

IPR2023-01368 (U.S. Patent No. 10,819,664)
IPR2023-01379 (U.S. Patent No. 11,258,732)
IPR2024-00065 (U.S. Patent No. 11,558,317)

Whatfix Inc. (Petitioner)

v.

WalkMe Ltd. (Patent Owner)

December 18, 2024

Roadmap

- 1. The '664, '317, and '732 Patents**
- 2. Claim Construction**
- 3. Symons-Williams**
- 4. Allen**
- 5. Krishnan-Radhakrishnan**

The '664, '317, And '732 Patents

'664 Patent

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

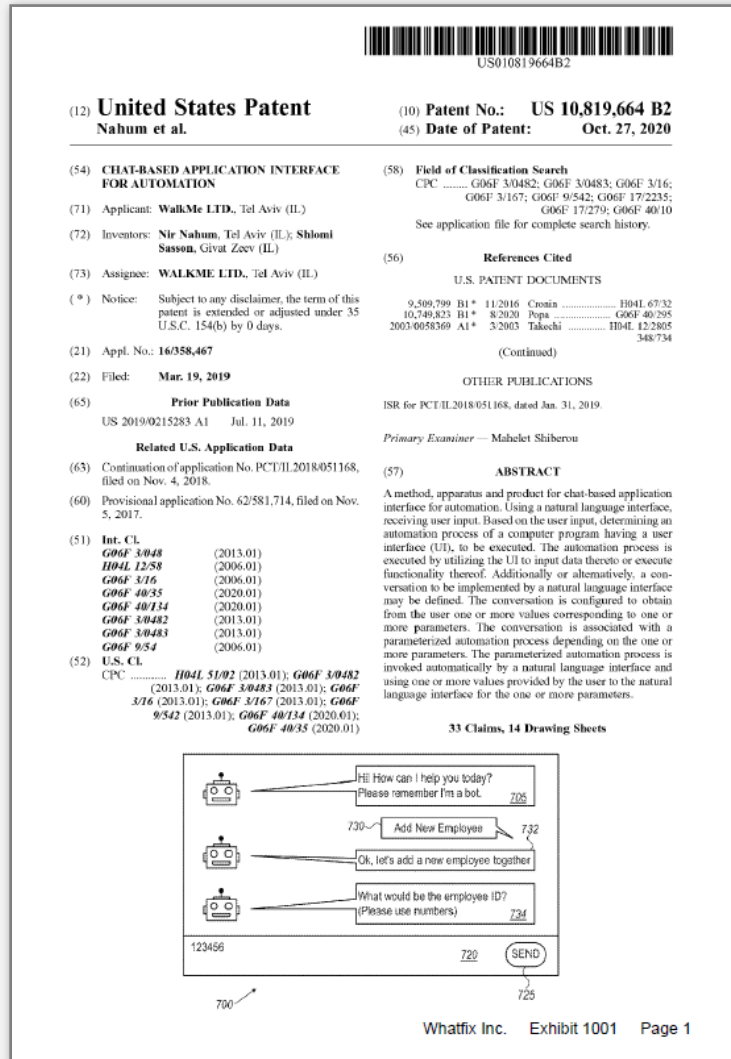
'664 Patent (EX1001), 9:44-47

On Step 250, the automation process may be executed. In some exemplary embodiments, the automation process may be a parameterized automation process that is executed using the values of the parameters obtained during the conversation session (e.g., Step 234). The automation pro-

'664 Patent (EX1001), 14:12-17

probabilistic method, or the like. The automation process interacts with the element-of-interest and simulates a user filling input to the element-of-interest, either a fixed value or a value of the parameter.

'664 Patent (EX1001), 15:26-29



'664 Patent, Claim 1

1. A method comprising:

using 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, wherein the natural language interface receives the natural language conversation and provides natural language input from the user, and wherein the natural language interface provides feedback on the first natural language input from the user in response to the natural language feedback:

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, wherein the user interface of the computer program is configured to be displayed on a computer screen, and wherein the interaction of the sequence of interactions is selected from a group of interactions, and wherein the data to the displayed user interface is the functionality of the displayed user interface, and wherein the automation process, when executed, comprises utilizing the displayed user interface of the computer program to perform the sequence of interactions.

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, wherein the

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,

'664 Patent (EX1001),
25:14-39

'317 Patent, Claim 1

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

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

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

determine to implement an automation process with respect to a web-based target system in response to the user instruction;

collect information to be used as input to the automation process;

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, wherein the automation process is performed with respect to the web-based target system and without relying on an Application Programming Interface (API) exposed by the web-based target system, wherein the automation process comprises:

automatically and without user input, interacting with a widget in the GUI of the web-based target system to cause the web-based target system to perform a predefined functionality;

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

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, wherein the automation process is performed with respect to third-party web-based target system and without relying on an Application Programming Interface (API) exposed by the web-based target system, wherein the implementation of the

'317 Patent (EX1001),
25:24-50

'732 Patent, Claim 1

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

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

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

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, wherein the conversation is parameterized automation process, wherein the conversation is controlled by the natural language interface, wherein the conversation is controlled by more values provided by the user to the natural language interface for the one or more parameters.

1. A method for defining an automation process, wherein

defining a conversation to be implemented by a natural language interface, wherein the conversation is configured to

associating the conversation with the automation process, wherein the automation process is configured to utilize a displayed user interface of a computer program to

publishing the conversation to be accessible to a user via the natural language interface, wherein the user is

'732 Patent (EX1001),
22:15-39

Claim Construction

Roadmap

1. The '664, '317, and '732 Patents

2. Claim Construction

- **“computer program” ('664, '732)**
- “defining” ('732)
- Order of elements 1[a], 1[b], and 1[d] ('732)
- “at least one of: a message element and a condition element” ('732)

'664 Patent, Claim 1

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, wherein the user interface of the computer program is configured to be displayed on a screen, 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 executing the automation process, wherein said executing comprises utilizing the displayed user interface of the computer program to perform the sequence of interactions.

1[f]

'664 Patent
(EX1001),
25:14-39

'732 Patent, Claim 1

1[c]

associating the conversation with the automation process, 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

'732 Patent (EX1001), 22:24-31

Proposed Constructions Of “computer program”

Petitioner’s Construction	Patent Owner’s Construction
“instructions carried out by computer(s)”	“target system,’ which has a functionality that is invoked through its displayed user interface”

'664 Reply (Paper 27), 1
'732 Reply (Paper 25), 1

'664 Patent Owner Response (POR) (Paper 19), 27
'732 POR (Paper 17), 24

The Specification Definition Of “computer program”

'664 and '732 Patents

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.

'664 Patent (EX1001), 22:60-65

'732 Patent (EX1001), 19:60-65

'664 Patent

Optionally, the computer program is one of: a web-based application, a native mobile application, or a desktop program.

'664 Patent (EX1001), 2:34-36

Cambridge Dictionary



Cambridge
Dictionary

Make your words meaningful

computer program

noun [C]

UK  US 

(also **program**)

Add to word list 

IT

a set of instructions that makes a computer do a particular thing:

Cambridge Dictionary (EX1038)

Collins Dictionary

computer program

in British English



(kəm'pju:tə 'prəʊgræm ⓘ)

noun

a set of instructions for a computer to
perform some task

*Collins English Dictionary. Copyright © HarperCollins
Publishers*

Cambridge Dictionary (EX1039)

Dictionary Definitions

Patent Owner's Expert

Q. Okay. Going back to my question about the documents that you reviewed. Did you review any dictionary definitions?

A. I don't believe I did, no.

Zatkovich Depo. Trans. (EX1036), 15:9-13

Patent Owner's Construction For “computer program”

'664 and '732 Patents

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.

'664 Patent (EX1001), 8:9-16; '732 Patent (EX1001), 5:6-13

Patent Owner's Construction Excludes Embodiments

'664 and '732 Patents

cess may be executed on the client device. In some exemplary embodiments, the user may a-priori install a computer program product on her client device, such as a desktop agent, a browser extension, or the like, to enable execution of automation processes for target programs and systems that do provide direct support for the disclosed subject matter. Additionally or alternatively, in case of a target

'664 Patent (EX1001), 14:18-24; '732 Patent (EX1001), 11:16-22

In some exemplary embodiments, Automation Execution Module **140** may execute automation process on a desktop application that is executed on a non-sandboxed operating system, such as WINDOWS™ or LINUX™. An agent may be installed on the user device. The agent may access other applications, including their UI elements, manipulate such elements and create new elements.

'664 Patent (EX1001), 13:11-17; '732 Patent (EX1001), 10:9-16

'664 Petition (Paper 2), 3; '664 Reply (Paper 27), 3

'732 Petition (Paper 2), 4; '732 Reply (Paper 25), 3

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Patent Owner's Construction For “computer program”

'664 and '732 Specification

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.

'664 Patent (EX1001), 8:9-16

'732 Patent (EX1001), 5:6-13



Patent Owner Response

These claimed processes require “a natural language interface”; a separate “computer program” (which the '664 Patent explains is a “target system”, Ex1003, 8:9-13; Ex2001, ¶¶94-95) with its own “user interface” that is “displayed on a screen”, and a “determin[ed]” “automation process” that “simulate[s] user

As Mr. Zatkovich further explains, the RPA software shown in the Symons Video appears to have been executed on a different device (apparently Symons' computer), from the user device on which the chatbot was implemented (apparently Vincent de Bei's computer). (Ex2001, ¶¶110, 111 (demonstrating this point using

Roadmap

1. The '664, '317, and '732 Patents

2. Claim Construction

- “computer program” ('664, '732)
- **“defining” ('732)**
- Order of elements 1[a], 1[b], and 1[d] ('732)
- “at least one of: a message element and a condition element” ('732)

'732 Patent, Claim 1

1[pre]

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:

1[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;

'732 Patent (EX1001), 22:15-23

Proposed Constructions Of “defining”

Petitioner’s Construction	Patent Owner’s Construction
“configuring”	“generating by a non-programming user via a user interface[/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”

’732 Reply (Paper 25), 3

’732 POR (Paper 17), 27-28

“defining” Means “configuring”

'732 Patent

140 may be invoked. Automation Execution Module 140 may be configured to execute, on the client-side, the automation process. In some cases, the automation process may

'732 Patent (EX1001), 9:27-29

Chat Bot Front-End Module 130 may be configured to enable a User 190 to interact with a chat bot. User 190 may

'732 Patent (EX1001), 9:4-5

“defining” Is Broader Than “without relying on a dedicated . . . API”

'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.

'732 Patent (EX1001), 23:14-19

Roadmap

1. The '664, '317, and '732 Patents

2. Claim Construction

- “computer program” ('664, '732)
- “defining” ('732)
- **Order of elements 1[a], 1[b], and 1[d] ('732)**
- “at least one of: a message element and a condition element” ('732)

'732 Patent, Claim 1

1[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;

1[b]

associating the conversation with the automation process, 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

1[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, 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.

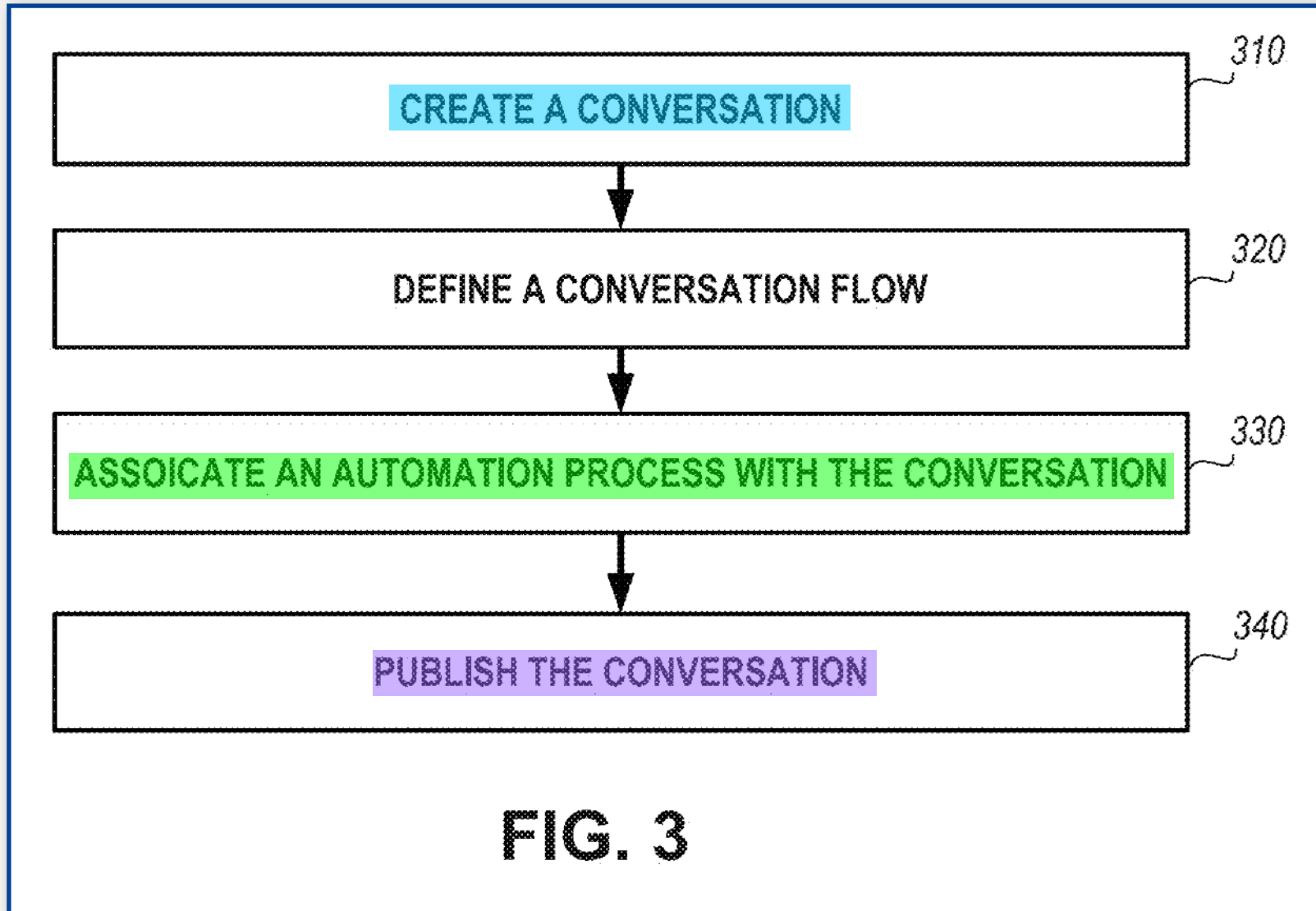
Proposed Constructions For The Order Of Elements 1[a], 1[b], And 1[d]

Petitioner's Construction	Patent Owner's Construction
ordinary and customary meaning	First , “defining a conversation” (1[a]) Second , “associating the conversation with the automation process” (1[b]) Third , “publishing the conversation” (1[d])

'732 Reply (Paper 25), 4-5

'732 POR (Paper 17), 29-32

'732 Patent, Figure 3



'732 Patent
(EX1001),
Fig. 3

'732 Patent: Order Of Functions

'732 Patent

cal function(s). In some alternative implementations, the functions noted in the block may occur out of the order noted in the figures. For example, two blocks shown in succession may, in fact, be executed substantially concurrently, or the blocks may sometimes be executed in the reverse order, depending upon the functionality involved. It will also be

*'732 Patent
(EX1001),
21:41-46*

Petitioner's Expert

(EX1001, 21:41-46 (emphasis added).) 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.

