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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	090611-0424941
First Named Inventor	Tom Freeman
Title	See Addendum
Express Mail Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☐ **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. ☑ **Applicant asserts small entity status.** See 37 CFR 1.27
3. ☐ **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. ☑ **Specification** [*Total Pages* 24] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. ☑ **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 3]
6. **Inventor's Oath or Declaration** [*Total Pages*] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   a. ☐ Newly executed (original or copy)
   b. ☐ A copy from a prior application (37 CFR 1.63(d))
7. ☑ **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program *(Appendix)*
   ☐ Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, items a. – c. are required)*
   a. ☐ Computer Readable Form (CRF)
   b. ☐ Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

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ACCOMPANYING APPLICATION PAPERS

10. ☐ **Assignment Papers** (cover sheet & document(s))
    Name of Assignee _____
11. ☐ **37 CFR 3.73(c) Statement** (*when there is an assignee*) ☐ **Power of Attorney**
12. ☐ **English Translation Document** (*if applicable*)
13. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☐ Copies of citations attached
14. ☐ **Preliminary Amendment**
15. ☐ **Return Receipt Postcard** (*MPEP § 503*) (*Should be specifically itemized*)
16. ☐ **Certified Copy of Priority Document(s)** (*if foreign priority is claimed*)
17. ☐ **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. ☐ **Other:** _____

***Note:** (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

☑ The address associated with Customer Number: 00909 **OR** ☐ Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/Ngai B. Zhang/	Date	September 3, 2013
Name (Print/Type)	Ngai B. Zhang	Registration No. (Attorney/Agent)	65,473

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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ADDENDUM

SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Tom Freeman, et al.

Application No.: ***New***

Filed: September 3, 2013

For: SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPLICATION DATA SHEET
37 CFR § 1.76

BIBLIOGRAPHIC DATA

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Correspondence for this application should be addressed as follows:

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4. Application information

Title of the Invention: SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

Attorney Docket Number: 090611-0424941

Total number of drawing sheets: 3

Type of application: Utility

Small Entity Status Claimed [X]

Secrecy order under § 5.2:

This application does not disclose subject matter of an application which is under a secrecy order pursuant to § 5.2.

5. Representative information.

The following have a power of attorney or authorization of agent in this application:

Customer No.: 00909

6. Domestic Priority information.

Domestic priority for this application is claimed as follows:

35 U.S.C. § 120:

Application No.: 13/371,870
Filed: February 13, 2012
Status: PENDING
Relationship: CONTINUATION

Application No.: 12/847,564
Filed: July 30, 2010
Status: PATENTED
Relationship: CONTINUATION

Application No.: 11/671,526
Filed: February 6, 2007
Status: PATENTED
Relationship: NON-PROVISIONAL

7. Assignee information

The assignee of this application is:

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Extent of interest of assignee in application: Entire right, title and interest.

Date: September 3, 2013

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SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

CROSS-REFERENCE TO RELATED APPLICATIONS

[001] This application is a continuation of 13/371,870, entitled "System and Method for Delivering Target Advertisements and Tracking Advertisement Interactions in Voice Recognition Context," filed February 13, 2012 (which issued as U.S. Patent No. 8,527,274 on September 3, 2013), which is a continuation of U.S. Patent Application Serial No. 12/847,564, entitled "System and Method for Selecting and Presenting Advertisements Based on Natural Language Processing of Voice-Based Input," filed July 30, 2010 (which issued as U.S. Patent No. 8,145,489 on March 27, 2012), which is a continuation of U.S. Patent Application Serial No. 11/671,526, entitled "System and Method for Selecting and Presenting Advertisements Based on Natural Language Processing of Voice-Based Input," filed February 6, 2007 (which issued as U.S. Patent No. 7,818,176 on October 19, 2010), the contents of which are hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

[002] The present invention relates to selecting and presenting advertisements based on natural language processing of voice-based input.

BACKGROUND OF THE INVENTION

[003] As technology advances, consumer electronics devices tend to play larger roles due to increased functionality and mobility. For example, mobile phones, navigation devices, embedded devices, and other such devices provide a wealth of functionality beyond core applications. However, increased functionality adds difficulty to the learning curve associated with using electronic devices, and increased mobility intensifies the demand for simple mechanisms to interact with devices on the go. For example, existing systems tend to have complex human to machine interfaces, which may inhibit mass-market adoption for various technologies. For example, when a user wishes to perform a relatively simple task on a mobile phone, such as purchasing a ring tone, the user often is forced to navigate through a series of

menus and press a series of buttons. In some instances, this may result in the transaction not necessarily occurring, as the user may prefer to avoid the hassles altogether. As such, there is ever-growing demand for ways to exploit technology in intuitive ways.

[004] Voice recognition software may enable a user to exploit applications and features of a device that may otherwise be unfamiliar, unknown, or difficult to use. However, many existing voice user interfaces (when they actually work) still require significant learning on the part of the user. For example, users often cannot directly issue a request for a system to retrieve information or perform an action without having to memorize specific syntaxes, words, phrases, concepts, semantic indicators, or other keywords/qualifiers. Similarly, when users are uncertain of particular needs, many existing systems do not engage the user in a productive, cooperative dialogue to resolve requests and advance a conversation. Instead, many existing speech interfaces force users to use a fixed set commands or keywords to communicate requests in ways that systems can understand. Using existing voice user interfaces, there is virtually no option for dialogue between the user and the system to satisfy mutual goals.

[005] The lack of adequate voice user interfaces results in missed opportunities for providing valuable and relevant information to users. Not only does this potentially leave user requests unresolved, in certain instances, providers of goods and services may lose out on potential business. In an increasingly global marketplace, where marketers are continually looking for new and effective ways to reach consumers, the problems with existing voice user interfaces leaves a large segment of consumer demand unfulfilled. Furthermore, existing techniques for marketing, advertising, or otherwise calling consumers to action fail to effectively utilize voice-based information, which is one of the most natural, intuitive methods of human interaction.

[006] Existing systems suffer from these and other problems.

SUMMARY OF THE INVENTION

[007] According to various aspects of the invention, a system and method for selecting and presenting advertisements based on natural language processing of voice-based inputs is provided. A natural language voice-based input may be received by a voice user interface. The voice-based input may include a user utterance, and a request may be identified from the

utterance. Appropriate action may be taken to service the request, while one or more advertisements may be selected and presented to the user. Advertisements may be selected based on various criteria, including content of the input (e.g., concepts, semantic indicators, etc.), an activity related to the input (e.g., a relation to a request, a requested application, etc.), user profiles (e.g., demographics, preferences, location, etc.), or in other ways. A user may subsequently interact with the advertisement (e.g., via a voice-based input), and action may be taken in response to the interaction. Furthermore, the interaction may be tracked to build statistical profiles of user behavior based on affinities or clusters among advertisements, user profiles, contexts, topics, semantic indicators, concepts, or other criteria.

[008] According to various aspects of the invention, advertisers may create advertisements, which may be stored in an advertisement repository. For example, advertisements may include sponsored messages, calls to action, purchase opportunities, trial downloads, or any other marketing communication, as would be apparent to those skilled in the art. Advertisers may specify various parameters to associate with the advertisements, such as various contexts or topic concepts (e.g., semantic indicators for a "music" concept may include words such as "music," "tunes," "songs," etc.), target demographics (e.g., a preferred audience), marketing criteria or prices for insertion (e.g., dynamic or static pricing based on various marketing criteria), or other information, as would be apparent. The advertisement repository may be associated with a server, where in response to a voice-based input from a user (e.g., at a voice-enabled device), a communications link may be established with the server. Information may be extracted from the voice-based input (e.g., words in the input, applications requested by the input, etc.), and the extracted information may be correlated with user profiles, advertisement parameters, or other information to determine which advertisements to select in relation to the voice-based input. The server may subsequently communicate the selected advertisements to the user, and the server may track the user's subsequent interaction with the selected advertisements.

[009] Other objects and advantages of the invention will be apparent based on the following drawings and detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

[010] Figure 1 illustrates a block diagram of an exemplary system for implementing a voice user interface according to various aspects of the invention.

[011] Figure 2 illustrates a block diagram of an exemplary advertising system according to various aspects of the invention.

[012] Figure 3 illustrates a flow diagram of an exemplary method for selecting and presenting advertisements based on voice-based inputs according to various aspects of the invention.

DETAILED DESCRIPTION

[013] Referring to Figure 1, an exemplary system 100 for implementing a voice user interface is illustrated according to various aspects of the invention. System 100 may enable users to perform various tasks on a voice-enabled device. For example, users may control navigation devices, media devices, personal computers, personal digital assistants, or any other device supporting voice-based inputs. System 100 may enable users to request voice-enabled devices to retrieve information or perform various tasks, among other things, using natural language voice-based inputs. For example, system 100 may interpret natural language voice-based inputs and generate responses using, among other things, techniques described in U.S. Patent Application Serial No. 10/452,147, entitled "Systems and Methods for Responding to Natural Language Speech Utterance," filed June 3, 2003, which issued as U.S. Patent No. 7,398,209 on July 8, 2008, and U.S. Patent Application Serial No. 10/618,633, entitled "Mobile Systems and Methods for Responding to Natural Language Speech Utterance," filed June 15, 2003, which issued as U.S. Patent No. 7,693,720 on April 6, 2010, both of which are hereby incorporated by reference in their entirety. For example, as described in U.S. Patent Application Serial No. 10/452,147, the system 100 may include a speech recognition engine (e.g., an Automatic Speech Recognizer 110) that may recognize words and phrases in an utterance using entries in one or more dictionary and phrase tables. In addition, as further described therein, fuzzy set possibilities or prior probabilities for the words in the dictionary and phrase tables may be dynamically updated to maximize the probability of correct recognition at each stage of the dialog (e.g., the probabilities or possibilities may be dynamically updated based on application

domains, questions or commands, contexts, user profiles and preferences, user dialog histories, recognizer dictionary and phrase tables, word spellings, and/or other criteria).

[014] According to various aspects of the invention, system 100 may receive a user input, including at least a voice-based user utterance, at an input device 105. Input device 105 may include any suitable device, or combination of devices, for receiving a voice-based input (e.g., a microphone). In various implementations, input device 105 may include a multi-modal input, such as a touch-screen interface, keypad, or other input. The received utterance may be processed by the Automatic Speech Recognizer 110. Automatic Speech Recognizer 110 may generate one or more preliminary interpretations of the utterance using various techniques. For example, Automatic Speech Recognizer 110 may interpret the utterance using techniques of phonetic dictation to recognize a stream of phonemes. Further, Automatic Speech Recognizer 110 may perform post-processing to enhance the preliminary interpretations. For example, Automatic Speech Recognizer 110 may vary interpretations of an utterance, or components of an utterance, from one context to another. Other techniques for enhancing an interpretation of a user utterance may be used, such as those described in U.S. Patent Application Serial No. 11/513,269, entitled "Dynamic Speech Sharpening," filed August 31, 2006, which issued as U.S. Patent No. 7,634,409 on December 15, 2009, and which is hereby incorporated by reference in its entirety.

[015] The one or more preliminary interpretations may be provided to a conversational language processor 120. Conversational language processor 120 may include a voice search engine 125, a context determination module 130, and one or more agents 135, among other things, to enable cooperative, conversational interaction between the user and system 100. Conversational language processor 120 may be communicatively coupled to one or more data repositories 140 and one or more applications 150. Conversational language processor 120 may generate a domain-specific conversational response, which may be returned to the user as an output 180. Output 180 may include a multi-modal output (e.g., by simultaneously returning a voice-based response and displaying information on a display device).

[016] System 100 may further include an interaction with one or more applications 150 to service one or more requests in the utterance. For example, the utterance may include one or

more requests for performing an action, retrieving information, or various combinations thereof. Output 180 may include a conversational response to advance a conversation to service requests by invoking one or more applications 150, as appropriate. For example, applications 150 may include a navigation application 155, an advertising application 160, a music application, an electronic commerce application 170, and/or other applications 175. Furthermore, Automatic Speech Recognizer 110, conversational language processor 120, data repositories 140, and/or applications 150 may reside locally (e.g., on a user device), remotely (e.g., on a server), and/or hybrid local/remote processing models may be used (e.g., lightweight applications may be processed locally while computationally intensive applications may be processed remotely).

[017] Conversational language processor 120 may build long-term and/or short-term shared knowledge in one or more knowledge sources. For example, shared knowledge sources may include information about previous utterances, requests, and other user interactions to inform generating an appropriate response to a current utterance. The shared knowledge may include public/non-private (i.e., environmental) knowledge, as well as personal/private (i.e., historical) knowledge. For example, conversational language processor 120 may use context determination module 130 to establish a context for a current utterance by having domain agents 135 competitively generate a context-based interpretation of the utterance (e.g., by scoring possible interpretations and selecting a highest scoring interpretation). As such, agents 135 may model various domains (e.g., navigation, music, a specific user, global users, advertising, e-commerce, etc.), and conversational language processor 120 may interpret and/or respond to a voice-based input accordingly. For example, context-based interpretations and responses to a voice-based input may be generated using techniques described in U.S. Patent Application Serial No. 11/197,504, entitled "Systems and Methods for Responding to Natural Language Speech Utterance," filed August 5, 2005, which issued as U.S. Patent No. 7,640,160 on December 29, 2009, and U.S. Patent Application Serial No. 11/212,693, entitled "Mobile Systems and Methods of Supporting Natural Language Human-Machine Interactions," filed August 29, 2005, which issued as U.S. Patent No. 7,949,529 on May 24, 2011, both of which are hereby incorporated by reference in their entirety.

[018] Furthermore, conversational language processor 120 may support adaptive misrecognition to reinterpret a current utterance and/or one or more previous utterances. For example, information contained in a current utterance may indicate that interpretations for one or more previous utterances were incorrect, and therefore, the previous utterances may be reinterpreted to improve subsequent interpretations. Accordingly, conversational language processor 120 may use the techniques described herein, along with various other techniques, to interpret and respond to conversational, natural language utterances. Conversational language processor 120 may use various other techniques as will be apparent, such as those described in U.S. Patent Application Serial No. 11/200,164, entitled "System and Method of Supporting Adaptive Misrecognition in Conversational Speech," filed August 10, 2005, which issued as U.S. Patent No. 7,620,549 on November 17, 2009, and U.S. Patent Application Serial No. 11/580,926, entitled "System and Method for a Cooperative Conversational Voice User Interface," filed October 16, 2006, which issued as U.S. Patent No. 8,073,681 on December 6, 2011, both of which are hereby incorporated by reference in their entirety. For example, as described in U.S. Patent Application Serial No. 11/200,164, an environmental model may be accessed to determine user location, user activity, track user actions, and/or other environmental information to invoke context, domain knowledge, preferences, and/or other cognitive qualities to enhance the interpretation of questions and/or commands. In addition, as further described therein, based on information received from a general cognitive model, the environmental model, and/or a personalized cognitive model, which provide statistical abstracts of user interaction patterns, the system 100 may enhance responses to commands and questions by including a prediction of user behavior.

[019] Referring to Figure 2, an exemplary advertising system 200 is illustrated according to various aspects of the invention. System 200 may include a server 230 for receiving one or more advertisements from an advertiser 220, wherein the advertisements may be stored in a data repository 260 associated with server 230. For example, advertisements may include sponsored messages or marketing communications, calls to action, purchase opportunities, trial downloads, coupons, or any other suitable marketing, advertising, campaign, or other information, as would be apparent to those skilled in the art. A voice-enabled device 210 may

receive a voice-based input and establish communications with advertising server 230. Subsequently, advertising server 230 may select one or more advertisements from among the advertisements stored in data repository 260, and the selected advertisements may be provided to the voice-enabled device for presentation to a user.

[020] Advertiser 220 may access advertising server 230 via an advertiser interface 245. Advertisers 220 may upload targeted advertisements to server 230 via advertiser interface 245, and server 230 may store the advertisements in data repository 260. The advertisements may include graphically-based advertisements that include banners, images, audio, video, or any suitable combination thereof. Furthermore, the advertisements may include interactive or embedded information, such as links, metadata, or computer-executable instructions, or any suitable combination thereof. Advertisers may specify criteria for a campaign or targeting information for an advertisement (e.g., a start date, an end date, budget information, geo-targeting information, conceptual or contextual information, or any other suitable criteria), which may be used to facilitate selecting an advertisement in relation to a particular voice-based input.

[021] In addition to providing interface 245 for advertisers, server 230 may include a content/action identification module 235, a user profile module 240, an advertisement selection module 250, and a tracking module 255. Users may submit voice-based requests to voice-enabled device 210, and voice-enabled device 210 may communicate information about the voice-based input to server 230. Server 230 may invoke advertisement selection module 250 to extract relevant information from the voice-based input, where advertisement selection module 250 may select one or more advertisements relevant to the voice-based input based on information extracted using content/action identification module 235 and/or user profile module 240.

[022] For example, content/action identification module 235 may identify content of the voice-based input (e.g., words in the input), requested information (e.g., search results, a web page, music, video, graphics, or other information), requested actions (e.g., calculating a navigation route, placing a telephone call, playing a song, etc.), a category or topic related to the input (e.g., music, business, stocks, sports, navigation, movies, etc.), or other criteria to use

in selecting an advertisement. Further, user profile module 240 may identify characteristics of a specific user (e.g., demographics, personal preferences, location-based information, etc.), global user profiles (e.g., demographic profiles, click-through rates, etc.), or other criteria to use in selecting an advertisement. Moreover, advertisement selection module 250 may account for where a request originates from. For example, advertisements may be selected based on a default user location (e.g., identified from a user profile), current geolocation information (e.g., identified from a navigation device), whether an affiliate or partner of server 230 initiated the request, or other criteria.

[023] For instance, a user may request airline reservations via voice-enabled device 210, and content/action identification module 235 may identify specific words used in the request, a category related to the request (e.g., travel, airlines, hotels, etc.), or other information. Furthermore, user profile module 240 may identify relevant characteristics of the user (e.g., user-specific demographics, location information, preferred airlines or hotels, etc.), as well as global user characteristics (e.g., most popular airlines). In various implementations, advertisements may be selected by assigning a score to each advertisement (e.g., based on click-through rates, relevance metrics, target audiences, etc.). As such, advertisement selection module 250 may correlate the information about the request to select advertisements stored in data repository 260, and server 230 may communicate the selected advertisements to voice-enabled device 210. Furthermore, selected advertisements may be presented according to a predetermined ordering or ranking (e.g., based on a ranking of relevance to an advertisement).

[024] In various implementations, advertisement selection module 250 may retrieve a predetermined number of advertisements for any given request. Furthermore, the selected advertisements may depend upon a presentation format. For example, advertisements may be selected based on an amount of available space on a display of voice-enabled device 210 and/or a size/shape of the selected advertisements. In another example, voice-based advertisements may be selected and presented to the user audibly (e.g., a "hands-free" advertisement may be preferred when voice-enabled device 210 is a telematics device).

[025] Furthermore, the user's subsequent interaction with an advertisement may be tracked using tracking module 255. For example, tracking module 255 may determine whether a

conversion or click-through occurs for each advertisement presented to users. Further, tracking module 255 may maintain accounting and/or billing information associated with advertisers 220. For example, advertisers 220 may specify a maximum insertion cost, a cost-per-click-through, an average insertion cost, or other criteria specifying a budget constraint for an advertisement. As such, tracking module 255 may track which advertisements are selected and/or presented, which advertisements result in a conversion or click-through, whether a click-through or conversion results in a transaction or sale, associations between advertisements and users, requests, concepts, semantic indicators, and/or other criteria. For example, tracking user interaction with advertisements may be used to build user-specific and/or global statistical profiles that map or cluster advertisements to topics, semantic indicators, contexts, concepts, etc. based on user behavior, demographics, targeting constraints, content of advertisements, content of requests, actions associated with requests, or other statistically relevant information. Accordingly, the tracking information may be used to bill or invoice advertisers 220, as well as to improve subsequent performance and relevance of advertisements selected using advertisement selection module 250. Other techniques and features of selecting and presenting advertisements based on voice-based inputs may suitably be employed, as would be apparent.

[026] Referring to Figure 3, an exemplary method for selecting and presenting advertisements based on a voice-based input is illustrated according to various aspects of the invention. The method may begin in an operation 305, where a voice-based input, including at least a user utterance, may be received at a voice user interface. The voice user interface may include any suitable mechanism for receiving the utterance (e.g., a microphone), and may interface with any suitable voice-enabled device, as would be apparent, including personal navigation devices, personal digital assistants, media devices, telematics devices, personal computers, mobile phones, or others.

[027] Subsequently, one or more requests included in the voice-based input may be identified in an operation 310. For example, the requests may include requests to retrieve information, perform tasks, explore or gather information, or otherwise interact with a system or device. For example, a voice-based input to a navigation device may include a request to calculate a

route or retrieve location-based information. In another example, a voice-based input to a mobile phone may include a request to place a telephone call, purchase a ringtone, or record a voice-memo. Furthermore, in various implementations, voice-based inputs may include multiple requests, multi-modal requests, cross-device requests, cross-application requests, or other types of requests. For example, an utterance received in operation 305 may be: "Get me a route to Chang's Restaurant, and call them so I can make a reservation." The utterance may thus include multiple requests, including cross-device requests (e.g., calculate a route using a navigation device, and make a telephone call using a mobile phone), as well as cross-application requests (e.g., search for an address and/or phone number using a voice search engine, and calculate a route using a navigation application).

[028] The requests may be part of a conversational interaction between a user and a system or device, whereby an interpretation of requests in a current utterance may be based upon previous utterances in a current conversation, utterances in previous conversations, context-based information, local and/or global user profiles, or other information. For example, a previous request may be reinterpreted based on information included in subsequent requests, a current request may be interpreted based on information included in previous requests, etc. Furthermore, the conversational interaction may take various forms, including query-based conversations, didactic conversations, exploratory conversations, or other types of conversations. For example, the conversational language processor may identify a type of conversation, and information may be extracted from the utterance accordingly to identify the one or more requests in operation 310. Moreover, the conversational language processor may determine whether any of the requests are incomplete or ambiguous, and action may be taken accordingly (e.g., a system response may prompt a user to clarify an incomplete and/or ambiguous request). The conversational language processor may therefore use various techniques to identify a conversation type, interpret utterances, identify requests, or perform other tasks, such as those described in the aforementioned U.S. Patent Applications and U.S. Patents, which are hereby incorporated by reference in their entirety.

[029] Upon identifying the one or more requests, action may be taken based on the identified requests in an operation 315, while one or more advertisements may be selected in an

operation 320 (described in greater detail below). For example, one or more context-appropriate applications may be invoked to service the requests in operation 315 (e.g., a voice search engine, a navigation application, an electronic commerce application, or other application may be invoked depending upon the request). Furthermore, in operation 320, information may be communicated to an advertising server to select one or more advertisements related to the request. Thus, as shown in Figure 3, taking action in operation 315 and selecting advertisements in operation 320 may be related operations (e.g., advertisements may be selected to help in interpreting incomplete and/or ambiguous requests).

[030] Upon taking action in operation 315 (e.g., to service the request) and selecting one or more advertisements in operation 320 (e.g., in relation to the request), an output may be presented to the user in operation 325. The output may indicate a result of the action associated with operation 315. For example, the output may include requested information, an indication of whether a requested task was successfully completed, whether additional information is needed to service the request (e.g., including a prompt for the information), or other information relating to an action based on the request. Furthermore, the output may include advertisements, as selected in operation 320. For example, the output may include text-based, graphic-based, video-based, audio-based, or other types of advertisements, as would be apparent to those skilled in the art. Further, the output may include other types of advertisements, including calls to action (e.g., a location-based coupon or purchase opportunity, trial downloads, or other actionable advertising or marketing).

[031] Advertisements may be selected in relation to a request based on various criteria. For example, an advertisement may be selected based on words or other content of the request, relevant words or content related to the words or content of the request, etc. In another example, the advertisement may be selected based on requested tasks/information (e.g., a request for movie showtimes may result in an advertisement being selected for a particular theater). In yet another example, the advertisement may be selected based on a topic or category associated with the requested tasks/information (e.g., a request to purchase airline tickets may result in an advertisement being selected for a hotel in a destination associated

with a reserved flight). In still other examples, the advertisement may be selected based on location information, (e.g., advertisements may be selected based on a proximity to a user geolocation identified using a navigation device), user-specific and/or global user profiles (e.g., advertisements may be selected based on user-specific and/or global preferences, advertiser campaign criteria, etc.).

[032] Content of a voice-based input may be determined based on various criteria, including contextual or conceptual information (e.g., semantic indicators, qualifiers, or other information). For example, a given concept may include various semantically equivalent indicators having an identical meaning. Thus, for instance, a voice-based input may be "Play some tunes!" or "Play some music!" or other variants thereof, each of which may be interpreted as relating to a specific idea (or concept) of "Music." Thus, concept or content information in a request may be used to select an advertisement. For example, a user may request to calculate a route in Seattle, Washington (e.g., "How do I get to the Space Needle?"). Based on a context of the requested task (e.g., "Navigation," "Seattle," etc.), a voice search engine may retrieve an address of the Space Needle and a navigation application may calculate the route. Furthermore, user profile information may indicate that the user is visiting Seattle from out-of-town (e.g., the profile may indicate that the user's home is Sacramento), and therefore, an advertisement for popular points-of-interest in Seattle may be selected. In another example, the user may request information about a sporting event (e.g., "Get me the kickoff time for the Eagles game on Sunday"). Based on a context of the requested information (e.g., "Search," "Sports," "Philadelphia," etc.), the requested information may be retrieved, while an advertisement for Eagles apparel or memorabilia may be selected.

[033] In various instances, concepts, semantic indicators, qualifiers, or other information included in, or inferred from, a request may indicate an exploratory nature for the request. In other words, the exploratory request may identify a goal for a conversation, instead of a particular task to perform or information to retrieve. As such, in various implementations, an advertisement may be selected in operation 320 in an effort to advance the conversation towards the goal. For example, an exploratory request may include a request for a navigation route (e.g., "I feel like going to a museum, find me something interesting"). Based on a context

of the requested task (e.g., "Navigation," "Points of Interest," etc.), the goal of the conversation may be identified, and the request may be serviced in operation 315 (e.g., a voice search engine may locate nearby points of interest based on user preferred topics). Further, the advertising application may select an appropriate advertisement in operation 320, where the advertisement may be selected in an attempt to advance the conversation towards the goal. For example, statistical profiles (e.g., user profiles, global profiles, topic-based profiles, etc.) may reflect an affinity between an advertisement for a particular museum and other users sharing similar demographics or other characteristics with the requesting user. Thus, in addition to retrieving information about museums in operation 315, an advertisement for a museum likely to be of interest to the user may be selected in operation 320.

[034] In various instances, a request may include incomplete, ambiguous, unrecognized, or otherwise insufficient semantic indicators, context, qualifiers, or other information needed to identify the request. In other words, the request may include inadequate information to identify or infer a task to perform, information to retrieve, or a goal for a conversation. Thus, as much information as possible may be extracted and/or inferred from the request based on shared knowledge such as context, user or global profile information, previous utterances, previous conversations, etc. As such, servicing the request may include generating a response and/or communicating with an advertising application to advance a conversation toward a serviceable request. For example, servicing the request in operation 315 and selecting an advertisement in operation 320 may include generating a response and/or selecting an advertisement to frame a subsequent user input, thereby advancing the conversation.

[035] For example, the request may include incomplete, ambiguous, or unrecognized information (e.g., "Do you know [*mumbled words*] Seattle?"). A context of the requested task may be identified (e.g., "Seattle"), yet the identified context may be insufficient to adequately take action to service the request. Additional information may be inferred based on previous utterances in the conversation, profile information, or other information. However, when the additional information fails to provide adequate information to infer a reasonable hypothesis, servicing the request in operation 315 may include generating a response to frame a subsequent user input and advance the conversation (e.g., information about various topics

may be retrieved based on a user's preferred topics). Further, the advertising application may select an advertisement in operation 320 to advance the conversation (e.g., advertisements may be selected based on user and/or global profiles reflecting an affinity between certain advertisements associated with Seattle and user preferences, profiles, etc.). Thus, by selecting an advertisement, indicating dissatisfaction with an advertisement, or otherwise interacting with an advertisement, the interaction may be used to build context and shared knowledge for a subsequent course of the conversation. For example, a user may select an advertisement, and an interpretation of a subsequent voice-based input (e.g., "Call them," "What's the price range?" etc.) may be interpreted with shared knowledge of the advertisement that the voice-based input relates to. Thus, advertisements may be used in a way that enables advertisers to market to consumers, while also improving the consumers' interaction with a device. Other advantages will be apparent to those skilled in the art.

[036] It will be apparent that operation 320 may use various techniques to select advertisements based on voice-based inputs and/or requests included therein. For example, an advertiser may specify a target audience, marketing criteria, campaign strategies, budget constraints, concepts, semantic indicators, related topics, categories, and/or any other suitable information to associate with an advertisement. For instance, advertisers may pay a premium to prioritize an advertisement in relation to similar advertisements (e.g., advertisements associated with competitors). In another example, various statistical profiles may define affinities between advertisements, topics, users, etc. (e.g., based on click-through or conversion rates, or other tracking information, as described in more detail below). Thus, advertisements may be selected in operation 320 using various techniques, including content of the request, an activity/action associated with the request, user profiles, user preferences, statistical metrics, advertiser-specified criteria, to advance a conversation, to resolve ambiguous requests, or in various other ways, as will be apparent.

[037] The output presented to the user in operation 325 may be provided to the user in various ways. For example, in various implementations, the output may include a voice-based or otherwise audible response. In another example, when an associated device includes a display mechanism, the output may be displayed on the display device. It will be apparent that

many combinations or variants thereof may be used, such as augmenting a voice-based response with information on a display device. For example, a user may request information about restaurants, and an advertisement may be selected based on a user preference indicating a favorite type of restaurant (e.g., a Chinese restaurant may be selected based on a user profile indicating a preference for Chinese). Therefore, in one example, the output presented in operation 325 may display information about various restaurants matching the requested information, while a voice-based advertisement for the Chinese restaurant may be played to the user (e.g., via a speaker or other suitable mechanism for playing voice back to the user). Many other variations will be apparent (e.g., a graphical advertisement may be displayed on a display device, while a corresponding or different voice-based advertisement may be played audibly).

[038] Subsequent interaction between the user and the presented advertisements may be monitored in a decisional operation 330. For instance, when the user elects to interact with the advertisement, action may be taken based on the interaction in an operation 335. The interaction may take various forms, including additional voice-based inputs or other suitable mechanisms for interacting with advertisements (e.g., clicking on an advertisement displayed on a personal digital assistant using an associated stylus). For example, a user may initially request information from a voice-enabled media device (e.g., a satellite radio player) about a song currently playing (e.g., "What is this song?"). In addition to outputting the requested information about the song (e.g., "This song is Double Barrel by Dave and Ansel Collins."), a selected advertisement may enable the user to purchase a ringtone for a mobile phone that corresponds to the song. In this example, the interaction may include a request to purchase the ringtone (e.g., "Yeah, I'll buy that"), and action taken in operation 335 may include completing a transaction for the ringtone and/or downloading the ringtone to the mobile phone. Furthermore, additional advertisements may be selected in an operation 340 based on the interaction, using similar techniques as described in connection with operation 320 (e.g., advertisements for additional ringtones, similar musicians, etc. may be selected). Processing may subsequently return to operation 325 to present output resulting from the interaction.

[039] User advertisement interaction may be tracked in an operation 345. For example, operation 345 may track historical data about users, conversations, topics, contexts, or other criteria to associate information with the selected advertisement. The tracking information may therefore be used to build statistical profiles defining affinities, click-through or conversion rates, or other information about various advertisements, topics, or other criteria on a user-specific and/or a global-user level. Thus, clusters or mappings may be created between advertisements, topics, concepts, demographics, or other criteria based on user behavior with the advertisements (e.g., whether a user interacts with the advertisement in operation 330).

[040] For instance, certain advertisements may experience high click-through rates in relation to a first context and/or topic, but low click-through rates in relation to a second context and/or topic, and therefore, when requests relate to the first context and/or topic, the advertisement may be more likely to be selected in subsequent operations 320/340. In another example, global statistical profiles may indicate that an advertisement experiences more click-throughs by users of a particular demographic, and therefore, the advertisement may be more likely to be selected for users falling within the demographic. Many different techniques for tracking and building statistical profiles will be apparent.

[041] Implementations of the invention may be made in hardware, firmware, software, or any combination thereof. The invention may also be implemented as instructions stored on a machine-readable medium, which may be read and executed by one or more processors. A machine-readable medium may include any mechanism for storing or transmitting information in a form readable by a machine (e.g., a computing device). For example, a machine-readable storage medium may include read only memory, random access memory, magnetic disk storage media, optical storage media, flash memory devices, and others, and a machine-readable transmission media may include forms of propagated signals, such as carrier waves, infrared signals, digital signals, and others. Further, firmware, software, routines, or instructions may be described in the above disclosure in terms of specific exemplary aspects and implementations of the invention, and performing certain actions. However, it will be apparent that such descriptions are merely for convenience and that such actions in fact result from computing

devices, processors, controllers, or other devices executing the firmware, software, routines, or instructions.

[042] Aspects and implementations may be described as including a particular feature, structure, or characteristic, but every aspect or implementation may not necessarily include the particular feature, structure, or characteristic. Further, when a particular feature, structure, or characteristic is described in connection with an aspect or implementation, it will be apparent to effect such feature, structure, or characteristic in connection with other aspects or implementations whether or not explicitly described. Thus, various changes and modifications may be made, without departing from the scope and spirit of the invention. The specification and drawings are to be regarded as exemplary only, and the scope of the invention is to be determined solely by the appended claims.

CLAIMS

What is claimed is:

1. A computer-implemented method of obtaining conversationally-related promotional content, the method being implemented by a computer system that includes one or processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, by the computer system, a first natural language utterance;

providing, by the computer system, a response to the first natural language utterance;

receiving, by the computer system, a second natural language utterance relating to the first natural language utterance; and

determining, by the computer system, promotional content based on the first natural language utterance and the second natural language utterance.

2. The method of claim 1, wherein the first natural language utterance is received during an interactive session between a user and the computer system, and the second natural language utterance is received during the interactive session.

3. The method of claim 1, further comprising:

performing, by the computer system, speech recognition to recognize one or more words of the second natural language utterance;

determining, by the computer system, context information for the one or more recognized words based on the first natural language utterance; and

processing, by the computer system based on the context information, the one or more recognized words to determine an interpretation of the one or more recognized words.

4. The method of claim 1, further comprising:

performing, by the computer system, speech recognition to recognize one or more words of the second natural language utterance;

determining, by the computer system, domain information for the one or more recognized words based on the first natural language utterance;

processing, by the computer system based on the domain information, the one or more recognized words to determine an interpretation of the one or more recognized words.

5. The method of claim 4, wherein processing of the one or more recognized words comprises:

determining, by the computer system, one or more domains associated with the second natural language utterance based on the domain information; and

providing, by the computer system, the one or more recognized words to one or more domain agents associated with the one or more domains.

6. The method of claim 4, wherein processing of the one or more recognized words comprises:

providing, by the computer system, the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;

obtaining, by the computer system, a first interpretation of the one or more recognized words from the first domain agent;

obtaining, by the computer system, a second interpretation of the one or more recognized words from the second domain agent; and

determining, by the computer system, the interpretation based on the first interpretation and the second interpretation.

7. The method of claim 6, wherein the first interpretation is determined by the first domain agent based on the first domain, and wherein the second interpretation is determined by the second domain agent based on the second domain.

8. The method of claim 6, further comprising:

associating, by the computer system, the first interpretation with a first interpretation score; and

associating, by the computer system, the second interpretation with a second interpretation score,

wherein determining the interpretation comprises determining the first interpretation as the interpretation based on the first interpretation score and the second interpretation score.

9. The method of claim 8, wherein the first interpretation is determined as the interpretation based on the first interpretation score being greater than the second interpretation score.

10. The method of claim 1, further comprising:

presenting, by the computer system, the promotional content to the user;

receiving, by the computer system, a third natural language utterance relating to the first natural language utterance or the second natural language utterance;

performing, by the computer system, speech recognition to recognize one or more words of the third natural language utterance; and

determining, by the computer system, an interpretation of the one or more recognized words based on the promotional content.

11. The method of claim 10, wherein the second natural language utterance is received during an interactive session between a user and the computer system, and wherein the third natural language utterance is received during the interaction session.

12. The method of claim 11, wherein the third natural language utterance is received after the second natural language utterance.

13. The method of claim 10, wherein the one or more recognized words include one or more reference words that refer to an item associated with the promotional content.

14. The method of claim 13, wherein the item includes a purchasable good.

15. The method of claim 10, further comprising:

initiating, by the computer system, a purchase transaction associated with the promotional content based on the interpretation.

16. The method of claim 1, wherein the first natural language utterance is received during an interactive session between a user and the computer system, and wherein the second natural language utterance is received during the interactive session, the method further comprising:

performing, by the computer system, speech recognition to recognize one or more words of the second natural language utterance;

processing, by the computer system based on the first natural language utterance, the one or more recognized words to determine an interpretation of the one or more recognized words;

receiving, by the computer system, a third natural language utterance during the interactive session between the user and the computer system; and

processing, by the computer system based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance.

17. The method of claim 1, further comprising:

identifying, by the computer system, one or more requests associated with the second natural language utterance,

wherein determining the promotional content comprises obtaining the promotional content based on the promotional content relating to the one or more requests.

18. The method of claim 17, wherein the one or more requests includes a first request associated with a first application and a second request associated with a second application different than the first application, and wherein the promotional content relates to the first request or the second request.

19. The method of claim 17, wherein the one or more requests includes a first request to be processed by a first device and a second request to be processed by a second device different than the first device, and wherein the promotional content relates to the first request or the second request.

20. A system for obtaining conversationally-related promotional content, the system comprising one or more processors programmed with one or more computer program instructions such that, when executed, the one or more computer program instructions cause the one or more processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance; and

determine promotional content based on the first natural language utterance and the second natural language utterance.

ABSTRACT

The system and method described herein may use various natural language models to deliver targeted advertisements and track advertisement interactions in voice recognition contexts. In particular, in response to an input device receiving an utterance, a conversational language processor may select and deliver one or more advertisements targeted to a user that spoke the utterance based on cognitive models associated with the user, various users having similar characteristics to the user, an environment in which the user spoke the utterance, or other criteria. Further, subsequent interaction with the targeted advertisements may be tracked to build and refine the cognitive models and thereby enhance the information used to deliver targeted advertisements in response to subsequent utterances.

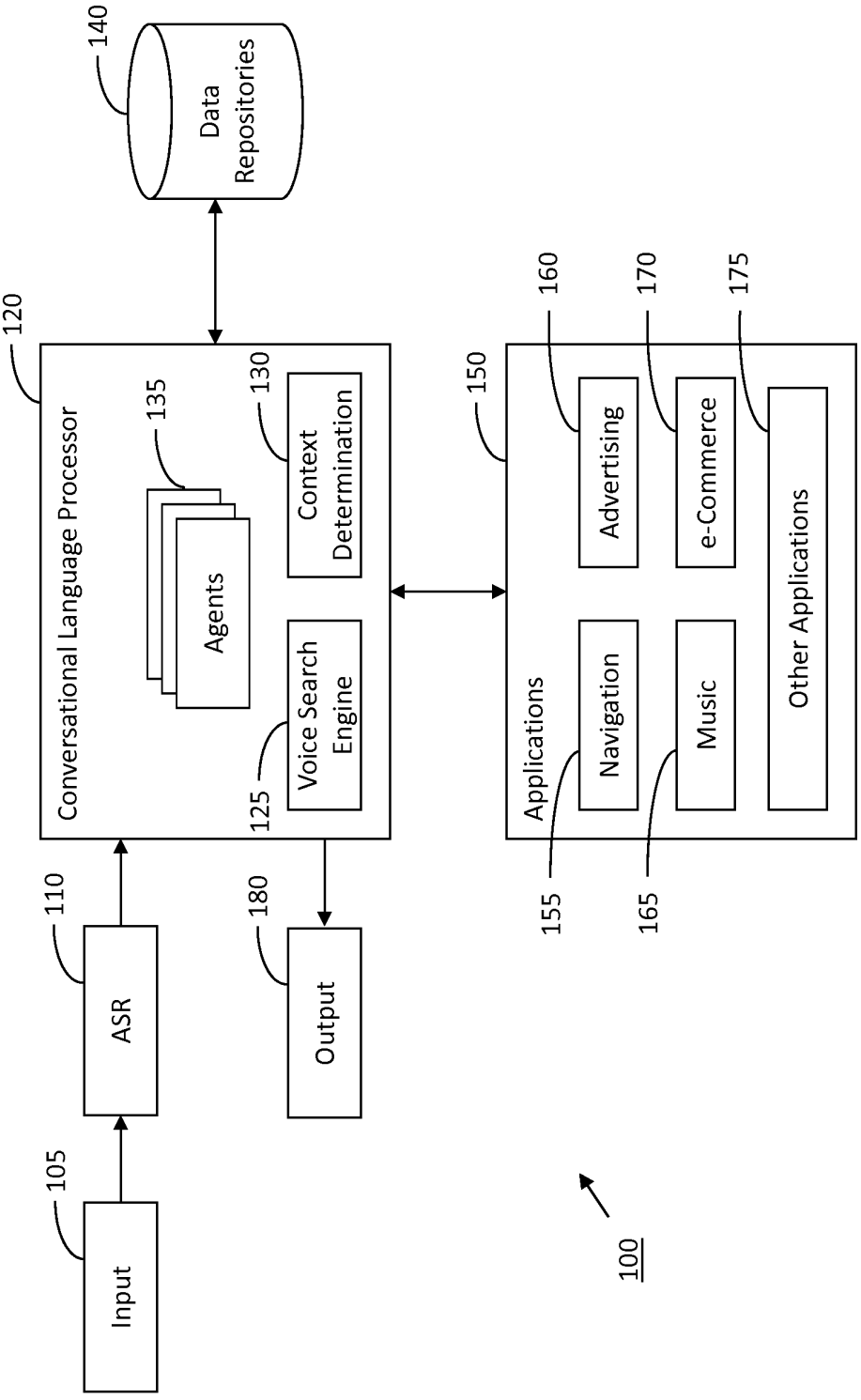

140
Data Repositories
120
Conversational Language Processor
135
Agents
130
Context Determination
125
Voice Search Engine
150
Applications
160
Advertising
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e-Commerce
175
Other Applications
155
Navigation
165
Music
110
ASR
180
Output
105
Input
100

Figure 1

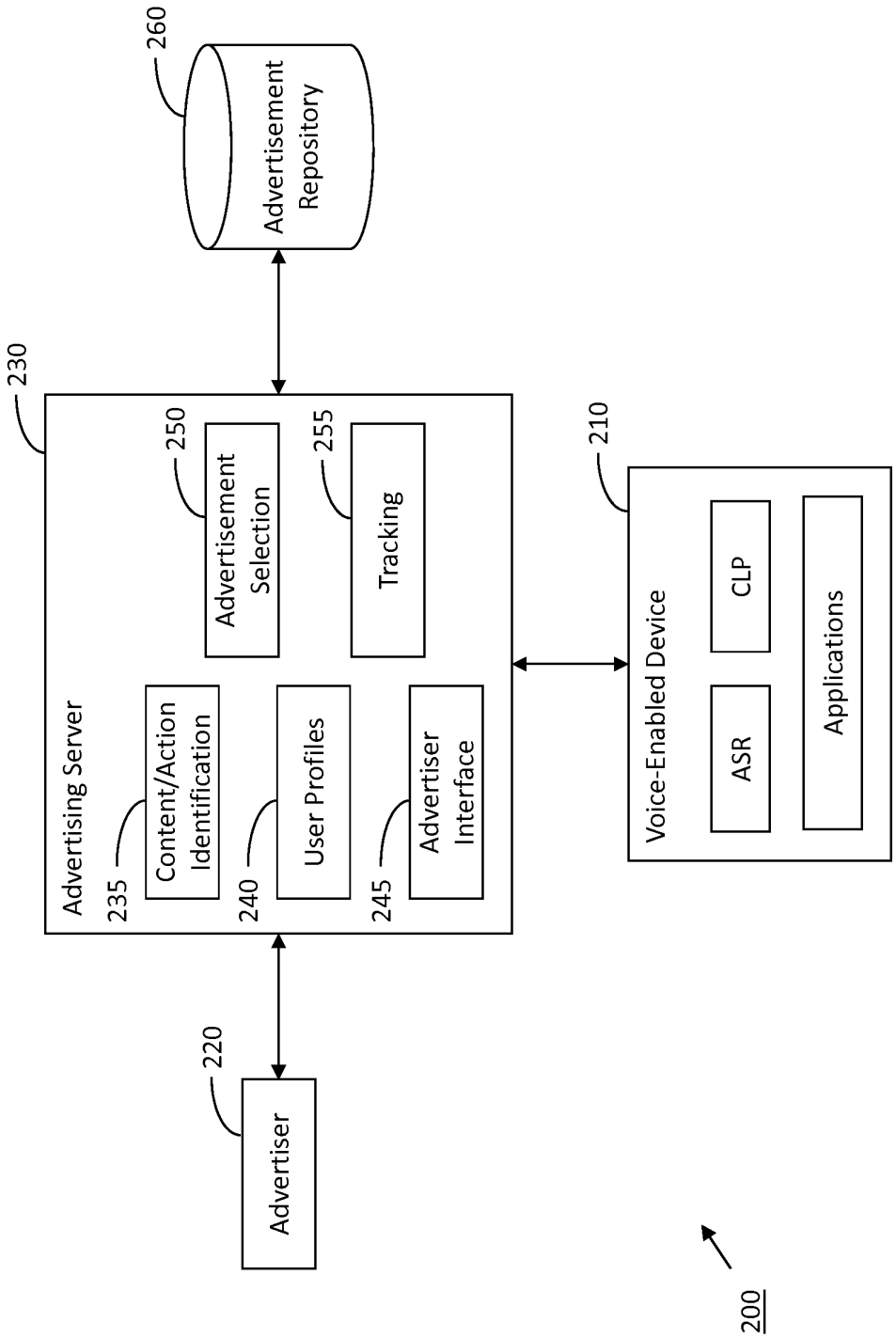

260
Advertisement Repository
230
Advertising Server
250
Advertisement Selection
255
Tracking
235
Content/Action Identification
240
User Profiles
245
Advertiser Interface
210
Voice-Enabled Device
ASR
CLP
Applications
220
Advertiser
200

Figure 2

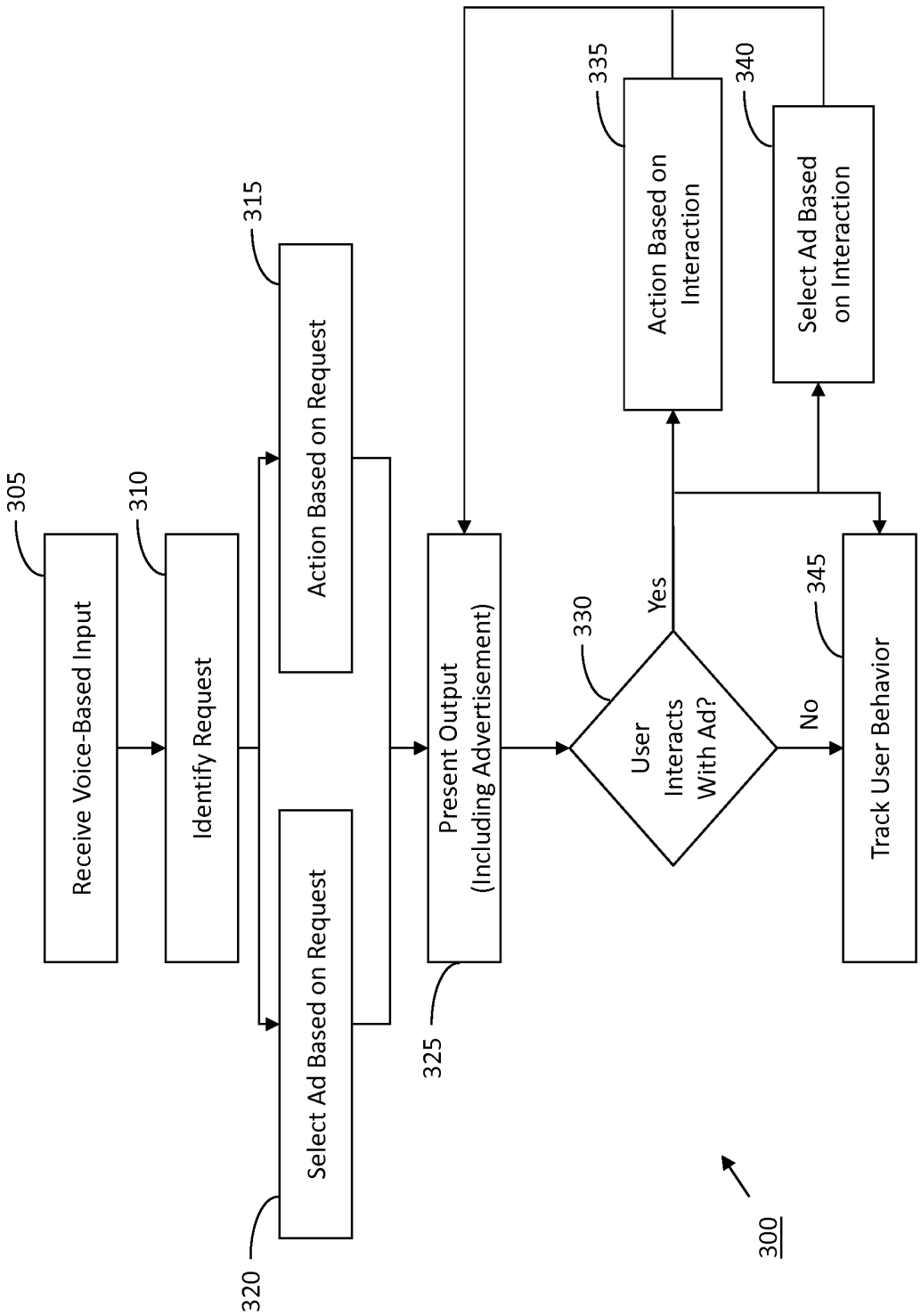

305
Receive Voice-Based Input
310
Identify Request
315
Action Based on Request
320
Select Ad Based on Request
325
Present Output (Including Advertisement)
330
User Interacts With Ad?
Yes
No
335
Action Based on Interaction
340
Select Ad Based on Interaction
345
Track User Behavior
300

Figure 3

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Filer:	Ngai Bing Zhang/Miriam Nelsen Awan
Attorney Docket Number:	090611-0424941

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**730**

Electronic Acknowledgement Receipt

EFS ID:	16749914
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Miriam Nelsen Awan
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	03-SEP-2013
Filing Date:	
Time Stamp:	16:21:46
Application Type:	Utility under 35 USC 111(a)

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Payment Type	Deposit Account
Payment was successfully received in RAM	$730
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		090611-0424941_ApplicationPapers.pdf	47303 25632b1ab96761ff9ee8376892f2e04c8b6f82c5	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal of New Application	1	2
	Application Data Sheet	3	5

Warnings:	
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2		090611-0424941_Specification.pdf	612493 832d63bf45c546d244ef717fcc5db7c48253c1a1	yes	24

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	18
	Claims	19	23
	Abstract	24	24

Warnings:	
Information:	

3	Drawings-only black and white line drawings	090611-0424941_Drawings.pdf	445893 2be8c95ca1820efdec81b6337579373d85a62335	no	3

Warnings:	
Information:	

4	Fee Worksheet (SB06)	fee-info.pdf	33130 730530c01b7855256eadfbfb99318b43a9d49aea	no	2

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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Document code: WFEE

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/016,757	09/03/2013	2658	800	090611-0424941	20	2

CONFIRMATION NO. 2790

909
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

FILING RECEIPT

OC000000063914321

Date Mailed: 09/30/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

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Applicant(s)

VoiceBox Technologies Corporation, Bellevue, WA

Assignment For Published Patent Application

VoiceBox Technologies Corporation, Bellevue, WA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 13/371,870 02/13/2012 PAT 8527274
which is a CON of 12/847,564 07/30/2010 PAT 8145489
which is a CON of 11/671,526 02/06/2007 PAT 7818176

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 09/19/2013
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/016,757**
Projected Publication Date: 01/09/2014
Non-Publication Request: No
Early Publication Request: No

**** SMALL ENTITY ****

Title

SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

Preliminary Class

704

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: 14/016,757

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/016,757	09/03/2013	Tom Freeman	090611-0424941

CONFIRMATION NO. 2790

909
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

NOTICE

OC000000063914322

Date Mailed: 09/30/2013

INFORMATIONAL NOTICE TO APPLICANT

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
  Tom Freeman
  Mike Kennewick

  Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE PATENT APPLICATION OF:	Tom FREEMAN *et al.*
SERIAL NO.:	14/016,757
FILING DATE:	September 3, 2013
ATTORNEY DOCKET NO.:	090611-0424941
CONFIRMATION NO.:	2790
EXAMINER:	Brian L. Albertalli
ART UNIT:	2657
FOR:	System and Method for Delivering Targeted Advertisements and Tracking Advertisement Interactions in Voice Recognition Contexts

PRELIMINARY AMENDMENT

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Prior to initial examination on the merits, please amend the above-identified application as follows:

Amendments to the Claims begin on page **2** of this paper.

Remarks begin on page **12** of this paper.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. § 1.136(a), and any fees required therefore (including fees for net addition of claims) are hereby authorized to be charged to Deposit Account No. 033975 (**Ref. No. 090611-0424941**).

This listing of claims will replace all prior versions and listings of claims in the Application.

LISTING OF CLAIMS:

1-20. (**Cancelled**)

21. (**New**) A computer-implemented method of obtaining conversationally-related promotional content, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, by the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, by the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

determining, by the one or more physical processors, promotional content based on the first natural language utterance and the second natural language utterance; and

presenting, by the one or more physical processors, the promotional content to a user.

22. (**New**) The method of claim 21, wherein the first natural language utterance and the second natural language utterance are received during an interactive session between the user and the computer system, and wherein determining the promotional content comprises:

determining, by the one or more physical processors, an activity relating to the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, the promotional content based on the activity.

23. (**New**) The method of claim 21, further comprising:

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

determining, by the one or more physical processors, context information for the one or more recognized words based on the first natural language utterance; and

processing, by the one or more physical processors based on the context information, the one or more recognized words to determine an interpretation of the one or more recognized words,

wherein determining the promotional content comprises determining the promotional content based on the interpretation of the one or more recognized words.

24. (**New**) The method of claim 21, further comprising:

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

determining, by the one or more physical processors, domain information for the one or more recognized words based on the first natural language utterance; and

processing, by the one or more physical processors based on the domain information, the one or more recognized words to determine an interpretation of the one or more recognized words,

wherein determining the promotional content comprises determining the promotional content based on the interpretation of the one or more recognized words.

25. (**New**) The method of claim 24, wherein processing the one or more recognized words comprises:

determining, by the one or more physical processors, one or more domains associated with the second natural language utterance based on the domain information; and

providing, by the one or more physical processors, the one or more recognized words to one or more domain agents associated with the one or more domains.

26. (**New**) The method of claim 24, wherein processing the one or more recognized words comprises:

providing, by the one or more physical processors, the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;

obtaining, by the one or more physical processors, a first interpretation of the one or more recognized words from the first domain agent;

obtaining, by the one or more physical processors, a second interpretation of the one or more recognized words from the second domain agent; and

determining, by the one or more physical processors, the interpretation based on the first interpretation and the second interpretation.

27. (**New**) The method of claim 26, wherein the first interpretation is determined by the first domain agent based on the first domain, and wherein the second interpretation is determined by the second domain agent based on the second domain.

28. (**New**) The method of claim 26, further comprising:

associating, by the one or more physical processors, the first interpretation with a first interpretation score; and

associating, by the one or more physical processors, the second interpretation with a second interpretation score,

wherein determining the interpretation comprises determining the first interpretation as the interpretation based on the first interpretation score and the second interpretation score.

29. (**New**) The method of claim 28, wherein the first interpretation is determined as the interpretation based on the first interpretation score being greater than the second interpretation score.

30. (**New**) The method of claim 21, further comprising:

receiving, by the one or more physical processors, a third natural language utterance relating to the first natural language utterance or the second natural language utterance;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance; and

determining, by the one or more physical processors, an interpretation of the one or more recognized words based on the promotional content.

31. (**New**) The method of claim 30, wherein the first natural language utterance, the second natural language utterance, and the third natural language utterance are received during an interactive session between the user and the computer system.

32. (**New**) The method of claim 31, wherein the third natural language utterance is received after the second natural language utterance.

33. (**New**) The method of claim 30, wherein the one or more recognized words include one or more reference words that refer to an item associated with the promotional content.

34. (**New**) The method of claim 33, wherein the item includes a purchasable good.

35. (**New**) The method of claim 30, further comprising:

initiating, based on the interpretation by the one or more physical processors, a purchase transaction associated with the promotional content.

36. (**New**) The method of claim 21, wherein the first natural language utterance and the second natural language utterance are received during an interactive session between the user and the computer system, the method further comprising:

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

processing, by the one or more physical processors based on the first natural language utterance, the one or more recognized words to determine an interpretation of the one or more recognized words;

receiving, by the one or more physical processors, a third natural language utterance during the interactive session between the user and the computer system; and

processing, by the one or more physical processors based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance.

37. (**New**) The method of claim 36, wherein determining the promotional content comprises determining the promotional content based on the reinterpretation.

38. (**New**) The method of claim 36, wherein determining the promotional content comprises determining the promotional content based on the interpretation, the method further comprising:

determining, by the one or more physical processors, other promotional content based on the reinterpretation; and

presenting, by the one or more physical processors, the other promotional content to the user.

39. (**New**) The method of claim 21, further comprising:

identifying, by the one or more physical processors, one or more requests associated with the second natural language utterance,

wherein determining the promotional content comprises obtaining the promotional content based on a determination that the promotional content relates to the one or more requests.

40. (**New**) The method of claim 39, further comprising:

determining, by the one or more physical processors, one or more activities in the one or more requests; and

performing, by the one or more physical processors, the one or more activities,

wherein determining the promotional content comprises determining the promotional content based on the one or more activities.

41. (**New**) The method of claim 40, wherein determining the one or more activities comprises determining a call to be initiated for the user in response to the one or more requests, wherein performing the one or more activities comprises initiating the call for the user, and wherein determining the promotional content comprises determining the promotional content based on the call.

42. (**New**) The method of claim 40, wherein determining the one or more activities comprises determining a navigation route to be calculated for the user in response to the one or more requests, wherein performing the one or more activities comprises calculating the navigation route for the user, and wherein determining the promotional content comprises determining the promotional content based on the navigation route.

43. (**New**) The method of claim 40, wherein determining the one or more activities comprise determining a media item to be presented in response to the one or more requests, wherein performing the one or more activities comprises presenting the media item to the user, and wherein determining the promotional content comprises determining the promotional content based on the media item, the promotional content being different than the media item.

44. (**New**) The method of claim 40, wherein determining the one or more activities comprises determining a reservation to be made on behalf of the user in response to the one or more requests, and wherein determining the promotional content comprises determining the promotional content based on information relating to the reservation.

45. (**New**) The method of claim 40, wherein determining the one or more activities comprises determining a first reservation to be made on behalf of the user in response to the one or more requests, and wherein determining the promotional content comprises determining the promotional content based on information relating to a second reservation that is an alternative to the first reservation.

46. (**New**) The method of claim 40, further comprising:

receiving, by the one or more physical processors, a third natural language utterance relating to the first natural language utterance or the second natural language utterance;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance;

determining, by the one or more physical processors, an interpretation of the one or more recognized words based on the promotional content; and

initiating, based on the interpretation by the one or more physical processors, a purchase transaction associated with the promotional content.

47. (**New**) The method of claim 39, further comprising:

determining, by the one or more physical processors, that at least one request of the one or more requests is incomplete or ambiguous;

monitoring, by the one or more physical processors, interaction of the user with the promotional content; and

interpreting, by the one or more physical processors, the at least one incomplete or ambiguous request based on the interaction.

48. (**New**) The method of claim 39, wherein the one or more requests includes a first request associated with a first application and a second request associated with a second application different than the first application, and wherein the promotional content relates to the first request or the second request.

49. (**New**) The method of claim 39, wherein a first application type of the first application is a navigation application, a music application, a commerce application, or a calling application, and wherein the second application is of an application type other than the first application type.

50. (**New**) The method of claim 39, wherein the one or more requests includes a first request to be processed by a first device associated with the user and a second request to be processed by a second device associated with the user, and wherein the promotional content relates to the first request or the second request.

51. (**New**) The method of claim 39, wherein a first device type of the first device is a mobile phone, a navigation device, or a media player device, and wherein the second device is of a device type other than the first device type.

52. (**New**) The method of claim 39, wherein the first device and the second device are operably independent of one another.

53. (**New**) The method of claim 21, further comprising:

obtaining, by the one or more physical processors, user profile information associated with the user, wherein the user profile information specifies prior user interactions with items;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the first natural language utterance or the second natural language utterance; and

identifying, by the one or more physical processors, categories of items from the prior user interactions specified by the user profile information,

wherein determining the promotional content comprises determining a promotional item associated with one of the categories.

54. (**New**) The method of claim 21, further comprising:

obtaining, by the one or more physical processors, user profile information associated with the user, wherein the user profile information specifies prior user interactions with items;

identifying, by the one or more physical processors, one or more requests associated with the first natural language utterance or the second natural language utterance;

determining, by the one or more physical processors, one or more applications for processing the one or more requests; and

identifying, by the one or more physical processors, categories of items from the prior user interactions specified by the user profile information,

wherein determining the promotional content comprises determining a promotional item associated with one of the categories.

55. (**New**) A system for obtaining conversationally-related promotional content, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance; and

determine promotional content based on the first natural language utterance and the second natural language utterance.

REMARKS

By this Preliminary Amendment, claims 1-20 have been cancelled without prejudice or disclaimer. Claims 21-55 have been newly added. Therefore, claims 21-55 are now pending. Support for the instant amendments is provided throughout the as-filed Specification. Thus, no new matter has been added.

Prompt examination and allowance of all the claims pending in the application are respectfully solicited. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

Date: **November 5, 2013**

PILLSBURY WINTHROP SHAW PITTMAN LLP

/ Ngai B. Zhang /

By: _____

Ngai B. Zhang
Registration No. 65,473

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P.O. Box 10500
McLean, Virginia 22102
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Main: 703.770.7900
Fax: 703.770.7901

Electronic Patent Application Fee Transmittal

Application Number:	14016757
Filing Date:	03-Sep-2013
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Filer:	Ngai Bing Zhang/Miriam Nelsen Awan
Attorney Docket Number:	090611-0424941

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	15	40	600
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**600**

Electronic Acknowledgement Receipt

EFS ID:	17319445
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Miriam Nelsen Awan
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	05-NOV-2013
Filing Date:	03-SEP-2013
Time Stamp:	15:39:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$600
RAM confirmation Number	2378
Deposit Account	033975
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

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Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		090611-0424941_PreliminaryAmendment.pdf	547869 5dd348cb1cc565b76c8f6b1999aefd73d096e1e0	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Preliminary Amendment	1	1
	Claims	2	11
	Applicant Arguments/Remarks Made in an Amendment	12	12

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30508 6b6f4ef487ed50e02088c4e968d55f35817b1d77	no	2

Warnings:

Information:

Total Files Size (in bytes):	578377

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/016,757	Filing Date 09/03/2013	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	11/05/2013	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 35	Minus	** 20	= 15	X $40 =	600
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	X $210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	**600**

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/DEBORAH NASH/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/016,757	09/03/2013	Tom Freeman	090611-0424941

CONFIRMATION NO. 2790

909
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

PUBLICATION NOTICE

OC000000065985784

Title:SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

Publication No.US-2014-0012577-A1
Publication Date:01/09/2014

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

909 7590 01/29/2014

Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

EXAMINER	
ALBERTALLI, BRIAN LOUIS	
ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
01/29/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket_ip@pillsburylaw.com
heather.marthers@pillsburylaw.com

Office Action Summary	Application No. 14/016,757	Applicant(s) FREEMAN ET AL.	
	Examiner BRIAN ALBERTALLI	Art Unit 2657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *21-55* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *21-25,30-35,39-46 and 55* is/are rejected.

8)☒ Claim(s) *26-29,36-38 and 47-54* is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 49, 51, and 52 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claim 49 recites the limitation "the first application" in lines 1-2 of the claim and "the second application" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, based on the wording of the claim, claim 49 will be considered dependent on claim 48.

Claim 51 recites the limitation "the first device" in line 1 of the claim and "the second device" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, based on the wording of the claim, claim 51 will be considered dependent on claim 50

Claim 52 recites the limitation "the first device and the second device" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, based on the wording of the claim, claim 52 will be considered dependent on claim 50

Claim Rejections - 35 USC § 102

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 21-25, 30-35, 39-46, and 55 are rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Ashton (U.S. Patent Application Publication 2007/0203736).

In regard to claim 21, Ashton discloses a computer-implemented method (Fig. 12) of obtaining conversationally-related promotional content, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method (Fig. 3, voice portal 115, paragraph 0094), the method comprising:

receiving, by the one or more physical processors, a first natural language utterance (step 1220, the system receives verbal input from the user, paragraph 0156);

providing, by the one or more physical processors, a response to the first natural language utterance (step 1265, the system generates a response, paragraph 0160);

receiving, by the one or more physical processors, a second natural language utterance relating to the first natural language utterance (Fig. 13, additional verbal utterances are received from the user to obtain information from the user, paragraphs 0165 and 0166);

determining, by the one or more physical processors, promotional content based on the first natural language utterance and the second natural language utterance

(steps 1310, 1316, and 1326, based on the selected activity, related targeted advertising is selected, paragraphs 0167, 0168, and 0170); and

presenting, by the one or more physical processors, the promotional content to a user (step 1332, the targeted add is presented to the user, paragraph 0172).

In regard to claim 22, Ashton discloses he first natural language utterance and the second natural language utterance are received during an interactive session between the user and the computer system (a directory assistance interaction, paragraph 0155), and wherein determining the promotional content comprises:

determining, by the one or more physical processors, an activity relating to the first natural language utterance or the second natural language utterance (Fig. 13, an interaction to book travel reservations, paragraph 0165); and

determining, by the one or more physical processors, the promotional content based on the activity (steps 1310, 1316, and 1326, based on the selected activity, related targeted advertising is selected, paragraphs 0167, 0168, and 0170).

In regard to claim 23, Ashton discloses performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance (Fig. 13, additional verbal utterances are received from the user to obtain information from the user, paragraphs 0165 and 0166);

determining, by the one or more physical processors, context information for the one or more recognized words based on the first natural language utterance (based on

the user's first verbal input, a transaction grammar is selected, paragraphs 0166 and 0167); and

processing, by the one or more physical processors based on the context information, the one or more recognized words to determine an interpretation of the one or more recognized words (the words uttered by the user are matched to the transaction grammar, paragraph 0070),

wherein determining the promotional content comprises determining the promotional content based on the interpretation of the one or more recognized words (steps 1310, 1316, and 1326, targeted advertising is selected based on the information recognized from the user's verbal input, paragraphs 0167, 0168, and 0170).

In regard to claim 24, Ashton discloses performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance (Fig. 13, additional verbal utterances are received from the user to obtain information from the user, paragraphs 0165 and 0166);

determining, by the one or more physical processors, domain information for the one or more recognized words based on the first natural language utterance (based on the user's first verbal input, the related domain, e.g. airfare, hotels, etc. is determined, paragraphs 0166 and 0167); and

processing, by the one or more physical processors based on the domain information, the one or more recognized words to determine an interpretation of the one or more recognized words (the determined domain is used to select a corresponding

transaction grammar, paragraphs 0166 and 0167; and the words uttered by the user are matched to the transaction grammar, paragraph 0070),

wherein determining the promotional content comprises determining the promotional content based on the interpretation of the one or more recognized words (steps 1310, 1316, and 1326, targeted advertising is selected based on the information recognized from the user's verbal input, paragraphs 0167, 0168, and 0170).

In regard to claim 25, Ashton discloses determining, by the one or more physical processors, one or more domains associated with the second natural language utterance based on the domain information (based on the user's first verbal input, the related domain, e.g. airfare, hotels, etc. is determined and used to recognize the additional verbal input, paragraphs 0166 and 0167); and

providing, by the one or more physical processors, the one or more recognized words to one or more domain agents associated with the one or more domains (Fig. 24, the user is transferred to one or more information partners based on the domain, paragraphs 0171 and 0247-0249).

In regard to claim 30, Ashton discloses receiving, by the one or more physical processors, a third natural language utterance relating to the first natural language utterance or the second natural language utterance (step 1336, verbal input from the user indicating one of the presented advertisement offers, paragraphs 0173 and 0174);

performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance (the user's verbal indication of a selection is recognized, paragraphs 0173 and 0174); and

determining, by the one or more physical processors, an interpretation of the one or more recognized words based on the promotional content (the system determines if the user has verbally selected one of the presented offers, by speaking words associated with the offer, paragraphs 0174 and 0193; see also example user input at paragraphs 0265-0267).

In regard to claim 31, Ashton discloses the first natural language utterance, the second natural language utterance, and the third natural language utterance are received during an interactive session between the user and the computer system (interactions illustrated in Figs. 12 and 13, paragraphs 0155 and 0165).

In regard to claim 32, Ashton discloses the third natural language utterance is received after the second natural language utterance (see Fig. 13, the user's verbal selection at step 1336 is after the additional information collected at steps 1306-1326).

In regard to claim 33, Ashton discloses the one or more recognized words include one or more reference words that refer to an item associated with the promotional content (the user speaks words presented in the offer to select the offer, paragraphs 0174 and 0193; see also example user input at paragraphs 0265-0267).

In regard to claim 34, Ashton discloses the item includes a purchasable good (e.g., airline ticket, paragraphs 0174 and 0193; see also example user input at paragraphs 0265-0267).

In regard to claim 35, Ashton discloses initiating, based on the interpretation by the one or more physical processors, a purchase transaction associated with the promotional content (step 1340, order confirmation processing is initiated, paragraph 0174).

In regard to claim 39, Ashton discloses identifying, by the one or more physical processors, one or more requests associated with the second natural language utterance (requests for particular itineraries, hotel stays, etc., paragraphs 0167, 0168, and 0170),

wherein determining the promotional content comprises obtaining the promotional content based on a determination that the promotional content relates to the one or more requests (targeted advertising is selected based on the requested itineraries, hotel stays, etc., paragraphs 0167, 0168, and 0170).

In regard to claim 40 Ashton discloses determining, by the one or more physical processors, one or more activities in the one or more requests (conducting an airfare search, hotel search, etc., paragraphs 0167, 0168, and 0170); and

performing, by the one or more physical processors, the one or more activities (the searches are performed and results cached for presentation to the user, paragraphs 0167, 0168, and 0170),

wherein determining the promotional content comprises determining the promotional content based on the one or more activities (targeted advertising related to the airfare search, hotel search, etc. is selected and presented to the user, paragraph 0172).

In regard to claim 41, Ashton discloses determining the one or more activities comprises determining a call to be initiated for the user in response to the one or more requests (see paragraph 0082, a call to American Airlines), wherein performing the one or more activities comprises initiating the call for the user (the user can be connected to American Airlines) , and wherein determining the promotional content comprises determining the promotional content based on the call (the promotion is selected based on the call being made immediately).

In regard to claim 42, Ashton discloses determining the one or more activities comprises determining a navigation route to be calculated for the user in response to the one or more requests (Fig. 15, driving directions to a location having a particular product the user requested, paragraph 0192), wherein performing the one or more activities comprises calculating the navigation route for the user (the user receives the driving directions, paragraph 0087), and wherein determining the promotional content

comprises determining the promotional content based on the navigation route (targeted advertisements are selected based on close proximity to the user, paragraphs 0191-0192).

