

1) Family number: 62910836 (US2016203002A)

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Title: HEADLESS TASK COMPLETION WITHIN DIGITAL PERSONAL ASSISTANTS

Abstract: Techniques are described for headlessly completing a task of an application in the background of a digital personal assistant. For example, a method can include receiving a voice input via a microphone. Natural language processing can be performed using the voice input to determine a user voice command. The user voice command can include a request to perform a task of the application. The application can be caused to execute the task as a background process without a user interface of the application appearing. A user interface of the digital personal assistant can provide a response to the user, based on a received state associated with the task, so that the response comes from within a context of the user interface of the digital personal assistant without surfacing the user interface of the application.

Classifications:

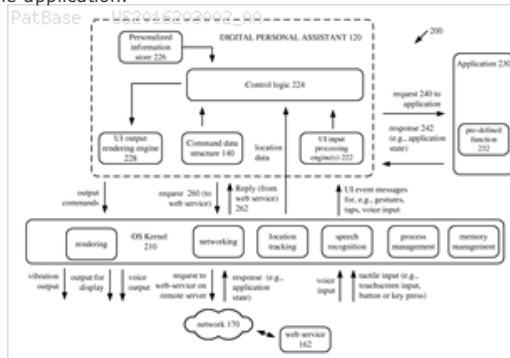
International (IPC 8-9): G06F3/01 G06F3/0484 G06F3/16 G06F9/44 G06F9/48 G10L G10L15/18 G10L15/22 G10L21/00 H04R3/00 (Advanced/Invention)

International (IPC 1-7): G10L15/22

CPC: G06F3/167 G06F3/0484 G10L15/1822 G06F3/162 G10L15/22

G06F9/4843 G06F9/453 G06F9/4446 G10L2015/223

US: 715/708



Family:

Publication number	Publication date	Application number	Application date
AU2015375326 AA	20160714	AU20150375326	20151229
BR112017013524 A2	20180102	BR20171113524	20151229
CA2970725 AA	20170612	CA20152970725	20151229
CL2017001755 A1	20180216	CL20170001755	20170703
CN107111516 A	20170829	CN201580072926	20151229
CO20170007028 A2	20170929	CO20170007028	20170713
EP3243199 A1	20171115	EP20150832720	20151229
ID201800404 A	20180119	ID2017P0004339	20151229
IL252458 A0	20170731	IL20150252458	20151229
IN201747019508 A	20170609	IN201747019508	20170602
JP2018511095 T2	20180419	JP20170536242T	20151229
KR20170103801 A	20170913	KR20177018792	20151229
MX2017008926 A1	20171011	MX20170008926	20151229
PH2017550012 A	20171018	PH20170550012	20170524
SG11201705282X A1	20170728	SG20171105282	20151229
US2016203002 AA	20160714	US20150593584	20150109
US9959129 BB	20180501	US20150593584	20150109
WO16111881 A1	20160714	WO2015US67759	20151229

Priority:

US20150593584 20150109 WO2015US67759 20151229

Probable Assignee: MICROSOFT TECHNOLOGY LICENSING LLC

Assignee(s): (std): MICROSOFT TECHNOLOGY LICENSING LLC ; MICROSOFT TECH LICENSING LLC

Assignee(s): TRUFINESCU ADINA MAGDALENA ; SOEMO THOMAS ; UZELAC ALEKSANDAR ; SHAHID KHURAM ; HWANG DANIEL J ; KANNAN VISHWAC SENA ; CHAMBERS ROBERT L ; EMAMI ALI

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

2) Family number: 56823932 (US2014270108A)

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Title: INTELLIGENT AUTOMATED AGENT AND INTERACTIVE VOICE RESPONSE FOR A CONTACT CENTER

Abstract: A system for a contact center includes: a processor; an interactive voice response (IVR) node configured to engage in an incoming interaction from a customer to the contact center by presenting set scripts to the customer and