*Beigi Reply
Dec. (EX1042),
¶ 29*

Roadmap

1. The '664, '317, and '732 Patents

2. Claim Construction

- “computer program” ('664, '732)
- “defining” ('732)
- Order of elements 1[a], 1[b], and 1[d] ('732)
- **“at least one of: a message element and a condition element” ('732)**

'732 Patent, Claim 3

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

'732 Patent (EX1001), 22:46-48

Proposed Constructions For “at least one of: a message element and a condition element”

Petitioner's Construction	Patent Owner's Construction
ordinary and customary meaning	“at least one ‘message element’ and at least one ‘condition element’”

'732 Reply (Paper 25), 5-6

'732 POR (Paper 17), 55-56

SuperGuide's Rule Does Not Apply

SuperGuide did not erect a universal rule of construction for all uses of “at least one of” in all patents, however. The *SuperGuide* court's construction of “at least of” was based on the particular facts of the particular patent at issue there. *See, e.g.*, 358 F.3d at 887 (finding that “[e]very disclosed embodiment teaches that the user must choose a value for each designated category” and that “nothing in the specification rebuts the presumption that the [] patentee intended the plain and ordinary meaning of [‘at least one of’]”). Accordingly, numerous courts have declined to follow the *SuperGuide* court's construction of “at least one of” where the facts before them called for a different understanding of the term. *See, e.g.*,

Fujifilm Corp. v. Motorola Mobility LLC, Case No. 12-cv-03587-WHO,
2015 WL 1265009, at *8 (N.D. Cal. Mar. 19, 2015)

Patent Owner's Construction Excludes Embodiments

'732
Patent

405 505

>Bots
>Conversations
>Connections

Conversations
Add New Employee

540

544

* Name 542 * Display Name * Keyword To Search By (Intent)

Add New Employee Add New Employee new x employee x new employee x 546

546a 546b 546c

ADD MESSAGE 552 ADD QUESTION 554 ADD CONDITION 556 ADD ACTION 558

Type	ID	Name	Next step	Actions
...	10497	Start	Employee ID	550a
?	10498	Employee ID	First Name	550b
?	10500	First Name	Last Name	550c
?	10501	Last Name	Email	550d
?	10512	Email	Business Unit	550e
?	10513	Business Unit	Business Unit = Grand Avenue ?	550f
?	10548	Business Unit = Grand Avenue ?	Success step: Add new Employee - Grand Avenue	550g
?	10520	Add New Employee - Orange Blossom	Fail step: Add New Employee - Orange Blossom	550h
?	10547	Add new Employee - Grand Avenue		550i

UNPUBLISH

Fig. 5B

Patent Owner's Expert

Q. So there are four separate buttons to allow the user to independently add a message, question, condition or action. Is that right?

A. To a conversation, yes.

Zatkovich Depo Trans. (EX1036), 74:15-19

'732 Patent (EX1001),
Fig. 5B

Instituted Grounds

Instituted Grounds For The '664 Patent

Ground	35 U.S.C. §	Claim(s)	Prior Art Reference(s)
1	103	1-8, 12, 13, 16, 19-23, 26, 29, 31	Symons (Article and Video), Williams
2	103	1-8, 12-16, 18-23, 25, 26, 28-31, 33	Allen
3	103	9	★ Allen, Dayanandan
4	103	1-8, 12-14, 16, 18-23, 26, 28, 29, 31, 33	Krishnan, Radhakrishnan

'664 Petition (Paper 2), 7

Instituted Grounds For The '317 Patent

Ground	35 U.S.C. §	Claim(s)	Prior Art Reference(s)
1	103	1-20	Symons (Article and Video), Williams
2	103	1-20	Allen
3	103	1-4, 6, 7, 9-12, 14, 16-18	Krishnan, Radhakrishnan

'317 Petition (Paper 2), 8

Instituted Grounds For The '732 Patent

Ground	35 U.S.C. §	Claim(s)	Prior Art Reference(s)
1	103	1-4, 9-14, 18, 19	Symons (Article and Video), Williams
2	103	6, 16, 21	★ Symons (Article and Video), Williams, Ben-Itzhak
3	103	1-5, 9-15, 18-20	Allen
4	103	6, 16, 21	★ Allen, Ben-Itzhak
5	103	1-5, 9-15, 18-20	Krishnan, Radhakrishnan

'732 Petition (Paper 2), 7



Symons

Symons

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

Whatfix Inc. Exhibit 1004 Page 1

Symons Article
(EX1004), 1

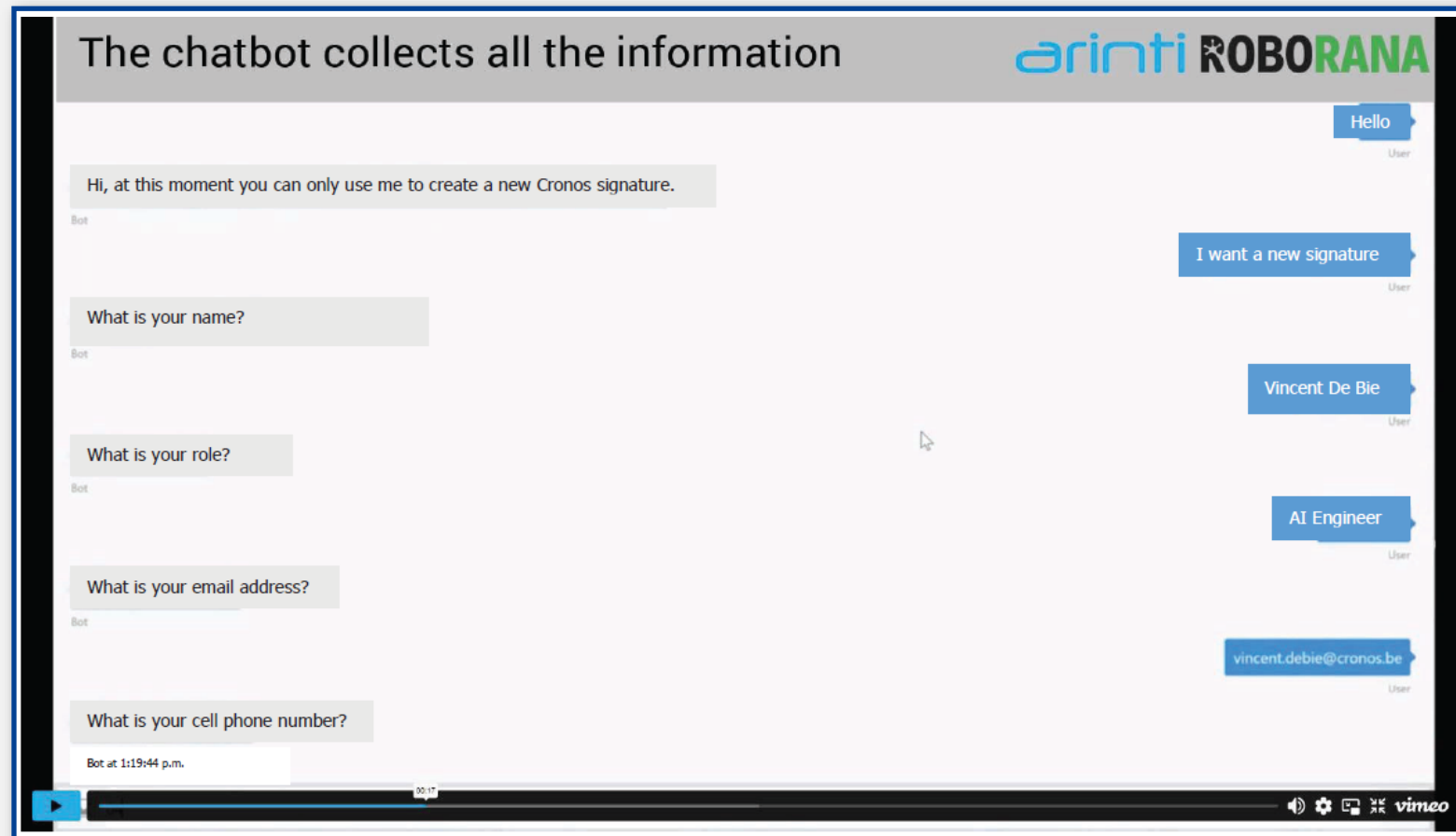


Symons Video (EX1006), 1

Symons

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

*Symons Article
(EX1004), 2*

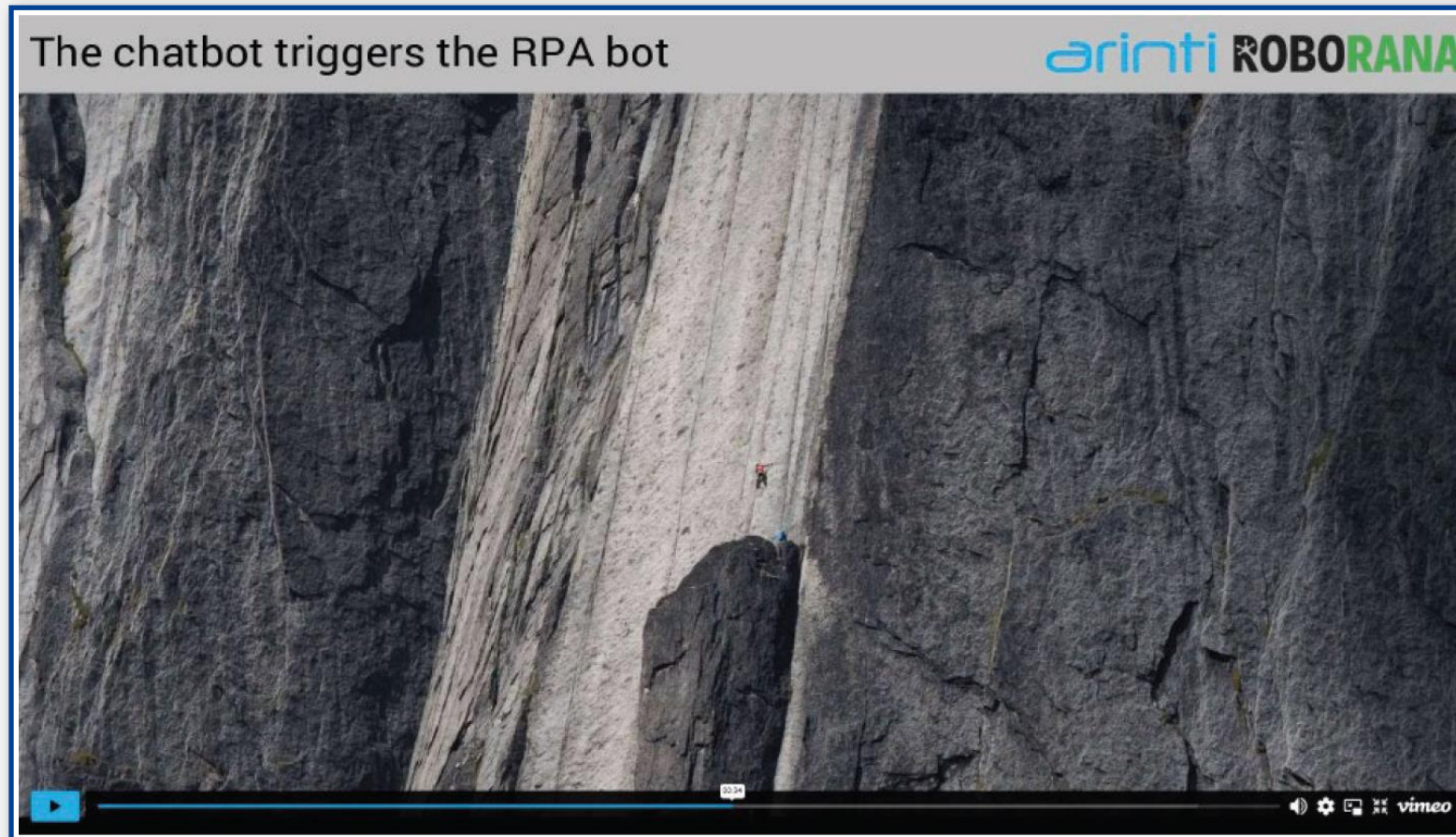


*Symons Video
(EX1006), 5*

Symons

manner. This information gets passed on to the RPA robot, which will then

*Symons Article
(EX1004), 2*



*Symons Video
(EX1006), 10*

Symons

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

*Symons Article
(EX1004), 2*

The RPA bot automatically opens browser and enters details **arinti ROBORAN**

CRONOS EMAIL SIGNATURE GENERATOR

Entity: Cronos
Name: Vincent De Bie
Role: AI Engineer
Email: vincent.debie@cronos.be
Phone: your telephone number (e.g. +32 3 123 45 67)
Mobile: 0412345678
Fax: your fax number (e.g. +32 3 123 45 67)

► Social Media

Logo:  

Links

Link 1

Text: Cronos recognised as 2016 Microsoft Country Partner of the Year
Url: <http://www.cronos.be/news/cronos-recognized-2016-microsoft-cou>

Preview

 Vincent De Bie
AI Engineer
M 0412345678
vincent.debie@cronos.be
www.cronos.be
Veldkant 33A - 2550 Kontich

Cronos recognised as 2016 Microsoft Country Partner of the Year

*Symons Video
(EX1006), 12*

'664 Petition (Paper 2), 10, 20
'317 Petition (Paper 2), 10, 29
'732 Petition (Paper 2), 10, 29

Symons

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

*Symons Article
(EX1004), 2*

The RPA bot automatically opens browser and enters details **arinti ROBORAN**

CRONOS EMAIL SIGNATURE GENERATOR

Entity	Cronos
Name	Vincent De Bie
Role	AI Engineer
Email	vincent.debie@cronos.be
Phone	your telephone number (e.g. +32 3 123 45 67)
Mobile	0412345678
Fax	your fax number (e.g. +32 3 123 45 67)

► Social Media

Logo



Links

Link 1

Text	Cronos recognised as 2016 Microsoft Country Partner of the Year
Url	http://www.cronos.be/news/cronos-recognized-2016-microsoft-cou

Preview



Vincent De Bie
AI Engineer
M 0412345678
vincent.debie@cronos.be
www.cronos.be
Veldkant 33A - 2550 Kontich

Cronos recognised as 2016 Microsoft Country Partner of the Year

00:29

vimeo

*Symons Video
(EX1006), 12*

'664 Petition (Paper 2), 10, 20
'317 Petition (Paper 2), 10, 29
'732 Petition (Paper 2), 10, 29

Symons

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.