In regard to claim 43, Ashton discloses determining the one or more activities comprise determining a media item to be presented in response to the one or more requests, wherein performing the one or more activities comprises presenting the media item to the user, and wherein determining the promotional content comprises determining the promotional content based on the media item, the promotional content being different than the media item (alternate embodiments allow a user to purchase and download media, paragraph 0087; a targeted advertisement selected based on the user's request for a media item would inherently be related to the media item, see paragraph 0119).

In regard to claim 44, Ashton discloses determining the one or more activities comprises determining a reservation to be made on behalf of the user in response to the one or more requests (reserving a flight, hotel room, restaurant, etc., paragraphs 0167, 0168, and 0170), and wherein determining the promotional content comprises determining the promotional content based on information relating to the reservation (targeted ads are selected based on the reserved flight, hotel, restaurant, etc., paragraphs 0167, 0168, and 0170).

In regard to claim 45, Ashton discloses determining the one or more activities comprises determining a first reservation to be made on behalf of the user in response to the one or more requests (e.g. an itinerary with a first airline, paragraph 0125), and wherein determining the promotional content comprises determining the promotional content based on information relating to a second reservation that is an alternative to the first reservation (the user is offered promotions from competitors, paragraph 0125).

In regard to claim 46, Ashton discloses receiving, by the one or more physical processors, a third natural language utterance relating to the first natural language utterance or the second natural language utterance (step 1336, the user verbally selects one of the presented offers, paragraph 0173);

performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance (the user's verbal indication of a selection is recognized, paragraphs 0173 and 0174);

determining, by the one or more physical processors, an interpretation of the one or more recognized words based on the promotional content (the system determines if the user has verbally selected one of the presented offers, by speaking words associated with the offer, paragraphs 0174 and 0193; see also example user input at paragraphs 0265-0267); and

initiating, based on the interpretation by the one or more physical processors, a purchase transaction associated with the promotional content (step 1340, order confirmation processing is initiated, paragraph 0174).

In regard to claim 55, Ashton discloses a system for obtaining conversationally-related promotional content, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions (Fig. 25, computer system 2500) which, when executed, cause the one or more physical processors to:

receive a first natural language utterance (step 1220, the system receives verbal input from the user, paragraph 0156);

provide a response to the first natural language utterance (step 1265, the system generates a response, paragraph 0160);

receive a second natural language utterance relating to the first natural language utterance (Fig. 13, additional verbal utterances are received from the user to obtain information from the user, paragraphs 0165 and 0166); and

determine promotional content based on the first natural language utterance and the second natural language utterance (steps 1310, 1316, and 1326, based on the selected activity, related targeted advertising is selected, paragraphs 0167, 0168, and 0170).

Allowable Subject Matter

4. Claims 26-29, 36-38, 47, 48, 50, 53, and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Additionally, claims 49, 51, and 52 would be allowable if the rejections under 35 U.S.C. 112, 2nd paragraph were overcome.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DeGolia, Gadd et al., Chiu et al., Ho, Stifelman et al., Anderson et al., and Roth disclose additional natural language processing systems that select promotional content.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN ALBERTALLI whose telephone number is (571)272-7616. The examiner can normally be reached on Monday-Friday, 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BLA 1/22/14
/BRIAN ALBERTALLI/
Primary Examiner, Art Unit 2657

Notice of References Cited	Application/Control No. 14/016,757	Applicant(s)/Patent Under Reexamination FREEMAN ET AL.	
	Examiner BRIAN ALBERTALLI	Art Unit 2657	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2005/0033582 A1	02-2005	Gadd et al.	704/277
*	B	US-2005/0246174 A1	11-2005	DeGolia, Richard C.	704/270
*	C	US-7,170,993 B2	01-2007	Anderson et al.	379/265.09
*	D	US-2007/0203736 A1	08-2007	Ashton, Jason	705/1
*	E	US-7,477,909 B2	01-2009	Roth, Daniel Lawrence	455/466
*	F	US-7,552,054 B1	06-2009	Stifelman et al.	704/270
*	G	US-7,856,358 B2	12-2010	Ho, Edwin	704/270
*	H	US-8,509,403 B2	08-2013	Chiu et al.	379/114.13
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	Art Unit
	BRIAN ALBERTALLI	2657

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	01/22/2014								
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	**Art Unit**
	BRIAN ALBERTALLI	2657

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	01/22/2014								
	37	O								
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	0	("20070203736").PN.	USPAT; USOCR	OR	OFF	2014/01/13 13:22
S2	2	"20070203736"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 13:22
S3	51	("704"/$.ccls. or "379"/$.ccls.) and ((ambiguous$5 or disambiguat$10) same (advertis$5 or promotion$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 13:30
S4	1948	("704"/$.ccls. or "379"/$.ccls.) and (application$5 same (advertis$5 or promotion$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 13:49
S5	214	("704"/$.ccls. or "379"/$.ccls.) and ((navigat$5 or music$5 or video$5 or commerc$5) with application$5 with (advertis$5 or promotion$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 13:50
S6	393	("704"/$.ccls. or "379"/$.ccls.) and (multipl$5 with application$5 with request$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 14:56
S7	62	S6 and (advertis$10 or promotion$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 14:57
S8	48	("704"/$.ccls. or "379"/$.ccls.) and (multipl$5 with application$5 with request$5).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 14:57
S9	48	("704"/$.ccls. or "379"/$.ccls.) and (multipl$5 with application$5 with request$5).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 15:19
S10	2296	"704"/$.ccls. and ((multiple$5 or plural$10) with applications)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 15:26
S11	360	"704"/$.ccls. and ((multiple$5 or plural$10) with applications with	US-PGPUB; USPAT; USOCR;	OR	OFF	2014/01/13 15:27

		(command$5 or request$5 or (user near2 input$5) or respon$5))	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S12	272	"704"/$.ccls. and ((multiple$5 or plural$10) with applications).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 15:28
S13	1103	S10 and (dialog$5 or conversation$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 15:28
S14	143	S12 and (dialog$5 or conversation$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 15:28
S15	315	S10 and (advertis$10 or promotion$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 15:32
S16	17	S14 and (advertis$10 or promotion$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 15:32
S17	360	"704"/$.ccls. and ((multiple$5 or plural$10) with applications with (command$5 or request$5 or (user near2 input$5) or respon$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 17:30
S18	261	S17 and (dialog$5 or conversation$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 17:30
S19	7	"704"/$.ccls. and ((multifacet$5 or (multi near2 facet$5)) with (command$5 or request$5 or (user near2 input$5) or respon$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/13 17:31
S20	732	"704"/$.ccls. and "705"/$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/21 15:54
S21	203	S20 and (conversation$5 or dialog$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/21 15:55
S22	148	"704"/$.ccls. and 705/14$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/01/21 16:05

EAST Search History (Interference)

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1/22/2014 9:48:07 AM
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BIB DATA SHEET

CONFIRMATION NO. 2790

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
14/016,757	09/03/2013	704	2657	090611-0424941

APPLICANTS

VoiceBox Technologies Corporation, Bellevue, WA, Assignee (with 37 CFR 1.172 Interest);

INVENTORS

Tom Freeman, Mercer Island, WA;
Mike Kennewick, Bellevue, WA;

**** CONTINUING DATA ***************************

This application is a CON of 13/371,870 02/13/2012 PAT 8527274
which is a CON of 12/847,564 07/30/2010 PAT 8145489
which is a CON of 11/671,526 02/06/2007 PAT 7818176

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
09/19/2013

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged /BRIAN LOUIS ALBERTALLI/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		WA	3	20	2

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TITLE

SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

FILING FEE RECEIVED		
1400	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	Art Unit
	BRIAN ALBERTALLI	2657

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Updated EAST Search from parent case 13/371,870	1/22/14	BA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE PATENT APPLICATION OF:	Tom FREEMAN *et al.*
SERIAL NO.:	14/016,757
FILING DATE:	September 3, 2013
ATTORNEY DOCKET NO.:	090611-0424941
CONFIRMATION NO.:	2790
EXAMINER:	Brian Louis ALBERTALLI
ART UNIT:	2657
FOR:	System and Method for Delivering Targeted Advertisements and Tracking Advertisement Interactions in Voice Recognition Contexts

RESPONSE TO NON-FINAL OFFICE ACTION mailed 29 JANUARY 2014

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Non-Final Office Action mailed **January 29, 2014**, please amend the above-identified application as follows:

A Listing of the Claims begins on page **2** of this paper.

Remarks begin on page **26** of this paper.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. § 1.136(a), and any fees required therefore (including fees for net addition of claims) are hereby authorized to be charged to Deposit Account No. 033975 (**Ref. No. 090611-0424941**).

This listing of claims will replace all prior versions and listings of claims in the Application.

LISTING OF CLAIMS:

1-20. (**Cancelled**)

21. (**Currently Amended**) A computer-implemented method of ~~obtaining conversationally-related~~ providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, [[by]] at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, [[by]] at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

determining, by the one or more physical processors, domain information for the one or more recognized words based on the first natural language utterance;

processing, by the one or more physical processors, based on the domain information, the one or more recognized words to determine an interpretation of the second natural language utterance, wherein processing the one or more recognized words comprises:

providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;

obtaining a first interpretation of the second natural language utterance from the first domain agent;

obtaining a second interpretation of the second natural language utterance from the second domain agent; and

determining the interpretation based on one or more of the first interpretation or the second interpretation;

determining, by the one or more physical processors, promotional content based on the interpretation; ~~the first natural language utterance and the second natural language utterance;~~ and

presenting, by the one or more physical processors, the promotional content to a user.

22. (**Currently Amended**) The method of claim 21, wherein the first natural language utterance and the second natural language utterance are received during an interactive session between the user and the computer system, the method further comprising:

determining, by the one or more physical processors, an activity relating to one or more of the first natural language utterance or the second natural language utterance,

wherein determining the promotional content comprises determining the promotional content based on the activity. ~~and wherein determining the promotional content comprises: determining, by the one or more physical processors, an activity relating to the first natural language utterance or the second natural language utterance; and determining, by the one or more physical processors, the promotional content based on the activity.~~

23. (**Currently Amended**) The method of claim 21, further comprising:

determining, by the one or more physical processors, context information for the one or more recognized words based on the first natural language utterance,

wherein the interpretation is determined further based on the context information. ~~performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance; determining, by the one or more physical processors, context information for the one or more recognized words based on the~~

~~first natural language utterance; and processing, by the one or more physical processors based on the context information, the one or more recognized words to determine an interpretation of the one or more recognized words, wherein determining the promotional content comprises determining the promotional content based on the interpretation of the one or more recognized words.~~

24-26. (**Cancelled**)

27. (**Currently Amended**) The method of ~~claim 26,~~ claim 21, wherein the first interpretation is determined by the first domain agent based on the first domain, and wherein the second interpretation is determined by the second domain agent based on the second domain.

28. (**Currently Amended**) The method of ~~claim 26,~~ claim 21, further comprising:

associating, by the one or more physical processors, the first interpretation with a first interpretation score; and

associating, by the one or more physical processors, the second interpretation with a second interpretation score,

wherein determining the interpretation comprises determining the first interpretation as the interpretation based on the first interpretation score and the second interpretation score.

29. (**Previously Presented**) The method of claim 28, wherein the first interpretation is determined as the interpretation based on the first interpretation score being greater than the second interpretation score.

30. (**Currently Amended**) The method of claim 21, further comprising:

receiving, [[by]] at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; ~~performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance;~~ and

determining, by the one or more physical processors, an interpretation of ~~the one or more recognized words~~ the third natural language utterance based on the promotional content.

31. (**Previously Presented**) The method of claim 30, wherein the first natural language utterance, the second natural language utterance, and the third natural language utterance are received during an interactive session between the user and the computer system.

32. (**Previously Presented**) The method of claim 31, wherein the third natural language utterance is received after the second natural language utterance.

33. (**Currently Amended**) The method of claim 30, further comprising:

performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance, wherein the one or more recognized words of the third natural language utterance include one or more reference words;

determining, by the one or more physical processors, that the one or more reference words refer to an item associated with the promotional content; and

initiating, by the one or more physical processors, a purchase transaction associated with the item based on the determination that the one or more reference words refer to the item.

34. (**Previously Presented**) The method of claim 33, wherein the item includes a purchasable good.

35. (**Currently Amended**) The method of claim 30, further comprising:

initiating, ~~based on the interpretation~~ by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

36. (**Currently Amended**) The method of claim 21, wherein the first natural language utterance and the second natural language utterance are received during an interactive session between the user and the computer system, the method further comprising: ~~performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance; processing, by the one or more physical processors based on the first natural language utterance, the one or more recognized words to determine an interpretation of the one or more recognized words;~~

receiving, [[by]] at the one or more physical processors, a third natural language utterance during the interactive session ~~between the user and the computer system~~; and

processing, by the one or more physical processors, based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance.

37. (**Previously Presented**) The method of claim 36, wherein determining the promotional content comprises determining the promotional content based on the reinterpretation.

38. (**Previously Presented**) The method of claim 36, wherein determining the promotional content comprises determining the promotional content based on the interpretation, the method further comprising:

determining, by the one or more physical processors, other promotional content based on the reinterpretation; and

presenting, by the one or more physical processors, the other promotional content to the user.

39. (**Previously Presented**) The method of claim 21, further comprising:

identifying, by the one or more physical processors, one or more requests associated with the second natural language utterance,

wherein determining the promotional content comprises obtaining the promotional content based on a determination that the promotional content relates to the one or more requests.

40. (**Previously Presented**) The method of claim 39, further comprising:

determining, by the one or more physical processors, one or more activities in the one or more requests; and

performing, by the one or more physical processors, the one or more activities,

wherein determining the promotional content comprises determining the promotional content based on the one or more activities.

41. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a call to be initiated for the user in response to the one or more requests, wherein performing the one or more activities comprises initiating the call for the user, and wherein determining the promotional content comprises determining the promotional content based on the call.

42. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a navigation route to be calculated for the user in response to the one or more requests, wherein performing the one or more activities comprises calculating the navigation route for the user, and wherein determining the promotional content comprises determining the promotional content based on the navigation route.

43. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprise determining a media item to be presented in response to the one or more requests, wherein performing the one or more activities comprises presenting the media item to the user, and wherein determining the promotional content comprises determining the promotional content based on the media item, the promotional content being different than the media item.

44. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a reservation to be made on behalf of the user in response to the one or more requests, and wherein determining the promotional content comprises determining the promotional content based on information relating to the reservation.

45. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a first reservation to be made on behalf of the user in response to the one or more requests, and wherein determining the promotional content comprises determining the promotional content based on information relating to a second reservation that is an alternative to the first reservation.

46. (**Currently Amended**) The method of claim 40, further comprising:

receiving, [[by]] at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; ~~performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance;~~

determining, by the one or more physical processors, an interpretation of the ~~one or more recognized words~~ third natural language utterance based on the promotional content; and

initiating, ~~based on the interpretation~~ by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

47. (**Previously Presented**) The method of claim 39, further comprising:

determining, by the one or more physical processors, that at least one request of the one or more requests is incomplete or ambiguous;

monitoring, by the one or more physical processors, interaction of the user with the promotional content; and

interpreting, by the one or more physical processors, the at least one incomplete or ambiguous request based on the interaction.

48. (**Currently Amended**) The method of claim 39, wherein the one or more requests ~~includes~~ include a first request associated with a first application and a second request associated with a second application different than the first application, and wherein the promotional content relates to one or more of the first request or the second request.

49. (**Currently Amended**) The method of ~~claim 39,~~ claim 48, wherein a first application type of the first application [[is]] includes one or more of a navigation application, a music

application, a commerce application, or a calling application, and wherein the second application is of an application type ~~other~~ different than the first application type.

50. (**Currently Amended**) The method of claim 39, wherein the one or more requests ~~includes~~ include a first request to be processed by a first device associated with the user and a second request to be processed by a second device associated with the user, and wherein the promotional content relates to one or more of the first request or the second request.

51. (**Currently Amended**) The method of ~~claim 39,~~ claim 50, wherein a first device type of the first device [[is]] includes one or more of a mobile phone, a navigation device, or a media player device, and wherein the second device is of a device type ~~other~~ different than the first device type.

52. (**Currently Amended**) The method of ~~claim 39,~~ claim 50, wherein the first device and the second device are operably independent of one another.

53. (**Currently Amended**) The method of claim 21, further comprising:

obtaining, by the one or more physical processors, user profile information associated with the user, wherein the user profile information specifies prior user interactions with items; ~~performing, by the one or more physical processors, speech recognition to recognize one or more words of the first natural language utterance or the second natural language utterance;~~ and

identifying, by the one or more physical processors, categories of items ~~from~~ based on the prior user interactions specified by the user profile information,

wherein determining the promotional content comprises determining a promotional item associated with one of the categories.

54. (**Currently Amended**) The method of claim 21, further comprising:

obtaining, by the one or more physical processors, user profile information associated with the user, wherein the user profile information specifies prior user interactions with items;

identifying, by the one or more physical processors, one or more requests associated with the first natural language utterance or the second natural language utterance;

determining, by the one or more physical processors, one or more applications for processing the one or more requests; and

identifying, by the one or more physical processors, categories of items ~~from~~ based on the prior user interactions specified by the user profile information, wherein the categories relate to the one or more applications,

wherein determining the promotional content comprises determining a promotional item associated with one of the categories.

55. (**Currently Amended**) A system for ~~obtaining conversationally related~~ providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

perform speech recognition to recognize one or more words of the second natural language utterance;

determine domain information for the one or more recognized words based on the first natural language utterance;

process, based on the domain information, the one or more recognized words to determine an interpretation of the second natural language utterance, wherein processing the one or more recognized words comprises:

providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;

obtaining a first interpretation of the second natural language utterance from the first domain agent;

obtaining a second interpretation of the second natural language utterance from the second domain agent; and

determining the interpretation based on one or more of the first interpretation or the second interpretation;

determine promotional content based on the interpretation ~~the first natural language utterance and the second natural language utterance~~; and

present the promotional content to a user.

56. (**New**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance during an interactive session between the user and the computer system;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance during the interactive session;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

processing, by the one or more physical processors, based on the first natural language utterance, the one or more recognized words to determine an interpretation of the second natural language utterance;

receiving, at the one or more physical processors, a third natural language utterance during the interactive session;

processing, by the one or more physical processors, based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance;

determining, by the one or more physical processors, promotional content based on one or more of the interpretation or the reinterpretation; and

presenting, by the one or more physical processors, the promotional content to a user.

57. (**New**) The method of claim 56, wherein determining the promotional content comprises determining the promotional content based on the reinterpretation.

58. (**New**) The method of claim 56, wherein determining the promotional content comprises determining the promotional content based on the interpretation, the method further comprising:

determining, by the one or more physical processors, other promotional content based on the reinterpretation; and

presenting, by the one or more physical processors, the other promotional content to the user.

59. (**New**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance during an interactive session between the user and the system;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance during the interactive session;

perform speech recognition to recognize one or more words of the second natural language utterance;

process, based on the first natural language utterance, the one or more recognized words to determine an interpretation of the second natural language utterance;

receive a third natural language utterance during the interactive session;

process, based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance;

determine promotional content based on one or more of the interpretation or the reinterpretation; and

present the promotional content to a user.

60. (**New**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

identifying, by the one or more physical processors, one or more requests associated with the second natural language utterance;

determining, by the one or more physical processors, that at least one request of the one or more requests is incomplete or ambiguous;

determining, by the one or more physical processors, promotional content that relates to the one or more requests;

presenting, by the one or more physical processors, the promotional content to a user;

monitoring, by the one or more physical processors, interaction of the user with the promotional content; and

interpreting, by the one or more physical processors, the at least one incomplete or ambiguous request based on the interaction.

61. (**New**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

identify one or more requests associated with the second natural language utterance;

determine that at least one request of the one or more requests is incomplete or ambiguous;

determine promotional content that relates to the one or more requests;

present the promotional content to a user;

monitor interaction of the user with the promotional content; and

interpret the at least one incomplete or ambiguous request based on the interaction.

62. (**New**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

identifying, by the one or more physical processors, requests associated with the second natural language utterance, wherein the requests include a first request associated with a first application and a second request associated with a second application different than the first application;

determining, by the one or more physical processors, promotional content that relates to one or more of the first request or the second request; and

presenting, by the one or more physical processors, the promotional content to a user.

63. (**New**) The method of 62, wherein a first application type of the first application includes one or more of a navigation application, a music application, a commerce application, or a calling application, and wherein the second application is of an application type different than the first application type.

64. (**New**) The method of claim 62, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, an interpretation of the third natural language utterance based on the promotional content.

65. (**New**) The method of claim 64, further comprising:

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

66. (**New**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

identify requests associated with the second natural language utterance, wherein the requests include a first request associated with a first application and a second request associated with a second application different than the first application;

determine promotional content that relates to one or more of the first request or the second request; and

present the promotional content to a user.

67. (**New**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

identifying, by the one or more physical processors, requests associated with the second natural language utterance, wherein the requests include a first request to be processed by a first device associated with a user and a second request to be processed by a second device associated with the user;

determining, by the one or more physical processors, promotional content that relates to one or more of the first request or the second request; and

presenting, by the one or more physical processors, the promotional content to the user.

68. (**New**) The method of claim 67, wherein a first device type of the first device includes one or more of a mobile phone, a navigation device, or a media player device, and wherein the second device is of a device type different than the first device type.

69. (**New**) The method of claim 67, wherein the first device and the second device are operably independent of one another.

70. (**New**) The method of claim 67, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, an interpretation of the third natural language utterance based on the promotional content.

71. (**New**) The method of claim 70, further comprising:

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

72. (**New**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

identify requests associated with the second natural language utterance, wherein the requests include a first request to be processed by a first device associated with a user and a second request to be processed by a second device associated with the user;

determine promotional content that relates to one or more of the first request or the second request; and

present the promotional content to the user.

73. (**New**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

obtaining, by the one or more physical processors, user profile information associated with a user, wherein the user profile information specifies prior user interactions with items;

identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information;

determining, by the one or more physical processors, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

presenting, by the one or more physical processors, the promotional content to the user.

74. (**New**) The method of claim 73, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, an interpretation of the third natural language utterance based on the promotional content.

75. (**New**) The method of claim 74, further comprising:

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

76. (**New**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

obtain user profile information associated with a user, wherein the user profile information specifies prior user interactions with items;

identify categories of items based on the prior user interactions specified by the user profile information;

determine, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

present the promotional content to the user.

77. (**New**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

obtaining, by the one or more physical processors, user profile information associated with the user, wherein the user profile information specifies prior user interactions with items;

identifying, by the one or more physical processors, one or more requests associated with one or more of the first natural language utterance or the second natural language utterance;

determining, by the one or more physical processors, one or more applications for processing the one or more requests; and

identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information, wherein the categories relate to the one or more applications;

determining, by the one or more physical processors, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

presenting, by the one or more physical processors, the promotional content to a user.

78. (**New**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

obtain user profile information associated with the user, wherein the user profile information specifies prior user interactions with items;

identify one or more requests associated with one or more of the first natural language utterance or the second natural language utterance;

determine one or more applications for processing the one or more requests; and

identify categories of items based on the prior user interactions specified by the user profile information, wherein the categories relate to the one or more applications;

determine, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

present the promotional content to a user.

REMARKS

In response to the Non-Final Office Action mailed **January 29, 2014** (hereinafter "Office Action"), claims 21-23, 27, 28, 30, 33, 35, 36, 46, and 48-55 have been amended, claims 24-26 have been cancelled without prejudice or disclaimer, and claims 56-78 have been newly added. Therefore, claims 21-23 and 27-78 are now pending. Support for the instant amendments is provided throughout the as-filed Specification. Thus, no new matter has been added. In view of the foregoing amendments and following comments, allowance of all the claims pending in the application is earnestly sought.

INFORMATION DISCLOSURE STATEMENT

Applicants are submitting herewith a Supplemental Information Disclosure Statement and request that the Examiner considers the cited references and provides a signed copy of the Form PTO-1449 for this submission with the next Office Action.

ALLOWABLE SUBJECT MATTER AND 35 U.S.C. §§ 102 AND 112 REJECTIONS

Applicants thank Examiner Albertalli for indicating the subject matter of claims 26-29, 36-38, and 47-54 as allowable. [Office Action, pg. 13]. Solely to expedite prosecution of this application, and without acknowledging the propriety of the alleged rejection under 35 U.S.C. § 102, the claims have been amended in accordance with the Examiner's indication of allowable subject matter. In particular, independent claims 21 and 55 have each been amended to include the subject matter of claim 26 (which is now cancelled). In addition, the instant amendments have rendered the 35 U.S.C. § 112 rejection moot. Accordingly, withdrawn of the alleged rejections under 35 U.S.C. §§ 102 and 112 is earnestly sought.

CONCLUSION

Having addressed the foregoing rejection, it is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, the application is in condition for allowance. Notice to that effect is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

Date: **May 9, 2014**

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PTO/AIA/22 (03-13)
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)	Docket Number (Optional) 090611-0424941
Application Number 14/016,757	Filed January 29, 2014
For SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	
Art Unit 2657	Examiner Brian Louis Albertalli

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

		Fee	Small Entity Fee	Micro Entity Fee	
☑	One month (37 CFR 1.17(a)(1))	$200	$100	$50	$ 100.00
☐	Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$
☐	Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$
☐	Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☐	Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$

☑ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☑ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 033975.

☑ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 65,473.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Ngai B. Zhang/	May 9, 2014
Signature	Date
Ngai B. Zhang	(703) 770-7532
Typed or printed name	Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☑ * Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS :	Tom FREEMAN *et al.*	CONFIRMATION NO.:	2790
SERIAL NUMBER :	14/016,757	EXAMINER:	Brian Louis Albertalli
FILING DATE :	September 3, 2013	ART UNIT:	2657
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicants hereby make of record in the above-identified application the documents listed on the attached Form PTO-1449.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This Information Disclosure Statement is being filed more than three months after the filing date of a national application other than a continued prosecution application under 37 C.F.R. § 1.53(d), or more than three months after the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, and after the mailing date of the first Office Action on the merits, but before the mailing date of any of a Final Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution in the application. 37 C.F.R. § 1.97(c).

Please charge the $90.00 fee [37 C.F.R. § 1.17(p)] to Deposit Account No. 03-3975. In addition, please charge any fee deficiencies, or credit any overpayment, to Deposit Account No. 03-3975 as needed to ensure consideration of the Information Disclosure Statement.

The foreign patent documents (except for References 4Y, 4Z, and 4AA) and the non-patent literature ("Other Documents") were cited by or submitted to the Office in Application No. 13/371,870, filed February 13, 2012, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449.

Respectfully submitted,

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Dated: May 9, 2014

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Applicant(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	1A	4,430,669	02/07/1984	Cheung	358	122	
	1B	4,821,027	04/11/1989	Mallory *et al.*	340	521	
	1C	4,829,423	05/09/1989	Tennant *et al.*	364	200	
	1D	4,910,784	03/20/1990	Doddington *et al.*	381	43	
	1E	5,027,406	06/25/1991	Roberts *et al.*	381	43	
	1F	5,155,743	10/13/1992	Jacobs	375	28	
	1G	5,164,904	11/17/1992	Sumner	364	436	
	1H	5,208,748	05/04/1993	Flores *et al.*	364	419	
	1I	5,274,560	12/28/1993	LaRue	364	444	
	1J	5,357,596	10/18/1994	Takebayashi *et al.*	395	2.84	
	1K	5,377,350	12/27/1994	Skinner	395	600	
	1L	5,386,556	01/31/1995	Hedin et al.	395	600	
	1M	5,424,947	06/13/1995	Nagao et al.	364	419.08	
	1N	5,471,318	11/28/1995	Ahuja et al.	358	400	
	1O	5,475,733	12/12/1995	Eisdorfer et al.	379	52	
	1P	5,488,652	01/30/1996	Bielby *et al.*	379	88	
	1Q	5,499,289	03/12/1996	Bruno et al.	379	220	
	1R	5,500,920	03/19/1996	Kupiec	395	2.79	
	1S	5,517,560	05/14/1996	Greenspan	379	114	
	1T	5,533,108	07/02/1996	Harris et al.	379	201	
	1U	5,537,436	07/16/1996	Bottoms et al.	375	222	
	1V	5,539,744	07/23/1996	Chu et al.	370	60	
	1W	5,557,667	09/17/1996	Bruno et al.	379	201	

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	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	1X	1 320 043 A2	06/18/2003	Europe				
	1Y	1 646 037	04/12/2006	Europe				
	1Z	WO 99/46763	09/16/1999	International				
	1AA	WO 00/21232	04/13/2000	International				
	1BB	WO 00/46792	08/10/2000	International				

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	1CC	REUTERS, "IBM to Enable Honda Drivers to Talk to Cars", Charles Schwab & Co., Inc., July 28, 2002, 1 page.
	1DD	LIN, Bor-shen, *et al.*, "A Distributed Architecture for Cooperative Spoken Dialogue Agents with Coherent Dialogue State and History", ASRU'99, 1999, 4 pages.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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	090611-0424941	14/016,757
	Applicant(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2A	5,559,864	09/24/1996	Kennedy, Jr.	379	59	
	2B	5,563,937	10/08/1996	Bruno et al.	379	201	
	2C	5,577,165	11/19/1996	Takebayashi et al.	395	2.84	
	2D	5,590,039	12/31/1996	Ikeda et al.	395	759	
	2E	5,608,635	03/04/1997	Tamai	364	449.3	
	2F	5,617,407	04/01/1997	Bareis	369	275.3	
	2G	5,633,922	05/27/1997	August et al.	379	220	
	2H	5,652,570	07/29/1997	Lepkofker	340	573	
	2I	5,675,629	10/07/1997	Raffel et al.	379	58	
	2J	5,696,965	12/09/1997	Dedrick	395	610	
	2K	5,708,422	01/13/1998	Blonder et al.	340	825.34	
	2L	5,721,938	02/24/1998	Stuckey	395	754	
	2M	5,722,084	02/24/1998	Chakrin et al.	455	551	
	2N	5,740,256	04/14/1998	Castello Da Costa *et al.*	361	94.7	
	2O	5,742,763	04/21/1998	Jones	395	200.3	
	2P	5,748,841	05/05/1998	Morin *et al.*	395	2.66	
	2Q	5,748,974	05/05/1998	Johnson	395	759	
	2R	5,752,052	05/12/1998	Richardson et al.	395	759	
	2S	5,754,784	05/19/1998	Garland et al.	395	200.49	
	2T	5,761,631	06/02/1998	Nasukawa	704	9	
	2U	5,774,841	06/30/1998	Salazar *et al.*	704	225	
	2V	5,774,859	06/30/1998	Houser *et al.*	704	275	
	2W	5,794,050	08/11/1998	Dahlgren et al.	395	708	

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	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	2X	WO 01/78065	10/18/2001	International				
	2Y	WO 2004/072954	08/26/2004	International				
	2Z	WO 2007/019318	02/15/2007	International				
	2AA	WO 2007/021587	02/22/2007	International				
	2BB	WO 2007/027546	03/08/2007	International				

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	2CC	KUHN, Thomas, *et al.*, "Hybrid In-Car Speech Recognition for Mobile Multimedia Applications", Vehicular Technology Conference, IEEE, July 1999, pages 2009-2013.
	2DD	BELVIN, Robert, *et al.*, "Development of the HRL Route Navigation Dialogue System", Proceedings of the First International Conference on Human Language Technology Research, San Diego, 2001, pages 1-5.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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	Tom FREEMAN *et.al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

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	3A	5,794,196	08/11/1998	Yegnanarayanan *et al.*	704	255	
	3B	5,797,112	08/18/1998	Komatsu *et al.*	701	201	
	3C	5,799,276	08/25/1998	Komissarchik *et al.*	704	251	
	3D	5,802,510	09/01/1998	Jones	707	2	
	3E	5,832,221	11/03/1998	Jones	375	200.36	
	3F	5,839,107	11/17/1998	Gupta *et al.*	704	270	
	3G	5,848,396	12/08/1998	Gerace	705	10	
	3H	5,855,000	12/29/1998	Waibel *et al.*	704	235	
	3I	5,867,817	02/02/1999	Catallo *et al.*	704	255	
	3J	5,878,385	03/02/1999	Bralich *et al.*	704	9	
	3K	5,878,386	03/02/1999	Coughlin	704	10	
	3L	5,892,813	04/06/1999	Morin *et al.*	379	88.01	
	3M	5,892,900	04/06/1999	Ginter *et al.*	395	186	
	3N	5,895,464	04/20/1999	Bhandari *et al.*	707	3	
	3O	5,895,466	04/20/1999	Goldberg et al.	707	5	
	3P	5,897,613	04/27/1999	Chan	704	210	
	3Q	5,902,347	05/11/1999	Backman *et al.*	701	200	
	3R	5,911,120	06/08/1999	Jarett et al.	455	417	
	3S	5,918,222	06/29/1999	Fukui *et al.*	707	1	
	3T	5,926,784	07/20/1999	Richardson et al.	704	9	
	3U	5,933,822	08/03/1999	Braden-Harder et al.	707	5	
	3V	5,950,167	09/07/1999	Yaker	704	275	
	3W	5,953,393	09/14/1999	Culbreth et al.	379	88.25	

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	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	3X	WO 2007/027989	03/08/2007	International				
	3Y	WO 2008/098039	08/14/2008	International				
	3Z	WO 2008/118195	10/02/2008	International				
	3AA	WO 2009/075912	06/18/2009	International				
	3BB	WO 2009/145796	12/03/2009	International				

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	3CC	LIND, R., *et al.*, "The Network Vehicle—A Glimpse into the Future of Mobile Multi-Media", IEEE Aerosp. Electron. Systems Magazine, Volume 14, No. 9, September 1999, pages 27-32.
	3DD	ZHAO, Yilin, "Telematics: Safe and Fun Driving", IEEE Intelligent Systems, Volume 17, Issue 1, 2002, pages 10-14.

EXAMINER	DATE CONSIDERED

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INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Applicant(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	4A	5,960,397	09/28/1999	Rahim	704	244	
	4B	5,960,399	09/28/1999	Barclay *et al.*	704	270	
	4C	5,960,447	09/28/1999	Holt *et al.*	707	500	
	4D	5,963,894	10/05/1999	Richardson et al.	704	9	
	4E	5,963,940	10/05/1999	Liddy et al.	707	5	
	4F	5,987,404	11/16/1999	Della Pietra et al.	704	9	
	4G	5,991,721	11/23/1999	Asano et al.	704	257	
	4H	5,995,119	11/30/1999	Cosatto et al.	345	473	
	4I	5,995,928	11/30/1999	Nguyen *et al.*	704	251	
	4J	6,009,382	12/28/1999	Martino et al.	704	1	
	4K	6,014,559	01/11/2000	Amin	455	413	
	4L	6,018,708	01/25/2000	Dahan *et al.*	704	244	
	4M	6,021,384	02/01/2000	Gorin et al.	704	1	
	4N	6,028,514	02/22/2000	Lemelson *et al.*	340	539	
	4O	6,035,267	03/07/2000	Watanabe *et al.*	704	1	
	4P	6,044,347	03/28/2000	Abella et al.	704	272	
	4Q	6,049,602	04/11/2000	Foladare et al.	379	265	
	4R	6,049,607	04/11/2000	Marash *et al.*	379	410	
	4S	6,058,187	05/02/2000	Chen	380	21	
	4T	6,067,513	05/23/2000	Ishimitsu	704	233	
	4U	6,076,059	06/13/2000	Glickman *et al.*	704	260	
	4V	6,078,886	06/20/2000	Dragosh et al.	704	270	
	4W	6,081,774	06/27/2000	De Hita et al.	704	9	

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	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	4X	WO 2010/096752	08/26/2010	International				
	4Y	2006-146881	06/08/2006	Japan				
	4Z	2008-027454	02/07/2008	Japan				
	4AA	2008-139928	06/19/2008	Japan				

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	4BB	CHAI *et al.*, "MIND: A Semantics-Based Multimodal Interpretation Framework for Conversational System", Proceedings of the International CLASS Workshop on Natural, Intelligent and Effective Interaction in Multimodal Dialogue Systems, June 2002, pages 37-46.
	4CC	CHEYER *et al.*, "Multimodal Maps: An Agent-Based Approach", International Conference on Cooperative Multimodal Communication (CMC/95), May 24-26, 1995, pages 111-121.
	4DD	ELIO *et al.*, "On Abstract Task Models and Conversation Policies" in Workshop on Specifying and Implementing Conversation Policies, Autonomous Agents '99, Seattle, 1999, 10 pages.

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	5A	6,085,186	07/04/2000	Christianson *et al.*	707	3	
	5B	6,101,241	08/08/2000	Boyce et al.	379	88.01	
	5C	6,108,631	08/22/2000	Ruhl	704	270	
	5D	6,119,087	09/12/2000	Kuhn et al.	704	270	
	5E	6,122,613	09/19/2000	Baker	704	235	
	5F	6,134,235	10/17/2000	Goldman et al.	370	352	
	5G	6,144,667	11/07/2000	Doshi et al.	370	401	
	5H	6,144,938	11/07/2000	Surace *et al.*	704	257	
	5I	6,154,526	11/28/2000	Dahlke *et al.*	379	88.03	
	5J	6,160,883	12/12/2000	Jackson et al.	379	230	
	5K	6,167,377	12/26/2000	Gillick *et al.*	704	240	
	5L	6,173,266	01/09/2001	Marx *et al.*	704	270	
	5M	6,173,279	01/09/2001	Levin et al.	707	5	
	5N	6,175,858	01/16/2001	Bulfer *et al.*	709	206	
	5O	6,185,535	02/06/2001	Hedin *et al.*	704	270	
	5P	6,188,982	02/13/2001	Chiang	704	256	
	5Q	6,192,110	02/20/2001	Abella *et al.*	379	88.01	
	5R	6,192,338	02/20/2001	Haszto *et al.*	704	257	
	5S	6,195,634	02/27/2001	Dudemaine *et al.*	704	231	
	5T	6,195,651	02/27/2001	Handel *et al.*	707	2	
	5U	6,199,043	03/06/2001	Happ	704	272	
	5V	6,208,964	03/27/2001	Sabourin	704	244	
	5W	6,208,972	03/27/2001	Grant *et al.*	704	275	

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	5Y	MAO, Mark Z., "Automatic Training Set Segmentation for Multi-Pass Speech Recognition", Department of Electrical Engineering, Stanford University, CA, copyright 2005, IEEE, pages I-685 to I-688.
	5Z	VANHOUCKE, Vincent, "Confidence Scoring and Rejection Using Multi-Pass Speech Recognition", Nuance Communications, Menlo Park, CA, 2005, 4 pages.

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	6B	6,219,643	04/17/2001	Cohen *et al.*	704	257	
	6C	6,226,612	05/01/2001	Srenger *et al.*	704	256	
	6D	6,233,556	05/15/2001	Teunen *et al.*	704	250	
	6E	6,233,559	05/15/2001	Balakrishnan	704	275	
	6F	6,233,561	05/15/2001	Junqua *et al.*	704	277	
	6G	6,236,968	05/22/2001	Kanevsky *et al.*	704	275	
	6H	6,246,981	06/12/2001	Papineni *et al.*	704	235	
	6I	6,246,990	06/12/2001	Happ	704	275	
	6J	6,266,636	07/24/2001	Kosaka *et al.*	704	244	
	6K	6,269,336	07/31/2001	Ladd *et al.*	704	270	
	6L	6,272,455	08/07/2001	Hoshen *et al.*	704	1	
	6M	6,275,231	08/14/2001	Obradovich	345	349	
	6N	6,278,377	08/21/2001	DeLine *et al.*	340	815.4	
	6O	6,278,968	08/21/2001	Franz *et al.*	704	3	
	6P	6,288,319	09/11/2001	Catona	84	609	
	6Q	6,292,767	09/18/2001	Jackson *et al.*	704	1	
	6R	6,301,560	10/09/2001	Masters	704	251	
	6S	6,308,151	10/23/2001	Smith	704	235	
	6T	6,314,402	11/06/2001	Monaco et al.	704	275	
	6U	6,321,196	11/20/2001	Franceschi	704	243	
	6V	6,356,869	03/12/2002	Chapados *et al.*	704	275	
	6W	6,362,748	03/26/2002	Huang	340	901	

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	6Y	EL MELIANI *et al.*, "A Syllabic-Filler-Based Continuous Speech Recognizer for Unlimited Vocabulary", Canadian Conference on Electrical and Computer Engineering, Volume 2, September 5-8, 1995, pages 1007-1010.

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	7B	6,366,886	04/02/2002	Dragosh et al.	704	270.1	
	7C	6,374,214	04/16/2002	Friedland *et al.*	704	235	
	7D	6,377,913	04/23/2002	Coffman *et al.*	704	8	
	7E	6,381,535	04/30/2002	Durocher *et al.*	701	202	
	7F	6,385,596	05/07/2002	Wiser *et al.*	705	51	
	7G	6,385,646	05/07/2002	Brown et al.	709	217	
	7H	6,393,403	05/21/2002	Majaniemi	704	275	
	7I	6,393,428	05/21/2002	Miller et al.	707	102	
	7J	6,397,181	05/28/2002	Li *et al.*	704	256	
	7K	6,404,878	06/11/2002	Jackson et al.	379	221.01	
	7L	6,405,170	06/11/2002	Phillips *et al.*	704	270	
	7M	6,408,272	06/18/2002	White *et al.*	704	270.1	
	7N	6,411,810	06/25/2002	Maxemchuk	455	453	
	7O	6,411,893	06/25/2002	Ruhl	701	207	
	7P	6,415,257	07/02/2002	Junqua *et al.*	704	275	
	7Q	6,418,210	07/09/2002	Sayko	379	142.15	
	7R	6,420,975	07/16/2002	DeLine *et al.*	340	815.4	
	7S	6,429,813	08/06/2002	Feigen	342	357.13	
	7T	6,430,285	08/06/2002	Bauer et al.	379	265.01	
	7U	6,430,531	08/06/2002	Polish	704	257	
	7V	6,434,523	08/13/2002	Monaco	704	257	
	7W	6,434,524	08/13/2002	Weber	704	257	

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	7Y	BAZZI, Issam *et al.*, "Heterogeneous Lexical Units for Automatic Speech Recognition: Preliminary Investigations", Processing of the IEEE International Conference on Acoustics, Speech, and Signal Processing, Volume 3, June 5-9, 2000, XP010507574, pages 1257-1260.

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	8C	6,446,114	09/03/2002	Bulfer et al.	709	206	
	8D	6,453,153	09/17/2002	Bowker et al.	455	67.4	
	8E	6,453,292	09/17/2002	Ramaswamy et al.	704	235	
	8F	6,456,711	09/24/2002	Cheung et al.	379	265.09	
	8G	6,456,974	09/24/2002	Baker *et al.*	704	270.1	
	8H	6,466,654	10/15/2002	Cooper *et al.*	379	88.01	
	8I	6,466,899	10/15/2002	Yano *et al.*	704	1	
	8J	6,470,315	10/22/2002	Netsch *et al.*	704	256	
	8K	6,487,494	11/26/2002	Odinak *et al.*	701	202	
	8L	6,487,495	11/26/2005	Gale *et al.*	701	209	
	8M	6,498,797	12/24/2002	Anerousis et al.	370	522	
	8N	6,499,013	12/24/2002	Weber	704	257	
	8O	6,501,833	12/31/2002	Phillips *et al.*	379	88.07	
	8P	6,501,834	12/31/2002	Milewski et al.	379	93.24	
	8Q	6,505,155	01/07/2003	Vanbuskirk *et al.*	704	246	
	8R	6,510,417	01/21/2003	Woods *et al.*	704	275	
	8S	6,513,006	01/28/2003	Howard *et al.*	704	257	
	8T	6,522,746	02/18/2003	Marchok *et al.*	379	406.03	
	8U	6,523,061	02/18/2003	Halverson et al.	709	202	
	8V	6,532,444	03/11/2003	Weber	704	257	
	8W	6,539,348	03/25/2003	Bond et al.	704	9	

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	8Y	"Statement in Accordance with the Notice from the European Patent Office dated 1 October 2007 Concerning Business Methods (OJ EPO 11/2007, 592-593), XP002456252

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	9C	6,556,970	04/29/2003	Sasaki *et al.*	704	257	
	9D	6,556,973	04/29/2003	Lewin	704	277	
	9E	6,560,576	05/06/2003	Cohen et al.	704	270	
	9F	6,560,590	05/06/2003	Shwe *et al.*	706	55	
	9G	6,567,778	05/20/2003	Chao Chang et al.	704	257	
	9H	6,567,797	05/20/2003	Schuetze *et al.*	707	2	
	9I	6,570,555	05/27/2003	Prevost *et al.*	345	156	
	9J	6,570,964	05/27/2003	Murveit et al.	379	67.1	
	9K	6,571,279	05/27/2003	Herz *et al.*	709	217	
	9L	6,574,597	06/03/2003	Mohri *et al.*	704	251	
	9M	6,574,624	06/03/2003	Johnson et al.	707	5	
	9N	6,578,022	06/10/2003	Foulger *et al.*	706	45	
	9O	6,581,103	06/17/2003	Dengler	709	231	
	9P	6,584,439	06/24/2003	Geilhufe *et al.*	704	270	
	9Q	6,587,858	07/01/2003	Strazza	707	102	
	9R	6,591,239	07/08/2003	McCall *et al.*	704	275	
	9S	6,594,257	07/15/2003	Doshi et al.	370	352	
	9T	6,594,367	07/15/2003	Marash *et al.*	381	92	
	9U	6,598,018	07/22/2003	Junqua	704	251	
	9V	6,601,026	07/29/2003	Appelt *et al.*	704	9	
	9W	6,604,075	08/05/2003	Brown *et al.*	704	270.1	

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	10C	6,611,692	08/26/2003	Raffel et al.	455	552	
	10D	6,614,773	09/02/2003	Maxemchuk	370	337	
	10E	6,615,172	09/02/2003	Bennett *et al.*	704	257	
	10F	6,622,119	09/16/2003	Ramaswamy *et al.*	704	9	
	10G	6,629,066	09/30/2003	Jackson et al.	704	9	
	10H	6,631,346	10/07/2003	Karaorman *et al.*	704	9	
	10I	6,631,351	10/07/2003	Ramachandran *et al.*	704	270	
	10J	6,633,846	10/14/2003	Bennett *et al.*	704	257	
	10K	6,636,790	10/21/2003	Lightner *et al.*	701	33	
	10L	6,643,620	11/04/2003	Contolini *et al.*	704	270	
	10M	6,650,747	11/18/2003	Bala et al.	379	265.06	
	10N	6,658,388	12/02/2003	Kleindienst *et al.*	704	275	
	10O	6,678,680	01/13/2004	Woo	707	6	
	10P	6,681,206	01/20/2004	Gorin *et al.*	704	243	
	10Q	6,691,151	02/10/2004	Cheyer et al.	709	202	
	10R	6,701,294	03/02/2004	Ball *et al.*	704	257	
	10S	6,704,396	03/09/2004	Parolkar *et al.*	379	88.17	
	10T	6,704,576	03/09/2004	Brachman *et al.*	455	503	
	10U	6,704,708	03/09/2004	Pickering	704	235	
	10V	6,707,421	03/16/2004	Drury *et al.*	342	357.1	
	10W	6,708,150	03/16/2004	Hirayama *et al.*	704	243	

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	11B	6,721,633	04/13/2004	Funk *et al.*	701	1	
	11C	6,721,706	04/13/2004	Strubbe *et al.*	704	275	
	11D	6,726,636	04/27/2004	Der Ghazarian *et al.*	600	532	
	11E	6,735,592	05/11/2004	Neumann *et al.*	707	101	
	11F	6,739,556	05/25/2004	Langston	244	189	
	11G	6,741,931	05/25/2004	Kohut *et al.*	701	209	
	11H	6,742,021	05/25/2004	Halverson *et al.*	709	218	
	11I	6,745,161	06/01/2004	Arnold *et al.*	704	7	
	11J	6,751,591	06/15/2004	Gorin *et al.*	704	257	
	11K	6,751,612	06/15/2004	Schuetze *et al.*	707	4	
	11L	6,754,485	06/22/2004	Obradovich *et al.*	455	414.1	
	11M	6,754,627	06/22/2004	Woodward	704	235	
	11N	6,757,544	06/29/2004	Rangarajan *et al.*	455	456.1	
	11O	6,757,718	06/29/2004	Halverson *et al.*	709	218	
	11P	6,795,808	09/21/2004	Strubbe *et al.*	704	275	
	11Q	6,801,604	10/05/2004	Maes *et al.*	379	88.17	
	11R	6,801,893	10/05/2004	Backfried *et al.*	704	257	
	11S	6,813,341	11/02/2004	Mahoney	379	88.01	
	11T	6,829,603	12/07/2004	Chai *et al.*	707	5	
	11U	6,832,230	12/14/2004	Zilliacus *et al.*	707	203	
	11V	6,833,848	12/21/2004	Wolff *et al.*	345	719	
	11W	6,850,603	02/01/2005	Eberle *et al.*	379	88.16	

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	12C	6,868,380	03/15/2005	Kroeker	704	240	
	12D	6,868,385	03/15/2005	Gerson	704	275	
	12E	6,873,837	03/29/2005	Yoshioka *et al.*	455	321	
	12F	6,877,001	04/05/2005	Wolf *et al.*	707	3	
	12G	6,877,134	04/05/2005	Fuller *et al.*	715	500.1	
	12H	6,901,366	05/31/2005	Kuhn *et al.*	704	275	
	12I	6,910,003	06/21/2005	Arnold *et al.*	704	4	
	12J	6,912,498	06/28/2005	Stevens *et al.*	704	235	
	12K	6,915,126	07/05/2005	Mazzara, Jr.	455	411	
	12L	6,928,614	08/09/2005	Everhart	715	728	
	12M	6,934,756	08/23/2005	Maes	709	227	
	12N	6,937,977	08/30/2005	Gerson	704	201	
	12O	6,937,982	08/30/2005	Kitaoka *et al.*	704	252	
	12P	6,944,594	09/13/2005	Busayapongchai *et al.*	704	275	
	12Q	6,950,821	09/27/2005	Faybishenko *et al.*	707	10	
	12R	6,954,755	10/11/2005	Reisman	707	10	
	12S	6,959,276	10/25/2005	Droppo *et al.*	704	226	
	12T	6,961,700	11/01/2005	Mitchell *et al.*	704	235	
	12U	6,963,759	11/08/2005	Gerson	455	563	
	12V	6,964,023	11/08/2005	Maes *et al.*	715	811	
	12W	6,968,311	11/22/2005	Knockeart *et al.*	704	270	

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	13A	6,973,387	12/06/2005	Masclet *et al.*	701	211	
	13B	6,975,993	12/13/2005	Keiller	704	275	
	13C	6,980,092	12/27/2005	Turnbull *et al.*	340	425.5	
	13D	6,983,055	01/03/2006	Luo	381	313	
	13E	6,990,513	01/24/2006	Belfiore *et al.*	709	203	
	13F	6,996,531	02/07/2006	Korall *et al.*	704	270	
	13G	7,003,463	02/21/2006	Maes *et al.*	704	270.1	
	13H	7,016,849	03/21/2006	Arnold *et al.*	704	275	
	13I	7,020,609	03/28/2006	Thrift *et al.*	704	270.1	
	13J	7,024,364	04/04/2006	Guerra *et al.*	704	270	
	13K	7,027,586	04/11/2006	Bushey *et al.*	379	265.09	
	13L	7,027,975	04/11/2006	Pazandak *et al.*	704	9	
	13M	7,035,415	04/25/2006	Belt *et al.*	381	92	
	13N	7,036,128	04/25/2006	Julia *et al.*	719	317	
	13O	7,043,425	05/09/2006	Pao	704	211	
	13P	7,054,817	05/30/2006	Shao	704	270	
	13Q	7,058,890	06/06/2006	George *et al.*	715	728	
	13R	7,062,488	06/13/2006	Reisman	707	8	
	13S	7,069,220	06/27/2006	Coffman *et al.*	704	275	
	13T	7,072,834	07/04/2006	Zhou	704	244	
	13U	7,076,362	07/11/2006	Ohtsuji *et al.*	701	211	
	13V	7,082,469	07/25/2006	Gold *et al.*	709	231	
	13W	7,085,708	08/01/2006	Manson	704	9	

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	14A	7,092,928	08/15/2006	Elad *et al.*	706	60	
	14B	7,107,210	09/12/2006	Deng *et al.*	704	226	
	14C	7,107,218	09/12/2006	Preston	704	270	
	14D	7,110,951	09/19/2006	Lemelson *et al.*	704	270	
	14E	7,127,400	10/24/2006	Koch	704	270.1	
	14F	7,130,390	10/31/2006	Abburi	379	88.17	
	14G	7,136,875	11/14/2006	Anderson *et al.*	707	104.1	
	14H	7,137,126	11/14/2006	Coffman *et al.*	719	328	
	14I	7,143,037	11/28/2006	Chestnut	704	251	
	14J	7,143,039	11/28/2006	Stifelman *et al.*	704	270	
	14K	7,146,319	12/05/2006	Hunt	704	254	
	14L	7,149,696	12/12/2006	Shimizu *et al.*	705	1	
	14M	7,165,028	01/16/2007	Gong	704	233	
	14N	7,171,291	01/30/2007	Obradovich	701	29	
	14O	7,174,300	02/06/2007	Bush	704	275	
	14P	7,177,798	02/13/2007	Hsu *et al.*	704	9	
	14Q	7,184,957	02/27/2007	Brookes *et al.*	704	246	
	14R	7,190,770	03/13/2007	Ando *et al.*	379	88.01	
	14S	7,197,069	03/27/2007	Agazzi *et al.*	375	233	
	14T	7,197,460	03/27/2007	Gupta *et al.*	704	270.1	
	14U	7,203,644	04/10/2007	Anderson *et al.*	704	246	
	14V	7,206,418	04/17/2007	Yang *et al.*	381	92	
	14W	7,207,011	04/17/2007	Mulvey *et al.*	715	812	

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	15A	7,215,941	05/08/2007	Beckmann *et al.*	455	404.1	
	15B	7,228,276	06/05/2007	Omote *et al.*	704	243	
	15C	7,231,343	06/12/2007	Treadgold *et al.*	704	9	
	15D	7,236,923	06/26/2007	Gupta	704	9	
	15E	7,254,482	08/07/2007	Kawasaki *et al.*	701	211	
	15F	7,272,212	09/18/2007	Eberle *et al.*	379	88.17	
	15G	7,277,854	10/02/2007	Bennett *et al.*	704	257	
	15H	7,283,829	10/16/2007	Christenson *et al.*	455	461	
	15I	7,283,951	10/16/2007	Marchisio *et al.*	704	9	
	15J	7,289,606	10/30/2007	Sibal *et al.*	379	52	
	15K	7,299,186	11/20/2007	Kuzunuki *et al.*	704	270.1	
	15L	7,301,093	11/27/2007	Sater *et al.*	84	615	
	15M	7,305,381	12/04/2007	Poppink *et al.*	1	1	
	15N	7,321,850	01/22/2008	Wakita	704	10	
	15O	7,328,155	02/05/2008	Endo *et al.*	704	251	
	15P	7,337,116	02/26/2008	Charlesworth *et al.*	704	254	
	15Q	7,340,040	03/04/2008	Saylor *et al.*	379	67.1	
	15R	7,366,285	04/29/2008	Parolkar *et al.*	379	88.17	
	15S	7,366,669	04/29/2008	Nishitani *et al.*	704	256	
	15T	7,376,645	05/20/2008	Bernard	707	3	
	15U	7,386,443	06/10/2008	Parthasarathy *et al.*	704	201	
	15V	7,398,209	07/08/2008	Kennewick *et al.*	704	255	
	15W	7,406,421	07/29/2008	Odinak *et al.*	704	275	

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	16A	7,415,414	08/19/2008	Azara *et al.*	704	270	
	16B	7,421,393	09/02/2008	Di Fabbrizio *et al.*	704	275	
	16C	7,424,431	09/09/2008	Greene *et al.*	704	270	
	16D	7,447,635	11/04/2008	Konopka *et al.*	704	275	
	16E	7,451,088	11/11/2008	Ehlen *et al.*	704	270.1	
	16F	7,454,608	11/18/2008	Gopalakrishnan *et al.*	713	100	
	16G	7,461,059	12/02/2008	Richardson *et al.*	707	5	
	16H	7,472,020	12/30/2008	Brulle-Drews	701	211	
	16I	7,472,060	12/30/2008	Gorin *et al.*	704	240	
	16J	7,472,075	12/30/2008	Odinak *et al.*	705	26	
	16K	7,478,036	01/13/2009	Shen *et al.*	704	9	
	16L	7,487,088	02/03/2009	Gorin *et al.*	704	240	
	16M	7,487,110	02/03/2009	Bennett *et al.*	705	26	
	16N	7,493,259	02/17/2009	Jones *et al.*	704	257	
	16O	7,493,559	02/17/2009	Wolff *et al.*	715	727	
	16P	7,502,672	03/10/2009	Kolls	701	29	
	16Q	7,502,738	03/10/2009	Kennewick *et al.*	704	257	
	16R	7,516,076	04/07/2009	Walker *et al.*	704	275	
	16S	7,529,675	05/05/2009	Maes	704	270.1	
	16T	7,536,297	05/19/2009	Byrd *et al.*	704	10	
	16U	7,536,374	05/19/2009	Au	706	55	
	16V	7,542,894	06/02/2009	Murata	704	9	
	16W	7,546,382	06/09/2009	Healey *et al.*	709	246	

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	17A	7,548,491	06/16/2009	Macfarlane	367	198	
	17B	7,558,730	07/07/2009	Davis *et al.*	704	235	
	17C	7,574,362	08/11/2009	Walker *et al.*	704	275	
	17D	7,577,244	08/18/2009	Taschereau	379	218.01	
	17E	7,606,708	10/20/2009	Hwang	704	257	
	17F	7,620,549	11/17/2009	Di Cristo *et al.*	704	257	
	17G	7,634,409	12/15/2009	Kennewick *et al.*	704	257	
	17H	7,640,006	12/29/2009	Portman *et al.*	455	412.1	
	17I	7,640,160	12/29/2009	Di Cristo *et al.*	704	257	
	17J	7,640,272	12/29/2009	Mahajan *et al.*	707	104.1	
	17K	7,676,365	03/09/2010	Hwang *et al.*	704	240	
	17L	7,676,369	03/09/2010	Fujimoto *et al.*	704	270	
	17M	7,684,977	03/23/2010	Morikawa	704	211	
	17N	7,693,720	04/06/2010	Kennewick *et al.*	704	275	
	17O	7,729,916	06/01/2010	Coffman *et al.*	704	270	
	17P	7,729,918	06/01/2010	Walker *et al.*	704	275	
	17Q	7,729,920	06/01/2010	Chaar *et al.*	704	275	
	17R	7,734,287	06/08/2010	Ying	455	423	
	17S	7,748,021	06/29/2010	Obradovich	725	105	
	17T	7,788,084	08/31/2010	Brun *et al.*	704	7	
	17U	7,801,731	09/21/2010	Odinak *et al.*	704	275	
	17V	7,809,570	10/05/2010	Kennewick *et al.*	704	257	
	17W	7,818,176	10/19/2010	Freeman *et al.*	704	270	

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	18A	7,831,426	11/09/2010	Bennett	704	252	
	18B	7,831,433	11/09/2010	Belvin *et al.*	704	275	
	18C	7,873,519	01/18/2011	Bennett	704	257	
	18D	7,873,523	01/18/2011	Potter *et al.*	704	275	
	18E	7,873,654	01/18/2011	Bernard	707	769	
	18F	7,881,936	02/01/2011	Longe *et al.*	704	257	
	18G	7,890,324	02/15/2011	Bangalore *et al.*	704	231	
	18H	7,894,849	02/22/2011	Kass *et al.*	455	550.1	
	18I	7,902,969	03/08/2011	Obradovich	340	439	
	18J	7,917,367	03/29/2011	Di Cristo *et al.*	704	270.1	
	18K	7,920,682	04/05/2011	Byrne *et al.*	379	88.18	
	18L	7,949,529	05/24/2011	Weider *et al.*	704	270	
	18M	7,949,537	05/24/2011	Walker *et al.*	704	275	
	18N	7,953,732	05/31/2011	Frank *et al.*	707	724	
	18O	7,974,875	07/05/2011	Quilici *et al.*	705	14.4	
	18P	7,983,917	07/19/2011	Kennewick *et al.*	704	257	
	18Q	7,984,287	07/19/2011	Gopalakrishnan *et al.*	713	100	
	18R	8,005,683	08/23/2011	Tessel *et al.*	704	275	
	18S	8,015,006	09/06/2011	Kennewick *et al.*	704	236	
	18T	8,060,367	11/15/2011	Keaveney	704	247	
	18U	8,069,046	11/29/2011	Kennewick *et al.*	704	257	
	18V	8,073,681	12/06/2011	Baldwin *et al.*	704	9	
	18W	8,077,975	12/13/2011	Ma *et al.*	382	187	

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	19A	8,082,153	12/20/2011	Coffman *et al.*	704	270	
	19B	8,086,463	12/27/2011	Ativanichayaphong *et al.*	704	275	
	19C	8,112,275	02/07/2012	Kennewick *et al.*	704	240	
	19D	8,140,327	03/20/2012	Kennewick *et al.*	704	226	
	19E	8,140,335	03/20/2012	Kennewick *et al.*	704	257	
	19F	8,145,489	03/27/2012	Freeman *et al.*	704	257	
	19G	8,150,694	04/03/2012	Kennewick *et al.*	704	257	
	19H	8,155,962	04/10/2012	Kennewick *et al.*	704	257	
	19I	8,170,867	05/01/2012	Germain	704	9	
	19J	8,195,468	06/05/2012	Weider *et al.*	704	275	
	19K	8,219,399	07/10/2012	Lutz *et al.*	704	270	
	19L	8,219,599	07/10/2012	Tunstall-Pedoe	707	955	
	19M	8,224,652	07/17/2012	Wang *et al.*	704	275	
	19N	8,255,224	08/28/2012	Singleton *et al.*	704	275	
	19O	8,326,627	12/04/2012	Kennewick *et al.*	704	257	
	19P	8,326,634	12/04/2012	Di Cristo *et al.*	704	270.1	
	19Q	8,326,637	12/04/2012	Baldwin *et al.*	704	275	
	19R	8,332,224	12/11/2012	Di Cristo *et al.*	704	257	
	19S	8,370,147	02/05/2013	Kennewick *et al.*	704	257	
	19T	8,447,607	05/21/2013	Weider *et al.*	704	250	
	19U	8,452,598	05/28/2013	Kennewick *et al.*	704	257	
	19V	8,515,765	08/20/2013	Baldwin et al.	704	275	
	19W	8,527,274	09/03/2013	Freeman *et al.*	704	257	

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	20A	8,589,161	11/19/2013	Kennewick *et al.*	704	252	
	20B	8,620,659	12/31/2013	Di Cristo et al.	704	257	
	20C	8,719,009	05/06/2014	Baldwin et al.	704	9	
	20D	8,719,026	05/06/2014	Kennewick *et al.*	704	257	
	20E	2001/0041980	11/15/2001	Howard *et al.*	704	270	
	20F	2001/0049601	12/06/2001	Kroeker *et al.*	704	254	
	20G	2001/0054087	12/20/2001	Flom *et al.*	709	218	
	20H	2002/0015500	02/07/2002	Belt *et al.*	381	66	
	20I	2002/0022927	02/21/2002	Lemelson *et al.*	701	301	
	20J	2002/0029261	03/07/2002	Shibata	709	219	
	20K	2002/0032752	03/14/2002	Gold *et al.*	709	218	
	20L	2002/0035501	03/21/2002	Handel *et al.*	705	10	
	20M	2002/0040297	04/04/2002	Tsiao *et al.*	704	257	
	20N	2002/0049535	04/25/2002	Rigo *et al.*	701	211	
	20O	2002/0049805	04/25/2002	Yamada *et al.*	709	202	
	20P	2002/0065568	05/30/2002	Silfvast *et al.*	700	94	
	20Q	2002/0067839	06/06/2002	Heinrich	381	110	
	20R	2002/0069059	06/06/2002	Smith	704	257	
	20S	2002/0069071	06/06/2002	Knockeart et al.	704	275	
	20T	2002/0082911	06/27/2002	Dunn *et al.*	705	14	
	20U	2002/0087326	07/04/2002	Lee *et al.*	704	270.1	
	20V	2002/0087525	07/04/2002	Abbott *et al.*	707	3	
	20W	2002/0107694	08/08/2002	Lerg	704	273	

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	21A	2002/0120609	08/29/2002	Lang *et al.*	707	1	
	21B	2002/0124050	09/05/2002	Middeljans	709	203	
	21C	2002/0133354	09/19/2002	Ross *et al.*	704	275	
	21D	2002/0133402	09/19/2002	Faber *et al.*	705	14	
	21E	2002/0135618	09/26/2002	Maes et al.	345	767	
	21F	2002/0138248	09/26/2002	Corston-Oliver *et al.*	704	1	
	21G	2002/0143532	10/03/2002	McLean *et al.*	704	235	
	21H	2002/0143535	10/03/2002	Kist *et al.*	704	251	
	21I	2002/0161646	10/31/2002	Gailey *et al.*	705	14	
	21J	2002/0173333	11/21/2002	Buchholz *et al.*	455	527	
	21K	2002/0173961	11/21/2002	Guerra	704	258	
	21L	2002/0184373	12/05/2002	Maes	709	228	
	21M	2002/0188602	12/12/2002	Stubler *et al.*	707	3	
	21N	2002/0198714	12/26/2002	Zhou	704	252	
	21O	2003/0014261	01/16/2003	Kageyama	704	275	
	21P	2003/0016835	01/23/2003	Elko *et al.*	381	92	
	21Q	2003/0046346	03/06/2003	Mumick *et al.*	709	205	
	21R	2003/0064709	04/03/2003	Gailey *et al.*	455	412	
	21S	2003/0065427	04/03/2003	Funk *et al.*	701	1	
	21T	2003/0069734	04/10/2003	Everhart	704	275	
	21U	2003/0088421	05/08/2003	Maes *et al.*	704	270.1	
	21V	2003/0097249	05/22/2003	Walker *et al.*	704	1	
	21W	2003/0110037	06/12/2003	Walker *et al.*	704	257	

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	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

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	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	22A	2003/0112267	06/19/2003	Belrose	345	728	
	22B	2003/0115062	06/19/2003	Walker *et al.*	704	258	
	22C	2003/0120493	06/26/2003	Gupta	704	270.1	
	22D	2003/0135488	07/17/2003	Amir *et al.*	707	3	
	22E	2003/0144846	07/31/2003	Denenberg *et al.*	704	277	
	22F	2003/0158731	08/21/2003	Falcon *et al.*	704	231	
	22G	2003/0161448	08/28/2003	Parolkar *et al.*	379	88.17	
	22H	2003/0182132	09/25/2003	Niemoeller	704	275	
	22I	2003/0204492	10/30/2003	Wolf *et al.*	707	3	
	22J	2003/0206640	11/06/2003	Malvar *et al.*	381	93	
	22K	2003/0212550	11/13/2003	Ubale	704	215	
	22L	2003/0212558	11/13/2003	Matula	704	260	
	22M	2003/0212562	11/13/2003	Patel *et al.*	704	275	
	22N	2003/0225825	12/04/2003	Healey *et al.*	709	203	
	22O	2003/0236664	12/25/2003	Sharma	704	251	
	22P	2004/0006475	01/08/2004	Ehlen *et al.*	704	270.1	
	22Q	2004/0010358	01/15/2004	Oesterling *et al.*	701	49	
	22R	2004/0025115	02/05/2004	Sienel *et al.*	715	513	
	22S	2004/0044516	03/04/2004	Kennewick *et al.*	704	5	
	22T	2004/0098245	05/20/2004	Walker *et al.*	704	1	
	22U	2004/0117179	06/17/2004	Balasuriya	704	231	
	22V	2004/0117804	06/17/2004	Scahill *et al.*	719	320	
	22W	2004/0140989	07/22/2004	Papageorge	345	700	

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OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	23A	2004/0158555	08/12/2004	Seedman *et al.*	707	3	
	23B	2004/0166832	08/26/2004	Portman *et al.*	455	412.1	
	23C	2004/0167771	08/26/2004	Duan *et al.*	704	10	
	23D	2004/0172258	09/02/2004	Dominach *et al.*	704	277	
	23E	2004/0193408	09/30/2004	Hunt	704	209	
	23F	2004/0193420	09/30/2004	Kennewick *et al.*	704	257	
	23G	2004/0199375	10/07/2004	Ehsani *et al.*	704	4	
	23H	2004/0205671	10/14/2004	Sukehiro *et al.*	715	532	
	23I	2004/0243417	12/02/2004	Pitts, III *et al.*	704	276	
	23J	2005/0015256	01/20/2005	Kargman	704	272	
	23K	2005/0021334	01/27/2005	Iwahashi	704	240	
	23L	2005/0021470	01/27/2005	Martin *et al.*	705	51	
	23M	2005/0021826	01/27/2005	Kumar	709	232	
	23N	2005/0033574	02/10/2005	Kim *et al.*	704	251	
	23O	2005/0043940	02/24/2005	Elder	704	9	
	23P	2005/0114116	05/26/2005	Fiedler	704	201	
	23Q	2005/0125232	06/09/2005	Gadd	704	270.1	
	23R	2005/0131673	06/16/2005	Koizumi *et al.*	704	2	
	23S	2005/0137850	06/23/2005	Odell	704	4	
	23T	2005/0137877	06/23/2005	Oesterling *et al.*	704	275	
	23U	2005/0143994	06/30/2005	Mori *et al.*	704	235	
	23V	2005/0216254	09/29/2005	Gupta *et al.*	704	9	
	23W	2005/0234727	10/20/2005	Chiu	704	270.1	

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	24A	2005/0283752	12/22/2005	Fruchter *et al.*	717	100	
	24B	2006/0041431	02/23/2006	Maes	704	270.1	
	24C	2006/0047509	03/02/2006	Ding *et al.*	704	231	
	24D	2006/0206310	09/14/2006	Ravikumar *et al.*	704	9	
	24E	2006/0217133	09/28/2006	Christenson *et al.*	455	461	
	24F	2006/0285662	12/21/2006	Yin *et al.*	379	88.16	
	24G	2007/0033005	02/08/2007	Cristo *et al.*	704	9	
	24H	2007/0033020	02/08/2007	(Kelleher) Francois *et al.*	704	226	
	24I	2007/0038436	02/15/2007	Cristo *et al.*	704	9	
	24J	2007/0043569	02/22/2007	Potter, III *et al.*	704	270	
	24K	2007/0043574	02/22/2007	Coffman *et al.*	704	275	
	24L	2007/0043868	02/22/2007	Kumar *et al.*	709	226	
	24M	2007/0050191	03/01/2007	Weider *et al.*	704	275	
	24N	2007/0055525	03/08/2007	Kennewick *et al.*	704	257	
	24O	2007/0061067	03/15/2007	Zeinstra *et al.*	701	200	
	24P	2007/0061735	03/15/2007	Hoffberg *et al.*	715	744	
	24Q	2007/0073544	03/29/2007	Millett *et al.*	704	277	
	24R	2007/0078708	04/05/2007	Yu *et al.*	705	14	
	24S	2007/0078709	04/05/2007	Rajaram	705	14	
	24T	2007/0118357	05/24/2007	Kasravi *et al.*	704	10	
	24U	2007/0135101	06/14/2007	Ramati *et al.*	455	414.1	
	24V	2007/0146833	06/28/2007	Satomi *et al.*	358	537	
	24W	2007/0162296	07/12/2007	Altberg *et al.*	705	1	

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	25A	2007/0179778	08/02/2007	Gong *et al.*	704	9	
	25B	2007/0186165	08/09/2007	Maislos *et al.*	715	728	
	25C	2007/0198267	08/23/2007	Jones *et al.*	704	257	
	25D	2007/0214182	09/13/2007	Rosenberg	707	104.1	
	25E	2007/0250901	10/25/2007	McIntire *et al.*	725	146	
	25F	2007/0265850	11/15/2007	Kennewick *et al.*	704	257	
	25G	2007/0299824	12/27/2007	Pan *et al.*	707	3	
	25H	2008/0034032	02/07/2008	Healey *et al.*	709	203	
	25I	2008/0065386	03/13/2008	Cross *et al.*	704	270	
	25J	2008/0091406	04/17/2008	Baldwin *et al.*	704	4	
	25K	2008/0103761	05/01/2008	Printz *et al.*	704	9	
	25L	2008/0109285	05/08/2008	Reuther *et al.*	705	7	
	25M	2008/0115163	05/15/2008	Gilboa *et al.*	725	34	
	25N	2008/0133215	06/05/2008	Sarukkai	704	2	
	25O	2008/0140385	06/12/2008	Mahajan *et al.*	704	9	
	25P	2008/0147410	06/19/2008	Odinak	704	270.1	
	25Q	2008/0177530	07/24/2008	Cross *et al.*	704	4	
	25R	2008/0189110	08/07/2008	Freeman *et al.*	704	251	
	25S	2008/0235023	09/25/2008	Kennewick *et al.*	704	257	
	25T	2008/0235027	09/25/2008	Cross	704	270.1	
	25U	2008/0319751	12/25/2008	Kennewick *et al.*	704	257	
	25V	2009/0052635	02/26/2009	Jones *et al.*	379	88.02	
	25W	2009/0067599	03/12/2009	Agarwal *et al.*	379	114.21	

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	26A	2009/0076827	03/19/2009	Bulitta *et al.*	704	275	
	26B	2009/0106029	04/23/2009	DeLine *et al.*	704	275	
	26C	2009/0117885	05/07/2009	Roth	455	414.3	
	26D	2009/0144271	06/04/2009	Richardson *et al.*	707	5	
	26E	2009/0150156	06/11/2009	Kennewick *et al.*	704	257	
	26F	2009/0171664	07/02/2009	Kennewick *et al.*	704	257	
	26G	2009/0216540	08/27/2009	Tessel *et al.*	704	275	
	26H	2009/0271194	10/29/2009	Davis *et al.*	704	235	
	26I	2009/0273563	11/05/2009	Pryor	345	157	
	26J	2009/0276700	11/05/2009	Anderson *et al.*	715	700	
	26K	2009/0299745	12/03/2009	Kennewick *et al.*	704	257	
	26L	2009/0307031	12/10/2009	Winkler *et al.*	705	7	
	26M	2009/0313026	12/17/2009	Coffman *et al.*	704	275	
	26N	2010/0023320	01/28/2010	Di Cristo *et al.*	704	9	
	26O	2010/0029261	02/04/2010	Mikkelsen *et al.*	455	419	
	26P	2010/0049501	02/25/2010	Kennewick *et al.*	704	9	
	26Q	2010/0049514	02/25/2010	Kennewick *et al.*	704	233	
	26R	2010/0057443	03/04/2010	Di Cristo *et al.*	704	9	
	26S	2010/0063880	03/11/2010	Atsmon *et al.*	705	14.53	
	26T	2010/0036967	02/11/2010	Caine *et al.*	709	236	
	26U	2010/0185512	07/22/2010	Borger *et al.*	705	14.49	
	26V	2010/0145700	06/10/2010	Kennewick *et al.*	704	257	
	26W	2010/0204986	08/12/2010	Kennewick *et al.*	704	226	

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	27A	2010/0204994	08/12/2010	Kennewick *et al.*	704	257	
	27B	2010/0217604	08/26/2010	Baldwin *et al.*	704	275	
	27C	2010/0286985	11/11/2010	Kennewick *et al.*	704	257	
	27D	2010/0299142	11/25/2010	Freeman *et al.*	704	9	
	27E	2010/0312566	12/09/2010	Odinak *et al.*	704	275	
	27F	2011/0112827	05/12/2011	Kennewick *et al.*	704	9	
	27G	2011/0112921	05/12/2011	Kennewick *et al.*	705	26.1	
	27H	2011/0131036	06/02/2011	Di Cristo *et al.*	704	9	
	27I	2011/0131045	06/02/2011	Cristo *et al.*	704	249	
	27J	2011/0231182	09/22/2011	Weider *et al.*	704	9	
	27K	2011/0231188	09/22/2011	Kennewick *et al.*	704	236	
	27L	2012/0022857	01/26/2012	Baldwin *et al.*	704	9	
	27M	2012/0101809	04/26/2012	Kennewick *et al.*	704	9	
	27N	2012/0101810	04/26/2012	Kennewick *et al.*	704	9	
	27O	2012/0109753	05/03/2012	Kennewick *et al.*	705	14.58	
	27P	2012/0150636	06/14/2012	Freeman *et al.*	705	14.49	
	27Q	2012/0278073	11/01/2012	Weider et al.	704	235	
	27R	2013/0054228	02/28/2013	Baldwin *et al.*	704	9	
	27S	2013/0211710	08/15/2013	Kennewick *et al.*	701	419	
	27T	2013/0253929	09/26/2013	Weider *et al.*	704	235	
	27U	2013/0297293	11/07/2013	Di Cristo *et al.*	704	9	
	27V	2013/0304473	11/14/2013	Baldwin *et al.*	704	257	
	27W	2013/0339022	12/19/2013	Baldwin *et al.*	704	257	
	27X	2014/0108013	04/17/2014	Di Cristo *et al.*	704	254	

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Bibliographic data: JP2006146881 (A) — 2006-06-08

DIALOGUING RATIONAL AGENT, INTELLIGENT DIALOGUING SYSTEM USING THIS AGENT, METHOD OF CONTROLLING INTELLIGENT DIALOGUE, AND PROGRAM FOR USING IT

No documents available for this priority number.