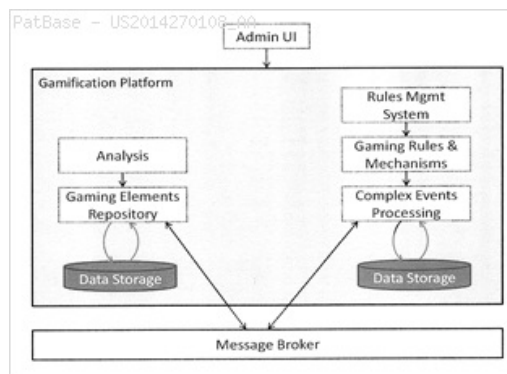
receiving corresponding responses; an intelligent automated agent including an artificial intelligence engine; a call server node configured to route the interaction and the responses to one of a pool of live agents or to the automated agent; and a non-transitory storage device coupled to the processor and configured to store customer profile data built from previous interactions. The automated agent is further configured to retrieve a profile of the customer from the customer profile data during the interaction and to update the retrieved profile on the storage device to reflect the interaction. The artificial intelligence engine is configured to learn knowledge from the interaction and to apply the learned knowledge to future interactions.

Classifications:

International (IPC 8-9): G06N99/00 G06Q30/00 G06Q30/02
H04M1/64 H04M3/00 H04M3/42 H04M3/493 H04M3/51 H04M3/523
H04M5/00 (Advanced/Invention);
H04M5/00 (Advanced/Non-invention)

CPC: H04M3/5235 G06N99/005 H04M3/5191 G06Q30/02 H04M3/00
H04M5/00 H04M3/4936 H04M3/5175 H04M2203/401 H04M2203/551
H04M3/5183 H04M3/5166 G06Q30/01

US: 1/1 379/265.02 379/265.07 379/265.09 379/265.13 379/266.01
379/266.02 379/266.08 379/88.01



Family:

Publication number	Publication date	Application number	Application date
AU2014233357 AA	20140918	AU20140233357	20140314
AU2014233357 BB	20170727	AU20140233357	20140314
AU2017251686 AA	20171109	AU20170251686	20171023
CA2917294 AA	20160104	CA20142917294	20140314
CN105229687 A	20160106	CN201480028462	20140314
EP2973312 A1	20160120	EP20140762585	20140314
EP2973312 A4	20160323	EP20140762585	20140314
KR101793355 B1	20171120	KR20157029613	20140314
KR20150131306 A	20151124	KR20157029613	20140314
KR20170122862 A	20171106	KR20177031090	20140314
US2014270108 AA	20140918	US20130866793	20130419
US2014270109 AA	20140918	US20130866812	20130419
US2014270146 AA	20140918	US20140270342	20140505
US2014314225 AA	20141023	US20130866763	20130419
US2015189085 AA	20150702	US20150656660	20150312
US2017006161 A9	20170105	US20130866763	20130419
US8767948 BA	20140701	US20130866824	20130419
US9008283 BB	20150414	US20130866812	20130419
US9386152 BB	20160705	US20130866793	20130419
US9648167 BB	20170509	US20140270342	20140505
WO14145149 A1	20140918	WO2014US29863	20140314

Priority:

US20130801323P 20130315	US20130866793 20130419	US20130866763 20130419
US20130866812 20130419	US20130866824 20130419	AU20140233357 20140314
WO2014US29863 20140314	US20140270342 20140505	US20150656660 20150312
AU20170251686 20171023		

Probable Assignee: GENESYS TELECOMMUNICATIONS LABORATORIES INC

Assignee(s): (std): GENESYS TELECOMM LAB INC ; GENESYS TELECOMMUNICATIONS LABORATORIES INC ; GREENEDEN US HOLDINGS II LLC ; GREENEDEN U S HOLDINGS II LLC

Assignee(s): RISTOCK HERBERT WILLI ARTUR ; RIAHI AKBAR ; SOUNDBITE COMMUNICATIONS INC ; UTOPIY INC ; GENESYS TELECOMMUNICATIONS LABORATORIES INC GRANTOR AS ; JPMORGAN CHASE BANK NA COLLATERAL AGENT AS ; ANGELCOM INC ; BANK OF AMERICA NA COLLATERAL AGENT AS

