Sur-Reply, 6)

Petitioner’s read violates the law of antecedent basis, which is clear. [c] reads as follows:

wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters;

(Markup added).

Here, “the displayed user interface of the computer program” which the automation process “simulate[s] sequence of interactions with” and “the computer program” which the automation process “execute[s] a functionality of” must be the same displayed user interface and the same computer program as “a displayed user interface of a computer program” which the automation process utilizes earlier in the claim. (See, e.g., caselaw at POR, 51).

The Law of Antecedent Basis is Clear

IPR2023-01368, Paper 19, '664 POR, 39 (see also IPR2023-01379, Paper 17, '732 POR, 51)

“[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).

‘664 and ‘732 Patents – “the displayed user interface of the computer program” must be the same displayed user interface of the same computer program

‘732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

[a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;

[b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and

[d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

“This contradiction with fundamental rules of grammar and antecedent basis, and his own interpretation of other claim terms, strains Dr. Beigi’s credibility.” (IPR2023-01379, Paper 30, ‘732 POR, 7 and 5 n.3; accord IPR2023-01368, Paper 33, Sur-Reply, 7, 5 n.4)

In virtually every other instance where the claim provides antecedent basis for “the” something, based on an earlier reference of “a” something, Dr. Beigi admitted were the same. (See Ex2021, 379:20-25/381:10-12/383:13-18 (automation process); 380:16-17 (conversation)). But for “displayed user interface” and “computer program”, Dr. Beigi attempts to distinguish “a” displayed user interface of “a” computer program from “the” displayed user interface of “the” computer program. (Ex2021, 388:10-12 (“it makes a distinction between “a” and “the.” Otherwise, it would have said “the” from the beginning”)). This contradiction with fundamental rules of grammar and antecedent basis, and his own interpretation of other claim terms, strains Dr. Beigi’s credibility. It is also incorrect.

³ Dr. Beigi offers his expertise in NLP, not patent law or grammar. (Ex2021, 388:23-390:13).

‘664 and ‘732 Patents – “the displayed user interface of the computer program” must be the same displayed user interface of the same computer program

Petitioner Frames The Wrong Question

IPR2023-01368, Paper 33, Sur-Reply, 6-7

Here, “**the displayed user interface** of **the computer program**” which the automation process “simulate sequence of interactions with” and “**the computer program**” which the automation process “execute a functionality” must be the same displayed user interface and the same computer program as “**a displayed user interface** of **a computer program**” which the automation process utilizes earlier in the claim. (See, e.g., caselaw in POR, 39).

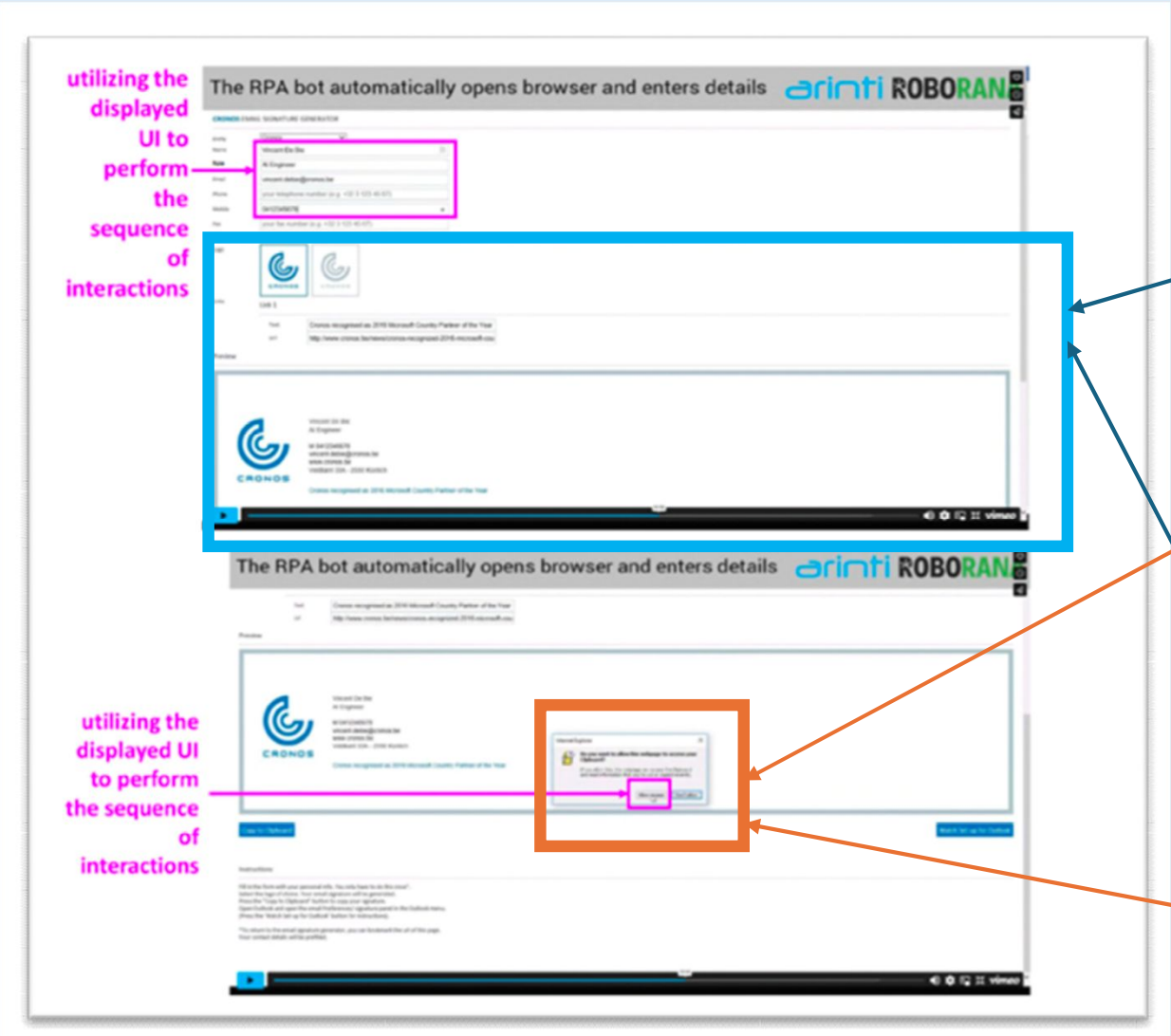
Petitioner’s assertion that the claim can have more than one user interface and more than one computer program (Reply, 11-12, *citing* Ex1042, ¶38) is not relevant. The question is whether “**the displayed user interface of the computer program**” and “**the computer program**” necessarily refers to the same displayed user interface of the same computer program identified earlier in the claims as “**a displayed user interface of a computer program**”. It does.

IPR2023-01379, Paper 30, Sur-Reply, 6

Here, “**the displayed user interface** of **the computer program**” which the automation process “simulate sequence of interactions with” and “**the computer program**” which the automation process “execute a functionality” must be the same displayed user interface and the same computer program as “**a displayed user interface** of **a computer program**” which the automation process utilizes earlier in the claim. (See, e.g., caselaw in POR, 51).

Petitioner’s assertion that the claim can have more than one user interface and more than one computer program (Reply, 12, *citing* Ex1042, ¶61) is not relevant. The question is whether “**the displayed user interface of the computer program**” and “**the computer program**” is necessarily referring to the same displayed user interface of the same computer program identified earlier in the claims as “**a displayed user interface of a computer program**”.

Both Petitions (IPR2023-01368 & IPR2023-01379) rely upon utilizing multiple "UI"s of multiple "software" as basis of Read



IPR2023-01368, Paper 19, '664 POR, 38-41

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).

IPR2023-01379, Paper 17, '732 POR, 38-52

Also, Ground 1 relies upon the Symons RPA Bot interacting with both **the UI of the Cronos email signature generator** (Ex1006, 10-11, quoted, shown and marked up at Ex1003, ¶91), and interacting with **the UI of “Internet Explorer”** (Ex1006, 13, quoted, shown and marked up at Ex1003, ¶92).

‘664 and ‘732 Patents – “the displayed user interface of the computer program” must be the same displayed user interface of the same computer program

IPR2023-01368, Paper 19, '664 POR, 41

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).

IPR2023-01379, Paper 17, '732 POR, 52

Ground 1 relies upon the Symons RPA Bot interacting with both the UI of the Cronos email signature generator (Ex1006, 10-11, quoted, shown and marked up at Ex1003, ¶91), and interacting with the UI of “Internet Explorer” (Ex1006, 13, quoted, shown and marked up at Ex1003, ¶92).

Mr. Zatkovich confirms, the cited UIs are **two different UIs of two different computer programs.** (Ex2001, ¶ 228-229). This read does not meet [c].

GROUND 1: Symons/Williams Fails To Meet Claims 1/11/19 of the '732 Patent

'732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] **defining a conversation** to be implemented by a **natural language interface**, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] **associating the conversation with the automation process**, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] **publishing the conversation** to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

Dr. Beigi's informal inherency arguments for Claim 1 (or 11/19) of the '732 Patent fail for Ground 1 (IPR2023-01379, Paper 17, '732 POR, 39, 42)

Knowing the “internals” were withheld, Dr. Beigi instead stated, without any support, that because the conversation existed, these elements “must” have been met, asserting:

- since **a conversation** is shown using “natural language” in the Symons Video, it “**must have been defined**” (Ex1003, ¶¶78, 88);
- since the values are used by the Symons RPA it is “**thus**” “**associated**” with the automation process (Ex1003, ¶90); and
- since a screen shot shows a conversation between a chatbot and a user, the conversation was “**published**” to the chatbot (Ex1003, ¶¶94-95).

In essence Dr. Beigi makes **an informal inherency obviousness argument**, without demonstrating how and why these features were necessarily present in Symons. The Petition mirrors, and references, Dr. Beigi's analysis with minimal explanation. (Petition, 18-21).

Dr. Beigi's **informal inherency argument fails, since without knowing the “internals”, Dr. Beigi does not know:**

- if the “**conversation**” is a “**natural language conversation**” using natural language processing, as everyone concedes is required by the '732 Patent;
- if the “**conversation**” was “**associat[ed]**” with the email signature generation software automation process in order for “**[t]his information [to] get[] passed on to the RPA bot**”; and
- even assuming it was “**associate[ed]**”, whether it was “**associated**” **after** the conversation was “**defined**” and **published**. (Ex2001, ¶¶326).

As Dr. Beigi admitted, he simply does not know. (Ex2003, 213:18-214:9).

Inherency is a High Standard and Dr. Beigi's one-line conclusory opinion does not meet it.

"Inherency ... is a high standard" (IPR2023-01379, Paper 17, '732 POR, 40).

"[I]nherency may supply a missing claim limitation in an obviousness analysis," but "the use of inherency ... must be carefully circumscribed in the context of obviousness." *PAR Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1194–95 (Fed. Cir. 2014). A claim limitation is inherent "only when the limitation at issue is the 'natural result' of the combination of prior art elements." *Id.* (quoting *In re Oelrich*, 666 F.2d 578, 581 (C.C.P.A. 1981)). In other words, "the mere fact that a certain thing may result from a given set of circumstances is not sufficient" to find a limitation as inherent. *Oelrich*, 666 F.2d at 581 (citation omitted). Instead, the "limitation at issue necessarily must be present" in the combination. *PAR Pharm.*, 773 F.3d at 1195–96.

As *Paul Hartmann* recently confirmed, the failure of the PTAB in finding obviousness to explain "the proposed combination would necessarily have the [claimed] characteristics" "does not satisfy the high 'necessarily so' standard required for inherency." 2024 WL 911880, *3 (citing *Persion Pharm. LLC v. Alvogen Malta Operations Ltd*, 945 F.3d 1184, 1191 (Fed. Cir. 2019) ("Inherency . . . is a high standard.")).

"Ground 1's reliance on Dr. Beigi one-line conclusory opinion is not sufficient to establish that these untaught claim features are necessarily present." (IPR2023-01379, Paper 17, '732 POR, 41).

Ground 1's reliance on Dr. Beigi's one-line conclusory opinion is not sufficient to establish that these untaught claim features are necessarily present. *Global Tel*Link Corp. v. Securus Technologies, Inc.*, IPR2015-01220, Paper 44, 35 (Nov. 30, 2016) ("Dr. Beigi's single-sentence conclusion that it would have been obvious to terminate an ongoing call if an unauthorized resident participates on the call **does not rise to the required level of 'reasoned analysis and evidentiary support' and is insufficient to supply the limitation missing from the prior art.**"; citing *Arendi S.A.R.L. v. Apple*, 832 F.3d 1355, 1362 (2016)); accord *Securus Tech, Inc. v. Global Tel Link Corp.*, 701 F.App'x 971 (Fed. Cir. 2017) ("Securus' case against the patentability of the claimed invention amounts to 'mere conclusory statements,' which fall short of 'some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'"); see also 37 CFR §42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.").

As the Federal Circuit in *Securus* warned, "[s]uch short-cut logic would lead to the conclusion that any and all combinations of elements known in this broad field would automatically be obvious, without the need for any further analysis. The Board, therefore, properly rejected Securus' assertion of obviousness." *Id.* at 976-977.

GROUND 1: Symons/Williams Fails To Meet Claims 1/11/19 of the ‘732 Patent

‘732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

Dr. Beigi’s unsupported obviousness arguments based on Williams for Claim 1 (or 11/19) of the ‘732 Patent fail for Ground 1 (IPR2023-01379, Paper 17, '732 POR, 43, 44-45 (Preamble), 45-46 ([a]))

Per Dr. Beigi: “For the [Preamble], it would be obvious in view of Williams to define an automation process (Ex1003, ¶¶ 80-82)” (IPR2023-01379, Paper 17, '732 POR, 44).