Inventor(s): LOUIS VINCENT; PANAGET FRANCK; BRETIER PHILIPPE ± (LOUIS VINCENT, ; PANAGET FRANCK, ; BRETIER PHILIPPE)

Applicant(s): FRANCE TELECOM ± (FR TELECOM)

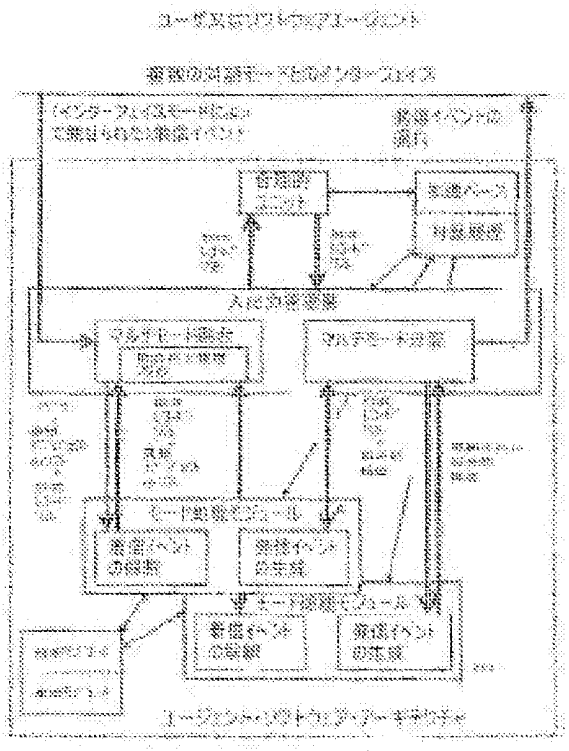
Classification: - international: ***G06F17/28; G06F3/01; G06F3/16; G10L15/22***
- cooperative: **G06N5/043**

Application number: JP20050278625 20050926

Priority number (s): FR20040010210 20040927

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Abstract of JP2006146881 (A)



PROBLEM TO BE SOLVED: To allow a dialoguing rational agent to generically manage multimodal interactions with its contacts, which may be human users or other software agents. ; SOLUTION: The rational agent includes an interpretation means to transform events translating the communication activity of an external agent into incoming formal records, a rational unit creating outgoing formal records as a function of the incoming formal records and a behavioral model of the rational agent, and an outgoing event generation means transforming the outgoing formal records into outgoing events enabling the communication activity of the rational agent with the external agent. The interpretation means comprise several interpretation modules, and the rational agent also comprises an input and output management layer, which correlates incoming formal records and submits the incoming formal communication records thus correlated to the rational unit. ; COPYRIGHT: (C)2006,JPO&NCIPI

Last updated: 11.12.2013 Worldwide Database 5.8.15; 92p

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G06F 17/28	(2006.01)	G06F	17/28	X	5D015
G06F 3/01	(2006.01)	G06F	3/01		5E501
G10L 15/22	(2006.01)	G10L	15/22	300Z	

審査請求 未請求　請求項の数 20　OL　外国語出願　（全 58 頁）

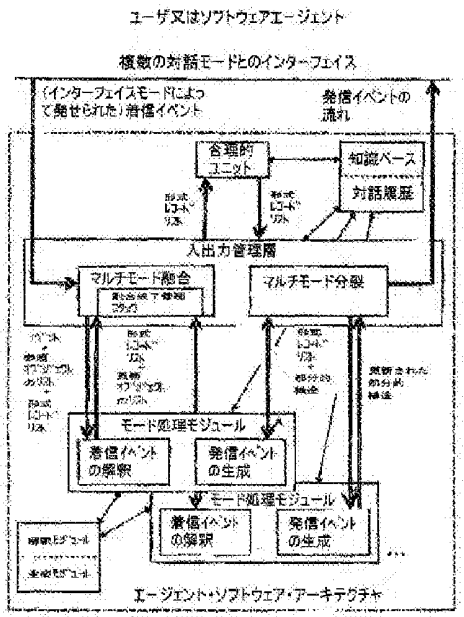
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(33)優先権主張国　フランス (FR)

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最終頁に続く

(54)【発明の名称】会話用合理的エージェント、このエージェントを用いるインテリジェント会話システム、インテリジェント会話を制御する方法、及びそれを用いるプログラム

(57)【要約】
【課題】会話用合理的エージェントが、人間のユーザ又は他のソフトウェアエージェントである接続相手とのマルチモード対話を包括的に管理できるようにする。
【解決手段】合理的エージェントには、イベントを変換し、外部エージェントの通信活動を着信形式レコードに翻訳する解釈手段と、着信形式レコードの機能として、発信形式レコード及び合理的エージェントの行動モデルを生成する合理的ユニットと、発信形式レコードを発信イベントに変換して、外部エージェントとの合理的エージェントの通信活動を具現化する発信イベント生成手段と、が含まれる。解釈手段には、幾つかの解釈モジュールが含まれ、合理的エージェントには、入出力管理層が含まれる。入出力管理層は、着信形式レコードを互いに関係付け、このようにして互いに関係付けられた着信形式通信レコードを合理的ユニットに送出する。
【選択図】図1



【特許請求の範囲】
【請求項1】
ソフトウェア・アーキテクチャを含む会話用合理的エージェントにおいて、少なくとも着信イベントを解釈する手段と、合理的ユニットと、発信イベントを生成する手段と、が含まれ、動作時、前記解釈手段は、着信イベントを変換して、外部エージェントの通信活動を着信形式通信レコードに翻訳するように設計されており、動作時、前記合理的ユニットは、前記着信形式通信レコードの機能として、発信形式通信レコードを生成し、また、前記合理的ユニットによって管理される前記合理的エージェントの行動モデルを生成し、更に、動作時、前記生成手段は、発信形式通信レコードを発信イベントに変換し、前記外部エージェントとの前記合理的エージェントの通信活動を具現化する前記会話用合理的エージェントであって、
前記ソフトウェア・アーキテクチャには、更に、少なくとも１つのマルチモード融合モジュールが備えられた入出力管理層が含まれ、
前記解釈手段には、複数の着信イベント解釈モジュールであって、各モジュールが特定の通信モードに専用化されている前記着信イベント解釈モジュールが含まれ、
動作時、前記マルチモード融合モジュールは、全ての着信イベントを処理し、これら着信イベントの解釈を前記様々な解釈モジュールに前記各モードの機能として転送し、
前記マルチモード融合モジュールは、同じ融合相の間、これらの解釈モジュールから収集された着信形式通信レコードを互いに関係付け、そして、このようにして互いに関係付けられた前記着信形式通信レコードを前記融合相の終了時に前記合理的ユニットに送出する、ことを特徴とする会話用合理的エージェント。
【請求項2】
請求項1に記載の会話用合理的エージェントであって、
前記融合モジュールは、もしあれば、同じ融合相で前の着信イベントにおいて以前起動されたオブジェクトのリスト、及び同じ融合相の間に前記前の解釈モジュールからの前記呼出しによって返された形式通信レコードのリストと共に、この解釈モジュールに特有な前記モードで表現された任意の着信イベントを関係する前記解釈モジュールに送信することによって着信イベントの解釈を転送することを特徴とする会話用合理的エージェント。
【請求項3】
請求項2に記載の会話用合理的エージェントであって、
前記融合モジュールによって呼び出された各解釈モジュールは、任意の新しい起動されたオブジェクトを含むように、又は前記最新の着信イベントにおいて起動された任意のオブジェクトを修正するように、完成されまた更新されたオブジェクトのリストと、形式通信レコードのリストと、を返し、同じ融合相の開始時点以来受信された全ての着信イベントによって表現された前記通信活動を翻訳することを特徴とする会話用合理的エージェント。
【請求項4】
前述の請求項のいずれか１つに記載の会話用合理的エージェントであって、前記融合モジュールには、全ての解釈モジュール及び前記融合モジュール用の読出し及び書き込みにおいてアクセス可能な融合相管理スタックが含まれることを特徴とする会話用合理的エージェント。
【請求項5】
ソフトウェア・アーキテクチャを含む会話用合理的エージェントであって、少なくとも着信イベントを解釈する手段と、合理的ユニットと、発信イベントを生成する手段と、が含まれ、動作時、前記解釈手段は、着信イベントを変換して、外部エージェントの通信活動を着信形式通信レコードに翻訳するように設計されており、動作時、前記合理的ユニットは、前記着信形式通信レコードの機能として、発信形式通信レコードを生成し、また、前記合理的ユニットによって管理される前記合理的エージェントの行動モデルを生成し、更に、動作時、前記生成手段は、発信形式通信レコードを発信イベントに変換し、前記外部

エージェントとの前記合理的エージェントの通信活動を具現化する前記会話用合理的エージェントであって、
　前記入出力管理層には、マルチモード分裂モジュールが備えられ、
　前記生成手段には、発信イベントを生成する複数のモジュールであって、各々それに特有の通信モードに対して専用化されている前記モジュールが含まれ、
　前記マルチモード分裂モジュールは、対応するモードで発信イベントとして前記合理的ユニットによって生成された発信形式通信レコードの変換を前記異なる生成モジュールに転送し、
　前記マルチモード分裂モジュールは、これらの発信イベントの流れを管理することを特徴とする会話用合理的エージェント。
【請求項6】
請求項5に記載の会話用合理的エージェントであって、請求項1乃至4のいずれか１つと組み合わせられた会話用合理的エージェント。
【請求項7】
請求項6に記載の会話用合理的エージェントであって、
　特定モード用の前記マルチモード解釈及び生成モジュールは、このモード用の同じ処理モジュールに属することを特徴とする会話用合理的エージェント。
【請求項8】
請求項5乃至7のいずれか１つに記載の会話用合理的エージェントであって、
　前記分裂モジュールは、前記合理的ユニットによって生成された前記発信形式通信レコードを順次アドレス指定することによって発信イベントへの発信形式レコードの変換と、各々前記発信イベントの１つを表す枝に構成された完成されるツリー構造と、を前記異なる生成モジュールに転送し、
　各生成モジュールは、この生成モジュールに特有な前記モードで表現された前記発信イベント（１つ又は複数）と共に、前記ツリー構造を、それが完成した後、前記分裂モジュールに返すことを特徴とする会話用合理的エージェント。
【請求項9】
請求項8に記載の会話用合理的エージェントであって、
　前記ツリー構造は、マークアップ構造であり、
　各生成モジュールは、全ての生成モジュールに共通なタグを用いて、発信イベントにおいて起動された同じオブジェクトを識別することを特徴とする会話用合理的エージェント。
【請求項10】
請求項9に記載の会話用合理的エージェントであって、
　前記生成モジュールの少なくとも１つは、新しい処理用に前記分裂モジュールによって以前呼び出された生成モジュールを選択的に呼び出して、新しい部分的構造をそれに送信し、前記呼出し生成モジュールによって生成された前記発信イベントを含み、また、前記呼び出された生成モジュールによって以前生成された前記発信イベントをもはや含まないように設計されていることを特徴とする会話用合理的エージェント。
【請求項11】
マルチモード通信インターフェイスと関連付けられた、前述の請求項のいずれか１つに記載の少なくとも１つの会話用合理的エージェントが含まれるインテリジェント会話システム。
【請求項12】
制御される合理的エージェントと外部エージェントとの間におけるインテリジェント会話を制御するための方法において、前記制御される合理的エージェントに供給される着信イベントを、それらを着信形式通信レコードに変換することによって、解釈する段階を含む少なくとも解釈動作と、発信形式通信レコードの形態で前記着信形式通信レコードに対する適切な応答を生成する段階を含む決定動作と、発信形式通信レコードを変換して、前記外部エージェントに宛てられた発信イベントを生成する段階を含む表現動作と、が含まれ

る前記方法であって、更に、
　切替え動作、相関動作及び相管理動作が含まれ、
　少なくとも１つの切替え動作が、この着信イベントの表現モードの機能として少なくとも１つの着信イベントを考慮する段階を含み、
　前記対応する異なるモードで表現された着信イベントを解釈する前記動作は、別々に用いられ、
　少なくとも１つの相関動作は、同じ融合相の間、異なるモードの着信イベントに対応する前記着信形式通信レコードを収集して、同じ決定動作によってこれらの着信形式通信レコードを合同処理する段階を含み、
　相管理動作が、少なくとも１つの融合相を少なくとも決定する段階を含むことを特徴とする方法。
【請求項13】
請求項12に記載の制御方法であって、
　前記相管理動作には、スタック又はオブジェクトのリストを更新して、前記融合相の関処理を管理する少なくとも１つの動作であって、解釈動作の間、少なくとも１つの新しいオブジェクトを選択的に前記スタックに記憶し、前記融合相の終了前に、少なくとも１つの新しいイベントの前記予想された出現を示す段階と、前記対応する予想されるイベントが、前記融合相の終了前にもはや予想されない場合、解釈動作の間、前記スタックから１つ又は複数のオブジェクトを選択的に除去する段階と、を含む前記動作が含まれることを特徴とする方法。
【請求項14】
請求項1に記載の制御方法であって、
　前記相管理動作には、更に、解釈動作の間、前記スタックの全てのオブジェクトを選択的に閲覧する段階を含むスタック閲覧動作が含まれることを特徴とする方法。
【請求項15】
請求項14に記載の制御方法であって、
　前記相管理動作には、更に、前記スタックから遅延タイプオブジェクトを選択的に除去し、この遅延の期間に対するタイムアウトを設定し、この遅延が経過した時、前記スタックを閲覧する段階を含むタイミング動作が含まれることを特徴とする方法。
【請求項16】
請求項15に記載の制御方法であって、
　前記相管理動作には、更に、前記スタックが空である場合、前記解釈動作の後、前記融合相を終了する段階を含む前記融合相を閉じる動作が含まれることを特徴とする方法。
【請求項17】
制御される合理的エージェントと外部エージェントとの間におけるインテリジェント会話を制御するための方法において、前記制御される合理的エージェントに供給される着信イベントを、それらを着信形式通信レコードに変換することによって、解釈する段階を含む少なくとも解釈動作と、発信形式通信レコードの形態で前記着信形式通信レコードに対する適切な応答を生成する段階を含む決定動作と、発信形式通信レコードを変換して、前記外部エージェントに宛てられた発信イベントを生成する段階を含む表現動作と、が含まれる前記方法であって、更に、
　対応する異なる出力モードに関連する表現動作を少なくとも前記発信形式通信レコードに順次適用する段階と、各々前記発信イベントの１つを表現する枝で構成されたツリー構造を生成し、各表現動作が、この表現動作に特有なモード情報を備えたこのツリー構造を完成する段階と、を含む連接動作が含まれることを特徴とする方法。
【請求項18】
請求項17に記載の制御方法であって、
　前記連接動作は、タグを備えたツリー構造を生成し、
　異なる対応する出力モードに関連する少なくとも幾つかの前記表現動作が、共通タグを用いて、発信イベントにおいて起動された同じオブジェクトを起動することを特徴とする

方法。
【請求項19】
請求項17及び18のいずれかに記載の制御方法であって，
各表現動作は、同じ連接動作の間に既に呼び出された他の表現動作を呼び出すように設計されており、また、構築される前記ツリー構造において、この他の表現動作によって以前生成された発信イベントをこの他の表現動作によって修正させるように設計されていることを特徴とする方法。
【請求項20】
コンピュータプログラムであって、
このプログラムがそれを対象にしたコンピュータ設備にインストールされた場合、請求項12乃至19のいずれか１つに基づく前述の方法を実現するためのプログラム命令を含むコ
【発明の詳細な説明】。
【技術分野】
【0001】
本発明は、一般的に、通信方法の自動化に関する。
【0002】
特に、その第１の側面によれば、本発明は、ソフトウェア・アーキテクチャが含まれる会話用合理的エージェントに関する。ソフトウェア・アーキテクチャには、少なくとも着信イベントを解釈する手段と、合理的ユニットと、発信イベントを生成する手段とが含まれる。解釈手段は、動作時、着信イベントを変換し、外部エージェントの通信活動を着信形式通信レコードに翻訳するように設計されており、合理的ユニットは、動作時、着信形式通信レコードの機能としての発信形式通信レコードと、合理的ユニットによって管理される合理的エージェントの行動モデルとを生成し、更に、動作時、生成手段は、発信形式通信レコードを発信イベントに変換し、外部エージェントとの合理的エージェントの通信活動を具現化する。
【背景技術】
【0003】
このタイプの合理的エージェントは、当業者には公知であり、本出願人による基本特許EP2787902に記載されている。
【0004】
この基本特許に提示す手法は、インテリジェント会話システムとユーザとの間の対話文脈において、又は、インテリジェント会話システムと幾つかのエージェントを備えたインテリジェント会話システムにおける他のソフトウェアエージェントとの間の対話文脈の双方において、合理的エージェントによって自然言語で用いられるインテリジェント会話システムに関する。
【0005】
第１の場合、会話は、自然言語で行われ、他方、第２の場合、上記特許において開示された頭字語“ArCOL”で知られている言語やエージェントの国際標準化団体FIPA(Foundation_for_Intelligent_Physical_Agents)コンソーシアムによって開発された頭字語“FIPA-ACL”で知られる言語等の形式論理言語で直接行い得る。このコンソーシアムに関する情報は、インターネットサイト“http://www.fipa.org”にある。
【0006】
しかしながら、上述した基本特許は、幾つかのやり方で、例えば、彼又は彼女の自然言語で及びボタンを押すこと及び／又は具体的な手話を行うことの双方によって、少なくとも外部エージェントがそれ自体を表現し得る会話を行う具体的な手段を規定していない。
【0007】
しかしながら、自動合理的エージェントと外部エージェント、例えば、人間のユーザとの間における会話を可能にし、非言語的なモードを用いて(言い換えると、自然言語を用いないで、例えば、手話又は触覚型のインターフェイスを介して)、あるいは、幾つかの異なるモードを同時に及び／又は連続的に用いて彼自身を表現し、各通信モードが、書面

によるメッセージ、口頭メッセージ、イントネーション、図、手話、タッチ感知情報等の場合のように、特定の情報チャネルに関連付けられるように、マルチモード会話の様式化が試みられて来た。

【0008】

ユーザは、従って、適切なインターフェイスを用いて、音声及び手話によって、彼自身を同時に表現し得るが、合理的エージェントもまた、それ自体を表現する幾つかの異なるモードを用いて、その応答をユーザに行い得ることを理解されたい。

【0009】

このようなマルチモード対話には、２つの動作、即ち、マルチモード融合及びマルチモード分裂を用いることが必要である。

【0010】

マルチモード融合は、これによって、インテリジェント会話システムへの入力における１つ又は複数のマルチモードイベント解釈構成要素が、感知されたメッセージの意味規則の統一表現を生成する動作である。

【0011】

マルチモード分裂は、外部エージェントが彼自身を表現するやり方とは独立に幾つかの異なるモードで合理的エージェントがそれ自体を表現する必要がある場合だけ要求され、二重マルチモード融合動作であり、また、１つ又は複数のマルチモードイベント生成構成要素の場合、前記イベントを生成し、合理的エージェントの合理的ユニットによって生成されたメッセージの意味論的表現を表す段階を含む。

【0012】

マルチモード会話を様式化する試みには、機能的なアーキテクチャが欠如した状態で、EMMA(拡張可能なマルチモード注釈マークアップ言語)と称され、また、XML言語に関連付けられたマークアップ言語に基づき、対話システムのマルチモード入出力を表現するためのツールを提示したW3C標準化機関のMMIグループによって行われた仕事が含まれるが、例外は、既存のツールが入力だけを表現し得ることである。

【0013】

更に、言及に値するのは、MMIグループと連携したW3C機関における音声XMLグループによって行われた仕事、記述的な要素をマルチモードコンテンツに追加するためのメカニズムを提供するMPEG-7プロジェクトやマルチモード対話用の標準フレームワークを提示する目的を備えたMPEG-21プロジェクトを立ち上げたMPEGコンソーシアムによって行われた仕事である。

【0014】

しかしながら、多くのシステムがマルチモード融合及び／又は分裂構成要素を用いるにも関わらず、これらの構成要素は、通常、幾つかの媒体処理能力の実験的集大成の結果であり、所定のソフトウェア・アーキテクチャを用いた結果ではない。

【0015】

特に、MMIグループによって行われた仕事は、マルチモード入出力流れを表すためのツールを記述するが、構成要素を系統立てるための抽象的アーキテクチャ（参考：W3Cマルチモード対話フレームワーク、W3Cメモ、2003年５月6日、http://www.w3.org/TR/2003/NOTE-mmi-framework-20030506/）を伴う。しかしながら、この仕事は、マルチモード入力の解釈用の、あるいは、合理的インテリジェント会話エージェントによるマルチモード出力の生成用の何らかの具体的なメカニズムにはまだ至っていない。

【発明の開示】

【発明が解決しようとする課題】

【0016】

この文脈において、また、上記特許FR2787902が、ユーザとインテリジェント会話システムとの間おける自然言語の使用(理解及び生成)や、ソフトウェアエージェント間（それらの１つは、インテリジェント会話システムであってよい）におけるArCOL又はFIPA-ACL等の形式通信言語の使用に基づき、対話だけを考慮する一方で、本発明の主な目的は、会

話用合理的エージェントが、人間のユーザ又は他のソフトウェアエージェントであり得るその接続相手とのマルチモード対話を包括的に管理できるようにするソフトウェア・アーキテクチャを提示することである。

【課題を解決するための手段】

【0017】

この目的を達成するために、本発明による会話用合理的エージェントは、上記序文において与えられた包括的な定義に適合する。本会話用合理的エージェントは、そのソフトウェア・アーキテクチャに、更に、少なくとも１つのマルチモード融合モジュールが備えられている入出力管理層が含まれることを本質的に特徴とする。また、解釈手段には、複数の着信イベント解釈モジュールであって、各モジュールが特定の通信モードに専用化されている着信イベント解釈モジュールが含まれることを特徴とする。また、動作時、マルチモード融合モジュールは、全ての着信イベントを処理し、これら着信イベントの解釈を様々な解釈モジュールに各モードの機能として転送することを特徴とする。マルチモード融合モジュールは、同じ融合相の間、これらの解釈モジュールから収集された着信形式通信レコードを互いに関係付け、そして、このようにして互いに関係付けられた着信形式通信レコードを融合相の終了時に合理的ユニットに送出することを特徴とする。

【0018】

好適には、融合モジュールは、もしあれば、同じ融合相で前の着信イベントにおいて以前起動されたオブジェクトのリスト、及び同じ融合相の間に前の解釈モジュールからの呼出しによって返された形式通信レコードのリストと共に、この解釈モジュールに特有なモードで表現された任意の着信イベントを関係する解釈モジュールに送信することによって着信イベントの解釈を転送する。

【0019】

これを達成するために、融合モジュールによって呼び出された各解釈モジュールは、任意の新しい起動されたオブジェクトを含むように、又は最新の着信イベントにおいて起動された任意のオブジェクトを修正するように、完成されまた更新されたオブジェクトのリストと、形式通信レコードのリストと、を返し、同じ融合相の開始時点以来受信された全ての着信イベントによって表現された通信活動を翻訳する。

【0020】

利点として、融合モジュールには、全ての解釈モジュール及び融合モジュールに対する読出し及び書き込みにおいてアクセス可能な融合相管理スタックが含まれる。

【0021】

対称的に、本発明は、更に、ソフトウェア・アーキテクチャを含む会話用合理的エージェントに関する。会話用合理的エージェントには、少なくとも着信イベントを解釈する手段と、合理的ユニットと、発信イベントを生成する手段と、が含まれる。動作時、解釈手段は、着信イベントを変換して、外部エージェントの通信活動を着信形式通信レコードに翻訳するように設計されている。動作時、合理的ユニットは、着信形式通信レコードの機能として、発信形式通信レコードを生成し、また、合理的ユニットによって管理される合理的エージェントの行動モデルを生成し、更に、生成手段は、発信形式通信レコードを発信イベントに変換し、外部エージェントに関する合理的エージェントの通信活動を具現化する。このエージェントの特徴は次の通りである。即ち、入出力管理層には、マルチモード分裂モジュールが備えられ、生成手段には、発信イベントを生成する複数のモジュールであって、各々それに特有の通信モードに対して専用化されているモジュールが含まれる。また、マルチモード分裂モジュールは、対応するモードで発信イベントとして合理的ユニットによって生成された発信形式通信レコードの変換を異なる生成モジュールに転送し、マルチモード分裂モジュールは、これらの発信イベントの流れを管理する。

【0022】

例えば、分裂モジュールは、異なる生成モジュールに対して、合理的ユニットによって生成された発信形式通信レコードを順次アドレス指定することによって発信イベントへの発信形式レコードの変換と、各々発信イベントの１つを表す枝に構成された完成されるツ

リー構造と、を転送する。各生成モジュールは、次に、この生成モジュールに特有なモードで表現された発信イベント（１つ又は複数）と共に、ツリー構造を、それが完成した後、分裂モジュールに返す。

【0023】

好適には、ツリー構造は、マークアップ構造であり、各生成モジュールは、全ての生成モジュールに共通なタグを用いて、発信イベントにおいて起動された同じオブジェクトを識別する。

【0024】

更に、有用なことは、生成モジュールの少なくとも１つが、新しい処理用に分裂モジュールによって以前呼び出された生成モジュールを選択的に呼び出して、新しい部分的構造をそれに送信し、呼出し生成モジュールによって生成された発信イベントを含み、また、呼び出された生成モジュールによって以前生成された発信イベントをもはや含まないように設計されていることである。

【0025】

合理的エージェントが、マルチモード融合モジュール及び分裂モジュールを含む場合、特別なモード用のマルチモード解釈及び生成モジュールは、好適には、このモード用の同じ処理モジュールに属する。

【0026】

本発明は、更に、マルチモード通信インターフェイスと関連付けられた、上記規定されたもののような少なくとも１つの会話用合理的エージェントが含まれるインテリジェント会話システムに関する。

【0027】

本発明は、更に、制御される合理的エージェントと外部エージェントとの間におけるインテリジェント会話を制御するための方法に関する。この方法には、制御される合理的エージェントに供給される着信イベントを、それらを着信形式通信レコードに変換することによって、解釈する段階を含む少なくとも解釈動作と、発信形式通信レコードの形態で着信形式通信レコードに対する適切な応答を生成する段階を含む決定動作と、発信形式通信レコードを変換して、外部エージェントに宛てられた発信イベントを生成する段階を含む表現動作と、が含まれる。この方法には、更に、切替え動作、相関動作及び相管理動作が含まれることを特徴とし、少なくとも１つの切替え動作が、この着信イベントの表現モードの機能として少なくとも１つの着信イベントを考慮する段階を含む。また、対応する異なるモードで表現された着信イベントを解釈する動作は、別々に用いられる。更に、少なくとも１つの相関動作は、同じ融合相の間、異なるモードの着信イベントに対応する着信形式通信レコードを収集して、同じ決定動作によってこれらの着信形式通信レコードを合同処理する段階を含む。また、相管理動作が、少なくとも１つの融合相を少なくとも決定する段階を含む。

【0028】

例えば、相管理動作には、スタック又はオブジェクトのリストを更新して、融合相の閉処理を管理する少なくとも１つの動作であって、解釈動作の間、１つ又は複数の新しいオブジェクトを選択的にスタックに記憶し、融合相の終了前に、１つ又は複数の新しいイベントの予想された出現を示す段階と、対応する予想されるイベントが、融合相の終了前にもはや予想されない場合、解釈動作の間、スタックから１つ又は複数のオブジェクトを選択的に除去する段階と、を含む動作が含まれる。

【0029】

更に、相管理動作には、解釈動作の間、スタックの全てのオブジェクトを選択的に閲覧する段階を含むスタック閲覧動作が含まれる。

【0030】

相管理動作には、更に、スタックから遅延タイプオブジェクトを選択的に除去し、この遅延の期間に対するタイムアウトを設定し、この遅延が経過した時、スタックを閲覧する段階を含むタイミング動作を含み得る。

【0031】
相管理動作には、スタックが空である場合、解釈動作の後、融合相を終了する段階を含む融合相を閉じる動作が含まれる。
【0032】
本発明は、更に、制御される合理的エージェントと外部エージェントとの間におけるインテリジェント会話を制御するための方法に関する。本方法には、制御される合理的エージェントに出力される着信イベントを、それらを着信形式通信レコードに変換することによって、解釈する段階を含む少なくとも解釈動作と、発信形式通信レコードの形態で着信形式通信レコードに対する適切な応答を生成する段階を含む決定動作と、発信形式通信レコードを変換して、外部エージェントに宛てられた発信イベントを生成する段階を含む表現動作と、が含まれる。本方法には、更に、対応する異なる出力モードに関連する表現動作を少なくとも発信形式通信レコードに順次適用する段階と、各々発信イベントの１つを表現する枝で構成されたツリー構造を生成し、各表現動作が、この表現動作に特有なモード情報を備えたこのツリー構造を完成する前記段階と、を含む連接動作が含まれることを特徴とする。
【0033】
好適には、連接動作は、タグを備えたツリー構造を生成し、異なる対応する出力モードに関連する少なくとも幾つかの表現動作が、共通タグを用いて、発信イベントにおいて起動された同じオブジェクトを起動する。
【0034】
各表現動作は、更に、同じ連接動作の間に既に呼び出された他の表現動作を呼び出すように設計されており、また、構築されるツリー構造において、この他の表現動作によって以前生成された発信イベントをこの他の表現動作によって修正させるように設計し得る。
【0035】
最後に、本発明は、コンピュータプログラムに関し、このコンピュータプログラムには、このプログラムがそれを対象にしたコンピュータ設備にインストールされた場合、上記規定された方法を実現するためのプログラム命令が含まれる。
【発明を実施するための最良の形態】
【0036】
本発明の他の特徴及び利点は、制限するためではなく手引のために与えられた次の説明を添付図を参照して解読すると明らかになるであろう。
【0037】
前述したように、本発明は、マルチモード対話システムの分野に存し、特に、システム入力におけるマルチモードイベントの解釈のための構成要素(融合構成要素)及び出力におけるマルチモードイベントの生成のための構成要素(分裂構成要素)に存する。
【0038】
この文脈において、本発明は、マルチモード対話のための上述した基本特許において述べた形式アーキテクチャを用いるソフトウェア・アーキテクチャを提示する。
【0039】
図1に示すように、このアーキテクチャには、以下が含まれる。
・会話用合理的エージェント内において、着信イベントの処理及び発信イベントの生成を統率する入出力管理層(以下参照)。
・多数の処理モジュールであって、各々それに特有の対話モードに関連付けられ、また、このモードにおいて表現されるイベントを処理する処理モジュール。用いられるこのタイプのモジュールの選択は、合理的エージェントが対話する必要のあるユーザ又はソフトウェアエージェントインターフェイスにおいて利用可能な異なる通信モードに直接依存する。
・上述した基本特許において述べたもののような合理的ユニットであって、このエージェントの形式モデル公理による論理的推測によって、合理的エージェントの反応を計算する機能を有する合理的ユニット。

・上記基本特許において述べた知識ベース及び対話履歴であって、上述した入出力管理層、合理的ユニット及び処理モジュールによってアクセスし得る知識ベース及び対話履歴。
・上記基本特許において述べたものなどのような理解及び生成モジュールであって、必要ならば、言語モードに関連付けられている(例えば、音声認識又はキーボード上でのユーザによるメッセージ入力から生じる)イベントを処理するためのモジュールによって用いられる理解及び生成モジュール。

【0040】

この新しいアーキテクチャの中心的な要素は、合理的エージェントの外部におけるイベントの繰り返し及び送信、並びにエージェント内におけるこれらのイベントの処理及び異なるモジュール間におけるそれらの配信を統率する入出力管理層である。

【0041】

この処理は、３つのステップ即ち相で構成され、マルチモード融合相、推論相及びマルチモード分裂相が含まれる。

【0042】

マルチモード分裂相の間、全ての着信イベントは、解釈され、これらのイベントを送信した外部エージェント、即ち、人間のユーザ又は他のソフトウェアエージェントによって実現された通信レコードを形式的に表す形式通信レコードのリストを形成する。これらのレコードは、上記基本特許において用いられるもののような(アーティミス（Artimis）通信言語の場合、ArCoLと称される)形式論理言語により、あるいは、ArCoL言語に基づきFIPAコンソーシアムによって規格化された言語であるFIPA-ACL言語のような形式論理言語で表現される。

【0043】

推論相の間、形式通信レコードは、形式通信レコードの新しいリストの形態で、会話用合理的エージェントの適切な反応を計算する合理的ユニットに送信される。この計算は、当業者に公知の上記特許における情報を用いて行われる。言い換えると、合理的エージェントの形式行動モデルの公理に基づき、論理的推測によって行われる。

【0044】

最後に、マルチモード分裂相の間、合理的ユニットによって以前生成された形式通信レコードは、外部エージェント(ユーザ又はソフトウェアエージェント)とのマルチモード通信インターフェイスにおいて利用可能な異なるモード用のイベントに変換される。

【0045】

合理的エージェントと他のソフトウェアエージェントとの間における対話だけを想定する特別な場合(従って、他のソフトウェアエージェントが人間のユーザではない場合)、FIPA-ACL等の形式エージェント間通信言語で表現されるメッセージの解釈及び生成に関連するイベントを処理するためのモジュールが、このソフトウェア・アーキテクチャに移植される。インテリジェント会話システムを用いる合理的エージェントの観点から見れば、このような言語を用いて他のエンティティと通信を行うことは、この場合、特別なモード上での対話であると理解される。

【0046】

入出力管理層によって用いられるマルチモード融合メカニズムについては、特に、図2を参照して説明する。

【0047】

合理的エージェントに宛てられた着信イベントは、合理的エージェントが外部エージェント(ユーザ又は他のソフトウェアエージェント)と会話を行う際に介するマルチモードインターフェイスを介して、モード毎に、別々に送信される。例えば、ユーザがフレーズを発声しながらクリックする場合、２つのソースが、合理的エージェントに送信されるイベントを生成する。即ち、最初に、クリックを感知するユーザインターフェイスのタッチモード、そして、次に、音声検出及び認識を実現する音声モードを生成する。

【0048】

入出力管理層によって受信される各着信イベントは、対応するモードに関連する処理モ

ジュールに送信される。前述の例において、合理的エージェントは、一方はタッチモードに関連するイベント用に、他方は、音声モードに関連するイベント用に、２つの処理モジュールを有さねばならない。

【0049】

一般的に、モードに関連する各処理モジュールは、“モジュール”とも称する２つの機能から構成されている。即ち、後で説明するように、マルチモード融合相の間に呼び出される着信イベントを解釈する機能と、マルチモード分裂相の間に呼び出される発信イベントを生成する機能とから構成されている。

【0050】

従って、着信イベントは、このイベントが生成するモードに関連する処理モジュールの解釈機能によって処理される。

【0051】

この解釈機能は、３つの引数を受信する。即ち、

・着信イベントEVTそれ自体、

・同じ融合相の間に前の着信イベントにおいて既に述べられたオブジェクトのリストLIST_OBJS(これらのオブジェクトは、前の着信イベントを繰り返す間に呼び出された解釈機能によって識別される)。このリストは、現マルチモード融合相に対する最初の呼出しの時点では空である。

・同じ融合相の間に最新の解釈機能に対する呼出しによって返された形式通信レコードのリストLIST_ACTS。このリストは、現マルチモード融合相に対する最初の呼出しの時点で空である。

【0052】

呼び出された解釈機能は、これら２つの要素を用いて、２つの結果を返さなければならない。即ち、

・着信イベントEVTのコンテンツ中で起動されたオブジェクトによって完成されまた更新し得る既に述べたオブジェクトの前のリストLIST_OBJS。リストに付加された新しい各オブジェクトに対して、このオブジェクトの内部表現が、提示されたソフトウェア・アーキテクチャにおける全てのモジュールによって共有される対話の履歴に生成される(特に、これらの表現は、形式通信レコードにおいて用い得ると共に他のモード及び合理的ユニットに関連する処理モジュールにアクセス可能にし得る)。

・融合相の始まり以来受信された全てのイベント(現在処理中のイベントEVTを含む)の通信又は発話内の力を表す形式通信レコードのリストLIST_ACTS。このリストは空である可能性もあるが、このことは、全ての受信イベントが、通信インターフェイス上における外部エージェントのアクションの満足な解釈を与えられないことを示す。このリストの構造は、解釈機能によってなされる評価に全体的に依存し、特に、最新の解釈機能に対する呼出しによって返されたリストを必ずしも含まない。本解釈方法は、現融合相の異なる解釈機能にこれまで送信された全ての情報を表すリストを構築しなければならない。これは、前の対話の文脈に敏感であり、また、対話履歴に記憶された情報を用いなければならない。

【0053】

従って、入出力管理層は、現融合相を終了するか否か判断するために(用いられる会話アプリケーションに依存し得る)特別なアルゴリズムを有さねばならない。言い換えると、このアルゴリズムは、合理的ユニットが反応計算にトリガをかける前に着信イベントを待つことが必要か否かを知る質問に答えなければならない。

【0054】

このアルゴリズムが、他の着信イベントが到着することを示す場合、入出力管理層は、次の着信イベントを待ち、そして、上述したように、このイベントに関連する解釈機能を呼び出す。

【0055】

一方、アルゴリズムが、待つべき着信イベントがもはやないことを示す場合、融合相が終了し、最新の解釈機能に対する呼出しによって返された形式通信レコードのリストは、

合理的ユニットに送信される。

【0056】

本発明において提示された基本アルゴリズムは、用いられる会話アプリケーションの機能として調整し得るが、スタックの維持に基づき、入出力管理層のマルチモード融合メカニズムによる融合相の停止を管理する。このスタックは、融合相の開始時点で空にされ、そして、最初の着信受信イベントに対応する解釈機能が呼び出される。融合は、解釈機能に対する呼出しから戻った際、スタックが空になり次第終了する。

【0057】

このスタックは、融合相を終了する前に予想される異なるイベントを表すオブジェクトのリストを実際に含む。これらのオブジェクトは、予想されるイベントをある程度の精度で記述し得る。最も一般的なオブジェクトは、如何なるイベントも明示する。更に特殊なオブジェクトは、特別なモード用の処理モジュールによって処理される予定の如何なるイベントも明示する。他の更に特殊なオブジェクトは、特別なモード等の処理モジュールによって処理されるイベント中の特別なイベントを明示する。

【0058】

例えば、任意のイベントを明示するオブジェクトは、スタックに記憶し得る。タッチモードに適用可能な任意のイベントを明示するオブジェクト、“クリック”タイプタッチモードに適用可能なイベントを明示するオブジェクト、“クリック/ボタン押下”タイプタッチモードに適用可能なイベント、また、この場合、“クリック/ボタン解除”タイプタッチモードに適用可能なイベントは、最初の３つのオブジェクトに対応するが、第４番目には対応しない。特別な“遅延”タイプオブジェクトは、更に、イベントが、示された遅延内において可能であることを示す。この遅延によって、合理的エージェントは、可能な追加のイベントを待ち、この相が完全に閉じられる前に現融合相において考慮し得る。

【0059】

スタックは、次のように、読出し及び書き込み時、全ての解釈機能にアクセス可能にし得る。

・解釈機能（又はモジュール）は、新しいオブジェクトをスタックに記憶して、融合を閉じる前に或るイベントを待つことが必要なことを示し得る。

・解釈機能（又はモジュール）は、スタックから１つ又は複数のオブジェクトを除去して、対応する予想イベントがもはや融合を終了する必要がないことを示し得る。

・解釈機能（又はモジュール）は、スタックにある全てのオブジェクトを閲覧して、融合を終了し得る前に、将来のどのイベントが予想されるか決定し得る。

【0060】

着信イベントEVTが受信されると、入出力管理層は、上述したように、適切な解釈機能を呼び出す前に、このイベントを満足する記述を備えた最初のオブジェクトをスタックから除去する。

【0061】

この機能が実行された後、

・スタックが空である場合、閉処理アルゴリズムは、融合が終了されることを示す。

・スタックが“遅延”オブジェクトを含む場合、入出力管理層は、このオブジェクトをスタックから除去し、このオブジェクトによって示された時間によりタイムアウトを設定し、こうして、この遅延が一旦経過すると、入出力管理層は、スタックをもう一度調べて、融合が終了されるか否か決定する。タイムアウトが設定された後、また、対応する遅延の終了前に受信されたいずれかの着信イベントが、このタイムアウトをキャンセルする。

・そうでない場合、閉処理アルゴリズムは、融合が終了していないこと、及び、他の着信イベントを待つべきであることを示す。

【0062】

一旦融合相が終了されると、次に、合理的ユニットは、上記基本特許において述べた当業者に公知の原理に基づき、合理的エージェントの反応を計算する。

【0063】

「例」
レストラン検索アプリケーションにおいて、この場合人間のユーザである外部エージェントには、インテリジェント会話システムを照会するためのタッチ及び音声インターフェイスが提供される。ユーザが、文“私は、この地域のイタリアン・レストランを探しているところです”と発声し、また、同時に、彼又は彼女が、例えば、マウスクリックによって、又は彼又は彼女の指でタッチすることのいずれかによって、エッフェル塔を表す画面上でその地域を明示するものとする。

【0064】
ユーザインターフェイスの音声モードは、イベントを合理的エージェントに送り、音声検出(“ユーザが話し始めていること”)を示すことによって始まる。そして、入出力管理層は、次の引数で音声モード解釈機能を呼び出す。
・“ユーザが話し始めている”着信イベントEVT。
・既に起動されたオブジェクトのリストLIST_OBJS(融合相が始まったばかりであるため、しばらくの間は空)。
・解釈機能に対する最新の呼出しによって返された形式通信レコードのリストLIST_ACTS(融合相が始まったばかりであるため、しばらくの間は空)。

【0065】
この段階において、音声モード解釈機能は、如何なる意味論的解釈もこのイベントに関連付けることはできないが、音声モードに適用可能な“音声認識結果”タイプイベントが後で到着することが分っている。従って、この機能は、オブジェクトを融合相閉処理管理スタックに記憶して、このタイプのイベントを待つ必要があることを示し、そして、以前起動されたオブジェクトリスト及び空の形式通信レコードリストを返す。

【0066】
入出力管理層は、スタックのコンテンツを調べることによって、その融合相閉処理アルゴリズムを適用する。スタックがイベントタイプオブジェクトを含むことから、融合は、完全ではなく、それ自体を新しい着信イベントの待機処理に投入する。

【0067】
そして、インターフェイスのタッチモードは、着信イベントを合理的エージェントに送り、“エッフェル塔をクリックせよ”を示す。このイベントタイプは、融合相の閉処理管理スタックに含まれないことから、入出力管理層は、スタックを修正せず、次の引数でタッチモード解釈機能を呼び出す。
・“エッフェル塔をクリックせよ”着信イベント。
・以前起動されたオブジェクトの空のリスト。
・音声モード解釈機能に対する最新の呼出しによって返された形式通信レコードの空のリスト。

【0068】
そして、タッチモード解釈機能は、“エッフェル塔”オブジェクトに対する位置タイプ参照を認識し、対話履歴の適切な構造でこのオブジェクトを生成し、そして、“エッフェル塔”オブジェクトだけを含むオブジェクトのリストLIST_OBJSと、形式通信レコードのリストLIST_ACTSとを返す。このレコードリストは、現会話の文脈におけるユーザメッセージの解釈に対応しなければならないが、更なる着信イベントは存在しないと仮定する。例えば、会話がちょうど始まった場合、このリストは、識別された“エッフェル塔”オブジェクト付近に位置するレストランに適用可能な“問合せ・照会”タイプレコードに縮小し得るが、ここで、合理的エージェントは、更に情報が入力されない場合、クリックをクリックによって明示されたその地域のレストラン検索要求であると解釈する。他の文脈において、例えば、インテリジェント会話システムが、ユーザに彼がたった今どこにいるかちょうど尋ねた場合、このリストは、“通知”タイプレコードに縮小して、ユーザが、識別された“エッフェル塔”オブジェクトの近くにいることを示し得る。融合相閉処理管理スタックは、他のイベントが予想されることを既に示していることから、タッチモード解釈機能は、それを修正しない。

【0069】
そして、ユーザインターフェイス音声モードは、“音声認識結果”タイプの“私は、この地域のイタリアン・レストランを探しているところです”着信イベントを合理的エージェントに送る。このイベントタイプは、融合相閉処理管理スタックに含まれることから、入出力管理層は、それを除去し(従って、スタックは空である)、そして、次の引数で音声モード解釈機能を呼び出す。
・“私は、この地域のイタリアン・レストランを探しているところです”着信イベント。
・“エッフェル塔”オブジェクトを含む以前起動されたオブジェクトのリスト。
・タッチモード解釈機能に対する最新の呼出しによって返された形式通信レコードのリスト、例えば、“問い合わせ・照会”又は“通知”タイプレコード。
【0070】
そして、音声モード解釈機能は、“特殊分野”タイプの“イタリアン”オブジェクトにリンクされたレストランタイプオブジェクト及び“位置”タイプの(不明)オブジェクトに関する質問を認識する。音声モード解釈機能は、以前起動されたオブジェクトのリストを調べ、そして、リストに与えられた“位置”タイプの“エッフェル塔”タイプオブジェクトに対して、それが識別した“位置”タイプの不明オブジェクトを認識する。新しいオブジェクトを生成し、また、対話履歴の適切な構造で既に起動されたオブジェクトを修正した後、音声モード解釈機能は、“位置”タイプの“エッフェル塔”オブジェクトと、“レストラン”タイプの(不明)オブジェクトと、“特殊分野”タイプの“イタリアン”オブジェクトとから構成されるオブジェクトが配列されたリストと、例えば、“イタリアン”特殊分野を有する“エッフェル塔”タイプオブジェクトの近くに位置するレストランに適用可能な“問い合わせ・照会”タイプの単一のレコードから構成される形式通信レコードのリストと、を返す。この解釈機能は、いずれか他の着信イベントを待ってはいないことから、融合相閉処理管理スタックを修正しない。
【0071】
この機能の実行後、入出力管理層は、スタックを調べ、スタックがその時点で空であることから、マルチモード相が終了されていると結論付けて、最新の解釈機能に対する呼出しによって返された解釈済形式通信レコード(この場合、単一の“問い合わせ・照会”タイプレコード)のリストを合理的ユニットに送信する。
【0072】
当業者が認識されるように、最新の２つの着信イベント(即ち、クリック及び音声認識結果)が、逆の順番で合理的エージェントによって受信されていたとすれば、この方法もまた、それらを処理できたであろう。最初のステップにおいて、音声モード解釈機能は、“レストラン”タイプの(不明)オブジェクトと、特殊分野”タイプの“イタリアン”オブジェクトと、“位置“タイプの“不明”オブジェクトと，から構成される起動されたオブジェクトのリストと、“上記と同じ“問い合わせ・照会”タイプレコードから構成される形式通信レコードのリストと、を送信したであろう。照会内容“この地域の”により他のアクションがユーザによって指定されたと判断した後、この解釈機能は、融合相閉処理管理スタックにおいて、(任意のタイプの)他の着信イベントが予想されることを示したであろう。第２のイベントにおいて、タッチモード解釈機能は、以前起動されたオブジェクトのリストに存在する(不明)“位置”タイプオブジェクトに対して、それが特定した“位置”タイプの“エッフェル塔”オブジェクトを識別したであろう。従って、融合相の最終的な結果は、同じだったであろう。
【0073】
入出力管理層によって用いられるマルチモード分裂メカニズムについて、特に、図3を参照して記述する。
【0074】
上述したように、マルチモード分裂メカニズムは、合理的ユニットによって生成された形式通信レコードから始まって、異なるユーザインターフェイスモード、又は合理的エージェントと接続している外部ソフトウェアエージェントに宛てられた発信イベントの流れ

の構築に対して責任を負う。この構築は、各枝が、生成された発信イベントの１つを均一に表現するツリー構造に基づく。

【0075】

便宜的に、各第１レベルタグがモードの情報を表し、これらの各情報項目が、対応するモードに特有な(必要に応じた数の深さレベルを備えた)下位レベルタグにそれ自体組み入れられるXMLタイプのマークアップ構造を選択するのは良いと思われる。

【0076】

幾つかの点では、XML構造の選択は、W3C規格化機関のMMXグループによって標準化されたEMMA(拡張可能なマルチモード注釈)マークアップ言語等のマルチモードイベントを処理するための言語の使用に類似し得るが、公知のアーキテクチャの現バージョンは、マルチモード入力だけを表し得ることを想起することが重要であり、また、本発明の主たる顕著な特徴は、異なるモードに関連するイベント処理のための別々のモジュールにおけるその構成であり、また、その最も完全な形態において、それらの生成機能の編成によることを強調することが重要である。

【0077】

マルチモード分裂相の開始時点において、入出力管理層は、空の部分的構造STRUCTを初期化するが、この構造は、マルチモード分裂相の間にその時点まで積み上げられた発信イベントの流れのコンテンツを表す。

【0078】

この原理は、次に、合理的ユニットによって生成された形式通信レコードのLIST_ACTSリスト及び現部分的構造STRUCTを、出力に利用可能な各モードに関連する処理モジュールの各発信イベント生成機能、即ち、モジュールに送信することである。

【0079】

これらの各生成機能即ちモジュールは、次に、対応するモード用の発信イベントの記述が完成した新しい部分的構造STRCTを返す。マルチモード分裂相の終了時点において、入出力管理層が全ての利用可能な出力モード処理モジュールを呼び出した場合、最新の返された部分的構造は、合理的エージェントによって、通信インターフェイスを介して、その接続先(ユーザ又は他のソフトウェアエージェント)に効果的に送信される発信イベントの完全な流れを表す。

【0080】

マークアップ構造STRUCTの形態での発信イベント流れの構築全体において、対応する可能な異なる出力モードに関連する生成機能は、出力イベントにおいて、参照されたオブジェクトを識別する。

【0081】

結果的に、生成機能が、既に他のモードで起動されたオブジェクトを起動する出力イベントを構築する必要がある場合、時系列的に２番目の生成機能は、このイベントの生成形態に適合して、この状況を考慮し得る。例えば、２番目の生成機能が、自然言語を用いる表現モードに関連付けられている場合、２番目に起動されたオブジェクトは、単に、完全な表現によってではなく代名詞によって指定し得る。

【0082】

この分裂手法は、極めて簡単であるという利点を有するという事実とは別に、異なるモードに送信される表現が同期化される可能性がある極めて多くの事例を処理し得るという利点を有する。

【0083】

一方、これは、入出力管理層が各出力モード用の生成機能を呼び出す順番に完全に依存する。この不利な点の発生を防止するために、各生成機能は、入出力管理層によって既に呼び出された、従って、部分的構造STRUCTに痕跡を残した生成機能をそれ自体呼び出し得るようにすべきであり、新しい部分的構造が、呼出し生成機能によって生成されたイベントを含み、また、呼び出された生成機能によって以前生成されたイベントをもはや含まないようにすべきである。

【0084】
この説明において提示されたマルチモード分裂メカニズムは、発話内の力及び／又は比例するコンテンツに関するモード表示を関連付けることも可能なよりリッチな言語を用いる場合のように、発話内の力(非言語的な通信活動)と各レコードに比例するコンテンツを関連付ける、合理的ユニットによって受信された又は生成された通信レコードの表現用の形式内部言語の用途にも適し、こうして、合理的ユニットは、合理的エージェントの観察において用いられるモードに関して、また、合理的エージェントのリアクションのために用いられるモードに関して明示的に推論し得る。
【0085】
このタイプの起動された内部言語は、特別なモード上で実現された“通知”タイプレコード又は提案内容の一部が１つのモードで表現され、また、他の一部が他のモードで表現された“通知”タイプレコードを表し得る。
【0086】
ArCol言語をマルチモードに拡張するこのような言語の用途において、各モード用の生成機能は、部分的構造STRUCTでは、これらのイベントに対応するモード用に意図された合理的ユニットによって生成された一部の通信レコードを翻訳するイベントの生成だけに限定される。
【0087】
「例」
レストラン検索のための本発明の応用例である上記例において、ユーザは、地図を表示しアニメ化し得る音声インターフェイス及びグラフィックインターフェイスを有し、合理的エージェントから応答を受信する。合理的エージェントは、エッフェル塔近くにイタリアン・レストランはないが、付近の地域に１つあることを示し、この表示が、例えば、グラフィックインターフェイスによって、点滅により、表示された地図上でこの地域をハイライト表示して与えることによって、ユーザの前の質問に答えると仮定する。
【0088】
入出力管理層は、(合理的ユニットによって生成された)この応答に対応する形式通信レコードLIST_ACTSのリストをグラフィックモード生成機能に送信することによって始まる。発信イベント流れを表す部分的構造STRUCTは、その際、空である。
【0089】
次に、グラフィックモード生成モジュールは、タグを構造STRUCTに付加して、ユーザのグラフィックインターフェイス用の発信イベント、例えば、エッフェル塔に隣接する地域を点滅させる命令を表現する。上述したように、このモジュールは、このイベントが、“位置”タイプの“他の識別位置”オブジェクトに、例えば、次の形態でXML構造を生成することによって、関連付けられていることを記述する。即ち、
【数1】

```
<outputstream>
<media name = "graphic"> <blink>
     <object id = "other location">
          <rectangle_area x = "300" y = "500" height
          = "150" width = "200"/>
     </object>
</blink> </media>
</outputstream>
```

【0090】
同じ形式通信レコード及びこの新しい部分的構造STRUCTは、次に、音声モード生成モジ

ュールに送信される。現部分的構造に以前積み上げられたイベントを調べる際，音声モード生成モジュールは、“位置”タイプの“他の識別位置”オブジェクトが、他のモードで既に起動されたことを観察し、次に、シフタ表現、例えば、“エッフェル塔の近くにイタリアン・レストランはないが、この地域でちょっと遠いが１つ見つけた”を選択して用い、それを指定する。従って、入出力管理層に返されたこれにより得られた構造は、次の形態を有し得る。即ち、

【数2】

```
<outputstream>
<media name = "graphic"> <blink>
     <object id = "other location">
         <rectangle_area x = "300" y = "500" height
         = "150" width = "200"/>
     </object>
</blink> </media>
<media name = "voice">
エッフェル塔の近くにイタリアン・レストランはないが、１つ見つけた
<object id = other location> この地域でちょっと遠いが
</object>.
</media>
</outputstream>
```

【0091】

次に、入出力管理層は、マルチモード分裂相を終了し、得られた流れをインターフェイスに送り、次に、各メッセージを適切なチャネル上に表示する。“オブジェクト”タグによってここに示すオブジェクトを起動する表示は、ユーザインターフェイスによって同期化しなければならない。例えば、エッフェル塔に隣接する地域は、音声合成システムが、言葉“この地域でちょっと遠い”を発声する間、点滅されなければならない。

【図面の簡単な説明】

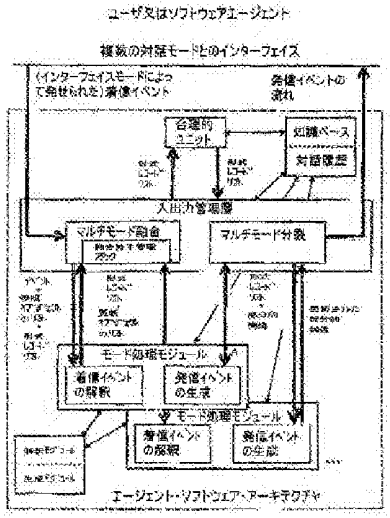
【0092】

【図1】本発明による会話用合理的エージェントのアーキテクチャを示す図である。

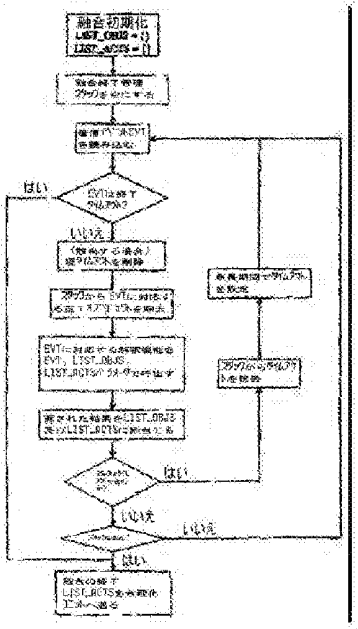
【図2】マルチモード融合相中、関係する動作の論理的及び時系列的構成を示すフローチャートである。

【図3】マルチモード分裂相中、関係する動作の論理的及び時系列的構成を表すフローチャートである。

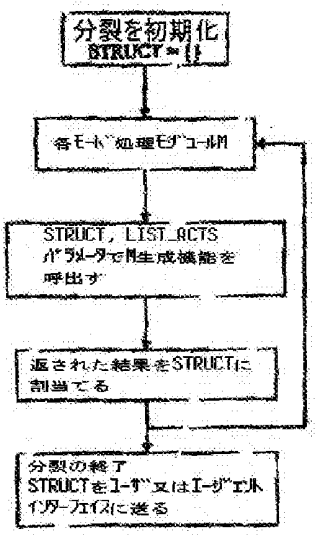
【図1】


ユーザ又はソフトウェアエージェント
複数の対話モードとのインターフェイス
発信イベントの流れ
合理的ユニット
知識ベース
対話履歴
入出力管理層
マルチモード融合
マルチモード分散
モード処理モジュール
着信イベントの解釈
発信イベントの生成
エージェント・ソフトウェア・アーキテクチャ

【図2】


はい
いいえ
はい
いいえ
はい

【図3】


分裂を初期化
STRUCT = {}
各モード処理モジュールM
STRUCT, LIST_ACTS
パラメータで再生成機能を
呼出す
返された結果をSTRUCTに
割当てる
分裂の終了
STRUCTをユーザ又はエージェント
インターフェイスに送る

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Ｆターム(参考)　5B091 AB00 DA00 EA00
5D015 LL02
5E501 AA02 BA20 CB05 DA17 EA02 EA05 EA10 FA13 FA14 FA32
FB04

【外国語明細書】

DIALOGUING RATIONAL AGENT, INTELLIGENT DIALOGUING SYSTEM USING THIS AGENT, METHOD OF CONTROLLING AN INTELLIGENT DIALOGUE, AND PROGRAM FOR USING IT.

This invention relates in general to automation of a communication method.

More precisely, according to a first of its aspects, the invention relates to a dialoguing rational agent comprising a software architecture including at least means of interpreting incoming events, a rational unit, and means of generating outgoing events, the interpretation means being designed to transform incoming events translating a communication activity of an external agent into incoming formal communication records, during operation, the rational unit producing outgoing formal communication records as a function of the incoming formal communication records during operation and a behavioural model of the rational agent managed by the rational unit, and also during operation the generation means transforming outgoing formal communication records into outgoing events materialising a communication activity of the rational agent with the external agent.

A rational agent of this type is well known to those skilled in the art and is described in the basic patent FR 2 787 902 by the same applicant.

The technique proposed in this basic patent relates to intelligent dialogue systems used in a natural language by rational agents, both in an interaction context between an intelligent dialogue system and a user, or in the context of an interaction between an intelligent dialogue system and another software agent of an intelligent dialogue system with several agents.

In the first case the dialogue is carried out in a natural language, while in the second case it can be carried out directly in a formal logical language such as the language known under the acronym "ArCoL" divulged in the above mentioned patent, or the language known under the acronym "FIPA-ACL" developed by the FIPA (Foundation for Intelligent Physical Agents) consortium. Information about this consortium can be found on the Internet site http://www.fipa.org).

However, the basic patent mentioned above does not define any specific means of performing a dialogue in which at least the external agent can express itself in several ways, for example both in his or her natural language and by pressing buttons and / or performing specific sign language.

However, attempts to formalise multimodal dialogues have been undertaken so as to allow a dialogue between an automated rational agent and an external agent, for example a human user, expressing himself using non-verbal modes (in other words not using natural language, for example through a sign language or haptic interfaces), or using several different modes simultaneously and / or

successively, each communication mode being related to a particular information channel as is the case for a written message, an oral message, an intonation, a drawing, a sign language, touch sensitive information, etc.

A user could thus express himself simultaneously by voice and sign language using an appropriate interface, it being understood that the rational agent could also use several different modes to express itself to make its reply to the user.

Such multimodal interactions require the use of two operations, namely multimodal fusion and multimodal fission.

Multimodal fusion is the operation by which one or several multimodal event interpretation components at the input to the intelligent dialogue system produce a unified representation of the semantics of perceived messages.

Multimodal fission, which is only required if the rational agent needs to express itself in several different modes independently of the manner in which the external agent expresses himself, is the dual multimodal fusion operation and, for one or several multimodal event generation components, consists of generating the said events to express the semantic representation of the message produced by the rational unit of the rational agent.

Attempts to formalise multimodal dialogues include the work done by the MMI group in the W3C standardisation organisation that, in the lack of a functional architecture, proposed a tool for representing the multimodal inputs and outputs of an interaction system

based on a mark-up language called EMMA (Extensible MultiModal Annotation Mark-up Language) and related to the XML language, except that the existing tool is only capable of representing the inputs.

It is also worth mentioning the work done by the VoiceXML group in the W3C organisation in contact with the MMI group, and the work done by the MPEG consortium that originated the MPEG-7 project that provides a mechanism for adding descriptive elements to a multimodal content, and the MPEG-21 project with the objective of proposing a standard framework for multimodal interaction.

However, although many systems use multimodal fusion and / or fission components, these components are usually the result of empirical integrations of processing capabilities of several media, and are not the result of the use of a predefined software architecture.

In particular, although the work done by the MMI group describes a tool for representing multimodal input and output flows, accompanied by an abstract architecture for the organisation of components (see W3C Multimodal Interaction Framework - W3C NOTE 06 May 2003 - http://www.w3.org/TR/2003/NOTE-mmi-framework-20030506/), this work has not yet led to any specific mechanism for the interpretation of multimodal inputs or for the generation of multimodal outputs by the rational intelligent dialogue agent.

In this context, and while the above mentioned patent FR 2 787 902 only considers interactions based on the use of the natural language between the user and the intelligent dialogue system (comprehension and generation) and the use of formal communication languages

like ArCoL or FIPA-ACL between software agents (one of them possibly being an intelligent dialogue system), the main purpose of this invention is to propose a software architecture that would allow the dialoguing rational agent to generically manage multimodal interactions with its contacts, that may be human users or other software agents.

To achieve this purpose, the dialoguing rational agent according to the invention that is conform with the generic definition given in the above preamble, is characterised essentially in that the software architecture also comprises an inputs and outputs management layer provided with at least one multimodal fusion module, and in that the interpretation means comprise a plurality of incoming event interpretation modules, each module being specifically dedicated to a particular communication mode, in that during operation all incoming events are handled by the multimodal fusion module that redirects interpretation of these incoming events to the various interpretation modules as a function of the mode of each, and in that the multimodal fusion module correlates incoming formal communication records collected from these interpretation modules during the same fusion phase, and submits the incoming formal communication records thus correlated to the rational unit at the end of the fusion phase.

Preferably, the fusion module redirects interpretation of incoming events by transmitting any incoming event expressed in the mode specific to this interpretation module to the interpretation module concerned, with a list of objects, if any, previously evoked in previous incoming events in the same fusion

phase, and a list of formal communication records returned by the call from the previous interpretation module during the same fusion phase.

To achieve this, each interpretation module called by the fusion module returns, for example, a list of objects completed and updated to include any new evoked object or to modify any object evoked in the last incoming event, and a list of formal communication records translating the communication activity represented by all incoming events received since the beginning of the same fusion phase.

Advantageously, the fusion module includes a fusion phase management stack accessible in read and in write for all interpretation modules and for the fusion module.

Symmetrically, the invention also relates to a dialoguing rational agent comprising a software architecture including at least means of interpreting incoming events, a rational unit, and means of generating outgoing events, the interpretation means being designed so that during operation they can transform incoming events translating a communication activity of an external agent into incoming formal communication records, and during operation the rational unit generating outgoing formal communication records as a function of the incoming formal communication records, and a behavioural model of the rational agent managed by the rational unit, and generation means transforming the outgoing formal communication records into outgoing events materialising a communication activity of the rational agent with regard to the external agent, this agent being characterised in that the inputs and outputs management layer is provided with a multimodal fission

module, in that the generation means comprise a plurality of modules generating outgoing events, each of which is specifically dedicated to a communication mode specific to it, in that the multimodal fission module redirects transformation of outgoing formal communication records generated by the rational unit as outgoing events with corresponding modes to the different generation modules, and in that the multimodal fission module manages the flow of these outgoing events.

For example, the fission module redirects transformation of outgoing formal records into outgoing events by sequentially addressing to the different generation modules the outgoing formal communication records generated by the rational unit and a tree structure to be completed, organised into branches, each of which will represent one of the outgoing events, each generation module then returning the tree structure to the fission module after having completed it with the outgoing event(s) expressed in the mode specific to this generation module.

Preferably, the tree structure is a mark-up structure, and each generation module uses a tag common to all generation modules to identify the same object evoked in an outgoing event.

It is also useful to allow for at least one of the generation modules to be designed to selectively call a generation module previously called by the fission module for a new processing, so as to transmit a new partial structure to it containing the outgoing event generated by the calling generation module and no longer containing the outgoing event previously generated by the called generation module.

If the rational agent comprises multimodal fusion modules and fission modules, the multimodal interpretation and generation modules for a particular mode preferably belong to the same processing module for this mode.

The invention also relates to an intelligent dialogue system comprising at least one dialoguing rational agent like that previously defined, associated with a multimodal communication interface.

The invention also relates to a method for controlling an intelligent dialogue between a controlled rational agent and an external agent, this method comprising at least interpretation operations consisting of interpreting incoming events supplied to the controlled rational agent by transforming them into incoming formal communication records, determination operations consisting of generating appropriate responses to the incoming formal communication records in the form of outgoing formal communication records, and expression operations consisting or transforming outgoing formal communication records to produce outgoing events addressed to the external agent, this method being characterised in that it also comprises switching operations, correlation operations and phase management operations, in that at least one switching operation consists of taking account of at least one incoming event as a function of a mode of expression of this incoming event, in that the operations to interpret incoming events expressed in the corresponding different modes are used separately, in that at least one correlation operation consists of collecting the incoming formal communication records corresponding to different modes of

incoming events, during the same fusion phase, for joint processing of these incoming formal communication records by the same determination operation, and in that phase management operations consist of at least determining at least one fusion phase.

For example, phase management operations include at least one operation to update a stack or a list of objects for management of closure of the fusion phase consisting of selectively storing one or several new objects in the stack during an interpretation operation, to indicate the expected appearance of one or several new events before the end of the fusion phase, and selectively removing one or several objects from the stack during an interpretation operation in the case in which the corresponding expected events are no longer expected before the end of the fusion phase.