Inventor(s): (std): RIAHI AKBAR ; RISTOCK HERBERT WILLI ARTUR

Agent(s): FB RICE; FB RICE PTY LTD; FETHERSTONHAUGH AND CO; GRUENECKER PATENT U RECHTSANWALTE PARTG MBH; CHRISTIE PARKER AND HALE LLP; LEWIS ROCA ROTHGERBER CHRISTIE LLP; CHANG JOSEPHINE E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 55194967 (US8595642B)

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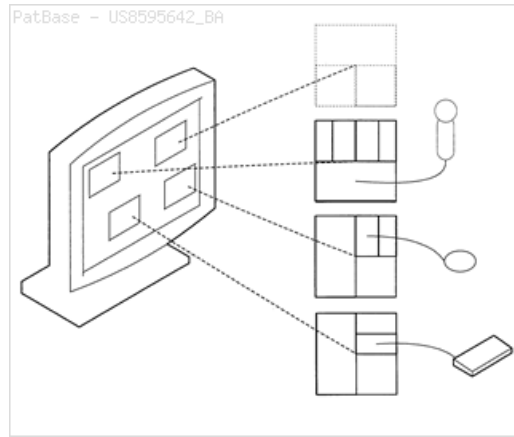
Title: MULTIPLE SHELL MULTI FACETED GRAPHICAL USER INTERFACE

Abstract: A multi faceted graphic user interface with multiple shells or layers may be provided for interaction with a user to speech enable interaction with applications and processes that do not necessarily have native support for speech input. The shells may be components of an operating system or of a parent application which supports such shells. Each shell has multiple facets for displaying applications and processes, and typically speech and other input is directed the application or process in the facet which has focus within the active shell. These multiple shells lend themselves to grouping of input or grouping of related applications and processes. For example, input from a speech recognizer, a mouse and a keyboard may each be directed at different shells; or a user may group related windows within various shells, such that all documents are displayed in one shell and all windows of an instant messaging application are displayed in another, thereby enabling better organization of work and work flow.

Classifications:

International (IPC 8-9): G06F13/00 G06F17/00 G06F17/30 G06F3/00
G06F3/048 G06F3/16 G06F9/44 G06T3/40 G09G5/00

G10L15/22 (Advanced/Invention)
CPC: G10L15/22 G10L2015/228 G06F3/167 G06F9/4443
G06F2203/04802 G06F3/048 G06F9/451
US: 1/1 704/275 715/778 715/779 715/781 715/782 715/804



Family:

Publication number	Publication date	Application number	Application date
US8595642 BA	20131126	US20080241035	20080930
US9189197 BA	20151117	US20130900480	20130522

Priority:

US20070983125P 20071004 US20070983125P 20071026 US20080241035 20080930
US20130900480 20130522

Probable Assignee: GREAT NORTHERN RESEARCH LLC
Assignee(s): (std): GREAT NORTHERN RES LLC ; LAGASSEY PAUL J
Assignee(s): GREAT NORTHERN RESEARCH LLC
Inventor(s): (std): LAGASSEY PAUL J
Agent(s): STEVEN M; OSTROLENK FABER LLP

4) Family number: 66708299 (US9741343B)

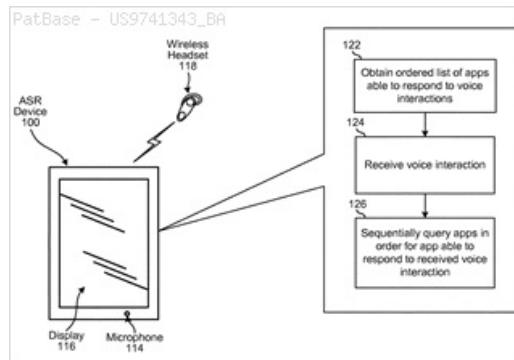
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Title: VOICE INTERACTION APPLICATION SELECTION

Abstract: An open framework for computing devices to dispatch voice-based interactions to supporting applications. Applications are selected on a trial-and-error basis to find an application able to handle the voice interaction. Dispatching to the applications may be performed without a determination of meaning conveyed in the interaction, with meaning determined by the individual applications. Once an application acts upon a voice interaction, that application may be given first-right-of-refusal for subsequent voice interactions.