Per POR/Zatkovich: “With respect to “defining an automation process” as required by the [Preamble], Ground 1, incorrectly relies on Williams’ the “Watson Policy Management Library”, which allows for “rules and policies” to be updated “outside of the RPA product”. (Ex1011, 4; quoted in Ex1003, ¶80; Petition, 15). As Mr. Zatkovich explains, however, “this does not relate to defining an automation process” at all. (Ex2001, ¶206).

Ground 1 also relies on Symons-Williams' combination that would have allegedly “result[ed] in a chatbot-RPA bot system capable of handling ... other requests” (Petition, 15; Ex1003, ¶¶80-82). As Mr. Zatkovich confirms, Williams does not support this alleged result (Ex2001, ¶¶207-209, but more importantly here, that result has nothing to do with “defining an automation process” as required in the [Preamble]. (Ex2001, ¶208).

The alleged motivation and resulting combination make no sense. (Ex2001, ¶¶183-191).” (IPR2023-01379, Paper 17, '732 POR, 44-45; Ex2001, 183-191, 206-209)

Per Dr. Beigi: If, for some reason, Symons does not disclose defining a conversation, it would have been obvious because a chatbot would be better able to interact with the user when the conversation (e.g. which questions to ask) is defined.” (IPR2023-01379, Ex1003, Beigi Decl., ¶89)

Per POR/Zatkovich: “Ground 1’s analysis does not address [a]’s full scope, which requires “defining a conversation to be implemented by a natural language interface” in addition to requiring the conversation is configured “to obtain from the user one or more values to one or more parameters associated with the automation process”. ([a]). As discussed in the next section, Symons does not inherently disclose that its conversation is a “natural language conversation”, and this obviousness analysis does not purport to fill that gap.

Thus, as discussed below and as Mr. Zatkovich confirms, for a “showcase”/“demo” like Symons, a POSITA as of November 5, 2017, could have generated a “hard-wired” conversation from a non-NLP “chat bot”, which would not be defined to be “implemented by a natural language interface”. (Ex2001, ¶¶165-187, 200, 223; see also next section).” (IPR2023-01379, Paper 17, '732 POR, 45-56)

“Dr. Beigi’s failure to offer an obviousness analysis for [b]/[d] is fatal.” (IPR2023-01379, Paper 17, '732 POR, 44)

IPR2024-00065 Ground 1: Symons/Williams Also Fails

'317 Patent, Claim 1

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

[a] receive a user instruction from a user using **a natural language interface;**

[b] determine to implement an automation process **on a web-based target system** in response to the user instruction;

[c] collect information to be used as part of the automation process; and

[d] implement the automation process by interacting with a Graphical User Interface (GUI) of **the web-based target system and** simulating user input to the GUI of the web-based target system, [e] wherein the automation process is performed with respect to **third-party web-based target system** and [f] without relying on an Application Programming Interface (API) exposed by the web-based target system, [g] wherein the implementation of the automatic process comprises:

automatically and without user input, **filling in a text input field in the GUI of the web-based target system;** and

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

IPR2024-00065, Paper 15, '317 POR, 31

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]. (Ex2002, ¶¶119-139; Ex1009, 2; Ex2005). As Dr. Beigi confirmed, Symons does not disclose “the internals of it”. (Ex2003, 213:18-214:9; see also Ex2002, ¶¶93, 144, 199).

IPR2024-00065, Paper 15, '317 POR, 37

With respect to the “third-party web-based target system”, **Ground 1 never identifies any specific system in Symons**. (Petition, 21, Ex1003, ¶¶100-102, [d]/[e]/[g]/[h]). For [e], Ground 1 offers an obviousness combination with Williams, against without specifying what the proposed modification in Symons would be, and how it would be a “third-party web-based target system”. [...] **Williams does not disclose use of “third-party” systems, but teaches “manipulation of internal systems** (e.g., manipulation of a call center’s internal databases)”. (Ex2002, ¶160)

IPR2024-00065, Paper 15, '317 POR, 39

No matter which single GUI of which single system Petitioner tries to pivot to, Ground 1 fails. **Ground 1 has identified no “widget” [h] for the Cronos email signature generator system , and no “fill in” input field [g] for Internet Explorer**. Williams is not offered to fill the gap elements [g] and [h], so Ground 1 fails. (Ex2002, ¶163).

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 2/3 of the ‘664 Patent

‘664 Patent, Claims 2/3

2. The method of claim 1, wherein the natural language interface is **a chat bot service** operable to converse with the user in natural language.

3. The method of claim 2, wherein the automation process is a parameterized automation process having a parameter, wherein **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.

The Petition and Dr. Beigi’s Declaration (Ex1003) fail to explain how this element is met, or what the “chatbot service” is. (IPR2023-01368, Paper 19, '664 POR, 41-42)

IPR2023-01368, Paper 2, Petition, 23-25 (pictures omitted).

4. Claim 2: “The method of claim 1, wherein the natural language interface is a chat bot service operable to converse with the user in natural language.”

Symons’ natural language interface (screen below) is a chatbot service operable to converse with the user in natural language. (See element 1[a]; EX1006, 5; EX1003, ¶¶104-105.)

5. Claim 3: “The method of claim 2, wherein the automation process is a parameterized automation process having a parameter, wherein 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.”

Symons’ “chatbot collects all the information,” prompting the user with questions to provide values for parameters (annotated below): name, job role, email address, phone number. (EX1006, 5, 6; EX1003, ¶106.)

The collected values for the parameters are utilized in the automation process of creating an email signature. (See element 1[c]; (EX1003, ¶107.)

Symons’ automation process is a parameterized automation process having a parameter. (EX1003, ¶107.)

IPR2023-01368, Ex1003, ‘664 Beigi Decl., ¶¶ 104-107 (pictures omitted).

4. Claim 2: “The method of claim 1, wherein the natural language interface is a **chat bot service** operable to converse with the user in natural language.”

104. According to the ‘664 patent, “[a] Chat bot is a computer program implementing natural language interface to conduct a conversation via auditory or textual methods with the user.” (EX1001, 1:21-23.)

105. As discussed for element 1[a], Symons uses a natural language interface (shown below). (EX1006, 5.) The natural language interface conducts a conversation via textual methods with the user. **The conversation uses every day, natural language (instead of, e.g., programming code).** Thus, Symons discloses claim 2 (“wherein the natural language interface is a chatbot service operable to converse with the user in natural language”).

5. Claim 3: “The method of claim 2, wherein the automation process is a parameterized automation process having a parameter, wherein 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.”

106. In Symons, the “chatbot collects all the information,” as shown in the annotated screen below. (EX1006, 5, 6.) As part of collecting the information, the chatbot prompts the user with questions requesting that the user provide values for parameters. For example, the chatbot prompts the user to provide a value for the name parameter by asking “What is your name?” The chatbot also prompts the user to provide values for the job role parameter (by asking “What is your role?”), email address parameter (by asking “What is your email address?”), and mobile number parameter (by asking “What is your cell phone number?”).

107. As shown for element 1[c], after the chatbot collects all the information (the values for the parameters: “Vincent De Bie,” “Engineer,” “vincent.debie@cronos.be,” “0412345678”), it utilizes the same values in the automation process of creating an email signature. It utilizes the value “Vincent De Bie” for the name parameter as input in the name input field in the email signature, the value “Engineer” for the job role parameter as input in the job role input field in the email signature, the value “vincent.debie@cronos.be” for the email parameter as input in the email input field in the email signature, and 0412345678 for the mobile number parameter as input in the mobile number input field in the email signature. Hence, the executing comprises utilizing the value of the parameter. The values of the parameters are utilized for setting values of parameters, so the automation process is a parameterized automation process having a parameter. Thus, Symons discloses claim 3 (“wherein the automation process is a parameterized automation process having a parameter, wherein 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”).

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 2/3 of the ‘664 Patent

‘664 Patent, Claims 2/3

2. The method of claim 1, wherein the natural language interface is **a chat bot service** operable to converse with the user in natural language.

3. The method of claim 2, wherein the automation process is a parameterized automation process having a parameter, wherein **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.

The Petition and Dr. Beigi’s Declaration (Ex1003) fail to explain how this element is met, or what the “chatbot service” is. (IPR2023-01368, Paper 19, '664 POR, 41-42)

IPR2023-01368, Ex1003, '664 Beigi Decl., ¶¶ 104-107 (pictures omitted).

4. Claim 2: “The method of claim 1, wherein the natural language interface is a **chat bot service** operable to converse with the user in natural language.”

104. According to the '664 patent, “[a] Chat bot is a computer program implementing natural language interface to conduct a conversation via auditory or textual methods with the user.” (EX1001, 1:21-23.)

105. As discussed for element 1[a], Symons uses a natural language interface (shown below). (EX1006, 5.) The natural language interface conducts a conversation via textual methods with the user. **The conversation uses every day, natural language (instead of, e.g., programming code).** Thus, Symons discloses claim 2 (“wherein the natural language interface is a chatbot service operable to converse with the user in natural language”).

IPR2023-01368, Ex2001, '664 Zatk. Decl., ¶¶ 172-173

172. *** As pertinent here, Claim 2 requires that **the natural language interface is a chat bot service**. As detailed in the '664 Patent, **the chat bot service is a third party service such as FACEBOOK MESSENGERTM, and SLACKTM and TELEGRAMTM, and other similar third party messaging services. (Ex1001, 7:64-8:3; 8:24-27).**

173. Dr. Beigi fails to identify any “chat bot service” in his read on these claims. See Ex1003, ¶¶ 104-107, 168-172, 210-211. **The only chat bot identified is the Arinti chat bot, which he does not assert is a “chat bot service”.**

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 5/22 of the ‘664 Patent

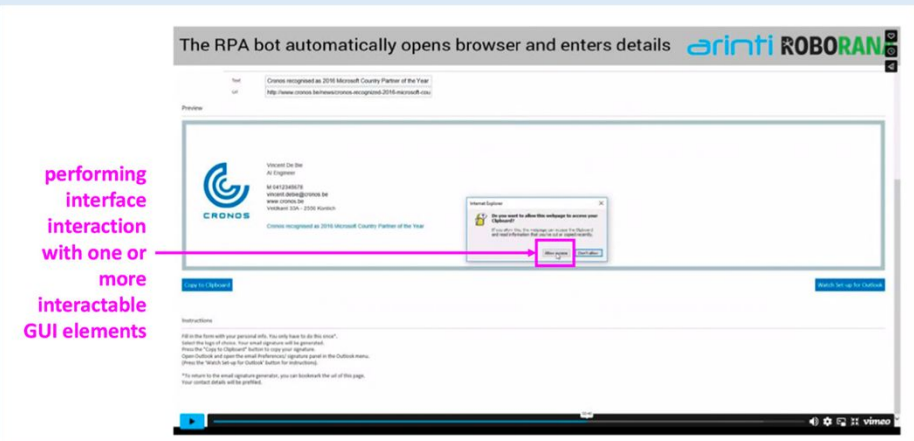
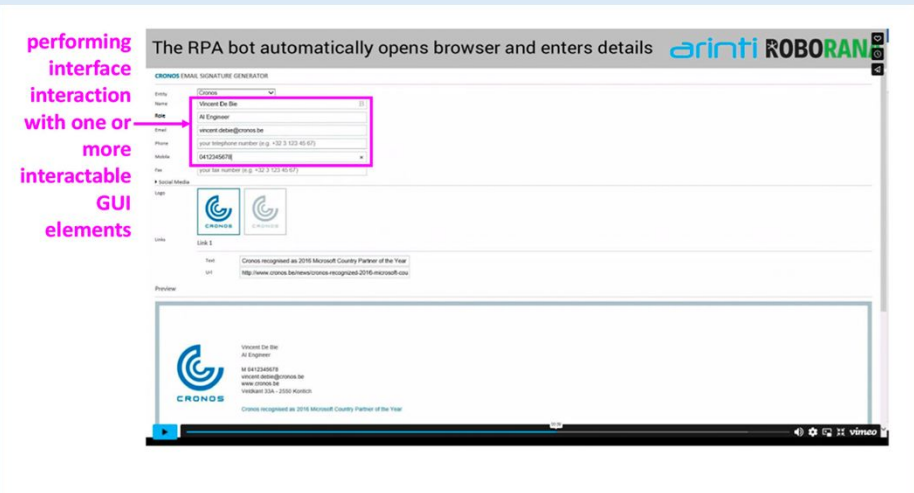
‘664 Patent, Claims 5/22

5. The method of claim 1, wherein the displayed user interface is a Graphical User Interface (GUI) comprising one or more interactable GUI elements, wherein said utilizing the displayed user interface comprises performing interface interaction with the one or more interactable GUI elements.

22. The non-transitory computer readable medium of claim 19, wherein the displayed user interface is a Graphical User Interface (GUI) comprising one or more interactable GUI elements, wherein said utilizing the displayed user interface comprises performing interface interaction with the one or more interactable GUI elements.

The Petition and Dr. Beigi’s Declaration (Ex1003) fail to explain how this element is met, or that the “displayed user interface” is “utilize[ed]”. (IPR2023-01368, Paper 19, '664 POR, 40)

IPR2023-01368, Ex1003, '664 Beigi Decl., ¶ 109 (GUI elements identified)



IPR2023-01368, Ex2001, '664 Zatk. Decl., ¶¶ 175-77

175. Claims 5 and 22 require that “utilizing the displayed user interface comprises performing interface interaction with the one or more interactable GUI element” of “the displayed user interface”. (Ex1001, Claim 5, 25:53-57; Claim 22, 27:45-50).