Furthermore, phase management operations can also include a stack viewing operation consisting of selectively viewing all objects in the stack during an interpretation operation.

Phase management operations can also include a timing operation consisting of selectively removing a delay type object from the stack, setting a timeout for the duration of this delay, and viewing the stack when this delay has elapsed.

Phase management operations may include an operation to close the fusion phase consisting of terminating the fusion phase after the interpretation operations, when the stack is empty.

The invention also relates to a method for control of an intelligent dialogue between a controlled rational agent and an external agent, this method comprising at

least interpretation operations consisting of interpreting incoming events output to the controlled rational agent by transforming them into incoming formal communication records, determination operations consisting of generating appropriate responses to incoming formal communication records in the form of outgoing formal communication records, and expression operations consisting of transforming outgoing formal communication records to produce outgoing events addressed to the external agent, this method being characterised in that it also includes a concatenation operation consisting of at least applying expression operations associated with corresponding different output modes to the outgoing formal communication records sequentially, and producing a tree structure organised in branches, each of which represents one of the outgoing events, each expression operation completing this tree structure with modal information specific to this expression operation.

Preferably, the concatenation operation produces a tree structure with tags, and at least some of the expression operations associated with different corresponding output modes use a common tag to evoke the same object invoked in an outgoing event.

Each expression operation can also be designed so that it calls another expression operation already called during the same concatenation operation and to have an outgoing event previously generated by this other expression operation modified by this other expression operation in the tree structure being constructed.

Finally, the invention relates to a computer program containing program instructions for implementing the

previously defined method when this program is installed on computer equipment for which it is intended.

Other characteristics and advantages of the invention will become clear after reading the following description that is given for guidance and is in no way limitative, with reference to the attached drawings in which:

- Figure 1 is a diagram showing the architecture of a dialoguing rational agent according to the invention;

- Figure 2 is a flowchart showing the logical and chronological organisation of operations involved during a multimodal fusion phase; and

- Figure 3 is a flowchart representing the logical and chronological organisation of the operations involved during a multimodal fission phase.

As mentioned previously, the invention is in the domain of multimodal interaction systems, and more particularly in components for the interpretation of multimodal events at system inputs (fusion components) and generation of multimodal events at the output (fission components).

In this context, this invention proposes a software architecture using the formal architecture described in the basic patent mentioned above for multimodal interactions.

As shown in Figure 1, this architecture comprises:

. an inputs and outputs management layer that organises processing of incoming events and the production of outgoing events within the dialoguing rational agent (see below);

. a number of processing modules, each of which is related to an interaction mode specific to it and that

processes events expressed in this mode. The choice of this type of modules to be used depends directly on the different communication modes available in the user or software agent interfaces with which the rational agent is required to interact;

. a rational unit like that described in the basic patent mentioned above, that has the function of calculating the reactions of the rational agent, by logical inference with the formal model axioms of this agent;

. a knowledge base and a history of interactions as described in the above mentioned basic patent, and which can be accessed by the inputs / outputs management layer, the rational unit and the processing modules mentioned above; and

. comprehension and generation modules like those described in the above mentioned basic patent, that if necessary are used by modules for processing of events related to linguistic modes (for example resulting from speech recognition, or messages input by the user on the keyboard).

The central element of this new architecture is the inputs / outputs management layer that organises reception and sending of events outside the rational agent, and processing of these events within the agent and their distribution between the different modules.

This processing is organised in three steps or phases, comprising a multimodal fusion phase, a reasoning phase and a multimodal fission phase.

During the multimodal fission phase, all incoming events are interpreted to form a list of formal communication records that formally represent

communication records accomplished by the external agent that sent these events, namely a human user or another software agent. These records are expressed in a formal logical language like that used in the above mentioned basic patent (called ArCoL, for Artimis Communication Language), or like the FIPA-ACL language, that is a language normalised by the FIPA consortium based on the ArCoL language.

During the reasoning phase, formal communication records are transmitted to the rational unit that calculates an appropriate reaction of the dialoguing rational agent in the form of a new list of formal communication records, this calculation being done using the information in the above mentioned patent known to those skilled in the art, in other words by logical inference based on axioms of the formal behavioural model of the rational agent.

Finally, during the multimodal fission phase, the formal communication records previously generated by the rational unit are transformed into events for the different available modes in the multimodal communication interface with the external agent (user or software agent).

In the special case in which only interactions between the rational agent and other software agents are envisaged (therefore the other software agents are not human users), modules for processing events associated with the interpretation and generation of messages expressed in a formal inter-agent communication language such as FIPA-ACL are implanted in this software architecture. From the point of view of the rational agent that uses the intelligent dialogue system, the use

of such a language to communicate with other entities is then seen as being an interaction on a particular mode.

The multimodal fusion mechanism used by the inputs / outputs management layer will be described particularly with reference to Figure 2.

Incoming events addressed to the rational agent are transmitted separately, mode by mode, through the multimodal interface through which the rational agent dialogues with the external agent (user or another software agent). For example, if the user clicks while he is pronouncing a phrase, two sources produce events sent to the rational agent, namely firstly the touch mode of the user interface that perceives the clicks, and secondly voice mode that implements voice detection and recognition.

Each incoming event received by the inputs / outputs management layer is sent to the processing module associated with the corresponding mode. In the previous example, the rational agent must have two processing modules, one for events related to touch mode, and the other for events related to voice mode.

In general, each processing module associated with a mode is composed of two functions, also called "modules", namely a function to interpret incoming events that is called during the multimodal fusion phase, and a function to generate outgoing events that is called during the multimodal fission phase, as described later.

Therefore an incoming event will be processed by the interpretation function of the processing module that is associated with the mode in which this event occurs.

This interpretation function receives three arguments, namely:

. the incoming event EVT itself;

. the list LIST_OBJS of objects already mentioned in the previous incoming events during the same fusion phase (these objects have been identified by the interpretation functions called during the reception of the previous incoming events). This list is empty at the time of the first call to the current multimodal fusion phase; and

. the list LIST_ACTS of formal communication records returned by the call to the last interpretation function during the same fusion phase, this list being empty at the time of the first call to the current multimodal fusion phase.

The called interpretation function uses these two elements, and must return two results:

. the previous list LIST_OBJS of objects already mentioned, completed and possibly updated by objects evoked in the contents of the incoming event EVT. For each new object added to the list, an internal representation of this object is created in the history of interactions that is shared by all modules in the proposed software architecture (in particular, these representations can be used in formal communication records and made accessible to processing modules associated with other modes and with the rational unit);

. the list LIST_ACTS of formal communication records that represent the communication or illocutionary force, of all events received since the beginning of the fusion phase (including the event EVT currently being processed). This list might be empty, which indicates that not all received events can give a satisfactory interpretation of the action of the external agent on the communication interface. The construction of this list

will depend entirely on an evaluation made by the interpretation function, and in particular does not necessarily include the list returned by the call to the last interpretation function. The interpretation method must build a list that represents all information transmitted so far to the different interpretation functions of the current fusion phase. It is sensitive to the context of previous interactions and must use information stored in the interactions history.

The inputs and outputs management layer must then have a special algorithm (that might depend on the dialogue applications used) to decide whether or not the current fusion phase is terminated. In other words, this algorithm must answer the question of knowing whether or not it is necessary to wait for an incoming event before the rational unit triggers the reaction calculation.

If this algorithm indicates that other incoming events should arrive, then the inputs and outputs management layer waits for the next incoming event and, as described above, calls the interpretation function associated with this event.

On the other hand, if the algorithm indicates that there is no longer any incoming event to be waited for, the fusion phase terminates and the list of formal communication records returned by the call to the last interpretation function is transmitted to the rational unit.

The basic algorithm proposed in this invention, that could be adjusted as a function of the dialogue applications used, is based on maintenance of a stack managing stopping the fusion phase by the multimodal fusion mechanism of the inputs and outputs management

layer. This stack is emptied at the beginning of a fusion phase, and the interpretation function corresponding to the first incoming received event is then called. Fusion terminates as soon as the stack is empty on return from the call to an interpretation function.

This stack actually contains a list of objects representing the different events expected before finishing the fusion phase. These objects can describe the expected events with more or less precision. The most general object will designate any event. A more specific object will designate any event that is to be processed by the processing module for a particular mode. Another more specific object will designate a particular event among events that will be processed by the processing module of a particular mode, etc.

For example, an object designating any event may be stored in a stack, an object designating any event applicable to touch mode, an object designating an event applicable to "click" type touch mode, an event applicable to "click / button pressed" type touch mode, and in this case, an event applicable to "click / button released" type touch mode will correspond to the first three objects but not to the fourth. A particular "delay" type object will also indicate that an event is possible within an indicated delay. This delay allows the rational agent to wait for possible additional events to take into account in the current fusion phase before this phase is effectively closed.

The stack may be made accessible to all interpretation functions in read and write as follows:

. an interpretation function - or module - may store a new object in the stack to indicate that it is

necessary to wait for a certain event before closing the fusion;

. an interpretation function - or module - may remove one or several objects from the stack to indicate that the corresponding expected events are no longer necessary to terminate the fusion; and

. an interpretation function - or module - may view all objects in the stack to determine which future events are expected before the fusion can be terminated.

When an incoming event EVT is received, the inputs / outputs management layer removes the first object with a description that satisfies this event from the stack before calling the appropriate interpretation function as described above.

After this function has been executed:

. if the stack is empty, the closing algorithm indicates that the fusion is terminated;

. if the stack contains a "delay" object, the inputs and outputs management layer removes this object from the stack and sets a timeout with the time indicated by this object, such that once this delay has elapsed, the inputs / outputs management layer once more tests the stack to determine whether or not the fusion is terminated. Any incoming event received after a timeout has been set and before the end of the corresponding delay will cancel this timeout;

. otherwise, the closing algorithm indicates that the fusion is not finished and that another incoming event should be awaited.

Once the fusion phase is terminated, the rational unit then calculates the reaction of the rational agent

based on principles known to those skilled in the art described in the above mentioned basic patent.

Example:

In a restaurant search application, the external agent, in this case a human user, is provided with a touch and voice interface for querying the intelligent dialogue system. Suppose that the user pronounces the sentence "I am looking for an Italian restaurant in this area" at the same time that he or she designates an area on the screen representing the Eiffel Tower, for example either by a mouse click or by touching with his or her finger.

The voice mode of the user interface starts by sending an event to the rational agent indicating speech detection ("the user is beginning to speak"). The inputs / outputs management layer then calls the voice mode interpretation function with the following arguments:

. "the user is beginning to speak" incoming event EVT;

. a list LIST_OBJS of objects already evoked (for the moment empty because the fusion phase is just beginning);

. a list LIST_ACTS of formal communication records returned by the last call to an interpretation function (for the moment empty because the fusion phase is just beginning).

At this stage, the voice mode interpretation function cannot associate any semantic interpretation to this event. However, it does know that a "speech recognition result" type event applicable to voice mode

will arrive later. Therefore, this function stores an object in the fusion phase closing management stack indicating that it is necessary to wait for this type of event, and then returns a list of previously evoked objects and a list of empty formal communication records.

The inputs / outputs management layer applies its fusion phase closing algorithm by examining the contents of the stack. Since the stack contains an event type object, the fusion is not complete and puts itself in waiting for a new incoming event.

The touch mode of the interface then sends an incoming event to the rational agent meaning "click on the Eiffel Tower". Since this event type is not included in the closing management stack of the fusion phase, the inputs / outputs management layer does not modify the stack and calls the touch mode interpretation function with the following arguments:

. the "click on the Eiffel Tower" incoming event;

. an empty list of previously evoked objects;

. the empty list of formal communication records returned by the last call to the voice mode interpretation function.

The touch mode interpretation function then identifies a location type reference to the "Eiffel Tower" object, creates this object in the appropriate structure of the interactions history, then returns a list LIST_OBJS of objects containing only the "Eiffel Tower" object and a list LIST_ACTS of formal communication records. This record list must correspond to the interpretation of the user's message in the context of the current dialogue, assuming that there are no future incoming events. For example, if the dialogue

has just started, this list may be reduced to a "QUERY-REF" type record applicable to a restaurant located close to the identified "Eiffel Tower" object, which the rational agent interprets the click as being a restaurant search request in the area designated by the click, if no more information is input. In another context, for example if the intelligent dialogue system has just asked the user where he is at the moment, this list could be reduced to an "INFORM" type record indicating that the user is close to the identified "Eiffel Tower" object. Since the fusion phase closing management stack already indicates that another event is expected, the touch mode interpretation function does not modify it.

The user interface voice mode then sends the "I am looking for an Italian restaurant in this area" incoming event of the "voice recognition result" type to the rational agent. Since this event type is included in the fusion phase closing management stack, the inputs / outputs management layer removes it (therefore the stack is empty) and calls the voice mode interpretation function with the following arguments:

. the "I am looking for an Italian restaurant in this area" incoming event;

. a list of previously evoked objects containing the "Eiffel Tower" object;

. and the list of formal communication records returned by the last call to the touch mode interpretation function, for example a "QUERY-REF" or "INFORM" type record.

The voice mode interpretation function then identifies a question relating to a restaurant type object linked to an "Italian" object of the "specialty"

type and an (unknown) object of the "location" type. It examines the list of previously evoked objects, and identifies the unknown object of the "location" type that it has identified to the "Eiffel Tower" type object of the "location" type given in the list. After creating the new objects and modifying the objects already evoked in the appropriate structure in the interactions history, the voice mode interpretation function returns an ordered list of objects composed of an "Eiffel Tower" object of the "location" type, an (unknown) object of the "restaurant" type, and an "Italian" object of the "specialty" type, and a list of formal communication records composed of a single record for example of the "QUERY-REF" type applicable to a restaurant located close to the "Eiffel Tower" type object with "Italian" specialty. Since this interpretation function is not waiting for any other incoming event, it does not modify the fusion phase closing management stack.

After execution of this function, the inputs / outputs management layer examines the stack. Since the stack is now empty, it concludes that the multimodal phase is terminated and transmits the list of interpreted formal communication records and returned by the call to the last interpretation function (in this case a single "QUERY-REF" type record) to the rational unit.

As those skilled in the art will realise, this method would also have been capable of processing the last two incoming events (namely the click and the voice recognition result) if they had been received by the rational agent in the reverse order. In the first step, the voice mode interpretation function would have sent a

list of evoked objects composed of an (unknown) object of the "restaurant" type, an "Italian" object of the "specialty" type, an "unknown" object of the "location" type, and a list of formal communication records composed of the same "QUERY-REF" type record as above. After determining that the reference "in this area" designated another action by the user, this interpretation function would have indicated that another incoming event (of any type) was expected, in the fusion phase closing management stack. In the second event, the touch mode interpretation function would have identified the "Eiffel Tower" object of the "location" type that it had recognised, to the (unknown) "location" type object present in the list of previously evoked objects. Therefore the final result of the fusion phase would have been the same.

The multimodal fission mechanism used by the inputs / outputs management layer will be described below particularly with reference to Figure 3.

As indicated above, the multimodal fission mechanism is responsible for constructing a flow of outgoing events addressed to the different user interface modes or the external software agent in contact with the rational agent, starting from formal communication records generated by the rational unit. This construction is based on a tree structure in which each branch uniformly represents one of the generated outgoing events.

For reasons of convenience, it is a good idea to choose an XML type mark-up structure in which each first level tag represents information intended for a mode, each of these items of information may itself be

organised into lower level tag (with as many depth levels as necessary) specific to the corresponding mode.

Although in some respects the choice of an XML structure can resemble the use of languages for processing of multimodal events such as the EMMA (Extensible Multimodal Annotation) Mark-up Language standardised by the MMI group in the W3C normalisation organisation, it is important to remember that the current version of the known architecture is only capable of representing multimodal inputs and emphasise that the main distinguishing feature of the invention is its organisation in separate modules for the processing of events related to the different modes, and in its most complete form, by the orchestration of their generation functions.

At the beginning of the multimodal fission phase, the inputs / outputs management layer initialises an empty partial structure STRUCT, that represents the contents of the flow of outgoing events built up to that point during the multimodal fission phase.

The principle is then to transmit the LIST_ACTS list of formal communication records produced by the rational unit, and the current partial structure STRUCT, to each outgoing event generation function - or module - of the processing module associated with each mode available for the output.

Each of these generation functions or modules then returns a new partial structure STRUCT in which the description of the outgoing event intended for the corresponding mode is completed. At the end of the multimodal fission phase, when the inputs / outputs management layer has called all available output mode

processing modules, the last returned partial structure represents the complete flow of outgoing events that is effectively transmitted by the rational agent to its contact (user or other software agent) through the communication interface.

Throughout the construction of outgoing events flow in the form of the mark-up structure STRUCT, the generation functions associated with the corresponding possible different output modes use a common tag to identify an object referred to in an output event.

Consequently, if a generation function needs to build an output event that evokes an object already evoked in another mode, then the chronologically second generation function can adapt the generation form of this event taking account of this situation. For example, if the second generation function is related to an expression mode using a natural language, the object evoked for the second time could simply be designated by a pronoun rather than by a complete expression.

Apart from the fact that it has the advantage of being very simple, this fission technique has the advantage that a large number of cases can be processed in which the expressions transmitted to different modes must be synchronised.

On the other hand, it is completely dependent on the order in which the inputs / outputs management layer calls the generation function for each output mode. To prevent this disadvantage from arising, each generation function should itself be allowed to call a generation function that has already been called by the inputs / outputs management layer, and therefore that has left a trace in the partial structure STRUCT, with a new

partial structure that contains the event generated by the calling generation function and that no longer contains the event previously generated by the called generation function.

The multimodal fission mechanism proposed in this description is equally suitable for the use of a formal internal language for the representation of communication records received or generated by the rational unit, that associates an illocutionary force (non-verbal communication activity) and a content proportional to each record, as for the use of a richer language also capable of associating modal indications on the illocutionary force and / or the proportional content, such that the rational unit can explicitly reason on the modes used in the observations of the rational agent and on the modes to be used for the reactions of the rational agent.

The type of internal language evoked can represent an "INFORM" type record accomplished on a particular mode or an "INFORM" type record for which part of the proposition content has been expressed in one mode and the other part in another mode.

In the use of such a language, that extends the ArCoL language to make it multimodal, the generation functions for each mode are limited to only producing events in the partial structure STRUCT that translate the part of communication records generated by the rational unit that is intended for the mode corresponding to these events.

Example

In the previous example of the application of the invention for the search for a restaurant, the user has a voice interface and a graphic interface capable of displaying and animating maps, to receive replies from the rational agent. We will assume that the rational agent answers the user's previous question by indicating that there is no Italian restaurant close to the Eiffel Tower but that there is one in a nearby area, this indication being given for example by highlighting this area on the map displayed by the graphic interface by blinking.

The inputs / outputs management layer begins by sending the LIST_ACTS list of formal communication records corresponding to this reply (generated by the rational unit) to the graphic mode generation function. The partial structure STRUCT representing the outgoing events flow is then empty.

The graphic mode generation module then adds a tag into the structure STRUCT to represent an outgoing event intended for the user's graphic interface, for example an order to make the area adjacent to the Eiffel Tower blink. As described above, this module mentions that this event is related to the "other identified location" object of the "location" type, for example by creating an XML structure in the following form:

```
<outputstream>
<media name = "graphic"> <blink>
    <object id = "other location">
        <rectangle_area x = "300" y = "500" height
        = "150" width = "200"/>
    </object>
```

```
</blink> </media>
</outputstream>
```

The same formal communication records and this new partial structure STRUCT are then transmitted to the voice mode generation module. In examining the previously built events in the current partial structure, the voice mode generation module observes that the "other identified location" object of the "location" type is already evoked in another mode, and then chooses to use a shifter formulation to designate it, for example "There is no Italian restaurant close to the Eiffel Tower; however, I have found one a bit further away in this area". The resulting structure returned to the inputs / outputs management layer would then have the following form:

```
<outputstream>
<media name = "graphic"> <blink>
     <object id = "other location">
          <rectangle_area x = "300" y = "500" height
          = "150" width = "200"/>
     </object>
</blink> </media>
<media name = "voice">
There is no Italian restaurant close to the Eiffel
Tower; however, I have found one <object id = other
location> a bit further away in this area </object>.
</media>
</outputstream>
```

The inputs / outputs management layer then terminates the multimodal fission phase and sends the flow obtained to the interface that then displays each message on the appropriate channel. The displays invoking the objects shown here by "object" tags must be synchronised by the user interface. For example, the area neighbouring the Eiffel Tower must be made to blink while the speech synthesis system pronounces the words "a bit further away in this area".

CLAIMS

1. Dialoguing rational agent comprising a software architecture including at least means of interpreting incoming events, a rational unit, and means of generating outgoing events, the interpretation means being designed to transform incoming events translating a communication activity of an external agent into incoming formal communication records, during operation, the rational unit producing outgoing formal communication records as a function of the incoming formal communication records during operation, and a behavioural model of the rational agent managed by the rational unit, and also during operation the generation means transforming outgoing formal communication records into outgoing events materialising a communication activity of the rational agent with the external agent, characterised in that the software architecture also comprises an inputs and outputs management layer provided with at least one multimodal fusion module, and in that the interpretation means comprise a plurality of incoming event interpretation modules, each module being specifically dedicated to a particular communication mode, in that during operation all incoming events are handled by the multimodal fusion module that redirects interpretation of these incoming events to the various interpretation modules as a function of the mode of each, and in that the multimodal fusion module correlates incoming formal communication records collected from these interpretation modules during the same fusion phase, and submits the incoming formal communication records thus correlated to the rational unit at the end of the fusion phase.

2. Dialoguing rational agent according to claim 1, characterised in that the fusion module redirects interpretation of incoming events by transmitting any incoming event expressed in the mode specific to this interpretation module to the interpretation module concerned, with a list of objects, if any, previously evoked in previous incoming events in the same fusion phase, and a list of formal communication records returned by the call from the previous interpretation module during the same fusion phase.

3. Dialoguing rational agent according to claim 2, characterised in that each interpretation module called by the fusion module returns a list of objects completed and updated to include any new evoked object or to modify any object evoked in the last incoming event, and a list of formal communication records translating the communication activity represented by all incoming events received since the beginning of the same fusion phase.

4. Dialoguing rational agent according to any one of the previous claims, characterised in that the fusion module includes a fusion phase management stack accessible in read and in write for all interpretation modules and for the fusion module.

5. Dialoguing rational agent comprising a software architecture including at least means of interpreting incoming events, a rational unit, and means of generating outgoing events, the interpretation means being designed to transform incoming events translating a communication

activity of an external agent into incoming formal communication records, during operation, the rational unit producing outgoing formal communication records as a function of the incoming formal communication records during operation and a behavioural model of the rational agent managed by the rational unit, and also during operation the generation means transforming outgoing formal communication records into outgoing events materialising a communication activity of the rational agent with the external agent, characterised in that the inputs and outputs management layer is provided with a multimodal fission module, in that the generation means comprise a plurality of modules generating outgoing events, each of which is specifically dedicated to a communication mode specific to it, in that the multimodal fission module redirects transformation of outgoing formal communication records generated by the rational unit as outgoing events with corresponding modes to the different generation modules, and in that the multimodal fission module manages the flow of these outgoing events.

6. Dialoguing rational agent according to claim 5 combined with any one of claims 1 to 4.

7. Dialoguing rational agent according to claim 6, characterised in that the multimodal interpretation and generation modules for a particular mode belong to the same processing module for this mode.

8. Dialoguing rational agent according to any one of claims 5 to 7, characterised in that the fission module redirects transformation of outgoing formal records into

outgoing events by sequentially addressing the outgoing formal communication records generated by the rational unit and a tree structure to be completed, organised into branches, each of which will represent one of the outgoing events, to the different generation modules, and in that each generation module returns the tree structure to the fission module after having completed it with the outgoing event(s) expressed in the mode specific to this generation module.

9. Dialoguing rational agent according to claim 8, characterised in that the tree structure is a mark-up structure, and in that each generation module uses a tag common to all generation modules to identify the same object evoked in an outgoing event.

10. Dialoguing rational agent according to claim 9, characterised in that at least one of the generation modules is designed to selectively call a generation module previously called by the fission module for a new processing, so as to transmit a new partial structure to it containing the outgoing event generated by the calling generation module and no longer containing the outgoing event previously generated by the called generation module.

11. Intelligent dialoguing system comprising at least one dialoguing rational agent according to any one of the previous claims, associated with a multimodal communication interface.

12. Method for controlling an intelligent dialogue between a controlled rational agent and an external agent, this method comprising at least interpretation operations consisting of interpreting incoming events supplied to the controlled rational agent by transforming them into incoming formal communication records, determination operations consisting of generating appropriate responses to the incoming formal communication records in the form of outgoing formal communication records, and expression operations consisting or transforming outgoing formal communication records to produce outgoing events addressed to the external agent, characterised in that it also comprises switching operations, correlation operations and phase management operations, in that at least one switching operation consists of taking account of at least one incoming event as a function of a mode of expression of this incoming event, in that the operations to interpret incoming events expressed in the corresponding different modes are used separately, in that at least one correlation operation consists of collecting the incoming formal communication records corresponding to different modes of incoming events, during the same fusion phase, for joint processing of these incoming formal communication records by the same determination operation, and in that phase management operations consist of at least determining at least one fusion phase.

13. Control method according to claim 12, characterised in that the phase management operations include at least one operation to update a stack or a list of objects for

management of closure of the fusion phase consisting of selectively storing at least one new object in the stack during an interpretation operation, to indicate the expected appearance of at least one new event before the end of the fusion phase, and selectively removing one or several objects from the stack during an interpretation operation in the case in which the corresponding expected events are no longer expected before the end of the fusion phase.

14. Control method according to claim 13, characterised in that the phase management operations also include a stack viewing operation consisting of selectively viewing all objects in the stack during an interpretation operation.

15. Control method according to claim 14, characterised in that the phase management operations also include a timing operation consisting of selectively removing a delay type object from the stack, setting a timeout for the duration of this delay, and viewing the stack when this delay has elapsed.

16. Control method according to claim 15, characterised in that the phase management operations also include an operation to close the fusion phase consisting of terminating the fusion phase after the interpretation operations, when the stack is empty.

17. Method for controlling an intelligent dialogue between a controlled rational agent and an external agent, this method comprising at least interpretation

operations consisting of interpreting incoming events supplied to the controlled rational agent by transforming them into incoming formal communication records, determination operations consisting of generating appropriate responses to the incoming formal communication records in the form of outgoing formal communication records, and expression operations consisting or transforming outgoing formal communication records to produce outgoing events addressed to the external agent, characterised in that it also comprises a concatenation operation consisting of at least applying expression operations associated with corresponding different output modes to the outgoing formal communication records sequentially, and producing a tree structure organised in branches, each of which represents one of the outgoing events, each expression operation completing this tree structure with modal information specific to this expression operation.

18. Control method according to claim 17, characterised in that the concatenation operation produces a tree structure with tags, and in that at least some of the expression operations associated with different corresponding output modes use a common tag to evoke the same object invoked in an outgoing event.

19. Control method according to either of claims 17 and 18, characterised in that each expression operation is designed so that it calls another expression operation already called during the same concatenation operation and to have an outgoing event previously generated by this other expression operation modified by this other

expression operation in the tree structure being constructed.

20. Computer program containing program instructions for implementing the previously defined method according to any one of claims 12 to 19, when this program is installed on computer equipment for which it is intended.

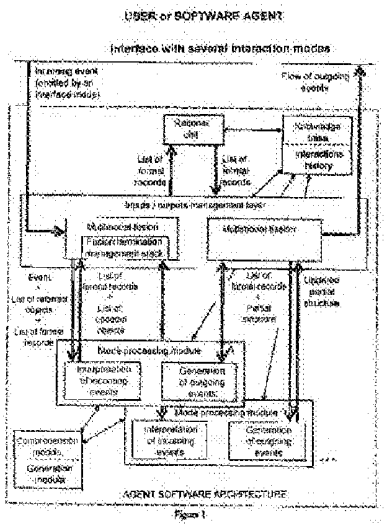
1 Abstract

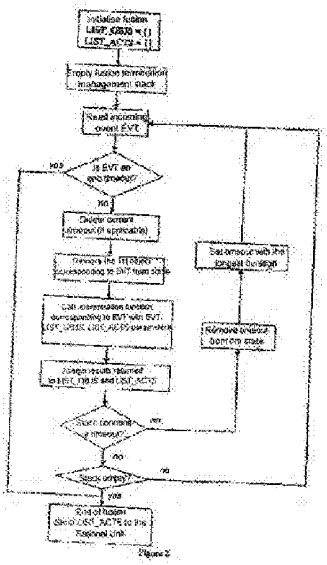
The invention relates particularly to a rational agent including interpretation means to transform events translating a communication activity of an external agent into incoming formal records, a rational unit producing outgoing formal records as a function of the incoming formal records and a behavioural model of the rational agent, and outgoing events generation means transforming outgoing formal records into outgoing events materialising a communication activity of the rational agent with the external agent.

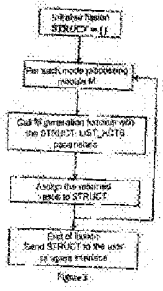
According to the invention, the interpretation means comprise several interpretation modules, each of which is dedicated to a mode specific to it, and the rational agent also comprises an inputs and outputs management layer provided with a multimodal fusion module that takes account of all incoming events, redirects their interpretation to the different interpretation modules concerned, correlates incoming formal records and submits the incoming formal communication records thus correlated to the rational unit.

2 Representative Drawing

Fig. 1


USER or SOFTWARE AGENT
Interface with several interaction modes
Incoming event (emitted by an interface module)
Flow of outgoing events
Response plan
Knowledge base
Interactions history
List of formal records
List of formal records
Inputs / outputs management layer
Multimodal fission
Fusion / termination management module
Multimodal fusion
Event
List of formal objects
List of formal records
List of formal records
List of coded values
Partial structure
Updated partial structure
Mode processing module
Interpretation of incoming events
Generation of outgoing events
Mode processing module
Interpretation of incoming events
Generation of outgoing events
Comprehension module
Generation module
AGENT SOFTWARE ARCHITECTURE


Initialise fusion
Empty fusion termination management stack
Read incoming event EVT
Is EVT an end message?
yes
no
Delete content (process if applicable)
Remove the RESULT corresponding to EVT from data
Call interpretation function corresponding to EVT with EVT, LIST_USED, LIST_ACTS parameters
Assign results returned to RET, LIST and LIST_ACTS
Remove dialogue context entry
Stack complete?
yes
no
Stack empty?
yes
no
End of fusion
Send LIST_ACTS to the dialogue manager


Initialise fusion
STRUCT = {}
For each mode processing module M
Call M generation function with the STRUCT, LIST_ACTS parameters
Assign the returned values to STRUCT
End of fusion
Send STRUCT to the user or agent interface

Bibliographic data: JP2008027454 (A) — 2008-02-07

SYSTEM AND METHOD FOR USING VOICE OVER TELEPHONE TO ACCESS, PROCESS, AND CARRY OUT TRANSACTION OVER INTERNET

No documents available for this priority number.

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Classification: - international: ***G06F3/16; G06Q10/00; G06Q30/00; G10L15/00; G10L15/22; H04M3/42; H04M3/487; H04M3/493; H04M3/50***

- cooperative: **G06Q30/0241**; **G06Q30/0251**; **G06Q30/0253**; **G06Q30/0255**; **G06Q30/0269**; **G06Q30/06**; **H04M3/4938**; H04M2201/40; H04M2203/105; H04M3/4878

Application number: JP20070206981 20070808

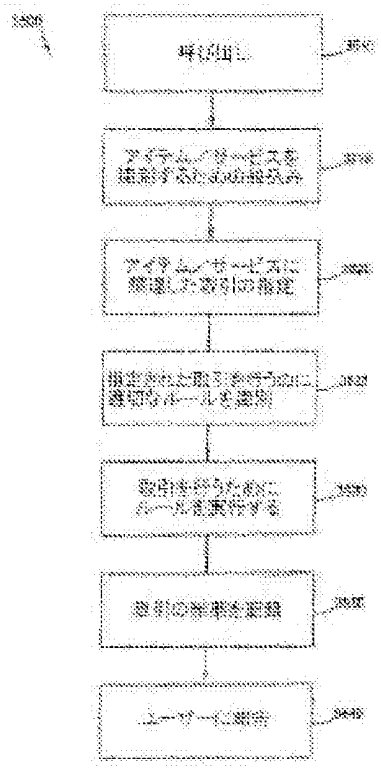
Priority number (s): US20000532509 20000321

Also published as: WO0171543 (A2) WO0171543 (A3) US2011225041 (A1) US8521585 (B2) US7974875 (B1) more

Abstract of JP2008027454 (A)

PROBLEM TO BE SOLVED: To provide a method for executing a transaction related to an item or a service using a telephone, etc. ; SOLUTION: The method for executing the transaction related to the item or the service using the telephone, etc. includes stages of providing information identifying the item or the service, providing a query as to a transaction to be performed in which the transaction is related to the identified item or service, and sending to a server system a request to execute the transaction related to the identified item or service in response to a user answer. The transaction is executed without the user performing a single action on a computer interface. ; COPYRIGHT: (C) 2008,JPO&INPIT

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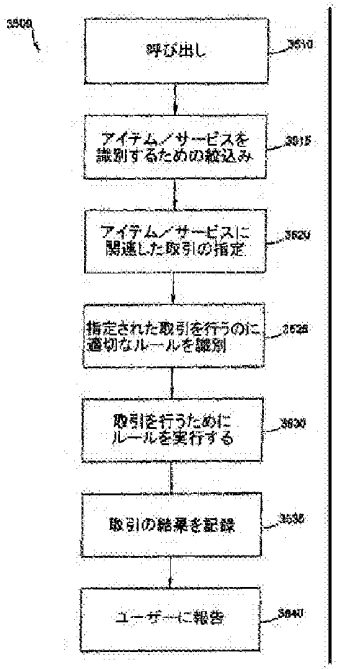
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(54)【発明の名称】電話による音声を用いてインターネットによる取引にアクセスし、これを処理し、実行するためのシステム及び方法

(57)【要約】
【課題】電話を使ってアイテム又はサービスに関係する取引を実行するための方法等を提供する。
【解決手段】電話を使ってアイテム又はサービスに関係する取引を実行するための方法等は、前記アイテム又はサービスを識別する情報を提供する段階と、取引が、識別されたアイテム又はサービスと関係付けられる、実行されることになる取引についての問合せを提供する段階と、ユーザーの回答に応答して、識別されたアイテム又はサービスに関係付けられた取引を実行するよう、要求をサーバーシステムへ送る段階とを含んでいる。ユーザーがコンピューターインタフェースで何らの操作を実行することなく、取引は実行される。
【選択図】図３５



【特許請求の範囲】
【請求項1】
ユーザーとのインタフェースを有し、ネットワークに接続可能なコンピュータ及びサーバーシステムにより実現された音声ポータル、及び、電話を使ってアイテム又はサービスに関係する取引を実行するための方法において、
前記アイテム又はサービスを識別する、前記コンピュータにより発生させた情報を前記音声ポータルにより提供し、前記情報は、複数のウェブサイトから得られ、複数のウェブサイトからの少なくとも２つの情報は同じであるか又は関連するかを見るために比較され、同じか関連があれば、これらの情報は融合され第３の基準情報が形成されることを特徴とし、
前記識別されたアイテム又はサービスと関係付けられている、実行されることになる取引に関する、前記コンピュータにより発生させた音声問合せをユーザーに提供する段階と、
ユーザーの音声回答に応えて、前記識別されたアイテム又はサービスに関係付けられた前記取引を実行するように、前記サーバーシステムに要求を送る段階と
を備えており、
前記取引は、前記ユーザーがコンピューターインタフェース上で何ら操作を行うことなく実行されることを特徴とする方法。
【請求項2】
前記アイテム又はサービスを識別する情報を提供する前記段階は、アイテム又はサービスの類別を選択的に識別する段階を備えていることを特徴とする、請求項１に記載の方法。
【請求項3】
前記アイテム又はサービスの類別を選択的に識別する前記段階は、アイテム又はサービスの類別の属性を選択的に識別する段階を備えていることを特徴とする、請求項２に記載の方法。
【請求項4】
前記実行される取引は購入であることを特徴とする、請求項１に記載の方法。
【請求項5】
前記実行される取引は入札であることを特徴とする、請求項１に記載の方法。
【請求項6】
前記取引の実行中に、前記識別されたアイテム又はサービスに関係する広告を選択的に提供する段階を更に備えていることを特徴とする、請求項１に記載の方法。
【請求項7】
広告を選択的に提供する前記段階は、前記識別されたアイテム又はサービスとは異なるアイテム又はサービスに関する広告を提供する段階を備えていることを特徴とする、請求項６に記載の方法。
【請求項8】
実行されることになる取引について、前記広告されたアイテム又はサービスに関連する問合せを提供する段階を更に備えていることを特徴とする、請求項７に記載の方法。
【請求項9】
ユーザーインタフェースを有し、ネットワークに接続可能なコンピュータ及びサーバーシステムにより実現された音声ポータルによって、インターネット上での取引を処理可能な音声制御式取引システムにおいて、
前記ユーザーインタフェースと連結されている少なくとも１つのデータベースとを備えており、
前記ユーザーインタフェースは、ユーザーとのコンピュータ音声通信を調整し、前記コンピュータ音声通信は、アイテム又はサービスの情報と、前記アイテム又はサービスに関連する取引とを含み、前記少なくとも１つのデータベースはアイテム及びサービスの情報

を記憶しており、
　少なくとも１つのウェブサイトから得られた少なくとも２つの情報を比較して、同じか関連があれば、これらの情報を融合して複数のウェブサイトから集められた情報に対応する第３の基準データファイルを選択的に確立するよう構成されているフュージョンエンジンを備え、
　従って、前記ユーザーがボタンを押すことなく、マウスをクリックすることなく、或いは計算装置へ手動で入力することなく、取引が実行されることを特徴とするシステム。
【請求項10】
　少なくとも１つのデータベースと連結されているネットワークインタフェースを更に備えており、前記ネットワークインタフェースは、前記インターネット上で前記アイテム及びサービスの情報にアクセスし、前記アイテム及びサービス情報に関係付けられた要求を処理し、前記識別されたアイテム又はサービスに伴う取引を実行するよう構成されていることを特徴とする、請求項９に記載のシステム。
【請求項11】
　前記ユーザーインタフェースは特定のユーザーに対しサービスを個人向けにするように、ユーザー情報を前記ユーザーインタフェースに提供する顧客マネージャーを更に備えたことを特徴とする、請求項９に記載のシステム。
【請求項12】
　前記ユーザーインタフェースに広告を選択的に提供するよう構成されている広告サブシステムを更に備えていることを特徴とする、請求項９に記載のシステム。
【請求項13】
　前記広告サブシステムは、ユーザーに関する情報に基づいて特定のユーザーに的を絞った広告を、前記ユーザーインタフェースに提供することを特徴とする、請求項１２に記載のシステム。
【請求項14】
　ユーザーインタフェースを有し、ネットワークに接続可能なコンピュータ及びサーバーシステムにより実現された音声ポータルを使用し、インターネットベースの情報へのアクセスと、ユーザーが電話による音声を使用してサービスと通信するインターネットベースの取引の実行とを提供するためのシステムにおいて、
　アイテム又はサービスを識別する、前記コンピュータにより発生させた情報を提供し、前記識別されたアイテム又はサービスに関係付けられている、実行されることになる取引についての前記コンピュータにより発生させた音声問合せを提供するための手段と、
　インターネット上の複数のサイトからデータベースからのアイテム又はサービスを識別する情報を検索する手段と、
　少なくとも１つのウェブサイトから得られた少なくとも２つの情報を比較して、同じか関連があれば、これらの情報を融合して複数のウェブサイトから集められた情報に対応する第３の基準データファイルを選択的に確立するよう構成する手段と、
　前記提供された質問に対するユーザーの回答に応えて、前記識別されたアイテム又はサービスに関係付けられた前記取引を実行するよう、要求を前記サーバーシステムに送るための手段と
を備えていることを特徴とするシステム。
【請求項15】
　ユーザーとのインタフェースを有し、ネットワークに接続可能なコンピュータ及びサーバーシステムにより実現された音声ポータルを有する通信装置を使って、アイテム又はサービスに関係する取引を実行するためのコンピュータ読み取り可能プログラムコードを備えているコンピュータプログラムにおいて、前記コンピュータプログラムのプログラムコードは、
　前記アイテム又はサービスを識別する、前記コンピュータにより発生させた情報を提供するための第１コンピュータ読み取り可能プログラムコードと、
　前記識別されたアイテム又はサービスに関係して実行されることになる取引についての

前記コンピュータにより発生させた音声問合せを提供するための第２コンピュータ読み取り可能プログラムコードと、
前記問合せに対するユーザーの返答に応えて、前記識別されたアイテム又はサービスに関係する取引を実行するよう、前記サーバーシステムへ要求を送るための第３コンピュータ読み取り可能プログラムコードと、
インターネットから情報を収集し、少なくとも１つのウェブサイトから得られた少なくとも２つの情報を比較して、同じか関連があれば、これらの情報を融合して複数のウェブサイトから集められた情報に対応する第３の基準データファイルを選択的に確立するための第４コンピュータ読み取り可能プログラムコードと、
を備えたことを特徴とするコンピュータプログラム。
【請求項16】
最適な取引を選択するために、複数の取引の間で比較を実行するための第５コンピュータープログラムコードを更に備えていることを特徴とする、請求項１５に記載のコンピュ
【発明の詳細な説明】
【技術分野】
【0001】
（発明の属する技術分野）
本発明は、一般的には、インターネット及び電子商取引、即ち「ｅコマース」に関する。より厳密には、本発明は、電話による音声を用いてインターネットによる取引にアクセスし、これを処理し、実行するためのシステム及び方法に関する。
【背景技術】
【0002】
（発明の背景）
インターネットは、各人がインターネットに接続されているコンピュータを使って、大量の情報にアクセスできる媒体に発展している。インターネットを通して情報にアクセスする能力は、様々な方法で提供することができる。通常は、キーワード又はキーフレーズを求めてインターネットを探索して、テキスト又は埋込み識別子（例えばメタタグ）のような、ウェブページ内の探索ワード又はフレーズを含むウェブサイトのリストを提供する、インターネットサーチエンジンによって、情報が提供されることもある。インターネットを通して個々のウェブサイトによって、情報にアクセスすることができる。個々のウェブサイトは、時間限界性且つ時間依存性の多種多様な情報とサービスを提供する。
【0003】
インターネットは、特に電子商取引を行うのに優れている。多くのインターネットサーバーが開発されており、ベンダは、それを通して商品又はサービスを広告し、販売することができる。そのような商品又はサービスには、インターネットを通して買い手に電子的に配信されるアイテム（例えば音楽）と、従来の配送チャネル（例えば一般的な運送業者）を通じて配送されるアイテム（例えば本）が含まれる。サービスには、インターネットを通して入手できる情報（例えば天気、交通、映画、コスト比較）の提供と、インターネット上で実行される商取引（例えば株取引、レストラン予約）も含めることができる。
【発明の開示】
【発明が解決しようとする課題】
【0004】
残念ながら、インターネットは大量の情報にアクセスする能力をユーザーに提供はするが、役に立つインターネットベースの情報を見つけ出すのは、時間を要し、面倒なことが多い。更に、複数の個別のウェブサイトで入手可能な同じ情報は、複数の異なる方法で編集され、複数の異なる形態で記述され、異なる様々な時間に変更されることがあるので、それを見つけ出し、比較するの難しい。インターネットに固有のこれらの難しさに加えて、インターネットサービスプロバイダ（ＩＳＰ）経由でインターネットに接続されているコンピュータ又は別の電子装置を持っていなければ、インターネットで入手可能な情報にはアクセスできないという単純な事実もある。更に、所望のインターネットベースの情報

を効率的に見つけ出すためには、インターネット経由での情報の探し出し方を学習しなければならない。このように、コンピュータを持っていない人、ＩＳＰと接続していない人、適切なソフトウェアを持っていない人、インターネットの利用に関して経験又は訓練経験の無い人は、インターネットベースの情報へのアクセスが制限される。これらの要因が、１９９９年の終わりまでに、米国人口の３０パーセントしかインターネットにアクセスしたことがない、即ち「ウェブをサーフィンした」ことがない（１９９９年１０月、フォレスターリサーチからの統計）と産業の専門家たちが推定する理由となっている。

【0005】

従って、直接コンピュータを使用しなくても、専用のＩＳＰ接続を持っていなくても、又はインターネット使用の経験又は訓練経験がなくても、インターネットベースの情報にアクセスできるシステム及び方法を提供することが望まれている。更に、例えば公衆電話からの音声のような、便利で容易に利用可能な手段を使ってインターネットベースの情報を入手できるようにするシステム及び方法を提供することが望まれている。更に、電話による音声を使って、インターネット上の取引にアクセスし、これを処理し、実行することができるシステム及び方法を提供することが望まれている。更に、そのような取引は、どの様なユーザーインタフェース又プラットフォームについても可能でなくてはならない。

【0006】

これまで、このようなシステム及び方法に向けて多くの挑戦が行われたが、不可能であった。例えば、そのようなシステム及び方法を使う人は、情報を、迅速に、又は少なくともある許容時間内に欲しがるであろう。そのような速さの実現は難しい。従来の高速コンピュータと高速通信接続を以ってしても、インターネットにアクセスするのに必要な時間遅延のせいで、多くの人に「ワールドワイドウェブ」ではなく「ワールドワイドウェイト」と呼ばせることになる。そのようなシステム及び方法へのもう１つの挑戦は、音声通信の認識である。従来の音声認識技術は、遅い上に不正確である。音声によるインターネットベースの情報への便利で有用なアクセスには、簡単、迅速且つ正確な音声認識が必要とされる。にもかかわらず、既知のプロセッサ及び記憶装置では、人対人の対話においてなされる音声認識に不可欠な大量の語彙及び処理速度への迅速なアクセスを実行できていない。

【0007】

そのようなシステム及び方法に関するもう１つの挑戦は、サービスを財務的にサポートしながら、インターネットベースの情報への自由なアクセスをどのように提供するかということである。従来のインターネットでの広告は、「バナー」のような広告情報を見て、バナーを「クリックする」というような何らかの手動的選択を行って、広告されている商品又はサービスに関する更なる情報を得るという能力を必要としている。

【0008】

従って、上記性能に加え、無料でインターネットベースの情報へ迅速且つ正確に音声アクセスすることのできるシステム及び方法を提供することが望まれている。更に、音声及び無線アクセスプロトコル（ＷＡＰ）を含め、インターネットベースの取引に必要な情報及び処理を、様々なプラットフォームのユーザーに提供するシステム及び方法を提供することが望まれている。

【課題を解決するための手段】

【0009】

（発明の概要）

本発明の実施例の１つの態様は、アイテム又はサービスに関する取引を、電話を使って実行するための方法である。本方法は、アイテム又はサービスを識別する情報を提供する段階と、識別されたアイテム又はサービスに取引が関係付けられる、実行されることになる取引についての問合せを提供する段階と、ユーザーの回答に応えて、識別されたアイテム又はサービスに関係付けられた取引を実行する要求をサーバーシステムへ送る段階を含んでいる。取引は、ユーザーがコンピュータインタフェースで何らの動作も実行することなく行われる。

【0010】
本発明の実施例のもう１つの態様は、要約すると、インターネット上で取引を処理する音声制御式取引サービスである。このサービスは、ユーザーインタフェースと、少なくとも１つのデータベースとを含んでいる。ユーザーインタフェースは、アイテム又はサービスの情報とアイテム又はサービスに関連する取引が含まれる、ユーザーとの音声通信を調整する。データベースは、ユーザーインタフェースと連結され、アイテムとサービス情報を記憶する。取引は、ユーザーがボタンを押すことなく、マウスをクリックすることなく、コンピューター装置へ何ら手動入力することなく実行される。
【0011】
本発明の実施例の又別の態様は、要約すると、インターネットベースの情報へのアクセスとインターネットベースの取引の実行を提供するためのサービスであり、ユーザーは、電話による音声を使って、そのサービスと通信する。このサービスは、アイテム又はサービスを識別する情報を提供し、識別されたアイテム又はサービスに関係付けられる。実行されることになる取引についての問合せを提供するための手段と、提供された質問に対するユーザーの回答に応えて、識別されたアイテム又はサービスに関係付けられた取引を実行する要求を、サーバーシステムへ送るための手段を含んでいる。
【0012】
本発明の実施例の又別の態様は、要約すると、アイテム又はサービスに関係する取引を通信装置を使って実行するための、コンピュータ読み取り可能プログラムコードを備えたコンピュータプログラム製品である。このコンピュータプログラム製品のプログラムコードは、アイテム又はサービスを識別する情報を提供するための第１コンピュータ読み取り可能プログラムコードと、識別されたアイテム又はサービスに関係付けられた、実行されることになる取引についての問合せを提供するための第２コンピュータ読み取り可能プログラムコードと、問合せに対するユーザーの応答に応えて、識別されたアイテム又はサービスに関係付けられた取引を実行する要求を、サーバーシステムへ送るための第３コンピュータ読み取り可能プログラムコードを含んでいる。取引は、ユーザーが手動操作を実行することなく行われる。
【0013】
本発明のこの他の特徴及び利点は、添付図面、詳細な説明、及び特許請求の範囲に記載した事項を見て頂ければ、当業者には明白であろう。
【発明を実施するための最良の形態】
【0014】
（代表的実施例の詳細な説明）
本発明は、例を用いて説明しているが、添付図面によって何ら制限されるものではない。なお、図中、類似参照番号は類似要素を表している。
【0015】
電話による音声を用いて、インターネットによる取引にアクセスし、これを処理し、実行するためのシステム及び方法を説明する。以下の記述では、説明を目的として、本発明を完全に理解して頂くために数多くの具体的な詳細事項について述べている。しかしながら、当業者には明らかなように、本発明はこれら具体的な詳細事項に制約されることなく実施することができる。その他の例では、本発明の好適な実施例を説明し易くするために、周知の構造及び装置をブロック図の形で示している。
【0016】
本発明の代表的な実施例の１つの態様は、アイテム又はサービスに関係した取引を、電話を使って実行するための方法を含んでいる。本方法は、アイテム又はサービスを識別する情報を提供し、識別されたアイテム又はサービスに取引が関係付けられる。実行されることになる取引についての問合せを提供する段階と、ユーザーの回答に応えて、識別されたアイテム又はサービスに関係付けられた取引を実行する要求を、サーバーシステムに送る段階を含んでいる。取引は、ユーザーがコンピュータインタフェースで何らの動作も行うことなく実行される。

【0017】
本システム及び方法は、消費者が、従来の商店又は電話アクセスが利用できる何処かで買い物をしている間に、オンライン小売業者から価格付け情報を入手して、注文できるようにする音声ベースの電話サービスを含んでおり、好都合である。音声ユーザーインタフェースは、ユーザーが興味を持った製品を特定的に識別できるようにする一連の質問を問い合わせることができるようになっており好都合である。これらの問い合わせのプロンプトは、製品のタイプが違えば様々に変えることができるし、実行時に設定変更することもできる。ユーザーは、回答を音声で伝えることによって、必要ならばスペリング及びＤＴＭＦ（二重トーン多重周波数、即ち、電話でのタッチトーン）に落として応答することができる。更に、音声ユーザーインタフェースは、仮想製品データベース（局所的にキャッシュされた情報とインターネットから実行時に検索された情報から構成される）と対話することができる。更に、音声ユーザーインタフェースは、様々なオンライン小売業者からの製品の価格付け及び入手可能性に関する情報を、消費者へ最小の遅延時間で戻すことができる。更に、音声ユーザーインタフェースは、ユーザーが、小売業者を選択して製品を注文できるようにする。

【0018】
本発明のもう１つの態様は、インターネットベースの情報及びサービスへの音声アクセスを提供するシステムに関係している。本発明の更に別の態様は、１つのウェブサイトが他のウェブサイトと同じ情報を持っているかどうか判定するためのシステム及び方法に関係している。本発明の更に別の態様は、インターネットの音声ポータルを使って広告するためのシステム及び方法に関している。本発明の更に別の態様は、インターネットベース情報の変換に用いられるルールの非プログラミング開発のためのシステム及び方法に関している。本発明の更に別の態様は、所望のアイテムを決定するために、インターネット音声ポータルシステムでユーザーの応答を送るためのシステム及び方法に関係している。本発明の更に別の態様は、組織的に構築されたデータの変換及び基準化に関係している。

【0019】
ある実施例では、メモリ内に含まれている一連の命令を実行する中央演算処理装置（ＣＰＵ）を有するコンピュータシステムが用いられている。更に特定すると、連続した命令の実行が、ＣＰＵに、以下に説明する段階を実行させる。命令は、実行に備えてＣＰＵによって、読み取り専用メモリ（ＲＯＭ）、大容量記憶装置、又は幾つかの他の恒久記憶装置から、ランダムアクセスメモリ（ＲＡＭ）内へとロードされる。他の実施例では、本発明を実施するために、ソフトウェア命令の代わりに、又はソフトウェア命令と組み合わせて、結線接続回路が用いられる。従って、ここに記載されている実施例は、ハードウェア回路とソフトウェアとの特定の組み合わせに限定されず、コンピュータシステムによって実行される命令に関する特定のソースにも限定されない。

【0020】
図１は、音声ポータル１０とネットワーク２０の間の接続を示している。代表的実施例では、ネットワーク２０は、インターネット、即ち、ＴＣＰ／ＩＰネットワークプロトコルを使ってデータの伝送及び交換を容易にするコンピュータネットワークの世界規模のネットワークである。別の実施例では、ネットワーク２０は、バーチャル私設ネットワーク（ＶＰＮ）のような、何れかのタイプのネットワークである。ネットワーク２０は、ハイパーテキストマークアップ言語（ＨＴＭＬ）ウェブページ３０及び４０との通信を提供するのが望ましい。ウェブページ３０及び４０は、様々なウェブサーバー上の様々なデータを含んでいる。ネットワーク２０は、更に、コンピュータ５２及び５４とデータベース５８を含んでいるサービス５６とをネットワーク２０に連結する、非音声ポータル５０との通信も提供する。サービス５６は、ネットワーク２０との接続を有する、何らかのタイプの会社、コンテンツ又はサービスプロバイダである。データベース５８はデータ用の記憶媒体であり、光学的、磁気的又は他の何れかの好適な記憶媒体である。

【0021】
一般的に、音声ポータル１０は、サーバーのネットワークとして実現される。サーバー

は、ソフトウェアによって構成できる。サーバーは、ディスクドライブ及び他の記憶装置を含む大量の読み取り／書き込みメモリを備えているのが望ましい。一般に、ユーザーは、携帯電話１２又は固定電話１４のような電話で、電話と音声ポータル１０との間の通信を開始する電話番号（一般的な旧来の電話サービス（ＰＯＴＳ））を呼び出すことによって、音声ポータル１０にアクセスする。代わりに、音声又は音声データをポータル１０へ伝達するのに別のタイプの電話サービスを利用してもよい。ポータル１０は、様々なライン、ネットワーク及びステーション経由で、電話１２及び１４と接続することができる。音声ポータル１０は、ユーザーとの音声通信を提供するので好都合である。音声ポータル１０は、ユーザーが、ウェブページ３０及び４０、及びネットワーク２０経由で利用可能な他のソースからの情報及びサービスにアクセスできるようにする。そのようなアクセスは、音声ポータル１０によって迅速且つ効果的な方法で提供され、様々なウェブサイト及びインターネットサービスからの情報を継続して検索し、編成し、記憶する。他のユーザーインタフェースプラットフォームも、音声ポータル１０を使うように設けられている。そのようなユーザーインタフェースプラットフォームは、例えば、ＷＡＰ（無線アプリケーションプロトコル）及びウェブインタフェースを含んでいる。

【0022】

図２は、音声ポータル１０によって実行される代表的な機能的オペレーションを示している。これらの機能は、任意の数の物理的な構造を含む様々な方法で実行される。代表的な実施例では、音声ポータル１０は、ユーザーインタフェース１１０と、広告サブシステム１２０と、顧客管理サブシステム１３０と、イグジスタンツサブシステム１４０と、フュージョンエンジン１５０と、更新エンジン１６０と、データベース１７０を含んでいる。

【0023】

ユーザーインタフェース１１０は、音声ポータル１０とユーザーとの間の音声通信を調整する。ユーザーインタフェース１１０は、音声、インターネット即ち「ワールドワイドウェブ」（ＷＷＷ）、無線アプリケーションプロトコル（ＷＡＰ）インタフェースによるもの、又は何れの他のプラットフォームインタフェースであってもよい。代表的な実施例では、ユーザーインタフェースは音声指向である。そのような音声指向の実施例では、ユーザーインタフェース１１０は、可能なあらゆる場所でユーザー入力を受信するために、ワードベースの自動音声認識（ＡＳＲ）を利用する。ユーザーインタフェース１１０は、マサチューセッツ州ボストンのスピーチワークスインターナショナルから提供されているスピーチワークスのような音声認識ソフトウェアパッケージを用いることができる。高速の音声認識のために、ユーザーインタフェース１１０は、ユーザーの応答を一式の認識可能な回答に絞り込む絞り込みプロセスを利用しており好都合である。絞り込みについては、図３４と関連付けて更に説明することとする。ユーザーインタフェース１１０は、ワードベースのＡＳＲが使用不能である場合、ユーザー入力を受信するためにスペリングベースのＡＳＲを用いる。最終的に、ユーザーインタフェース１１０は、ユーザーに利点がある場合にだけ、ユーザー入力を受信するのにキーパッド入力を用いる。キー入力は、電話１２及び１４のキーを利用する（図４）。

【0024】

代表的な実施例では、ユーザーインタフェース１１０は、下記の内の１つ又は複数のタスクを実行する。（１）電話番号と、その他のユーザー固有の情報でユーザーを確認する。（２）所与のプラットフォーム上の所与のユーザーに対し新しいセッションを開始する。（３）所与のプラットフォーム上の所与のユーザーに対し新しい命令を追加する。（４）音声ポータル１０で利用可能な関心対象の一式の垂直ドメイン内でのユーザーの嗜好を更新する。（５）関心対象の前記垂直ドメインに関するユーザーの嗜好を使用可能又は使用禁止にする。（６）ユーザーの技能レベルを全体的に、又は特定の垂直内で更新する。（７）ユーザーの人口統計上の情報、又は個人的な情報（並びにクレジットカード情報）を更新する。（８）ユーザーのセッション状態を、ユーザーインタフェース特定情報と共に更新する。（９）新しいクレジットカードをデータベースに加える。（１０）現在のク

レジットカードを新しい情報と共に更新する。（１１）クレジットカードをクレジットカードのタイプと番号とで識別し、既にデータベースにあるかどうか検査する。（１２）ユーザーに利用可能な垂直ドメインのリストとその順序を設定する。（１３）ユーザーのセッションを正常に終了する。（１４）顧客管理サブシステム１３０に、ユーザーのセッションが変則的に終了してある所定の状態（例えば、対話中断、セッションタイムアウト）にあることを通知する。（１５）セッションが変則的に終了されていたら（例えば、対話中断、セッションタイムアウト）、セッションを再開できるように、所与のプラットフォームを与えられたユーザーの最近のセッションを判定し、記憶されているセッション状態を返す。ユーザーインタフェース１１０は、識別、セッション、ユーザー及び支払いプロトコルに関係した追加機能を実行することができる。

【0025】

広告サブシステム１２０は、通信セッション中にユーザーに提示される広告に関する活動を調整する。ある代表的な実施例では、広告サブシステム１２０は、スポンサー付の広告、特定のユーザーに的を絞った広告、及びユーザーからの積極的な要求の後にだけ提示される許可ベースの広告のような広告を含んでいる。ある代表的な実施例では、広告サブシステム１２０は、以下の機能の内１つ又は複数の機能を提供する。（１）ユーザー、セッション、ロケーション、コンテンツ、及び探査されているアイテムに基づいて、上演する広告を選択する。（２）広告が上演されたこと、それが完了したか否かということを記録する。（３）スピークスルー（即ち、以下で述べるように、ユーザーが広告された対象について更に聴くことを選択的に選択する広告）が行われたことを記録する。（４）データベース呼び出しを繰り返す必要が無いように、顧客及びセッション情報をビーン内に記憶する。（５）広告を提供する会社に関する記録を作成し、それを識別できるようにする。（６）データベース内に記憶されるべき広告、及び広告契約（１つの広告が、システム上の用途によって異なる契約を有しているかもしれないので）を作成する。（７）広告販売目的の場合は、新しい販売雇人又は雇主の契約を作成する。（８）広告及び／又は前記広告の契約を更新する。（９）広告会社を更新して、契約情報及びアドレス情報を変更する。（１０）販売雇人及び雇主の契約を更新する。（１１）アクティブリスト内に広告を配置する／アクティブリストから広告を除去する。（１２）外部情報に基づいて、広告契約が完了しているか又は未完了であるかをマークする。（１３）広告のタイプに基づき、アクティブな広告のリストを表示する。（１４）非アクティブかアクティブか、未完了であるか完了しているか、又は単に全部広告かという基準に基づいて、会社に関係している広告リストを表示する。（１５）上記基準に基づいて、広告に関係している契約のリストを表示する。（１６）上記基準に基づいて、販売雇人に関係している契約リストを表示する。（１７）単に独自の識別子を通過させることにより、雇人、会社、広告又は広告契約の完成リストを検索する。（１８）雇人、会社、広告及び広告契約イグジスタンツの近似ストリング整合を求めて、データベースを探索する。（１９）特定の契約で会社に支払った受け渡しの経緯を保持し、傑出した会社のバランスを更新できるようにする。（２０）データの完全性に関するエラーが確実に存在しないようにするために、更新ログを探索する。（２１）特定ジャンルに関する広告を記憶するのに必要な上演リストを作成及び変更する。

【0026】

これらのオペレーションそれぞれを実行するのに、多種多様な方法を用いることができる。広告オペレーションについては、図３６に関連して更に説明する。広告サブシステム１２０は、識別、セッション、ユーザー及び支払いプロトコルに関係する追加の機能を実行することができる。本明細書で開示されている広告技術は、従来型のパーソナルコンピュータ（ＰＣ）インタフェースウェブ接続を使って利用することもできる。

【0027】

顧客管理サブシステム１３０は、ユーザー及びユーザーの音声ポータル１０の利用に関係する情報の管理を調整する。ある代表的な実施例では、顧客管理サブシステム１３０は、ユーザーインタフェース１１０、広告サブシステム１２０及び音声ポータル１０の他の

機能によって選択的に利用される、嗜好及び人口統計のようなユーザーに関する情報を取得する。顧客管理サブシステム１３０は、識別、セッション、ユーザー及び支払いプロトコルに関係する追加の機能を実行することができる。サブシステム１１０、１２０、１３０は別々に記述されているが、それぞれのオペレーションは、本発明の原理から逸脱することなく、単一ユニットに統合することができる。

【0028】

ユーザーインタフェース（ＵＩ）１１０と顧客管理サブシステム１３０は、垂直ドメインの選択とインターネットベースの情報へのアクセスを提供するために対話する。垂直ドメインは、様々な分野又は領域を類別し、ユーザーはそこから音声ポータル１０内で選択することができる。ＵＩ１１０がユーザーと効果的に通信するためには、一定の嗜好とユーザーに関する事実が、確認され、受動的にしろ能動的にしろ理解されねばならない。顧客管理サブシステム１３０は、そのような情報をデータベース１７０に記憶する。代わりに、個々の顧客のデータベースがそのような情報を保持することもできる。

【0029】

顧客管理サブシステム１３０は、顧客の嗜好及び事実を判定するのに必要な情報をＵＩ１１０から取得する。ＵＩ１１０は、データを顧客管理サブシステム１３０へ送り、顧客管理サブシステム１３０はそれを処理して、それを少なくとも１つのデータベースへ中継する。更に構文解析するために、イグジスタンツサブシステム１４０内の嗜好の更新が行われる。その後、イグジスタンツサブシステム１４０は、ユーザーの嗜好及び事実のような情報をＵＩ１１０へ送り返す。

【0030】

顧客管理サブシステム１３０は、応答時間をそれほど長くすることなく、修正可能であり、拡張可能であり好都合である。そのため、新しい垂直ドメインを音声ポータル１１０に加えるプロセスは迅速で、安定している。常に新しい垂直ドメインを加えることができるので、顧客の事実及び人口統計上のタイプを完全に定義することはできない。

【0031】

顧客管理サブシステム１３０は、ユーザーによってなされた、データベースを通して契約され、契約解除された全取引を記録する。更に、顧客管理サブシステム１３０は、ユーザーが構成された履歴リスト内に配置しているアイテムを記録し、ユーザーが（ウェブサイト上やＷＡＰ装置を通じて）閲覧したコレクションを追跡する。

【0032】

顧客管理サブシステム１３０は、契約済みの顧客を、可能なとき何時でも、可能な限り受動的に識別する。従って、顧客の認識は、例えば、電話番号及びシステム加入のＩＤ（「ＰＩＮ」）のようなある種の識別キーを通して行うのが望ましい。この識別は、顧客に関連した一定の嗜好、及び嗜好の各セット内での顧客の経験レベルに繋がることが望ましい。更に、本システムは、購入を正式に認可する前に、追加の識別のレベル（例えば、パスワードの識別）が、記憶されているクレジットカード情報に対して作られるようにする。

【0033】

顧客管理サブシステム１３０は、各垂直ドメイン内に一式の嗜好を保持して、音声ポータル１０経由でのユーザー対話をやり易くする。例えば、ある代表的な実施例では、顧客管理サブシステム１３０は、どのタイプの広告を顧客に提供するか、どのように顧客のサービスを向上させるか決定するのを助けるために、顧客から情報を収集する。顧客管理サブシステム１３０は、それぞれサポートされているドメインに適切な顧客の嗜好を維持し、顧客データをデータソースから動的に更新する。例えば、関心対象のオークションドメインでは、現在のビット状況は、ユーザーの要求で更新される。音声ポータル１０は、そのドメインに適切な通貨によってデータをユーザーに示すので、好都合である。例えば、関心対象のオークションドメインでは、ビットは数秒以内で常に最新状態にある。関心対象のｅコマースドメインでは、価格付け情報は、購入価格が示されている時点の最新のものである。

【0034】
顧客管理サブシステム１３０は、どのユーザーがどのサービスにアクセスしているかを判定できるように、報告と分析を提供するので好都合である。更に、顧客管理サブシステム１３０は、例えば、一定の収入グループ、性別、又は年齢層からのユーザーによってアクセスされるのはどのサービスかを判定するような、異なる人口統計学上のセグメントによるセッション及び取引の履歴に関する報告を提供する。更に、顧客管理サブシステム１３０は、実際の利用に基づいて、関連の報告を提供する（例えば、映画に関心のあるユーザーによりアクセスされているのは、他のどのサービスであるかを報告する能力）。
【0035】
１つのプラットフォームからもう１つのプラットフォームへ（例えば、電話からウェブへ、電話からＷＡＰへ）継続して価値を追加しユーザーと共に移行するために、顧客管理サブシステム１３０は、個人に合わせた特性をサポートし、顧客の経験をサービスによって向上させるので好都合である。個人化に加えて、他の「スティッキネス」（競争の点で顧客はサービスと「スティッキング」している）のソースは、共通の関心対象に関して友人又は家族のネットワークのようなコミュニティ特性のサポートを含んでいる。従って、個人化特性及びコミュニティ特性が、顧客管理サブシステム１３０と共に含まれているとすれば、顧客は、特定のサービスプロバイダにより忠実であろうとする。
【0036】
サービス（又は広告）の、顧客の行動への適用をサポートするため、顧客管理サブシステム１３０は、サービスの利用を追跡するので好都合である。更に、インタフェース評価の領域では、インタフェース階層の典型的なユーザー探査が、問題領域か又は非常に有用な領域か、或いは、単一セッション内の副次的特徴の相関関係にあるセットかの識別を助ける。音声ポータル１０のサービスの重要な属性のもう１つの例はタイミングである。例えば、「バージ・イン」（ユーザーは、リスト又はプロンプトが終了する前に、回答することで中断することができる）の利用は、より進んだユーザーを示すことができ、特定のユーザーに対して繰り返される単一のサブツリーへのバージ・イン選択のストリングは、顧客管理サブシステム１３０により感知され、全体的なものか、又は可能性としては顧客特定のものである、ショートカットへの機会へ繋げられる。
【0037】
「スティッキネス」の態様は、顧客の嗜好へのサービスの適用である。このことは、非反復的「署名」又は「購入」データ入力要件のサポートにおいて顧客情報保存のような比較的簡単な特性を含むこともできるが、異なるフロントエンドにおける特定の対話のサブツリーのナビゲーションに関する嗜好、及びサービス／ベンダ順序付け又は選択に関する嗜好を含むこともできる。ベンダ嗜好又は順序付けの例として、ユーザーは、「好適なベンダ」を選択して、音声ポータル１０に従って見つけた製品に関する売り手リストを２つ、即ち、安いものと好みのものとに限定することができる。
【0038】
垂直的嗜好は、ユーザーの行動に基づいて受動的に設定されるべきである。即ち、受動的な嗜好は、特定の属性を２回以上要求した後で設定される。或いは、嗜好はダイナミックで、ユーザーの行動に基づいて変わる。ユーザーは、受動的な嗜好を全て、音声又はウェブインタフェースのどちらかを通じて設定又は再設定することによって、オーバーライドできるのが望ましい。
【0039】
顧客管理サブシステム１３０は、株情報、天気の好み等のようなユーザーの嗜好を、マイヤフーやマイエキサイトの様な個人向けのウェブページから引き出すことができる。個人向けのウェブページは、従来のインターネット接続経由でユーザーが先に作成しておくことができる。代わりに、個人向けウェブページは、ユーザーの音声コマンドに応えて、顧客管理サブシステム１３０が構築することもできる。これらのページは、次に音声ポータル１０と共に用いられるように翻訳することができる。特定の垂直的嗜好又は最近の呼び出し嗜好が存在しない場合、好都合に、一般的な嗜好をデフォルト時嗜好として用いる

ことができる。

【0040】

以下は、代表的な垂直的嗜好要件のリストとその説明である。それぞれの嗜好は、各インタフェースを通して別々に用いられる。ある代表的な実施例では、天気に対する嗜好のみが、顧客が要求する位置に関する天気である。デフォルトにより、ユーザーの位置はそのＺＩＰコードである。最も一般的に用いられている位置は、利用可能であれば、最近の呼び出し位置によってオーバーライドすることができる。

【0041】

関心対象のスポーツドメインでは、閲覧すべき異なる嗜好が幾つかある。あるスポーツのスコア、スケジュール、成績をユーザーに送ることもできる。ウェブサイトについては、排他的に、あるスポーツの広告及び情報を送らないように使うこともできる。例えば、あるユーザーは、ホッケーの試合の情報は聞きたくないが、野球の情報は欲しいかもしれない。第２に、あるチームが他よりも好まれるにつれて、嗜好の細分化を高めることができる。これらの細分化されたそれぞれで、限定された選択の最新使用（ＭＲＵ）リストを用いて嗜好リストを決定することもできる。更に、スポーツ及びチームの嗜好のタイプ、好みのイベントを用いてもよい。

【0042】

関心対象の映画ドメインでは、必要な嗜好には、顧客の地域性及び映画館の地域性、映画のタイプ（例えばスリラー、ホラー、アクションなど）、映画の格付け（ＡＡ，Ｇ，Ｒなど）、顧客のお気に入りの映画俳優／映画女優が出演する映画が含まれている。これらの嗜好のそれぞれは、限定された選択であるＭＲＵリストに挙げられている。

【0043】

関心対象の交通ドメインでは、利用される主な嗜好は、属性として時間を備えている、ユーザーが目的地に到達するのに利用したい特定のルートである（最新のものはデフォルト値）。従って、限られたルートのＭＲＵリストは、顧客の嗜好リストを構成することができる。