Classifications:

International (IPC 8-9): G10L15/00 G10L15/01 G10L15/22
G10L15/26 (Advanced/Invention)
CPC: G10L15/265 G10L15/00 G10L15/01 G10L15/22 G10L2015/223
G10L2015/228



Family:

Publication number	Publication date	Application number	Application date
US9741343 BA	20170822	US20130134941	20131219

Priority:

US20130134941 20131219

Probable Assignee: AMAZON TECHNOLOGIES INC
Assignee(s): (std): AMAZON TECH INC
Assignee(s): AMAZON TECHNOLOGIES INC
Inventor(s): (std): DERAMAT FREDERIC JOHAN GEORGES ; GUNDETI VIKRAM KUMAR ; JAIN VIKAS ; MANTHEI CORY CURTIS ; MILES ANDREW CHRISTOPHER
Agent(s): PIERCE ATWOOD LLP

5) Family number: 57983826 (US2014365227A)

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Title: INTERPRETING AND ACTING UPON COMMANDS THAT INVOLVE SHARING INFORMATION WITH REMOTE DEVICES

Abstract: An electronic device with one or more processors and memory includes a procedure for sharing information with a third party recipient. In some embodiments, the device receives a speech input from a first user, the speech input specifying a second user different from the first user, and an information item to be shared with the second user. In response to the speech input, the device initiates a background process during which a digital assistant searches for the information item and

causes the information item to be sent to the second user without further review and instruction from the first user.

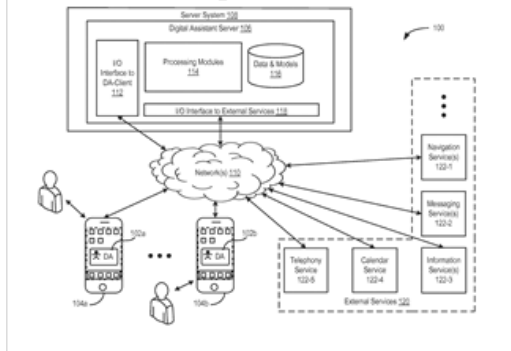
Classifications:

International (IPC 8-9): G06F17/27 G06F17/30 G06F3/16 G10L15/22 H04W4/02 (Advanced/Invention); H04M1/2745 (Advanced/Non-invention)

CPC: G10L15/22 G06F3/167 G06F17/3087 H04M1/274516 H04W4/02 H04W4/026 H04W4/027

US: 704/275

PatBase - US2014365227_AA



Family:

Publication number	Publication date	Application number	Application date
US2014365227 AA	20141211	US20140298678	20140606
US9966068 BB	20180508	US20140298678	20140606
WO14197335 A1	20141211	WO2014US40397	20140530

Priority:

US20130832821P 20130608 US20140298678 20140606

Probable Assignee: APPLE INC

Assignee(s): (std): APPLE INC

Inventor(s): (std): CASH JESSE R ; DAVE SWAPNIL R ; SWAPNIL DAVE R ; VAROGLU DEVRIM

Agent(s): DENTONS US LLP; EIDE CHRISTOPHER B ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

6) Family number: 57428365 (US2014278419A)

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Title: VOICE COMMAND DEFINITIONS USED IN LAUNCHING APPLICATION WITH A COMMAND

Abstract: A voice command definition file (VCDF) declaratively defines voice commands for an application. For example, the VCDF may include definitions for: voice commands; one or more phrases/utterances that may be said to execute each of the commands; a navigation location to navigate to within the application (e.g. a page); phrase lists containing items that may be used as a parameter in a voice command; examples; feedback; and the like. A user may say a single utterance to launch the application, navigate to the associated location of the command and execute the command. The VCDF may define multiple ways to listen for a particular command. The VCDF may be edited/defined by a user and may include a user friendly name for an application. A speech engine loads the VCDF for use such that it may recognize the commands associated with an application. The definitions may be updated during runtime.