*Symons
Declaration
(EX1008), 1*

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

*Symons
Declaration
(EX1008), 1*

POSITA Level

Q. Is there a specific area of computer science that you focused on while at the University of Pittsburgh?

A. I spent a lot of time studying network communication. As well as electronic -- digital circuit design.

Zatkovich Depo Trans. (EX1036), 16:7-12

Q. Okay. So would you say that by the time you graduated from the University of Pittsburgh with a BS in computer science, you had experience in network communication?

A. Yes.

Q. Okay. And would you also say that by the time you graduated from the University of Pittsburgh with a bachelors of science in computer science, you had experience in electronic digital circuit design?

A. Yes.

Zatkovich Depo Trans. (EX1036), 16:13-25

Williams

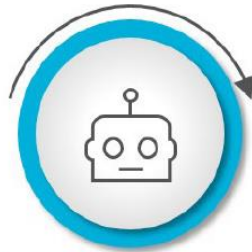
Williams

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.

Williams (EX1011), 3

Williams

Intelligent automation continuum



Robotic process automation
(RPA)

- The "robot" is taught to drive applications like a human does through the graphical user interface (GUI), following predetermined pathways
- Accesses and assembles structured data performing prescribed actions



Complex process automation
(CPA)

- The "robot" follows predetermined computer pathways, conducts complex calculations, performs actions, and triggers downstream activities
- Uses artificial intelligence (AI) to continuously monitor and improve the process environment
- Accesses and integrates a base knowledge repository into process flows to optimize outcomes



Intelligent process automation
(IPA)

- The "robot" has autonomous decision-making and self-remediating capabilities
- Uses AI to redesign and restructure processes to optimize operations
- Reasons and remembers information, and learns to identify new insights through data discovery
- Interacts with humans through a combination of advanced algorithms, natural language processing, machine learning, and other forms of AI
- Records every action, transaction, interaction and decision tree, which makes it auditable and accountable



Roadmap

3. Symons-Williams (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a])
- “determining . . . an automation process” (’664, 1[c])
- “displayed user interface of a computer program” (’664, 1[c]; ’732, 1[c]) / “[GUI] of the web-based target system” (’317, 1[d])
- “automatically and without user input, interacting with a widget in the GUI” (’317, 1[h])
- “third-party web-based target system” (’317, 1[e])
- “defining an automation process” (’732, 1[pre])
- “defining a conversation” (’732, 1[a])
- ☆ Order of elements 1[a], 1[b], and 1[d]

'664 Patent, Claim 1

1[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, 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:

'664 Patent (EX1001), 25:15-23

'317 Patent, Claim 1

1[a]

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

'317 Patent (EX1001), 25:29-30

'732 Patent, Claim 1

1[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;

'732 Patent (EX1001), 22:19-23

Natural Language Processing vs. “natural language interface”

'664, '317, and '732 Patents

database, such as 102 of FIG. 1. Based on processing of the user's interaction with the chat bot, such as using Natural Language Processing (NLP) techniques, it may be determined which conversation is the most likely conversation and such a conversation may be suggested to the user for confirmation.

'664 Patent (EX1001), 13:38-43; '317 Patent (EX1001) 13:46-51; '732 Patent (EX1001), 10:37-42

predefined automation flow on the target system. The chat bot may implement a natural language interface, such as a text-based conversation, an oral conversation, or the like.

'664 Patent (EX1001), 8:7-8

Natural Language Processing vs. “natural language interface”

Petitioner's Expert

Q. Okay. So when you talk to other people about natural language processing, what is it that you understand it to mean,

* * *

A. 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.

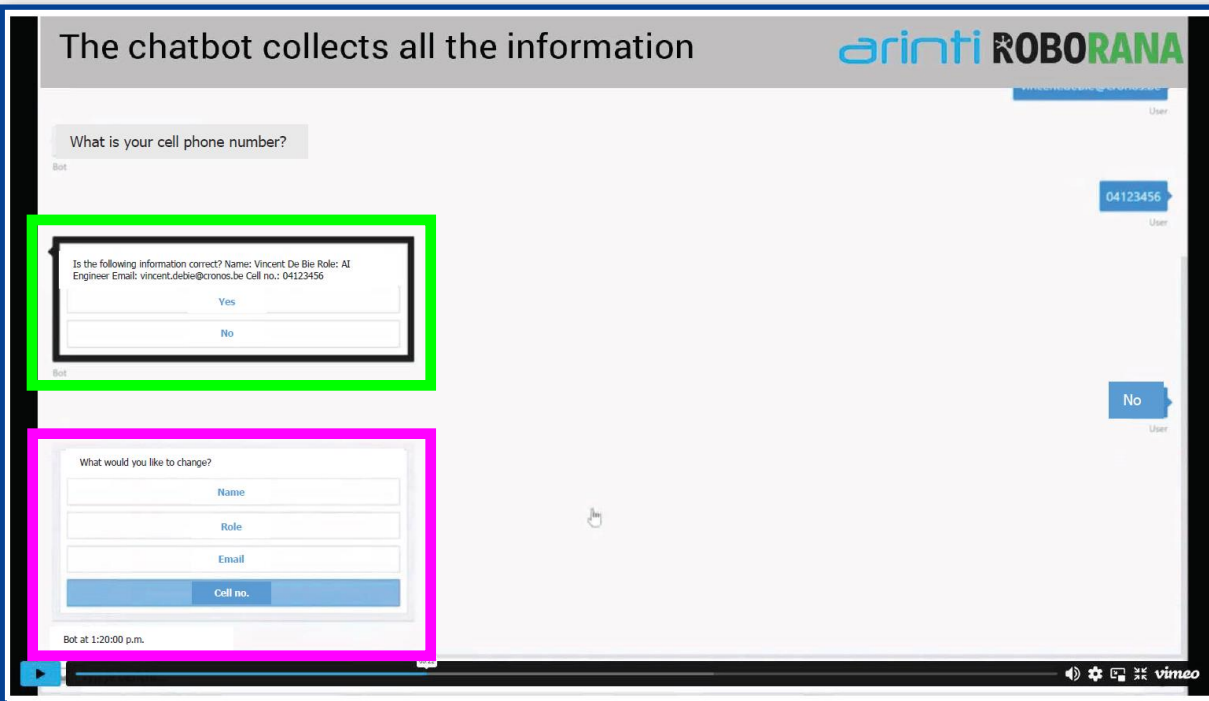
Q. And what would be a natural language interface to the same group of people?

A. 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.

Beigi Depo. Trans. (EX2003), 63:15-64:17

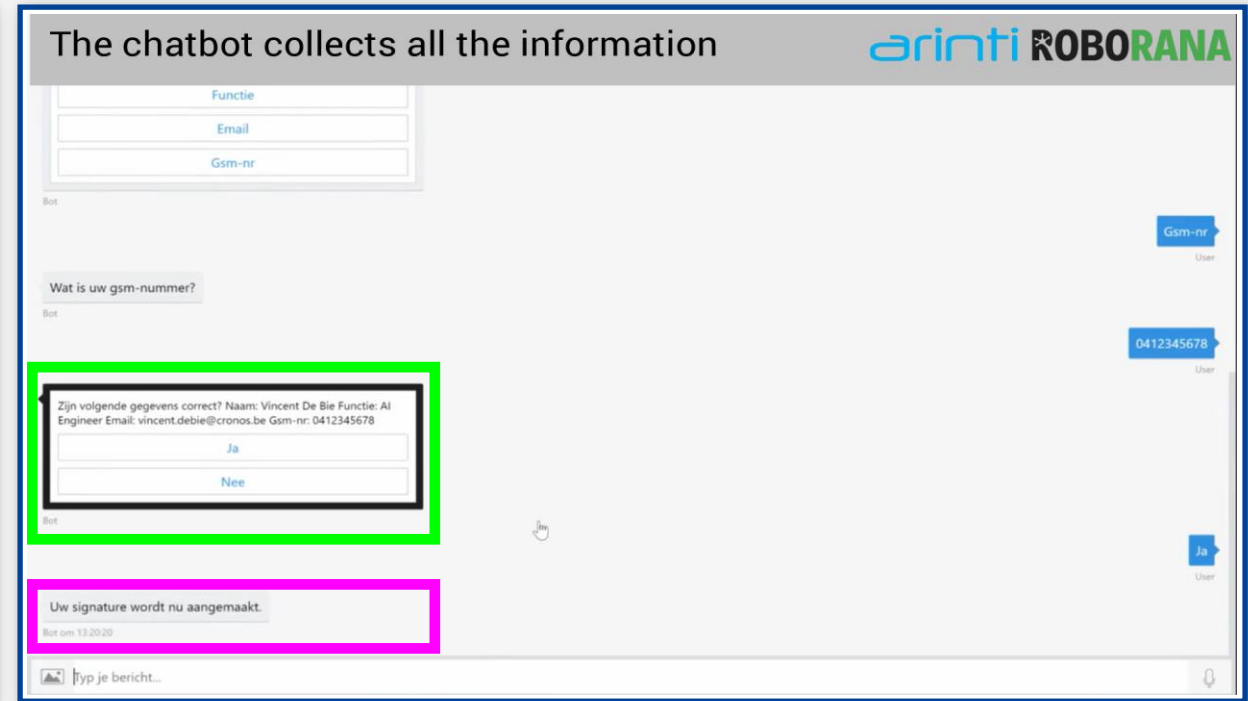
Symons Teaches Natural Language Processing

User Input: “No”



Symons Video (EX1006), 8

User Input: “Yes”



Symons Video (EX1033), 00:31

Mr. Zatkovich's Computer Program

Petitioner's Expert

50. I note that Mr. Zatkovich's description of his computer code contradicts his testimony. He testified that "[i]t's not clear" whether the chatbot transmits information to an RPA server and "[n]either I nor Dr. Beigi could make that determination as to how or if that information is transmitted." (EX1036, 120:13-21.) Yet, he made the "determination" when creating his code and providing a description of it. He also testified that he was not sure that the chatbot transmits information to the RPA bot via an HTML method called POST a URL because "[a]gain, neither Dr. Beigi nor I had any view into the internals of how that worked. So I could not verify that particular method." (EX1036, 122:23-123:9.) However, Mr. Zatkovich's description of his computer code states "[t]he information that is collected by the chatbot is sent to a Server (e.g. an RPA Server). This is done the most common HTML method known as POST a URL." (EX2006, 6.)

'664 Beigi Reply Dec.
(EX1042), ¶ 50

Roadmap

3. Symons-Williams (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a])
- **“determining . . . an automation process” (’664, 1[c])**
- “displayed user interface of a computer program” (’664, 1[c]; ’732, 1[c]) / “[GUI] of the web-based target system” (’317, 1[d])
- “automatically and without user input, interacting with a widget in the GUI” (’317, 1[h])
- “third-party web-based target system” (’317, 1[e])
- “defining an automation process” (’732, 1[pre])
- “defining a conversation” (’732, 1[a])
- ☆ Order of elements 1[a], 1[b], and 1[d]

'664 Patent, Claim 1

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,

'664 Patent (EX1001), 25:14-39

“determining” Is Broader Than “selecting”

'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.

'664 Patent (EX1001), 26:6-12

“determining . . . an automation process” Encompasses A Single Automation Process

automation processes. However, it is noted that a conversation may be configured to end in a **specific (single) automation process**. Additionally or alternatively, in some cases,

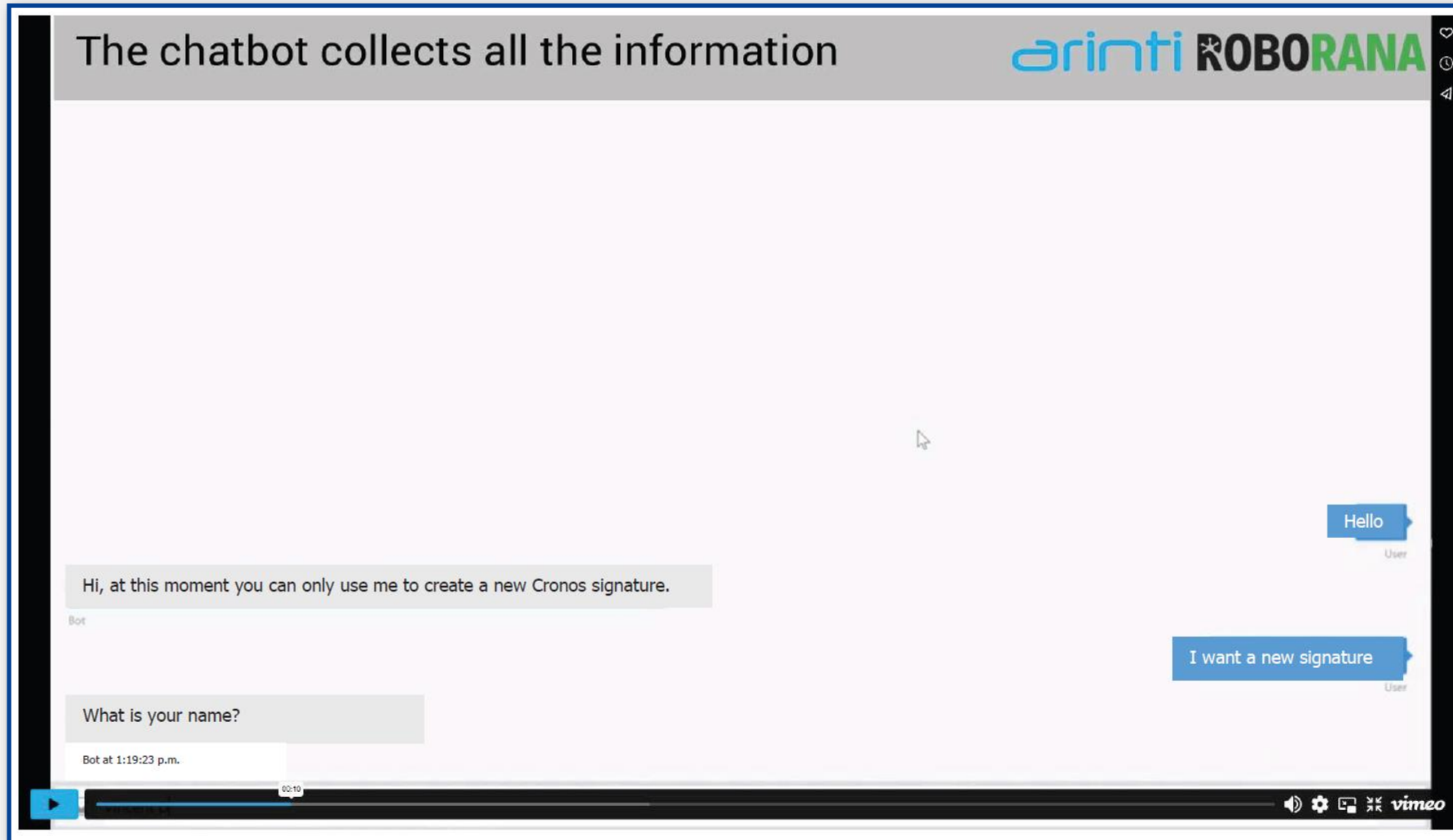
'664 Patent (EX1001), 19:36-37

be associated with different conversation flows. Each conversation flow may be associated with **one or more automation processes** that can be invoked. A non-programmer user

'664 Patent (EX1001), 9:65-67

Symons-Williams Teaches “determining . . . an automation process”

Symons



*Symons Video
(EX1006), 3*

Symons-Williams Teaches “determining . . . an automation process”

Williams

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.