176. Consistent with his read on claim 1, Dr. Beigi identifies as the “one or more interactable GUI element[s]” the “input fields” and “GUI buttons” which are displayed in the Symons video. (Ex1003, ¶ 109). He provides examples including filling in parts of the Cronos Email Signature Generator form and clicking on the “Allow access” button, as shown below: [See LEFT]

177. As discussed previously, however, the “Allow access” button is not part of the same displayed user interface of the same computer program as the input fields of the Cronos email signature generator.

Accordingly, a POSITA as of November 5, 2017 would understand that utilizing the displayed user interface does not comprise interacting with the “one or more interactable GUI elements”, since they are of different displayed user interfaces. Dr. Beigi thus does not show that Claims 6 and 22 are met.

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claim 8 of the '664 Patent

'664 Patent, Claim 8

8. The method of claim 1, wherein said determining comprises selecting the automation process from a database retaining a plurality of user-defined automation processes; wherein the database is updatable by one or more users via a Graphical User Interface (GUI) capable of defining new automation processes and updating existing automation processes retained therein.

Williams Does Not Teach a Database Storing Automation Processes, nor Updating Automation Processes Via a GUI (IPR2023-01368, Paper 19, POR, at 42-43)

- Ground 1 incorrectly asserts that Williams “Watson Policy Management Library” (WPML) teaches selecting an automation process from a database updatable by a GUI. (Petition 29-30; Ex1003, ¶118).
- 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).

Ground 1: Symons/Williams Fails to Meet Dependent Claim 12 of the '664 Patent

'664 Patent, Claim 12

12. The method of claim 1, wherein said executing is performed on a client device of the user.

Symons' RPA Process Does Not Run on the User's Device, as Claim 12 Requires (IPR2023-01368, Paper 19, '664 POR, 43)

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 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).

Ground 1: Symons/Williams Fails to Meet Dependent Claim 13 of the '664 Patent

'664 Patent, Claim 13

13. The method of claim 1, wherein the natural language interface is a voice-based service, wherein the **voice-based service** is configured to receive vocal commands from a human user.

Using a “voice-based service” would not improve Symons (IPR2023-01368, Paper 19, '664 POR, 43-44)

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.

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 2/12/19 of the '732 Patent

'732 Patent, Claims 2/12/19

2. The method of claim 1, wherein said defining comprises determining a conversation flow, wherein the conversation flow defines an order between conversation elements, wherein the conversation elements comprise at least a question element and an action element, wherein the action element is associated with automation process.

12. The computerized apparatus of claim 11, wherein said defining comprises determining a conversation flow, wherein the conversation flow defines an order between conversation elements, wherein the conversation elements comprise at least a question element and an action element, wherein the action element is associated with automation process.

19. The non-transitory computer readable medium of claim 18, wherein said defining comprises determining a conversation flow, wherein the conversation flow defines an order between conversation elements, wherein the conversation elements comprise at least a question element and an action element, wherein the action element is associated with automation process.

The Petition and Dr. Beigi's Declaration (Ex1003) fail to explain how this element is met. (IPR2023-01379, Paper 17, '732 POR, 53)

Claims 2/12/19 further require the “defining” process further determining a “conversation flow” which “defines an order between conversation elements”, including “a question element” and “an action element” “associated with automation process.” Claims 3-4/13-14 depend from Claims 2/12 respectively. (Ex2001, ¶232.)

As Mr. Zatkovich confirms, “Symons does not disclose how its conversation was generated, let alone if it defined a question element or an action element, or the order in which such elements are presented.” (Ex2001, ¶234; see also Ex2001, ¶¶229-237).

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 3/13 of the '732 Patent

'732 Patent, Claims 3/13

3. The method of claim 2, wherein the conversation elements comprise at least one of: a message element and a condition element.

13. The computerized apparatus of claim 12, wherein the conversation elements comprise at least one of: a message element and a condition element.

The Petition and Dr. Beigi's Declaration (Ex1003) fail to explain how this element is met. (IPR2023-01379, Paper 17, '732 POR, 55-56)

Claims 3/13 require that the conversation in Claims 2/12 also includes at least one “message element” and at least one “condition element”. Ground 1 asserts Claims 3/13 only require at least one “message element” or at least one “condition element” and asserts Symons includes a “message element” and relies upon Williams as including “conditional logic”. (Petition, 24-25; Ex1003, ¶¶105-106).

Ground 1's construction is contrary to Federal Circuit precedent. *SuperGuide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 886 (Fed. Cir. 2004). Consistent with the plain and ordinary meaning, Claims 3/13 requires both at least one “message” elements and at least one “condition” elements. (Ex2001, ¶¶126-134, 246, 248-249).

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 4/14 of the '732 Patent

'732 Patent, Claims 4/14

4. The method of claim 2, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

14. The computerized apparatus of claim 12, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

The Petition and Dr. Beigi's Declaration (Ex1003) fail to explain how this element is met. (IPR2023-01379, Paper 17, '732 POR, 57-58)

“[n]either Symons nor Williams suggest using a single chatbot-RPA to handle multiple requests in the same conversation. Instead, Williams is directed at most to using chatbots ‘in a variety of other processes and across industries’ (Ex1011, at 3), without relating to a single chatbot-RPA handling multiple requests at once.”

Nor, as Mr. Zatkovich explains, does Williams teach that these two actions are “in the same conversation, or even in the same conversation as the signature generation and ... ‘selectively invoked’ based on the user input.” (Ex2001, ¶258).

Ground 1 offers no motivation to modify Symons’ conversation to include additional actions.

GROUND 1: Symons/Williams Provides No Motivation to Reach Dependent Claim 9 of the '732 Patent

'732 Patent, Claim 9

9. The method of claim 1, wherein the automation process is configured to execute a new functionality of the computer program, wherein the new functionality is defined based on the values to the one or more parameters, without relying on a dedicated Application Programming Interface (API) of the computer program.

The Petition and Dr. Beigi's Declaration (Ex1003) fail to explain why a POSITA would have been motivated to modify Symons. (IPR2023-01379, Paper 17, '732 POR, 58)

Ground 1 provides no explanation why a POSITA would have been motivated to modify Symons to expand the functionality of the computer programs identified, (including the Chronos email signature generator) to “execute a new functionality” as Claim 9 requires, nor how, given the opaque nature of the Symons disclosure, the email signature generator would have been modified (Petition, 27-29; Ex1003, ¶¶111-116; Ex2001, ¶¶261-263). Instead, as Mr. Zatkovich explains, a POSITA would, choose alternative means over modifying the functionality of the Cronos Signature generator, or Word. (Ex2001, ¶262).

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 2/10, 3/11/17 of the ‘317 Patent

‘317 Patent, Claim 2

2. The chat-bot program product of claim 1, wherein the chat-bot program product is configured to implement the automation process by a client device used by the user.

The Petition and Dr. Beigi’s Declaration (Ex1003) fail to explain how this element is met. (IPR2024-00065, Paper 15, '317 POR, 40-41)

"Claims 2/10 require the automation process “is performed by a client device used by the user”, and their dependent claims 3/11 further require the automation process is performed “by a browser that is executed by the client device” of the same user. (Ex2002, ¶¶165-166). Claim 17 combines both of these elements together.”

“[T]he “natural language interface” and the “automation process” must be run on the same “client device” to meet Claims 2/3/10/11/17.”

In Symons "the apparent user of the chatbot (the asserted “natural language interface”, Ex1003, ¶71) as Mr. Vincent De Bie, running on what appears to be his device (Ex2002, ¶173; Ex2003, 217:6-218:15), and the RPA (the asserted “automation process”, Ex1003, ¶¶102-103) is running on a different device”

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 4/12/18 of the '317 Patent

'317 Patent, Claim 4

4. The chat-bot program product of claim 1, wherein the chat-bot program product is configured to converse with the user in natural language **using a vocal interface.**

The Petition and Dr. Beigi's Declaration (Ex1003) fail to explain how this element is met. (IPR2024-00065, Paper 15, '317 POR, 42)

Claims 4/12/18 requires the chatbot to use of a **"vocal interface"**. (Ex2002, ¶176). Symons does not use one. Ground 2 instead asserts, relying on Williams, that it would be obvious to modify Symons to use a "microphone that receives vocal commands from a human user" as a "convenient way for a human user to input information" (Ex1003, ¶107). But, as Mr. Zatkovich explains, **a POSITA would not have been motivated** to use a "vocal interface" 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.** (Ex2002, ¶¶178; Ex2003, 79:17-80:2 (noting "mistakes"). Ground 1 fails against Claims 4/12/18. (Ex2002, ¶¶176-180).

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 5/13/19 of the ‘317 Patent

‘371 Patent, Claim 5

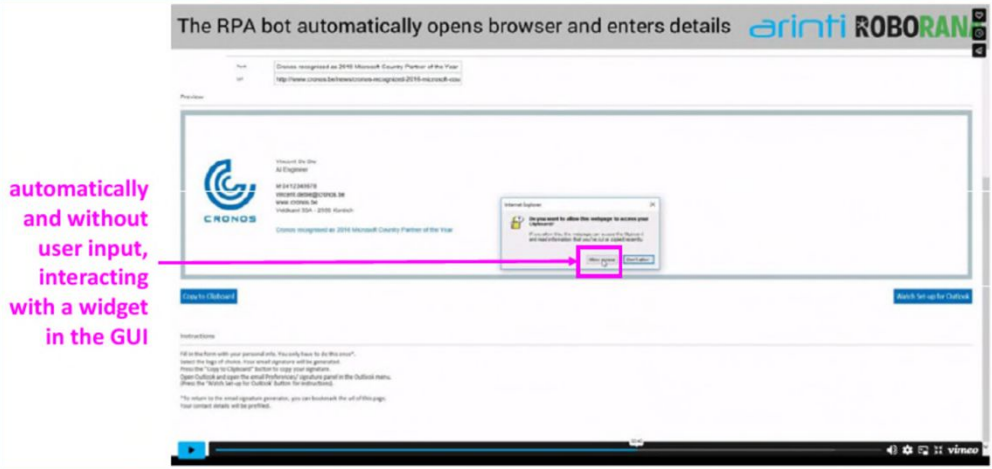
5. The chat-bot program product of claim 1, wherein the automation process is configured to automatically fill information in an online form, wherein the online form comprises the text input field, wherein the widget is configured to invoke submission of the online form, wherein the chat-bot program product is configured to request user validation from the user before submitting the online form.

The Petition and Dr. Beigi’s Declaration (Ex1003) fail to explain how this element is met. (IPR2024-00065, Paper 15, '317 POR, 43)

IPR2024-00065, Paper 15, '317 POR, 43

Claims 5/13/19 require, inter alia, the automation process to “fill information in an online form” with “text information”, and a “widget” “to invoke submission of the online form”. (Ex2002, ¶181). Ground 1 asserts that the “Allow Access” button in the Internet Explorer Modal shown in [h] (see Ex1003, ¶100) submits a form (Ex1003, ¶110), because otherwise an email would not be generated and sent to Vincent De Bie. (Petition 27-28, Ex1003, ¶113). This is flawed. (Ex2002, ¶¶181-185). As discussed in [h], this button is “not in the same GUI as the input fields and does not cause a ‘web-based targeting system’ to perform any predefined functionality.” (Ex2002, ¶¶163, 183). Moreover, as Mr. Zatkovich explains, the “allow access” button identified as the “widget” is not “configured to invoke submission of the online form”, but merely allows copying. (Ex2002, ¶184). The alleged “widget” does not cause an email to be sent, and thus Ground 1 fails. (Ex2002, ¶¶181-185).

IPR2024-00065, Ex 1003, '317 Beigi Decl., ¶ 100



GROUND 1: Symons/Williams Also Fails To Meet Dependent Claims 6/14 of the '317 Patent

'371 Patent, Claim 6

6. The chat-bot program product of claim 1, wherein the information comprises information of the user, whereby **personalizing the automation process**.

The Petition and Dr. Beigi's Declaration (Ex1003) fail to explain how this element is met. (IPR2024-00065, Paper 15, '317 POR, 44)

Claims 6/14 require the “automation process” to be **“personaliz[ed]” based on “information of the user”**. (Ex1001, 6, 16:1-3; 14, 26:50-52; Ex2003, ¶186; Ex1003, 59, header 8). Ground 2 asserts that because personal information is “used as part of the automation process”, Symons meets these claims. (Ex1003, ¶99). But using personal information provided to carry out the automation process, is not what the claim requires. Rather, as Mr. Zatkovich confirms “the steps of the automation process itself must vary in some form depending on the information the user provided.” (Ex2002, ¶188). **“Symons merely uses the collection information ‘as part of the automation process’ (Ex1003, ¶118), not to vary the automation process.** This is insufficient to meet these claims.” (Ex2002, ¶¶189, 186-190)

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claim XX of the ‘317 Patent

‘371 Patent, Claim 7

7. The chat-bot program product of claim 1, wherein the chat-bot program product is configured to utilize credentials of the user, whereby the chat-bot is privy to user-specific information.

The Petition and Dr. Beigi’s Declaration (Ex1003) fail to explain how this element is met. (IPR2024-00065, Paper 15, ‘317 POR, 44-45)

Ground 1 contends that the use of “information specific to the user, such as the user’s name, role, email address, and mobile phone number” constitutes using “credentials of the user” that “the chat bot is privy to”. (Petition 29; Ex1003, ¶121). To support this assertion, Dr. Beigi misleading characterizes the ‘317 Patent as identifying these as “example[s of] user credential[]”. (Ex1003, ¶120, citing Ex1001, 20:17-27). However, the ‘317 Patent differentiates information obtained via “question steps” from information, like credentials, which is “available to the user”. (Ex1001, 20:10-16). As Mr. Zatkovich explains, information (such as first and last names) obtained by asking the user, is not a “credential” that the chatbot is “privy to” as required by Claim 7. (Ex2002, ¶¶191-196).