Classifications:

International (IPC 8-9): G06F3/16 G10L15/04 G10L15/06

G10L15/22 (Advanced/Invention);

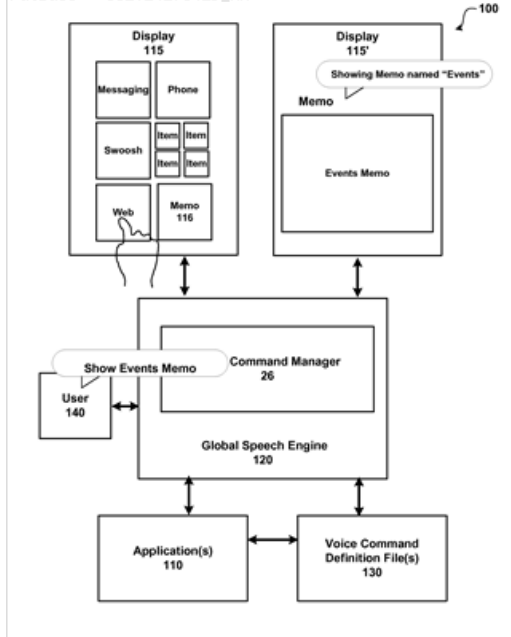
G10L15/193 (Advanced/Non-invention)

CPC: G10L15/22 G06F3/16 G06F3/167 G10L15/193 G10L2015/223

G10L15/063 G10L2015/0635

US: 1/1 704/244 704/249

PatBase - US2014278419_AA



Family:

Publication number	Publication date	Application number	Application date
US2014278419 AA	20140918	US20130830318	20130314
US2016275949 AA	20160922	US20160171064	20160602
US9384732 BB	20160705	US20130830318	20130314
US9905226 BB	20180227	US20160171064	20160602

Priority:

US20130830318 20130314 US20160171064 20160602

Probable Assignee: MICROSOFT TECHNOLOGY LICENSING LLC**Assignee(s):** (std): MICROSOFT CORP ; MICROSOFT TECH LICENSING LLC ; MICROSOFT TECHNOLOGY LICENSING LLC**Inventor(s):** (std): BISHOP F AVERY ; BROWN ROBERT ; CHAMBERS ROBERT ; WILSON TRAVIS**Agent(s):** STEVEN; TOM; MICKY**7) Family number: 33521466** (US2006253287A)

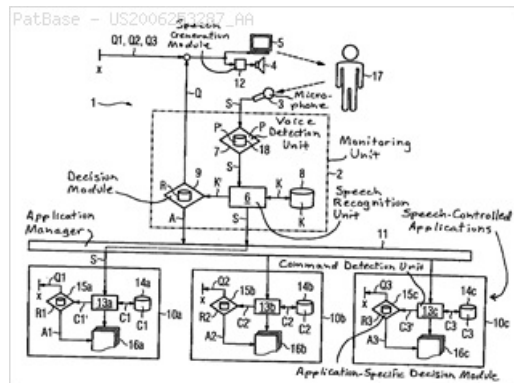
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Title: METHOD AND SYSTEM FOR MONITORING SPEECH-CONTROLLED APPLICATIONS

Abstract: In a non-manual method and system for monitoring speech-controlled applications, a speech data stream of a user is acquired by a microphone and the speech data stream is analyzed by a speech recognition unit for the occurrence of stored key terms. An application associated with the key term is activated or deactivated upon detection of a key term within the speech data stream.

Classifications:**International (IPC 8-9):** G10L15/22 G10L21/00 (Advanced/Invention);

G10L15/00 (Advanced/Non-Invention)

CPC: G10L2015/088 G10L2015/228**European:** S10L15/08W**US:** 704/275 704/275P 704/E15.044 704/E15.044S**Family:**

Publication number	Publication date	Application number	Application date
DE102005016853 A1	20061019	DE200510016853	20050412
US2006253287 AA	20061109	US20060402346	20060412

Priority:

DE200510016853 20050412

Probable Assignee: SIEMENS AG**Assignee(s):** (std): KAMMERER BERNHARD ; REINDL MICHAEL ; SIEMENS AG**Inventor(s):** (std): KAMMERER BERNHARD ; REINDL MICHAEL ; KAEMMERER BERNHARD**Agent(s):** SCHIFF HARDIN LLP, PATENT DEPARTMENT; SCHIFF HARDIN LLP PATENT DEPARTMENT**8) Family number: 49148667** (US2013176328A)