Williams (EX1011), 3

Roadmap

3. Symons-Williams (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a])
- “determining . . . an automation process” (’664, 1[c])
- **“displayed user interface of a computer program” (’664, 1[c]; ’732, 1[c]) / “[GUI] of the web-based target system” (’317, 1[d])**
- “automatically and without user input, interacting with a widget in the GUI” (’317, 1[h])
- “third-party web-based target system” (’317, 1[e])
- “defining an automation process” (’732, 1[pre])
- “defining a conversation” (’732, 1[a])
- ☆ Order of elements 1[a], 1[b], and 1[d]

'664 Patent, Claim 1

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,

'664 Patent (EX1001), 25:14-39

'732 Patent, Claim 1

1[c]

associating the conversation with the automation process, 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

'732 Patent (EX1001), 22:24-29

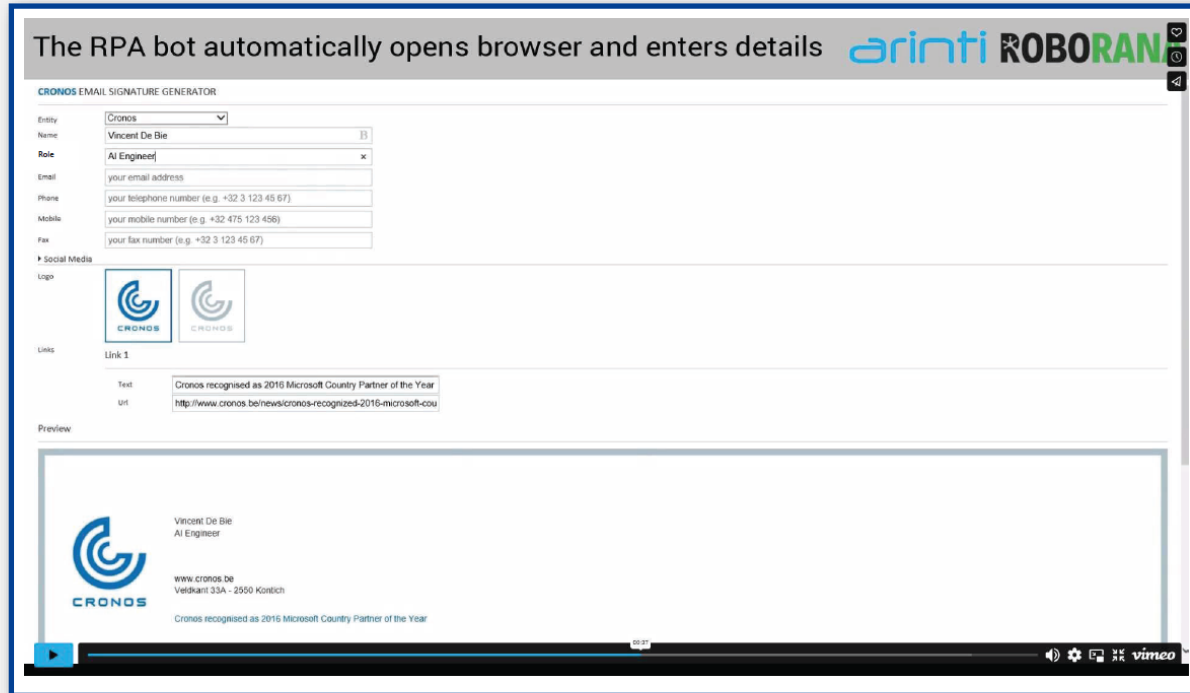
'317 Patent, Claim 1

1[d]

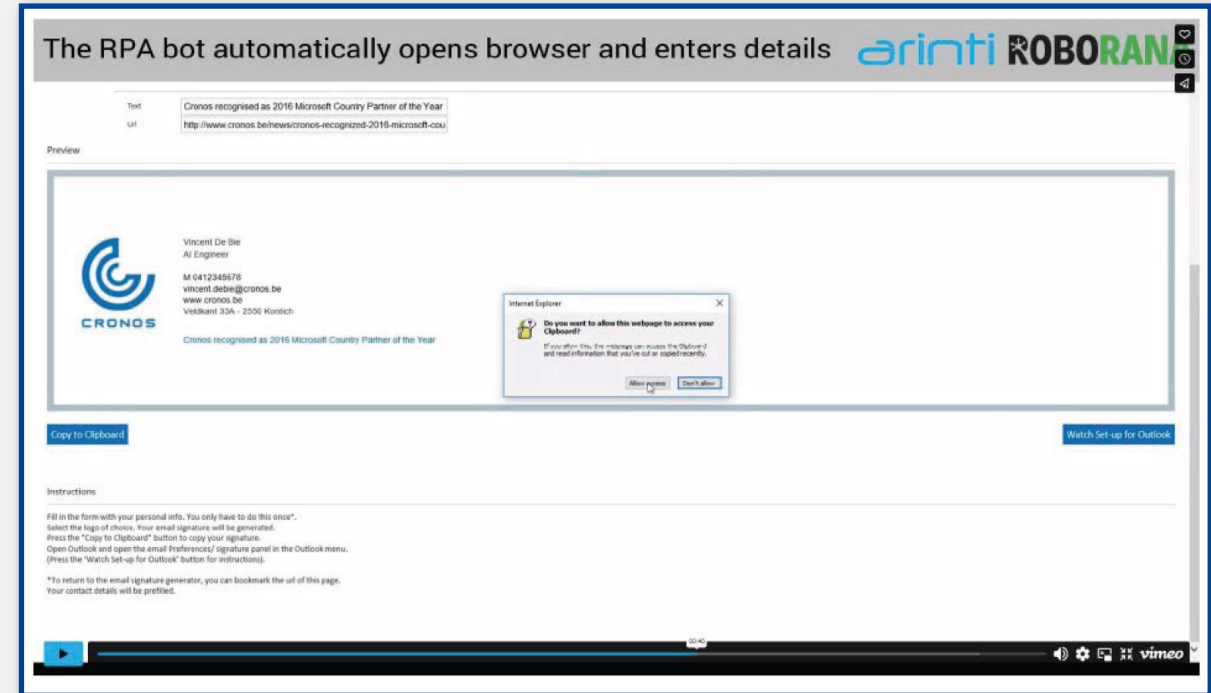
implement the automation process by interacting with a Graphical User Interface (GUI) of the web-based target system and simulating user input to the GUI of the web-based target system, wherein the automation pro-

'317 Patent (EX1001), 25:36-39

Symons Teaches A “displayed user interface of a computer program”



Symons Video (EX1006), 11



Symons Video (EX1006), 13

'664 Petition (Paper 2), 20-21

'317 Petition (Paper 2), 20

'732 Petition (Paper 2), 19-20

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Roadmap

3. Symons-Williams (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a])
- “determining . . . an automation process” (’664, 1[c])
- “displayed user interface of a computer program” (’664, 1[c]; ’732, 1[c]) / “[GUI] of the web-based target system” (’317, 1[d])
- **“automatically and without user input, interacting with a widget in the GUI” (’317, 1[h])**
- “third-party web-based target system” (’317, 1[e])
- “defining an automation process” (’732, 1[pre])
- “defining a conversation” (’732, 1[a])
- ☆ Order of elements 1[a], 1[b], and 1[d]

'317 Patent, Claim 1

1[h]

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

'317 Patent (EX1001), 25:48-50

Symons Teaches “automatically and without user input, interacting with a widget in the GUI”

The RPA bot automatically opens browser and enters details **arinti** **ROBORAN**

Text: Cronos recognised as 2016 Microsoft Country Partner of the Year
Url: <http://www.cronos.be/news/cronos-recognized-2016-microsoft-cou>

Preview



Copy to Clipboard Watch Set-up for Outlook

Instructions

Fill in the form with your personal info. You only have to do this once*.
Select the logo of choice. Your email signature will be generated.
Press the "Copy to Clipboard" button to copy your signature.
Open Outlook and open the email Preferences/ signature panel in the Outlook menu.
(Press the "Watch Set-up for Outlook" button for instructions).

*To return to the email signature generator, you can bookmark the url of this page.
Your contact details will be prefilled.

00:40 vimeo

Symons Video
(EX1006), 13

Roadmap

3. Symons-Williams (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a])
- “determining . . . an automation process” (’664, 1[c])
- “displayed user interface of a computer program” (’664, 1[c]; ’732, 1[c]) / “[GUI] of the web-based target system” (’317, 1[d])
- “automatically and without user input, interacting with a widget in the GUI” (’317, 1[h])
- **“third-party web-based target system” (’317, 1[e])**
- “defining an automation process” (’732, 1[pre])
- “defining a conversation” (’732, 1[a])
- ☆ Order of elements 1[a], 1[b], and 1[d]

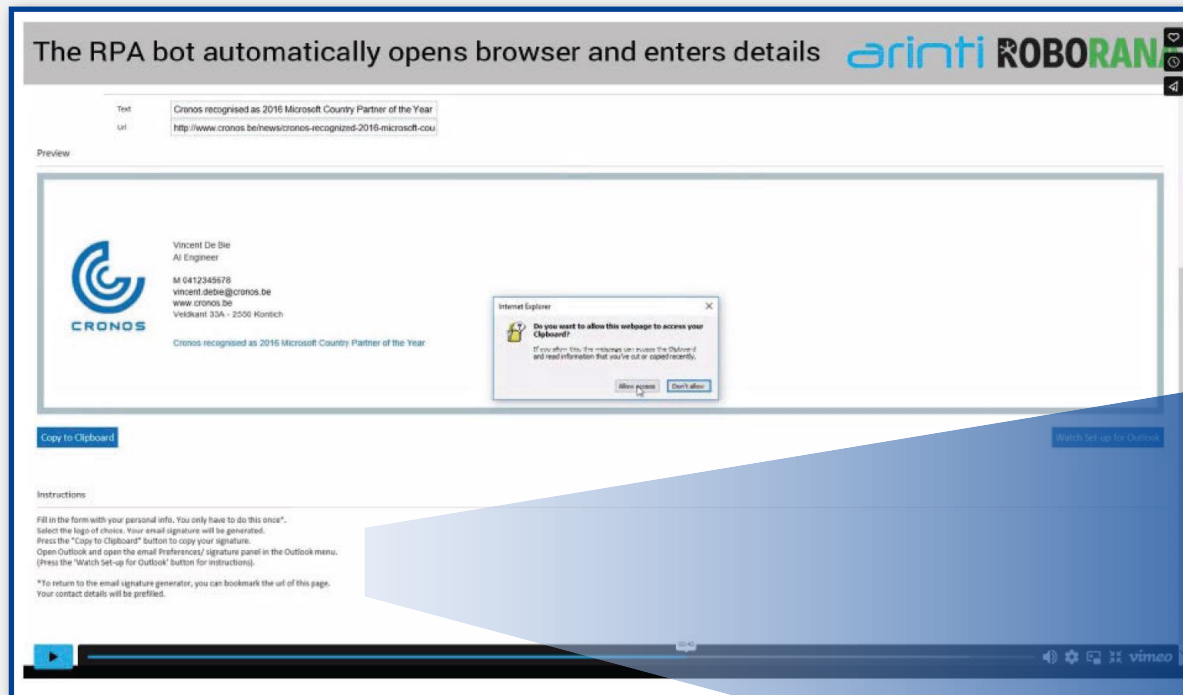
'317 Patent, Claim 1

1[e]

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, wherein the automation process is performed with respect to **third-party web-based target system** and without relying on an Application Programming Interface (API) exposed by the web-based target system, wherein the implementation of the

'317 Patent (EX1001), 25:36-43

Symons Teaches A “third-party web-based target system”



Symons Video (EX1006), 13

Instructions

Fill in the form with your personal info. You only have to do this once*.
Select the logo of choice. Your email signature will be generated.
Press the "Copy to Clipboard" button to copy your signature.
Open Outlook and open the email Preferences/ signature panel in the Outlook menu.
(Press the "Watch Set-up for Outlook" button for instructions).

*To return to the email signature generator, you can bookmark the url of this page.
Your contact details will be prefilled.

Symons Teaches A “third-party web-based target system”

Baetens and Arinti

My role was to manage the team that implemented the chatbot as an interface for a natural language conversation with the user.

Baetens Decl. (EX1010), 4

Symons and RoboRana

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.

Symons Decl. (EX1008), 3

Williams Teaches A “third-party web-based target system”

RPA enlists software robots to perform complex, nested routines that cut across multiple applications and interact with these systems without the need to build complex and rigid system-to-system interfaces. Although robots can be configured to interface directly with applications through pre-existing application programming interfaces (APIs), these platforms are equally able to work through systems' graphical interfaces, including web browsers and Citrix terminal sessions. This

Williams (EX1011), 2

Roadmap

3. Symons-Williams (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a])
- “determining . . . an automation process” (’664, 1[c])
- “displayed user interface of a computer program” (’664, 1[c]; ’732, 1[c]) / “[GUI] of the web-based target system” (’317, 1[d])
- “automatically and without user input, interacting with a widget in the GUI” (’317, 1[h])
- “third-party web-based target system” (’317, 1[e])
- **“defining an automation process” (’732, 1[pre])**
- “defining a conversation” (’732, 1[a])
- ☆ Order of elements 1[a], 1[b], and 1[d]

'732 Patent, Claim 1

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:

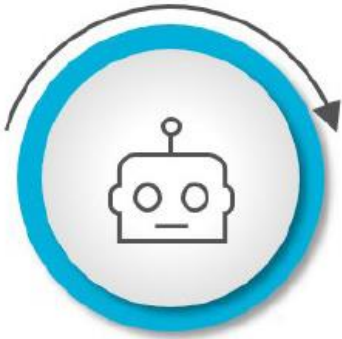
'732 Patent (EX1001), 22:15-18

Symons Teaches “defining an automation process” Without Using An API

9. 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.

Symons Declaration (EX1008), 3

Williams Teaches “defining an automation process”



Robotic process automation
(RPA)

- The “robot” is taught to drive applications like a human does through the graphical user interface (GUI), following predetermined pathways
- Accesses and assembles structured data performing prescribed actions

Williams (EX1011), 4

Furthermore, in some cases where nested, if-then logic routines exist, programming these rules become more problematic. In light of this situation, IBM has introduced Watson Policy Management Library (WPML), which allows business process owners to draft, create and amend rules and policy changes outside of the RPA product using normal conversational text.