GROUND 1: Symons/Williams Also Fails To Meet Dependent Claim 8/15/20 of the '317 Patent

'371 Patent, Claim 8

8. The chat-bot program product of claim 1, wherein implementation of the automation process is performed by automatically identifying the widget in the GUI and by automatically identifying the text input field in the GUI.

The Petition and Dr. Beigi's Declaration (Ex1003) fail to explain how this element is met. (IPR2024-00065, Paper 15, '317 POR, 45)

Ground 1 does not identify any support in Symons which shows the RPA process of generating and emailing an email signature automatically identifies either the text input fields in Cronos or the "Allow access" button in Internet Explorer. (Petition 30; Ex1003, ¶¶122-123). He cannot, since Symons does not show "the internals of it". (Ex2003, 213:18-214:9; Ex2002, ¶¶199, 93, 144). Mr. Zatkovich confirms that Symons does not teach Claims 8/15/20. (Ex2002, ¶¶197-200).

Grounds

Basis	35 USC § (Post AIA)	IPR2023-01368 (USP 10,819,664)	IPR2023-01379 (USP 11,258,732)	IPR2024-0065 (USP 11,558,317)
NOT CHALLENGED		10-11, 17, 24, 27, 32	7-8, 16-17	
Allen (Ex1014)	103	Ground 2 1-8-12-16, 18-23, 25-26, 28-31, 33	Ground 3 1-5, 9-15,18-20	Ground 2 1-20
Allen Dayanandan (Ex1015)	103	Ground 3 9		
Allen, Ben-Itzhak	103		Ground 4 6, 16, 21	

Ex1014

US007983997B2

(12) **United States Patent**
Allen et al.

(10) **Patent No.:** **US 7,983,997 B2**
(45) **Date of Patent:** **Jul. 19, 2011**

(54) **INTERACTIVE COMPLEX TASK TEACHING SYSTEM THAT ALLOWS FOR NATURAL LANGUAGE INPUT, RECOGNIZES A USER'S INTENT, AND AUTOMATICALLY PERFORMS TASKS IN DOCUMENT OBJECT MODEL (DOM) NODES**

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(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 813 days.

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G06F 11/00 (2006.01)

(52) **U.S. Cl.** 706/12

(58) **Field of Classification Search** 706/45-48,
706/62, 12; 704/2, 9, 231, 246, 251; 707/73;
707/736, 769, 771, 772

See application file for complete search history.

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(Continued)

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(57)

ABSTRACT

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 web browser. The system includes software running on a user's computational device. The user "teaches" task steps by inputting natural language and demonstrating actions with the GUI. The system uses a semantic ontology and natural language processing to create an explicit representation of the task that is stored on the computer. After a complete task has been taught, the system is able to automatically execute the task in new situations. Because the task is represented in terms of the ontology and user's intentions, the system is able to adapt to changes in the computer code while still pursuing the objectives taught by the user.