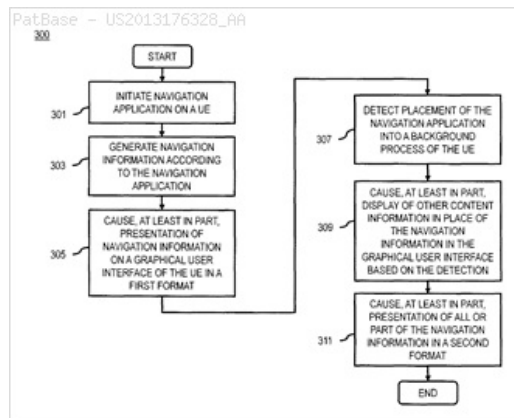
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Title: METHOD AND APPARATUS FOR PERSISTENT DISPLAY OF NAVIGATION CONTENT

Abstract: An approach is provided for presenting persistent navigation content. Presentation of navigation information on a graphical user interface is caused, at least in part, on a device in a first format. The navigation information is generated according to a navigation application. Placement of the navigation application into a background process of the device is detected. Display of other content information in place of the navigation information on the graphical user interface based on the detection is caused, at least in part. Presentation of all or part of the navigation information in a second format is caused, at least in part. The second format is a persistent element overlaid on the other content information in the graphical user interface.

Classifications:**International (IPC 8-9):** G01C21/32 G01C21/36 G06F3/00

G08G1/0968 G09G5/14 (Advanced/Invention)

International (IPC 1-7): G06F3/00**CPC:** G09G5/14 G01C21/3632 G01C21/3664**European:** G01C21/36G2 G01C21/36K**US:** 345/592 345/634**Family:**

Publication number	Publication date	Application number	Application date
IN03189CH2009 A	20110701	IN2009CH03189	20091225
US2013176328 AA	20130711	US20100517011	20101202
WO11076989 A1	20110630	WO2010FI50992	20101202

Priority:

IN2009CH03189 20091225 WO2010FI50992 20101202

Probable Assignee: NOKIA TECHNOLOGIES OY

Assignee(s): (std): NOKIA CORP ; PILLAI SETHU MADHAVAN

Assignee(s): NOKIA TECHNOLOGIES OY

Inventor(s): (std): PILLAI SETHU MADHAVAN

Agent(s): NOKIA CORP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 56142230 (US2014095173A)

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Title: SYSTEMS AND METHODS FOR PROVIDING A VOICE AGENT USER INTERFACE

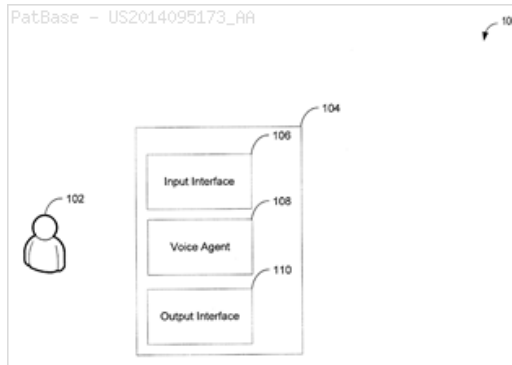
Abstract: Some embodiments provide techniques performed by at least one voice agent. The techniques include receiving voice input; identifying at least one application program as relating to the received voice input; and displaying at least one selectable visual representation that, when selected, causes focus of the computing device to be directed to the at least one application program identified as relating to the received voice input.

Classifications:

International (IPC 8-9): G10L15/22 (Advanced/Invention)

CPC: G10L15/22 G10L2015/228 G06F3/167

US: 704/275



Family:

Publication number	Publication date	Application number	Application date
US2014095173 AA	20140403	US20120632344	20121001

Priority:

US20120632344 20121001

Probable Assignee: NUANCE COMMUNICATIONS INC

Assignee(s): (std): NUANCE COMMUNICATIONS INC

Inventor(s): (std): LYNCH TIMOTHY ; CHEN VICTOR SHINE ; CABACO TIAGO GONCALVES ; BROWN SEAN P ; ATTAYADMAWITTAYA PAWEENA