Williams (EX1011), 4

Roadmap

3. Symons-Williams (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a])
- “determining . . . an automation process” (’664, 1[c])
- “displayed user interface of a computer program” (’664, 1[c]; ’732, 1[c]) / “[GUI] of the web-based target system” (’317, 1[d])
- “automatically and without user input, interacting with a widget in the GUI” (’317, 1[h])
- “third-party web-based target system” (’317, 1[e])
- “defining an automation process” (’732, 1[pre])
- **“defining a conversation” (’732, 1[a])**
- ☆ Order of elements 1[a], 1[b], and 1[d]

'732 Patent, Claim 1

1[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;

'732 Patent (EX1001), 22:19-23

Symons Teaches “defining a conversation”

The chatbot collects all the information

arinti ROBORANA

Hello
User

Hi, at this moment you can only use me to create a new Cronos signature.
Bot

I want a new signature
User

What is your name?
Bot

Vincent De Bie
User

What is your role?
Bot

AI Engineer
User

What is your email address?
Bot

vincent.debie@cronos.be
User

What is your cell phone number?
Bot

Bot at 1:19:44 p.m.

00:17

🔊 ⚙️ 📺 🖱️ vimeo

Symons Video
(EX1006), 5

Roadmap

3. Symons-Williams (Dependent Claims)

- ★ “client device of [/used by] the user” (’664, Claim 12; ’317 Claims 2 and 3)
- ☆ “widget [] configured to invoke submission of the online form” (’317, Claim 5)
- ☆ “personalizing the automation process” (’317, Claim 6)
- ☆ “credentials of the user” (’317, Claim 7)
- ☆ “automatically identify the widget in the GUI and [] automatically identifying the text input field in the GUI” (’317, Claim 8)
- ☆ “defines an order between conversation elements” (’732, Claim 2)
- ☆ “condition element” (’732, Claim 3)
- ☆ “second automation process” (’732, Claim 4)

'664 Patent, Claim 12

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

'664 Patent (EX1001), 26:43-44

Symons Teaches “a client device of the user”

The RPA bot automatically opens browser and enters details

arinti ROBORANA

CRONOS EMAIL SIGNATURE GENERATOR

Entity: Cronos

Name: Vincent De Bie

Role: AI Engineer

Email: your email address

Phone: your telephone number (e.g. +32 3 123 45 67)

Mobile: your mobile number (e.g. +32 475 123 456)

Fax: your fax number (e.g. +32 3 123 45 67)

Social Media

Logo:  

Link 1

Text: Cronos recognised as 2016 Microsoft Country Partner of the Year

Url: <http://www.cronos.be/news/cronos-recognized-2016-microsoft-cou>

Preview

 Vincent De Bie
AI Engineer

www.cronos.be
Veldkant 33A - 2550 Kontich

Cronos recognised as 2016 Microsoft Country Partner of the Year

00:27

vimeo

Symons Video
(EX1006), 11

Roadmap

3. Symons-Williams (Dependent Claims)

- ☆ “client device of [/used by] the user” (’664, Claim 12; ’317 Claims 2 and 3)
- ☆ “widget [] configured to invoke submission of the online form” (’317, Claim 5)
- ☆ “personalizing the automation process” (’317, Claim 6)
- ☆ “credentials of the user” (’317, Claim 7)
- ☆ “automatically identify the widget in the GUI and [] automatically identifying the text input field in the GUI” (’317, Claim 8)
- ☆ “defines an order between conversation elements” (’732, Claim 2)
- ☆ “condition element” (’732, Claim 3)
- ☆ “second automation process” (’732, Claim 4)

'317 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.

'317 Patent (EX1001), 25:61-67

Symons Teaches A “widget [] configured to invoke submission of the online form”

The RPA bot automatically opens browser and enters details **arinti ROBORAN**

Text: Cronos recognised as 2016 Microsoft Country Partner of the Year
url: http://www.cronos.be/news/cronos-recognized-2016-microsoft-cou

Preview



Vincent De Bie
AI Engineer
M 0412345678
vincent.debie@cronos.be
www.cronos.be
Veldkant 33A - 2050 Kontich
Cronos recognised as 2016 Microsoft Country Partner of the Year

Internet Explorer
Do you want to allow this webpage to access your Clipboard?
If you allow this, the webpage can retrieve the Clipboard and read information that you've cut or copied recently.
Allow access Don't allow

Copy to Clipboard Watch Set-up for Outlook

Instructions

Fill in the form with your personal info. You only have to do this once.
Select the logo of choice. Your email signature will be generated.
Press the "Copy to Clipboard" button to copy your signature.
Open Outlook and open the email Preferences/ signature panel in the Outlook menu.
(Press the "Watch Set-up for Outlook" button for instructions).

*To return to the email signature generator, you can bookmark the url of this page.
Your contact details will be prefilled.

00:40 vimeo

Symons
Video
(EX1006),
13

Roadmap

3. Symons-Williams (Dependent Claims)

- ☆ “client device of [/used by] the user” (’664, Claim 12; ’317 Claims 2 and 3)
- ☆ “widget [] configured to invoke submission of the online form” (’317, Claim 5)
- ☆ “personalizing the automation process” (’317, Claim 6)
- ☆ “credentials of the user” (’317, Claim 7)
- ☆ “automatically identify the widget in the GUI and [] automatically identifying the text input field in the GUI” (’317, Claim 8)
- ☆ “defines an order between conversation elements” (’732, Claim 2)
- ☆ “condition element” (’732, Claim 3)
- ☆ “second automation process” (’732, Claim 4)

'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.

'317 Patent (EX1001), 26:4-7

'317 Patent: User Credentials Are Parameters

In some exemplary embodiments, the automation process may be a parameterized automation process that can be provided with values to its parameters. In some exemplary embodiments, parameter values may be mandatory. The user may associate parameters gathered by the conversation (e.g., by Question Step 550*b*, 550*c*, 550*d*, 550*e* of FIG. 5B). Additionally, or alternatively, the user may associate parameters available to the chat bot, such as based on the user credentials, environment variables, or the like.

'317 Patent (EX1001), 20:7-16

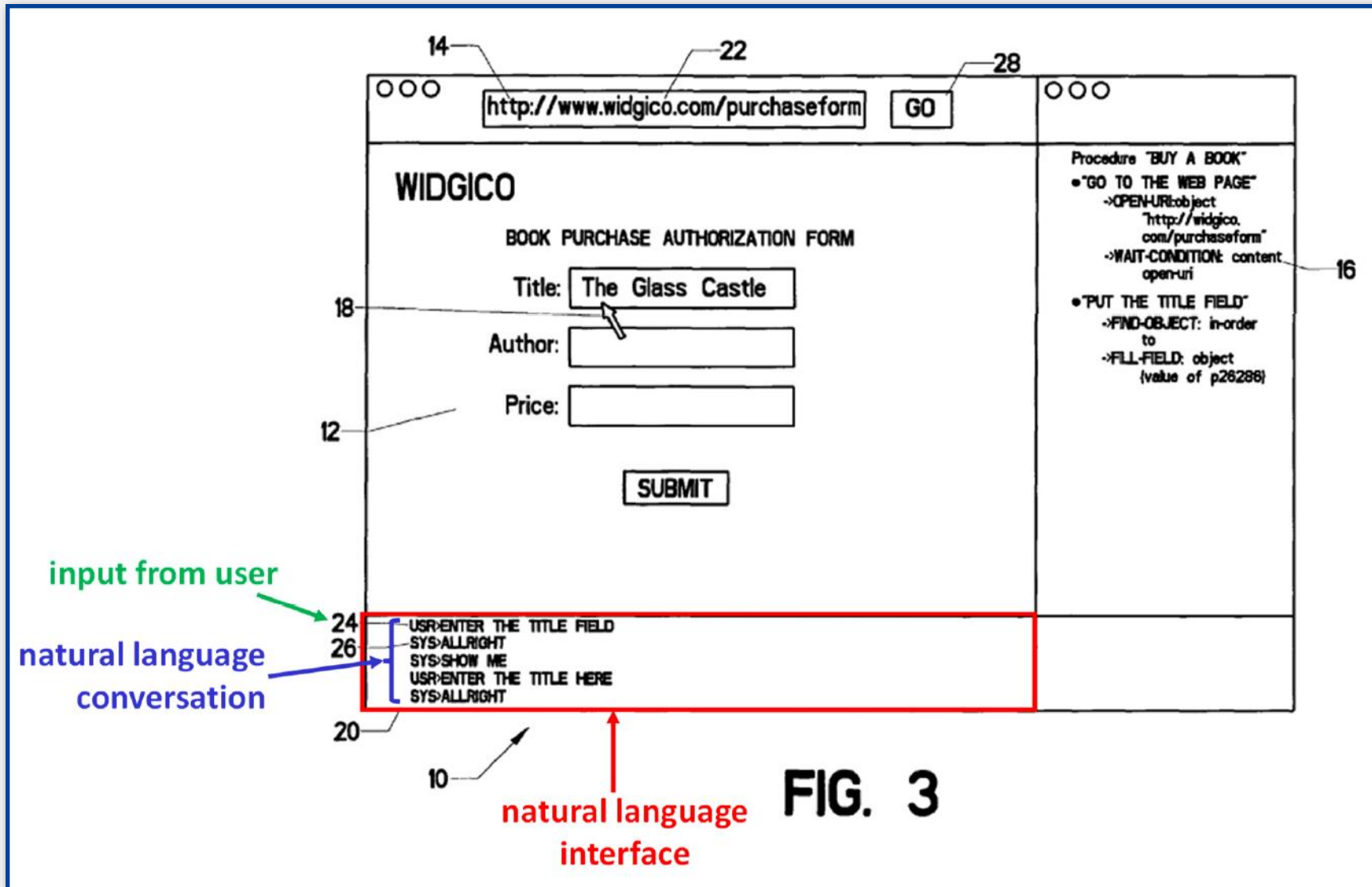
Allen

Allen

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.

*Allen (EX1014),
Abstract*

Allen



Allen (EX1014),
Fig. 3

Allen

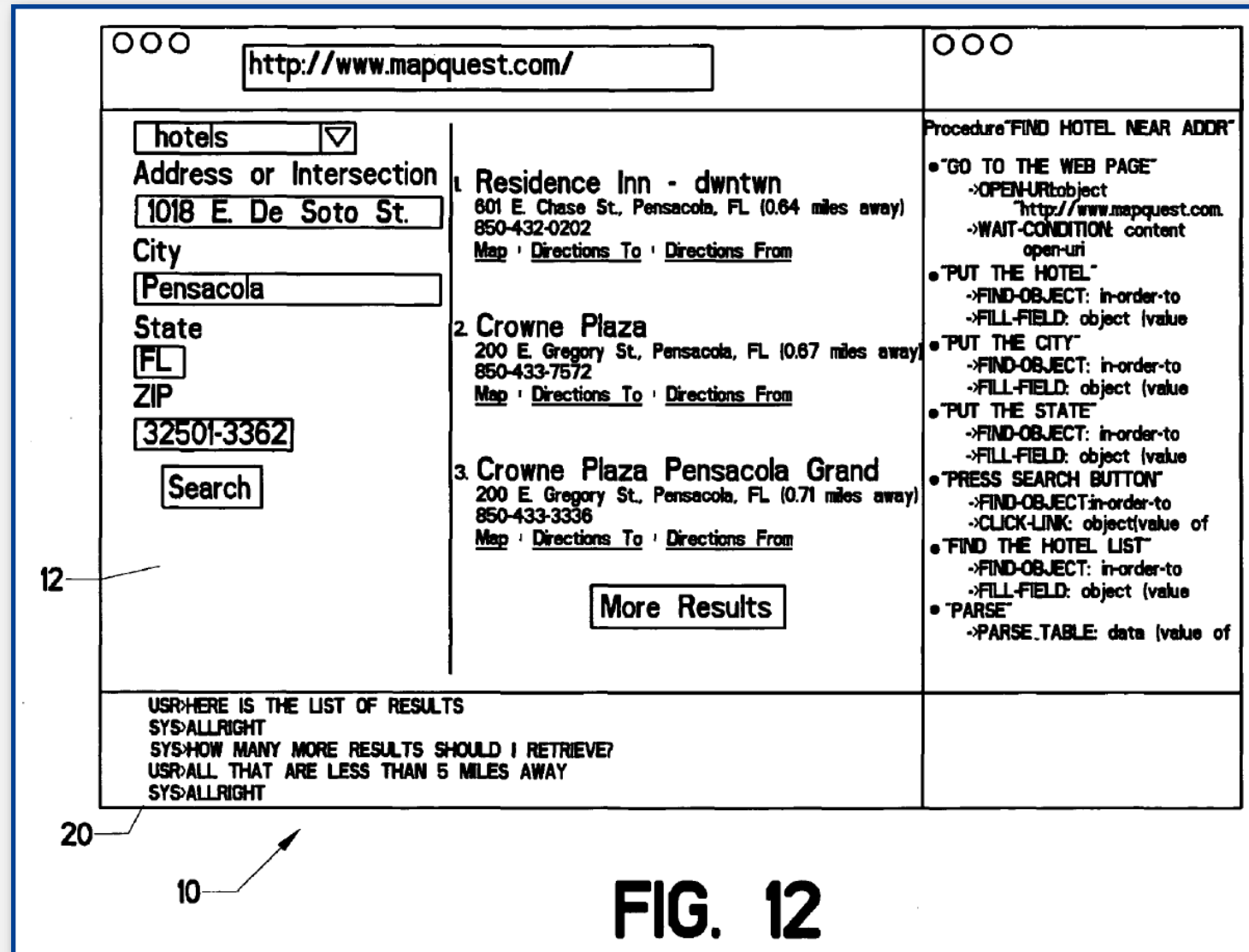


FIG. 12

Allen (EX1014),
Fig. 12

Roadmap

4. Allen (Independent Claims)

- **“natural language interface”** ('664, 1[a]; '317, 1[a]; '732, 1[a])
- “displayed user interface of a computer program” ('664, 1[c]; '732, 1[c]) / “[GUI] of the web-based target system” ('317, 1[d])
- “executing a functionality of the displayed user interface” ('664, 1[e])
- “defining a conversation” ('732, 1[a])
- “associating the conversation with the automation process” ('732, 1[b])
- “publishing the conversation to be accessible to a user” ('732, 1[d])

'664 Patent, Claim 1

1[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, 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:

'664 Patent (EX1001), 25:15-23

'317 Patent, Claim 1

1[a]

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

'317 Patent (EX1001), 25:29-30

'732 Patent, Claim 1

1[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;

'732 Patent (EX1001), 22:19-23

“natural language interface”

'664, '317, and '732 Patents

predefined automation flow on the target system. The chat bot may implement a natural language interface, such as a text-based conversation, an oral conversation, or the like.

'664 Patent (EX1001), 8:6-8; '317 Patent (EX1001), 8:10-12; '732 Patent (EX1001), 5:3-5

Allen Teaches A “natural language interface”

Once the complete task is learned, the user can employ PLOW's task database the next time he or she wishes to order a book. The user would only need to say something like “I want to buy a book.” The system would then ask, “What is the title of the book?” Once that information is provided, PLOW would then perform the steps it was previously taught and complete the transaction. Of course, the user can build in “authorization” steps. As an example, the user could teach the system to obtain price and delivery date information, then provide this information back to the user and ask whether the user wishes to complete the transaction.