【0044】

ある代表的な実施例では、関心対象の株ドメインに関する嗜好について２レベルの階層がある。先ず、マーケットリストに対する嗜好があり、次に各マーケット内で、見るべき株や指数の嗜好がある。又、マーケット及び株のＴＢＤ選択のＭＲＵリストは一覧表にしてもよい。関心対象のその他の垂直ドメインには、レストラン、コンサート、ライブイベント、タクシー、飛行機の予約が含まれる。

【0045】

図２に示すように、イダジスタンツサブシステム１４０は、ユーザーインタフェース１１０、広告サブシステム１２０、顧客管理サブシステム１３０、フュージョンエンジン１５０及び更新エンジン１６０による、データベース１７０へのアクセスを調整する。イダジスタンツサブシステム１４０は、データベース１７０内に含まれるデータ構造の作成、適用及び操作を管理する。データベース１７０内に含まれるデータは、更新エンジン１６０によってインターネットソースから集められる。ある代表的な実施例では、データベース１９０内で利用されるデータ構造は、「イダジスタンツ」又はシングの階層、それらの関係、及びお互いの関連性に基づいている。データベース１７０は、イダジスタンツサブシステム１４０とだけ対話するので、データベース１７０内の情報を複製及び修正する機能は、容易に実行される。イダジスタンツ及びそれらの作成は、図４－１０に関連して更に説明することとする。具体的に、イダジスタンツに関するある代表的なデータ構造モデルを、図４－６に関連して説明するが、イダジスタンツに関しては、様々な別の構造を利用することもできる。イダジスタンツの作成及び更新は、図７－１０に関連して説明されている。

【0046】

フュージョンエンジン１５０は、２つのイダジスタンツが同じか否かを判断して、同じならそれらのイダジスタンツを融合させ、第３の基準イダジスタンツを形成する。このよ

うに、フュージョンエンジン１５０は、１つのソースから集められた情報が、他のソースから集められた情報に関係しているか、又は同じであるかをはっきりさせる。フュージョンエンジン１５０の機能は、図２５、２６、２７に関連して説明することとする。

【0047】

更新エンジン１６０は、データベース１７０内に含まれている情報及び属性を更新するため、インターネットから情報を検索する。ある代表的な実施例では、更新エンジン１６０は、データベース１７０内の情報を更新するために、インターネットから情報を検索する「スパイダ」を利用する。更新エンジン１６０のオペレーションは、図７及び８に関連して更に説明することとする。

【0048】

データベース１７０は、顧客データ、広告情報、製品及びサービス情報のような、音声ポータル１０によって利用される情報を記憶する。データベース１７０内の情報は、イグジスタンツ、イグジスタンツの属性、イグジスタンツの関係、イグジスタンツの結びつきの中に記憶される。イグジスタンツとはどういうものか、イグジスタンツはどのように形成されるのか、イグジスタンツは互いにどのように関係しているのか、イグジスタンツは音声ポータル１０の機能性とどのように関係しているのか、ということについては、以下に説明することとする。別の実施例では、複数のデータベースが、顧客データ、広告情報及びオペレーションの記録などの特定のタイプの情報に用いられる。

【0049】

図３は、音声ポータル１０の代表的な物理的配置を示している。これらの物理的構造は、単なる例示である。図示のものと組み合わせて、或いは、図示の代わりに、他の構造を用いてもよい。ある代表的な実施例では、音声ポータル１０には、フロントエンドサーバー２１０と、フロントツーバックネットワーク２２０と、バックエンドサーバー２３０と、バックエンドネットワーク２４０が含まれている。ユーザーは、電話を通して、フロントツーバックネットワーク２２０によってバックエンドサーバー２３０に連結されている、フロントエンドサーバー２１０と通信する。

【0050】

ある代表的な実施例では、バックエンドサーバー２３０は、プロキシマネジャー２４５と、プロキシ２５０と、ビーン２６０と、データベース２７０を含んでいる。プロキシマネジャー２４５は、フロントツーバックネットワーク２２０を通して、フロントエンドサーバー２１０の１つからの情報に対する要求を受信する。プロキシマネジャー２４５は、バックエンドネットワーク２４０を通して通信し、各プロキシマネジャー２４５のワークロードレベルを判定する。一旦適切なプロキシマネジャー２４５が決定されると、適切なプロキシマネジャー２４５は、自由なプロシキのプール２５０から自由なプロキシを引き出して、そのプロキシをビーン２６０へ割り当てる。ビーン２６０は、情報を検索し、情報を挿入し、イグジステンツ又はイグジステンツの関係を探索し、又はデータベース２７０に関して可能な他の機能を実行するために、データベース２７０と関連付けられている。

【0051】

図３と関連して説明されているバーチャルデータベース構造は、インターネット２０から手に入れた情報を、時間的にも技術的にも実用的な方法で音声ポータル１０のユーザーに送るように設計されている。人々は、様々な設定と方法で、情報を必要とし利用するので、好都合に、音声ポータル１０が、限定するわけではないが、電話（例えば、音声、ＷＡＰ及びその両方）、ウェブ及び携帯可能に接続された計算装置（例えば、Ｐａｌｍ（Ｒ）ＯＳデバイス、ＷｉｎＣＥ（Ｒ）デバイス、ＲＩＭページャー）を含む様々なプラットフォーム上でこれをサポートする。

【0052】

バックエンドサーバー２３０は、データの収集及びフュージョン（融合）を含む様々な特徴を備えたデータベースサービスサポートを含んでいる。データ収集は、図７及び８と関連して説明されているように、特定のアイテムタイプ及び／又はサイトに対してスケジ

ュールされている定期的なインターバルで、インターネットソースからデータを蓄積することを含んでいる。音声ポータル１０は、図９及び１０と関連して説明されているように、データソースサイトへの変更を感知し、適切なサイトルールマネジャーに通知する。図９及び１０と関連して説明されているように、音声ポータル１０は、更に、データソースに対して、データ抽出の一般的な定義をサポートする。

【００５３】

音声ポータル１０は、「フュージョン（融合）」のプロセスで、異なるインターネットベンダからの同じアイテムを識別する。フュージョンプロセスの間、音声ポータル１０は、全情報のソースに関するメタデータを保持する。メタデータはデータに関するデータを含んでいる。例えば、メタデータは、データ要素又は属性（名称、規模、データのタイプなど）に関するデータ、記録又はデータ構造（長さ、分野、コラムなど）に関するデータ、データに関するデータ（どこに配置されているか、どのように関連付けられているか、所有権など）に関する資料である。更に、必然性が自動的に決定されない場合、音声ポータル１０は、非専門家によるフュージョン決定又は非決定の対話的明確化をサポートする。音声ポータル１０は、更に、コード変更なしで、新しいデータのタイプ及びデータ要素を追加することをサポートする。更に、音声ポータル１０は、マーケット調査、試験及び機会を通して識別された相関性のドメイン特定の概念をサポートする。例えば、関心対象のｅコマースドメインでは、安くて、良質で、一緒に買うことが多くて、最も人気があるのは、重要な相関性の概念である。関心対象の映画ドメインでは、関係する映画及び製品、及び、あるカテゴリーでベストの映画、最も人気のある映画、なつかしのベスト映画、役者によるベスト映画は、重要な相関性概念である。音声ポータル１０は、アイテム（例えば製品説明）についての詳細事項を追加するのに必要な関連情報を集めて保持する。フュージョンのオペレーション及び機能性は、図２５－２７と関連して更に説明することとする。

【００５４】

図４は、音声ポータル１０のデータベース１７０に用いられている代表的なデータ構造モデル３００を示しており、その中で、「イグジスタンツ」（又はシング）は属性、アソシエーション、及び関係を与えられる。イグジスタンツ同士の「継承」関係は、先端に三角形が付いた実線で示されている。イグジスタンツ同士の「アソシエーション」関係は、先端が開いた矢印の点線で示されている。継承関係を例にとると、データ構造モデル３００では、ブロック３１０は「イベント」である。「イベント」は「イグジスタンツ」又はシングであり、ブロック３２０へ向かう三角形先端の矢印３１５で示されている。同様に「映画上映」（ブロック３３０）は「イベント」（ブロック３１０）であり、三角形先端矢印３３５で示されている。アソシエーション関係の例では、イベントは「行為地」と関連付けられており、ブロック３４０へ向かう先端が開いた矢印３４５で示されている。同様に、映画上映（ブロック３３０）は、先端が開いた矢印３５５で示すように、「映画パッケージ」（ブロック３３０）と関連付けられている。イベントは、スポーツイベント、ドラマ、コンサート、喜劇、花火大会、ダンス大会又は他の活動であってもよい。

【００５５】

データ構造モデル３００は、図４に示すようにもっと多くのイグジスタンツ、アソシエーション及び関係を含んでいるが、ここでは説明しない。更に、データ構造モデル３００は、この他にも図面に含まれていないイグジスタンツ、アソシエーション及び関係を含んでいる。図４は、説明のためだけのものである。

【００５６】

図５には、代表的なデータ構造モデル４００が示されており、ユーザー又は顧客オブジェクトと別の垂直クラスとの間のオブジェクト指向関係が提示されている。継承及びアソシエーション関係の説明は、図４に関連して説明したデータ構造モデル３００の説明と同じである。ある代表的実施例では、データ構造モデル４００内に配置されるユーザー情報は、データベース１７０内に含まれている。しかし、別の実施例では、そのようなユーザー情報は、個別の顧客データベースに含まれている。

【0057】
顧客はイグジスタンツ（顧客イグジスタンツブロック４０２）であり、階層内で最高レベル直下の子孫、即ち「イグジスタンツ」イグジスタンツであり、従って、その全特性を受け継いでいる。この構造の背後にある理由は、データベース１７０及びその方法は既に作成され、構造はコードを再利用できるようになっていることである。
【0058】
顧客オブジェクトは様々な情報の断片を含んでいる。総体的な嗜好クラスは、「交通」、「天気」及び「映画」のような嗜好に関する情報を含んでいる。顧客が関心対象の新しい別の垂直ドメインに参入する度に、垂直ドメインの名称に対する嗜好オブジェクトのインスタンスが作成され、嗜好データが挿入される。垂直ドメインが既に存在している場合、オブジェクトは、更新された情報によって修正される。
【0059】
セッションクラスは、ユーザーのセッション（セッションブロック４０４）に関する情報を直接記録する。セッションは、呼び出しであってもよいし、ウェブサイトを通しての探索であってもよいし、ＷＡＰを用いる呼び出しであってもよい。日時及び期間のようなデータは一般的な属性であるが、ユーザーが固定電話から呼び出したか携帯電話から呼び出したかについての分析は、電話セッションに特定的なことである。このタイプのデータは、音声ポータル１０が（広告目的で）マーケティングを誰に向けるかを決定し、性能及びサービスの両方を改良するのに有用である。同様に、顧客オブジェクトは、これらのセッションのオブジェクトそれぞれにリンクしており、（ユーザーがセッションを終了し、その特定時間に再接続したい場合）そのプラットフォームの最新のセッションは何であったかを判定する。
【0060】
電話セッションブロック４０８は、ポータル１０との通信に電話が用いられる通信セッションに関係する情報を記録する。電話セッションブロック４０８は、現在の対話のレベル、現在の関心対象のドメイン、インタフェースプラットフォームのタイプ（例えばＷＷＷ、ＷＡＰ、ＡＳＲ）、閲覧した前回のレベルなどの情報を含んでいる。電話セッションブロック４０８は、ユーザーが、前回のセッションで止めたセッション又は中断したセッションに再参加できるようにするので好都合である。クレジットカード情報イグジスタンツ、場所イグジスタンツ、嗜好イグジスタンツのような他のイグジスタンツブロックは、関連した属性を含んでおり、必要に応じて情報を記録する。
【0061】
専門技術クラス（専門技術ブロック４０６）は、異なるプラットフォーム（即ち、電話、ＷＡＰ、ＷＷＷ）を通して（総体的に、且つ異なる嗜好に対して）異なるレベルの使用適性を維持するという目的を果たす。顧客は、これらのクラスインスタンスのそれぞれにリンクしている。これらは、嗜好はプラットフォームを横断できるのに対してユーザーの機能はできないので、嗜好クラスには含まれない。
【0062】
図６は、広告に関係した情報用の、音声ポータル１１０のデータベース１７０で用いられる代表的なデータ構造モデル４５０を示している。継承及びアソシエーション関係の説明は、図４のデータ構造モデル３００の説明と同じである。ある代表的な実施例では、データ構造モデル４５０内に配置された広告情報は、データベース１７０に含まれる。しかし、別実施例では、そのような広告情報は、個別の広告データベース内に含まれている。
【0063】
データ構造モデル３００、４００、４５０は、イグジスタンツ、アソシエーション及び関係に関する情報の配置を連続して拡大するので好都合である。更に、モデル３００、４００、４５０は、迅速に、且つ先に入力されている情報を変更することなく、関心対象の新しい垂直ドメインの作成に配慮している。例えば、モデル３００は、本、玩具及び電子機器のような商品に関係した情報と同時に、映画及びコンサートのようなイベントに関係した情報も含んでいる。バレエのようなどんなイベントでも、「イベント」との継承関係

及び適切なアソシエーション関係を有するイグジスタンツとして容易に加えることができる。同様に、車両のようなどんな商品でも、「製造済みのアイテム」との継承関係及び適切なアソシエーション関係を有するイグジスタンツとして容易に加えることができる。データ構造モデル３００、４００、４５０の動的な性質及び発展的な能力は、音声ポータル１０に、インターネットベースの情報及びサービスの広い範囲に対して統一されたポータルであるという利点を与える。

【0064】

図７は、代表的なデータ構造モデル３００（図４）、データ構造モデル４００（図５）、データ構造モデル４５０（図６）に示されているイグジスタンツのようなイグジスタンツの代表的な作成プロセスのフローチャート７００を示している。ステップ７１０では、インターネット上のウェブページが見つけ出される。代表的な実施例では、所定のアイテムのカテゴリに関係している特定のウェブページを見つけ出すのに、スパイダが用いられる。スパイダは、文書を検索し、その中で引用されている幾つかの又は全ての文書を反復的に検索することにより、ワールドワイドウェブ（ＷＷＷ）を自動的に探査する従来式の既知のプログラムである。それに対し、人間によって操作される通常のウェブブラウザは、インライン画像及びＵＲＬリダイレクション以外のリンクに自動的に従うことはない。ステップ７１０が実行された後ステップ７２０が実行されるが、そこで情報は、ページをオーバーレイして特定の情報を浮過する選択されたフォームを用いて、見つけ出されたウェブページ上で識別される。ステップ７２０の後ステップ７３０が実行されるが、そこでは、ステップ７２０でのフォームオーバーレイによって検索された情報から特徴的な情報又は属性を識別するのに、ルールが利用される。特徴的な情報又は属性は、イグジスタンツが何であるかを定義する。ルールは、イグジスタンツ属性の構成を定義する。例えば、映画イグジスタンツは、タイトル、ディレクター、出演者、封切り年、あらすじという属性を含んでいる。

【0065】

ステップ７３０が実行された後ステップ７４０が実行されるが、そこでは、属性はイグジスタンツ内で編成され、イグジスタンツはデータベース１７０内に記憶される。イグジスタンツ内での属性の編成と配置は、予め定義されたルールによって組み立てられる。

【0066】

図８は、図７と関連して述べられているイグジスタンツの代表的な作成プロセスを示している。スパイダ８１０は、様々な異なるウェブページに記憶されている情報を求めてインターネット２０を点検する。スパイダ８１０によって検索された情報は、その情報をデータ構造８３０内に入れるために、ルール８２０に従って編成され配列される。ある代表的な実施例では、スパイダ８１０は、インターネット２０から映画に関する情報を検索する。例えば、スパイダ８１０はＩＭＤＢウェブサイトを点検して、特定の映画のタイトル、ディレクター、出演者、封切り年、上映時間に関する情報を検索してもよい。一旦映画情報がデータ構造８３０内に記憶されると、データ構造８３０は、辞書テーブル８４０に適用される。辞書テーブル８４０は、データ構造８３０内に含まれる属性を編成し、情報を３つの列に配置する。ある代表的な実施例では、辞書テーブル８４０の第１列はオリジナルデータを含んでおり、第２列は正規化されたタグ付きのフォーマットのオリジナルデータを含んでおり、第３列は探索可能でマッシュされたフォーマットのデータを含んでいる。辞書テーブル８４０とデータ構造８３０は、データベース１７０内のメモリ構造内に備えられている。

【0067】

例えばスパイダ８１０が映画「レイダース、失われたアーク」に関係する情報を求めてインターネット２０を点検する場合、インターネット２０から検索されたデータは、映画に対応するルールに対して適用され、データ構造８３０内に配置されることになる。そのような映画のルールは、タイトル、ディレクター、出演者、封切り年を含んでおり、全てが映画の属性である。この例では、タイトルは「レイダース、失われたアータ」で、ディレクターは「スティーブン・スピルバーグ」で、出演者は「ハリソン・フォードとカレン

・アレン」で、封切り年は「１９８１年」で、上映時間は「１１５分」である。従って、辞書テーブル８４０には、タイトルが、オリジナルフォーマットでは「Ｒａｉｄｅｒｓ　ｏｆ　ｔｈｅ　Ｌｏｓｔ　Ａｒｋ」で、正規化されたタグ付きフォーマットでは＜ｔｉｔｌｅ＞Ｒａｉｄｅｒｓ　ｏｆ　ｔｈｅ　Ｌｏｓｔ　Ａｒｋ＜／ｔｉｔｌｅ＞で、探索可能でマッシュされたフォーマットでは、スペースや識別冠詞（例えば、ｔｈｅ、ａ、ａｎ）を入れずにＲａｉｄｅｒｓＬｏｓｔＡｒｋで含まれることになる。

【0068】

図９は、非プログラミング手段を使ってインターネットベースの情報を集める代表的なプロセスを示すフローチャート９００である。ステップ９１０では、探索ページが見つけ出され、パターンを使って関連情報を含んでいる前記ページ上の領域が分離される。ステップ９１０が実行された後ステップ９２０が実行されるが、そこでは適切なフォームが見つけ出され、特定のルーチンが呼び出されて実際のデータと情報が抽出される。ステップ９２０の後ステップ９３０が実行され、ここでは特定のページが与えられれば、関係情報を備えた複数のページが見つけ出される。データ特定のパターンとは別に、データ特定のパターンが特定のページ内のどこで作用するかを定義する領域パターンがある。ステップ９３０が実行された後ステップ９４０は実行され、複数のページ上の製品又はサービスを更にリストするためのリンクが見つけ出される。ある代表的な実施例では、予測ルーチンを使って、コードサンプルから製品リスティングする実際のパターンを計算する。

【0069】

一般的に、予測ルーチンは、ルールライターによって与えられる所望の出力からパターンを計算する。ルールライターは、それを生じさせるためにパターンを開発する必要無しに、単に、抽出したいテキストフラグメントをＨＴＭＬコードからペーストしなければならないだけなので、パターン予測ルーチンは、生産の速度を上げ、好都合である。パターンを書き込むのに現在用いられている入力フィールドは、このデータを挿入するのに用いられる。

【0070】

例を挙げると、予測ルーチンは、先ずルールライターにウェブページ上のサンプル著者名を著者フィールドにコピーさせることによって、本に関するデータを与えているウェブページ用の著者データのパターンを開発する。その後アルゴリズムは、サンプルデータをウェブページ上のその位置へ合わせる。照合されたデータに近接する文字又はタグは、「接頭部」及び「接尾部」として識別される。接頭部は、照合されたデータの前の文字であり、接尾部は照合されたデータの後の文字である。接頭部及び接尾部は、パターンを構成するのに用いられる。

【0071】

構成されたパターンは、別のデータと照合させるためにウェブページに適用される。構成されたパターンが、所望の結果と異なるデータを取り上げる場合、更に完全で正確なパターンを求めて、パターンを開発するために用いられる接頭部及び接尾部が加えられる。パターンを改良するため、この手順が繰り返される。

【0072】

この例を更に明らかにするために、本に製品データを与えているウェブページから以下のＨＴＭＬコードを取り上げる。

【0073】

```
<html>
<title>Programming Perl<html>
written by < b >Larry Wall< /b >
<html>

<html>
<title>Learning Perl(< b >2nd edition< /b >) </title>
written by < b >Randal Schwartz< /b >
```

</html>
【0074】
ルールライターは、著者フィールド内の「Ｌａｒｒｙ　Ｗａｌｌ」をダンプして、これは著者を抽出するためのデータであることを示す。
【0075】
パターン予測アルゴリズムは、おおよそ以下のように作用する。

```
n=1;
repeat
$page=~m/(.{n)Larry\s+Wall(.{n)/x;
$prefix=$1;
$suffix=$2;
$page=~m/$prefix (.*?) $suffix/x;
n=n+1;
until ($1eq<desired_>);
```

【0076】
１ページ目をｎ＝１で開始すると、アルゴリズムは、$prefixは値「>」を取り$suffixは値「<」を取ることを意味する「>Larry　Wall<」とマッチする。次に、パターン予測アルゴリズムは、第１ステップから得た＄１及び＄２の値を使って、パターン「>(.*?)<」を構築する。このパターンを、ウェブページに対してマッチさせると、所望の結果「Larry　Wall」とは異なる「>Programming　Perl<」という結果になる。従って、ｎがｎ＝２に増加され、パターンは、接頭部及び接尾部に別の文字を含むように改良される。ウェブページを「(.{2)Larry\s+Wall(.{2)」とマッチさせると、$prefixは値「b>」を取り、$suffixは値「</」を取ることを意味する「b>Larry　Wall</」となる。次に、パターン予測アルゴリズムは、第１ステップから得た＄１及び＄２の値を使って、パターン「b>(.*?)</」を構築する。このパターンを、ウェブページに対してマッチさせると、所望の出力である「Larry　Wall」という結果になる。
【0077】
次に、ルールライターがウェブページを通して異なるページに同じパターンを適用するときに、彼又は彼女は、そのパターンが、本「Learing　Perl」に関するページの「第２版」とマッチすることを発見する。次にルールライターは、第２例となる望ましい結果を与えてアルゴリズムを改良し（即ち、彼又は彼女は、「Randal　Schwartz」をＧＵＩ入力フィールドへダンプする）、そのことがパターン予測アルゴリズムのトリガとなって、<ｂ>の前に「ｙ」を強要するパターンが作成されるまで、更にｎを増やす。アルゴリズムは、必要なウェブデータ及び必要なパターンの複雑さ次第で、幾つかの対話を実行する。
【0078】
ステップ９４０が実行された後ステップ９５０が実行され、ベンダ特定データ抽出ファイルが作成される。ある代表的な実施例では、コードサンプルから関連ＵＲＬを計算するルーチンが用いられる。代わりに、ＵＲＬを計算するルーチンをフォームとして送ってもよい。ステップ９５０が実行された後ステップ９６０が実行され、キャッシュが作成される。ステップ９６０が実行された後ステップ９７０が実行され、製品データの抽出のためのパターンが作成される。ある好適な実施例では、回帰テスト機構が特別なルーチンの編集をサポートする。
【0079】
図１０は、音声ポータル１０に関連するルールの非プログラミング開発に関する代表的なプロセスを示している。この代表的なプロセスでは、一式のルールライター１０１０の内の１つのルールライターは、データソース１０３０、データソース１０３５、データソース１０４０、又はWWW１０２０と接続されている他のデータソースの内の何れかからの情報にアクセスするために、ワールドワイドウェブ（「WWW」）１０２０にアクセスする。データソースから検索されたデータは、データ編成ツール１０２５を用いてデータ構造に配置される。ルールライター１０１０は、データ編成ツール１０２５を使って、多

数の可能なフォームの内の１つを、ＷＷＷ１０２０を通して入手可能な情報の「ページ」へ適用する。そのようなフォームは、ページ上に関連情報の位置を提示し何らかの特徴的なタグを付けて表示される。例えば、ＷＷＷ１０２０上に提供されたページは、ページの左上隅にデータ入力ボックスを含んでいる。更に、部品又はサービスの関連情報は、本のタイトルに対しては「＜ｔｉｔｌｅ＞」のようにＨＴＭＬタグの後に配置される。

【００８０】

なお、ここで用いる「ページ」という用語は、データ、メッセージ、レポート等の図式又はテキスト表示を提供するスクリーンのような、診断システムのユーザーが見ることのできる、ユーザーインタフェースのスクリーン又は同様の装置を含むものとする。更に、そのようなページは、Java（登録商標）、Perl、Java（登録商標） Scriptのようなマークアップ言語又はプログラミング言語、或いは他の好適な言語によって定義することができる。

【００８１】

データソースからのデータは、ルールライター１０１０によってデータ編成ツール１０２５から選択されたフォームを使って、データ構造１０４５、データ構造１０５０、データ構造１０５５、又は、情報を維持するための同様の構造に編成される。データ構造１０４５、１０５０、１０５５は、比較、融合してもよいし、統合データ構造１０６０の形態で利用してもよい。統合データ構造１０６０はデータベース１０７０に記憶される。

【００８２】

図１０に示す代表的なプロセスでは、非専門ルールライター１０１０が、データ編成ツール１０２５により提供される多数のフォームから選択し、ＷＷＷ１０２０を通して入手可能な特定のウェブサイトからの情報の検索に利用できるようになっており、好都合である。このように、データソース１０３０、１０３５、１０４０からのウェブページ上に含まれているデータは、ルールライター１０１０によって選択されたフォームで、データ編成ツール１０２５を使って、データベース１０７０へ継続して更新することができる。データ構造１０４５、１０５０、１０５５内に含まれている情報は正確を期して比較されるので、データ編成ツール１０２５は、ウェブページが、それらの対応するウェブページ上でデータのフォーマット又は配列を何時変更したのかを検知する。

【００８３】

図１１－２４は、新しいルール作成のある代表的なプロセスを示している。更に、図１１－２４は、ルールライターとデータ編成ツール１０２５（図１０）との間で可能な対話を示している。１つの代表的なルールは、現存のルール、即ちthe Amazon.com book productsに基づいている。このルール構築に用いられているステップは、他のルール構築に用いられているステップと同じである。

【００８４】

図１１は、ルール８２０（図８）の作成を開始するのに用いられるグラフィカルユーザーインタフェース（ＧＵＩ）１１１０を示している。このＧＵＩ１１１０は、ベンダーウインドウ１１２０と、スパイダー選択ウインドウ１１３０と、問合せウインドウ１１４０と、ステイタスウインドウ１１５０と、サーチボックスエリア１１６０と、コードウインドウ１１９７とを含んでいる。サーチボックスエリア１１６０は、スライダバー１１７０と、右セットの矢印１１８０と、左セットの矢印１１９０と、サーチウインドウ１１９５とを含んでいる。

【００８５】

新しいデータソースを開始するには、ルールライターは、ベンダーウインドウ１１２０内のデータソース（例えばアマゾン・ブック）に入る。ルールライターは、「Enter」を押し、「New」ボタンをクリックする。この動作が実行されると、図１２に示すグラフィカルユーザーインタフェース（ＧＵＩ）１２００が表れる。ルールライターは、データソースが正しくリストアップされていることを確かめた後、「Done」ボタンをクリックする。次に、図１３に示すグラフィカルユーザーインタフェース（ＧＵＩ）１３００が表れる。選択されたベンダー名に対応するＵＲＬが表示される。ルールライターは、正しいＵＲ

Ｌを確認するよう求められる。アマゾン・ブックの例では、ＧＵＩのウインドウ１３００にＵＲＬ　http://www.AmazonBook.comが現れる。しかし、ＵＲＬリンクは、http://www.AmazonBook.comを読み取らなければならない。ルールライターはＵＲＬを訂正し、「Done」ボタンをクリックする。

【0086】

図１１に戻るが、ルールライターは、所望されている問合せのタイプを選択する。先ず、ルールライターは、問合せウインドウ１１４０を選択し、可能性のある問合せのリストから選ぶ。例えば、「本の包装」は、関心対象の本の垂直ドメインに関する可能性のある問合せである。この探索は、ルールライターが問合せウインドウ１１４０の「ＳＤＥ」（探索データエディタ）上のボタンをクリックすれば開始する。ＳＤＥボタンは探索データエディタを呼び出し、探索データエディタは、図１４に示すグラフィカルユーザーインタフェース（ＧＵＩ）１４００を提供する。ＧＵＩ１４００は、関心対象の特定アイテムの探索に便利な属性リストを示している。例えば、本が探索される場合、ＩＳＢＮ又はＵＰＣのような属性が示される。別のアイテムの探索である場合、そのアイテムに相当する属性がリストアップされる。「映画上映」を探索すると、映画パッケージ、時間及び封切り期日のような属性がリストアップされることになる（図４に関連して説明されているブロック３３０を参照のこと）。

【0087】

ルールライターは、ＩＳＢＮ番号を相当するデータボックスへタイプし、「Done」をクリックする。ＧＵＩ１４００のボタン１４３０は、ルールライターが、別の探索の間に、異なる探索基準をセーブできるようにするので好都合である。一旦探索基準が入力されると、ルールライターは「Done」をクリックし、特定のデータソース（即ち、AmazonBook）にルールが定義されていないので、図１５に示すグラフィカルユーザーインタフェース（ＧＵＩ）１５００が現れる。ＧＵＩ１５００は、ルールライターが新しいルールを追加するか、又は探索データを変更することを望んでいるかどうかをたずねる。この例では、ルールライターが「Add」ボタンをクリックし、ＧＵＩ１５００は拡張して、図１６に示すグラフィカルユーザーインタフェース（ＧＵＩ）１６００になる。

【0088】

次に図１６では、ルールライターは、正しいタイプの問合せが強調表示されていることを確認する。この例では、ＩＳＢＮが強調表示され、ルールライターは「Yes」ボタンをクリックする。図１７に示すグラフィカルユーザーインタフェース（ＧＵＩ）１７００が現れ、アマゾン・ブックのホームページがネットスケープブラウザにロードされていることをルールライターに教える。ルールライターは、ＩＳＢＮルールに関連するウェブページをブラウズするよう指示される。一旦探索ページがインターネットブラウザにロードされると、ルールライターは「Done」ボタンをクリックする。

【0089】

図１８に示すグラフィカルユーザーインタフェース（ＧＵＩ）１８００は、ルールライターにより選択されるべきフォームオプションを示す。フォームが正しければ、ルールライターは「Done」ボタンをクリックする。リストされているフォームの中に、ルールライターが必要とする選択肢がなければ、ルールライターは「Next」ボタンをクリックして、そのページの別のフォームを見る。一旦マッチするページが見つかると、図１９に示すグラフィカルユーザーインタフェース（ＧＵＩ）１９００が表示される。

【0090】

データ編成ツール１０２５（図１０）は、インターネットブラウザ内の結果のページを表示する。ページが正しければ、ルールライターはＧＵＩ１９００上で「OK」をクリックする。図２０に示すグラフィカルユーザーインタフェース（ＧＵＩ）２０００が現れ、探索が複数のアイテムにマッチする場合は、そのページ上の１つのアイテムをどのように検出するかを問い合わせてくる。更にＧＵＩ２０００は、問合せのアイテムについての詳細を得るのにＵＲＬの何処を探すかを示すのに用いられる。アイテムが１つしか見つからなければ、正規の表現式を構築するには情報が十分に提示されていないので、ルールライタ

ーは「Defer」ボタンをクリックする。複数のアイテムが見つかると、正規の表現式がデータウインドウ２０１０へ入力される。例えば、１つの著者が複数の本を書いているかもしれないので、著者探索は複数のアイテムを戻してくるかもしれない。別の場合で、問合せが１つのアイテムに合致しているだけのときでも、情報を入手するために追加のＵＲＬリンクに従うのが必要なこともある。

【0091】

次に図２１に示すグラフィカルユーザーインタフェース（ＧＵＩ）２１００が現れ、複数の製品ページを検出するのに用いられる。ルールライターが探索されたアイテムへ直接行く場合、正規の表現式を構築するのに情報は必要ない。図１１に戻るが、コードウインドウ１１９７は、検索されたページからのＨＴＭＬコードで満たされている。この時点で、ルールライターは、属性を指定するよう準備している。属性は、正規の表現式を名前の次のボックスに入れることによって指定される。正規の表現式は、表現式の結果として、（括弧を使って）その中の１つのサブストリングを指定しなければならない。例えば、『この（全て）のマッチ』という正規の表現式は、（正規の表現式はマッチできると仮定して）その結果として「全て」を戻すことになる。例えば、本のタイトルを見つけるのに用いられるパターンを決定するには、ルールラーターは、本のタイトルを探索ウインドウ１１９５へタイプする必要がある。様々なＨＴＭＬ信号を用いることができる。「＼ｓ＊」は、単語と単語の間の可能性のあるブランクスペースを示すのに必要である。探索ウインドウ１１９５に入力された探索ストリングの第１のマッチは、ＨＴＭＬコードで見つけられた第１のマッチを強調表示する。例えば、タイトルは、幾つか余分な情報を備えた一対の＜ｔｉｔｌｅ＞タグの内部に見つけられる。本のタイトルの代表的な属性は、「＜ｔｉｔｌｅ＞（[^<]*）＜/ｔｉｔｌｅ＞」である。一旦属性が入力されると、その属性に対する全てのマッチが見つけ出される。

【0092】

図１４に戻るが、探索データエディタ１４００は、値をタイプ次第の属性に割り当てるのに用いられるフォームで構成されている。ステイタスウインドウは、データ編成ツール１０２５が何を行っているのかを示す。ある代表的な実施例では、ステイタスはアイドル状態で、インターネット上で問合せを実行し、キャッシュを使っている。問合せウインドウ１１４０は、ルールライターが、課題のデータソースに所望される問合せのタイプを設定し、ＳＤＥボタンを使って探索基準を設定できるようにする。

【0093】

スパイダ選択ウインドウ１１３０は、ルールライターが、問合せ探索を行っていなければ使用すべきスパイダを設定できるようにする。ある代表的な実施例では、可能性のあるスパイダのタイプは、フル、漸増、特別及び参照である。フルスパイダは、選択されたタイプにマッチする全てのアイテムを取る。漸増スパイダは、通常、インターネットデータソースからのデータの更新をピックアップするのに用いられる。特別スパイダは、通常、本のベストセラーのような特別な、サイトが持っている何かをピックアップするのに用いられる。参照スパイダは、通常、そのサイトはまだ作動しており、ルールが作用していることを確認するのに用いられる。

【0094】

ベンダーウインドウ１１２０は、ルールライターが、データソースを作動するよう設定できるようにする。探索ウインドウ１１９５は、ルールライターが、テキストをＨＴＭＬコードで検索できるようにする。コードウインドウ１１９７には、テキスト入力の位置を示すカーソルがある。左セットの矢印１１９０は、第１の番号を含んでおり、キャッシュから実行するときに探索が始まる開始点である。第２の番号は、キャッシュ内のページの合計数を示している。このウインドウの矢印セットは、ルールライターがキャッシュから実行する時に、開始するページを制御する。右セットの矢印１１８０は、検索されたページをスクロールする矢印を含んでいる。

【0095】

スパイダは問合せと似ているが、どのルールも適用できない場合に呼び出される。スパ

イダは、指定されたタイプとマッチするウェブサイトの全オブジェクトに関する情報を集める責任を負っている。スパイダは、幾つかの入れ子ループから成り、各入れ子ループは、階層内へと１つ深いレベルへ進むように設計されている。図２２には、本のスパイダに関して代表的なスパイダ階層２２００が示されており、レベル２２１０は開始ページであり、レベル２２２０は本のカテゴリページであり、レベル２２３０は、本のサブカテゴリページであり、レベル２２４０は本のページを示す。

【0096】

図２３に示すように、グラフィカルユーザーインタフェース（ＧＵＩ）２３００は、スパイダルールに関連付けられるページのＵＲＬを検索するのに用いられる。スパイダデプススライドルールは、ルールライターが、データ編成ツール１０２５に、実際の製品ページへ行き着くのどれほどの数のリンクが必要かを告げることができるようにする。上側境界スライドルールは、ルールライターが、スパイダに対するアイテム数の上限を指定することができるようにする。一旦ＵＲＬが選択され、スパイダデプス及び上側境界が選択されると、ルールライダーは「Done」ボタンをクリックする。図２４に示すグラフィカルユーザーインタフェース（ＧＵＩ）２４００が現れる。ルールライターは、図１１に関連して説明した問合せに対して入力された探索パターンと同じ様式で用いるために、スパイダに探索パターンを入力する。一旦パターンが入力されると、ルールライターは、「Build」ボタンをクリックし、スパイダは実行を開始する。

【0097】

図１１－２４に関連して示し、説明したグラフィカルユーザーインタフェースは、非専門のルールライターがデータ探索を実行し、情報検索用のルールのフォームを作成することができるようにするので好都合である。一旦フォームが作成されると、そのフォームは、更新された情報を集めるのに頻繁に利用することができる。更に、フォームは、ベンダーによるウェブサイトでの情報の配列及び表示に対応する共通のフォームを使って、ベンダーのウェブサイトで入手可能な大量の情報を検索するのに役立つ。非専門家によるルール作成のフォームは、ウェブサイトで入手可能な情報を低コストで更新できるようにする。更に、このフォームは、インターネットベースの情報の正確な検索を自動化するのに好都合である。

【0098】

図２５は、データベース内の情報を融合する代表的なプロセスを示している。図２５に示す代表的な実施例では、フローチャート２５００は、フュージョンエンジン１５０（図２）で実行される単純な融合プロセス、即ち「クイックフュージョン」を表している。ステップ２５１０では、更新エンジン１６０は、ネットワーク２０から情報を受信し、その情報を、イグジスタンツサブシステム１４０経由で、データベース１７０内のイグジスタンツデータ構造に配置する。フュージョンエンジン１５０は、イグジスタンツサブシステム１４０経由で、更新エンジン１６０からイグジスタンツへアクセスし、イグジスタンツサブシステム１４０はデータベース１７０にアクセスする。ステップ２５１０が実行された後ステップ２５１５が実行され、そこでフュージョンエンジン１５０は、ステップ２５１０で検索されたイグジスタンツに対応する属性定義テーブルから正確な融合属性を集める。ステップ２５１５が実行された後ステップ２５２０が実行され、そこでフュージョンエンジン１５０は、データベース１７０から検索されたイグジスタンツからの各融合属性の、容易に比較できるフォームへの「マッシュ」を実行する。ある代表的な実施例では、「マッシュ」フォームは、スペース、前置詞及び他の非本質的ワードを削除する。「マッシュされた」フォーマットは迅速な探索機能を提供するので好都合である。

【0099】

ステップ２５２０が実行された後ステップ２５２５が実行され、フュージョンエンジン１５０はデータベース問合せを公式化して、そこでデータソースが「同一」に設定され、ステイタスが「標準」に設定される。この問合せは、現在の情報にマッチしている同じデータソースファイルから、すでに存在している標準イグジスタンツを見つけようとしている。ステップ２５２５が実行された後ステップ２５３０が実行され、そこで、データベー

ス１７０でのマッチが見つかるかどうか決定される。ステップ２５２５の問合せによってデータベース１７０でのマッチが見つかれば、ステップ２５３５が実行され、そこでデータベース１７０内に含まれるイグジスタンツが更新される。

【0100】

ステップ２５２５の問合せからデータベース１７０内にマッチが見つからなければ、ステップ２５４０が実行され、そこでステップ２５２５の問合せは再度公式化され、データソースは「同一」に設定され、ステイタスは「非標準」に設定される。この問合せは、現在の情報にマッチしている同じデータソースファイルから、すでに存在しているイグジスタンツを見つけようとしている。ステップ２５４０が実行された後ステップ２５４５が実行され、そこで、ステップ２５４０の再度公式化された問合せから、データベース１７０内でマッチが見つかるかどうか決定される。マッチが見つかれば、ステップ２５５０が実行され、そこでデータベース１７０内に含まれるイグジスタンツが更新される。

【0101】

データベース１７０内でマッチが見つからなければ、ステップ２５５５が実行され、そこで問合せは、データソースを「任意」に、ステイタスを「標準」に設定して再度公式化される。この問合せは、現在の情報にマッチしている何れかのデータソースから、すでに存在している標準的なイグジスタンツを見つけようとしている。ステップ２５５５が実行された後ステップ２５６０が実行され、そこで、データベース１７０内でマッチが見つかるかどうか決定される。データベース１７０内でマッチが見つからなければ、ステップ２５６５が実行され、そこでイグジスタンツがデータベース１７０に追加される。

【0102】

データベース１７０内でマッチが見つかるか、又はステップ２５５０が実行された後で、ステップ２５７０が実行され、そこで、マッチはシステムイグジスタンツであるかどうか決定される。マッチがシステムイグジスタンツであれば、ステップ２５７５が実行され、システムイグジスタンツが更新される。マッチがシステムイグジスタンツでなければ、ステップ２５８０が実行され、標準的なシステムイグジスタンツが形成される。ステップ２５５０が実行された後ステップ２５８５が実行され、そこでこのイグジスタンツがデータベース１７０に加えられる。ステップ２５８５が実行された後ステップ２５９０が実行され、融合テーブルが更新される。

【0103】

図２５に示すデータベース内の情報融合に関する代表的なプロセスは、複数のウェブサイトに情報の比較を提供する。このように、１つのウェブサイトが他のウェブサイトと同じ情報を含んでいるかどうか決定することができる。更に、音声ポータル１０のデータベース１７０内に含まれている情報は、インターネットベースのソースからの情報、関係、及びアソシエーションを継続して加えることができ、それにより、データソースから検索される情報に、より大きな利便性が提供される。

【0104】

図２６は、代表的な融合処理で行われるステップを描いたフローチャート２６００を示している。図２６に説明する代表的な処理では、融合処理は、図２５に関連して説明したフローチャート２５００に示す融合処理に比べ、より包括的であることが分かる。ステップ２６１０で、フュージョンエンジン１５０は、データベースから属性定義テーブルを読み出す。ステップ２６１０を実行した後ステップ２６１５が実行され、フュージョンエンジン１５０は、先行融合を要求する各イグジスタンツタイプに関しフュージョン制御言語ファイルを読み出す。ステップ２６１５を実行した後ステップ２６２０が実行され、フュージョンエンジン１５０はフュージョンファイルを中間コンピュータコードにコンパイルする。ステップ２６２０を実行した後ステップ２６２５が実行され、フュージョンエンジン１５０はこれまでに融合したイグジステンツをメモリに保持する。ステップ２６２５の後ステップ２６３０が実行され、フュージョンエンジンは属性を等価セットに収集する。ステップ２６３０の後ステップ２６３５が実行され、属性がテキスト的であるか否かを判定する。フュージョンエンジン１５０が、属性はテキスト的ではないと判定した場合は、

ステップ２６４０が実行され、その値に索引をつける。フュージョンエンジン１５０が、属性はテキスト的であると判断した場合は、ステップ２６４５が実行され、フュージョンエンジン１５０は当該属性のサブストリング出現に索引をつける。

【0105】

ステップ２６４５の後ステップ２６５０が実行され、フュージョンエンジン１５０は、テキストが構造化されているか否かを判定する。テキストが構造化されていない場合は、ステップ２６７０が実行される。テキストが構造化されていると判定された場合、フュージョンエンジン１５０は、ステップ２６５５で、当該テキストの場所及び構造内の分離セグメントを識別する。ステップ２６５５の後ステップ２６６０が実行され、フュージョンエンジン１５０は分離部分を構文解析して意味論的情報を識別する。ステップ２６６０の後ステップ２６６５が実行され、フュージョンエンジン１５０は意味論的情報に索引づけを行う。ステップ２６６５の後ステップ２６７０が実行され、フュージョンエンジン１５０は妥当性チェックを実施し、データベース１７０の完全性を検証する。ステップ２６７０の後ステップ２６７５が実行され、フュージョンエンジン１５０はイグジスタンツを検索して融合する。

【0106】

ステップ２６７５の後ステップ２６８０が実行され、フュージョンエンジン１５０は、対応するイグジスタンツタイプに対しフュージョン基準及びマッチングプログラムを起動させる。フュージョン基準及びマッチングプログラムには、図１０に関連して既に説明したように確立された現存ルールを適用する。ステップ２６８０の後ステップ２６８５が実行され、フュージョンエンジン１５０はフュージョン基準及びマッチングプログラムから第１のフュージョンルールを実行してマッチしたもの全てを戻す。ステップ２６８５の後ステップ２６９０が実行され、受け入れ可能なマッチが見つかったか否かを判定する。ある代表的な実施例では、受け入れ可能なマッチとは、所定割合（例えば７０％）の属性が共通であるものとされている。別の実施例では、受け入れ可能なマッチとは、全ての属性が同じ値を有するものとなっている。受け入れ可能なマッチが見つかると、ステップ２６９７が実行され、フュージョンエンジン１５０はイグジスタンツを融合して一体化する。受け入れ可能なマッチが見つからない場合、ステップ２６９１が実行され、次のフュージョンルールを実行してマッチしたもの全てを戻す。

【0107】

ステップ２６９１の後ステップ２６９２が実行され、受け入れ可能なマッチが見つかったか否かを判定する。受け入れ可能なマッチが見つかった場合、ステップ２６９７が実行され、フュージョンエンジン１５０はイグジスタンツを融合して１つに纏める。イグジスタンツを融合することには、融合されるべきイグジスタンツに関連付けられ且つその中に全情報を保有している新しいイグジスタンツを作成することが含まれる。受け入れ可能なマッチが見つからなかった場合、ステップ２６９３が実行され、最後のルールを試したか否かを判定する。最後のルールを試していない場合、ステップ２６９１が再度実行される。最後のルールが試されている場合、ステップ２６９４が実行され、フュージョンエンジン１５０は、強い部分的マッチがあるか否かを判定する。ある代表的な実施例では、強い部分的マッチとは、７０％というようなある程度のパーセンテージ内にマッチがあるものとされている。強い部分的マッチが存在する場合、ステップ２６９８が実行され、差異が人的検査に委ねられる。部分的マッチが見つからない場合、ステップ２６９５が実行され、フュージョンエンジン１５０がフュージョンの作成を拒否し、ステップ２６９９が実行され、新しいイグジスタンツが作成される。

【0108】

図２６に示すデータベース内の代表的な情報融合処理では、同一又は異なるデータソースからの情報を自動的に比較でき好都合である。このように、データベース１７０に保有されている情報は、継続的に更新され、他のデータソースからの情報に対する関連性を付与されることになる。更に、フュージョンは、インターネット上で個別的に利用できる何百万ものデータベースよりも完全且つ頑丈に一体化したデータベースのコンパイルを配慮

している。

【0109】

図２７は、２つのデータ構造から標準データ構造を作成する代表的処理を示している。データフィル２７００は、固有識別番号により識別され、第１のデータファイル２７１０、第２のデータファイル２７２０、及び標準データファイル２７３０を保有している。ある代表的な実施例では、第１のデータファイル２７１０は、ＩＭＤＢ（「インターネット映画データベース」）ウェブサイト（http://www.IMDB.com）から検索した特定の映画に関係する情報を保有している。第２のデータファイル２７２０は、Reel.comウェブサイトから得た特定の映画に関する情報を含んでいる。図２７に示す例では、データファイル２７１０には、タイトル「ザ・ボーイズ・オブ・アリゾナ」、ディレクター「ウィルツ」、放映年「１９９７年」、粗筋「素晴らしい映画」が含まれている。同様に、データファイル２７２０では、タイトル「ボーイズ・オブ・アリゾナ」、ディレクター「ボブ・ウィルツ」、放映年「１９９８年」となっているが、粗筋は空欄である。

【0110】

標準データファイル作成処理に際しては、特定のタイプの情報についてのルールが入っているルールファイル２７４０が導入される。図２７の例では、ルールファイル２７４０には映画の属性に関する情報が入っている。ルール２７４０を適用すると、データファイル２７１０とデータファイル２７２０から最も完全なタイトル、即ちここではデータファイル２７１０のタイトル「ザ・ボーイズ・オブ・アリゾナ」、を採用することにより標準データファイルが作成される。ディレクター情報は、データファイル２７２０の方がディレクターの性と名の両方を含んでおりデータファイル２７１０よりも完全であることから、データファイル２７２０から入手される。データファイル２７１０に掲載されている放映年とデータファイル２７２０に掲載されている放映年については矛盾が存在する。以前の情報に基づき、この矛盾は、データファイル２７２０の方が正しい放映年を掲載しているというように解決される。標準データファイル２７３０には、データファイル２７２０の粗筋欄が空欄なので、データファイル２７１０の粗筋を含める。

【0111】

図２７に関連して説明した標準データファイル作成処理では、より完璧且つ正確な情報を備えたファイルが作成でき好都合である。更に、この処理では多数のウェブサイトの情報を互いに比較することが可能になる。更には、標準データファイルの作成処理により、データファイル同士の関連性及びアソシエーション関係が増す。

【0112】

図２８は、ウェブから入手したデータを分離して、データベースに記憶するため当該データを変換する際に実行されるオペレーションの機能説明図２８００を示している。代表的な処理には、データをネットワーク２０から抽出してデータ構造２８１０に入れ、データを配列して編成する段階が含まれている。例えば、交通情報に関するデータを、内容、幹線道路、交差道路、時間、日付、重大度などに関する情報を含むようにインターネットから抽出する。データがデータ構造２８１０に配列され編成されるようにするテキストパターンと記述を含んだルール２８１５を使って、データ構造２８１０を作成・編成する。データ構造２８１０はデータベースのデータファイルに記憶される。データ構造２８１０内のデータは変換され、第１の項代入形式を適用してデータ構造２８２０を作成する。項代入時はルール２８２５を用いてデータ構造２８２０を作成するが、これは変換テーブルの辞書的入力を含んでいる。交通情報の例では、“Ｒｄ”は“ｒｏａｄ（道路）”に、“Ｉ”は“ｉｎｔｅｒｓｔａｔｅ（州間高速自動車道）”に、そして“Ｒｔ”は“ｒｏｕｔｅ（路線）”に、それぞれ変換される。

【0113】

データ構造２８２０に入っているデータは、送られてきたデータに対して属性句文法を適用するルール２８３５に基づいて、データ構造２８３０に、構文解析済みフォームで置かれる。交通情報の例では、東西南北のような「方角」を識別し、「州間高速自動車道」や「高速道」の様な「ハイウェイ識別子」を求める。データ構造２８３０のデータは、次

に項配列ルール２８４５を用いて、データ構造２８４０に、再配列フォームで入れられる。データ構造２８４０のデータは、第２の項代入形式で扱われて、辞書的変換テーブルからのルール２８５５を適用することによりデータ構造２８５０に入れられる。例えば、"Ｓｔ．"という語は、場所識別子＜ｓｔｒｅｅｔ　ｓｔ．＞又は＜ｃｉｔｙ　ｓｔ．＞に基づいて"ｓｔｒｅｅｔ（ストリート）"又は"ｓａｉｎｔ（セイント）"の何れかと判定される。

【0114】

辞書的変換を行った後、データは、未融合正規化済タグ付フォーマットのデータ構造２８６０に入れられる。データ構造２８６０は、データベース２８５０内にあるのが望ましい。正規化済タグ付フォーマットとは、データを容易に探索し比較できるような均質編成とＨＴＭＬタグを含んでいるフォーマットを指す。ＨＴＭＬタグは、しばしば、データのタイプ、その場所、及びその長さに関する情報を提供する。未融合とは、データが図２５及び２６に関連して説明したフュージョン処理をまだ受けていないことを意味している。

【0115】

図２８に関連して説明したデータ分離処理は、ウェブからデータを取り出し、それをデータベース内の正規化済タグつきフォーマットへと変換するので好都合である。正規化済タグつきデータは、編成、処理、及び融合に備えている。データ分離処理は均質であり、広範なデータソースからのデータを扱うので好都合である。このように、一般的には、本処理は、インターネットソースからデータを入手する段階と、入手したデータで第１のフォーマットを使って第１データファイルを作成する段階と、入手したデータから、特定のインターフェースに関連付けられた第２のフォーマットで表される句を生成する段階を含んでいる。入手したデータを第１及び第２のフォーマットに変換するのには、様々なアプリケーションが利用できる。例えば、テキストパターン、辞書的変換テーブル、属性句文法、及び項配列ルールを使って、入手したデータを均質且つ探索可能なフォーマットに変換し、変換したものをデータベース内のデータファイルにセーブし、次にセーブしたデータをインターフェース特定フォーマットに変換するようにしてもよい。別の実施例では、他のパターン、テーブル、及びデータ処理アプリケーションを使用することもできる。

【0116】

図２９は、データベース１７０から、幾つかのインターフェースプラットフォーム（例えば、ＷＡＰ、ウェブ、電話、ＡＳＲ、ＴＴＦ）を介して音声ポータル１０のユーザーまでの、データの変換を示す機能説明図２９００である。データ構造２８６０に保有されているデータ（図２９にも図示）は、正規化済タグ付データ用の属性句文法を備えたルール２９１５を適用することにより、構文解析済みフォームで、データ構造２９１０内に置かれる。属性句文法は、正規化済タグ付データを取り上げて、識別された属性を含んでいる感知可能な句を作成する。次に、データ構造２９１０からのデータは、辞書的入力変換テーブルを保有しているルール２９２０を使って項代入形式を適用することによりデータ構造２９２０内に配置される。この代表的な実施例では、ルール２９２０の辞書的入力変換テーブルには、特定のインターフェースに対応したデータ出力構造が掲載されている。例えば、"ｒｏｕｔｅ"という語は、ＷＡＰを用いる場合は"Ｒｔ．"に変換され、音声を用いる電話の場合は"Ｒｏｕｔｅ（ルート）"と変換される。同様に、"Ｕ．Ｓ．"という語は、ＷＡＰを用いる場合は"Ｕ．Ｓ．"に変換され、音声を用いる電話の場合は"ユー・エス"と変換される。

【0117】

データ構造２９２０からのデータは、使用出力機器にもよるが、ルール２９３５を適用して項置換えルールを用いることにより、再配列フォームで、データ構造２９３０内へ置かれる。項再配置ルールでは、項をあちこち移動させて個々のユーザーインターフェースに最も適した配置にする。次に、データ構造２９３０内のデータは、句生成文法を備えたルール２９４５を適用することにより文が生成されるデータ構造２９４０に置かれる。例えば、"we have a <severity> traffic incident between <cross location> and <cross location> on <main road>"（＜幹線道路＞の＜交差箇所＞と＜交差箇所＞との間で＜

重大度＞交通事故発生）という文章が生成される。一旦、データがデータ構造２９４０のフォーマットになると、それは、ＷＡＰ、ウェブ、電話、及びＡＳＲなど各種出力インターフェースに合わせて準備される。

【0118】

図２９に関して説明したデータ変換処理は、データを取り出して多様なユーザーインターフェースに合わせてそれを用意する均質処理であるので好都合といえる。例えば、この処理では、ウェブソースからデータを抽出して、意味論的に識別し、音声インターフェースを介した音声送信に備えることも可能である。同時に、この処理では、同じデータをＷＡＰ機器又はウェブアプリケーションへの送信に合わせて準備することもできる。

【0119】

図３０から３３では、ユーザーと音声ポータル１０との間の代表的対話を例証する数通りの動作経路を示している。ユーザーインターフェース１１０は、図３２及び３３に関連して説明するように、明示的プロンプトを使用して、適切な発言を作り出すようにユーザーを導くことが望ましい。

【0120】

図３０は、代表的なシステムの概要を示すフローチャート３０００であり、音声ポータル１０の各種機能性を表す処理ブロックを含んでいる。ある代表的な実行経路では、ブロック３０１０で、音声ポータル１０は「アメリカンエキスプレス提供のクワックへようこそ」と言ってユーザーに挨拶する。音声ポータル１０は、ユーザーを識別する手段として発信者ＩＤを使用するのが望ましい。ある好適な実施例では、電話番号はデータベース１７０に顧客属性として記憶されている。代わりに、電話番号を顧客データベースに記憶してもよい。音声ポータル１０は、「こんにちは、スティーブ・ウッド。あなたのＰＩＮを声に出すか番号キーで入力してください。スティーブでない場合は、あなたの電話番号を声に出すか番号キーで入力してください。」と続ける。ユーザーはここで「５０８２」と言葉で応答し自分のＰＩＮを教える。認証が済むと、音声ポータル１０はブロック３０２０に進む。ブロック３０２０では、音声ポータル１０は、「ここはクワック・ランウェイです。映画、天気、交通、株式、スポーツ、のリストから興味のあるカテゴリの名前を言って下さい。」と提示する。ユーザーはカテゴリ名で応答するか、「さよなら」と告げる。カテゴリ名が与えられると、音声ポータル１０はブロック３０３０に進む。「さよなら」と言われたら、音声ポータル１０は、素直に終了する。代表的な応答では、ユーザーは「天気」と答えているので音声ポータル１０はブロック３０３０に進む。ブロック３０３０で、音声ポータル１０は「お天気チャンネル提供のお天気コーナーへようこそ。」と言って、ブロック３０４０に進む。ブロック３０４０では、固有イグジスタンツ識別サブシステムが行われる。

【0121】

ブロック３０４０の後ブロック３０５０が実行され、イグジスタンツがブロック３０４０の固有イグジスタンツ識別サブシステムで見つけられたか否かについて判定が行われる。イグジスタンツが見つからなかった場合、制御はブロック３０３０に戻る。イグジスタンツが見つかった場合は、ブロック３０６０が実行され、発見済みイグジスタンツサブシステム（図３３に関連して説明）が実行される。

【0122】

次に、図３１に示すように、ブロック３０４０（図３０）で実行される固有イグジスタンツ識別サブシステムには、データベース１７０が、現在の垂直ドメイン（例、天気、交通、映画）に関し属性従属グラフから属性を提供するブロック３１１０が含まれている。属性従属グラフにそれ以上の属性がない場合には、制御はブロック３１１５に移り、イグジスタンツサーチ失敗が告知される。ブロック３１１５の次に、制御はブロック３０３０（図３０）に移る。ブロック３１１０（図３１）の後ブロック３１２０が実行され、データベース１７０により提供された属性値から属性語彙が構築される。ブロック３１２０を実行した後ブロック３１３０が実行され、音声ポータル１０は、方法Ｎに従い自動音声認識（ＡＳＲ）技術を使って、属性値プロンプトに対するユーザーの応答を捕捉する。例え

ば、音声ポータル１０は、ユーザーの場所を郵便番号、即ち１つの代表的な方法Ｎ、により応答するよう要求する。ユーザーは自分の郵便番号例えば「５３０４５」を与えることによって応答する。

【0123】

ブロック３１４０では、音声認識が成功したか否かについて判定がなされる。成功でない場合は、フォールバック方法Ｎ＋１に従ってＡＳＲでブロック３１３０が実行される。例えば、天気の垂直ドメインでは、フォールバック方法Ｎ＋１は、ユーザーがいる州及び都市を尋ねることが考えられる。好適な実施例では、このフォールバック方法には、リストから属性を選択する段階と、区画スペースにより設定された属性値を制約する段階（例えば、州名を入手してから都市名を入手するなど）と、属性値を綴る段階が含まれている。音声認識が成功した場合は、ブロック３１５０が実行され、音声ポータル１０は、補足した属性でデータベース１７０を探索する。ブロック３１５０を行った後、フローチャート３２００（図３２）が実行される。

【0124】

次に図３２は、固有イグジスタンツ識別サブシステムの一部を示すフローチャート３２００である。ブロック３１５０を実行した（図３１）後、ブロック３２１０が実行され、データベース１７０の探索結果からマッチしたイグジスタンツの数が求められる。製品データベースの探索により見つかったマッチの数によって別々の行動が起こされる。マッチが見つからない場合、ブロック３２２０が実行され、複合ユニークキーを探すか否かについて決定が下される。データベース１７０内には保有されていないがインターネット上で所望のアイテムを見つけるのに使うことのできるユニークキー又は識別子が１つ又はそれ以上ある場合は、複合ユニークキーが存在するかもしれない。

【0125】

１つのマッチが発見された場合、ブロック３２３０が実行され、音声ポータル１０はそのマッチが正しいイグジスタンツか否かを検証する。マッチの数が１つよりは多いがリストの最大数よりも少ない場合、ブロック３２４０が実行され、ユーザーはマッチのリストからイグジスタンツを識別するように要求される。リスト内の可能なエンティティの最大数よりもマッチの数が多い場合、ブロック３２５０が実行され、属性が「拡張可能」であるか否か判定される。換言すれば、属性について情報がもっと提供できるか否かについて判定される。これ以上情報が提供できない場合は、制御はブロック３１１０（図３１）に戻り、属性従属グラフから別の属性を入手する。属性が拡張可能である場合、ブロック３２５０が実行され、属性の拡張が試みられる。属性が拡張できれば、制御はブロック３１２０（図３１）に移り、語彙セットが構築され、ＡＲＳ技術及び方法を使って属性値が入手される。属性の拡張ができない場合、制御はブロック３１１０（図３１）に移り、属性従属グラフから別の属性を入手する。属性の拡張の結果がアイテムリストとなれば、制御はブロック２４０に移る。

【0126】

以下、ブロック３２２０で実行される問い合わせについて説明するが、ＷＷＷ探索に使用する複合ユニークキーがないと判断された場合、制御はブロック３１１０（図３１）に移る。複合ユニークキーが存在するかもしれないと判断されると、制御はブロック３２７０に移り、ＷＷＷを探索するか否かを決める。ＷＷＷを探索しない場合、制御は現在の垂直ドメインの最上位であるブロック３０３０（図３０）に移る。ＷＷＷを探索する場合、制御はブロック３２８０に移る。次にブロック３２３０及びブロック３２４０について説明すると、正しいイグジスタンツが見つかった、又は正しいイグジスタンツがリストから見つかった場合、制御はブロック３２８０に移る。ブロック３２３０又は３２４０で正しいイグジスタンツが見つからなかった場合、制御は、アイテムを見つけるために探索できる複合ユニークキーがあるかどうかを判定するためブロック３２２０に移る。ブロック３２８０では、ウェブルックアップが行われる。この時点で、顧客には長さが様々な目標広告が提示されることになる。広告については図３６に関連して詳しく説明する。ブロック３２８０の間に、ブロック３０６０が実行され、発見済みイグジスタンツサブシステムが

実行される。

【0127】

図３３に示すように、発見済みイグジスタンツサブシステムは、顧客データベースに発見時間のログを行うブロック３３１０を含んでいる。ある好適な実施例では、顧客データベースはデータベース１７０に含まれている。ブロック３３１０の後ブロック３３２０が実行され、データベース１７０の情報から垂直ドメインに適切なものとして提示するために情報が準備される。ブロック３３２０の後ブロック３３３０が実行され、関係する情報とコマンド文法が構築される。例えば、映画の垂直ドメインでは、特定の劇場で公開されている映画のリストを流す場合、その文法には、ユーザーが特定の映画について更に情報を求めることができるように映画のタイトルが含まれる。

【0128】

ブロック３３４０では、情報がユーザーから戻される。好適な実施例では、考えられる受け入れ可能なコマンドには、より詳細な情報を聞き、特定のソースから情報を聞き、関係情報（例えば、より安価、より好都合）を聞き、垂直ドメインに対して適切な行動をとる（例えば、ビット上げる、場所を変える）ためのコマンドが含まれる。ブロック３３４０の後ブロック３３５０が実行され、次のアクティビティが得られる。新しい垂直ドメインを所望する場合、制御はブロック３０２０（図３０）に移る。現在の垂直ドメインの一番上から新たに選択したほうが望ましい場合、制御はブロック３０３０（図３０）に移る。新しいイグジスタンツを所望する場合、制御はブロック３０４０（図３０）に移る。

【0129】

図３２に戻るが、ブロック３２８０の後ブロック３２９０が実行され、ウェブルックアップの結果が、データベース１７０を更新することにより調整される。ブロック３２９０でウェブ結果を調整中、ブロック３２９５でスマートディレイハンドルを実行し、広告又は遅延を処理する別のフォームを実行してもよい。ブロック３２９５のスマートディレイハンドルは、顧客データベース及び広告データベースからの情報を使う。ある好適な実施例では、顧客データベース及び広告データベースは、データベース１７０のサブセットである。別の実施例では、顧客データベース及び広告データベースは物理的に別個のデータベースである。

【0130】

作動中、ここで説明したインターネットベースの情報に音声アクセスするシステム及び方法は、顧客の関心がある垂直ドメイン（例えば、映画、買い物）を識別し、次に垂直ドメイン中の考えられる全ての範囲から顧客が求める１つのもの又は１つのセットにまでユーザー応答を「絞り込む」ことができ好都合である。垂直ドメイン内のこの絞込みには、特定のアイテムに絞り込むための事前に定義づけられた「経路」セットに従って、製品又はサービスの属性について、ユーザーにシステム主導型質問を実施することが含まれる。経路は、突き止められ例示されるべき製品についての制約を順序付ける形で定義されている。

【0131】

図３４は、音声ポータル１０がユーザーの応答を絞り込んで、ユーザー応答への音声認識の正確性を上げることのできる絞込み処理のフローチャート３４００を示している。ステップ３４１０で、ユーザーは音声ポータル１０を呼び出す。ステップ３４１０の後ステップ３４１５が実行され、上記の様々な方法を使って発信人が識別される。ステップ３４１５の後ステップ３４２０が実行され、ユーザーは興味のある垂直ドメインを選択する。ステップ３４２５が次に実行され、選択された関心対象の垂直ドメインに対する属性絞込み特性が開始される。ステップ３４２５の後ステップ３４３０が実行され、音声ポータル１０は、関心対象の垂直ドメイン内にユーザーの嗜好のものがあるかどうかを判定する。嗜好のものが存在しユーザーがオーバーライドしたくない場合には、制御はステップ３４６０に移り、ユーザーの嗜好に基づいて見つけられたアイテム又はサービスが表示される。

【0132】

嗜好のものが入手できないか又はユーザーが自分の嗜好をオーバーライドする場合、ステップ３４３５が実行され、属性語彙セットが構築される。語彙セットは、関心対象の垂直ドメイン内のこの時点でのユーザー応答の音声認識に音声ポータル１０が使用できる可能な応答の数を限定できるようにするので好都合である。定義された語彙セットを用いれば、音声ポータル１０は、従来の音声施認識技術を高認識率で実現できるので好都合である。例えば、ユーザーがメジャーリーグベースボール（ＭＬＢ）チームを選択し、ＭＢＬチームに関して要求される可能性のある語彙セットが構築された後では、「ブリュワーズ」という語の認識は容易になるはずである。このような語彙セットは、同じ情報についてユーザーが入力する多種多様なユーザー入力のタイプを含んでいる。例えば、ＭＬＢチームの例では、語彙セットは、ＭＬＢチームに関連する全ての都市名又は州名並びにＭＬＢチームのマスコットまでも含んでいる。従って、「ミルウォーキー」及び「ブリュワーズ」は両方ともＭＬＢチームの語彙セットの一部である。

【0133】

適切な語彙セットが構築された後、ステップ３４４０が実行され、音声ポータル１０は属性に関して問い合わせをする。例えば、「どのメジャーリーグベースボールチームについて聞きたいですか？」と問い合わせる。ステップ３４４０の後ステップ３４４５が実行され、属性が識別される。属性が識別できない場合、ステップ３４４７が実行され、属性の識別のためにフォールバック処理が実施される。ステップ３４５０では、音声ポータル１０は、「終了状態」に到ったか、或いはアテム又はサービスを発見した時点であるかを判定する。「終了状態」に到っていない場合、ステップ３４５５が実行され、次の属性にアクセスして、制御はステップ３４３０に戻る。このベースボールの例では、チーム名だけでは終了状態には至っていない。最近の試合結果、選手統計、チームの地位、又は他の関係情報というような他の「より狭義の」属性が要求されるはずである。ステップ３４６０が実行されてしまうと、ステップ３４６５が実行され、見つかったアイテム又はサービスがユーザーに報告される。

【0134】

ある代表的実施例では、ユーザーは次のようにアイテムを選択する。ユーザーは、最初に関心のドメイン（例えば、電子商取引、交通情報、天気予報、映画など）を指定する。次にユーザーは、１つのアイテム（例えば、本、おもちゃ、交通情報の場合は関心のある路線、天気予報の場合は関心のある都市など）を、アイテムの属性を指定することにより選定する。次にユーザーには、アイテムのドメイン（例えば、製品、交通、天気、映画など）に適切な、識別されたアイテムについての詳細な情報が提供される。例えば、電子商取引ドメインが関心対象の場合、値段、発送費用、入手可能性などを含むベンダー情報が入手可能である。関心が映画ドメインである場合は、要覧、プロデューサー、及び配役が提供される。関心がオークションドメインである場合には、目立った競り値を知ることができる。

【0135】

ユーザーは、場所を識別するための多様な方法（例えば、郵便番号、町名、都市区分、「ボストン北部、西部など」）を使って場所（例えば、識別された製品の場合は一番近いベンダー、映画の場合は一番近い映画館）によって情報を要求でき好都合である。ある代表的実施例では、郵便番号中心に場所を識別する戦略を使用しており、近郊の名前をたずね、都市名又は州名にまでさかのぼり、その後再度ズームインする手法をとっている。ある代表的実施例では、ユーザーは、要求すれば情報が最後に更新された日付と時刻を入手できる。ユーザーに提示されたデータは全て、当該ドメインに対して現時点で適切であることが望ましい。ユーザーは、「純粋な」ソース情報（ＸＸＸＸ提供）又は唯一の情報源からの情報の場合には情報源を通知される。ある好適な実施例では、「ヘルプ」又は「インストラクション」オプションがどの選択時点でも利用できる。

【0136】

ユーザーは、ドメインに適切な場合、アイテム属性に基づいてアイテム比較を要求してもよい。ユーザーは、ドメインに適切な場合、「より好都合な」「より安価な」「関係す

る」アイテムの識別を要求してもよい。関心対象のドメインに適切な場合、ユーザーは、ユーザーが識別した多数のリストにアイテムを明示的に記録してもよく好都合である。ユーザーは自分のリストからアイテムを検討してもよい。ユーザーは、自分のリスト上のアイテムへの、情報変更（ドメインに適切な）の電話又はＥメールによる通知を要求してもよい。

【0137】

図３５は、音声ポータル１０を使って取引を実行する代表的なプロセスのフローチャート３５００を示している。ステップ３５１０で、ユーザーは（電話又は呼び出し）音声ポータル１０にアクセスする。ステップ３５１０の後ステップ３５１５が実行され、ユーザーが所望するアイテム又はサービスを識別するために絞込み処理が実行される。このような絞込み処理では、フローチャート３４００に示し且つ図３４に関連して説明したオペレーションが行われる。

【0138】

ステップ３５１５の後ステップ３５２０が実行され、音声ポータル１０は、識別されたアイテム又はサービスに望ましく且つ関係する取引を指定するようユーザーに要求する。ステップ３５２０の後ステップ３５２５が実行され、音声ポータル１０は、指定された取引を実行するのに適切な音声ポータルルールを識別する。ステップ３５２５の後ステップ３５３０が実行され、ルールを実行して指定された取引が実行される。取引には、アイテム又はサービスを購入すること、オークションで競り値をつけること、或いはインターネット上で可能な他の何らかのタイプの取引が挙げられる。ステップ３５３０の後ステップ３５３５が実行され、音声ポータル１０は取引の結果を記録する。結果はデータベース１７０に記録されるのが望ましい。ステップ３５３５の後ステップ３５４０が実行され、取引がユーザーに報告される。

【0139】

異なる取引（例えば、競売する、見る、買う、追跡する）は別々のドメインに適切である。例えば、関心対象が電子商取引である場合には、ユーザーは選定したベンダーから識別した製品を注文することになる。更に、ユーザーは、後で購入する場合に備えてショッピングカートにアイテムを追加してもよい。ユーザーは、注文時に、請求先のクレジットカード及び届け先住所を（ユーザープロフィールから又は手動で）指定することになる。ユーザーは、これまでに注文した製品の状況情報を要求することもできる。別の例では、関心対象がオークションの垂直ドメインである場合、ユーザーは、現在の競り値を上げてもよいし、新しいオークションで競り値をつけてもよい。