17 Claims, 13 Drawing Sheets

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graph TD
    USER((USER 34)) -- "USER INSTRUCTIONS 30" --> LUM[LANGUAGE UNDERSTANDING MODULE 36]
    USER -- "USER ACTIONS 32" --> AM[ACTION MONITORING MODULE 38]
    LUM --> IRM[INTENT RECOGNITION MODULE 38]
    AM --> IRM
    IRM --> CAM[COLLABORATIVE ACTOR MODULE 40]
    AM --> CAM
    CAM -- "CONFIRMING STATEMENTS 36" --> USER
  
```

Whatfix Inc. Exhibit 1014 Page 1

222. 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, Allen does not disclose simulating a sequence of interactions with the displayed user interface using PLOW.

IPR2023-01368, Ex2001, Zatkovich Decl. ¶222, cited in IPR2023-01368, Paper 19, '664 POR, 51

Figures 1, 3, and 7 of Allen, as relied on by Dr. Beigi

Figures 1, 3, and 7 all illustrate how the “PLOW” system **learns to perform a task** (IPR2023-01379, Ex2001, ¶ 303):

Allen Fig. 1

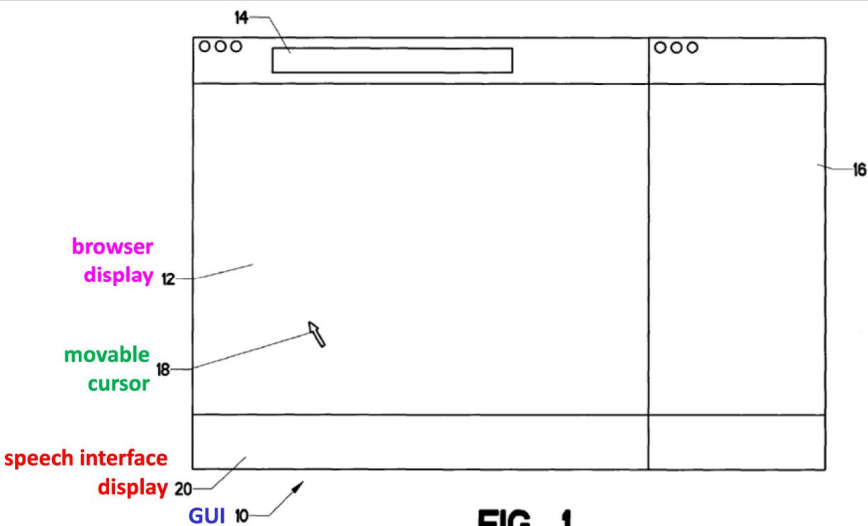


FIG. 1

IPR2023-01379, Ex1003, ¶147

- Blank GUI of the learning system
 - (IPR2023-01379, Ex2001, '732 Zatk. Decl., ¶ 304, cited by IPR2023-01379, Paper 17, '732 POR, 60)

Allen Fig. 3

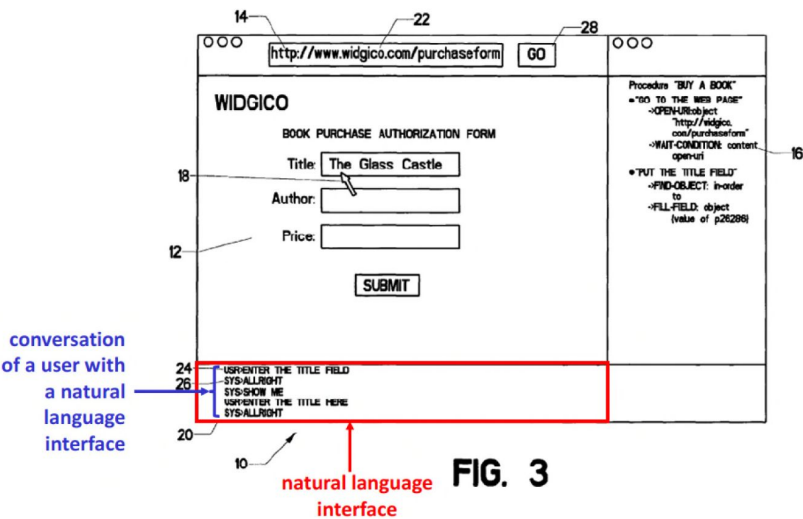


FIG. 3

IPR2023-01379, Ex1003, ¶150

- How a user would teach the system how to buy a book
 - (IPR2023-01379, Ex2001, '732 Zatk. Decl., ¶ 304, cited by IPR2023-01379, Paper 17, '732 POR, 60)

Allen Fig. 7

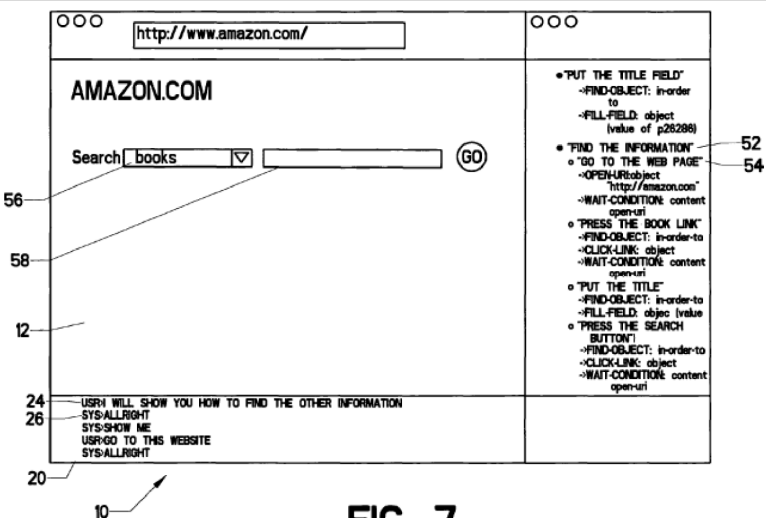


FIG. 7

IPR2023-01379, Ex1003, ¶157

- How a user would teach the system how to buy a book
 - (IPR2023-01379, Ex2001, '732 Zatk. Decl., ¶ 304)

Execution Example Not Necessarily Utilize “Natural Language Interface”

Ex1014, Allen, 12:62-13:6

“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”.

IPR2023-01379, Paper 17, '732 POR, 61

“While this passage indicates that, if a user were to say ‘I want to buy a book’, the system would ask, ‘What is the title of the book?’, which, when provided, enables PLOW to ‘perform the steps it was previously taught and complete the transaction’ (Ex1014, 12:64-13:5), Allen does not disclose that PLOW asks ‘What is the title of the book?’ using the ‘speech interface display 20’.”

- (Ex2001, ¶1320).

Fig. 6 is not a natural language interface

Allen Fig. 6

50

WHAT IS THE NAME OF THE BOOK YOU ARE LOOKING FOR?

USER ENTRY:

48

FIG. 6

Fig. 6 is a form

- Dr. Beigi confirms “what is the title of the book” would be asked using a form like FIG. 6.
 - “Figure 6 [is] an example of how the system asked [about information for the book buying task] using the word ‘name’ instead of title”. (Ex2003, 257:20-24)
- A form is not a natural language interface:
 - Ex2003, 60:24-61:3:
 - **Q:** So would a form where you fill in a name, address, telephone number, would that be human natural language?
 - **Dr. Beigi:** No.

IPR2023-01368 Grounds 2/3: Allen (Ex1014) fails to anticipate or render obvious the claims of the '664 Patent

'664 Patent, Claim 1

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.

IPR2023-01368, Paper 19, '664 POR, at 52-53

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” but this is used to train the PLOW system, not to conduct a natural language conversation which seeks to invoke performing a task.”

IPR2023-01368, Paper 19, '664 POR, 58

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).

IPR2023-01368, Paper 33, Sur-Reply, 20-21

Even if PLOW could be a “computer program”, the automation process of buying a book, does not necessarily use a “displayed” user interface of PLOW nor necessarily cause PLOW to simulate a sequence of interaction on its GUI to execute functionality of PLOW. The functionality of buying the book is executed on the target system (Widgico), not PLOW. (POR 58-59; Ex2001, ¶240).

Allen does not teach that when it executes the book buying instructions, it displays the GUI ordering a book. Even if it did, there is no evidence showing that execution of any functionality occurs utilizing the displayed user interface as recited in the claims. (Ex2001, ¶240-241).

IPR2023-01379 Grounds 3/4: Allen (Ex1014) fails to anticipate or render obvious the claims

'732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

As labeled in IPR2023-01379, Paper 10, ID pg. 8

IPR2023-01379, Paper 17, '732 POR, 64

As Mr. Zatkovich explains, “the most that Allen discloses is that, where necessary, the system seeks user input in performing a task, for example, by using the form displayed in FIG. 6.” (Ex2001, ¶342).

A “form” like FIG. 6 (Ex2003, 257:6-24; Ex2001, ¶¶321-324), is not, according even to Dr. Beigi, a “natural language interface”. (Ex2003, 60:24-61:3, 59-60).

IPR2023-01379, Paper 30, Sur-Reply, 23

The Petition identifies “speech interface displayed 20” as the “natural language interface” but the “speech interface display 20” is “used to teach the PLOW system how to perform a task”, not implement a conversation configured to invoke an automation process. (Ex2001, ¶¶305-318, 320-321, 336, 339-342). Even Dr. Beigi acknowledges these are “specific to training”. (Ex1042, ¶115).

IPR2023-01379, Paper 30, Sur-Reply, 25

Even if PLOW could be a “computer program”, the automation process of buying a book, does not necessarily use a “displayed” user interface of PLOW nor necessarily cause PLOW to simulate a sequence of interaction on its GUI to execute functionality of PLOW. (POR 63; Ex2001, ¶322). The book buying functionality is executed on the target system, Widgico, not PLOW.

IPR2023-01368 Grounds 3/4: Allen (Ex1014) fails to anticipate or render obvious the claims 2/3 of the '664 Patent

'664 Patent, Claims 2-3

2. The method of claim 1, wherein the natural language interface is a **chat bot service** operable to converse with the user in natural language.

3. The method of claim 2, wherein the automation process is a parameterized automation process having a parameter, wherein **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.

Ground 1 fails to identify a “chatbot service” (IPR2023-01368, Paper 19, POR, pg. 41)

Claims 2/3[] 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).

IPR2023-01368 Grounds 3/4: Allen (Ex1014) fails to anticipate or render obvious the claims 4-5/21-22 of the '664 Patent

'664 Patent, Claims 4-5/21-22

4. The method of claim 1, wherein the **displayed user interface** is a Graphical User Interface (GUI) comprising **one or more input fields**, wherein said utilizing the displayed user interface comprises inputting data received by the natural language interface to the one or more input fields.

21. The non-transitory computer readable medium of claim 19, wherein the **displayed user interface** is a Graphical User Interface (GUI) comprising **one or more input fields**, wherein said utilizing the displayed user interface comprises inputting data received by the natural language interface to the one or more input fields.

5. The method of claim 1, wherein the **displayed user interface** is a Graphical User Interface (GUI) **comprising one or more interactable GUI elements**, wherein said utilizing the displayed user interface comprises performing interface interaction with the one or more interactable GUI elements.

22. The non-transitory computer readable medium of claim 19, wherein the **displayed user interface** is a Graphical User Interface (GUI) **comprising one or more interactable GUI elements**, wherein said utilizing the displayed user interface comprises performing interface interaction with the one or more interactable GUI elements.

Williams Does Not Teach a Database storing Automation Processes, nor Updating Automation Processes via a GUI (IPR2023-01368, Paper 19, POR, pg. 60)

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).

IPR2023-01368 Grounds 3/4: Allen (Ex1014) fails to anticipate or render obvious the claim 8 of the '664 Patent

'664 Patent, Claim 8

8. The method of claim 1, wherein said determining comprises selecting the automation process from a database retaining a plurality of user-defined automation processes; wherein the database is updatable by one or more users via a Graphical User Interface (GUI) capable of defining new automation processes and **updating existing automation processes** retained therein.

Allen Does Not Teach Updating Automation Processes After They Are Defined (IPR2023-01368, Paper 19, POR pg. 61)

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.

IPR2023-01368 Grounds 3/4: Allen (Ex1014) fails to anticipate or render obvious the claim 14 of the '664 Patent

'664 Patent, Claim 14

14. The method of claim 1, wherein said determining the automation process comprises:

selecting the sequence of interactions from a plurality of sequences based on the first natural language input; and

determining a parameter to be used in an interaction of the sequence of interactions based on the second natural language input.

Allen Does Not Teach Updating Automation Processes After They Are Defined (IPR2023-01368, Paper 19, POR pg. 61)

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).

IPR2023-01368 Grounds 3/4: Allen (Ex1014) fails to anticipate or render obvious the claims 18/28/33 of the '664 Patent

'664 Patent, Claims 18/28/33

18. The method of claim 1, 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, wherein the sequence of interactions is performed with respect to the user interface of the web browser.

28. The non-transitory computer readable medium of claim 19, 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, wherein the sequence of interactions is performed with respect to the user interface of the web browser.

33. The system of claim 29, 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, wherein the sequence of interactions is performed with respect to the user interface of the web browser.

GUI 10 and Browser 12 Are Displayed Prior To, and Not Activated By, the Automation Process (IPR2023-01368, Paper 19, POR pg. 62)

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).

IPR2023-01379 Grounds 3/4: Allen (Ex1014) fails to anticipate or render obvious the claims

'732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

IPR2023-01379, Paper 30, Sur-Reply, 19-20

Allen Does Not Teach [d] Publishing, if It Is Using “task-specific ontology” as the Reply Asserts

Petitioner’s reliance on “task-specific ontology” conveniently ignores that Allen’s use of “ontology” would result in information requests which are never “published” as part of a conversation but are instead “generated on the fly”.

Dr. Beigi admits the publishing step must come after the conversation is defined and associated with the automation process. (Ex2021, 372:17-24). Accordingly, “on the fly”, ontologically-based conversation generation does not meet the claim.

As labeled in IPR2023-01379, Paper 10, ID pg. 8

IPR2023-01379 Grounds 3/4: Allen (Ex1014) fails to Meet Claims 2/12/19 and their dependent claims 3-4/13-14 of the '732 Patent

'732 Patent, Claims 2/12/19, 3-4/13-14

2. The method of claim 1, wherein said defining comprises determining a conversation flow, wherein the conversation flow defines an order between conversation elements, wherein the conversation elements comprise at least a question element and an action element, wherein the action element is associated with automation process.

3. The method of claim 2, wherein the conversation elements comprise at least one of: a message element and a condition element.

4. The method of claim 2, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

12. The computerized apparatus of claim 11, wherein said defining comprises determining a conversation flow, wherein the conversation flow defines an order between conversation elements, wherein the conversation elements comprise at least a question element and an action element, wherein the action element is associated with automation process.

13. The computerized apparatus of claim 12, wherein the conversation elements comprise at least one of: a message element and a condition element.

14. The computerized apparatus of claim 12, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

IPR2023-01379, Paper 17, '732 POR, 69:

Claims 2/12/19 and dependent claims 3-4/13-14:

“As discussed, Claims 2/12/19 require the “defining” process further includes determining a “conversation flow” which “defines an order between conversation elements”, including “a question element” and “an action element” “associated with automation process.” (Ex1001, Claims 2, 12, 19; Ex2001, ¶¶364, 366). Since Allen does not teach how to define a conversation (Ex2001, ¶¶322-345), let alone a “conversation flow” (Ex2001, ¶¶369-378), these claims are not taught or rendered obvious by Allen. (Ex2001, ¶¶364-383).”

IPR2023-01379 Grounds 3/4: Allen (Ex1014) fails to Meet Claims 3/13 of the '732 Patent

'732 Patent, Claims 3/13

3. The method of claim 2, wherein the conversation elements comprise **at least one of**: a message element **and** a condition element.

13. The computerized apparatus of claim 12, wherein the conversation elements comprise **at least one of**: a message element **and** a condition element.

IPR2023-01379, Paper 17, '732 POR, 70:

Claims 3/13:

“Claim 3/13 further modify the “conversation” in Claims 2/12 to include a “message element” and a “condition element” to the same conversation which already has a “question element” and an “action element”. But Ground 3 asserts that authorization using price and delivery date is both a “question element” for Claims 2/12 and “message element” for Claims 3/13. (Petition 44-45). This can’t be both a “message element” and also a “question element” in the same conversation.

Separately, the identified “condition” is a condition in the execution of the automation process, not a “condition element” in a conversation. (Ex1003, ¶ 174). Both fail. (Ex2001, ¶¶384-397).

IPR2023-01379 Grounds 3/4: Allen (Ex1014) fails to Meet Claims 4/14 of the '732 Patent

'732 Patent, Claims 4/14

4. The method of claim 2, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

14. The computerized apparatus of claim 12, wherein the conversation elements comprise a second action element associated with a second automation process, whereby the natural language interface is configured to selectively invoke either the automation process or the second automation process based on interaction with the user.

IPR2023-01379, Paper 17, '732 POR, 70-71:

Claims 4/14:

“With respect to Claims 4/5, Ground 3 relies upon the same passage in Allen to say the “book buying task” and “hotel searching task” are inherently in the same conversation for Claim 4, and inherently in different conversations for Claim 5. (See Ex1003, ¶179 & 180). By definition, neither claim “limitation” is “necessarily” present when are possibilities. (Ex2001, ¶¶402-414). *Paul Hartmann, supra.*”