Allen (EX1014), 12:62-13:5

'664 Petition (Paper 2), 38-40

'317 Petition (Paper 2), 40-41

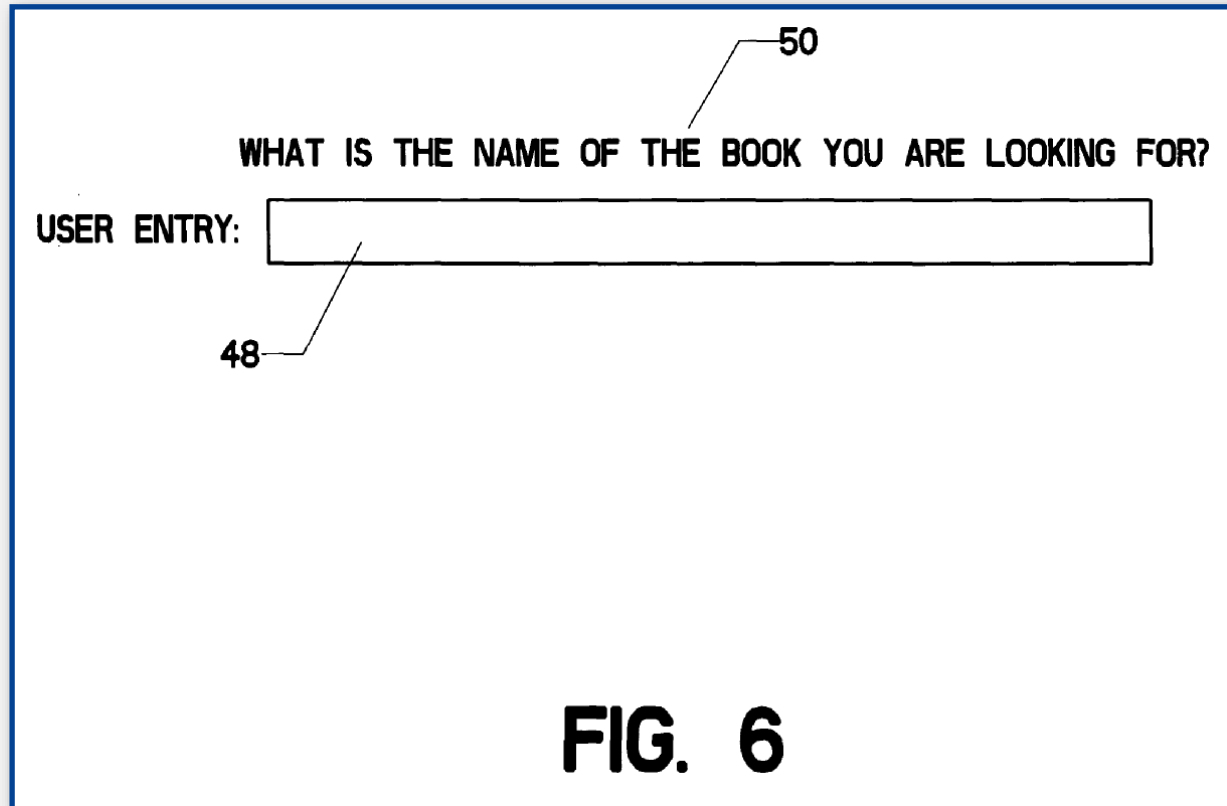
'732 Petition (Paper 2), 37-39

Allen Teaches A “natural language interface”

1. An interactive method for learning and executing executable tasks using language and demonstration inputs from a user, comprising:
 - a. providing a computational device including a graphical user interface (GUI);
 - b. providing software running on said computational device and supported GUI-based interaction with said user;
 - c. wherein said user performs tasks using the GUI
 - d. wherein said software includes a natural dialog-based interface whereby said user can communicate with said software using natural dialog-based language;

Allen (EX1014), 18:38-49

Petitioner And Its Expert Do Not Rely On Figure 6



Allen (EX1014), Fig. 6

Petitioner's Expert

Q. So would a form where you fill in name, address, telephone number, would that be human natural language?

A. No.

Beigi Depo Trans. (EX2003), 60:24-61:3

'664 PO's Sur-reply (Paper 33), 17

'317 PO's Sur-reply (Paper 28), 16

'732 PO's Sur-reply (Paper 30), 22

Roadmap

4. Allen (Independent Claims)

- “natural language interface” ('664, 1[a]; '317, 1[a]; '732, 1[a])
- **“displayed user interface of a computer program” ('664, 1[c]; '732, 1[c]) / “[GUI] of the web-based target system” ('317, 1[d])**
- “executing a functionality of the displayed user interface” ('664, 1[e])
- “defining a conversation” ('732, 1[a])
- “associating the conversation with the automation process” ('732, 1[b])
- “publishing the conversation to be accessible to a user” ('732, 1[d])

'664 Patent, Claim 1

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,

'664 Patent (EX1001), 25:14-39

'317 Patent, Claim 1

1[d]

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

'317 Patent (EX1001), 25:36-43

'732 Patent, Claim 1

1[c]

associating the conversation with the automation process, 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

'732 Patent (EX1001), 22:24-29

Allen Teaches A “displayed user interface of a computer program”

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

Allen (EX1014), Abstract

Allen Teaches A “displayed user interface of a computer program”

1. An interactive method for learning and executing executable tasks using language and demonstration inputs from a user, comprising:
 - a. providing a computational device including a graphical user interface (GUI);
 - b. providing software running on said computational device and supported GUI-based interaction with said user;
 - c. wherein said user performs tasks using the GUI
 - d. wherein said software includes a natural dialog-based interface whereby said user can communicate with said software using natural dialog-based language;

Allen (EX1014), 18:38-49

Allen Teaches A “displayed user interface of a computer program”

vals<.” The system preferably provides an enhanced GUI displaying iterative operations. The system then looks for code having a similar structure in all the other DOM nodes. It preferably displays the result in an alternate GUI.

FIG. 10 shows a simplified depiction of what this user interface might look like. The left column displays the search

Allen (EX1014), 15:14-18

will then appear in the third column. On some occasions the system will make mistakes. For example, it may extract the wrong structure as the title. If so, the user can readily observe the mistake and take action to correct it. The GUI allows the

Allen (EX1014), 15:37-40

Allen's Use Of HTML Code Is To “display[]”

decoding application known as a “web browser.” The web browser takes the HTML code—which maybe thought of as a series of instructions—and uses it to create the display of the web page on the client computer’s monitor. The instructions

Allen (EX1014), 2:14-16

Roadmap

4. Allen (Independent Claims)

- “natural language interface” ('664, 1[a]; '317, 1[a]; '732, 1[a])
- “displayed user interface of a computer program” ('664, 1[c]; '732, 1[c]) / “[GUI] of the web-based target system” ('317, 1[d])
- **“executing a functionality of the displayed user interface” ('664, 1[e])**
- “defining a conversation” ('732, 1[a])
- “associating the conversation with the automation process” ('732, 1[b])
- “publishing the conversation to be accessible to a user” ('732, 1[d])

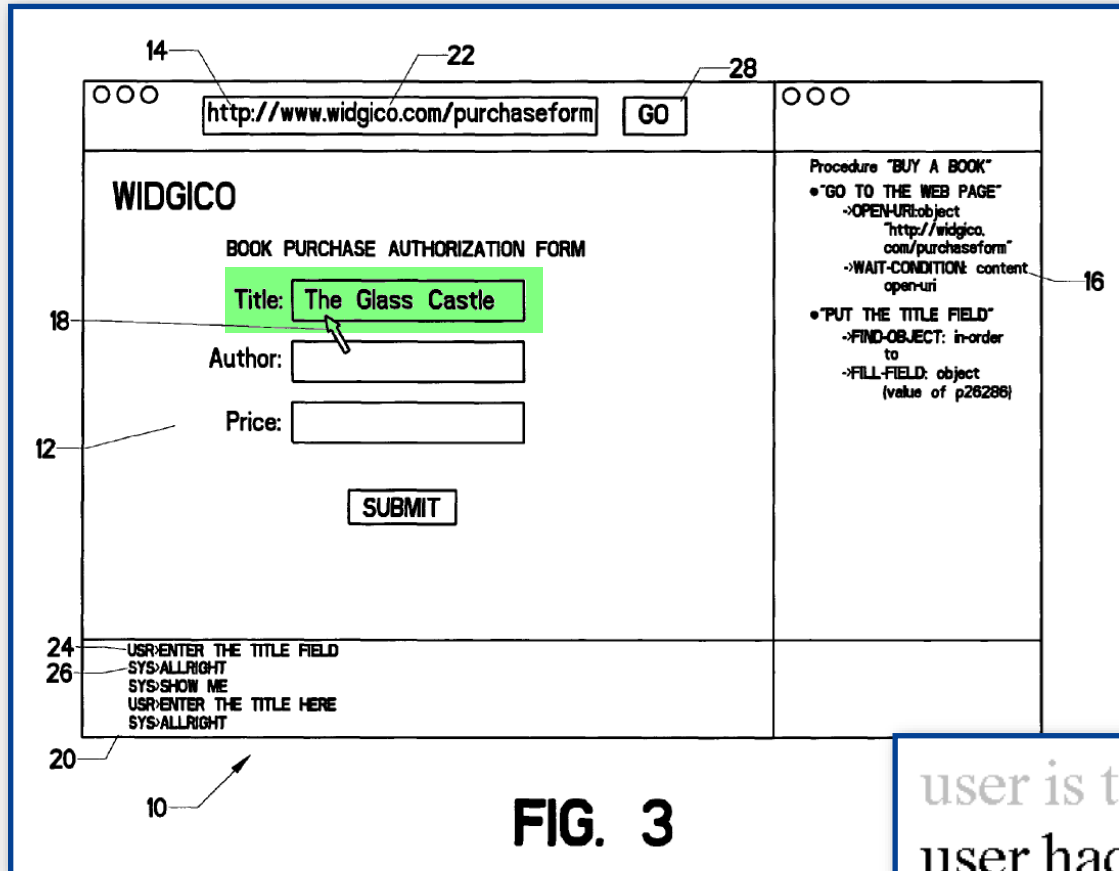
'664 Patent, Claim 1

1[e]

configured to be displayed on a screen, 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

'664 Patent (EX1001), 25:31-35

Allen Teaches “executing a functionality of a displayed user interface”

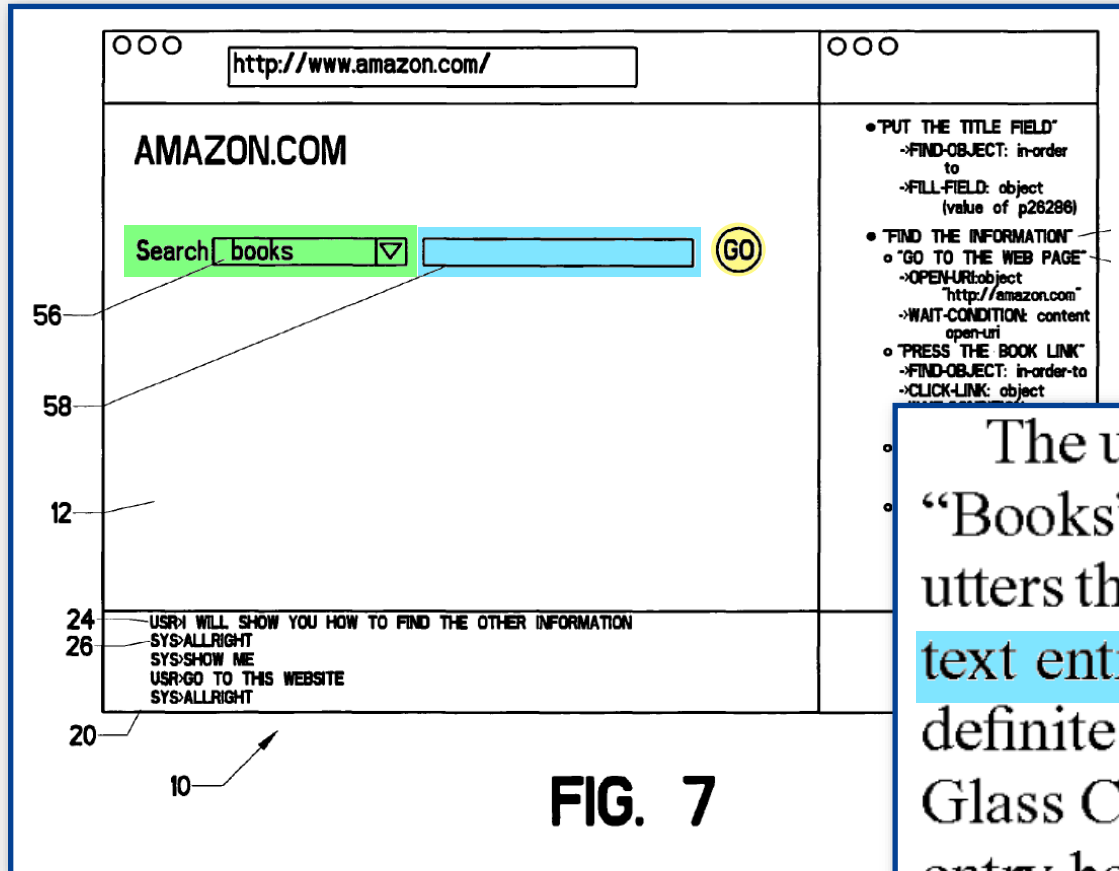


Allen (EX1014), Fig. 3

user is teaching the system how to buy a book. In FIG. 3, the user had instructed the system to “Enter the title here” (referring to a book title to be entered in title entry box 30). Task log

Allen (EX1014), 12:12-14

Allen Teaches “executing a functionality of a displayed user interface”



Allen (EX1014), Fig. 7

The user then demonstrates pulling down and selecting the “Books” category in search category box 56. The user next utters the phrase “Put the title here” and demonstrates picking text entry box 58. The system will infer from the use of the definite article “the” that the previously entered title (“The Glass Castle” entered in FIG. 3) should be placed in the text entry box. If the system’s inference is incorrect, the user can correct the mistake. The user then instructs PLOW to actuate the “GO” button to launch the search.

Allen (EX1014), 12:38-46

Roadmap

4. Allen (Independent Claims)

- “natural language interface” ('664, 1[a]; '317, 1[a]; '732, 1[a])
- “displayed user interface of a computer program” ('664, 1[c]; '732, 1[c]) / “[GUI] of the web-based target system” ('317, 1[d])
- “executing a functionality of the displayed user interface” ('664, 1[e])
- **“defining a conversation” ('732, 1[a])**
- “associating the conversation with the automation process” ('732, 1[b])
- “publishing the conversation to be accessible to a user” ('732, 1[d])

'732 Patent, Claim 1

1[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;

'732 Patent (EX1001), 22:19-23

Allen Teaches “defining a conversation”

The system identifies task input parameters using three sources: First, it uses the initial task description to define an objective. The system identifies ontological properties of the objective. If, as an example, the objective is buying a book, the system identifies the objective as a book and identifies the ontological properties of a book, such as the fact that it will have a title and that it will have been created by an author. Second, the system identifies parameters by observing which user actions require the inputting of text by the user. Third, the system identifies input parameters by recognizing user statements which require one.