【0140】

音声ポータル１０を使って取引を実行する処理では、ユーザーがコンピュータ上で手動操作をする必要がないので好都合である。ユーザーは、マウスをクリックしなくても、コンピュータキーボード上でキーを押さなくとも、或いは他のどんなコンピュータインターフェース手動操作（例：マウスクリック、キーボード入力）をしなくても、アイテムを購入し、入札に参加し、或いは他のインターネット取引を行うことができる。このように、図３５に関連して説明したプロセスは、「ノークリック」インターネット取引プロセスで行える。ユーザーは、電話のタッチパッドを利用して「ノークリック」インターネット取引を行うこともできる。

【0141】

図３６Ａは、音声ポータル１０を使った広告の代表的なプロセスのフローチャート３６００Ａを示す。広告サブシステム１２０は、特定ユーザーに流す広告を決める方法を含んでおり好都合である。一般的に、この方法は、ユーザー人口統計学、場所人口統計学、及び現在の関心対象ドメインなど、コンテキストに基づいて選択制約を設定することを含んでいる。選択制約が設定されると、本方法では、その制約に基づいて広告データベースに問い合わせを行い、可能な広告のリストを検索する。可能な広告のリストは、各広告の販売基準に基づいて再注文される。広告は再注文されたリストから選択されユーザーに提示される。

【0142】
フローチャート３６００Ａに示すように、ステップ３６１０Ａでは、音声ポータル１０の広告サブシステムＡ１２０は、ユーザーに提示される広告の選択制約を設定する。ある実施例では、選択制約は、ユーザー人口統計学、場所人口統計学及び（仮に、あれば）現在選択されている関心対象の垂直ドメインなどのユーザー中心情報、並びに広告販売基準、反復無し及び他の広告有効性要素などの広告中心情報に基づいている。紹介スポンサー広告、垂直スポンサー広告、及び商業広告など、多種多様な広告のタイプから選択する際には、このような制約又は判断基準が使用される。ステップ３６１０Ａの後ステップ３６１５Ａが実行され、ステップ３６１０Ａで選択された制約を基に可能な広告のリストを求めてデータベース１７０に問い合わせが行われる。
【0143】
ステップ３６１５Ａの後ステップ３６２０Ａが実行され、可能な広告のリストが、販売基準要素に基づいて再注文される。ある実施例では、販売基準は、以下の事柄、即ち（１）当広告については引渡し率が達成されつつあるか？、（２）当広告については最小目標引渡し率は達成されたか？、を判定するために使用される。販売基準を使って、各広告顧客がそれぞれに満たされるべき引渡し要件を持っていることを確認できるので好都合ある。ある実施例では、最初に引渡されるべき広告に優先順位をつけるために比率が計算される。
【0144】
以下に、どのように広告を注文するかについての判断要素として比率を使った例を示す。広告Ｘは契約上１００，０００件の引渡しを要する。音声ポータル１０は、広告Ｘのインスタンスを既に７，０００件引渡し済みである。契約開始は５月１０日で、契約終了は７月７日である。現在の日付は５月１５日であると仮定する。よって代表的比率は以下のように求められる。
【0145】
・契約開始から数えた日数＝５
・契約期間＝２７日
・広告を流すことが必要とされる日数＝２２日
・既に流された広告の割合＝７，０００／１００，０００～＝７％
・既に流された日数の割合＝５／２７～＝１８．５％
以上のことから、代表的最終比率は：
（既に流された日数の割合－既に流された広告の割合）／残りの契約日数、となる。
【0146】
この比率は間もなく流されるはずの広告を考慮に入れており（小さい方の分母－＞大きい方の比率）、既に流されたの広告の喰い違いは、低い比率でプッシュバックされており好都合である。
【0147】
可能な広告のリストが再注文されるステップ３６２０Ａの次に、広告が選択されるステップ３６２５Ａが実行される。ある実施例では、広告は、可能な広告のリストの中で利用できる最も高い比率に基づいて選ばれる。ステップ３６２５Ａの後、提示されるべき広告のタイプによって異なる動作が起きる。ステップ３６３０Ａでは、利用できる広告がない場合、及び広告タイプが紹介スポンサー広告である場合には、ステップ３６３５Ａで例外が起きる。そうでなければ、ステップ３６４０Ａが実行され、広告が利用できるか否かについて決定を下す。利用できる広告がある場合は、ステップ３６４５Ａが実行され、広告が流される。利用可能な広告がなければ、ステップ３６４０Ａが実行され、選択制約がリセットされ、制御はステップ３６２０Ａに戻る。
【0148】
このように、広告のタイプ毎に処理段階に差があるが、広告の種類として、紹介スポンサー広告、垂直スポンサー広告、及び商業広告の３種類がある。以下、紹介スポンサー広告を選択する場合の代表的プロセスを示す。

１．紹介スポンサー広告タイプに対して、場所に基づいて選択制約を設定する（垂直は該当しないので使用しない）。
２．制約に基づいてデータベースに問い合わせを行い、結果を、流せる広告のリストに変換する。
３．販売基準に基づいてリストを再注文する。
４．リストから比率が最も高い広告を選択する。データベース内には広告が存在するはずであり、そうでなければ例外が発生する。

【0149】

以下に、垂直スポンサー広告を選択する場合の代表的プロセスを示す。
１．ユーザー人口統計学、場所人口統計学、垂直スポンサー広告タイプの垂直タイプに基づいて制約を設定する。
２．制約に基づいてデータベースに問い合わせを行い、結果を、流せる広告のリストに変換する。
３．販売基準に基づいてリストを再注文する。
４．広告が利用可能であればリストから比率が最も高い広告を選択し、ユーザーインターフェースに戻す。
５．利用できるものがない場合には、垂直タイプだけに基づいて選択制約をリセットし、クアック促進にだけつながる垂直スポンサーのタイプをセットする。
６．販売基準に基づいてリストを再注文する。
７．広告が利用可能であればリストから比率が最も高い広告を選択し、ユーザーインターフェースに戻す。
８．ユーザーがリストから全ての広告を聞いた場合には、最後にユーザーに対して流された広告を戻す。何らかの理由でリストが空で利用できる広告がない場合には、例外が発生する。

【0150】

以下に、商業広告を選択する場合の代表的プロセスを示す。
１．場所人口統計学、顧客人口統計学、及び商業広告タイプの垂直タイプに基づいて選択制約を設定する。
２．制約に基づいてデータベースに問い合わせを行い、結果を、流せる広告のリストに変換する。
３．販売基準に基づいてリストを再注文する。
４．広告が利用可能であればリストから比率が最も高い広告を選択し、ユーザーインターフェースに戻す。
５．利用できるものがない場合、垂直タイプだけに基づいて選択制約をリセットし、クアック（即ち、音声ポータルシステム）コマーシャル又は有料コマーシャル（入力タイプには無関係）の何れかにコマーシャルのタイプをセットする。
６．販売基準に基づいてリストを再注文する。
７．広告が利用可能であればリストから比率が最も高い広告を選択し、ユーザーインターフェースに戻す。
８．ユーザーがリストから全ての広告を聞いた場合には、最後の広告を戻す。何らかの理由でリストが空で利用できる広告がない場合は、例外が発生する。

【0151】

図３６Ｂは、音声ポータル１０を使った広告の第２の代表的なプロセスのフローチャート３６００Ｂを示す。ステップ３６１０Ｂで、ユーザーは音声ポータル１０にアクセス（電話又は呼び出し）する。ステップ３６１０Ｂの後ステップ３６１５Ｂが実行され、ユーザールックアップを行いユーザーを識別する。様々な方法で発信者識別が実施されるが、そのうちの数例を図２及び図３０に関連して説明している。ステップ３６１５Ｂの後ステップ３６２０Ｂでは、音声ポータル１０にとってそのユーザーが既知であるか否かの判定がなされる。ユーザーが知られていない場合、ステップ３６２５Ｂが実行され、そのユーザーにデフォルトプロフィールが使用される。ある代表的実施例では、ある種の広告につ

いては、デフォルトプロフィールはユーザー制約又は制限を含んでいない。デフォルトプロフィールは、例えば、ユーザーのエリアコード、呼び出しの日時、曜日など、呼び出しについて分かっているある特定のパラメータに連動する。ユーザーが既知である場合、若しくはステップ３６２５Ｂが実行された後、ステップ３６３０Ｂが実行され、広告サブシステム１２０は、現在のユーザーに特定のユーザー制約を含めインターフェース（例：音声、ＷＡＰ、ＷＷＷ）のタイプに基づいて広告のセット“Ｓ”を生成する。

【0152】

現在の作動コンテキスト（例：特定ユーザー、関心対象の垂直ドメイン）が与えられると、ステップ３６３５Ｂで、広告サブシステム１２０は広告コンテキストに基づいて広告セットＳに重み付けする。ステップ３６３５Ｂの後ステップ３６４０Ｂが実行され、ユーザーが最も欲しいものを正確に知るのに十分なコンテキストであるか否かが判定される。コンテキストが十分でない場合、ステップ３６４５Ｂが実行され、入手された部分的コンテキストに基づいて広告がピックアップされる。コンテキストが十分である場合、ステップ３６５０Ｂが実行され、最もふさわしい広告が流される。

【0153】

広告サブシステム１２０は、初期の一般的広告又はスポンサーメッセージを全発信者に提供し、好都合である。広告サブシステム１２０は、ドメインに適した効用関数に基づいて選ばれた、的を絞った音声広告もユーザーに提供する。ある代表的実施例では、効用関数は、広告対象の製品又はサービスの入手可能性、現在のアイテムの関係性（例えば、ＤＶＤならテレビに関係がある）、ユーザーに対する関連性（例えば、人口統計学による）、ユーザーの広告主への好ましさ、及びサービスプロバイダに対する価値（例えば、費用／利益に基づく）に関係がある。広告サブシステム１２０は、ある一定数の広告をある一定の時間枠内でユーザーに引き渡すことができるので好都合である。更に、広告サブシステム１２０は、無線アプリケーションプロトコル（ＷＡＰ）、ＷＷＷ及び音声インターフェースなど異なるプラットフォームを通して広告を引き渡すことが可能である。

【0154】

音声インターフェースプラットフォームを例に取ると、最初の１分間で１つのスポンサー広告と１つの的を絞った広告がユーザーに流される。次の４０秒以内に２番目に的を絞った広告が引き渡される。ある実施例では、スポンサーメッセージは３－５秒間で処理され、次に的を絞った広告が１０－２０秒間を使う。

【0155】

この構造の実施は、システムに入ったら紹介スポンサー広告が提示されるという事実に基づいている。ユーザーは垂直に入る都度、「垂直スポンサー」に促される。ユーザーが要求するデータを受信しようとすれば、コマーシャル全編がユーザーに提示される。このモデルは、これまでに掲載されたスケジュールを、ユーザーが受信まで４０秒かけて自分の情報を探索するものと見積もった上で概算しており、好都合である。

【0156】

広告コンテキストでは、広告が提示された際により詳細な情報を引き渡すには「スピークスルー」が必要である。スピークスルーは、音声インターフェースだけでなくＷＡＰやＷＷＷの両方にも適用できるので好都合である。ＷＡＰの場合は、音声及びテキストはスピークスルーと見なされ、一方、広告についてより深く知るためのバナー上のクリックは、ＷＷＷ上のスピークスルーとなる。音声対話でのスピークスルーのある実施例は、顧客にウェブサイトアドレス又は電話番号を指し示すものである。別の実施例では、スピークスルーはＥメールアドレス又は顧客電話番号を収集して広告主に提供し、顧客に、より関連性の高い情報を送るようにしている。ＷＷＷインタフェースでは、スピークスルーは、顧客情報を管理し監査するのに外部ソースを利用することを含んでいる。広告サブシステム１２０は、更に、ドメイン（例えば、ＷＷＷインタフェース）に適した効率関数に基づいて選択された、的を絞った「バナー」広告をユーザーに提供する。

【0157】

広告サブシステム１２０の広告引渡しの管理は、幾つかの要素の組合せに基づいている

。ある代表的実施例では、広告は３つの場面のうちの１場面で引き渡される。第１に、広告は、ユーザーがシステムに入って新しいセッションを開始しようとしているときに引き渡される。このスポンサーメッセージはユーザーインターフェース１１０即ち「システム音声」内で流れ、数個の別の広告スポンサーの中でローテーションされる。例えば、スポンサーメッセージとしては「クアックは、ウェブの通貨「ビザ」の提供でお送りします」又は「クワックはセルラサービスをリードするスプリントＰＣＳの提供でお送りします」などである。

【0158】

第２に、ユーザーが、映画、交通、又は天気など、システムのある特定の垂直にアクセスする直前に、別のスポンサー広告（垂直スポンサー広告）が引き渡される。例えば、このような広告としては、「映画情報の世界的権威ＩＭＤＢがお届けします」や「ＬＣＥソニーメトレオンは、ボストンで誰もが納得する素晴らしい映画セレクションをお届けします」などがある。

【0159】

第３に、ユーザーが精選された要求を受け取る直前に広告が引き渡される。この種の広告は「コマーシャル」と定義される。このような広告はタイムリーではある（即ち選定された時点で引き渡される）が、２分毎といったように非常に頻繁に流れる。システム音声は、ユーザーに対して役に立ちそうな付加価値のあるコンテキストを指摘するので都合がよい。例えば、ユーザーが特定の劇場の映画を選択している場合には、近くのレストランを提案する。非スピークスルー広告が可能ではあるが、ここではスピークスルー広告を使うのが望ましい。広告内容自体は長さが約７秒であるのが望ましい。スピークスルー広告は、出来る限り最高品質であり（即ち、専門的に製作されたもの）、長さは大体１５から２０秒であるのが望ましい。例えば、ユーザーが、ＬＣＥソニーメトレオンで映画として「アメリカンビューティー」を選択する場合、システム音声は、「ソニーメトレオンのリストを見ています。ソニーメトレオンからたった５分のボストン最高のイタリア料理店「トニーズ・マトリシアーナ」について聞きたければ、「トニーズ！」と言って下さい、でなければリスト提示を維持して下さい。」と言う。ユーザーはここで自動的に予約を入れることになる。他の関係性属性を、的を絞った広告を行うために使ってもよい。垂直指定要求をすることは広告の引渡しに時間がかかるという現在の仮定のためこれら別々のスポットで広告が引き渡されるので、好都合である。

【0160】

これらの問題に加えて、どの広告をユーザーの元に届けるべきかの決定が行われる。この決定に組み入れられる要素としては、呼び出しの長さ、どんなタイプの垂直コンテンツが要求されるか、コンテンツとユーザープロフィール（及び／又は場所）の組合せ（即ち、レストランの広告は顧客の地元であるべき）、可能収益、発信人が要求する特定の情報、及びユーザーがその広告を既に耳にしているかどうか、などがある。ある代表的実施例では、広告は以下の要素に基づいてローテーションされる。即ち、当該広告が最後に流されたのは何時か。今回の呼び出し前にユーザーが当該広告を最後に耳にしたのは何時か。ユーザーは今回の呼び出しで既に当該広告を聞いたか。当広告について広告引渡し率は達成されつつあるか。最小引渡し目標は当広告では達成されたか。

【0161】

広告は、提示が特定の顧客にとって適当で、請求料金に則ったやり方で引き渡されるので好都合である。こうして、当該広告は何度流されたか、及び各ユーザーは当該広告を何度聞いたかなど、ある一定の基本データを集めて各広告を管理する。

【0162】

また、このような基本的なデータが与えられると、以下の更に複雑な問い合わせが可能になる。例えば、問い合わせには、定義された各種グループ、即ち、名前、人口統計学的情報、場所、及び関係性情報（これらユーザーが他に要求したもの）のグループの中の広告を聞いたことのある全ユーザーの報告書を作成する能力が含まれている。問い合わせには、スピークスルー情報を要求したことのあるユーザー全ての報告書を作成する能力も含

まれる。

【0163】

音声ポータル１０では他のモード時には可能であるバージ・イン能力（即ち広告の上演を停止すること）を広告提示中は除外することができる。バージ・インを防止する能力は、音声ポータル１０を介して与えられた広告に関連して入手されているデータを広告主が確信しなければならない点で重要である。ある実施例では、広告用データの収集は第３者監査人により行われる。

【0164】

広告サブシステム１２０は、ユーザーに提供された全広告の記録を、成功（即ち完遂した）及び不成功（即ち不完全な）の引渡しを含めて全て保持している。この記録はデータベース１７０に記憶されるのが望ましい。広告は、関心対象の垂直ドメイン、又は発信人住所即ちユーザー、又はユーザーの嗜好、又はユーザーの過去の関心により、或いは広告主の利益とユーザーが収集した情報の何か別の組合せにより的を絞られ、好都合である。

【0165】

コンテキストに敏感な情報の使用は、ユーザーに対して広告の目標範囲を絞るのに利用できるので好都合である。音声ポータル１０でのコンテキストに敏感な広告の的絞りは、広告コマーシャルとユーザーが受信するほぼ正確な情報とを関係付ける。この機能を正しくするために、広告が流される直前に適当なポインタが選択アルゴリズムに送り込まれる。ある実施例では、垂直タイプがコンテキストポインタである。

【0166】

別の実施例では、イグジスタンツはより具体的な目標設定を許容するコンテキストポインタである。このコンテキストポインタは、その属性基準を市場調査基準と突き合わせて、ある特定のカテゴリーの重み付けを決定する。これらカテゴリー重み付けを初期リスト中の広告の販売基準と組み合わせてコンテキスト重み付けの順位を定義し、そこから最良の広告を選択するようにしている。人口統計学及び垂直タイプから作成されたこの初期リストはコンテキスト重み付けの基礎となる。算術的な表記法を導入してこの問題をアルゴリズムに組立てた場合の一例を以下に示す。

【0167】

第１に、関係するパラメータに対して変数を定義する。アルゴリズムに送り込まれるイグジスタンツの属性のリストは、セット$\{e_1, e_2, \ldots, e_m\}$により定義されるものとし、ここにmはイグジスタンツ内の属性の個数である。例えば、映画イグジスタンツについては、サンプル属性は、ジャンル、場所、及び放映時間である。広告と結びつけるのに利用できるカテゴリーのリストは、セット$\{C_1, C_2, \ldots, C_n\}$により定義され、ここにnはカテゴリーの総数である。システム内のサンプルカテゴリーとして幾つか例を示すと、家族、レストラン、ナイトライフ、映画、及び娯楽などがある。コンテキストカテゴリーには各カテゴリーC_iに対し重みW_iがあるとし、ここに$i \in \{1, \ldots, n\}$である。コンテキストカテゴリー加重を設ける目的は、広告カテゴリー加重に比べたコンテキストの強度を判断するためであり、これについては以下に説明する。

【0168】

全イグジスタンツに対する市場調査基準を$P = \{p_1, p_2, \ldots, p_t\}$により表し、ここにtはデータベース内の全ての基準の合計である。各基準p_jには対応付けられた重みw_jがあり、ここに$j \in \{1, \ldots, t\}$であり、全てのi、jに対し各属性e_iは全p_jを満たそうとするものであり、ここに$i \in \{1, \ldots, m\}$、$j \in \{1, \ldots, t\}$である。こうして、e_iがp_iを満たし、p_jがカテゴリーC_kに属するのであれば、$W_k = W_k + w_j$となり、ここに$i \in \{1, \ldots, m\}$、$j \in \{1, \ldots, t\}$、$k \in \{1, \ldots, n\}$である。この反復法を使って、各カテゴリーの上記コンテキスト加重を定義する。

【0169】

各カテゴリーに対し、合計コンテキスト加重W_kが定義されると、付随する強度比率R_kが計算できるはずである。カテゴリーの強度比率を使用すれば、イグジスタンツのコンテ

キストが広告の選択に値するほどに強力であるかどうかが判定できる。例えば，家族というカテゴリーがＰに多くの基準を有している場合，イグジスタンツのコンテキストに対応する重みが受け入れ可能な割合内にあるかを確かめたいと思う。よって、$R_k=W_k/T_k$であり、ここにT_kはカテゴリーｋに関係するＰ内の全基準の加重合計である。

【0170】

人口統計学的問い合わせにより生成された広告のリストは、セットＡ＝｛A_1，A_2，．．．，A_r｝により定義され、ここにｒはリスト内の広告の総数である。各広告A_iは自身のカテゴリー重みx_kを有し、ここにｉ∈｛１，．．．．，ｒ｝及びｋ∈｛１，．．．．，ｎ｝で、コンテキストカテゴリー加重比R_kに対応しているアルゴリズムに結び付けて使用される。

【0171】

こうして、データベース上で人口統計学と広告タイプによりフィルタリングすることにより広告Ａの初期リストが一旦作成されると、アルゴリズム内のステップは以下のようになる。

１．各カテゴリーＣｋに対しカテゴリー重みW_kを次のように設定する。

・各$W_k=0$に初期化し、ここにｋ∈｛１，．．．．，ｎ｝

・各ｉ∈｛１，．．．．，ｎ｝及び各ｊ∈｛１，．．．．，ｔ｝に対し、イグジスタンツの現在の属性｛e_1，e_2，．．．．e_m｝に基づいて、e_iがp_jを満たし、p_jがカテゴリーC_kに対応付けられている場合、$W_k=W_k+w_j$、ここにｋ∈｛１，．．．．，ｎ｝である。

２．次にイグジスタンツの属性とは別にカテゴリーの合計加重を表にする。合計加重より，各カテゴリーのコンテキスト比を確立する。

・各ｋ∈｛１，．．．，ｎ｝及び各ｊ∈｛１，．．．．，ｔ｝に対し、p_jがカテゴリーC_kに対応付けられている場合、$T_k=T_k+w_j$。コンテキストカテゴリーコンテキスト比を$R_k=W_k/T_k$と設定する。

３．各カテゴリーｋに対し、各R_kに各広告Ａｉのカテゴリー加重x_kを掛け、次にその合計に広告S^iの販売基準比を掛け、コンテキスト合計G_iを得る。

・各ｉ∈｛１，．．．．，ｒ｝に対しG_iを計算し、ここに

$$G_i=S_i\cdot(R_1x_1+\ldots+R^nx_n)$$

である。

４．広告A_iを選択し、ここにｉは$max(G_i)$、ｉ∈｛１，．．．．，ｒ｝により定義される。

【0172】

上記アルゴリズムをサンプル例により説明する。ユーザーが、関心対象の映画の垂直ドメインで音声ポータル１０のサービスを使用している例を考察する。垂直スポンサー広告が流され、ユーザーは映画表示に関する情報を正に受信するところである。こうしてコンテキストとして、選択肢には、特定のイグジスタンツを流すためのポインタが含まれており、それは引数のための「ミッション・トゥー・マース」である。映画表示イグジスタンツの属性のうち幾つかは格付け（例えば、Ｒ）、ジャンル（例えば、スリラー）、及び放映時間（例えば、４：００ｐｍ）などであり、｛e_1，e_2，e_3｝により表すことができる。そこで、要素Ｐ＝｛p_1，p_2，．．．．，p_t｝を含んでいるマッチングコンテキスト基準のリストが必要となる。基準のサンプルリストはデータベース内で下表のように表される。

【0173】

【表1】

属性	マッチタイプ	値	カテゴリー	重み
映画	--	--	娯楽	１０
映画格付け	=	G	家族	８０
映画格付け	=	R	ナイトライフ	５０
映画ジャンル	=	サスペンス	１０代	４０
映画ジャンル	=	サスペンス	アダルト	５０
映画ジャンル	=	スリラー	１０代	８０
映画放映時刻	>	７：００ＰＭ	１０代	８０
映画放映時刻	<	４：００ＰＭ	家族	７０

【0174】
この表から、カテゴリーはC＝｛娯楽、家族、ナイトライフ、１０代、アダルト｝として推断され、ここにk＝５である。よって、ステップ1から、W_1＝１０、W_2＝０、W_3＝５０、W_4＝８０、W_5＝０である。ステップ２より、R_1＝１、R_2＝０、R_3＝１、R_4＝０．４、R_5＝０である（これは、Ｐには８つしか要素がない場合を想定しているが、当てはまる場合はほとんどなく要素は凡そ２００以上になるはずである）。次に、広告リストＡには3つの広告があると仮定する。広告の５つのカテゴリーの重みを次のように仮定する。

【0175】
【表2】

広告名	娯楽	家族	ナイトライフ	１０代	アダルト	販売比
ＩＭＤＢ	0.9	0.5	0.7	0.9	0.9	0.8
ミッション・トゥー・マーズ	0.9	0	0.9	0.9	0.8	1.1
ＡＭＣ劇場	0.9	0.9	0.7	0.9	0.7	1.0

【0176】
よって、これらの重みづけ｛x_1、x_2、x_3、x_4、x_5｝から、計算を行って各広告A_iに対しG_iの値を以下のように得るが、ここにｉ＝｛１，２，３｝である。

【0177】
$G_i=S_i\cdot(R_1x_1+\ldots+R_nx_n)$
G_1＝０．８・（（１）（０．９）＋０＋（１）（０．７）＋（０．４）（０．９）＋０）＝１．５６８
G_2＝１．１・（（１）（０．９）＋０＋（１）（０．９）＋（０．４）（０．９）＋０）＝２．３７６
G_3＝１．０・（（１）（０．９）＋０＋（１）（０．７）＋（０．４）（０．９）＋

０）＝１．９６

【0178】

この様に、コンテキスト及び販売比に基づけば、「ミッション・トゥー・マース」の広告が最も適当である。このアルゴリズムは、検索されている情報への関連性に基づいて異なるカテゴリーのコンテキストに注意する。また、販売基準に合わせて流す必要のある広告に気づきそれを順序付けの要素にするように編成を行うこともする。本例では、広告、カテゴリー、及びＰの基準の短いリストしか示していない。アルゴリズムは、もっと多くのカテゴリー及び基準を利用しようとするものである。

【0179】

図３７－４３は、ユーザーと音声ポータル１０との間の対話の代表的なダイアログマップを示している。図３７－４３に関連して記載されているダイアログマップは、説明のためだけの図である。関心対象である映画、天気、交通、株及びスポーツの垂直ドメインを図に示しているが、関心対象の何れの垂直ドメインでも、特に、図４－６に関連して説明したデータ構造モデル３００、４００、４５０により入手可能な、発展的で適用性のある機能に照らして、このようなダイアログマップ（及び音声ポータル１０のユーザーとの対話）に含まれ得ることは明らかである。更に、ユーザーと音声ポータル１０との間の異なる対話を示す特定のブロックは、説明するためだけのものである。関心対象の多くの可能な垂直ドメインそれぞれに対し、様々な対話が可能である。

【0180】

図３７はダイアログマップ３７００を示しており、ユーザーによって音声ポータル１０へ電話呼び出しが行われた後ブロック３７１０が実行され、歓迎を受ける。ブロック３７１０の後ブロック３７２０が実行され、署名手続きが続く（更に図３８に関連して記載されている）。ブロック３７２０の署名手続きの後、ユーザーは、ブロック３７３０及び３７４０で、音声ポータル１０のサービスへの案内を受けるか、又は、ブロック３７５０で、可能性のある関心対象の垂直ドメインの案内への通路情報へ直接進むか、選択することができる。具体的には、ブロック３７３０では、サービスがどの様に行われるかに関し案内情報が提供される。ブロック３７５０では、音声ポータル１０は、ユーザーに、関心対象のドメインを「通路」（例えば、映画、天気、交通、株、スポーツ）から選択するように要求する。

【0181】

ユーザーが関心対象の映画ドメインを選択すれば、ブロック３７６０が実行され、そこで映画サブシステムが実行され（図３９と関連して更に説明する）、ユーザーは、映画リスト、劇場及び評論のような映画情報と取引にアクセスすることになる。ユーザーが関心対象の天気ドメインを選択すれば、ブロック３７７０が実行され、そこで天気サブシステムが実行され（図４０と関連して更に説明する）、ユーザーは、好みの場所又は何れかの場所の今日の予報、又は数日先の予報のような天気情報にアクセスすることになる。ユーザーが関心対象の交通ドメインを選択すれば、ブロック３７８０が実行され、そこで交通サブシステムが実行され（図４１と関連して更に説明する）、ユーザーは、市街の報告、あるルートに関する報告、又は個人向けの報告のような交通情報にアクセスすることになる。ユーザーが関心対象の株ドメインを選択すれば、ブロック３７９０が実行され、そこで株サブシステムが実行され（図４２と関連して更に説明する）、ユーザーは、市場の動向、株の相場、株のニュース、個人向けの株ニュース又は取引（例えば、売り、買い）のような株情報及び取引にアクセスすることになる。ユーザーが関心対象のスポーツドメインを選択すれば、ブロック２５００が実行され、そこでスポーツサブシステムが実行され（図４３と関連して更に説明する）、ユーザーは、スポーツのスコア、スポーツニュース、スポーツイベントのチケット情報及びスポーツの夢のリーグ取引のようなスポーツ情報と取引にアクセスすることになる。

【0182】

図３８は、署名サブシステムを示している。ブロック３８１０で、発信者の識別が試みられている。音声ポータル１０のユーザーの１つのタイプは、識別されていないユーザー

である。識別されていないユーザーがコールインする（恐らく初めて）と、そのユーザーは、従来式の発信者識別技術（発信者ＩＤ）によってつきとめられるか、られないかのどちらかである。発信者ＩＤがデータベース１７０内になければ、発信者は恐らく新規発信者である。発信者ＩＤが秘密にされると、音声ポータル１０はどちらの方法も通知できない。ある実施例では、音声ポータル１０は電話番号（又は他の識別子）を質問して、「識別済み」発信者と継続する。別の実施例では、音声ポータル１０は検証無しでも継続する。この判断は、要求されている情報の種類によって決まる。例えば、特定の垂直ドメインでは、ユーザーの確認は、行為（例えばオークション）の前にユーザーを確認するよう判定される必要がある。

【0183】

確認されたユーザーは、加入しているか、していないか何れかである。確認されたユーザーが加入している場合、音声ポータル１０は、データベース１７０からのクレジットカード及び嗜好のようなユーザーに関する情報を有している。音声ポータル１０が嗜好と関心対象の追跡を開始し、サービスに対する高い付加価値とロイヤリティを実現できるように、ユーザーは加入するのが望ましい。ユーザーは、加入に際して、住所及びクレジットカードの番号を含むプロファイル情報を指定する。更に、特定の発信者に関する情報が蓄積されるほど、送られてくる広告が多く（従って価値のあるものに）なる。

【0184】

発信者の識別が可能であれば、ブロック３８２０が実行され、ユーザーにパスワードを質問することにより、ユーザーの確認が行われる。一旦パスワードが検証されると、ユーザーの嗜好が設定され、制御はブロック３８７０へ移り、図３７へ戻って、案内又は通路選択が実行される。与えられたパスワードが無効であれば、制御はブロック３８４０へ移る。

【0185】

発信者の識別が不可能か、又はユーザーが自分のパスワードを知らない場合、制御はブロック３８３０へ移り、音声ポータル１０はユーザーの口座状況を判定する。ユーザーが口座を持っていない場合、制御はブロック３８５０へ移り、ユーザーは口座を開設すべきだという口座開設催促が与えられる。ユーザーが口座を持っている場合、制御はブロック３８４０へ移り、音声ポータル１０は、ユーザーの口座番号を入手する。ユーザーが口座番号を忘れている場合、制御はブロック３８５０へ移り、ユーザーに口座を開設することを求める。ユーザーが有効な口座番号を提供すれば、ユーザー確認のため制御はブロック３８２０へ移る。ユーザーが無効な口座番号を提供すれば、制御はブロック３８６０へ移り、音声ポータル１０は、ユーザーに口座が無効であることを通知し、ウェブサイトを訪れるか、又は助けを求めて支援番号を呼び出すよう通知する。次に制御はブロック３８８０そして図３８へ移り、そこで案内又は通路選択が実行される。

【0186】

図３９では、映画サブシステムが実行される。音声ポータル１０は、ブロック３９１０で、関心対象の映画ドメインへの案内を流す。ユーザーは、劇場での映画、映画のリスト、映画の批評のようなオプションを選択することができる。ユーザーが劇場での映画を選択すれば、制御はブロック３９１５へ移り、音声ポータル１０は、ユーザーが所望した地理的場所を決定する。ＺＩＰコード、州、都市のような場所又は嗜好を決定するのには、様々な方法が利用できる。所与の場所付近に劇場がない場合、ブロック３９２０が実行され、ユーザーに所与の領域内には劇場がない旨知らせるメッセージが流される。場所が決定されると、ブロック３９２５が実行され、その場所内の劇場名がリストアップされる。ブロック３９２５の後ブロック３９３０が実行され、前記領域内の劇場で上映されている映画がリストアップされる。音声ポータル１０は、ユーザーに、映画を選択するよう要求し、ブロック３９３５へ移る。

【0187】

関心対象の映画ドメインへの案内を流したブロック３９１０に戻り、ユーザーが映画のリストを求めれば、ブロック３９４０が実行され、音声ポータル１０は映画のタイトルを

ユーザーに要求する。ブロック３９４０の後ブロック３９４５が実行され、地理的場所がユーザーに求められる。上に述べたように、発信者の場所を判定するにの、様々な方法が用いられる。選択された映画を上映している劇場があれば、ブロック３９５０が実行され、その映画を上映している劇場がリストアップされ、ユーザーはそのリストから選択するよう求められる。次に制御はブロック３９３５へ移る。選択された映画を上映している劇場が無ければ、ブロック３９５５が実行され、最も近い場所での上映時間が、ユーザーに提供される。次に制御はブロック３９３５へ移る。

【0188】

関心対象の映画ドメインへの案内を流したブロック３９１０では、ユーザーが映画の評論を求めれば、ブロック３９６０が実行され、音声ポータル１０は映画のタイトルをユーザーに要求する。ブロック３９６０の後ブロック３９６５が実行され、選択された映画の評論が流される。ブロック３９６５の後ブロック３９７０が実行され、音声ポータル１０は、ユーザーに、選択された映画の上映を知りたいかどうか質問する。ユーザーが拒否すれば、制御はブロック３９６０へ戻り、映画評論のための別の映画タイトルを得る。ユーザーが受け入れれば、制御はブロック３９４５へ移る。

【0189】

ブロック３９３５では、音声ポータル１０が、選択された映画及び劇場の上映時間を提供する。音声ポータル１０は、ブロック３９８０で、次の行動を要求する。ユーザーは劇場の住所を要求することができ、そのアドレスはブロック３９８５で提供される。ユーザーは、映画の評論を要求することもでき、その評論はブロック３９９０で提供される。ユーザーが、関心対象の映画ドメインを離れたい場合、制御は図３７のブロック３７５０へ戻る。

【0190】

図４０では、天気サブシステムが図示のように実行される。ブロック４０１０で、音声ポータル１０は、関心対象の天気ドメインへの案内を流す。ブロック４０１０で案内が流された後、制御はブロック４０２０へ移り、音声ポータル１０は、関心対象の天気ドメインで用いる場所情報を入手する。先に述べたように、ＺＩＰコード、都市又は州、及び他の場所的証拠から場所を手に入れるように、各種の方法を使って場所情報を入手することができる。ブロック４０２０の後、制御はブロック４０３０へ移り、音声ポータル１０は、ユーザーが、現在の天気情報を欲しいのか、先の天気情報を欲しいのか応答を促す。ユーザーが先の天気情報を聴くことを選択すれば、制御はブロック４０４０へ移り、音声ポータル１０は、ユーザーに天気潜在オプションを提供するプロンプトを流す。ユーザーが現在の天気情報を欲しい場合、又はユーザーがブロック４０４０で潜在オプションを選択した後、制御はブロック４０５０へ移り、音声ポータル１０は、所望の天気情報を提供する。

【0191】

ブロック４０５０が実行された後、制御はブロック４０６０へ移り、音声ポータル１０は、ユーザーに、先の予報を所望するか否か質問する。先の予報が所望の場合、制御はブロック４０７０へ移り、音声ポータル１０は先の予報を提供する。ブロック４０７０の後、又はユーザーが先の予報を求めない場合、制御はブロック４０８０へ移り、音声ポータル１０は、ユーザーに次の行動をたずねる。ユーザーが関心対象の天気ドメインを継続したい場合、制御はブロック４０２０へ移る。ユーザーが関心対象の天気ドメインを離れたい場合、制御は、図３７でブロック３７５０に関連して述べた通路に相当するブロック４０９０へ移る。

【0192】

図４１では、交通サブシステムが実行される。ブロック４１１０で、音声ポータル１０は、関心対象の交通ドメインへの案内を流す。ブロック４１１０の後、制御はブロック４１１５へ渡り、音声ポータル１０は、ユーザーに関する場所情報又はユーザーに関する個人向け情報を入手する。ブロック４１１５の後、制御はブロック４１２０へ移り、音声ポータル１０は、市街の交通情報を入手する。市街の交通情報が不可能であれば、制御はブ

ロック４１３５へ移り，ＺＩＰコード交通情報が入手される。都市が音声ポータル１０に認識されていなければ、ＺＩＰコード交通情報はフォールバックである。都市のデータが見つからず、データが近くの場所に含まれている場合，制御はブロック４１４０へ移り、音声ポータル１０は、付近の都市をたずねる。ブロック４１２０で交通イベントが報告できない場合、制御はブロック４１２５へ移り、ユーザーに、その都市には報告できる交通情報がない旨告げられる。ブロック４１２０で交通データが入手できない場合、制御はブロック４１３０へ移り，ユーザーには、他の都市を試すか、或いは新しい関心対象のドメインの選択に向け通路へ進むか、のオプションが提示される。

【0193】

ブロック４１２０の後、制御はブロック４１４５へ移り、音声ポータル１０は特定の交通ルート又は「都市全体」を要求する。ブロック４１４５の後、制御はブロック４１５０へ移り、音声ポータル１０はルート指示情報を入手する。ブロック４１５０の後、そのルートに報告すべき交通量がない場合、制御はブロック４１５５へ移る。ブロック４１５５で、ユーザーには、新しい交通ルートか「都市全体」を選択するか、通路へ行き新しい関心対象のドメインを選択するかというオプションが提示される。ルート交通情報が入手可能であれば、ブロック４１５０の後、制御はブロック４１６０へ移り、音声ポータル１０は、選択されたルートのルート交通量をリストアップする。ユーザーがブロック４１４５で「都市全体」を選択した場合、制御はブロック４１６５へ移り、音声ポータル１０は都市の交通情報をリストアップする。

【0194】

ブロック４１６０とブロック４１６５の後、制御はブロック４１７０へ移り、音声ポータル１０は、ユーザーに所望の交通報告を提供する。ブロック４１７０の後、制御はブロック４１７５へ移り、音声ポータル１０は、関心対象の交通ドメインで実行すべき次の行動を要求する。ある代表的実施例では、次の行動に、交通報告の反復、交通情報リストアップの継続通路への進行が含まれる。ユーザーがブロック４１７５で選択した後、制御は適切なブロックへ移る。例えば、ユーザーが交通報告の反復を選択する場合、制御はブロック４１７０へ移る。ユーザーがリスト継続のオプションを選択する場合、制御は、ブロック４１４５でなされた、特定の交通ルートか「都市全体」かの選択によって、ブロック４１６０かブロック４１６５へ移る。ユーザーが通路への進行を選択する場合、制御は、図３７のブロック３７５０に関連して説明された通路に相当するブロック４１８０へ移る。

【0195】

図４２では、株サブシステムが実行される。ブロック４１２０で、音声ポータル１０は、関心対象の株ドメインへの案内を流す。ブロック４２１０の後、制御はブロック４２１５へ移り、音声ポータル１０は、ユーザーに、市場の動向、株価、或いは「マイ・クワック」と呼ばれる個人向けリストを選択するオプションを提示する。ユーザーが市場の動向を選択すれば、制御はブロック４２４０へ移り、ダウジョーンズ工業平均、ナスダック、Ｓ＆Ｐ５００、ＮＹＳＥ出来高、ナスダック出来高、３０年社債などの各種市場の動向が提供される。ユーザーが株価を選択すれば、制御はブロック４２２０へ移り、音声ポータル１０はユーザーから特定の株の銘柄を入手する。ブロック４２２０の後、制御はブロック４２２５へ移り、音声ポータル１０は、ブロック４２２０で提供された株の銘柄に対応する株式取引を入手する。株式取引が識別された後、制御はブロック４２３０へ移り、音声ポータル１０は、株価、最新の取引、変動、出来高及び一日の最高値／最安値のような株の情報を提供する。

【0196】

ブロック４３２０の後、制御はブロック４２３５へ移り、音声ポータル１０は関心対象の株のドメインで実行すべき次の行動をたずねる。ある代表的な実施例では、ユーザーは、株情報を繰り返す／株の情報をリストアップし続ける、新しい株を入手する、市場の動向を聞く、或いは通路へ行くことを選択できる。ブロック４２３５でユーザーが行った選択によって、制御は、市場の動向を選択した場合はブロック４２４０へ、新しい株の銘柄

を選択した場合はブロック４２４０へ、個人向けのマイ・クワック株を選択した場合はブロック４２５０へ移り、通路を選択した場合はブロック４２７５０へ移る、ブロック４２７５の前に、制御はブロック４２７０へ移り、音声ポータル１０は、個人向け情報をより速く入手するには嗜好を設定することができるという嗜好の催促をユーザーに提供する。ユーザーが、嗜好に関するこのコールで既に催促を受けていれば、制御は直接ブロック４２７５へ移る。

【0197】

ブロック４２１５でユーザーが「マイ・クワック」を選択した場合、制御は、預金口座情報が識別されなければブロック４２４５へ移り、口座情報が識別されればブロック４２５０へ移る。ブロック４２４５では、嗜好が設定され、口座情報が確立される。ユーザーに、ウェブ上に口座を設定するよう進言してもよい。ブロック４２５０では、株価、最新の取引、変動及び出来高のような個人向けの株情報が提供される。ブロック４２５０のオペレーションの間に、ユーザーは、例えば、特定の株に関する情報が流れている間に「その株」と声を出すことによって、特定の株を識別することができる。そのような選択がなされた場合、制御はブロック４２５５へ移り、特定の株に対して株のニュースオプションがリストアップされる。ユーザーが、ブロック４２５５でリストから特定のタイプの株ニュースを選択した後、制御はブロック４２６０へ移り、音声ポータル１０は、選択された株のニュースを流す。ブロック４２６０の後、制御はブロック４２６５へ移り、音声ポータル１０は、ユーザーに、戻って株のニュースのリストを入手するか（ブロック４２５５）又は株のニュースを出るかをたずねる。ユーザーが株のニュースを出ることを選択すれば、制御はブロック４２３５へ移り、株に関する次の行動が求められる。ユーザーが関心対象の株のドメインを完了すると、制御は、図３７のブロック３７５０に関連して述べられている通路に相当するブロック４２７５へ移る。

【0198】

図４３では、スポーツサブシステムが実行される。ブロック４３１０で、音声ポータル１０は、関心対象のスポーツドメインへの案内を流す。ブロック４３１０の後、制御はブロック４３１５へ移り、音声ポータル１０がユーザーの所望するスポーツのタイプを入手するか、又は、ユーザーが「マイ・クワック」と言って個人向けのスポーツタイプのスコアを入手する。ユーザーが特定のスポーツを選択すると、制御はブロック４３２０へ移り、音声ポータル１０は、リストから選択されたスポーツのリーグ名を入手する。例えば、音声ポータル１０は、「ＮＦＬ、ＮＢＡ、ＮＨＬ及びメジャーリーグベースボール」をリストアップする。ユーザーがリーグ名を選択すると、制御はブロック４３２５へ移り、音声ポータル１０は、ユーザーが関心を持っている特定のチームを入手する。ブロック４３２５の後、制御はブロック４３３０へ移り、スポーツのスコアが提供される。例えば、音声ポータル１０は、「ＴＥＡＭが行った最新の試合は、ＤＡＴＥで、ＴＥＡＭ１との最終的なスコアはＳＣＯＲＥ１で、ＴＥＡＭ２との最終的なスコアはＳＣＯＲＥ２である」と言う。

【0199】

ブロック４３１５で、ユーザーが「マイ・クワック」を選択した場合、制御はブロック４２４０へ移る。ブロック４３４０で、音声ポータル１０は、個人向けのマイ・クワックスポーツチームのスポーツのスコアを提供する。ブロック４３４０の後、制御はブロック４３３５へ移り、音声ポータル１０は、スポーツニュースにチーム特定のニュースを提供する。ブロック４３３０及びブロック４３３５の後、制御はブロック４３４５へ移り、音声ポータル１０は、ユーザーがスポーツニュースを繰り返し聞きたいかどうかたずねる。ユーザーが肯定すると、音声ポータル１０は、戻って提供された情報を繰り返す。ユーザーが情報を繰り返して欲しくなければ、制御はブロック４３５０へ移り、音声ポータル１０は、関心対象のスポーツドメインで実行すべき次の行動を求める。ブロック４３５０の後、リーグ名を選択する際には制御はブロック４３２０へ移り、マイ・クワックスポーツのスコアを提供する際には制御はブロック４３４０へ移り、通路情報の際には制御はブロック４３５５へ移る。ブロック４３５５は、図３７のブロック３７５０に関連して述べた

通路に相当する。図４０－４３の各サブシステムは、単なる例として示している。

【0200】

図面に示し、上に説明した実施例は現在のところ好適であるとして示しているが、これらの実施例は単なる例として提示している旨理解頂きたい。他の実施例は、音声ポータル経由でインターネットへのアクセスを単純化するための様々なデータ構造を含んでいる。本発明は、特定の実施例に限定されず、特許請求の範囲に述べる範囲及び精神の内にありながら、様々な修正、組み合わせ及び変更に及ぶものである。

【図面の簡単な説明】

【0201】

【図1】インターネットに接続されている音声ポータルの全体図である。

【図2】図１の音声ポータルの代表的な機能的実施例の全体的機能ブロック図である。

【図3】図１の音声ポータルの代表的な物理的実施例の更に詳細なブロック図である。

【図4】図１の音声ポータルに用いられている、代表的データ構造モデルの概略図である。

【図5】ユーザー関連情報に関する、図４の代表的データ構造モデルの概略図である。

【図6】広告関連情報に関する、図４の代表的データ構造モデルの概略図である。

【図7】図４の代表的データ構造モデルの代表的作成プロセスを示すフローチャートである。

【図8】図７の代表的作成プロセスの概略図である。

【図9】非プログラミング手段を使ってインターネットベースの情報を集める代表的プロセスを示すフローチャートである。

【図10】図１の音声ポータルに関連するルールの非プログラミング開発の代表的プロセスの概略図である。

【図11】図１の音声ポータルに関連するルールの非プログラミング開発に関する代表的グラフィカルユーザーインタフェースである。

【図12】図１の音声ポータルに関連するルールの非プログラミング開発に用いられる代表的グラフィカルユーザーインタフェースウインドウである。

【図13】図１２のグラフィカルユーザーインタフェースウインドウの拡大フォームである。

【図14】図１の音声ポータルに関連するルールの非プログラミング開発に用いられる、代表的グラフィカルユーザーインタフェース探索データエディタウインドウである。

【図15】図１の音声ポータルに関連するルールの非プログラミング開発に用いられる、代表的グラフィカルユーザーインタフェースインドウである。

【図16】図１５のグラフィカルユーザーインタフェースウインドウの拡大フォームである。

【図17】図１の音声ポータルに関連するルールの非プログラミング開発に用いられる、代表的グラフィカルユーザーインタフェースウインドウである。

【図18】図１の音声ポータルに関連するルールの非プログラミング開発に用いられる、ベンダーフォームオプションのための代表的グラフィカルユーザーインタフェースウインドウである。

【図19】図１の音声ポータルに関連するルールの非プログラミング開発におけるＵＲＬの試験のための代表的グラフィカルユーザーインタフェースウインドウである。

【図20】図１の音声ポータルに関連するルールの非プログラミング開発における、パターンの選択のための代表的グラフィカルユーザーインタフェースウインドウである。

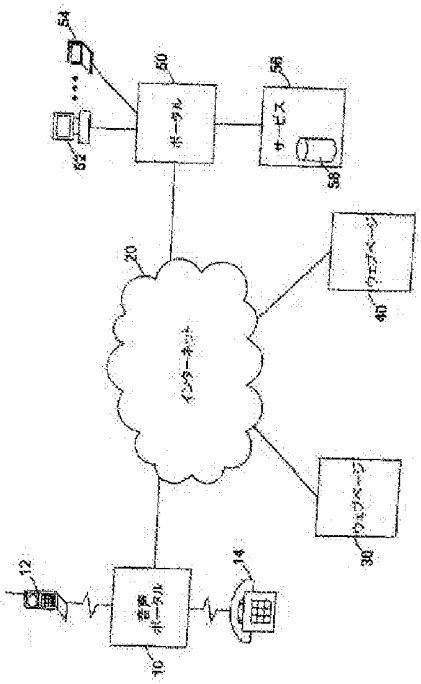
【図21】図１の音声ポータルに関連するルールの非プログラミング開発の間に、複数のページ上でリンクを検出するためにパターンを識別するのに用いられる、代表的グラフィカルユーザーインタフェースウインドウである。

【図22】スパイダのプログラミングに用いられる階層構造の概略図である。

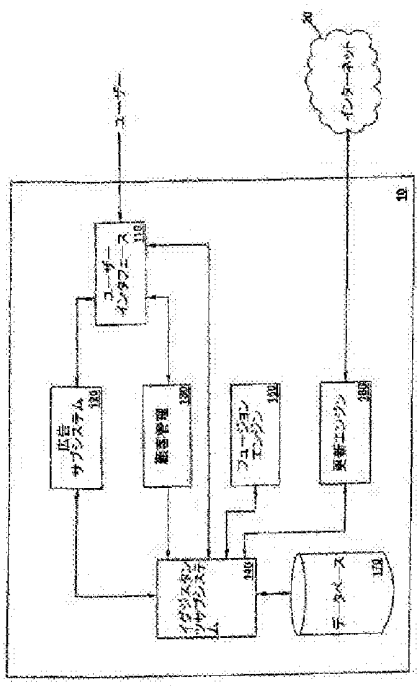
【図23】図１の音声ポータルと共に用いられるスパイダのプログラミングのための、代表的グラフィカルユーザーインタフェースウインドウである。

【図24】図２３の代表的グラフィカルユーザーインタフェースウインドウの拡大フォームである。
【図25】情報を図１の音声ポータルの統合データベースに融合させる、代表的プロセスを示すフローチャートである。
【図26】情報を図１の音声ポータルの統合データベースに融合させる、第２の代表的プロセスを示すフローチャートである。
【図27】所与のアイテムに関するより完全な情報を作るために、２つのイグジスタンツから規範的なイグジスタンツを作成する概略図である。
【図28】インターネットソースから図１の音声ポータルのユーザーへのデータ分離及び変換の代表的プロセスの第１部分の概略図である。
【図29】データがインターネットソースから図１の音声ポータルのユーザーへ分離及び変換される、図２８の代表的プロセスの第２部分の概略図である。
【図30】図１の音声ポータルの代表的オペレーションの流れを示すフローチャートである。
【図31】図３０のフローチャートの代表的なオペレーションサブシステムを示すフローチャートである。
【図32】図３０のフローチャートの第２の代表的なオペレーションサブシステムを示すフローチャートである。
【図33】図３０のフローチャートの第３の代表的なオペレーションサブシステムを示すフローチャートである。
【図34】図１の音声ポータルにおけるユーザー応答を流して所望のアイテム又はサービスを決定する、代表的プロセスを示すフローチャートである。
【図35】図１の音声ポータルを使って取引を実行する、代表的プロセスを示すフローチャートである。
【図36A】図１の音声ポータルを使って広告する、代表的プロセスを示すフローチャートである。
【図36B】図１の音声ポータルを使って広告する、第２の代表的プロセスを示すフローチャートである。
【図37】図１の音声ポータルの代表的対話マップを示すフローチャートである。
【図38】図３７の代表的な対話マップの代表的サブシステムを示すフローチャートである。
【図39】図３７の代表的な対話マップの第２の代表的サブシステムを示すフローチャートである。
【図40】図３７の代表的な対話マップの第３の代表的サブシステムを示すフローチャートである。
【図41】図３７の代表的な対話マップの第４の代表的サブシステムを示すフローチャートである。
【図42】図３７の代表的な対話マップの第５の代表的サブシステムを示すフローチャートである。
【図43】図３７の代表的な対話マップの第６の代表的サブシステムを示すフローチャートである。

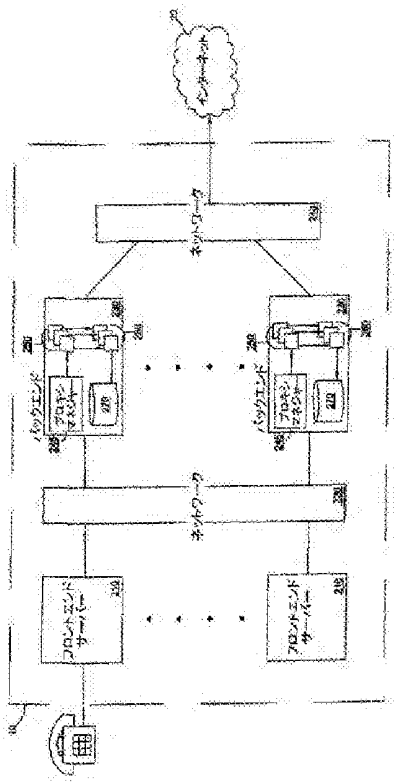
【図1】



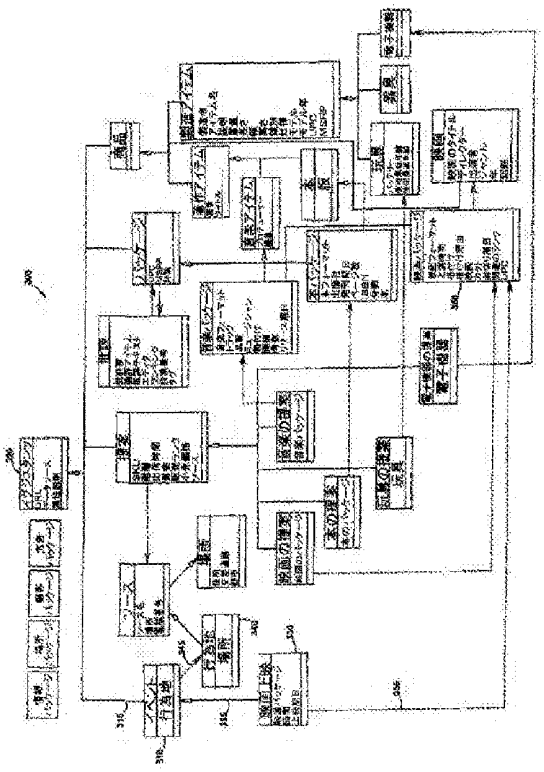
【図2】



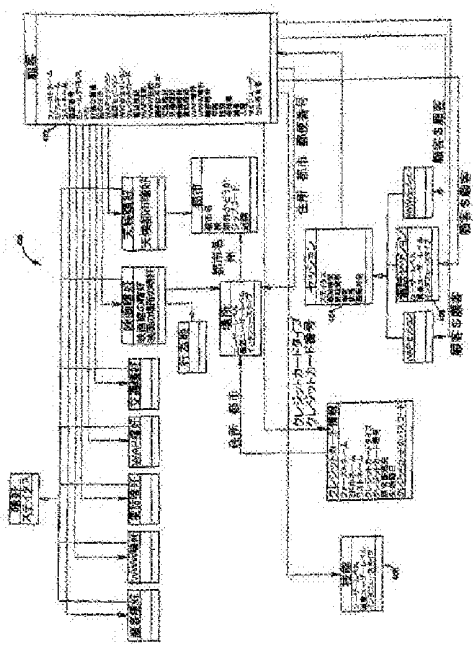
【図3】



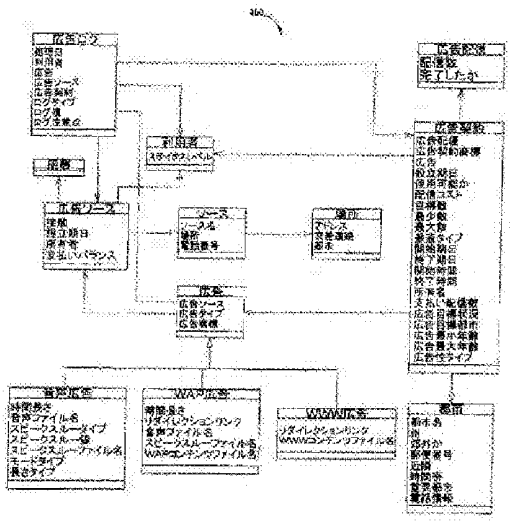
【図4】



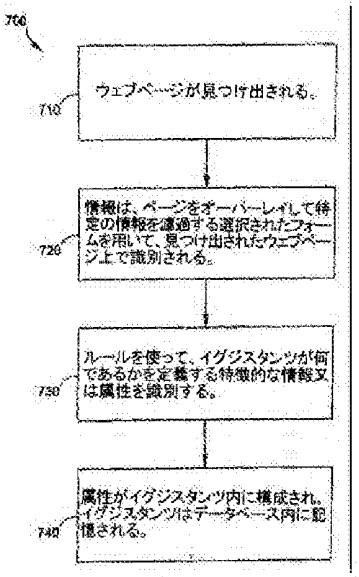
【図５】



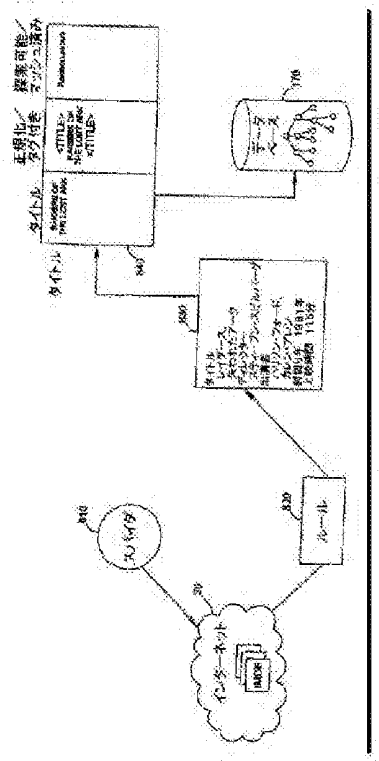
【図６】



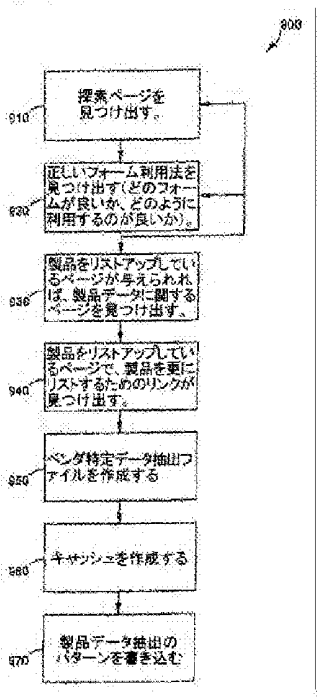
【図７】


700
710
ウェブページが見つけ出される。
720
情報は、ページをオーバーレイして特定の情報を通過する選択されたフォームを用いて、見つけ出されたウェブページ上で識別される。
730
ルールを使って、イグジスタンツが何であるかを定義する特徴的な情報又は属性を識別する。
740
属性がイグジスタンツ内に構成され、イグジスタンツはデータベース内に記憶される。