IPR2023-01379 Grounds 3/4: Allen (Ex1014) fails to Meet Claims 9 of the '732 Patent

'732 Patent, Claim 9

9. The method of claim 1, wherein the automation process is configured to execute a new functionality of the computer program, wherein the new functionality is defined based on the values to the one or more parameters, without relying on a dedicated Application Programming Interface (API) of the computer program.

IPR2023-01379, Paper 17, '732 POR, 71:

Claim 9:

“Ground 3 misleadingly relies Allen’s disclosure indicating that a new step can be added to an automation process. (Petition, 50-51; Ex1003, ¶187). But this “new step” is to add another step in a new process being trained, not to modify an existing process. (Ex2001, ¶416). Training PLOW also does not create “a new functionality of the computer program” as Claim 9 requires. (Ex2001, ¶416).”

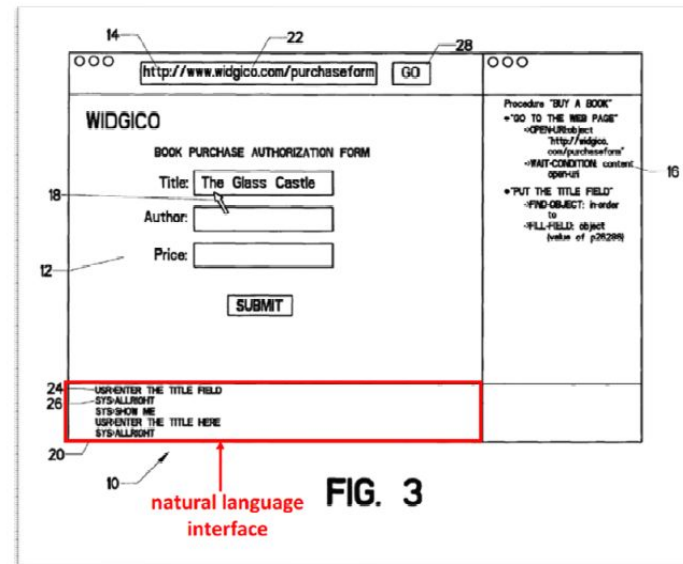
IPR2024-00065 Ground 2: Allen (Ex1014) fails to anticipate or render obvious the claims

'317 Patent, Claim 1

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

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

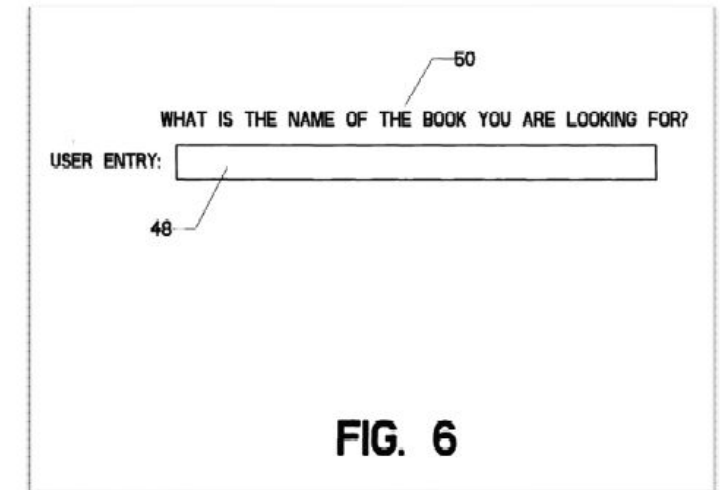
Dr. Beigi offers a markup of FIG. 3 to assert the conversation presented in the speech interface display 20 as a “conversation implemented by a natural language interface”:



(Ex1003, ¶166, annotating FIG. 3 of Allen, Ex1014).

But this is the wrong natural language interface. This interface is used for training PLOW how to buy a book from WIDGICO, not implementing the process of buying the book. (Ex2002, 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.” (Ex2002, ¶214, citing Ex1014, 12:64-13:5).

Instead, 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. (Ex2002, ¶218)

IPR2024-00065, Paper 15, '317 POR, 51-53

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

PODX - 113

IPR2024-00065 Ground 2: Allen (Ex1014) fails to anticipate or render obvious the claims

'317 Patent, Claim 1

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

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

IPR2024-00065, Paper 15, '317 POR, 53-56

Allen's Learned Processes Could be Executed Using the HTML code, Not a Graphical User Interface

- The crux of Dr. Beigi's argument is that because Allen's system can be taught via a GUI, it must necessarily interact with the GUI in execution. (Ex1003, ¶178, cited in Petition, 42-42; ID 20-21).
 - Dr. Beigi has **no basis**, in Allen or otherwise, to assert that "the system performing the steps it was previously taught means it **simulates user input to the GUI of the web-based target system**", thereby interacting with the GUI. (Ex1003, ¶177).
- To the contrary, PLOW "understand[s] the step of filling the title **as more than simply mimicking the user's actions**" (Ex1014, 8:55-63), and thus **using the HTML code, PLOW is able to "automatically execute the task"**, even "in new situations" (Ex1014, Abstract). (See also Ex2002, ¶¶ 225-226).
- Rather than "simulate the user's interaction with the GUI" as Dr. Beigi asserts, **Allen instead teaches "[o]nce the client computer is asked to submit the interactive response, another ASCII transmission is sent from the client computer back to the hosting server."** (Ex1014, 2:22-24).
 - "Allen **could interface directly with the HTML code**, which it already accesses and uses during the learning process" (Ex2002, ¶228, citing Ex1014, 12:19-25 (PLOW "search[es] the HTML code" to "identify the text object corresponding to the book's title" before "submitting the title"))
 - PLOW **could have "modified the values using HTML code accessible to PLOW"**, instead of necessarily interacting with an "input field" or "widget" in the GUI itself.

IPR2024-00065 Grounds 2: Allen (Ex1014) fails to anticipate or render obvious the claims 6/14 of the '317 Patent

'317 Patent, Claims 6 and 14

6. The chat-bot program product of claim 1, wherein the information comprises information of the user, whereby **personalizing the automation process.**

14. The method of claim 9, wherein the information comprises information of the user, whereby **personalizing the automation process.**

IPR2024-00065, Paper 15, '317 POR, pg. 60-61

- Ground 2 asserts Claims 6/14 are taught by Allen because the information gathered can be personal information, and this information can then be used in an automation process. (Petition 50; Ex1003, ¶¶197-198).
- Having an automation task use personal information (not the claims), is not “personalizing the automation task” (i.e., **varying the task to be performed based on the user's personal information, the claim**), (Ex2002, ¶¶236).
- Ground 2 has **failed to identify any task that is personalized** as a result of user information, in contrast to merely using personal information.

IPR2024-00065 Grounds 2: Allen (Ex1014) fails to anticipate or render obvious the claim 7 of the '317 Patent

'317 Patent, Claim 7

7. The chat-bot program product of claim 1, wherein the chat-bot program product is configured to utilize credentials of the user, whereby the chat-bot is privy to user-specific information.

IPR2024-00065, Paper 15, '317 POR, pg. 61-62

- As Mr. Zatkovich confirms (Ex2002, ¶240), rather than point to any teaching in Allen which suggests PLOW “utilize[s] credentials of the user” or “is privy to user-specific information”, Dr. Beigi incorrectly asserts that “the '317 patent provides example user credentials: Employee ID, First Name, and Last Name ([Ex1001], 20:17-27)” (Ex1003, ¶ 200)
- The '317 Patent differentiates information obtained via “question steps” from information, like credentials, which is “available to the user” (Ex1001, 20:10-16). Thus, Dr. Beigi’s assertion as to what variables could be “credentials” ignores how the information is obtained and accessed, and thus fails to address the proper scope of Claim 7. (Ex1003, ¶¶241-243).
- Dr. Beigi’s example “[t]he user’s home or work address are credential of the user that are provided to the system (e.g., needed to obtain delivery date information to deliver the book)” (Ex1003, ¶201) fails to:
 - Point to any express disclosure in Allen providing that PLOW uses the “user’s home or work address”
 - Show that these are “credentials” that would be used to authenticate the user, nor that PLOW would not obtain this information from the user directly.” (Ex2002, ¶245).

IPR2024-00065 Grounds 2: Allen (Ex1014) fails to anticipate or render obvious the claims 8/15/20 of the '317 Patent

'317 Patent, Claims 8, 15, and 20

8. The chat-bot program product of claim 1, wherein implementation of the automation process is performed by automatically identifying the widget in the GUI and by automatically identifying the text input field in the GUI.

15. The method of claim 9, wherein said implementing the automation process comprises:

automatically identifying the widget in the GUI; and

automatically identifying the text input field in the GUI.

20. The computerized apparatus of claim 16, wherein said implementing the automation process comprises:

automatically identifying the widget in the GUI; and

automatically identifying the text input field in the GUI.

IPR2024-00065, Paper 15, '317 POR, pg. 62-63

- Ground 2 contends this is met because “the system observes the user identifying a widget in the GUI and identifying a text input field in the GUI” (Petition 50-51; Ex1003, ¶¶202-203). As Mr. Zatkovich affirms [...] simply because PLOW learns by “observ[ing] the user identifying” GUI elements does not mean that the automation process automatically identifies GUI elements during execution. (Ex2002, ¶¶247-251).

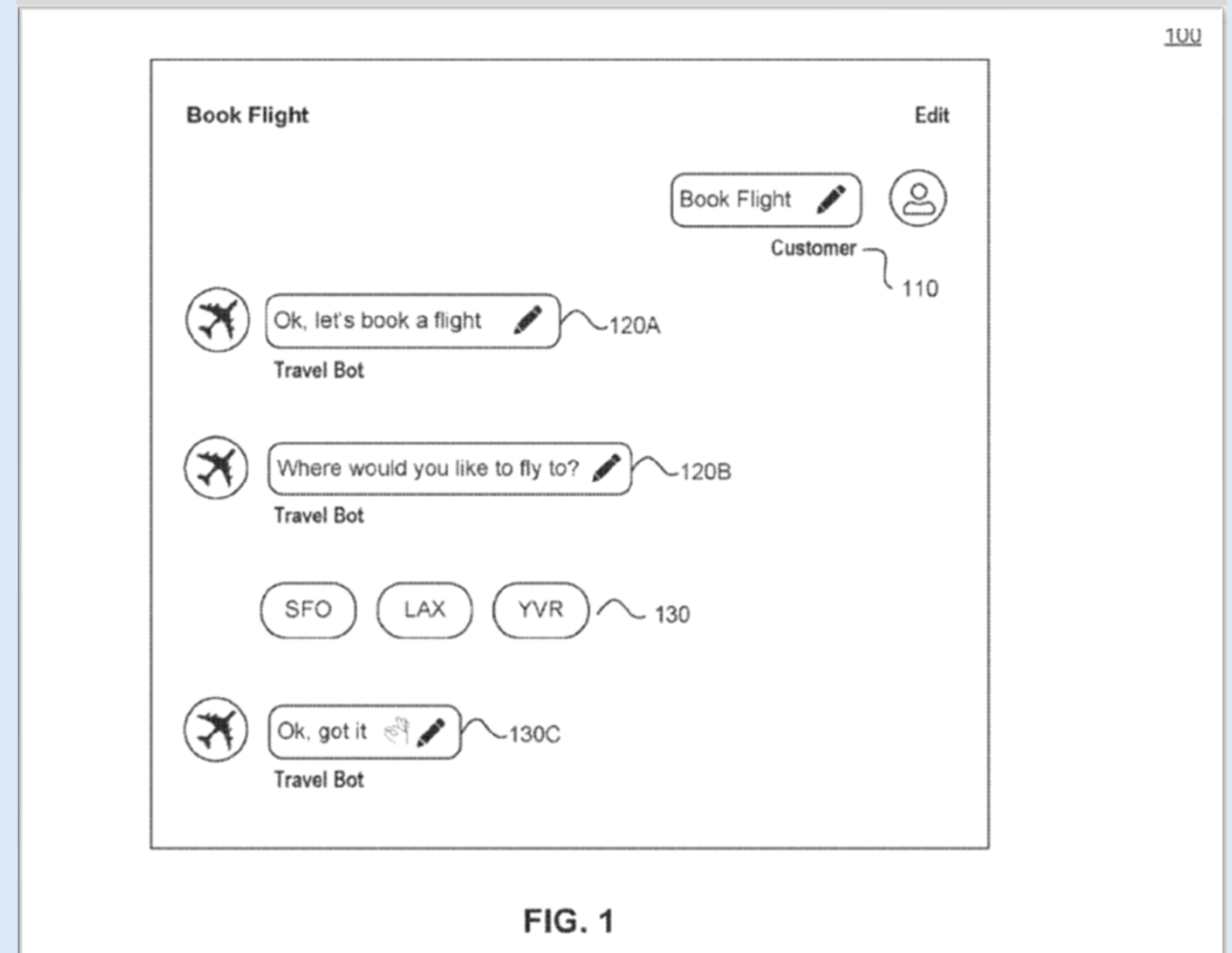
Krishnan / Radhakrishnan

Basis	35 USC § (Post AIA)	IPR2023-01368 (USP 10,819,664)	IPR2023-01379 (USP 11,258,732)	IPR2024-0065 (USP 11,558,317)
NOT CHALLENGED		10-11, 17, 24, 27, 30, 32	5, 7-8, 16-17	
Krishnan (Ex1016/Ex1017) Radhakrishnan (Ex1018)	103	Ground 4 1-8, 12-14, 16, 18-23, 26, 28-29, 31, 33	Ground 5 1-5, 9-15, 18-20	Ground 3 1-4, 6-7, 9-12, 14, 16-18

Krishnan

- “a visual chat bot builder which enables a chat bot to execute a selected dialog, including performing an action.”
 - IPR2023-01368, Ex2001, Zatkovich '664 Decl., ¶ 303
- “Chatbot editor that generates a conversation to be implemented utilizing backend system (using a script, an API or the like, not a “displayed user interface”)
 - IPR2023-01368, Paper 19, POR, 65
- “Neither the Petition nor Dr. Beigi claim that Krishnan teaches to implement, let alone ‘invoke’, an automated process with the conversation”
 - IPR2023-01368, Paper 19, POR, 65-66

FIG. 1



Radhakrishnan is wrong kind of automation process on wrong system

The RPA module works “within a virtual environment”...

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).

...in order to ‘generate an operation record for automatically generating and transmitting a diagnosis’ not in order to perform an automation process

IPR2023-01368, Paper 19, POR at 73-74 (see also IPR2023-01379, Paper 17, POR at 79-80 and IPR2024-00065, Paper 15, POR at 72):

- 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).

Radhakrishnan is non-analogous art (‘664; ‘732; ‘317)

Radhakrishnan is not in the same field as the patent claims	
Radhakrishnan	‘664; ‘732; ‘317
“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) (IPR2023-01368, Paper 19, POR, 68)	<u>IPR2023-01368, Paper 19, POR, 67:</u> 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”. (IPR2023-01368, Paper 19, POR, 67)
	<u>IPR2023-01379, Paper 17, POR, 77:</u> ‘732 Patent relates to “ defining a conversation used to invoke an automation process as illustrated, for example, by the method shown in FIG. 3” (Ex2001, ¶458)
	<u>IPR2024-00065, Paper 15, POR, 65:</u> the ‘317 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”.

Radhakrishnan is non-analogous art ('664; '732; '317)

IPR2024-00065, Paper 15, '317 POR, 66 (See also IPR2023-01379, Paper 17, '732 POR, 78 and IPR2023-01368, Paper 19, '664 POR, 68)

- 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)

Lack of Motivation to combine (‘664; ‘732; ‘317)

Alleged Motivation

- “**greater convenience** for users and **lower costs** for an organization...”
 - IPR2024-00065
Petition 66; Ex1003, ¶257
 - IPR2023-01368
Petition 70; Ex1003, ¶257
 - IPR2023-01379
Petition 62; Ex1003, ¶224, both citing Ex1016, 2:7-11

Statement of RPA bots reducing usage of “computing resources” in Radhakrishnan is in the context of error correction

Ground 5’s reliance on Radhakrishnan’s teaching that RPAs “reduce” usage of “computing resources required to executing tasks when compared with” using an “API” (Ex1018, 6:21-34) is also misplaced. As Mr. Zatkovich explains, reducing computing resources is a benefit of Radhakrishnan’s “error detection” function, not using RPAs generally, which are “typically **more** resource-intensive than API calls” (Ex2001, ¶491). Thus, this motivation fails. (Ex2001, ¶¶484-485).

IPR2023-01379, Paper 17, POR at 81 (see also IPR2023-01368, Paper 19, POR at 75; IPR2024-00065, Paper 15, POR at 74-75

otherwise require integration. (*See, e.g.*, Ex1018, 6:20-38). In my opinion, a POSITA as of November 5, 2017 would understand that a reduction in computing resources is not a normal advantage of RPA bots in other contexts, such as automating processes in backend systems, which are typically more resource-intensive than API calls. Accordingly, in my opinion, a POSITA as of November 5, 2017 would not have been motivated to modify Krishnan with Radhakrishnan based on the reasons provided by Dr. Beigi.

IPR2023-01379, Ex2001 at ¶491

IPR2023-01368 Ground 4: Krishnan/Radhakrishan fails for all claims

‘664 Patent, Claim 1

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.

For [b]

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).

IPR2023-01368, Paper 19, POR, 71

IPR2023-01368 Ground 4: Krishnan/Radhakrishan fails for all claims

‘664 Patent, Claim 1

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.

For [c], [d], [f]

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 form 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

IPR2023-01368 Ground 4: Krishnan/Radhakrishnan fails for all claims

‘664 Patent, Claim 1

For [d] & [f]

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).

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

IPR2023-01368, Paper 19, POR, 74

PODX - 126

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

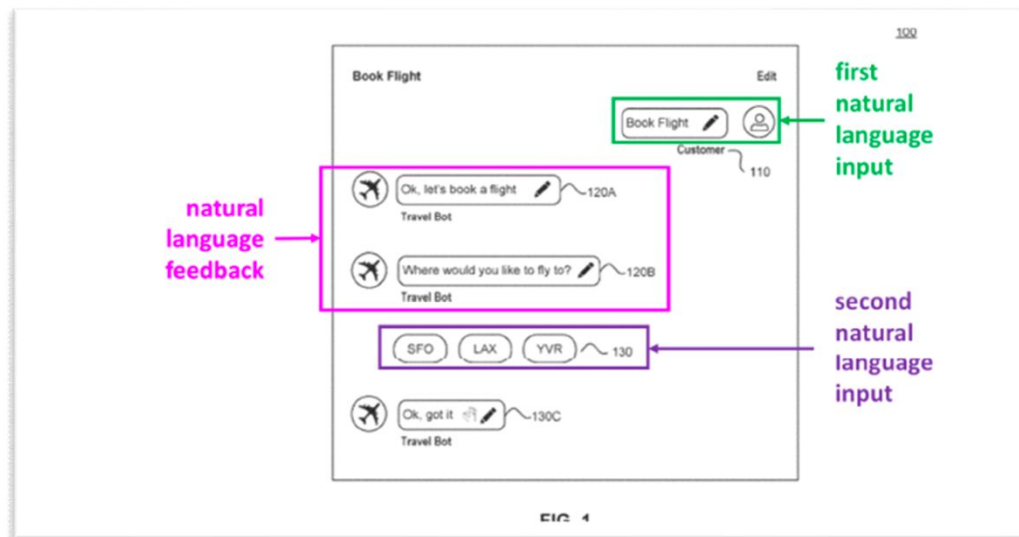
[f] **executing the automation process, wherein said executing comprises utilizing the displayed user interface of the computer program to perform the sequence of interactions.**

IPR2023-01368 Ground 4: Krishnan does not have a second natural language input

Ground 4's Read on "Second Natural Language Input" (IPR2023-01368, Paper 19, '664 POR, 70)

Ground 4 relies upon the following markup of Fig. 1 of Krishnan (Ex1016)

found in Ex1003, ¶251:



Both Experts Agree pushing a "button" is not "natural language input" (IPR2023-01368, Paper 19, '664 POR, 71)

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).

IPR2023-01368 Ground 4: Krishnan's uses a "backend" database, not "displayed user interface" and no "automation process"

Ex1016, 2:33-35

"The chat bot may serve as an interface between the customer and one or more backend databases or other information processing systems."

IPR2023-01368, Paper 19, '664 POR, 72-73

"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)

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).

IPR2023-01368 Ground 4: Radhakrishnan's RPAs work in “virtual environments” and not “the computer program”

Radhakrishnan:

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).

Virtual Environment Does Not Meet [c]/[d]/[f]. (IPR2023-01368, Paper 19, '664 POR, 72)

[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, ¶1344).

Combining Krishnan with Radhakrishnan makes no sense...

Alleged Motivation of “greater convenience to users and lower costs for organization” would counsel against modifying Krishnan

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).

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).

IPR2023-01368, Paper 19, '664 POR, 75-76

...and would not meet the claim

Radhakrishnan Merely Generates A Report and Does Not Execute Any Functionality of a Target System

- IPR2023-01368, Paper 19, POR at 68:
 - 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).