Allen (EX1014), 3:47-56

12:62-13:5 Conversation

a book. The user would only need to say something like “I want to buy a book.” The system would then ask, “What is the

Allen Teaches “defining a conversation”

The system identifies task input parameters using three sources: First, it uses the initial task description to define an objective. The system identifies ontological properties of the objective. If, as an example, the objective is buying a book, the system identifies the objective as a book and identifies the ontological properties of a book, such as the fact that it will have a title and that it will have been created by an author. Second, the system identifies parameters by observing which user actions require the inputting of text by the user. Third, the system identifies input parameters by recognizing user statements which require one.

Allen (EX1014), 3:47-56

12:62-13:5 Conversation

want to buy a book.” The system would then ask, “What is the title of the book?” Once that information is provided, PLOW

Allen Teaches “defining a conversation”

The system identifies task input parameters using three sources: First, it uses the initial task description to define an objective. The system identifies ontological properties of the objective. If, as an example, the objective is buying a book, the system identifies the objective as a book and identifies the ontological properties of a book, such as the fact that it will have a title and that it will have been created by an author. Second, the system identifies parameters by observing which user actions require the inputting of text by the user. Third, the system identifies input parameters by recognizing user statements which require one.

Allen (EX1014), 3:47-56

12:62-13:5 Conversation

“authorization” steps. As an example, the user could teach the system to obtain price and delivery date information, then provide this information back to the user and ask whether the user wishes to complete the transaction.

Allen Teaches “defining a conversation”

with each other. Natural language sentences obtained from the user are thereby mapped to the task-specific ontology.

Allen (EX1014), 7:14-15

Roadmap

4. Allen (Independent Claims)

- “natural language interface” ('664, 1[a]; '317, 1[a]; '732, 1[a])
- “displayed user interface of a computer program” ('664, 1[c]; '732, 1[c]) / “[GUI] of the web-based target system” ('317, 1[d])
- “executing a functionality of the displayed user interface” ('664, 1[e])
- “defining a conversation” ('732, 1[a])
- **“associating the conversation with the automation process” ('732, 1[b])**
- “publishing the conversation to be accessible to a user” ('732, 1[d])

'732 Patent, Claim 1

1[b]

associating the conversation with the automation process, 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

'732 Patent (EX1001), 22:24-31

Allen Teaches “associating the conversation with the automation process”

Once the complete task is learned, the user can employ PLOW's task database the next time he or she wishes to order a book. The user would only need to say something like “I want to buy a book.” The system would then ask, “What is the title of the book?” Once that information is provided, PLOW would then perform the steps it was previously taught and complete the transaction. Of course, the user can build in “authorization” steps. As an example, the user could teach the system to obtain price and delivery date information, then provide this information back to the user and ask whether the user wishes to complete the transaction.

Allen (EX1014), 12:62-13:5

Roadmap

4. Allen (Independent Claims)

- “natural language interface” ('664, 1[a]; '317, 1[a]; '732, 1[a])
- “displayed user interface of a computer program” ('664, 1[c]; '732, 1[c]) / “[GUI] of the web-based target system” ('317, 1[d])
- “executing a functionality of the displayed user interface” ('664, 1[e])
- “defining a conversation” ('732, 1[a])
- “associating the conversation with the automation process” ('732, 1[b])
- **“publishing the conversation to be accessible to a user” ('732, 1[d])**

'732 Patent, Claim 1

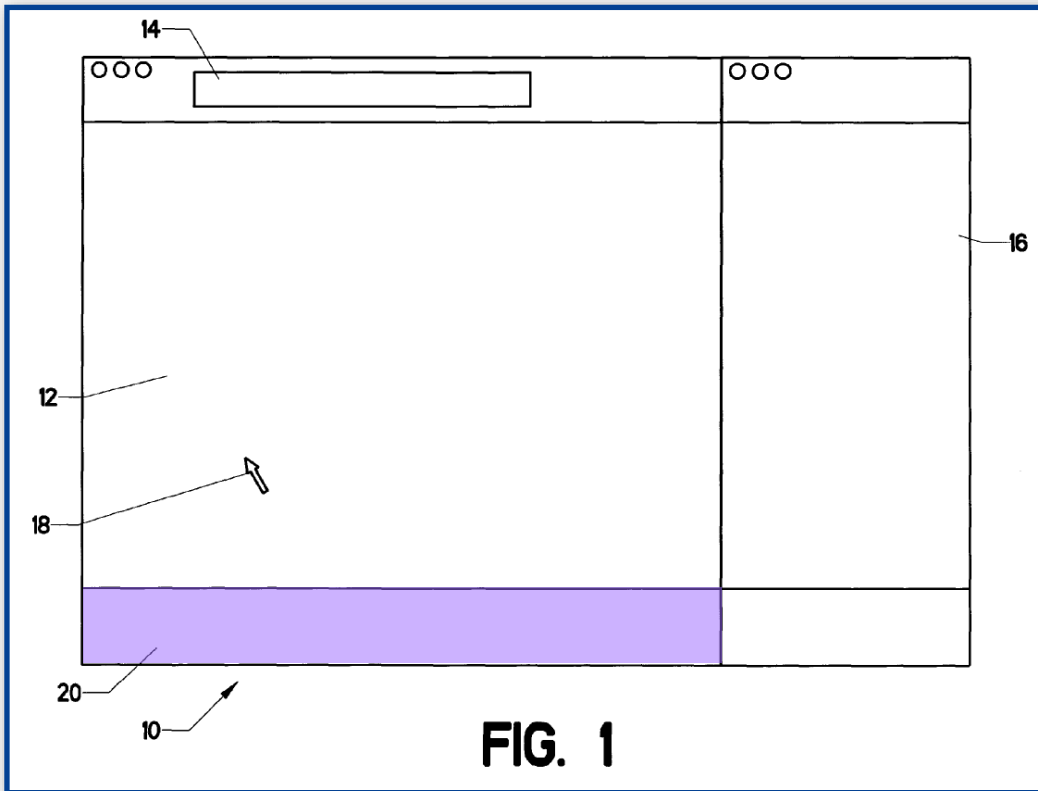
1[d]

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, 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.

'732 Patent (EX1001), 22:32-39

Allen Teaches

“publishing the conversation to be accessible to a user”



Allen (EX1014), Fig. 1

1. An interactive method for learning and executing executable tasks using language and demonstration inputs from a user, comprising:
 - a. providing a computational device including a graphical user interface (GUI);
 - b. providing software running on said computational device and supported GUI-based interaction with said user;
 - c. wherein said user performs tasks using the GUI
 - d. wherein said software includes a natural dialog-based interface whereby said user can communicate with said software using natural dialog-based language;

Allen (EX1014), 18:38-49

Roadmap

4. Allen (Dependent Claims)

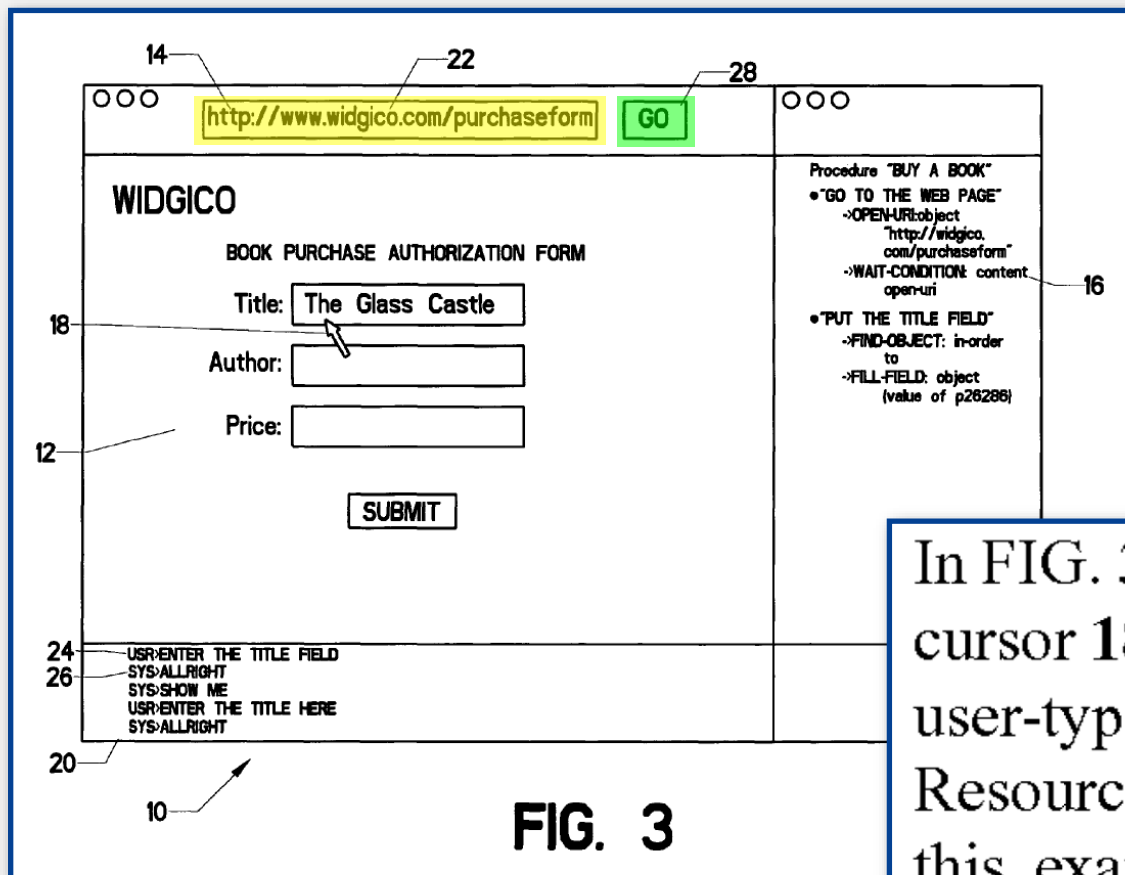
- ★ “activating the web browser to cause the displayed user interface to be displayed” (’664, Claim 18)
- ☆ “personalizing the automation process” (’317, Claim 6)
- ☆ “credentials of the user” (’317, Claim 7)
- ☆ “determining a conversation flow” (’732, Claim 2)
- ☆ “at least one of a message element and a condition element” (’732, Claim 3)
- “conversation elements comprise a second action element associated with a second automation process” (’732, Claim 4)
- “a plurality of conversations” (’732, Claim 5)
- ☆ “execute a functionality of the computer program” (’732, Claim 9)

'664 Patent, Claim 18

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.

'664 Patent (EX1001), 26:65-27:4

Allen Teaches “activating the web browser to cause the displayed user interface to be displayed”



Allen (EX1014), Fig. 3

In FIG. 3, the user moves a computer mouse so that movable cursor 18 moves up to URI entry box 14. The user then types user-typed input 22 using a keyboard to identify the Uniform Resource Identifier (“URI”) defining the desired website. In this example, the user types in “http://www.widgico.com/purchaseform.” The user then presses transmit button 28, which causes the web browser to “navigate” to the URI.

Allen (EX1014), 6:5-12

Roadmap

4. Allen (Dependent Claims)

- ☆ “activating the web browser to cause the displayed user interface to be displayed” (’664, Claim 18)
- ☆ “personalizing the automation process” (’317, Claim 6)
- ☆ “credentials of the user” (’317, Claim 7)
- ☆ “determining a conversation flow” (’732, Claim 2)
- ☆ “at least one of a message element and a condition element” (’732, Claim 3)
- **“conversation elements comprise a second action element associated with a second automation process” (’732, Claim 4)**
- “a plurality of conversations” (’732, Claim 5)
- ☆ “execute a functionality of the computer program” (’732, Claim 9)

'732 Patent, Claims 2 and 4

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.

'732 Patent (EX1001), 22:40-45

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.

'732 Patent (EX1001), 22:49-54

Roadmap

4. Allen (Dependent Claims)

- ☆ “activating the web browser to cause the displayed user interface to be displayed” (’664, Claim 18)
- ☆ “personalizing the automation process” (’317, Claim 6)
- ☆ “credentials of the user” (’317, Claim 7)
- ☆ “determining a conversation flow” (’732, Claim 2)
- ☆ “at least one of a message element and a condition element” (’732, Claim 3)
- “conversation elements comprise a second action element associated with a second automation process” (’732, Claim 4)
- **“a plurality of conversations” (’732, Claim 5)**
- ☆ “execute a functionality of the computer program” (’732, Claim 9)

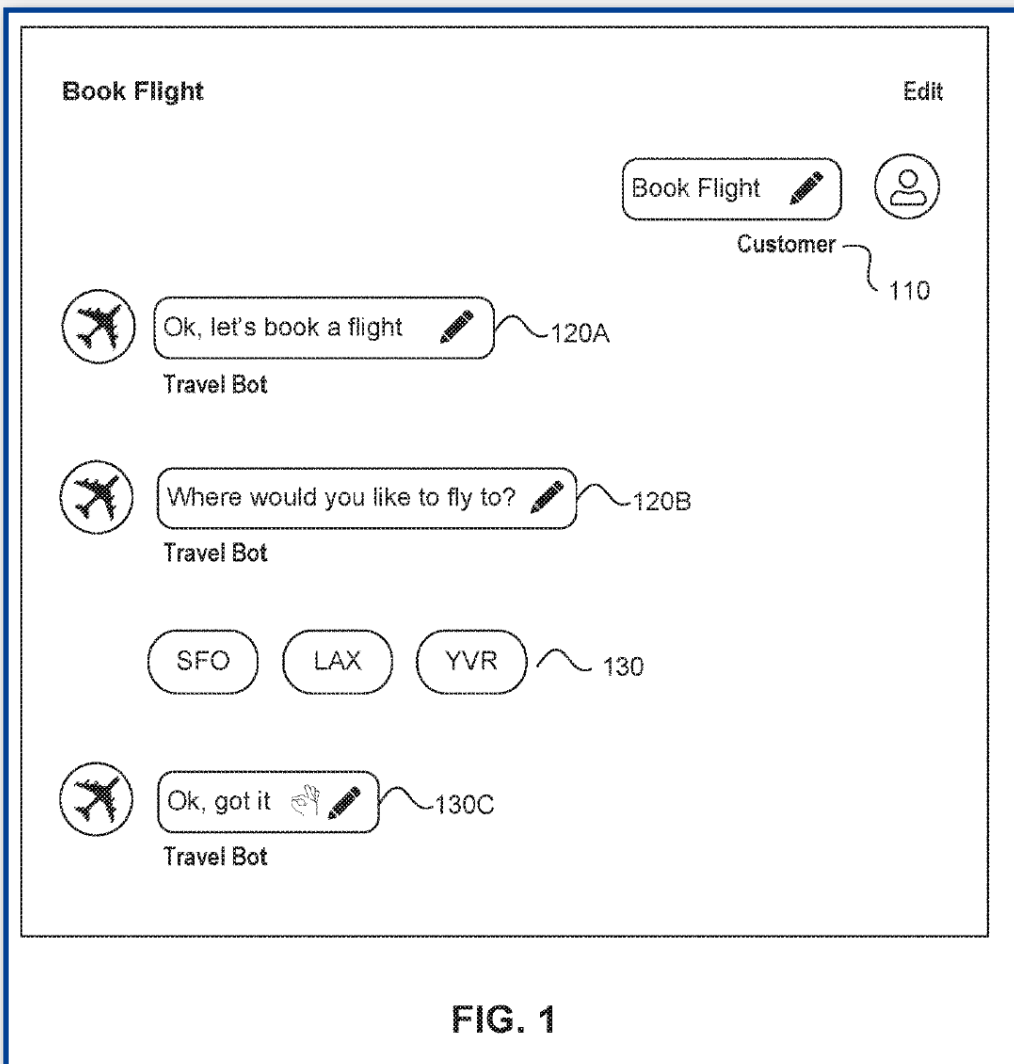
'732 Patent, Claim 5

5. The method of claim 1, wherein the natural language interface is associated with a plurality of conversations, wherein the plurality of conversations comprise the conversation; wherein each of the plurality of conversations is associated with one or more terms, wherein the natural language interface is configured to select a conversation from the plurality of conversations based on a user intent matching the one or more terms, wherein the user intent is determined based on interaction of the user with the natural language interface.