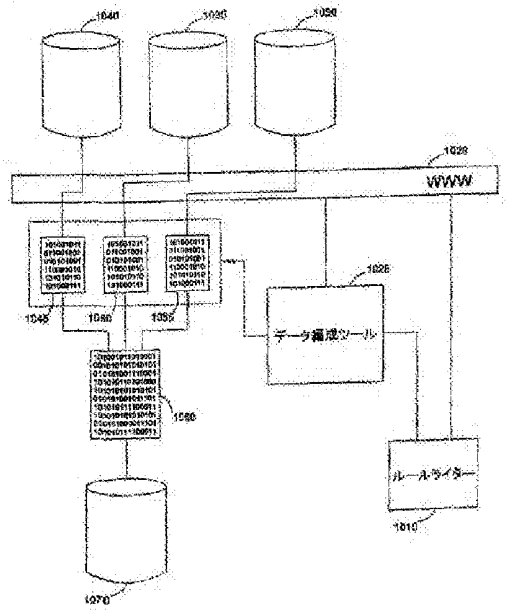
【図８】



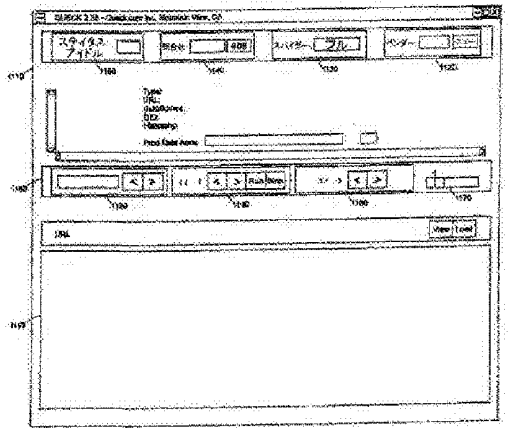
【図９】



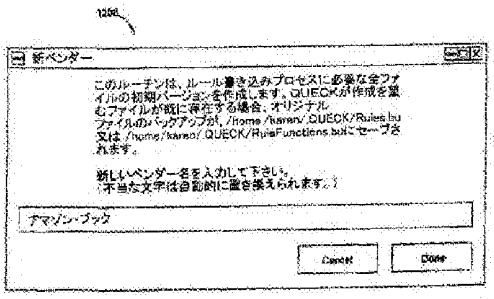
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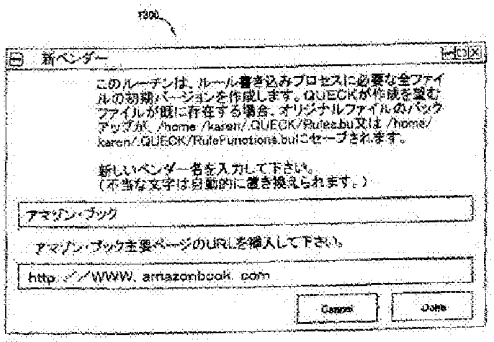
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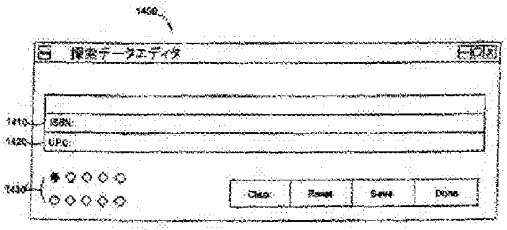
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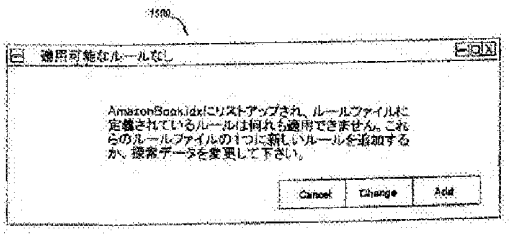
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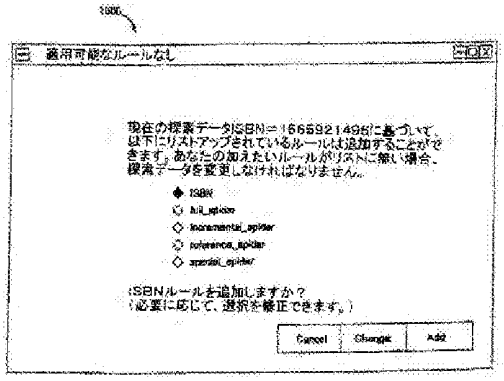
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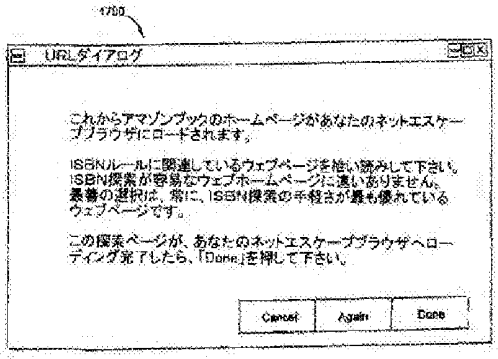
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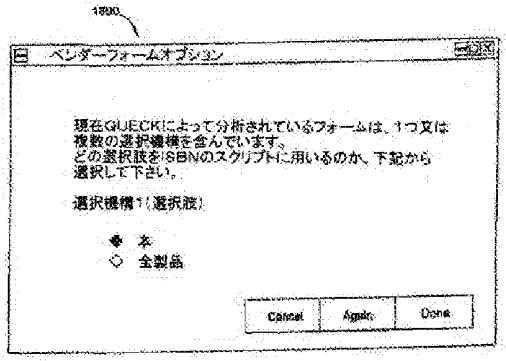
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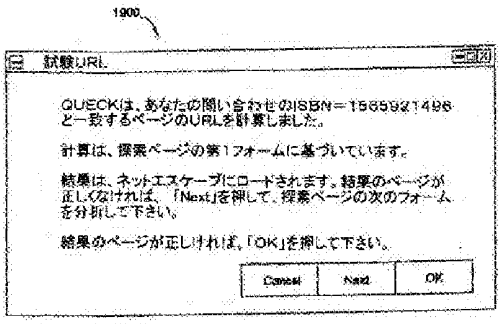
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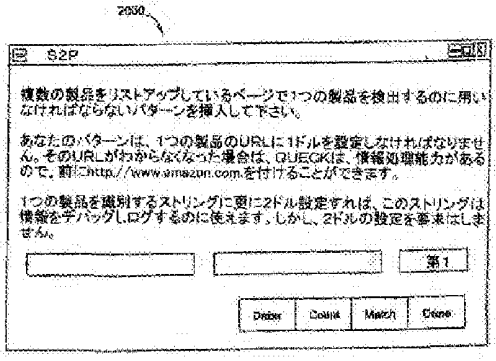
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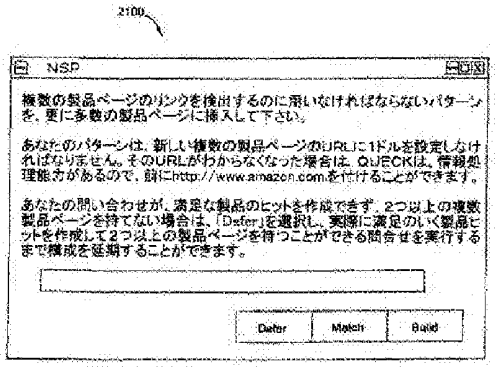
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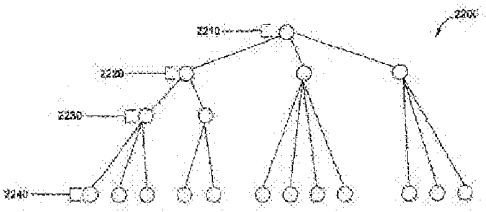
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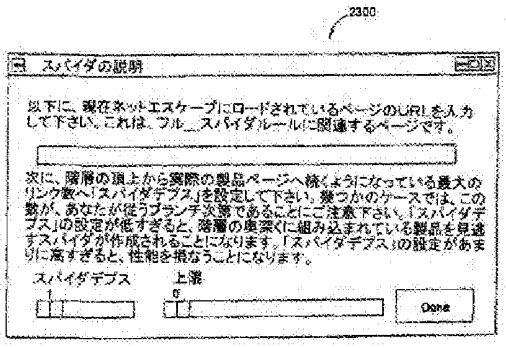
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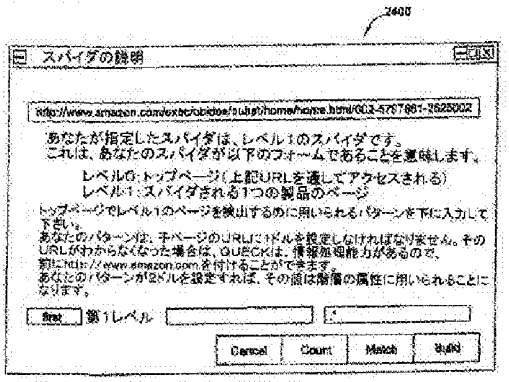
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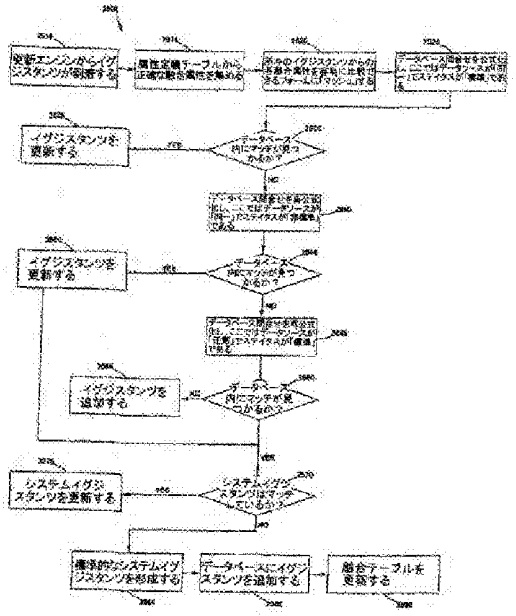
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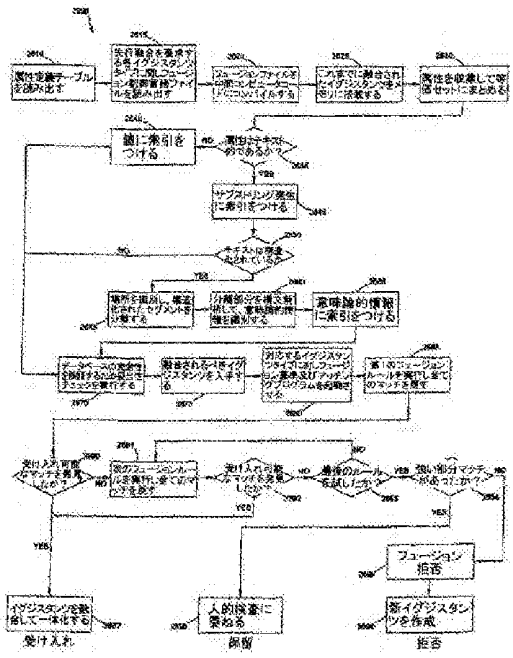
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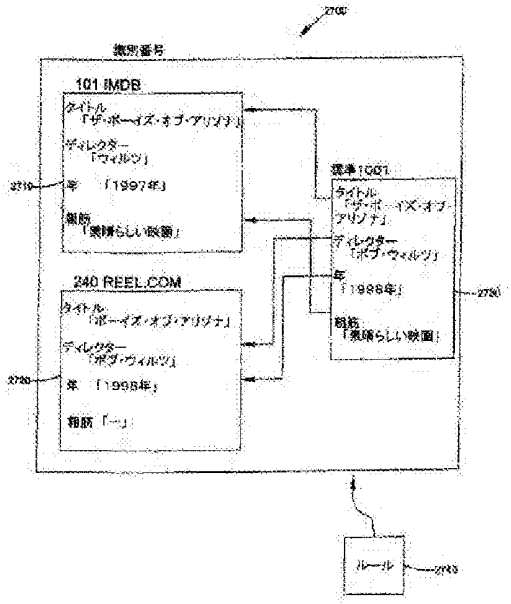
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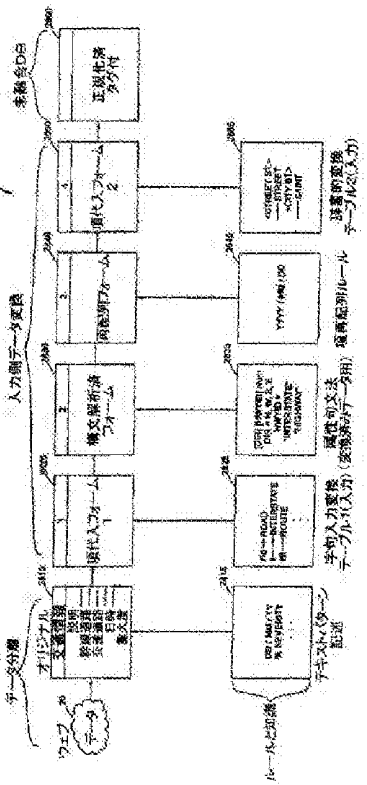
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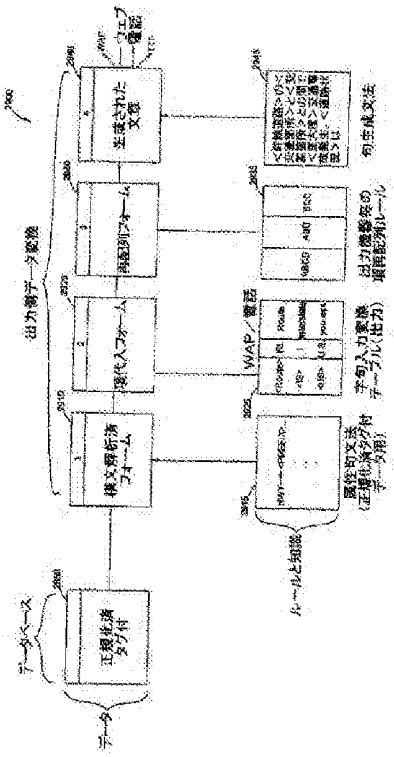
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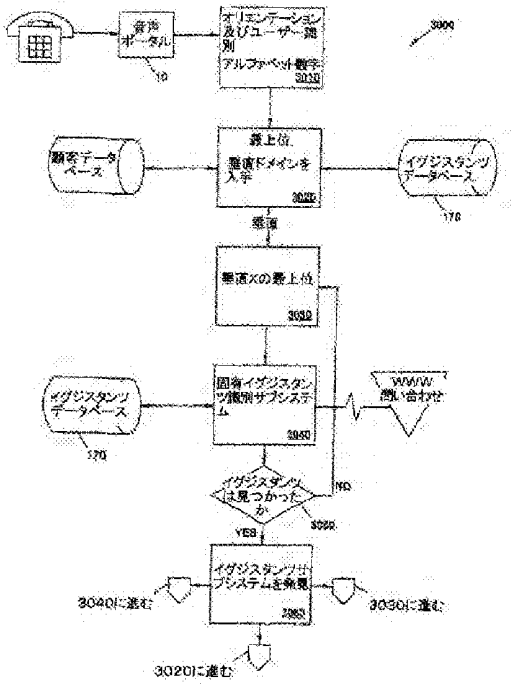
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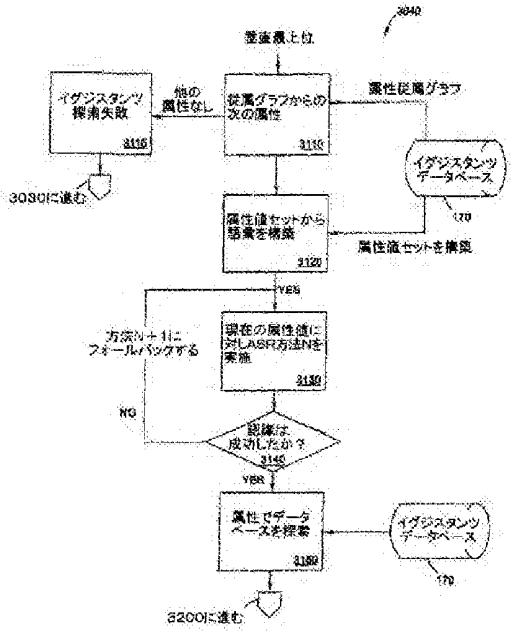
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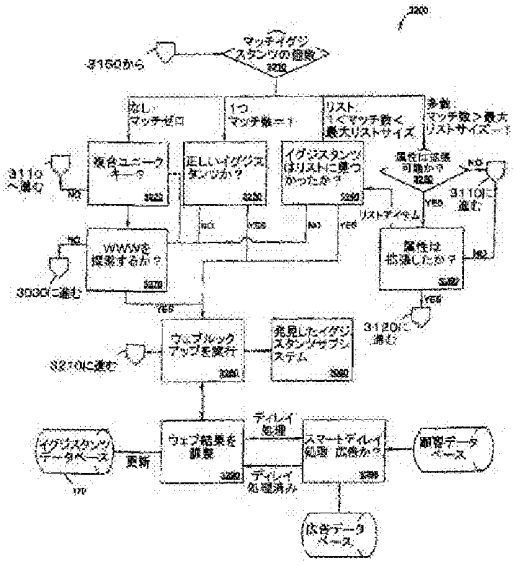
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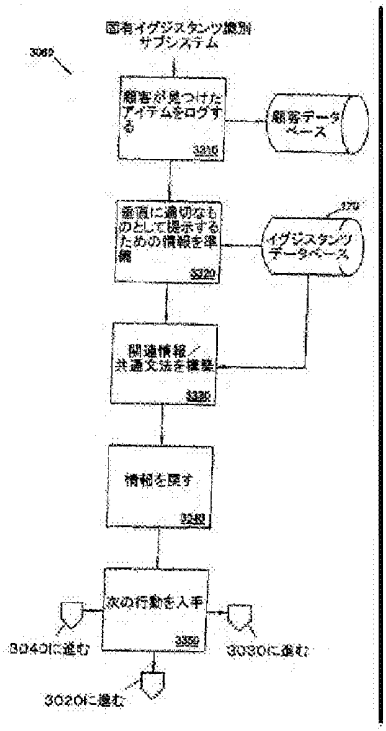
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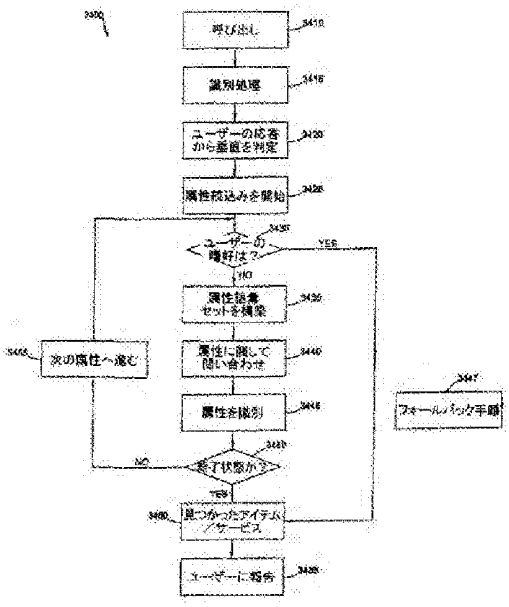
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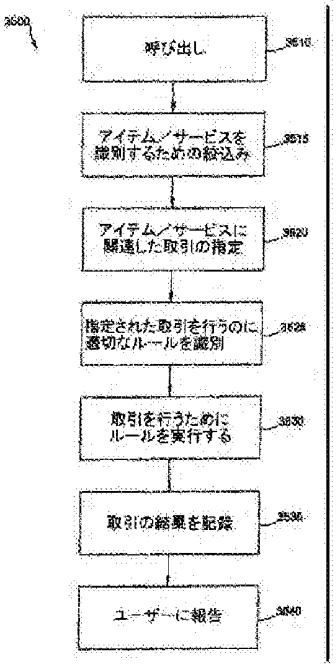
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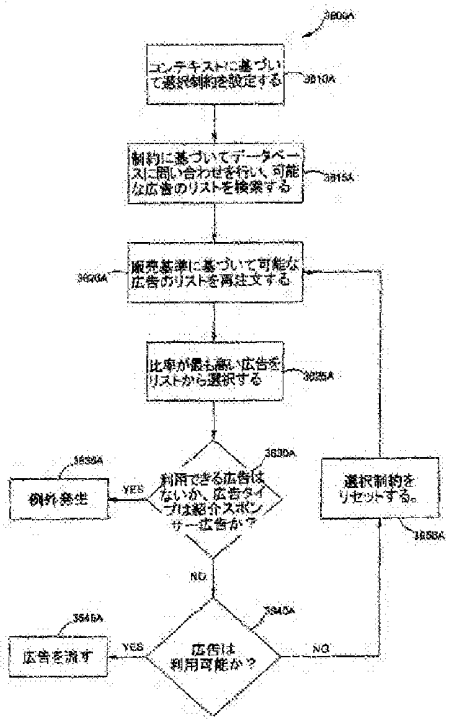
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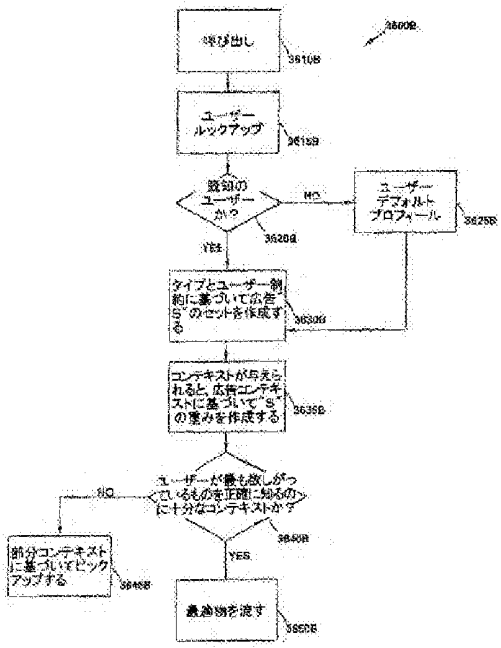
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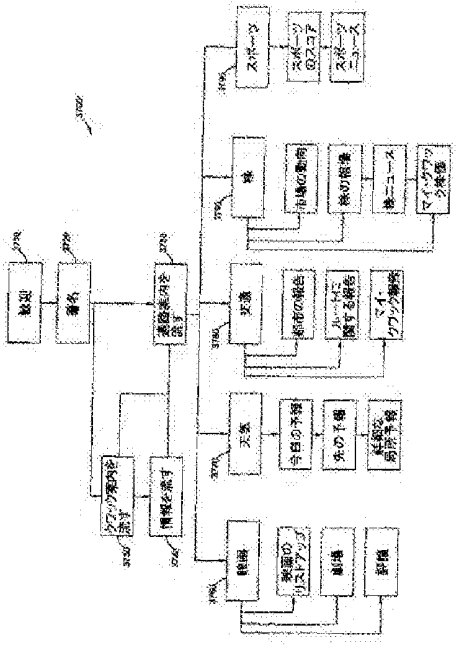
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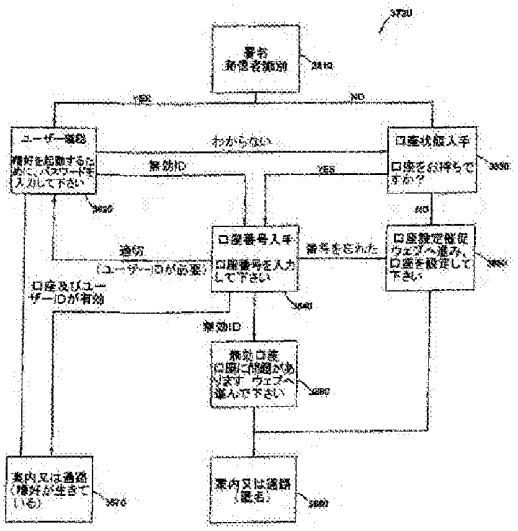
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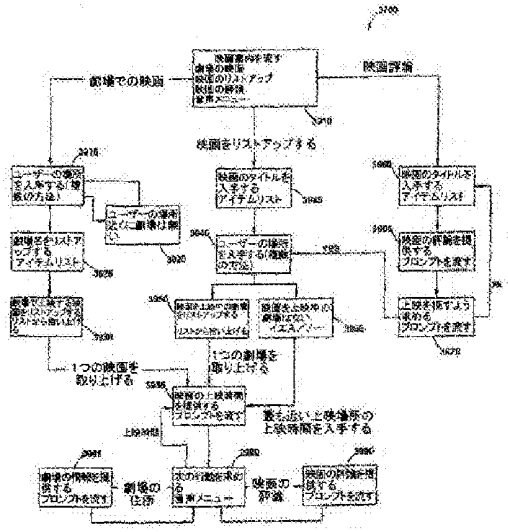
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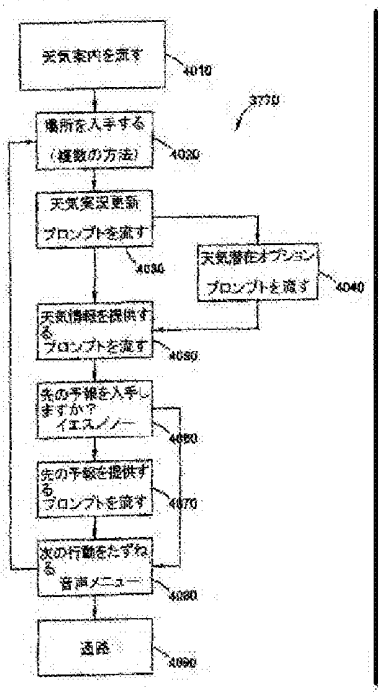
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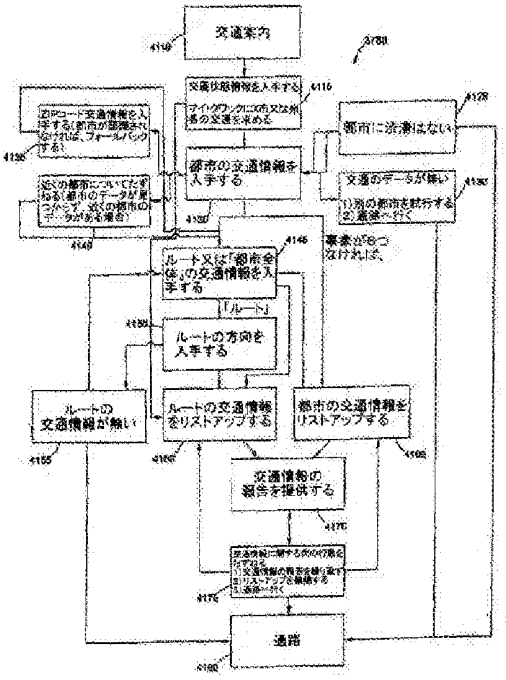
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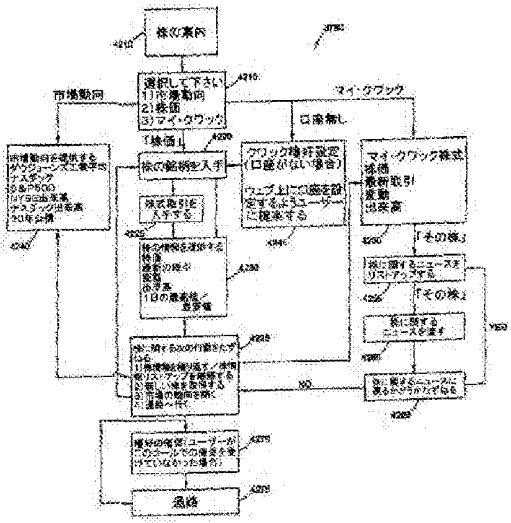
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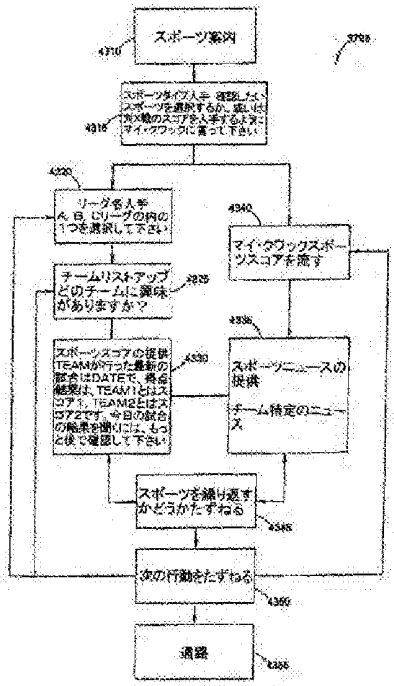
【図41】



【図42】



【図43】


スポーツ案内
4310
3700
4315
4320
リーグ名入手
A, B, Cリーグの内の
1つを選択して下さい
4340
マイ・クワックスポーツスコアを流す
チームリストアップ
どのチームに興味
がありますか？
4325
4335
スポーツスコアの提供
TEAMが行った最新の
試合はDATEで、現在
結果は、TEAM1とはス
コア1、TEAM2とはス
コア2です。今日の試合
の結果を聞くには、もっ
と後で確認して下さい
4330
スポーツニュースの
提供
チーム特定のニュース
スポーツを繰り返す
かどうかたずねる
4345
次の行動をたずねる
4360
通話
4365

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		Ｇ１０Ｌ　15/22	３００Ｚ	

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Applicant(s): YAHOO JAPAN CORP ± (YAHOO JAPAN CORP)

Classification: **- international:** ***G06F17/30; G06F19/00; G06Q30/02; G06Q30/06; G06Q50/00***

- cooperative:

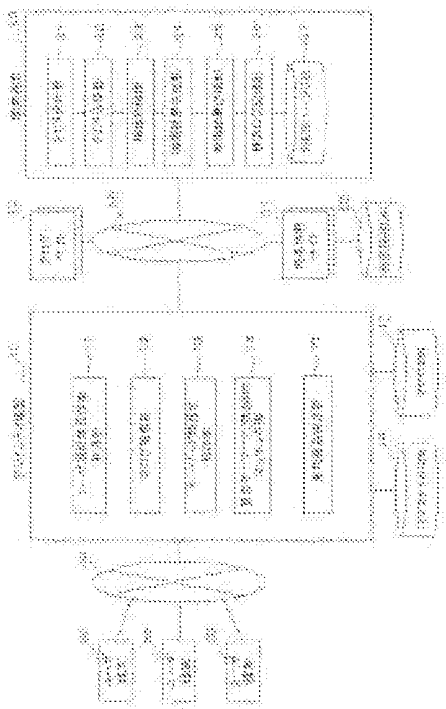
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Abstract of JP2008139928 (A)

PROBLEM TO BE SOLVED: To provide a new apparatus that can extract and recommend related articles of merchandise from sites responsive to general affairs and trends by effectively using resources existing on the Internet. ; SOLUTION: The apparatus comprises a user-selected merchandise information acquisition part for acquiring merchandise information selected by a user in an auction bidding or merchandise search on the Internet and acquiring a merchandise keyword from the merchandise information, a blog search part for searching blog sites based on the merchandise keyword, a keyword merchandise name extraction part for extracting merchandise name keywords frequent in pages from the content of blogs obtained by the blog search part, an extracted keyword/merchandise DB matching part for comparing the extracted keywords with sales merchandise information stored in a merchandise description database to compute affinity, and a recommended merchandise decision part for deciding merchandise keywords whose affinity is higher than a predetermined value as recommended merchandise to the user. ; COPYRIGHT: (C)2008,JPO&INPIT



(19)日本国特許庁(JP)　(12)公開特許公報(A)　(11)特許出願公開番号
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		G06F 17/30	340Z	

審査請求 未請求　請求項の数 5　OL　（全 14 頁）

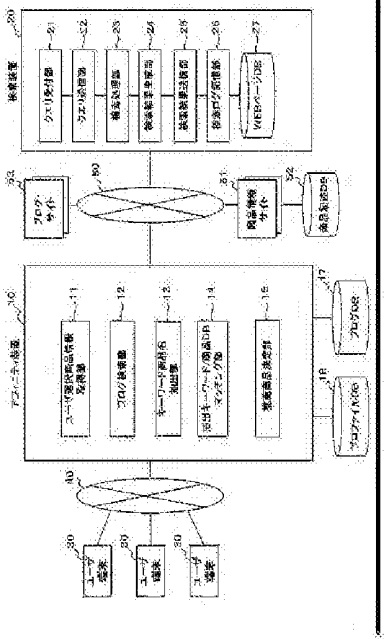
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Ｆターム(参考)　5B075 ND20　NK02　PP22　PR06　QM08

(54)【発明の名称】ブログ又はクエリ・クリックを利用したアフィニティ装置

(57)【要約】
【課題】インターネット上にすでに実現されている資源を有効に利用し、世の中の情勢や流行にも敏感に反応するようなサイトから関連商品を抽出し、推薦できる新たな装置等を提供すること。
【解決手段】インターネット上でのオークションの応札若しくは商品検索において、ユーザが選択した商品情報を取得して該商品情報から商品キーワードを取得するユーザ選択商品情報取得部と、商品キーワードに基づいて、ブログ・サイトに対して検索を行うブログ検索部と、ブログ検索部によって得られたブログのコンテンツから、そのページ内で頻出する商品名のキーワードを抽出するキーワード商品名抽出部と、抽出したキーワードと商品記述データベースに格納された販売用商品情報とを比較し、適合度を求める抽出キーワード／商品ＤＢマッチング部と、適合度が所定の値よりも高い商品キーワードを前記ユーザに対する推薦商品として決定する推薦商品決定部とを備える装置。
【選択図】図１



【特許請求の範囲】
【請求項1】
ユーザが求める商品に関連する他の商品の情報を抽出する方法であって、
ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、前記ユーザが選択した商品情報を取得して前記ユーザが求める商品の第１の商品情報を取得するステップと、
前記オークションのサイト若しくは前記商品検索のサイトとは異なる別のサイトから前記第１の商品情報に関連するページを取得し、該関連するページの特徴を解析するステップと、
前記解析によって得られたページ内で頻出する第２の商品情報を抽出するステップと、
前記第２の商品情報と商品記述データベースに格納されている販売用商品情報との適合度を求めるステップと、
前記適合度が所定の値よりも高い前記第２の商品情報を、前記第１の商品情報に関連する推薦商品として決定するステップと、
を含む方法。
【請求項2】
ユーザが求める商品に関連する他の商品の情報を抽出する装置であって、
ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、前記ユーザが選択した商品情報を取得して該商品情報から商品キーワードを取得するユーザ選択商品情報取得部と、
前記商品キーワードに基づいて、ネットワーク上のブログ・サイトに対して検索を行うブログ検索部と、
前記ブログ検索部によって得られたブログのコンテンツから、そのコンテンツのページ内で頻出する商品名のキーワードを抽出するキーワード商品名抽出部と、
前記抽出したキーワードと商品記述データベースに格納されている販売用商品情報とを比較し、その適合度を求める抽出キーワード／商品ＤＢマッチング部と、
前記適合度が所定の値よりも高い商品キーワードを前記ユーザに対する推薦商品として決定する推薦商品決定部と、
を備える装置。
【請求項3】
ユーザが求める商品に関連する他の商品の情報を抽出する装置であって、
ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、前記ユーザが選択した商品情報を取得して該商品情報から商品キーワードを取得するユーザ選択商品情報取得部と、
前記ユーザのクリックした商品情報ページと同じページをクリックした他のユーザがクリックした前記商品情報ページとは別のページを取得するクリックページ取得部と、
前記別のページで頻出する他商品のキーワードを抽出する他商品キーワード抽出部と、
前記他商品のキーワードと商品記述データベースに格納されている販売用商品情報との適合度を求める商品ＤＢ／クリックページマッチング部と、
前記適合度が所定の値よりも高い商品情報をユーザが求めた商品と関連する推薦商品として決定する推薦商品決定部と、
を備える装置。
【請求項4】
前記頻出する商品のキーワードは、ＴＦ＊ＩＤＦ値を計算することによって求める、請求項２又は３に記載の装置。
【請求項5】
前記クリックページ取得部は、前記ユーザのクリックした商品情報ページに替えて、前記ユーザの参照した参照ニュースページ若しくは参照記事ページと同じページをクリックした他のユーザがクリックした前記商品情報ページとは別のページを抽出する、請求項３

に記載の装置。
【発明の詳細な説明】
【技術分野】
【0001】
本発明は、ブログ又はクエリ・クリックを利用したアフィニティ装置に関する。更に詳しくは、インターネット上のブログ・サイトやユーザが検索したクリック履歴から、関連する商品の情報を抽出するための装置、方法に関する。
【背景技術】
【0002】
インターネットを利用した各種の検索サービスやオンライン・ショッピングが広く普及するにつれ、ユーザが求める商品のみならず、その商品に関連する商品やサービス等も合わせて、ユーザに提示することが広く行われている。例えば、ユーザが、求める書籍をインターネット・ショッピングサイトで検索すると、ショッピングサイトのシステムは、その書籍の情報のみならず、その同じ書籍を購入した別のユーザを検出し、その別のユーザが購入した書籍を同時に表示させて、関連する書籍の販売に結び付けようとする。
【0003】
また、例えば、特許文献１には、顧客の購買履歴データを取得し、この購買履歴データから、商品の活性度と各商品の購買頻度から各商品の推薦度を求めて、顧客が商品を購入する際に、当該商品と時系列的な順序関係のある商品で推薦度の高い商品を顧客に推薦するような商品推薦装置等が開示されている。
【特許文献1】特開２００２－２７９２７９号公報
【発明の開示】
【発明が解決しようとする課題】
【0004】
上記の書籍のショッピングサイトの例では、他のユーザの書籍購入履歴を利用して、他の商品を推薦するものであるが、書籍と関係ないカテゴリーの中から関連する商品を推薦することはできない。書籍以外にも同様なサービスを提供するサイトもあるが、自サイト外が扱う商品以外の商品情報を推薦することはできない。
【0005】
また、特許文献１に記載の方法では、ユーザ（顧客）の購買履歴を時系列に多数蓄積し、そこから関連する商品を抽出して推薦する。しかしながら、このような方法では、購買履歴を持たないユーザや、新商品等発売されてまもない商品についてはデータの蓄積が少なく、必ずしも有効でない場合がある。また、最近のように膨大な商品数が存在し、かつ流行や移り変わりの激しい時代では、ユーザの購買履歴を蓄積するだけでは推薦できる商品の幅も狭くなりがちである。ユーザの商品購買意欲は、過去のユーザの履歴だけでは判断できないものであるし、世の中の情勢や他のユーザの動向によっても影響を受けるものだからである。
【0006】
本発明は、上記のような課題を鑑み、インターネット上にすでに実現されている様々なデータベース等の資源を有効に利用し、世の中の情勢や流行にも敏感に反応するようなサイトから関連商品を抽出し、推薦できるような新たな装置等を提供することを目的とする。
【課題を解決するための手段】
【0007】
本発明では、以下のような解決手段を提供する。
【0008】
（１）　ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、前記ユーザが選択した商品情報を取得して前記ユーザが求める商品の第１の商品情報を取得するステップと、
前記オークションのサイト若しくは前記商品検索のサイトとは異なる別のサイトから前

記第１の商品情報に関連するページを取得し、該関連するページの特徴を解析するステップと、
前記解析によって得られたページ内で頻出する第２の商品情報を抽出するステップと、
前記第２の商品情報と商品記述データベースに格納されている販売用商品情報との適合度を求めるステップと、
前記適合度が所定の値よりも高い前記第２の商品情報を、前記第１の商品情報に関連する推薦商品として決定するステップと、
を含む方法。
【0009】
この方法では、まず、ユーザがインターネット上のオークションや商品検索を行った際にユーザが選択した商品の商品名やキーワードを第１の商品情報として取得する。次にオークションサイトや商品検索に用いたサイトとは別のサイト（例えばブログ・サイトや同じ商品を検索したユーザが閲覧した別のサイト）から、第１の商品情報に関連するページを取得し、この関連するページに対して特徴を解析する。そして、その解析によって得られたページ内で頻出する第２の商品情報（商品名、キーワード）を求める。そして第２の商品情報と商品記述データベースに格納されている販売用商品情報との適合度を求め、適合度の高い第２の商品情報をユーザに対する推薦商品として決定する。
【0010】
このようにすることで、ユーザが直接参照したページとは異なる他のページの情報を利用して、ユーザに対する推薦商品の幅を広くすることができる。すなわち、間接情報を利用して関連商品を抽出することができる。
【0011】
（２）　ユーザが求める商品に関連する他の商品の情報を抽出する装置であって、
ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、前記ユーザが選択した商品情報を取得して該商品情報から商品キーワードを取得するユーザ選択商品情報取得部と、
前記商品キーワードに基づいて、ネットワーク上のブログ・サイトに対して検索を行うブログ検索部と、
前記ブログ検索部によって得られたブログのコンテンツから、そのコンテンツのページ内で頻出する商品名のキーワードを抽出するキーワード商品名抽出部と、
前記抽出したキーワードと商品記述データベースに格納されている販売用商品情報とを比較し、その適合度を求める抽出キーワード／商品ＤＢマッチング部と、
前記適合度が所定の値よりも高い商品キーワードを前記ユーザに対する推薦商品として決定する推薦商品決定部と、
を備える装置。
【0012】
このような構成によれば、本装置は、ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、前記ユーザが選択した商品情報を取得して該商品情報から商品キーワードを取得する。次に、商品キーワードを用いて、ネットワーク上のブログ・サイトに対して検索を行う。得られたブログのコンテンツから、そのコンテンツページで頻出する商品名のキーワードを抽出する。そして、抽出したキーワードと商品記述データベース（典型的にはその商品のメーカや販売者から提供される）に格納されている販売用商品情報とを比較し、その適合度を求め、適合度が所定の値よりも高い商品キーワードを前記ユーザに対する推薦商品として決定する。
【0013】
このようにすることで、インターネット上に多数存在する広告効果の高いブログから得られる各種の情報（例えば、カリスマブログに記載された口コミ情報等）を利用して、推薦商品を抽出することができる。
【0014】
（３）　ユーザが求める商品に関連する他の商品の情報を抽出する装置であって、

ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、前記ユーザが選択した商品情報を取得して該商品情報から商品キーワードを取得するユーザ選択商品情報取得部と、
前記ユーザのクリックした商品情報ページと同じページをクリックした他のユーザがクリックした前記商品情報ページとは別のページを取得するクリックページ取得部と、
前記別のページで頻出する他商品のキーワードを抽出する他商品キーワード抽出部と、
前記他商品のキーワードと商品記述データベースに格納されている販売用商品情報との適合度を求める商品ＤＢ／クリックページマッチング部と、
前記適合度が所定の値よりも高い商品情報をユーザが求めた商品と関連する推薦商品として決定する推薦商品決定部と、
を備える装置。
【0015】
このような構成によれば、本装置は、ユーザ端末から、インターネット上でのオークションの応札若しくは商品検索において、ユーザが選択した商品情報を取得して該商品情報から商品キーワードを取得する。次に、ユーザのクリックした商品情報ページと同じページをクリックした他のユーザがクリックした前記商品情報ページとは別のページを抽出する。そして、この別のページで頻出する他商品のキーワードを抽出し、商品記述データベースに格納されている販売用商品情報と前記別のページとの適合度を求め、適合度が所定の値よりも高い商品情報をユーザが求めた商品と関連する推薦商品として決定する。
【0016】
このようにすることで、ユーザがオークション応札や商品検索の際にクリックしたページと同じページをクリックした別のユーザが、クリックした別のページにある情報を利用して、推薦商品を抽出することができる。
【0017】
（４）　前記頻出する商品のキーワードは、ＴＦ＊ＩＤＦ値を計算することによって求める。（２）又は（３）に記載の装置。
【0018】
このような構成によれば、取得したブログページ又は他のユーザがクリックしたページから頻出する語を抽出するためにＴＦ＊ＩＤＦ値を求める。ＴＦ＊ＩＤＦ値は、特定のページに偏って頻出する単語を抽出する広く知られた方法であるのでブログページやクリックしたページの特徴を抽出するのに有用である。
【0019】
（５）　前記クリックページ取得部は、前記ユーザのクリックした商品情報ページに替えて、前記ユーザの参照した参照ニュースページ若しくは参照記事ページと同じページをクリックした他のユーザがクリックした前記商品情報ページとは別のページを抽出する、（３）に記載の装置。
【0020】
このような構成によれば、本装置は、ユーザがクリックした商品情報ページにかわりに参照ニュースページ履歴や参照記事等個人の興味関心に基づく行動の履歴を用いることができる。このようにすることで、同じ興味のページをクリックしたユーザを類似ユーザととらえ、これらのユーザがクリックした他のページからも情報を抽出することができる。
【発明の効果】
【0021】
本発明によれば、インターネット上に実現されている資源を有効に利用し、特に検索するユーザとはまったく別の無関係な人間が作成した情報や履歴を利用して、関連する商品を抽出し推薦できるような装置等を提供することができる。
【発明を実施するための最良の形態】
【0022】
以下、本発明の実施形態について図を参照しながら説明する。
【0023】

［実施形態１］

図１は、本発明の実施形態１に係るアフィニティ装置１０及び関連するシステムのブロック図である。本発明のアフィニティ装置１０は、商品に関連する他の商品情報を、インターネット上の様々な情報を利用して、ユーザに提供するための装置である。アフィニティ装置１０は、インターネット４０，５０を介して利用者の端末であるユーザ端末３０、インターネット上のＷｅｂページを検索する検索エンジンを備えた検索装置２０、商品の詳細情報を提供する各種商品情報サイト５１（典型的には商品記述ＤＢ５２を備える）、及び各種ブログ・サイト５３と接続される。ここで、ユーザ（利用者）は、ユーザ端末３０を用いて、購入を検討している商品をなんらかの手段で表示しようとする。例えば、商品検索結果をクリックして、商品情報を表示させたり、オークションサイトの入札画面から目的の商品情報を表示させたりする。

【0024】

アフィニティ装置１０は、ユーザ選択商品情報取得部１１、ブログ検索部１２、キーワード商品名抽出部１３、抽出キーワード／商品ＤＢマッチング部１４、推薦商品決定部１５を備えている。また、ユーザの履歴や各種個人情報を格納するプロファイルＤＢ１６、及びブログ専用の検索に用いるブログＤＢ１７を備える。ただし、プロファイルＤＢ１６とブログＤＢ１７については、それらを装置内部に備えていてもよいが、ネットワークに接続する外部装置に備えるようにしても。各部の働きについては次の図２で説明する。

【0025】

検索装置２０は、アフィニティ装置１０と通信可能に接続され、典型的には、クエリ受付部２１、クエリ送信部２２、検索処理部２３、検索結果生成部２４、検索結果送信部２５、検索ログ記憶部２６を備える。ここで、クエリとは、ユーザ又は他の装置（ここではアフィニティ装置１０）からの照会を受け、その結果を返答することをいう。検索処理部２３は、クエリ受付部２１から入力された検索キーワードや検索条件を用いて、実際の検索処理を行うもので、ここでは公知の検索技術が用いられてよい。検索結果生成部２４と検索結果送信部２５は、クエリの要求に合わせて、検索結果を加工したり、ユーザが見やすいように表示画面を生成したり、その結果を要求元に送信するものである。また、ＷＥＢページＤＢ２７は、検索のための情報を格納したデータベースであり、検索装置２０となんらかの形で接続されていれば、このデータベースは、検索装置２０の内部にあっても外部にあってもよい。なお、アフィニティ装置１０、検索装置２０において、上記の構成はほんの一例であり、他の様々なバリエーションが考えられることはいうまでもない。

【0026】

図２は、本発明の実施形態１に係るアフィニティ装置１０が行う処理フローを示す図である。まず、ステップＳ１において、ユーザ選択商品情報取得部１１は、Ｙａｈｏｏ！オークション等のインターネット上の各種オークションサイトや、Ｙａｈｏｏ！商品検索等の各種商品情報検索によって、購入したい商品情報取得する。例えば、オークションにおいては、その入札しようとする画面情報から、インターネット・ショッピングでは商品購入画面情報から、商品名やキーワードを取得する。購入したい商品名やキーワードを取得する方法は、本発明においては主眼でなく任意の方法を用いてよい。

【0027】

次に、ステップＳ２において、本実施形態１の中心的な役割をになうブログ検索部１２が、上記で得た商品名等を用いてインターネット上に多数存在するブログ・サイト５３を検索する。ブログとは、一般的には、インターネット上の様々なユーザが作成する日記風のホームページとされているが、今日では、商品の広告手段として注目を浴びている。例えば、広告サービス会社は、ブログの作成者（ブロガ）に対価を支払い、自分のブログに顧客企業の商品を使った経験等を載せ、それとなく宣伝してもらうようにしている。カリスマブロガと呼ばれる人間が作成したブログ・サイトには毎日数万件の訪問者があることも珍しくないからである。これは、Ｖｅｒｖａｌ　Ｍａｒｋｅｔｉｎｇとも呼ばれ、口コミを利用する新たなＰＲ手法である。口コミは、利用者の生の声やブームを反映するものとして広告効果が高いとされており、インターネット上のブログは、このような口コミ情

報を掲載する手段として非常に有用である。本発明では、ブログを、関連商品情報を得るための手段として用いている。図１のブログＤＢ１７は、このようなブログ・サイトへのリンク等を多数格納したブログ専用のデータベースである。このデータベースを利用して、ブログ検索部１２は、効率的にユーザが購入したい商品名やキーワードが掲載されたブログページを集めることができる。

【0028】

次に、ステップＳ３において、キーワード商品名抽出部１３が、集められたブログページを解析し、ブログ記事、コメントからキーワードとなる商品名を抽出する。このキーワード商品名は、商品そのものの正式名称だけでなく、略称や巷でよく使われる愛称であってもよい。このようなキーワード商品名の抽出にはブログは最適である。キーワード商品名は、特定のページに偏って頻出する単語を抽出する。具体的には、単語毎にＴＦ＊ＩＤＦ（Ｔｅｒｍ　Ｆｒｅｑｕｅｎｃｙ＊Ｉｎｖｅｒｓｅ　Ｔｅｒｍ　Ｆｒｅｑｕｅｎｃｙ）値を計算することによって求めることができる。

【0029】

次に、ステップＳ４において、抽出キーワード／商品ＤＢマッチング部１４が、抽出キーワード等と商品ＤＢから取得した商品情報のマッチング（比較）を行う。ここでのマッチングには、抽出キーワード等と商品記述との適合関係を求めて判定される。ここで、適合度の計算には公知の技術を用いてよい（例えば、特公２００３－１６７９２０公報参照）。

【0030】

最後に、ステップＳ５において、推薦商品決定部１５が、関連する商品の中から適合度の高いものを推薦商品として決定する。以上のステップを次の図３を用いて更に具体的に説明する。

【0031】

図３は、本発明の実施形態１におけるプロファイルＤＢ１６に格納されるテーブルの例を示す図である。このテーブルにはユーザ毎のプロファイルが格納される。ここでは、まず、ユーザＩＤ「ＡＡＡ」のユーザが、オークション応札や商品検索によって、購入を考慮している商品のページ等から得られた語「ＫＫＫカメラ」が、商品キーワードとして、このテーブルに格納される。この商品キーワードに基づいて、ブログ検索部１２が、このキーワードを含んだブログページのＵＲＬを格納する。このときのキーワードは、「ＫＫＫカメラ」だけでなく、その類義語も用いてもよい。例えば、「ＫＫＫのカメラ」、「カメラＫＫＫ」等である。

【0032】

次に、キーワード商品名抽出部１３が、集められたブログページの内容を解析し、そのＵＲＬ毎に、ＴＦ＊ＩＤＦ法等を用いて、特定のページに偏って頻出する単語を、「キーワード・商品名」として抽出する。ここでは、「ＡＡＹレンズ」、「ＱＱＱプリンタ」、「ＭＭＭ双眼鏡」が抽出されたとする。

【0033】

抽出キーワード／商品ＤＢマッチング部１４は、抽出されたキーワード・商品名を商品記述ＤＢに格納された正式商品名と比較し、適合度の高い正式商品名を抽出する。ここでは、「ＭＭＭ双眼鏡」は、そのまま商品ＤＢに商品名として記述されているので、適合度１００として抽出されている。いっぽう、「ＡＡＡレンズ」や「ＺＺＺプリンタ」は、「キーワード・商品名」との適合度はやや低く、それぞれ、８６．０，５４．０となっている。

【0034】

図４は、オークション入札画面における関連商品情報の表示例を示す図である。この画面表示において、左側の領域と右上の領域は、通常のオークションの入札画面である。この画面を表示したユーザは、出品者「ｋａｎａさん」が出品した商品である「ＫＫＫカメラ」に入札しようかと思慮している。画面右下の領域（符号６０で示す）が、アフィニティ装置１０によって追加された関連商品情報である。この領域に、ブログの情報から他に

推薦する商品として、「この商品を論じている人は、こういう商品についても論じています」と記載され、「ＭＭＭ双眼鏡」、「ＡＡＡレンズ」、「ＺＺＺプリンタ」が、適合度の高い順にリストされている。ここでは図示していないが、人気マブログ名を情報元として表示するようにしてもよい。ユーザが、このブログから得た情報を元にした関連商品情報を参照することにより、「ＫＫＫカメラ」だけでなく、「ＭＭＭ双眼鏡」等に誘導されれば、「ＭＭＭカメラ」の広告主にとって有用である。このようにブログを用いた関連商品の表示は従来になく、口コミによる広告効果をねらった関連商品の新しい広告手段であるといえる。

【0035】

［実施形態２］

図５は、本発明の実施形態２に係るアフィニティ装置１０ａ及び関連するシステムのブロック図である。本実施形態では、アフィニティ装置１０ａは、インターネット４０，５０を介して利用者の端末であるユーザ端末３０、インターネット上を検索する検索エンジン等を備えた検索装置２０、及び、商品の詳細情報を提供する各種商品情報サイト５１（商品記述ＤＢ５２を備える）と接続される。このようなシステム構成は、図１の場合と同様であるが、図１との相異は、ブログ検索部１２が、クリックページ取得部１２ａに置き換わったこと、ブログ・サイト５３とブログＤＢ１７が存在しない代わりにユーザクリック履歴ＤＢ１７ａや参照ニュースページ履歴ＤＢ１７ｂが存在する点である。

【0036】

アフィニティ装置１０ａは、ユーザ選択商品情報取得部１１ａ、クリックページ取得部１２ａ、他商品キーワード抽出部１３ａ、商品ＤＢ／クリックページマッチング部１４ａ、推薦商品決定部１５ａを備えている。また、プロファイルＤＢ１６、とユーザクリック履歴ＤＢ１７ａ等を、装置内部に備えていてもよいし、ネットワークに接続する外部に備えていてもよい。アフィニティ装置１０ａ各部の働きについては次の図６で説明する。

【0037】

検索装置２０は、アフィニティ装置１０ａと通信可能に接続され、典型的には、クエリ受付部２１、クエリ送信部２２、検索処理部２３、検索結果生成部２４、検索結果送信部２５、検索ログ記憶部２６を備える。検索装置２０の構成は、図１の場合とまったく同一なのでここでは説明を省略する。なお、アフィニティ装置１０ａ、検索装置２０において、上記の構成はほんの一例であり、他の様々な構成が考えられることはいうまでもない。

【0038】

図６は、本発明の実施形態２に係るアフィニティ装置１０ａが行う処理フローを示す図である。まず、ステップＳ１ａにおいて、ユーザ選択商品情報取得部１１ａが、Ｙａｈｏｏ！オークション等のインターネット上の各種オークションサイトや、各種商品情報検索によって、ユーザが購入しようとする商品の商品情報（商品名等）を取得する。例えば、オークションにおいてはその入札ページから、インターネット・ショッピングでは購入ページから、商品名等を取得する。ここで、購入したい商品名等を取得する方法は任意であってよい。

【0039】

ステップＳ１ａは、ユーザが商品を購入しようとする意志を持っている場合の処理であるが、一般の検索では、必ずしも商品の購入が目的ではない。この場合は、ステップＳ１ａの代わりにステップＳ１ｂにおいて、一般検索により得られたＷｅｂページを取得する。

【0040】

次に、ステップＳ２ａにおいて、クリックページ取得部１２ａが、オークションの入札ページのＵＲＬや商品検索された商品ページのＵＲＬ、又は、一般検索の結果でユーザがクリックしたページのＵＲＬを取得する。このＵＲＬは、プロファイルＤＢ１６ａにユーザプロファイルのクリック履歴として記憶される。更に、クリックページ取得部１２ａは、ユーザプロファイルに記憶されたクリック履歴の中から、同じＵＲＬをクリックしたユーザＩＤを見つけ出す。すべてのユーザのクリック履歴は、ユーザクリック履歴ＤＢ１７

ａから取得できる。ユーザのクリック履歴を自動的に集める方法は公知の技術である。ただし、参照ニュースページ履歴を集めるためには、クリックページ取得部が、定期的にユーザ端末３０を探索する必要があろう。

【0041】

次に、ステップＳ３ａにおいて、他商品キーワード抽出部１３ａは、他のユーザのクリック履歴から、当該他のユーザがクリックしたＵＲＬのページ内容を解析し、その特徴（プロファイル）となる語を抽出する。この特徴となる語は、商品の正式名称や、略称や巷でよく使われる愛称であってもよい。具体的には、単語毎にＴＦ＊ＩＤＦ値を計算することによって求めることができる。

【0042】

次に、ステップＳ４ａにおいて、商品ＤＢ／クリックページマッチング部１４ａが、商品記述ＤＢに格納された商品情報と他のユーザがクリックしたページのプロファイル（特徴となる語）とのマッチング（比較）を行う。ここでのマッチングには、適合度を求めて判定される。ここで、適合度の計算には公知の技術を用いてよい。

【0043】

最後に、ステップＳ５ａにおいて、推薦商品決定部１５ａが、他のユーザがクリックしたページから抽出された特徴となる語の中から、元のユーザが検索した商品キーワードとの適合度の高いものを推薦商品として決定する。以上のステップを次の図７を用いて具体的に説明する。

【0044】

図７は、本発明の実施形態２におけるプロファイルＤＢ１６に格納されるテーブルの例を示す図である。ここでは、まず、ユーザＩＤ「ＡＡＡ」のユーザが商品検索した「ＫＫＫカメラ」が「商品キーワード」として、このテーブルに格納される。また、このとき、このユーザがクリックした「ＫＫＫカメラ」の商品情報ページのＵＲＬが、クリックページＵＲＬとしてこのテーブルに格納される。そして、この同じＵＲＬ（ｈｔｔｐ：／／ｗｗｗ．ｘｘｘ、ａａａ）をクリックした他のユーザのＩＤ（「ＣＣＣ」，「ＤＤＤ」，「ＥＥＥ」）を、「同じページをクリックした類似ユーザＩＤ」として、このテーブルに格納する。また、これらの他の類似ユーザがクリックした他のページのＵＲＬのリストを、このデーブルに更に格納する。

【0045】

次に、他商品キーワード抽出部１３ａが、集められた類似ユーザのクリックしたＵＲＬリストを用いて、そのＵＲＬ先の内容を検索し、ＴＦ＊ＩＤＦ法等を用いて、特定のページに偏って頻出する単語を推薦商品候補として抽出する。このとき、クリックしたページの代わりに、参照ニュースページ履歴、参照記事履歴等の個人の興味関心に基づく履歴を用いてもよい。ここでは、ユーザ「ＣＣＣ」がクリックした３つのＵＲＬから、「ＥＥＥ双眼鏡」が抽出され、推薦商品候補としてテーブルに格納されたことが示されている。同様に、ユーザＩＤ「ＤＤＤ」のクリックした履歴から、同じく「ＥＥＥ双眼鏡」が検出され、ユーザＩＤ「ＥＥＥ」のクリック履歴からは「ＦＦＦレンズ」が推薦商品候補として抽出されたことを示している。

【0046】

図８は、商品検索画面における関連商品情報の表示例を示す図である。この画面表示において、左側の領域と右上の領域は、通常の商品検索の結果、特定の商品を表示した画面である。このユーザは、現在商品「ＫＫＫカメラ」の画面を表示しているが、画面右下の領域が、アフィニティ装置１０ａによって追加された関連商品情報である。ここでは、符号６０ａで示す領域に、他のユーザの情報から推薦する商品として、「この商品を検索している人は、こういう商品についても検索しています」と表示され、ユーザ名と共に「ＥＥＥ双眼鏡」、「ＦＦＦレンズ」等のリンクが、表示される。ここで、ユーザ名は、特に表示されないようにしてもよい。この関連商品情報を参照することにより、「ＫＫＫカメラ」だけでなく、「ＥＥＥ双眼鏡」に誘導できれば、「ＥＥＥ双眼鏡」の広告主にとって有用である。このように同じ商品に興味を持った他のユーザのクリック履歴から関連商品

情報を抽出する方法は、従来にない手法であり、他人の間接情報を利用したＭａｒｋｅｔｉｎｇといえる。

【0047】

［アフィニティ装置のハードウェア構成］

図９は、本発明の好適な実施形態１，２に係るアフィニティ装置１０，１０ａのハードウェア構成の一例を示す図である（以下、単にアフィニティ装置１０と呼ぶ）。

【0048】

アフィニティ装置１０は、制御部１０１を構成するＣＰＵ（Ｃｅｎｔｒａｌ　Ｐｒｏｃｅｓｓｉｎｇ　Ｕｎｉｔ）１０１０（マルチプロセッサ構成ではＣＰＵ１０１２等複数のＣＰＵが追加されてもよい）、バスライン１００５、通信Ｉ／Ｆ１０４０、メインメモリ１０５０、ＢＩＯＳ（Ｂａｓｉｃ　Ｉｎｐｕｔ　Ｏｕｔｐｕｔ　Ｓｙｓｔｅｍ）１０６０、ＵＳＢポート１０９０、Ｉ／Ｏコントローラ１０７０、並びにキーボード及びマウス１１００等の入力手段や表示装置１０２２を備える。

【0049】

Ｉ／Ｏコントローラ１０７０には、テープドライブ１０７２、ハードディスク１０７４、光ディスクドライブ１０７６、半導体メモリ１０７８、等の記憶手段を接続することができる。

【0050】

ＢＩＯＳ１０６０は、アフィニティ装置１０の起動時にＣＰＵ１０１０が実行するブートプログラムや、アフィニティ装置１０のハードウェアに依存するプログラム等を格納する。

【0051】

記憶部１０７を構成するハードディスク１０７４は、アフィニティ装置１０が機能するための各種プログラム及び本発明の機能を実行するプログラムを記憶しており、更に必要に応じて各種データベースを構成可能である。

【0052】

光ディスクドライブ１０７６としては、例えば、ＤＶＤ－ＲＯＭドライブ、ＣＤ－ＲＯＭドライブ、ＤＶＤ－ＲＡＭドライブ、ＣＤ－ＲＡＭドライブを使用することができる。この場合は各ドライブに対応した光ディスク１０７７を使用する。光ディスク１０７７から光ディスクドライブ１０７６によりプログラム又はデータを読み取り、Ｉ／Ｏコントローラ１０７０を介してメインメモリ１０５０又はハードディスク１０７４に提供することもできる。また、同様にテープドライブ１０７２に対応したテープメディア１０７１を主としてバックアップのために使用することもできる。

【0053】

アフィニティ装置１０に提供されるプログラムは、ハードディスク１０７４、光ディスク１０７７、又はメモリカード等の記録媒体に格納されて提供される。このプログラムは、Ｉ／Ｏコントローラ１０７０を介して、記録媒体から読み出され、又は通信Ｉ／Ｆ１０４０を介してダウンロードされることによって、アフィニティ装置１０にインストールされ実行されてもよい。

【0054】

前述のプログラムは、内部又は外部の記憶媒体に格納されてもよい。ここで、記憶部１０７を構成する記憶媒体としては、ハードディスク１０７４、光ディスク１０７７、又はメモリカードの他に、ＭＤ等の光磁気記録媒体、テープ媒体を用いることができる。また、専用通信回線やインターネットに接続されたサーバシステムに設けたハードディスク１０７４又は光ディスクライブラリ等の記憶装置を記録媒体として使用し、通信回線を介してプログラムをアフィニティ装置１０に提供してもよい。

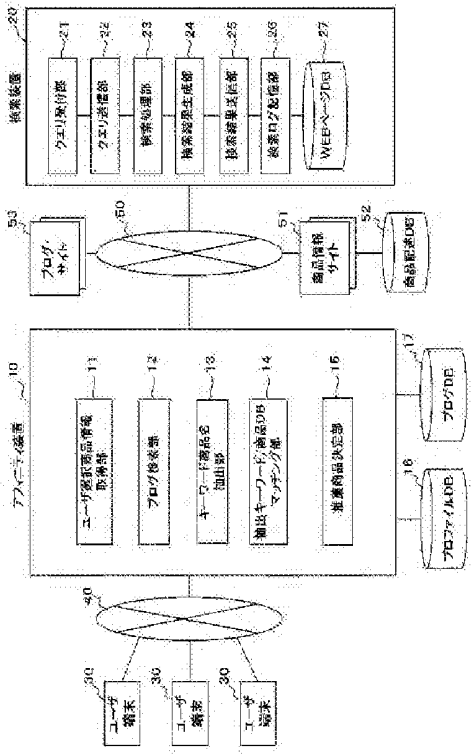
【0055】

ここで、表示装置１０２２は、ユーザにデータの入力を受け付ける画面を表示したり、アフィニティ装置１０による演算処理結果の画面を表示したりするものであり、ブラウン管表示装置（ＣＲＴ）、液晶表示装置（ＬＣＤ）等のディスプレイ装置を含む。

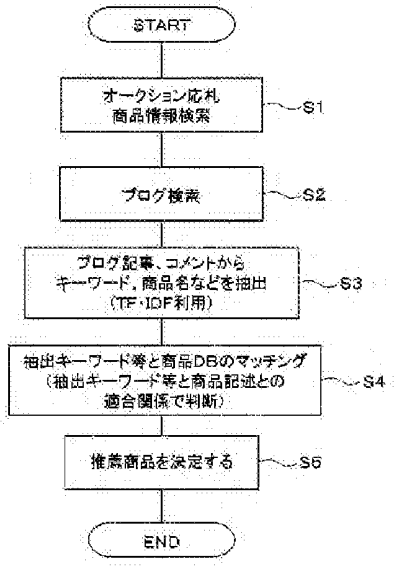
【0056】
ここで、入力手段は、ユーザによる入力の受付を行うものであり、キーボード及びマウス１１００等により構成してよい。
【0057】
また、通信Ｉ／Ｆ１０４０は、アフィニティ装置１０を専用ネットワーク又は公共ネットワークを介して端末と接続できるようにするためのネットワーク・アダプタである。通信Ｉ／Ｆ１０４０は、モデム、ケーブル・モデム及びイーサネット（登録商標）・アダプタを含んでよい。
【0058】
以上の例は、アフィニティ装置１０について主に説明したが、コンピュータに、プログラムをインストールして、そのコンピュータをサーバ装置として動作させることにより上記で説明した機能を実現することもできる。したがって、本発明において一実施形態として説明したサーバにより実現される機能は、上述の方法を当該コンピュータにより実行することにより、或いは、上述のプログラムを当該コンピュータに導入して実行することによっても実現可能である。
【0059】
以上、本発明の実施形態について説明したが、本発明は上述した実施形態に限るものではない。また、本発明の実施形態に記載された効果は、本発明から生じる最も好適な効果を列挙したに過ぎず、本発明による効果は、本発明の実施例に記載されたものに限定されるものではない。
【図面の簡単な説明】
【0060】
【図1】本発明の実施形態１に係るアフィニティ装置１０及び関連するシステムのブロック図である。
【図2】本発明の実施形態１に係るアフィニティ装置１０が行う処理フローを示す図である。
【図3】本発明の実施形態１におけるプロファイルＤＢ１６に格納されるテーブルの例を示す図である。
【図4】オークション入札画面における関連商品情報の表示例を示す図である。
【図5】本発明の実施形態２に係るアフィニティ装置１０ａ及び関連するシステムのブロック図である。
【図6】本発明の実施形態２に係るアフィニティ装置１０ａが行う処理フローを示す図である。
【図7】実施形態２におけるプロファイルＤＢ１６に格納されるテーブルの例を示す図である。
【図8】図８は、商品検索画面における関連商品情報の表示例を示す図である。
【図9】本発明の好適な実施形態１，２に係るアフィニティ装置１０，１０ａのハードウェア構成の一例を示す図である。
【符号の説明】
【0061】
１０，１０ａ　アフィニティ装置
１１，１１ａ　ユーザ選択商品情報取得部
１２　ブログ検索部
１２ａ　クリックページ取得部
１３　キーワード商品名抽出部
１３ａ　他商品キーワード抽出部
１４　抽出キーワード／商品ＤＢマッチング部
１４ａ　商品ＤＢ／クリックページマッチング部
１５，１５ａ　推薦商品決定部
１６，１６ａ　プロファイルＤＢ

１７　ブログＤＢ
１７ａ　ユーザクリック履歴ＤＢ
１７ｂ　参照ニュースページ履歴ＤＢ
２０　検索装置
２１　クエリ受付部
２２　クエリ送信部
２３　検索処理部
２４　検索結果生成部
２５　検索結果送信部
２６　検索ログ記憶部
２７　ＷＥＢページＤＢ
３０　ユーザ端末
４０，５０　インターネット
５１　商品情報サイト
５２　商品記述ＤＢ
５３　ブログ・サイト
６０，６０ａ　推薦商品情報

【図1】



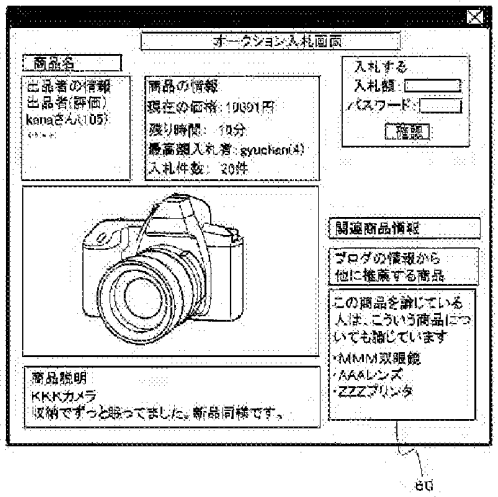
【図2】



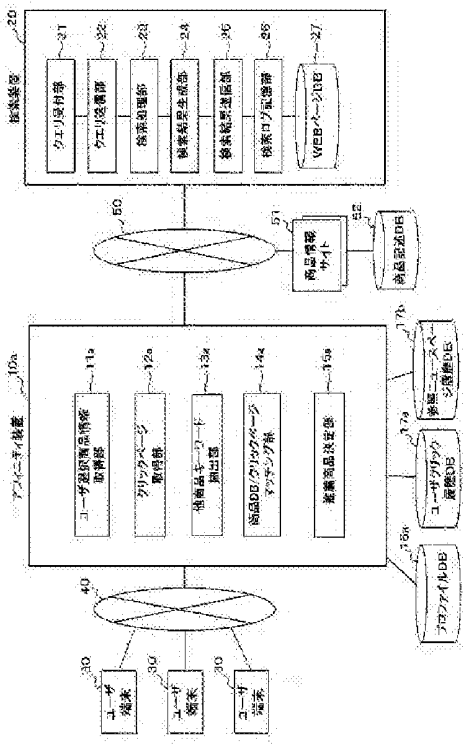
【図3】

ユーザID	商品キーワード	ブログページURL	キーワード・商品名	推奨候補商品	推奨商品
44A	KKKカメラ	http://www.xxx.aaa http://www.xxx.bbb http://www.xxx.ccc http://www.xxx.ddd	「AAYレンズ」 「QQQプリンタ」 「MMM双眼鏡」	MMM双眼鏡　100.0 AAAレンズ　66.0 ZZZプリンタ　54.0	MMM双眼鏡
BBB		http://www.xxx.eee			
CCC		・・・	・・・	・・・	・・・
・・・	・・・	・・・	・・・	・・・	・・・

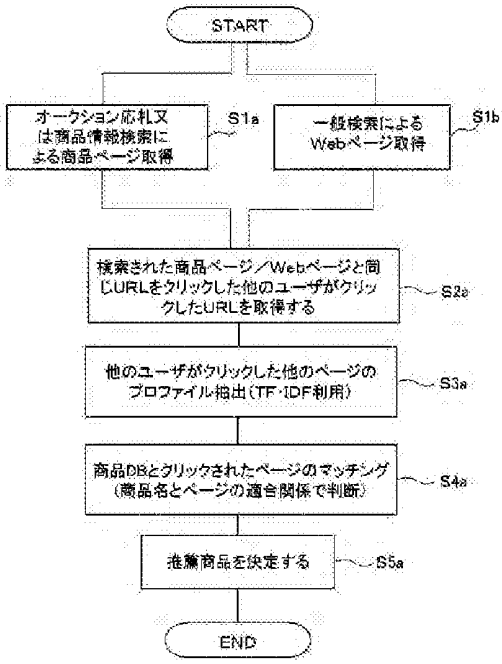
【図4】



【図5】



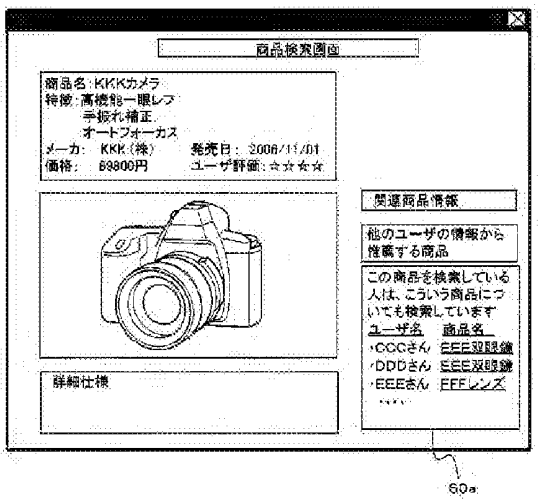
【図6】



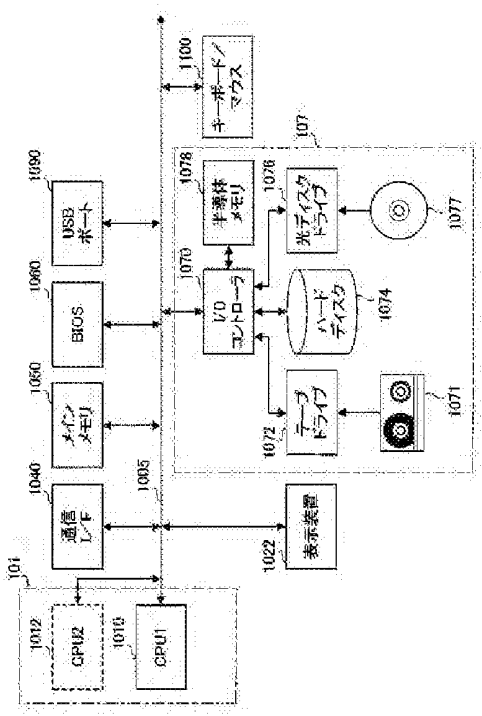
【図7】

ユーザID	商品キーワード	クリックページURL	同じページをクリックした他のユーザID	このユーザがクリックした後のページのURL	関連商品候補
AAA	KKKカメラ	http://www.xxx.xxx	CCC	http://www.xxx.xxx http://www.xxx.jjj http://www.xxx.xxx	EEE双眼鏡
-	-	-	DDD	http://www.xxx.xxx http://www.xxx.hhh http://www.xxx.iii	EEE双眼鏡
-	-	-	EEE	http://www.xxx.fff http://www.xxx.iii http://www.xxx.kkk	FFFレンズ

【図8】



【図9】



Electronic Patent Application Fee Transmittal

Application Number:	14016757
Filing Date:	03-Sep-2013
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Filer:	Ngai Bing Zhang/Miriam Nelsen Awan
Attorney Docket Number:	090611-0424941

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	20	40	800
Independent Claims in Excess of 3	2201	11	210	2310
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Extension - 1 month with $0 paid	2251	1	100	100
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
		Total in USD ($)		**3300**

Electronic Acknowledgement Receipt

EFS ID:	18992842
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Miriam Nelsen Awan
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	09-MAY-2014
Filing Date:	03-SEP-2013
Time Stamp:	16:26:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$3300
RAM confirmation Number	2757
Deposit Account	033975
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		090611-0424941_ResponseNFOA.pdf	587189 a93e22f1220bb6d648add3d23cd23ac2d164df50	yes	27

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Claims	2	25
Applicant Arguments/Remarks Made in an Amendment	26	27

Warnings:

Information:

2	Extension of Time	090611-0424941_EOT.pdf	23869 5ffcf484feb075155958f388a683cfab17c20f2f	no	1

Warnings:

Information:

3		090611-0424941_IDS_1449.pdf	605672 2cf00192201f405470ec0958225dcc2fef511120	yes	30

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Transmittal Letter	1	3
Information Disclosure Statement (IDS) Form (SB08)	4	30

Warnings:

Information:

4	Foreign Reference	090611-0424941_JP2006-146881.pdf	7520220 338675111ccab8aed2fd26993c595f9e9f6e3231	no	61

Warnings:

Information:

5	Foreign Reference	090611-0424941_JP2008-027454.pdf	8986274 71e465ffa836196d0b525bb494e1ee7dbdb7434c	no	58

Warnings:					
Information:					
6	Foreign Reference	090611-0424941_JP2008-139928.pdf	2362361 22d790ab82a03ae19fc86727a821516b5dd0df3d	no	16
Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	35445 73f41859ebb34e64614f068ba4ba1bc043e28b05	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	20121030		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/016,757	Filing Date 09/03/2013	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	05/09/2014	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 55	Minus	** 35	= 20	X $40 =	800
	Independent (37 CFR 1.16(h))	* 14	Minus	***3	= 11	X $210 =	2310
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	**3110**

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/LYNNELL JOHNSON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Attorney Docket: 090611-0424941

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT :	TOM FREEMAN, ET AL.	CONFIRMATION NO. :	2790
SERIAL NUMBER :	14/016,757	GROUP ART UNIT:	2658
FILING DATE :	SEPTEMBER 3, 2013		
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

RESPONSE TO INFORMATIONAL NOTICE

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Informational Notice dated September 30, 2013 (copy attached), please find attached the executed Declarations of inventors Tom FREEMAN and Mike KENNEWICK.

It is believed that no fees are due in connection with the submission of this paper. However, if it is determined that fees are due, the Commissioner is hereby authorized to charge any fees which may be required to Deposit Account No. 033975 (ref. **090611-0424941**).

Date: May 23, 2014

Respectfully submitted,

/NGAI B. ZHANG/

By: _____

Ngai B. Zhang
Reg. No. 65,473

PILLSBURY WINTHROP SHAW PITTMAN LLP
P.O. Box 10500
McLean, Virginia 22102
Main: 703-770-7900
Direct: 703-770-7532
Fax: 703-770-7901
E-mail: ngai.zhang@pillsburylaw.com

404547017v1

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/016,757	09/03/2013	Tom Freeman	090611-0424941

CONFIRMATION NO. 2790

909
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

NOTICE



Date Mailed: 09/30/2013

INFORMATIONAL NOTICE TO APPLICANT

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
  Tom Freeman
  Mike Kennewick

  Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

ATTORNEY DOCKET NUMBER: 090611-0424941

DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention: SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

As a below named inventor, I hereby declare that:

This declaration is directed to United States application number 14/016,757 filed on September 3, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

(1) Legal Name of Inventor: TOM FREEMAN

Signature: _____ Date: 5/22/2014

(2) Legal Name of Inventor: MIKE KENNEWICK

Signature: _____ Date: 5/22/14

Electronic Acknowledgement Receipt

EFS ID:	19117332
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Miriam Nelsen Awan
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	23-MAY-2014
Filing Date:	03-SEP-2013
Time Stamp:	15:14:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		090611-0424941_ResponseInformationalNoticeDEC.pdf	57319 4e9a063975f372ff86842e5e21a61cf5e779dd98	yes	3

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Applicant Response to Pre-Exam Formalities Notice	1	2
	Oath or Declaration filed	3	3
Warnings:			
Information:			
	Total Files Size (in bytes):	57319	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/AIA/80 (07-12)
Approved for use through 11/30/2014. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

■ Practitioners associated with Customer Number: 00909

OR

☐ Practitioner(s) named below (If more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(a).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

■ The address associated with Customer Number: 00909

OR

☐	Firm or Individual Name		
	Address		
	City	State	Zip
	Country		
	Telephone	Email	

Assignee Name and Address: VoiceBox Technologies Corporation
11980 NE 24th Street, Suite 100
Bellevue, Washington 98005

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Todd Kenck	Date	5/13/14
Name	Todd Kenck	Telephone	425.968.7907
Title	Chief Financial Officer of VoiceBox Technologies Corporation		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: VoiceBox Technologies Corporation

Application No./Patent No.: 14/016,757 Filed/Issue Date: September 3, 2013

Titled: SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

VoiceBox Technologies Corporation, a Corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: FREEMAN, TOM and KENNEWICK, MIKE To: VOICEBOX TECHNOLOGIES, INC.

The document was recorded in the United States Patent and Trademark Office at Reel 032792, Frame 0207, or for which a COPY thereof is attached.

2. From: VOICEBOX TECHNOLOGIES, INC. To: VOICEBOX TECHNOLOGIES CORPORATION

The document was recorded in the United States Patent and Trademark Office at Reel 032796, Frame 0671, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on

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PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a COPY thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a COPY thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a COPY thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a COPY thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Ngai Zhang
Signature

May 30, 2014
Date

Ngai B. Zhang
Printed or Typed Name

65743
Title or Registration Number

American LegalNet, Inc.
www.FormsWorkFlow.com

Electronic Acknowledgement Receipt

EFS ID:	19175329
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Monet Noel
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	30-MAY-2014
Filing Date:	03-SEP-2013
Time Stamp:	17:15:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		0424941.PDF	207657 a928b59055cce5cd0b9b25b5690d87ba6b675843	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Power of Attorney	2	2
	Assignee showing of ownership per 37 CFR 3.73.	3	4
Warnings:			
Information:			
	Total Files Size (in bytes):	207657	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney Docket: 090611-0424941

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of: Tom FREEMAN *et al.*

Application No.: 14/016,757 Confirmation No: 2790

Filed: September 3, 2013 Examiner: ALBERTALLI, BRIAN LOUIS

Title: SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

SUBMISSION OF DECLARATION AND POWER OF ATTORNEY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Applicant submits herewith the following for the above-captioned application:

- **Power of Attorney**
- **Assignee Statement under 37 C.F.R. §3.73(c)**

It is believed that no fees are due in connection with the filing of these documents. In the event that it is determined that fees are due, however, the Director is hereby authorized to charge the undersigned's Deposit Account No. 033975 (**Ref. No. 090611-0424941**).

Respectfully submitted,

Customer No.: 00909

PILLSBURY WINTHROP SHAW PITTMAN LLP

By _____
Ngai B. Zhang
Registration No. 65,473
Telephone: (703) 770-7532

Date: May 30, 2014
P.O. Box 10500
McLean, VA 22102

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

909 7590 06/05/2014
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

EXAMINER	
ALBERTALLI, BRIAN LOUIS	
ART UNIT	PAPER NUMBER
2657	

DATE MAILED: 06/05/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

TITLE OF INVENTION: SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	09/05/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

909 7590 06/05/2014
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

TITLE OF INVENTION: SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	09/05/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
ALBERTALLI, BRIAN LOUIS	2657	704-257000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

909 7590 06/05/2014

Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

EXAMINER	
ALBERTALLI, BRIAN LOUIS	
ART UNIT	PAPER NUMBER
2657	

DATE MAILED: 06/05/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice Requiring Inventor's Oath or Declaration	Application No. 14/016,757	Applicant(s) Tom Freeman	
	Examiner ALBERTALLI, BRIAN LOUIS	Art Unit 2657	

This notice is an attachment to the Notice of Allowability (PTOL-37), or the Notice of Allowability For A Design Application (PTOL-37D).

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor has not yet been submitted.

An oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each inventor (for any inventor for which a compliant oath, declaration, or substitute statement has not yet been submitted) MUST be filed no later than the date on which the issue fee is paid. See 35 U.S.C. 115(f). Failure to timely comply will result in ABANDONMENT of this application.

A properly executed inventor's oath to declaration has not been received for the following inventor(s):

If applicant previously filed one or more oaths, declarations, or substitute statements, applicant may have received an informational notice regarding deficiencies therein.