- IPR2023-01368, Paper 19, POR at 73-74:
 - 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).

IPR2023-01368 Ground 4: Krishnan/Radhakrishnan fails for Claims 3/20

'664 Patent, Claim 3/20

3. The method of claim 2, wherein the automation process is a parameterized automation process having a parameter, wherein 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.

20. The non-transitory computer readable medium of claim 19, wherein the automation process is a parameterized automation process having a parameter, wherein the natural language interface is configured to prompt the user to provide a value for the parameter, wherein said executing comprises utilizing the value of the parameter.

IPR2023-01368, Paper 19, '664 POR, 76

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).

IPR2023-01368 Ground 4: Krishnan/Radhakrishan fails for Claims 4/21, 5/22

‘664 Patent, Claim 4/21, 5/22

- 4. The method of claim 1, wherein the displayed user interface is a Graphical User Interface (GUI) comprising one or more input fields, wherein said utilizing the displayed user interface comprises inputting data received by the natural language interface to the one or more input fields.
- 5. The method of claim 1, wherein the displayed user interface is a Graphical User Interface (GUI) comprising one or more interactable GUI elements, wherein said utilizing the displayed user interface comprises performing interface interaction with the one or more interactable GUI elements.
- 21. The non-transitory computer readable medium of claim 19, wherein the displayed user interface is a Graphical User Interface (GUI) comprising one or more input fields, wherein said utilizing the displayed user interface comprises inputting data received by the natural language interface to the one or more input fields.
- 22. The non-transitory computer readable medium of claim 19, wherein the displayed user interface is a Graphical User Interface (GUI) comprising one or more interactable GUI elements, wherein said utilizing the displayed user interface comprises performing interface interaction with the one or more interactable GUI elements.

IPR2023-01368, Paper 19, '664 POR, 77

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).

IPR2023-01368 Ground 4: Krishnan/Radhakrishnan fails for Claim 8

'664 Patent, Claim 8

8. The method of claim 1, wherein said determining comprises selecting the automation process from a database retaining a plurality of user-defined automation processes; wherein the database is updatable by one or more users via a Graphical User Interface (GUI) capable of defining new automation processes and updating existing automation processes retained therein.

IPR2023-01368, Paper 19, '664 POR, 77-78

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 -77-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).

IPR2023-01368 Ground 4: Krishnan/Radhakrishnan fails for Claim 12

'664 Patent, Claim 12

12. The method of claim 1, wherein said executing is performed on a client device of the user.

IPR2023-01368, Paper 19, '664 POR, 78

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.

IPR2023-01368 Ground 4: Krishnan/Radhakrishnan fails for Claim 16/26/31, 18/28/33

'664 Patent, Claim 16/26/31, 18/28/33

16. The method of claim 1, wherein the displayed user interface of the computer program is presented to the user.
18. The method of claim 1, 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, wherein the sequence of interactions is performed with respect to the user interface of the web browser.
26. The non-transitory computer readable medium of claim 19, wherein the displayed user interface of the computer program is presented to the user.
28. The non-transitory computer readable medium of claim 19, 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, wherein the sequence of interactions is performed with respect to the user interface of the web browser.
31. The system of claim 29, wherein the displayed user interface of the computer program is presented to the user.
33. The system of claim 29, 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, wherein the sequence of interactions is performed with respect to the user interface of the web browser.

IPR2023-01368, Paper 19, '664 POR, 79

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).

IPR2023-01379 Ground 5: Krishnan/Radhakrishnan fails

‘732 Patent, Claim 1

1. A method for defining an automation process, wherein the automation process is configured to be invoked in response to a conversation of a user with a natural language interface, the method comprising:

- [a] defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to obtain from the user one or more values to one or more parameters associated with the automation process;
- [b] associating the conversation with the automation process, [c] wherein the automation process is configured to utilize a displayed user interface of a computer program to simulate sequence of interactions with the displayed user interface of the computer program and execute a functionality of the computer program, wherein the automation process is a parameterized automation process depending on the one or more parameters; and
- [d] publishing the conversation to be accessible to a user via the natural language interface, wherein the user is enabled to interact with the natural language interface in accordance with the conversation, [e] whereby the parameterized automation process is invoked automatically by the natural language interface and using one or more values provided by the user to the natural language interface for the one or more parameters.

Neither reference teaches a “parameterized automation process” using the “displayed user interface” to “execute a functionality” of the computer program (‘732 1[c]/[e])

IPR2023-01379, Paper 17, POR at 79:

- Krishnan is implemented “by directly accessing ‘one or more backend databases or other information processing systems’ and updating such ‘backend databases...’ (Ex1016, 2:33-35)” and would have been closer to a “script execution” than an “automation process” that is invoked in response to a conversation. (Ex2001, ¶470)
- Radhakrishnan does not disclose using a displayed user interface in order to execute an automation process. (Cf. Ex2003, 269:4-271:4). Instead, as Mr. Zatkovich confirms, Radhakrishnan uses RPA bot technology to “simulate[] user operations so that it may help diagnose computer software- related errors, such as ‘program crashes, file corruption, and operating errors...’” and to reproduce errors in a “virtual environment”, in “parallel” with the actual process being executed by the user. (Ex1018, 1:8-10, 11:29-47; Ex2001, ¶¶453, 483)

IPR2023-01379, Paper 17, POR at 81:

- The resulting combination of Radhakrishnan's RPAs in Krishnan's system would not simulate user interactions with a displayed user interface to cause execution of an automation process. (Ex2001, ¶486). At most the combined system would only improve error detection. (Id.)

Krishnan does not teach a “natural language interface”

As Dr. Beigi confirms, button inputs (like for destination 130) are not a natural language interface (Ex2003, 199:11-200:25) (explaining that 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.). Petitioner instead turns to a new ground that Krishnan’s 11:4-6 “teaches receiving the input for destination 130 via typed words” (Reply, 25). However, this passage is not in the Provisional (Ex1017), and thus is not prior art. (Cf. Ex1003, ¶217).

IPR2023-01379, Paper 30, Sur-Reply at 27-28

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

PODX - 137

IPR2024-00065 Ground 3: Krishnan/Radhakrishnan fails

‘317 Patent, Claim 1

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

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

Neither reference teaches to [d] “implement the automation process by interacting with a [GUI]” and Their Combination Does Not Achieve This Claim Element

IPR2024-00065, Paper 15, POR at 68-69:

- Dr. Beigi concedes “**Krishnan** is silent regarding whether or not its automation process interacts with a GUI and simulates user input to the GUI”. (Ex1003, ¶ 255). **Krishnan simply discloses another way of gathering information from a user to carry out system functionality** (flight booking). (Ex2002, ¶ 296).

IPR2024-00065, Paper 15, POR at 72-73:

- The RPA bot disclosed in **Radhakrishnan** **does not perform the missing aspects of [d]/[g]/[h]**. Dr. Beigi makes this point when he explains, Radhakrishnan discusses “simulat[ing] operations” with an RPA module to “Act as a mirror of the actual user operations” (Ex1003, ¶ 256).
- As Mr. Zatkovich explains, “Radhakrishnan does this simulation in order to ‘generate an operation record for automatically generating and transmitting a diagnosis’ (Ex1018, Abstract, 11:32-36), **not in order to perform an automation process again** or to later be invoked based upon an input from a user using a natural language input. Instead, **the end use of the recorded operations is for inclusion in a ‘support ticket’**. (Ex1018, 12:37-46).” (Ex2002, ¶ 306). Such diagnostic purposes are simply not germane.
- In other words, as Mr. Zatkovich confirms **Radhakrishnan “teaches “mirroring” the user’s activity while the user is performing the activity, as opposed to invoking an automation process which uses the information obtained by the chatbot ([b]), uses input fields in the GUI ([g]), or causes the system to perform a predetermined functionality by interacting with a widget in the GUI ([h]).”**
- “while Dr. Beigi asserts that a user interacting with a widget would ‘cause the system to perform a predefined functionality’, he **does not assert that the RPA module ‘mirroring’ the user “interacting with a widget” would also cause the RPA module to “perform a predefined functionality”**. (Ex1003, ¶ 266). This makes sense, given Radhakrishnan’s disclosure that the RPA module operates within a ‘virtual’ environment. **Nor does he explain how the combination** of Krishnan and Radhakrishnan (which only ‘mirrors’ the user’s activity) **would use ‘information as part of the automation process’ [...]** (See Ex2002, ¶ 308, citing Ex1003, ¶¶ 251-252).

IPR2024-00065 Ground 3: Krishnan/Radhakrishan fails

'317 Patent, Claim 1

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

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

Neither reference teaches [b]/[e] an automation process “performed with respect to a third-party web-based target system”

IPR2024-00065, Paper 15, POR at 69:

- The chatbot in Krishnan is intended to “to provide customer service to users via the Internet or a mobile application” and available to a user when he or she “visit or log into a website and have customer service requests fulfilled by a chat bot.” (Ex1016, 2:5-14). In other words, the chatbot is implemented directly on the website or application for which it is providing customer service. (Ex2002, ¶300).

IPR2024-00065, Paper 15, POR at 70:

- The key point of Krishnan is that the chatbot is providing customer service directly at whatever website or application is being serviced, as if it is part of the website or application, not separate from it.

IPR2023-01368 Ground 3: Krishnan/Radhakrishan fails for Claims 2/10, 3/11/17

‘317 Patent - Claims 2/10, 3/11/17

2. The chat-bot program product of claim 1, wherein the chat-bot program product is configured to implement the automation process by a **client device** used by the user.

10. The method of claim 9, wherein said implementing is performed by a **client device** used by the user.

3. The chat-bot program product of claim 2, wherein the chat-bot program product is configured to **implement the automation process by a browser** that is executed by the client device.

11. The method of claim 10, wherein said implementing is **performed by a browser** that is executed by the client device.

17. The computerized apparatus of claim 16, wherein the computerized apparatus is a client device used by the user, wherein said implementing is **performed by a browser** that is executed by the client device.

The “bot-builder interface” is not a “client device” that would implement an automation process

- IPR2023-01368, Paper 15, POR at 76
 - Ground 2 identifies the “client device” as Krishnan’s bot-builder interface” (Petition 69, Ex1003, ¶1268).
 - The “bot-builder interface” **is not a “client device”** that would implement an automation process; instead, **it “allows a ‘developer’ to ‘construct and configure dialogs’ to be used by a chatbot.”**
 - “the asserted client device (the **bot-builder interface** interface) is not ‘used by the user’ of the natural **language interface** (the Customer 110)” which Ground 2 identified in the independent claims.
 - Krishnan also **does not disclose using “bot-builder interface” to run a browser on which an automation process is performed**, as Claims 3/11/17 require.

IPR2023-01368 Ground 3: Krishnan/Radhakrishan fails for Claims 6/14

‘317 Patent - Claims 6/14

6. The chat-bot program product of claim 1, wherein the information comprises information of the user, whereby **personalizing the automation process**.

14. The method of claim 9, wherein the information comprises information of the user, whereby **personalizing the automation process**.

Personalizing means modifying the automation process based on the user who is calling it, which Krishnan/Radhakrishan does not do

- IPR2023-01368, Paper 15, POR at 77
 - **Ground 3 asserts “performing the automation with user-specific information” is “personalizing the automation process”.** (Ex1003, ¶1272; Petition 70-71).
 - This is not what “personalizing the automation process” means.
 - Rather, it **means modifying the automation process based on the user who is calling it.**
 - E.g., to meet the Claims, the “automated process” as implemented by John would have to perform steps that are personal to John as a user that would differentiate John’s process from the “automated process” as implemented with respect to Mary, which would have some other variant of tasks based on Mary’s information.
 - A POSITA would understand that “verification” in Krishnan is not “personaliz[ing] the automation process”. (Ex2002, ¶¶326-328).

Grounds

Basis	35 USC § (Post AIA)	IPR2023-01368 (USP 10,819,664)	IPR2023-01379 (USP 11,258,732)	IPR2024-0065 (USP 11,558,317)
NOT CHALLENGED		10-11, 17, 24, 27, 32	7-8, 16-17	
Symons Blog Symons Video Williams Ben Itzhak (Ex1034)	103		Ground 2 6, 16, 21	
Allen, Ben-Itzhak	103		Ground 4 6, 16, 21	