'732 Patent (EX1001), 22:55-64

Krishnan

Krishnan



Through executing dialogs, a chat bot can provide the user with information retrieved from another system, request information from the user, and perform actions to fulfill user requests (such as account transfers, refunds, processing payments, booking tickets, etc.). Based on different user

Krishnan (EX1016), 3:46-50

*Krishnan
(EX1016),
Fig. 1*



Radhakrishnan

Radhakrishnan

gration. Bots are trained to mimic user activity directly with a UI by only addressing a presentation layer of the computer system or device, not the underlying data layer of the system. The bot may transmit signals and commands electronically which mimic input signals sent directly through the UI. For example, a bot may transmit signals which simulate mouse and keyboard inputs to execute commands and perform automated tasks. These bot commands may not

Radhakrishnan (EX1018), 5:49-56

Roadmap

5. Krishnan-Radhakrishnan (Independent Claims)

- **“natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a]) / “a second natural language input” (’664, 1[b])**
- ☆ “collect information to be used as part of the automation process” (’317, 1[c])
- “executing a functionality of the displayed user interface” (’664, 1[e]) / “implement the automation process by interacting with a [GUI]” (’317, 1[d]) / “execute a functionality of the computer program” (’732, 1[c])
- “executing the automation process” (’664, 1[f])

'664 Patent, Claim 1

1[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, 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:

1[b]

'664 Patent (EX1001), 25:15-23

'317 Patent, Claim 1

1[a]

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

'317 Patent (EX1001), 25:29-30

'732 Patent, Claim 1

1[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;

'732 Patent (EX1001), 22:19-23

Krishnan Teaches A “natural language interface” / “second natural language input”

[0001] A chat bot may be a computer program that conducts a conversation via auditory and/or textual methods. A chat bot may be designed to simulate a human conversational pattern.

Krishnan Prov. App. (EX1017), [0001]

[0021] The bot builder UI enables an administrator to quickly and easily select how to receive responses/input from a user. For example, the admin may provide only user menu selections, only text/voice selections, or a combination of either or both. The bot builder UI enables an administrator to visually create the conversational flow from the bot's point of view and have a real-time immediate preview of the flow from the user's perspective. The bot builder UI enables calls back-and-forth between different dialogs for the conversation.

Krishnan Prov. App. (EX1017), [0021]

Roadmap

5. Krishnan-Radhakrishnan (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a]) / “a second natural language input” (’664, 1[b])
- ★ “collect information to be used as part of the automation process” (’317, 1[c])
- “executing a functionality of the displayed user interface” (’664, 1[e]) / “implement the automation process by interacting with a” [GUI]”) (’317, 1[d]) / “execute a functionality of the computer program” (’732, 1[c])
- “executing the automation process” (’664, 1[f])

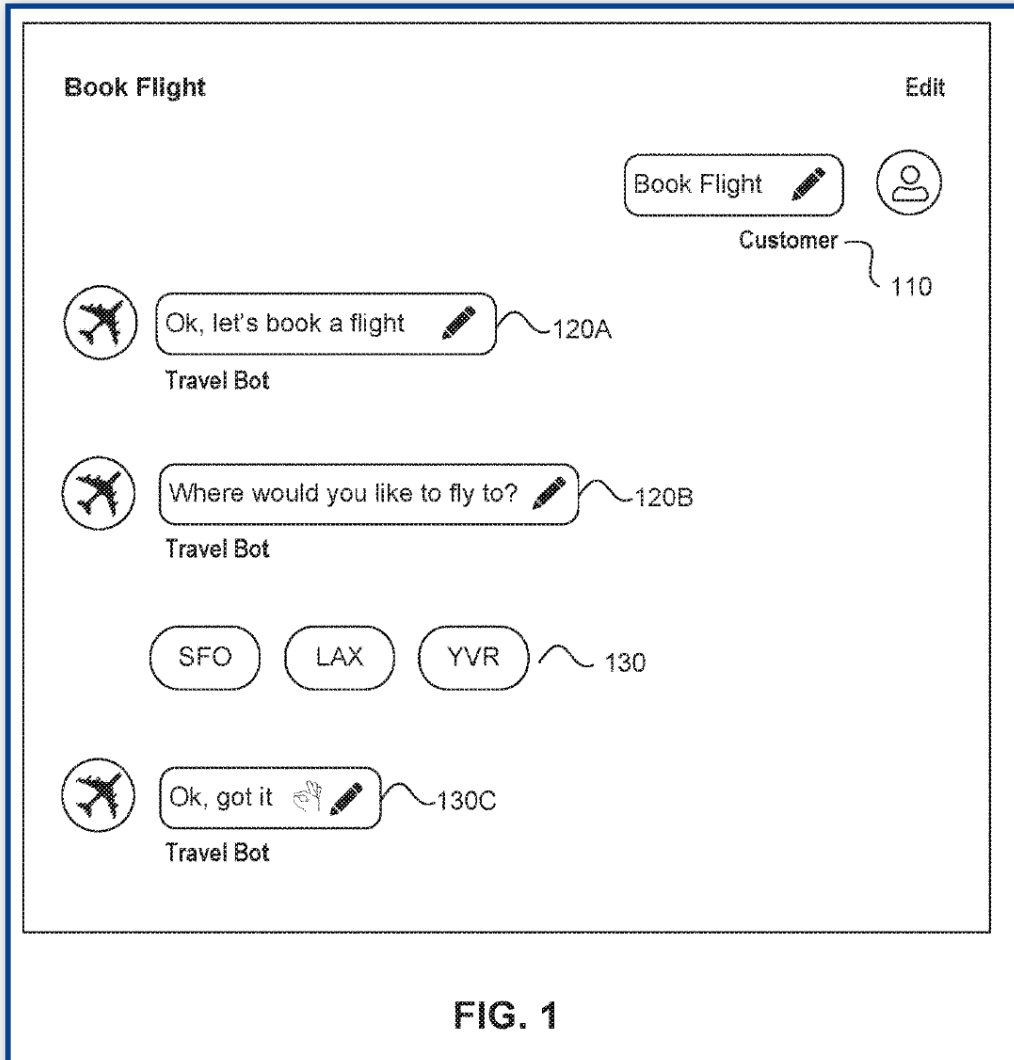
'317 Patent, Claim 1

1[c]

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

'317 Patent (EX1001), 25:34-35

Krishnan Teaches “collect[ing] information to be used as part of the automation process”



Through executing dialogs, a chat bot can provide the user with information retrieved from another system, request information from the user, and perform actions to fulfill user requests (such as account transfers, refunds, processing payments, booking tickets, etc.). Based on different user

Krishnan (EX1016), 3:46-50

Roadmap

5. Krishnan-Radhakrishnan (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a]) / “a second natural language input” (’664, 1[b])
- ☆ “collect information to be used as part of the automation process” (’317, 1[c])
- “executing a functionality of the displayed user interface” (’664, 1[e]) / “implement the automation process by interacting with a” [GUI]”) (’317, 1[d]) / “execute a functionality of the computer program” (’732, 1[c])
- “executing the automation process” (’664, 1[f])

'664 Patent, Claim 1

1[e]

configured to be displayed on a screen, 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**

'664 Patent (EX1001), 25:31-35

'317 Patent, Claim 1

1[d]

implement the automation process by interacting with a Graphical User Interface (GUI) of the web-based target system and simulating user input to the GUI of the web-based target system, wherein the automation pro-

'317 Patent (EX1001), 25:36-39

'732 Patent, Claim 1

1[c]

associating the conversation with the automation process, 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

'732 Patent (EX1001), 22:24-29

Radhakrishnan Teaches

“executing a functionality of the displayed user interface”

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

Radhakrishnan (EX1018), 11:41-47

gration. Bots are trained to mimic user activity directly with a UI by only addressing a presentation layer of the computer system or device, not the underlying data layer of the system. The bot may transmit signals and commands elec-

Radhakrishnan (EX1018), 5:49-52

'664 Petition (Paper 2), 70-71; '664 Reply (Paper 27), 24-25

'317 Petition (Paper 2), 65-66; '317 Reply (Paper 23), 20

'732 Petition (Paper 2), 62; '732 Reply (Paper 25), 26 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Radhakrishnan Teaches “executing a functionality of the displayed user interface”

system. The bot may transmit signals and commands electronically which mimic input signals sent directly through the UI. For example, a bot may transmit signals which simulate mouse and keyboard inputs to execute commands and perform automated tasks. These bot commands may not occur on a display device itself, but rather be performed in a virtual environment wherein the bot interprets the display of a screen electronically. Further, advantageously, these

Radhakrishnan (EX1018), 5:52-59

Roadmap

5. Krishnan-Radhakrishnan (Independent Claims)

- “natural language interface” (’664, 1[a]; ’317, 1[a]; ’732, 1[a]) / “a second natural language input” (’664, 1[b])
- ☆ “collect information to be used as part of the automation process” (’317, 1[c])
- “executing a functionality of the displayed user interface” (’664, 1[e]) / “implement the automation process by interacting with a” [GUI]”) (’317, 1[d]) / “execute a functionality of the computer program” (’732, 1[c])
- **“executing the automation process” (’664, 1[f])**

'664 Patent, Claim 1

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.

'664 Patent (EX1001), 25:36-39

Radhakrishnan Teaches “executing the automation process”

Patent Owner

Moreover, Radhakrishnan only describes “simulat[ing] user operations with the user device to generate an operation record for automatically generating and transmitting a diagnosis” (Ex1018, Abstract), not to execute an automation process. (POR, 73-74; Ex2001, ¶347, citing Ex1018, 12:37-46). Petitioner’s Reply

’664 PO Sur-reply (Paper 33), 25

Radhakrishnan

the UI. For example, a bot may transmit signals which simulate mouse and keyboard inputs to execute commands and perform automated tasks. These bot commands may not

Radhakrishnan (EX1018), 5:49-56

’664 Petition (Paper 2), 73

’317 Petition (Paper 2), 65-66

’732 Petition (Paper 2), 62, 66

Roadmap

5. Krishnan-Radhakrishnan (Independent Claims)

- ★ Motivation to combine ('664, '317, '732)
- ☆ Radhakrishnan is analogous art ('664, '317, '732)

Motivation To Combine Krishnan And Radhakrishnan

Petitioner

1:8-10; EX1003, ¶257.) Both aim for better user convenience, lower operational costs, and increased user and/or process efficiency. (EX1016, 2:5-11; EX1018, 6:21-34; EX1003, ¶257.) Krishnan teaches achieving these objectives by using a chatbot as an interface between the user and, *e.g.*, a back-end system. (EX1016, 2:33-35; EX1003, ¶258.) Radhakrishnan teaches using an RPA bot to automatically execute processes, such as a back-end process, at the presentation layer of the computing system (without an API). (EX1018, 5:21-23, 5:49-51; EX1003, ¶258.)

'664 Petition (Paper 2), 70-71; '317 Petition (Paper 2), 66; '732 Petition (Paper 2), 62

Motivation To Combine Krishnan And Radhakrishnan

device. By leveraging robotic process automation technology, the present invention reduces the amount of computing resources required to execute tasks when compared with executing the same tasks using a traditional application programming interface (API). Furthermore, due to the simple nature of designing and tailoring the functions of bots, a user or entity would be able to avoid the costly and time-consuming process of building a new and complicated API-based systems from the ground up. Additionally, the

Radhakrishnan (EX1018), 6:21-29

Motivation To Combine Krishnan And Radhakrishnan

API-based systems from the ground up. Additionally, the bots are able to transform output signals to simulate input signals related to input devices of a user interface (e.g., keyboards, mouse, touch-screen, microphone, or the like) allowing for the simulation of user input directly at the presentation layer of the application. Other applications or programs would not typically interact with another application in this manner, instead interaction through the data layer would require more complex programming requiring additional resources for development and operation. The bot application however interacts with the application at the user interface level and has the ability to input information or data into another application, whereas a typical application would be waiting for an input.

Radhakrishnan (EX1018), 6:29-42

'664 Petition (Paper 2), 70; '664 Reply (Paper 27), 26

'317 Petition (Paper 2), 66; '317 Reply (Paper 23), 22

'732 Petition (Paper 2), 62; '732 Reply (Paper 25), 27 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Roadmap

5. Krishnan-Radhakrishnan (Dependent Claims)

- ☆ “parameterized automation process” ('664, Claim 3)
- ☆ “executing is performed on a client device of the user” ('664, Claim 12) / “implement the automation process by a client device of the user” ('317, Claims 2 and 3)
- ☆ “personalizing the automation process” ('317, Claim 6)
- ☆ “without relying on a dedicated [API]” ('732, Claim 9)
- ☆ “inputting data to a field of the displayed user interface” ('732, Claim 10)

'664 Patent, Claim 1

1. A method comprising:
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, 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;
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, wherein the user interface of the computer program is configured to be displayed on a screen, 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
executing the automation process, wherein said executing comprises utilizing the displayed user interface of the computer program to perform the sequence of interactions.

*'664 Patent
(EX1001),
25:14-39*

'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:

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

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

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

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, wherein the automation process is performed with respect to third-party web-based target system and without relying on an Application Programming Interface (API) exposed by the web-based target system, 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

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

*'317 Patent
(EX1001),
25:24-50*

'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:

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;

associating the conversation with the automation process, 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

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, 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.

*'732 Patent
(EX1001),
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Certificate of Service (37 C.F.R. § 42.6(e)(4))

I hereby certify that the attached PETITIONER’S DEMONSTRATIVES
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