Claim 6/16/21 of '732 Patent

Claim 6/16/21 of '732 Patent

6. The method of claim 1, wherein the natural language interface is implemented by a third-party messaging service, wherein the natural language interface is configured to generate and provide the user with a link, wherein interaction with the link is configured to cause execution of the automation process.

16. The computerized apparatus of claim 11, wherein the natural language interface is implemented by a third-party messaging service, wherein the natural language interface is configured to generate and provide the user with a link, wherein interaction with the link is configured to cause execution of the automation process.

21. The non-transitory computer readable medium of claim 18, wherein the natural language interface is implemented by a third-party messaging service, wherein the natural language interface is configured to generate and provide the user with a link, wherein interaction with the link is configured to cause execution of the automation process.

Neither Symons, Williams nor Allan Disclose

Petition and Dr. Beigi make no claim that Symons/Williams nor Allen disclose Claims 6/16/21. Instead, they rely upon Ben-Itzhak (Ex1034).

IPR2023-01379, Paper 17, '732 POR, 71

Ben-Itzhak (Ex1034)

Ben-Itzhak teaches to make recommendations

Ben-Itzhak concerns providing “personalized content recommendations that are interesting, trustworthy, and relevant to the user” (Ex1034, [0003]) as part of a “conversation agent to the user as a message or response” to “user messages in [an] active conversation”. (Id., Abstract, [0018]; Ex1003, ¶137). The recommendation is presented using “a voice message, an image, a video, a VR interaction, an AR interaction, a link to a different interactive communication platform, etc.” (Ex1034, [0018]).

As Mr. Zatkovich explains, Ben-Itzhak uses links to give a content recommendation, which are not “configured to cause execution of the automation process” as claims 6/16/21 requires. (Ex2001, ¶268; Ex1034, [0018]). Grounds 2/4 do not assert otherwise. (See Petition, 33-34, 55-56; Ex1003, ¶¶137-143, 212-213).

Ben-Itzhak (Ex1034), Abstract:

“An interactive communication-based personalized content recommendation provisioning method and system are described. A user interacting with an interactive communication platform (e.g., a messaging application, an Internet of Things device, a Virtual Reality device, an Augmented Reality device, a webpage, a website etc.) may engage in an interactive conversation (e.g., a text-based exchange, a voice-based exchange, a video-based exchange, a gesture-based exchange etc.) with a conversation agent of a personalized content recommendation communication system. The user may interact with the conversation agent via a conversational exchange of messages to receive one or more content recommendations that are tailored to or “personalized” for that user. The personalized content recommendations may be provided by the conversation agent via a message as part of the conversation with the user.”

Grounds 2 and 4 Fail To Properly Make A Case

Ground 2: Modifying Symons/Williams in View of Ben-Itzhak Will Not Meet the Claim and Makes No Sense

Ground 2’s combination of Ben-Itzhak with Symons/Williams (Ex1003, ¶143) makes no sense. (Ex2001, ¶¶291-296). Neither Williams nor Ben-Itzhak teach executing an automation process using a link as required by Claims 6/16/21. (See Ex2001, ¶293, citing Ex1011, 2). Ground 4’s proposed modification, “to have a conversation to generate personal recommendations” (Ex2003, 312:23-313:8) makes no sense to Symons’ email generation chatbot/deployment. (Ex2001, ¶426). Such muddled and unsupported speculation does not rise to the required level of “reasoned analysis and evidentiary support” and is insufficient to supply the limitation missing from the prior art. *Arendi*, 832 F.3d at 1362.

The alleged benefits of the combination (Ex1003, ¶143)—“shorter times for deployment”, “lower upfront costs”, or “lower operational costs”—would not result from adding a “conversation to generate personal recommendations” for content, to a conversation whose sole purpose is to gather information to generate an email signature. (Ex2001, ¶293).

IPR2023-01379, Paper 17, '732 POR, 74-75

Ground 4: Modifying Allen in View of Ben-Itzhak Will Not Meet the Claim and Makes No Sense

Ground 4, like Ground 2, does not identify a reference which teaches using a “link ... to cause execution of the automation process” as required in Claims 6/11/22. (Cf. Pet. 55-56; Ex1003, ¶212-214). Contra Dr. Beigi, Col. 3:20-31 in Allen does not refer to using a link to invoke an automation process. (Cf. Ex1003, ¶214, with Ex2001, ¶428).

The proposed modification of Allen (from his deposition), “to have a conversation to generate personal recommendations” (Ex2003, 314:23-315:8) would not improve the task of “buying a book” relied upon in Ground 3. Ben-Itzhak also does not teach using a link to execute an automation process. (See Ex2001, ¶¶427-430).

IPR2023-01379, Paper 17, '732 POR, 75-76

Ben-Itzhak (Ex1034) Combination

Petition does not properly explain what the combination would result in

- Petitioner’s “explanation” (IPR2023-01379, Paper 2, Petition at 56):

(EX1014, 2:48-49, 11:46-47.) Interacting with the link (as Ben-Itzhak teaches) helps the user consume content associated with the webpages. Consuming content in Allen corresponds to the computer interacting with the webpage (causing execution of the automation process). A POSITA would have been motivated with interaction of the link causing execution of the automation process because then the user can see whether the system understood the speech correctly and executes the task properly (consistent with Allen’s objectives). (*Id.*, 5:24-40; EX1003, ¶214.)

Dr. Beigi in deposition confirms the result would be to offer content recommendations

- Ex2003, 314:23-315:8 (cited IPR2023-01379, Paper 17, '732 POR, 75):
 - **Q.** So you're saying that you would modify Allen to have a conversation to generate personal recommendations, as taught in Ben-Itzhak, because that's the sentence you just read me?
 - **Dr. Beigi:** Yes.
 - **Q.** That's your proposed modification of Allen?
 - **Dr. Beigi:** That is one way you can modify it, yes.

Ben Itzak is not analogous art

Ben-Itzhak Is in a Different Field from the '732 Patent

The '732 Patent relates to “defining a conversation used to invoke an automation process as illustrated, for example, by the method shown in FIG. 3” (Ex2001, ¶279; Ex2003, 186:9-21, 280:23-281:10; see also Ex1001, 4:59-67 (discussing “[o]ne technical problem” is “defining automation processes to be invoked by chat bots ...”)).

Conversely, Ben-Itzhak aims to provide “[a]n interactive communication-based personalized content recommendation provisioning method and system.” (Ex1034, Abstract; Ex1034 [0016]); Ex2001, ¶280 (accord); Ex2003, 294:10-18 (“Ben-Itzhak is about a personalized content recommendation provision and method.”).

As Mr. Zatkovich confirmed, a POSITA would not consider these two different fields to be the same. (Ex2001, ¶¶286).

IPR2023-01379, Paper 17, '732 POR, 73

Ben-Itzhak Is Not Reasonably Pertinent to the Particular Problem Confronting the Inventors

Ben-Itzhak does not address any of the problems discussed in the '732 Patent (see Section II.B.2, *supra*; Ex2001, ¶¶57-61, 278). Conversely, the '732 Patent provides “no example of content recommendation.” (Ex2003, 295:15-20; Ex2001, ¶280), the problem in Ben-Itzhak, i.e., “figuring out what is the content that the user should watch”. (Ex2003, 295:9-11). As Mr. Zatkovich confirmed, Ben-Itzhak is not reasonably pertinent to the particular problem confronting the '732 Patent inventors. (Id., ¶¶282-286).

Ben-Itzhak is not analogous art under *Chemours*; Grounds 2/4 should be rejected for at least this reason.

IPR2023-01379, Paper 17, '732 POR, 73-74

Grounds

Basis	35 USC § (Post AIA)	IPR2023-01368 (USP 10,819,664)	IPR2023-01379 (USP 11,258,732)	IPR2024-0065 (USP 11,558,317)
NOT CHALLENGED		10-11, 17, 24, 27, 32	7-8, 16-17	
Allen Dayanandan (Ex1015)	103	Ground 3 9		

Ground 3 Does Not Demonstrate Dayanandan Teaches the Missing Elements of Claim 9 ('664 Patent)

'664 Patent, Claim 9

The method of claim 1,

wherein the automation process defines an operation to be performed with respect to an element in the displayed user interface, wherein the automation process identifies the element based on a plurality of parameters of the element;

wherein said executing the automation process comprises identifying the element in the displayed user interface, wherein said identifying the element comprises computing a similarity score for each element in the displayed user interface using the plurality of parameters of the element, and selecting a selected element having a highest similarity score, wherein the highest similarity score is at least above a predetermined threshold.

Dayanandan does not teach using a similarity score to identify “elements” in a displayed user interface

IPR2023-01368, Paper 19, '664 POR, 65:

- 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”.

IPR2023-01368, Paper 33, Sur-Reply, 22:

- The **vector matching** (Ex1015, 22:23-26) relied upon by Dr. Beigi/Petitioner relates to **comparing “a data object with a potential screen”** to “**fetch data** to be displayed by the GUI **from the data object**”. (See Ex2001, ¶294-295).
- This is confirmed at 22:60-23:17 where mapping “GUI screen **components**” to “data object **components**” notably **does not describe using a similarity score to identify elements in the displayed user interface** as recited in claim 9.

Dayanandan is non-analogous art

Dayanandan is in a different field of endeavor than the '664 Patent

Dayanandan	'664 Patent
IPR2023-01368, Paper 19, '664 POR, 63: Directed to application development of new systems and mockups of future GUIs (Ex1015, Abstract, 2:10-14; Ex2001, ¶281)	IPR2023-01368, Paper 19, '664 POR, 63: 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)

Dayanandan not reasonably pertinent to the problems facing the '664 inventors (IPR2023-01368, Paper 19, '664 POR, 64)

- Not directed to making chatbots and automation processes easier to program for non-programmers like the '664 Patent
- 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)

Credibility/Reliability of the Experts: Claim Construction of “Computer Program” (IPR2023-01368)

Mr. Zatkovich

Mr. Zatkovich relied upon the disclosure’s narrowing definition of “computer program” as referring to the “target system”. (Ex2001, ¶94). A dictionary definition would not be pertinent to such construction.

Dr. Beigi (IPR2023-01368, Paper 33, PO Sur-Reply, 27-28)

construction. *See supra*. By contrast, Dr. Beigi’s construction of that term was based on strained and unsupported citations to the specification and a failure to appreciate distinctions in usage of the terms “computer program”, from other different terms in the specification. *See section II.A, supra*. It is Dr. Beigi’s analysis that should not be credited.

IPR2023-01368, Paper 33, PO Sur-Reply, 28: “It is Dr. Beigi’s analysis that should not be credited”.

Creditability of the Experts: Inconsistent Testimony

Mr. Zatkovich

Consistent

Dr. Beigi

Contradictory Between First Deposition and Declarations and Second Deposition

- “natural language interface” and “NLP” (See PODX – 33, comparing Ex2003, Dr. Beigi Deposition taken June 25, 2024, 63:15-64:17 and Ex2020, Dr. Beigi Deposition taken November 11, 2024, 82:21-84:12)
- “a” and “the” for “conversation” and “automation process” vs. “displayed user interface” and “computer” (See PODX – 28, citing IPR2023-01379, Paper 30, Sur-Reply, 7)

Credibility of the Experts

Dr. Beigi's Testimony is Unreliable

1. At his second deposition, he continually refused to answer straightforward questions directly, and instead would ramble with convoluted and irrelevant analysis. (See, e.g., Ex2020, 176:10-179:20). He would not identify what he was paid (Ex2020, 15:4-17:9) or how much time he spent preparing roughly 250 pages of testimony for the 3 IPRs. (Ex2020, 93:4-10, 95:2-19)
2. His Reply Declaration omits any identification of the documents he relied upon in preparing the declaration. When asked he identified the list of Petitioner's exhibits, but not PO's exhibits, although he eventually admitted he relied upon PO's exhibits. (Ex2020, 106:10-22)
3. He admittedly had errors that if he had checked the declaration before signing he should have caught. (Ex2020, 142:21-145:9)
4. Dr. Beigi's analysis of Claim 1 of the '317 Patent illustrates that he did not "understand" the proper legal framework for obviousness. (Ex2020, 179:21-180:9, 197:3-202:19).

IPR2023-01368, Paper 33, PO Sur-Reply, 28-29; see *also* IPR2023-01379, Paper 30, PO Sur-Reply, 30; IPR2024-00065, Paper 28, PO Sur-Reply, 26.

Credibility of the Experts

IPR2023-01379, Paper 17, '732 POR, 42

Ground 1's reliance on Dr. Beigi's one-line conclusory opinion is not sufficient to establish that these untaught claim features are necessarily present. *Global Tel*Link Corp. v. Securus Technologies, Inc.*, IPR2015-01220, Paper 44, 35 (Nov. 30, 2016) ("Dr. Beigi's single-sentence conclusion that it would have been obvious to terminate an ongoing call if an unauthorized resident participates on the call does not rise to the required level of 'reasoned analysis and evidentiary support' and is insufficient to supply the limitation missing from the prior art."; citing *Arendi S.A.R.L. v. Apple*, 832 F.3d 1355, 1362 (2016)); accord *Securus Tech, Inc. v. Global Tel Link Corp.*, 701 F.App'x 971 (Fed. Cir. 2017) ("Securus' case against the patentability of the claimed invention amounts to 'mere conclusory statements,' which fall short of 'some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'"); see also 37 CFR §42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.").

Dr. Beigi's informal inherency argument fails, since without knowing the "internals", Dr. Beigi does not know:

- if the "conversation" is a "natural language conversation" using natural language processing, as everyone concedes is required by the '732 Patent;
- if the "conversation" was "associat[ed]" with the email signature generation software automation process in order for "[t]his information [to] get[] passed on to the RPA bot"; and
- even assuming it was "associate[ed]", whether it was "associated" after the conversation was "defined" and published. (Ex2001, ¶¶326).

As Dr. Beigi admitted, he simply does not know. (Ex2003, 213:18-214:9).