The following deficiencies are noted:

INFORMAL ACTION PROBLEMS

- A properly executed inventor's oath or declaration has not been received for the following inventor(s): **Tom Freeman** and **Mike Kennewick**.
  Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

Questions relating to this Notice should be directed to the Application Assistance Unit at 571-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 14/016,757	Applicant(s) FREEMAN ET AL.	
	Examiner BRIAN ALBERTALLI	Art Unit 2657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *9 May 2014*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *21-23 and 27-78*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/BRIAN ALBERTALLI/
Primary Examiner, Art Unit 2657

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Applicant(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	1A	4,430,669	02/07/1984	Cheung	358	122	
	1B	4,821,027	04/11/1989	Mallory *et al.*	340	521	
	1C	4,829,423	05/09/1989	Tennant *et al.*	364	200	
	1D	4,910,784	03/20/1990	Doddington *et al.*	381	43	
	1E	5,027,406	06/25/1991	Roberts *et al.*	381	43	
	1F	5,155,743	10/13/1992	Jacobs	375	28	
	1G	5,164,904	11/17/1992	Sumner	364	436	
	1H	5,208,748	05/04/1993	Flores *et al.*	364	419	
	1I	5,274,560	12/28/1993	LaRue	364	444	
	1J	5,357,596	10/18/1994	Takebayashi *et al.*	395	2.84	
	1K	5,377,350	12/27/1994	Skinner	395	600	
	1L	5,386,556	01/31/1995	Hedin et al.	395	600	
	1M	5,424,947	06/13/1995	Nagao et al.	364	419.08	
	1N	5,471,318	11/28/1995	Ahuja et al.	358	400	
	1O	5,475,733	12/12/1995	Eisdorfer et al.	379	52	
	1P	5,488,652	01/30/1996	Bielby *et al.*	379	88	
	1Q	5,499,289	03/12/1996	Bruno et al.	379	220	
	1R	5,500,920	03/19/1996	Kupiec	395	2.79	
	1S	5,517,560	05/14/1996	Greenspan	379	114	
	1T	5,533,108	07/02/1996	Harris et al.	379	201	
	1U	5,537,436	07/16/1996	Bottoms et al.	375	222	
	1V	5,539,744	07/23/1996	Chu et al.	370	60	
	1W	5,557,667	09/17/1996	Bruno et al.	379	201	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	1X	1 320 043 A2	06/18/2003	Europe				
	1Y	1 646 037	04/12/2006	Europe				
	1Z	WO 99/46763	09/16/1999	International				
	1AA	WO 00/21232	04/13/2000	International				
	1BB	WO 00/46792	08/10/2000	International				

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	1CC	REUTERS, "IBM to Enable Honda Drivers to Talk to Cars", Charles Schwab & Co., Inc., July 28, 2002, 1 page.
	1DD	LIN, Bor-shen, *et al.*, "A Distributed Architecture for Cooperative Spoken Dialogue Agents with Coherent Dialogue State and History", ASRU'99, 1999, 4 pages.

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2A	5,559,864	09/24/1996	Kennedy, Jr.	379	59	
	2B	5,563,937	10/08/1996	Bruno et al.	379	201	
	2C	5,577,165	11/19/1996	Takebayashi et al.	395	2.84	
	2D	5,590,039	12/31/1996	Ikeda et al.	395	759	
	2E	5,608,635	03/04/1997	Tamai	364	449.3	
	2F	5,617,407	04/01/1997	Bareis	369	275.3	
	2G	5,633,922	05/27/1997	August et al.	379	220	
	2H	5,652,570	07/29/1997	Lepkofker	340	573	
	2I	5,675,629	10/07/1997	Raffel et al.	379	58	
	2J	5,696,965	12/09/1997	Dedrick	395	610	
	2K	5,708,422	01/13/1998	Blonder et al.	340	825.34	
	2L	5,721,938	02/24/1998	Stuckey	395	754	
	2M	5,722,084	02/24/1998	Chakrin et al.	455	551	
	2N	5,740,256	04/14/1998	Castello Da Costa *et al.*	361	94.7	
	2O	5,742,763	04/21/1998	Jones	395	200.3	
	2P	5,748,841	05/05/1998	Morin *et al.*	395	2.66	
	2Q	5,748,974	05/05/1998	Johnson	395	759	
	2R	5,752,052	05/12/1998	Richardson et al.	395	759	
	2S	5,754,784	05/19/1998	Garland et al.	395	200.49	
	2T	5,761,631	06/02/1998	Nasukawa	704	9	
	2U	5,774,841	06/30/1998	Salazar *et al.*	704	225	
	2V	5,774,859	06/30/1998	Houser *et al.*	704	275	
	2W	5,794,050	08/11/1998	Dahlgren et al.	395	708	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	2X	WO 01/78065	10/18/2001	International				
	2Y	WO 2004/072954	08/26/2004	International				
	2Z	WO 2007/019318	02/15/2007	International				
	2AA	WO 2007/021587	02/22/2007	International				
	2BB	WO 2007/027546	03/08/2007	International				

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	2CC	KUHN, Thomas, *et al.*, "Hybrid In-Car Speech Recognition for Mobile Multimedia Applications", Vehicular Technology Conference, IEEE, July 1999, pages 2009-2013.
	2DD	BELVIN, Robert, *et al.*, "Development of the HRL Route Navigation Dialogue System", Proceedings of the First International Conference on Human Language Technology Research, San Diego, 2001, pages 1-5.

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	3A	5,794,196	08/11/1998	Yegnanarayanan *et al.*	704	255	
	3B	5,797,112	08/18/1998	Komatsu *et al.*	701	201	
	3C	5,799,276	08/25/1998	Komissarchik *et al.*	704	251	
	3D	5,802,510	09/01/1998	Jones	707	2	
	3E	5,832,221	11/03/1998	Jones	375	200.36	
	3F	5,839,107	11/17/1998	Gupta *et al.*	704	270	
	3G	5,848,396	12/08/1998	Gerace	705	10	
	3H	5,855,000	12/29/1998	Waibel *et al.*	704	235	
	3I	5,867,817	02/02/1999	Catallo *et al.*	704	255	
	3J	5,878,385	03/02/1999	Bralich *et al.*	704	9	
	3K	5,878,386	03/02/1999	Coughlin	704	10	
	3L	5,892,813	04/06/1999	Morin *et al.*	379	88.01	
	3M	5,892,900	04/06/1999	Ginter *et al.*	395	186	
	3N	5,895,464	04/20/1999	Bhandari *et al.*	707	3	
	3O	5,895,466	04/20/1999	Goldberg et al.	707	5	
	3P	5,897,613	04/27/1999	Chan	704	210	
	3Q	5,902,347	05/11/1999	Backman *et al.*	701	200	
	3R	5,911,120	06/08/1999	Jarett et al.	455	417	
	3S	5,918,222	06/29/1999	Fukui *et al.*	707	1	
	3T	5,926,784	07/20/1999	Richardson et al.	704	9	
	3U	5,933,822	08/03/1999	Braden-Harder et al.	707	5	
	3V	5,950,167	09/07/1999	Yaker	704	275	
	3W	5,953,393	09/14/1999	Culbreth et al.	379	88.25	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	3X	WO 2007/027989	03/08/2007	International				
	3Y	WO 2008/098039	08/14/2008	International				
	3Z	WO 2008/118195	10/02/2008	International				
	3AA	WO 2009/075912	06/18/2009	International				
	3BB	WO 2009/145796	12/03/2009	International				

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	3CC	LIND, R., *et al.*, "The Network Vehicle—A Glimpse into the Future of Mobile Multi-Media", IEEE Aerosp. Electron. Systems Magazine, Volume 14, No. 9, September 1999, pages 27-32.
	3DD	ZHAO, Yilin, "Telematics: Safe and Fun Driving", IEEE Intelligent Systems, Volume 17, Issue 1, 2002, pages 10-14.

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	4A	5,960,397	09/28/1999	Rahim	704	244	
	4B	5,960,399	09/28/1999	Barclay *et al.*	704	270	
	4C	5,960,447	09/28/1999	Holt *et al.*	707	500	
	4D	5,963,894	10/05/1999	Richardson et al.	704	9	
	4E	5,963,940	10/05/1999	Liddy et al.	707	5	
	4F	5,987,404	11/16/1999	Della Pietra et al.	704	9	
	4G	5,991,721	11/23/1999	Asano et al.	704	257	
	4H	5,995,119	11/30/1999	Cosatto et al.	345	473	
	4I	5,995,928	11/30/1999	Nguyen *et al.*	704	251	
	4J	6,009,382	12/28/1999	Martino et al.	704	1	
	4K	6,014,559	01/11/2000	Amin	455	413	
	4L	6,018,708	01/25/2000	Dahan *et al.*	704	244	
	4M	6,021,384	02/01/2000	Gorin et al.	704	1	
	4N	6,028,514	02/22/2000	Lemelson *et al.*	340	539	
	4O	6,035,267	03/07/2000	Watanabe *et al.*	704	1	
	4P	6,044,347	03/28/2000	Abella et al.	704	272	
	4Q	6,049,602	04/11/2000	Foladare et al.	379	265	
	4R	6,049,607	04/11/2000	Marash *et al.*	379	410	
	4S	6,058,187	05/02/2000	Chen	380	21	
	4T	6,067,513	05/23/2000	Ishimitsu	704	233	
	4U	6,076,059	06/13/2000	Glickman *et al.*	704	260	
	4V	6,078,886	06/20/2000	Dragosh et al.	704	270	
	4W	6,081,774	06/27/2000	De Hita et al.	704	9	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO
	4X	WO 2010/096752	08/26/2010	International				
	4Y	2006-146881	06/08/2006	Japan				
	4Z	2008-027454	02/07/2008	Japan				
	4AA	2008-139928	06/19/2008	Japan				

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	4BB	CHAI *et al.*, "MIND: A Semantics-Based Multimodal Interpretation Framework for Conversational System", Proceedings of the International CLASS Workshop on Natural, Intelligent and Effective Interaction in Multimodal Dialogue Systems, June 2002, pages 37-46.
	4CC	CHEYER *et al.*, "Multimodal Maps: An Agent-Based Approach", International Conference on Cooperative Multimodal Communication (CMC/95), May 24-26, 1995, pages 111-121.
	4DD	ELIO *et al.*, "On Abstract Task Models and Conversation Policies" in Workshop on Specifying and Implementing Conversation Policies, Autonomous Agents '99, Seattle, 1999, 10 pages.

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	5A	6,085,186	07/04/2000	Christianson *et al.*	707	3	
	5B	6,101,241	08/08/2000	Boyce et al.	379	88.01	
	5C	6,108,631	08/22/2000	Ruhl	704	270	
	5D	6,119,087	09/12/2000	Kuhn et al.	704	270	
	5E	6,122,613	09/19/2000	Baker	704	235	
	5F	6,134,235	10/17/2000	Goldman et al.	370	352	
	5G	6,144,667	11/07/2000	Doshi et al.	370	401	
	5H	6,144,938	11/07/2000	Surace *et al.*	704	257	
	5I	6,154,526	11/28/2000	Dahlke *et al.*	379	88.03	
	5J	6,160,883	12/12/2000	Jackson et al.	379	230	
	5K	6,167,377	12/26/2000	Gillick *et al.*	704	240	
	5L	6,173,266	01/09/2001	Marx *et al.*	704	270	
	5M	6,173,279	01/09/2001	Levin et al.	707	5	
	5N	6,175,858	01/16/2001	Bulfer *et al.*	709	206	
	5O	6,185,535	02/06/2001	Hedin *et al.*	704	270	
	5P	6,188,982	02/13/2001	Chiang	704	256	
	5Q	6,192,110	02/20/2001	Abella *et al.*	379	88.01	
	5R	6,192,338	02/20/2001	Haszto *et al.*	704	257	
	5S	6,195,634	02/27/2001	Dudemaine *et al.*	704	231	
	5T	6,195,651	02/27/2001	Handel *et al.*	707	2	
	5U	6,199,043	03/06/2001	Happ	704	272	
	5V	6,208,964	03/27/2001	Sabourin	704	244	
	5W	6,208,972	03/27/2001	Grant *et al.*	704	275	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

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	5X	TURUNEN, "Adaptive Interaction Methods in Speech User Interfaces", Conference on Human Factors in Computing Systems, Seattle, Washington, 2001, pages 91-92.
	5Y	MAO, Mark Z., "Automatic Training Set Segmentation for Multi-Pass Speech Recognition", Department of Electrical Engineering, Stanford University, CA, copyright 2005, IEEE, pages I-685 to I-688.
	5Z	VANHOUCKE, Vincent, "Confidence Scoring and Rejection Using Multi-Pass Speech Recognition", Nuance Communications, Menlo Park, CA, 2005, 4 pages.

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	6A	6,219,346	04/17/2001	Maxemchuk	370	338	
	6B	6,219,643	04/17/2001	Cohen *et al.*	704	257	
	6C	6,226,612	05/01/2001	Srenger *et al.*	704	256	
	6D	6,233,556	05/15/2001	Teunen *et al.*	704	250	
	6E	6,233,559	05/15/2001	Balakrishnan	704	275	
	6F	6,233,561	05/15/2001	Junqua *et al.*	704	277	
	6G	6,236,968	05/22/2001	Kanevsky *et al.*	704	275	
	6H	6,246,981	06/12/2001	Papineni *et al.*	704	235	
	6I	6,246,990	06/12/2001	Happ	704	275	
	6J	6,266,636	07/24/2001	Kosaka *et al.*	704	244	
	6K	6,269,336	07/31/2001	Ladd *et al.*	704	270	
	6L	6,272,455	08/07/2001	Hoshen *et al.*	704	1	
	6M	6,275,231	08/14/2001	Obradovich	345	349	
	6N	6,278,377	08/21/2001	DeLine *et al.*	340	815.4	
	6O	6,278,968	08/21/2001	Franz *et al.*	704	3	
	6P	6,288,319	09/11/2001	Catona	84	609	
	6Q	6,292,767	09/18/2001	Jackson *et al.*	704	1	
	6R	6,301,560	10/09/2001	Masters	704	251	
	6S	6,308,151	10/23/2001	Smith	704	235	
	6T	6,314,402	11/06/2001	Monaco et al.	704	275	
	6U	6,321,196	11/20/2001	Franceschi	704	243	
	6V	6,356,869	03/12/2002	Chapados *et al.*	704	275	
	6W	6,362,748	03/26/2002	Huang	340	901	

FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	6X	WENG, Fuliang, *et al.*, "Efficient Lattice Representation and Generation", Speech Technology and Research Laboratory, SRI International, Menlo Park, CA, 1998, 4 pages.
	6Y	EL MELIANI *et al.*, "A Syllabic-Filler-Based Continuous Speech Recognizer for Unlimited Vocabulary", Canadian Conference on Electrical and Computer Engineering, Volume 2, September 5-8, 1995, pages 1007-1010.

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	7A	6,366,882	04/02/2002	Bijl *et al.*	704	235	
	7B	6,366,886	04/02/2002	Dragosh et al.	704	270.1	
	7C	6,374,214	04/16/2002	Friedland *et al.*	704	235	
	7D	6,377,913	04/23/2002	Coffman *et al.*	704	8	
	7E	6,381,535	04/30/2002	Durocher *et al.*	701	202	
	7F	6,385,596	05/07/2002	Wiser *et al.*	705	51	
	7G	6,385,646	05/07/2002	Brown et al.	709	217	
	7H	6,393,403	05/21/2002	Majaniemi	704	275	
	7I	6,393,428	05/21/2002	Miller et al.	707	102	
	7J	6,397,181	05/28/2002	Li *et al.*	704	256	
	7K	6,404,878	06/11/2002	Jackson et al.	379	221.01	
	7L	6,405,170	06/11/2002	Phillips *et al.*	704	270	
	7M	6,408,272	06/18/2002	White *et al.*	704	270.1	
	7N	6,411,810	06/25/2002	Maxemchuk	455	453	
	7O	6,411,893	06/25/2002	Ruhl	701	207	
	7P	6,415,257	07/02/2002	Junqua *et al.*	704	275	
	7Q	6,418,210	07/09/2002	Sayko	379	142.15	
	7R	6,420,975	07/16/2002	DeLine *et al.*	340	815.4	
	7S	6,429,813	08/06/2002	Feigen	342	357.13	
	7T	6,430,285	08/06/2002	Bauer et al.	379	265.01	
	7U	6,430,531	08/06/2002	Polish	704	257	
	7V	6,434,523	08/13/2002	Monaco	704	257	
	7W	6,434,524	08/13/2002	Weber	704	257	

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	7X	ARRINGTON, Michael, "Google Redefines GPS Navigation Landscape: Google Maps Navigation for Android 2.0", TechCrunch, printed from the Internet <http://www.techcrunch.com/2009/10/28/google-redefines-car-gps-navigation-google-maps-navigation-android/>, October 28, 2009, 4 pages.
	7Y	BAZZI, Issam *et al.*, "Heterogeneous Lexical Units for Automatic Speech Recognition: Preliminary Investigations", Processing of the IEEE International Conference on Acoustics, Speech, and Signal Processing, Volume 3, June 5-9, 2000, XP010507574, pages 1257-1260.

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	8A	6,434,529	08/13/2002	Walker *et al.*	704	275	
	8B	6,442,522	08/27/2002	Carberry et al.	704	257	
	8C	6,446,114	09/03/2002	Bulfer et al.	709	206	
	8D	6,453,153	09/17/2002	Bowker et al.	455	67.4	
	8E	6,453,292	09/17/2002	Ramaswamy et al.	704	235	
	8F	6,456,711	09/24/2002	Cheung et al.	379	265.09	
	8G	6,456,974	09/24/2002	Baker *et al.*	704	270.1	
	8H	6,466,654	10/15/2002	Cooper *et al.*	379	88.01	
	8I	6,466,899	10/15/2002	Yano *et al.*	704	1	
	8J	6,470,315	10/22/2002	Netsch *et al.*	704	256	
	8K	6,487,494	11/26/2002	Odinak *et al.*	701	202	
	8L	6,487,495	11/26/2005	Gale *et al.*	701	209	
	8M	6,498,797	12/24/2002	Anerousis et al.	370	522	
	8N	6,499,013	12/24/2002	Weber	704	257	
	8O	6,501,833	12/31/2002	Phillips *et al.*	379	88.07	
	8P	6,501,834	12/31/2002	Milewski et al.	379	93.24	
	8Q	6,505,155	01/07/2003	Vanbuskirk *et al.*	704	246	
	8R	6,510,417	01/21/2003	Woods *et al.*	704	275	
	8S	6,513,006	01/28/2003	Howard *et al.*	704	257	
	8T	6,522,746	02/18/2003	Marchok *et al.*	379	406.03	
	8U	6,523,061	02/18/2003	Halverson et al.	709	202	
	8V	6,532,444	03/11/2003	Weber	704	257	
	8W	6,539,348	03/25/2003	Bond et al.	704	9	

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	8X	O'SHAUGHNESSY, Douglas, "Interacting with Computers by Voice: Automatic Speech Recognition and Synthesis", Proceedings of the IEEE, Volume 91, No. 9, September 1, 2003, XP011100665, pages 1272-1305.
	8Y	"Statement in Accordance with the Notice from the European Patent Office dated 1 October 2007 Concerning Business Methods (OJ EPO 11/2007, 592-593), XP002456252

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	9A	6,549,629	04/15/2003	Finn *et al.*	381	92	
	9B	6,553,372	04/22/2003	Brassell et al.	707	5	
	9C	6,556,970	04/29/2003	Sasaki *et al.*	704	257	
	9D	6,556,973	04/29/2003	Lewin	704	277	
	9E	6,560,576	05/06/2003	Cohen et al.	704	270	
	9F	6,560,590	05/06/2003	Shwe *et al.*	706	55	
	9G	6,567,778	05/20/2003	Chao Chang et al.	704	257	
	9H	6,567,797	05/20/2003	Schuetze *et al.*	707	2	
	9I	6,570,555	05/27/2003	Prevost *et al.*	345	156	
	9J	6,570,964	05/27/2003	Murveit et al.	379	67.1	
	9K	6,571,279	05/27/2003	Herz *et al.*	709	217	
	9L	6,574,597	06/03/2003	Mohri *et al.*	704	251	
	9M	6,574,624	06/03/2003	Johnson et al.	707	5	
	9N	6,578,022	06/10/2003	Foulger *et al.*	706	45	
	9O	6,581,103	06/17/2003	Dengler	709	231	
	9P	6,584,439	06/24/2003	Geilhufe *et al.*	704	270	
	9Q	6,587,858	07/01/2003	Strazza	707	102	
	9R	6,591,239	07/08/2003	McCall *et al.*	704	275	
	9S	6,594,257	07/15/2003	Doshi et al.	370	352	
	9T	6,594,367	07/15/2003	Marash *et al.*	381	92	
	9U	6,598,018	07/22/2003	Junqua	704	251	
	9V	6,601,026	07/29/2003	Appelt *et al.*	704	9	
	9W	6,604,075	08/05/2003	Brown *et al.*	704	270.1	

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	10A	6,604,077	08/05/2003	Dragosh et al.	704	270.1	
	10B	6,606,598	08/12/2003	Holthouse *et al.*	704	275	
	10C	6,611,692	08/26/2003	Raffel et al.	455	552	
	10D	6,614,773	09/02/2003	Maxemchuk	370	337	
	10E	6,615,172	09/02/2003	Bennett *et al.*	704	257	
	10F	6,622,119	09/16/2003	Ramaswamy *et al.*	704	9	
	10G	6,629,066	09/30/2003	Jackson et al.	704	9	
	10H	6,631,346	10/07/2003	Karaorman *et al.*	704	9	
	10I	6,631,351	10/07/2003	Ramachandran *et al.*	704	270	
	10J	6,633,846	10/14/2003	Bennett *et al.*	704	257	
	10K	6,636,790	10/21/2003	Lightner *et al.*	701	33	
	10L	6,643,620	11/04/2003	Contolini *et al.*	704	270	
	10M	6,650,747	11/18/2003	Bala et al.	379	265.06	
	10N	6,658,388	12/02/2003	Kleindienst *et al.*	704	275	
	10O	6,678,680	01/13/2004	Woo	707	6	
	10P	6,681,206	01/20/2004	Gorin *et al.*	704	243	
	10Q	6,691,151	02/10/2004	Cheyer et al.	709	202	
	10R	6,701,294	03/02/2004	Ball *et al.*	704	257	
	10S	6,704,396	03/09/2004	Parolkar *et al.*	379	88.17	
	10T	6,704,576	03/09/2004	Brachman *et al.*	455	503	
	10U	6,704,708	03/09/2004	Pickering	704	235	
	10V	6,707,421	03/16/2004	Drury *et al.*	342	357.1	
	10W	6,708,150	03/16/2004	Hirayama *et al.*	704	243	

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	11A	6,721,001	04/13/2004	Berstis	348	231.3	
	11B	6,721,633	04/13/2004	Funk *et al.*	701	1	
	11C	6,721,706	04/13/2004	Strubbe *et al.*	704	275	
	11D	6,726,636	04/27/2004	Der Ghazarian *et al.*	600	532	
	11E	6,735,592	05/11/2004	Neumann *et al.*	707	101	
	11F	6,739,556	05/25/2004	Langston	244	189	
	11G	6,741,931	05/25/2004	Kohut *et al.*	701	209	
	11H	6,742,021	05/25/2004	Halverson *et al.*	709	218	
	11I	6,745,161	06/01/2004	Arnold *et al.*	704	7	
	11J	6,751,591	06/15/2004	Gorin *et al.*	704	257	
	11K	6,751,612	06/15/2004	Schuetze *et al.*	707	4	
	11L	6,754,485	06/22/2004	Obradovich *et al.*	455	414.1	
	11M	6,754,627	06/22/2004	Woodward	704	235	
	11N	6,757,544	06/29/2004	Rangarajan *et al.*	455	456.1	
	11O	6,757,718	06/29/2004	Halverson *et al.*	709	218	
	11P	6,795,808	09/21/2004	Strubbe *et al.*	704	275	
	11Q	6,801,604	10/05/2004	Maes *et al.*	379	88.17	
	11R	6,801,893	10/05/2004	Backfried *et al.*	704	257	
	11S	6,813,341	11/02/2004	Mahoney	379	88.01	
	11T	6,829,603	12/07/2004	Chai *et al.*	707	5	
	11U	6,832,230	12/14/2004	Zilliacus *et al.*	707	203	
	11V	6,833,848	12/21/2004	Wolff *et al.*	345	719	
	11W	6,850,603	02/01/2005	Eberle *et al.*	379	88.16	

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	12A	6,856,990	02/15/2005	Barile *et al.*	707	10	
	12B	6,865,481	03/08/2005	Kawazoe *et al.*	701	211	
	12C	6,868,380	03/15/2005	Kroeker	704	240	
	12D	6,868,385	03/15/2005	Gerson	704	275	
	12E	6,873,837	03/29/2005	Yoshioka *et al.*	455	321	
	12F	6,877,001	04/05/2005	Wolf *et al.*	707	3	
	12G	6,877,134	04/05/2005	Fuller *et al.*	715	500.1	
	12H	6,901,366	05/31/2005	Kuhn *et al.*	704	275	
	12I	6,910,003	06/21/2005	Arnold *et al.*	704	4	
	12J	6,912,498	06/28/2005	Stevens *et al.*	704	235	
	12K	6,915,126	07/05/2005	Mazzara, Jr.	455	411	
	12L	6,928,614	08/09/2005	Everhart	715	728	
	12M	6,934,756	08/23/2005	Maes	709	227	
	12N	6,937,977	08/30/2005	Gerson	704	201	
	12O	6,937,982	08/30/2005	Kitaoka *et al.*	704	252	
	12P	6,944,594	09/13/2005	Busayapongchai *et al.*	704	275	
	12Q	6,950,821	09/27/2005	Faybishenko *et al.*	707	10	
	12R	6,954,755	10/11/2005	Reisman	707	10	
	12S	6,959,276	10/25/2005	Droppo *et al.*	704	226	
	12T	6,961,700	11/01/2005	Mitchell *et al.*	704	235	
	12U	6,963,759	11/08/2005	Gerson	455	563	
	12V	6,964,023	11/08/2005	Maes *et al.*	715	811	
	12W	6,968,311	11/22/2005	Knockeart *et al.*	704	270	

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	13A	6,973,387	12/06/2005	Masclet *et al.*	701	211	
	13B	6,975,993	12/13/2005	Keiller	704	275	
	13C	6,980,092	12/27/2005	Turnbull *et al.*	340	425.5	
	13D	6,983,055	01/03/2006	Luo	381	313	
	13E	6,990,513	01/24/2006	Belfiore *et al.*	709	203	
	13F	6,996,531	02/07/2006	Korall *et al.*	704	270	
	13G	7,003,463	02/21/2006	Maes *et al.*	704	270.1	
	13H	7,016,849	03/21/2006	Arnold *et al.*	704	275	
	13I	7,020,609	03/28/2006	Thrift *et al.*	704	270.1	
	13J	7,024,364	04/04/2006	Guerra *et al.*	704	270	
	13K	7,027,586	04/11/2006	Bushey *et al.*	379	265.09	
	13L	7,027,975	04/11/2006	Pazandak *et al.*	704	9	
	13M	7,035,415	04/25/2006	Belt *et al.*	381	92	
	13N	7,036,128	04/25/2006	Julia *et al.*	719	317	
	13O	7,043,425	05/09/2006	Pao	704	211	
	13P	7,054,817	05/30/2006	Shao	704	270	
	13Q	7,058,890	06/06/2006	George *et al.*	715	728	
	13R	7,062,488	06/13/2006	Reisman	707	8	
	13S	7,069,220	06/27/2006	Coffman *et al.*	704	275	
	13T	7,072,834	07/04/2006	Zhou	704	244	
	13U	7,076,362	07/11/2006	Ohtsuji *et al.*	701	211	
	13V	7,082,469	07/25/2006	Gold *et al.*	709	231	
	13W	7,085,708	08/01/2006	Manson	704	9	

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	14A	7,092,928	08/15/2006	Elad *et al.*	706	60	
	14B	7,107,210	09/12/2006	Deng *et al.*	704	226	
	14C	7,107,218	09/12/2006	Preston	704	270	
	14D	7,110,951	09/19/2006	Lemelson *et al.*	704	270	
	14E	7,127,400	10/24/2006	Koch	704	270.1	
	14F	7,130,390	10/31/2006	Abburi	379	88.17	
	14G	7,136,875	11/14/2006	Anderson *et al.*	707	104.1	
	14H	7,137,126	11/14/2006	Coffman *et al.*	719	328	
	14I	7,143,037	11/28/2006	Chestnut	704	251	
	14J	7,143,039	11/28/2006	Stifelman *et al.*	704	270	
	14K	7,146,319	12/05/2006	Hunt	704	254	
	14L	7,149,696	12/12/2006	Shimizu *et al.*	705	1	
	14M	7,165,028	01/16/2007	Gong	704	233	
	14N	7,171,291	01/30/2007	Obradovich	701	29	
	14O	7,174,300	02/06/2007	Bush	704	275	
	14P	7,177,798	02/13/2007	Hsu *et al.*	704	9	
	14Q	7,184,957	02/27/2007	Brookes *et al.*	704	246	
	14R	7,190,770	03/13/2007	Ando *et al.*	379	88.01	
	14S	7,197,069	03/27/2007	Agazzi *et al.*	375	233	
	14T	7,197,460	03/27/2007	Gupta *et al.*	704	270.1	
	14U	7,203,644	04/10/2007	Anderson *et al.*	704	246	
	14V	7,206,418	04/17/2007	Yang *et al.*	381	92	
	14W	7,207,011	04/17/2007	Mulvey *et al.*	715	812	

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	15B	7,228,276	06/05/2007	Omote *et al.*	704	243	
	15C	7,231,343	06/12/2007	Treadgold *et al.*	704	9	
	15D	7,236,923	06/26/2007	Gupta	704	9	
	15E	7,254,482	08/07/2007	Kawasaki *et al.*	701	211	
	15F	7,272,212	09/18/2007	Eberle *et al.*	379	88.17	
	15G	7,277,854	10/02/2007	Bennett *et al.*	704	257	
	15H	7,283,829	10/16/2007	Christenson *et al.*	455	461	
	15I	7,283,951	10/16/2007	Marchisio *et al.*	704	9	
	15J	7,289,606	10/30/2007	Sibal *et al.*	379	52	
	15K	7,299,186	11/20/2007	Kuzunuki *et al.*	704	270.1	
	15L	7,301,093	11/27/2007	Sater *et al.*	84	615	
	15M	7,305,381	12/04/2007	Poppink *et al.*	1	1	
	15N	7,321,850	01/22/2008	Wakita	704	10	
	15O	7,328,155	02/05/2008	Endo *et al.*	704	251	
	15P	7,337,116	02/26/2008	Charlesworth *et al.*	704	254	
	15Q	7,340,040	03/04/2008	Saylor *et al.*	379	67.1	
	15R	7,366,285	04/29/2008	Parolkar *et al.*	379	88.17	
	15S	7,366,669	04/29/2008	Nishitani *et al.*	704	256	
	15T	7,376,645	05/20/2008	Bernard	707	3	
	15U	7,386,443	06/10/2008	Parthasarathy *et al.*	704	201	
	15V	7,398,209	07/08/2008	Kennewick *et al.*	704	255	
	15W	7,406,421	07/29/2008	Odinak *et al.*	704	275	

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	16B	7,421,393	09/02/2008	Di Fabbrizio *et al.*	704	275	
	16C	7,424,431	09/09/2008	Greene *et al.*	704	270	
	16D	7,447,635	11/04/2008	Konopka *et al.*	704	275	
	16E	7,451,088	11/11/2008	Ehlen *et al.*	704	270.1	
	16F	7,454,608	11/18/2008	Gopalakrishnan *et al.*	713	100	
	16G	7,461,059	12/02/2008	Richardson *et al.*	707	5	
	16H	7,472,020	12/30/2008	Brulle-Drews	701	211	
	16I	7,472,060	12/30/2008	Gorin *et al.*	704	240	
	16J	7,472,075	12/30/2008	Odinak *et al.*	705	26	
	16K	7,478,036	01/13/2009	Shen *et al.*	704	9	
	16L	7,487,088	02/03/2009	Gorin *et al.*	704	240	
	16M	7,487,110	02/03/2009	Bennett *et al.*	705	26	
	16N	7,493,259	02/17/2009	Jones *et al.*	704	257	
	16O	7,493,559	02/17/2009	Wolff *et al.*	715	727	
	16P	7,502,672	03/10/2009	Kolls	701	29	
	16Q	7,502,738	03/10/2009	Kennewick *et al.*	704	257	
	16R	7,516,076	04/07/2009	Walker *et al.*	704	275	
	16S	7,529,675	05/05/2009	Maes	704	270.1	
	16T	7,536,297	05/19/2009	Byrd *et al.*	704	10	
	16U	7,536,374	05/19/2009	Au	706	55	
	16V	7,542,894	06/02/2009	Murata	704	9	
	16W	7,546,382	06/09/2009	Healey *et al.*	709	246	

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	17A	7,548,491	06/16/2009	Macfarlane	367	198	
	17B	7,558,730	07/07/2009	Davis *et al.*	704	235	
	17C	7,574,362	08/11/2009	Walker *et al.*	704	275	
	17D	7,577,244	08/18/2009	Taschereau	379	218.01	
	17E	7,606,708	10/20/2009	Hwang	704	257	
	17F	7,620,549	11/17/2009	Di Cristo *et al.*	704	257	
	17G	7,634,409	12/15/2009	Kennewick *et al.*	704	257	
	17H	7,640,006	12/29/2009	Portman *et al.*	455	412.1	
	17I	7,640,160	12/29/2009	Di Cristo *et al.*	704	257	
	17J	7,640,272	12/29/2009	Mahajan *et al.*	707	104.1	
	17K	7,676,365	03/09/2010	Hwang *et al.*	704	240	
	17L	7,676,369	03/09/2010	Fujimoto *et al.*	704	270	
	17M	7,684,977	03/23/2010	Morikawa	704	211	
	17N	7,693,720	04/06/2010	Kennewick *et al.*	704	275	
	17O	7,729,916	06/01/2010	Coffman *et al.*	704	270	
	17P	7,729,918	06/01/2010	Walker *et al.*	704	275	
	17Q	7,729,920	06/01/2010	Chaar *et al.*	704	275	
	17R	7,734,287	06/08/2010	Ying	455	423	
	17S	7,748,021	06/29/2010	Obradovich	725	105	
	17T	7,788,084	08/31/2010	Brun *et al.*	704	7	
	17U	7,801,731	09/21/2010	Odinak *et al.*	704	275	
	17V	7,809,570	10/05/2010	Kennewick *et al.*	704	257	
	17W	7,818,176	10/19/2010	Freeman *et al.*	704	270	

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*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	18A	7,831,426	11/09/2010	Bennett	704	252	
	18B	7,831,433	11/09/2010	Belvin *et al.*	704	275	
	18C	7,873,519	01/18/2011	Bennett	704	257	
	18D	7,873,523	01/18/2011	Potter *et al.*	704	275	
	18E	7,873,654	01/18/2011	Bernard	707	769	
	18F	7,881,936	02/01/2011	Longe *et al.*	704	257	
	18G	7,890,324	02/15/2011	Bangalore *et al.*	704	231	
	18H	7,894,849	02/22/2011	Kass *et al.*	455	550.1	
	18I	7,902,969	03/08/2011	Obradovich	340	439	
	18J	7,917,367	03/29/2011	Di Cristo *et al.*	704	270.1	
	18K	7,920,682	04/05/2011	Byrne *et al.*	379	88.18	
	18L	7,949,529	05/24/2011	Weider *et al.*	704	270	
	18M	7,949,537	05/24/2011	Walker *et al.*	704	275	
	18N	7,953,732	05/31/2011	Frank *et al.*	707	724	
	18O	7,974,875	07/05/2011	Quilici *et al.*	705	14.4	
	18P	7,983,917	07/19/2011	Kennewick *et al.*	704	257	
	18Q	7,984,287	07/19/2011	Gopalakrishnan *et al.*	713	100	
	18R	8,005,683	08/23/2011	Tessel *et al.*	704	275	
	18S	8,015,006	09/06/2011	Kennewick *et al.*	704	236	
	18T	8,060,367	11/15/2011	Keaveney	704	247	
	18U	8,069,046	11/29/2011	Kennewick *et al.*	704	257	
	18V	8,073,681	12/06/2011	Baldwin *et al.*	704	9	
	18W	8,077,975	12/13/2011	Ma *et al.*	382	187	

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	19A	8,082,153	12/20/2011	Coffman *et al.*	704	270	
	19B	8,086,463	12/27/2011	Ativanichayaphong *et al.*	704	275	
	19C	8,112,275	02/07/2012	Kennewick *et al.*	704	240	
	19D	8,140,327	03/20/2012	Kennewick *et al.*	704	226	
	19E	8,140,335	03/20/2012	Kennewick *et al.*	704	257	
	19F	8,145,489	03/27/2012	Freeman *et al.*	704	257	
	19G	8,150,694	04/03/2012	Kennewick *et al.*	704	257	
	19H	8,155,962	04/10/2012	Kennewick *et al.*	704	257	
	19I	8,170,867	05/01/2012	Germain	704	9	
	19J	8,195,468	06/05/2012	Weider *et al.*	704	275	
	19K	8,219,399	07/10/2012	Lutz *et al.*	704	270	
	19L	8,219,599	07/10/2012	Tunstall-Pedoe	707	955	
	19M	8,224,652	07/17/2012	Wang *et al.*	704	275	
	19N	8,255,224	08/28/2012	Singleton *et al.*	704	275	
	19O	8,326,627	12/04/2012	Kennewick *et al.*	704	257	
	19P	8,326,634	12/04/2012	Di Cristo *et al.*	704	270.1	
	19Q	8,326,637	12/04/2012	Baldwin *et al.*	704	275	
	19R	8,332,224	12/11/2012	Di Cristo *et al.*	704	257	
	19S	8,370,147	02/05/2013	Kennewick *et al.*	704	257	
	19T	8,447,607	05/21/2013	Weider *et al.*	704	250	
	19U	8,452,598	05/28/2013	Kennewick *et al.*	704	257	
	19V	8,515,765	08/20/2013	Baldwin et al.	704	275	
	19W	8,527,274	09/03/2013	Freeman *et al.*	704	257	

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	20A	8,589,161	11/19/2013	Kennewick *et al.*	704	252	
	20B	8,620,659	12/31/2013	Di Cristo et al.	704	257	
	20C	8,719,009	05/06/2014	Baldwin et al.	704	9	
	20D	8,719,026	05/06/2014	Kennewick *et al.*	704	257	
	20E	2001/0041980	11/15/2001	Howard *et al.*	704	270	
	20F	2001/0049601	12/06/2001	Kroeker *et al.*	704	254	
	20G	2001/0054087	12/20/2001	Flom *et al.*	709	218	
	20H	2002/0015500	02/07/2002	Belt *et al.*	381	66	
	20I	2002/0022927	02/21/2002	Lemelson *et al.*	701	301	
	20J	2002/0029261	03/07/2002	Shibata	709	219	
	20K	2002/0032752	03/14/2002	Gold *et al.*	709	218	
	20L	2002/0035501	03/21/2002	Handel *et al.*	705	10	
	20M	2002/0040297	04/04/2002	Tsiao *et al.*	704	257	
	20N	2002/0049535	04/25/2002	Rigo *et al.*	701	211	
	20O	2002/0049805	04/25/2002	Yamada *et al.*	709	202	
	20P	2002/0065568	05/30/2002	Silfvast *et al.*	700	94	
	20Q	2002/0067839	06/06/2002	Heinrich	381	110	
	20R	2002/0069059	06/06/2002	Smith	704	257	
	20S	2002/0069071	06/06/2002	Knockeart et al.	704	275	
	20T	2002/0082911	06/27/2002	Dunn *et al.*	705	14	
	20U	2002/0087326	07/04/2002	Lee *et al.*	704	270.1	
	20V	2002/0087525	07/04/2002	Abbott *et al.*	707	3	
	20W	2002/0107694	08/08/2002	Lerg	704	273	

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	21A	2002/0120609	08/29/2002	Lang *et al.*	707	1	
	21B	2002/0124050	09/05/2002	Middeljans	709	203	
	21C	2002/0133354	09/19/2002	Ross *et al.*	704	275	
	21D	2002/0133402	09/19/2002	Faber *et al.*	705	14	
	21E	2002/0135618	09/26/2002	Maes et al.	345	767	
	21F	2002/0138248	09/26/2002	Corston-Oliver *et al.*	704	1	
	21G	2002/0143532	10/03/2002	McLean *et al.*	704	235	
	21H	2002/0143535	10/03/2002	Kist *et al.*	704	251	
	21I	2002/0161646	10/31/2002	Gailey *et al.*	705	14	
	21J	2002/0173333	11/21/2002	Buchholz *et al.*	455	527	
	21K	2002/0173961	11/21/2002	Guerra	704	258	
	21L	2002/0184373	12/05/2002	Maes	709	228	
	21M	2002/0188602	12/12/2002	Stubler *et al.*	707	3	
	21N	2002/0198714	12/26/2002	Zhou	704	252	
	21O	2003/0014261	01/16/2003	Kageyama	704	275	
	21P	2003/0016835	01/23/2003	Elko *et al.*	381	92	
	21Q	2003/0046346	03/06/2003	Mumick *et al.*	709	205	
	21R	2003/0064709	04/03/2003	Gailey *et al.*	455	412	
	21S	2003/0065427	04/03/2003	Funk *et al.*	701	1	
	21T	2003/0069734	04/10/2003	Everhart	704	275	
	21U	2003/0088421	05/08/2003	Maes *et al.*	704	270.1	
	21V	2003/0097249	05/22/2003	Walker *et al.*	704	1	
	21W	2003/0110037	06/12/2003	Walker *et al.*	704	257	

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	22A	2003/0112267	06/19/2003	Belrose	345	728	
	22B	2003/0115062	06/19/2003	Walker *et al.*	704	258	
	22C	2003/0120493	06/26/2003	Gupta	704	270.1	
	22D	2003/0135488	07/17/2003	Amir *et al.*	707	3	
	22E	2003/0144846	07/31/2003	Denenberg *et al.*	704	277	
	22F	2003/0158731	08/21/2003	Falcon *et al.*	704	231	
	22G	2003/0161448	08/28/2003	Parolkar *et al.*	379	88.17	
	22H	2003/0182132	09/25/2003	Niemoeller	704	275	
	22I	2003/0204492	10/30/2003	Wolf *et al.*	707	3	
	22J	2003/0206640	11/06/2003	Malvar *et al.*	381	93	
	22K	2003/0212550	11/13/2003	Ubale	704	215	
	22L	2003/0212558	11/13/2003	Matula	704	260	
	22M	2003/0212562	11/13/2003	Patel *et al.*	704	275	
	22N	2003/0225825	12/04/2003	Healey *et al.*	709	203	
	22O	2003/0236664	12/25/2003	Sharma	704	251	
	22P	2004/0006475	01/08/2004	Ehlen *et al.*	704	270.1	
	22Q	2004/0010358	01/15/2004	Oesterling *et al.*	701	49	
	22R	2004/0025115	02/05/2004	Sienel *et al.*	715	513	
	22S	2004/0044516	03/04/2004	Kennewick *et al.*	704	5	
	22T	2004/0098245	05/20/2004	Walker *et al.*	704	1	
	22U	2004/0117179	06/17/2004	Balasuriya	704	231	
	22V	2004/0117804	06/17/2004	Scahill *et al.*	719	320	
	22W	2004/0140989	07/22/2004	Papageorge	345	700	

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	23A	2004/0158555	08/12/2004	Seedman *et al.*	707	3	
	23B	2004/0166832	08/26/2004	Portman *et al.*	455	412.1	
	23C	2004/0167771	08/26/2004	Duan *et al.*	704	10	
	23D	2004/0172258	09/02/2004	Dominach *et al.*	704	277	
	23E	2004/0193408	09/30/2004	Hunt	704	209	
	23F	2004/0193420	09/30/2004	Kennewick *et al.*	704	257	
	23G	2004/0199375	10/07/2004	Ehsani *et al.*	704	4	
	23H	2004/0205671	10/14/2004	Sukehiro *et al.*	715	532	
	23I	2004/0243417	12/02/2004	Pitts, III *et al.*	704	276	
	23J	2005/0015256	01/20/2005	Kargman	704	272	
	23K	2005/0021334	01/27/2005	Iwahashi	704	240	
	23L	2005/0021470	01/27/2005	Martin *et al.*	705	51	
	23M	2005/0021826	01/27/2005	Kumar	709	232	
	23N	2005/0033574	02/10/2005	Kim *et al.*	704	251	
	23O	2005/0043940	02/24/2005	Elder	704	9	
	23P	2005/0114116	05/26/2005	Fiedler	704	201	
	23Q	2005/0125232	06/09/2005	Gadd	704	270.1	
	23R	2005/0131673	06/16/2005	Koizumi *et al.*	704	2	
	23S	2005/0137850	06/23/2005	Odell	704	4	
	23T	2005/0137877	06/23/2005	Oesterling *et al.*	704	275	
	23U	2005/0143994	06/30/2005	Mori *et al.*	704	235	
	23V	2005/0216254	09/29/2005	Gupta *et al.*	704	9	
	23W	2005/0234727	10/20/2005	Chiu	704	270.1	

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	24A	2005/0283752	12/22/2005	Fruchter *et al.*	717	100	
	24B	2006/0041431	02/23/2006	Maes	704	270.1	
	24C	2006/0047509	03/02/2006	Ding *et al.*	704	231	
	24D	2006/0206310	09/14/2006	Ravikumar *et al.*	704	9	
	24E	2006/0217133	09/28/2006	Christenson *et al.*	455	461	
	24F	2006/0285662	12/21/2006	Yin *et al.*	379	88.16	
	24G	2007/0033005	02/08/2007	Cristo *et al.*	704	9	
	24H	2007/0033020	02/08/2007	(Kelleher) Francois *et al.*	704	226	
	24I	2007/0038436	02/15/2007	Cristo *et al.*	704	9	
	24J	2007/0043569	02/22/2007	Potter, III *et al.*	704	270	
	24K	2007/0043574	02/22/2007	Coffman *et al.*	704	275	
	24L	2007/0043868	02/22/2007	Kumar *et al.*	709	226	
	24M	2007/0050191	03/01/2007	Weider *et al.*	704	275	
	24N	2007/0055525	03/08/2007	Kennewick *et al.*	704	257	
	24O	2007/0061067	03/15/2007	Zeinstra *et al.*	701	200	
	24P	2007/0061735	03/15/2007	Hoffberg *et al.*	715	744	
	24Q	2007/0073544	03/29/2007	Millett *et al.*	704	277	
	24R	2007/0078708	04/05/2007	Yu *et al.*	705	14	
	24S	2007/0078709	04/05/2007	Rajaram	705	14	
	24T	2007/0118357	05/24/2007	Kasravi *et al.*	704	10	
	24U	2007/0135101	06/14/2007	Ramati *et al.*	455	414.1	
	24V	2007/0146833	06/28/2007	Satomi *et al.*	358	537	
	24W	2007/0162296	07/12/2007	Altberg *et al.*	705	1	

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	090611-0424941	14/016,757
	Applicant(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	25A	2007/0179778	08/02/2007	Gong *et al.*	704	9	
	25B	2007/0186165	08/09/2007	Maislos *et al.*	715	728	
	25C	2007/0198267	08/23/2007	Jones *et al.*	704	257	
	25D	2007/0214182	09/13/2007	Rosenberg	707	104.1	
	25E	2007/0250901	10/25/2007	McIntire *et al.*	725	146	
	25F	2007/0265850	11/15/2007	Kennewick *et al.*	704	257	
	25G	2007/0299824	12/27/2007	Pan *et al.*	707	3	
	25H	2008/0034032	02/07/2008	Healey *et al.*	709	203	
	25I	2008/0065386	03/13/2008	Cross *et al.*	704	270	
	25J	2008/0091406	04/17/2008	Baldwin *et al.*	704	4	
	25K	2008/0103761	05/01/2008	Printz *et al.*	704	9	
	25L	2008/0109285	05/08/2008	Reuther *et al.*	705	7	
	25M	2008/0115163	05/15/2008	Gilboa *et al.*	725	34	
	25N	2008/0133215	06/05/2008	Sarukkai	704	2	
	25O	2008/0140385	06/12/2008	Mahajan *et al.*	704	9	
	25P	2008/0147410	06/19/2008	Odinak	704	270.1	
	25Q	2008/0177530	07/24/2008	Cross *et al.*	704	4	
	25R	2008/0189110	08/07/2008	Freeman *et al.*	704	251	
	25S	2008/0235023	09/25/2008	Kennewick *et al.*	704	257	
	25T	2008/0235027	09/25/2008	Cross	704	270.1	
	25U	2008/0319751	12/25/2008	Kennewick *et al.*	704	257	
	25V	2009/0052635	02/26/2009	Jones *et al.*	379	88.02	
	25W	2009/0067599	03/12/2009	Agarwal *et al.*	379	114.21	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.A./

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Applicant(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	26A	2009/0076827	03/19/2009	Bulitta *et al.*	704	275	
	26B	2009/0106029	04/23/2009	DeLine *et al.*	704	275	
	26C	2009/0117885	05/07/2009	Roth	455	414.3	
	26D	2009/0144271	06/04/2009	Richardson *et al.*	707	5	
	26E	2009/0150156	06/11/2009	Kennewick *et al.*	704	257	
	26F	2009/0171664	07/02/2009	Kennewick *et al.*	704	257	
	26G	2009/0216540	08/27/2009	Tessel *et al.*	704	275	
	26H	2009/0271194	10/29/2009	Davis *et al.*	704	235	
	26I	2009/0273563	11/05/2009	Pryor	345	157	
	26J	2009/0276700	11/05/2009	Anderson *et al.*	715	700	
	26K	2009/0299745	12/03/2009	Kennewick *et al.*	704	257	
	26L	2009/0307031	12/10/2009	Winkler *et al.*	705	7	
	26M	2009/0313026	12/17/2009	Coffman *et al.*	704	275	
	26N	2010/0023320	01/28/2010	Di Cristo *et al.*	704	9	
	26O	2010/0029261	02/04/2010	Mikkelsen *et al.*	455	419	
	26P	2010/0049501	02/25/2010	Kennewick *et al.*	704	9	
	26Q	2010/0049514	02/25/2010	Kennewick *et al.*	704	233	
	26R	2010/0057443	03/04/2010	Di Cristo *et al.*	704	9	
	26S	2010/0063880	03/11/2010	Atsmon *et al.*	705	14.53	
	26T	2010/0036967	02/11/2010	Caine *et al.*	709	236	
	26U	2010/0185512	07/22/2010	Borger *et al.*	705	14.49	
	26V	2010/0145700	06/10/2010	Kennewick *et al.*	704	257	
	26W	2010/0204986	08/12/2010	Kennewick *et al.*	704	226	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.A./

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Applicant(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	27A	2010/0204994	08/12/2010	Kennewick *et al.*	704	257	
	27B	2010/0217604	08/26/2010	Baldwin *et al.*	704	275	
	27C	2010/0286985	11/11/2010	Kennewick *et al.*	704	257	
	27D	2010/0299142	11/25/2010	Freeman *et al.*	704	9	
	27E	2010/0312566	12/09/2010	Odinak *et al.*	704	275	
	27F	2011/0112827	05/12/2011	Kennewick *et al.*	704	9	
	27G	2011/0112921	05/12/2011	Kennewick *et al.*	705	26.1	
	27H	2011/0131036	06/02/2011	Di Cristo *et al.*	704	9	
	27I	2011/0131045	06/02/2011	Cristo *et al.*	704	249	
	27J	2011/0231182	09/22/2011	Weider *et al.*	704	9	
	27K	2011/0231188	09/22/2011	Kennewick *et al.*	704	236	
	27L	2012/0022857	01/26/2012	Baldwin *et al.*	704	9	
	27M	2012/0101809	04/26/2012	Kennewick *et al.*	704	9	
	27N	2012/0101810	04/26/2012	Kennewick *et al.*	704	9	
	27O	2012/0109753	05/03/2012	Kennewick *et al.*	705	14.58	
	27P	2012/0150636	06/14/2012	Freeman *et al.*	705	14.49	
	27Q	2012/0278073	11/01/2012	Weider et al.	704	235	
	27R	2013/0054228	02/28/2013	Baldwin *et al.*	704	9	
	27S	2013/0211710	08/15/2013	Kennewick *et al.*	701	419	
	27T	2013/0253929	09/26/2013	Weider *et al.*	704	235	
	27U	2013/0297293	11/07/2013	Di Cristo *et al.*	704	9	
	27V	2013/0304473	11/14/2013	Baldwin *et al.*	704	257	
	27W	2013/0339022	12/19/2013	Baldwin *et al.*	704	257	
	27X	2014/0108013	04/17/2014	Di Cristo *et al.*	704	254	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	/Brian Albertalli/	DATE CONSIDERED	05/29/2014

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.A./

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	**Art Unit**
	BRIAN ALBERTALLI	2657

CPC						
Symbol					**Type**	**Version**
G10L		15	/	265	I	2013-01-01
G10L		15	/	18	F	2013-01-01
G06Q		30	/	0251	I	2013-01-01
G06Q		30	/	0241	I	2013-01-01
G06Q		30	/	0242	I	2013-01-01
			/			
			/			
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			/			
			/			
			/			

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	55	
/BRIAN ALBERTALLI/ Primary Examiner.Art Unit 2657	5/29/14	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	**Art Unit**
	BRIAN ALBERTALLI	2657

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
704	257

CROSS REFERENCE(S)

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
704	9	270.1			
705	14.4				

INTERNATIONAL CLASSIFICATION					
CLAIMED					**NON-CLAIMED**
G	1	0	L	15 / 18 (2013.0)	
G	0	6	F	17 / 27 (2006.0)	
G	1	0	L	21 / 00 (2013.0)	
G	0	6	Q	30 / 00 (2012.01.01)	

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	55	
/BRIAN ALBERTALLI/ Primary Examiner.Art Unit 2657	5/29/14	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	**Art Unit**
	BRIAN ALBERTALLI	2657

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17	10	33	26	49	42	65						
	2		18	11	34	27	50	43	66						
	3		19	12	35	28	51	44	67						
	4		20	13	36	29	52	45	68						
	5	1	21	14	37	30	53	46	69						
	6	2	22	15	38	31	54	47	70						
	7	3	23	16	39	32	55	48	71						
	8		24	17	40	33	56	49	72						
	9		25	18	41	34	57	50	73						
	10		26	19	42	35	58	51	74						
	11	4	27	20	43	36	59	52	75						
	12	5	28	21	44	37	60	53	76						
	13	6	29	22	45	38	61	54	77						
	14	7	30	23	46	39	62	55	78						
	15	8	31	24	47	40	63								
	16	9	32	25	48	41	64								

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	55	
/BRIAN ALBERTALLI/ Primary Examiner.Art Unit 2657	5/29/14	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	1

U.S. Patent and Trademark Office

Part of Paper No. 20140529

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	Art Unit
	BRIAN ALBERTALLI	2657

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Updated EAST Search from parent case 13/371,870	1/22/14	BA
Updated EAST Search	5/29/14	BA
Google Scholar Search	5/29/14	BA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	Interference Search	5/29/14	BA

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	Art Unit
	BRIAN ALBERTALLI	2657

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	01/22/2014	05/29/2014	05/29/2014						
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	19	-	-							
	20	-	-							
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2	22	✓		=						
3	23	✓		=						
	24	✓		-						
	25	✓		-						
	26	O		-						
4	27	O		=						
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6	29	O		=						
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9	32	✓		=						
10	33	✓		=						
11	34	✓		=						
12	35	✓		=						
13	36	O		=						

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	Art Unit
	BRIAN ALBERTALLI	2657

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	01/22/2014	05/29/2014	05/29/2014						
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15	38	O		=						
16	39	✓		=						
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18	41	✓		=						
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21	44	✓		=						
22	45	✓		=						
23	46	✓		=						
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25	48	O		=						
26	49	O		=						
27	50	O		=						
28	51	O		=						
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30	53	O		=						
31	54	O		=						
32	55	✓		=						
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49	72									

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14016757	FREEMAN ET AL.
	Examiner	Art Unit
	BRIAN ALBERTALLI	2657

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	01/22/2014	05/29/2014	05/29/2014						
50	73									
51	74									
52	75									
53	76									
54	77									
55	78									

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	59	("704"/$.ccls. or "379"/$.ccls.) and ((ambiguous$5 or disambiguat$10) same (advertis$5 or promotion$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/05/29 10:31
L2	168	("704"/$.ccls. or "379"/$.ccls.) and (domain$5 near2 agent$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/05/29 10:32
L3	118	l2 and (speech or voice).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/05/29 10:32
L4	95	l2 not voicebox$2.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/05/29 10:33
L5	55	l2 and (advertis$5 or promotion$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/05/29 10:33

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L6	3180	(advertis$5 or promotion$5).clm. and (speech or voice).clm.	US-PGPUB; USPAT; UPAD	OR	OFF	2014/05/29 10:35
L7	112	l6 and domain$5.clm.	US-PGPUB; USPAT; UPAD	OR	OFF	2014/05/29 10:35
L8	4	l6 and (domain$5 near5 agent$5).clm.	US-PGPUB; USPAT; UPAD	OR	OFF	2014/05/29 10:35

5/29/2014 10:41:16 AM
C:\Users\balbertalli\Documents\EAST\Workspaces\14016757B.wsp

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/016,757	09/03/2013	Tom Freeman	090611-0424941

CONFIRMATION NO. 2790

909
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

POA ACCEPTANCE LETTER

OC000000068856443

Date Mailed: 06/10/2014

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/30/2014.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/snguyen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

7590 06/30/2014

Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

EXAMINER	
ALBERTALLI, BRIAN LOUIS	
ART UNIT	**PAPER NUMBER**
2657	
NOTIFICATION DATE	**DELIVERY MODE**
06/30/2014	ELECTRONIC

Letter Withdrawing a Notice Requiring Inventor's Oath or Declaration

The Notice Requiring Inventor's Oath or Declaration mailed on 06/05/2014 was sent in error, and is hereby withdrawn. The time period set forth in the Notice of Allowance and Fee(s) Due to file a reply and pay the required fees continues to run from the mailing date of the Notice of Allowance and Fee(s) Due. Any time period set forth in the Notice of Allowability continues to run from the mailing date of the Notice of Allowability.

Questions relating to this Notice should be directed to the Application Assistance Unit at 571-272-4200.

(571)-272-4200 or 1(888)-786-0101
Patent Publication Branch
Office of Data Management

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

909 7590 06/05/2014
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

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Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

TITLE OF INVENTION: SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	09/05/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
ALBERTALLI, BRIAN LOUIS	2657	704-257000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Pillsbury Winthrop Shaw Pittman LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: VoiceBox Technologies Corporation
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Bellevue, Washington

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ■ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ■ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ■ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 03-3975 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Ngai B. Zhang/ Date August 26, 2014
Typed or printed name Ngai B. Zhang Registration No. 65,473

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

INVENTOR(S):	Tom FREEMAN *et al.*
SERIAL NO.:	14/016,757
FILING DATE:	September 3, 2013
ATTORNEY DOCKET NO.:	090611-0424941
CONFIRMATION NO.:	2790
EXAMINER:	BRIAN LOUIS ALBERTALLI
ART UNIT:	2657
FOR:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXT

AMENDMENT UNDER 37 C.F.R. § 1.312

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.312, and prior to payment of the enclosed issue fee, please amend the above-identified application as follows:

Amendments to the Claims begin on page **2** of this paper.

Remarks/Arguments begin on page **25** of this paper.

It is believed that no extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. § 1.136(a), and any fees required therefore (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 033975 (**Ref. No. 090611-0424941**).

This listing of claims will replace all prior versions and listings of claims in the Application.

LISTING OF CLAIMS:

1-20. (**Cancelled**)

21. (**Previously Presented**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

determining, by the one or more physical processors, domain information for the one or more recognized words based on the first natural language utterance;

processing, by the one or more physical processors, based on the domain information, the one or more recognized words to determine an interpretation of the second natural language utterance, wherein processing the one or more recognized words comprises:

providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;

obtaining a first interpretation of the second natural language utterance from the first domain agent;

obtaining a second interpretation of the second natural language utterance from the second domain agent; and

determining the interpretation based on one or more of the first interpretation or the second interpretation;

determining, by the one or more physical processors, promotional content based on the interpretation; and

presenting, by the one or more physical processors, the promotional content to a user.

22. (**Previously Presented**) The method of claim 21, wherein the first natural language utterance and the second natural language utterance are received during an interactive session between the user and the computer system, the method further comprising:

determining, by the one or more physical processors, an activity relating to one or more of the first natural language utterance or the second natural language utterance,

wherein determining the promotional content comprises determining the promotional content based on the activity.

23. (**Previously Presented**) The method of claim 21, further comprising:

determining, by the one or more physical processors, context information for the one or more recognized words based on the first natural language utterance,

wherein the interpretation is determined further based on the context information.

24-26. (**Cancelled**)

27. (**Previously Presented**) The method of claim 21, wherein the first interpretation is determined by the first domain agent based on the first domain, and wherein the second interpretation is determined by the second domain agent based on the second domain.

28. (**Previously Presented**) The method of claim 21, further comprising:

associating, by the one or more physical processors, the first interpretation with a first interpretation score; and

associating, by the one or more physical processors, the second interpretation with a second interpretation score,

wherein determining the interpretation comprises determining the first interpretation as the interpretation based on the first interpretation score and the second interpretation score.

29. (**Previously Presented**) The method of claim 28, wherein the first interpretation is determined as the interpretation based on the first interpretation score being greater than the second interpretation score.

30. (**Previously Presented**) The method of claim 21, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, an interpretation of the third natural language utterance based on the promotional content.

31. (**Previously Presented**) The method of claim 30, wherein the first natural language utterance, the second natural language utterance, and the third natural language utterance are received during an interactive session between the user and the computer system.

32. (**Previously Presented**) The method of claim 31, wherein the third natural language utterance is received after the second natural language utterance.

33. (**Previously Presented**) The method of claim 30, further comprising:

performing, by the one or more physical processors, speech recognition to recognize one or more words of the third natural language utterance, wherein the one or more recognized words of the third natural language utterance include one or more reference words;

determining, by the one or more physical processors, that the one or more reference words refer to an item associated with the promotional content; and

initiating, by the one or more physical processors, a purchase transaction associated with the item based on the determination that the one or more reference words refer to the item.

34. (**Previously Presented**) The method of claim 33, wherein the item includes a purchasable good.

35. (**Previously Presented**) The method of claim 30, further comprising:

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

36. (**Previously Presented**) The method of claim 21, wherein the first natural language utterance and the second natural language utterance are received during an interactive session between the user and the computer system, the method further comprising:

receiving, at the one or more physical processors, a third natural language utterance during the interactive session; and

processing, by the one or more physical processors, based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance.

37. (**Previously Presented**) The method of claim 36, wherein determining the promotional content comprises determining the promotional content based on the reinterpretation.

38. (**Previously Presented**) The method of claim 36, wherein determining the promotional content comprises determining the promotional content based on the interpretation, the method further comprising:

determining, by the one or more physical processors, other promotional content based on the reinterpretation; and

presenting, by the one or more physical processors, the other promotional content to the user.

39. (**Previously Presented**) The method of claim 21, further comprising:

identifying, by the one or more physical processors, one or more requests associated with the second natural language utterance,

wherein determining the promotional content comprises obtaining the promotional content based on a determination that the promotional content relates to the one or more requests.

40. (**Previously Presented**) The method of claim 39, further comprising:

determining, by the one or more physical processors, one or more activities in the one or more requests; and

performing, by the one or more physical processors, the one or more activities,

wherein determining the promotional content comprises determining the promotional content based on the one or more activities.

41. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a call to be initiated for the user in response to the one or more requests, wherein performing the one or more activities comprises initiating the call for the user, and wherein determining the promotional content comprises determining the promotional content based on the call.

42. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a navigation route to be calculated for the user in response to the one or more requests, wherein performing the one or more activities comprises calculating the navigation route for the user, and wherein determining the promotional content comprises determining the promotional content based on the navigation route.

43. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprise determining a media item to be presented in response to the one or more requests, wherein performing the one or more activities comprises presenting the media item to the user, and wherein determining the promotional content comprises determining the promotional content based on the media item, the promotional content being different than the media item.

44. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a reservation to be made on behalf of the user in response to the one or more requests, and wherein determining the promotional content comprises determining the promotional content based on information relating to the reservation.

45. (**Previously Presented**) The method of claim 40, wherein determining the one or more activities comprises determining a first reservation to be made on behalf of the user in response to the one or more requests, and wherein determining the promotional content comprises determining the promotional content based on information relating to a second reservation that is an alternative to the first reservation.

46. (**Previously Presented**) The method of claim 40, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance;

determining, by the one or more physical processors, an interpretation of the ~~one or~~ third natural language utterance based on the promotional content; and

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

47. (**Previously Presented**) The method of claim 39, further comprising:

determining, by the one or more physical processors, that at least one request of the one or more requests is incomplete or ambiguous;

monitoring, by the one or more physical processors, interaction of the user with the promotional content; and

interpreting, by the one or more physical processors, the at least one incomplete or ambiguous request based on the interaction.

48. (**Previously Presented**) The method of claim 39, wherein the one or more requests include a first request associated with a first application and a second request associated with a second application different than the first application, and wherein the promotional content relates to one or more of the first request or the second request.

49. (**Previously Presented**) The method of~~,~~ claim 48, wherein a first application type of the first application includes one or more of a navigation application, a music application, a commerce application, or a calling application, and wherein the second application is of an application type different than the first application type.

50. (**Previously Presented**) The method of claim 39, wherein the one or more requests include a first request to be processed by a first device associated with the user and a second request to be processed by a second device associated with the user, and wherein the promotional content relates to one or more of the first request or the second request.

51. (**Previously Presented**) The method of claim 50, wherein a first device type of the first device includes one or more of a mobile phone, a navigation device, or a media player device, and wherein the second device is of a device type different than the first device type.

52. (**Previously Presented**) The method of claim 50, wherein the first device and the second device are operably independent of one another.

53. (**Previously Presented**) The method of claim 21, further comprising:

obtaining, by the one or more physical processors, user profile information associated with the user, wherein the user profile information specifies prior user interactions with items; and

identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information,

wherein determining the promotional content comprises determining a promotional item associated with one of the categories.

54. (**Previously Presented**) The method of claim 21, further comprising:

obtaining, by the one or more physical processors, user profile information associated with the user, wherein the user profile information specifies prior user interactions with items;

identifying, by the one or more physical processors, one or more requests associated with the first natural language utterance or the second natural language utterance;

determining, by the one or more physical processors, one or more applications for processing the one or more requests; and

identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information, wherein the categories relate to the one or more applications,

wherein determining the promotional content comprises determining a promotional item associated with one of the categories.

55. (**Previously Presented**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

perform speech recognition to recognize one or more words of the second natural language utterance;

determine domain information for the one or more recognized words based on the first natural language utterance;

process, based on the domain information, the one or more recognized words to determine an interpretation of the second natural language utterance, wherein processing the one or more recognized words comprises:

providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;

obtaining a first interpretation of the second natural language utterance from the first domain agent;

obtaining a second interpretation of the second natural language utterance from the second domain agent; and

determining the interpretation based on one or more of the first interpretation or the second interpretation;

determine promotional content based on the interpretation; and

present the promotional content to a user.

56. (**Currently Amended**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance during an interactive session between [[the]] a user and the computer system;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance during the interactive session;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

processing, by the one or more physical processors, based on the first natural language utterance, the one or more recognized words to determine an interpretation of the second natural language utterance;

receiving, at the one or more physical processors, a third natural language utterance during the interactive session;

processing, by the one or more physical processors, based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance;

determining, by the one or more physical processors, promotional content based on one or more of the interpretation or the reinterpretation; and

presenting, by the one or more physical processors, the promotional content to [[a]] the user.

57. (**Previously Presented**) The method of claim 56, wherein determining the promotional content comprises determining the promotional content based on the reinterpretation.

58. (**Previously Presented**) The method of claim 56, wherein determining the promotional content comprises determining the promotional content based on the interpretation, the method further comprising:

determining, by the one or more physical processors, other promotional content based on the reinterpretation; and

presenting, by the one or more physical processors, the other promotional content to the user.

59. (**Currently Amended**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance during an interactive session between [[the]] a user and the system;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance during the interactive session;

perform speech recognition to recognize one or more words of the second natural language utterance;

process, based on the first natural language utterance, the one or more recognized words to determine an interpretation of the second natural language utterance;

receive a third natural language utterance during the interactive session;

process, based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance;

determine promotional content based on one or more of the interpretation or the reinterpretation; and

present the promotional content to [[a]] the user.

60. (**Previously Presented**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

identifying, by the one or more physical processors, one or more requests associated with the second natural language utterance;

determining, by the one or more physical processors, that at least one request of the one or more requests is incomplete or ambiguous;

determining, by the one or more physical processors, promotional content that relates to the one or more requests;

presenting, by the one or more physical processors, the promotional content to a user;

monitoring, by the one or more physical processors, interaction of the user with the promotional content; and

interpreting, by the one or more physical processors, the at least one incomplete or ambiguous request based on the interaction.

61. (**Previously Presented**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

identify one or more requests associated with the second natural language utterance;

determine that at least one request of the one or more requests is incomplete or ambiguous;

determine promotional content that relates to the one or more requests;

present the promotional content to a user;

monitor interaction of the user with the promotional content; and

interpret the at least one incomplete or ambiguous request based on the interaction.

62. (**Previously Presented**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

identifying, by the one or more physical processors, requests associated with the second natural language utterance, wherein the requests include a first request associated with a first application and a second request associated with a second application different than the first application;

determining, by the one or more physical processors, promotional content that relates to one or more of the first request or the second request; and

presenting, by the one or more physical processors, the promotional content to a user.

63. (**Previously Presented**) The method of 62, wherein a first application type of the first application includes one or more of a navigation application, a music application, a commerce application, or a calling application, and wherein the second application is of an application type different than the first application type.

64. (**Previously Presented**) The method of claim 62, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, an interpretation of the third natural language utterance based on the promotional content.

65. (**Previously Presented**) The method of claim 64, further comprising:

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

66. (**Previously Presented**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

identify requests associated with the second natural language utterance, wherein the requests include a first request associated with a first application and a second request associated with a second application different than the first application;

determine promotional content that relates to one or more of the first request or the second request; and

present the promotional content to a user.

67. (**Previously Presented**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

identifying, by the one or more physical processors, requests associated with the second natural language utterance, wherein the requests include a first request to be processed by a first device associated with a user and a second request to be processed by a second device associated with the user;

determining, by the one or more physical processors, promotional content that relates to one or more of the first request or the second request; and

presenting, by the one or more physical processors, the promotional content to the user.

68. (**Previously Presented**) The method of claim 67, wherein a first device type of the first device includes one or more of a mobile phone, a navigation device, or a media player device, and wherein the second device is of a device type different than the first device type.

69. (**Previously Presented**) The method of claim 67, wherein the first device and the second device are operably independent of one another.

70. (**Previously Presented**) The method of claim 67, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, an interpretation of the third natural language utterance based on the promotional content.

71. (**Previously Presented**) The method of claim 70, further comprising:

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

72. (**Previously Presented**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

identify requests associated with the second natural language utterance, wherein the requests include a first request to be processed by a first device associated with a user and a second request to be processed by a second device associated with the user;

determine promotional content that relates to one or more of the first request or the second request; and

present the promotional content to the user.

73. (**Previously Presented**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

obtaining, by the one or more physical processors, user profile information associated with a user, wherein the user profile information specifies prior user interactions with items;

identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information;

determining, by the one or more physical processors, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

presenting, by the one or more physical processors, the promotional content to the user.

74. (**Previously Presented**) The method of claim 73, further comprising:

receiving, at the one or more physical processors, a third natural language utterance relating to one or more of the first natural language utterance or the second natural language utterance; and

determining, by the one or more physical processors, an interpretation of the third natural language utterance based on the promotional content.

75. (**Previously Presented**) The method of claim 74, further comprising:

initiating, by the one or more physical processors, based on the interpretation of the third natural language utterance, a purchase transaction associated with the promotional content.

76. (**Previously Presented**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

obtain user profile information associated with a user, wherein the user profile information specifies prior user interactions with items;

identify categories of items based on the prior user interactions specified by the user profile information;

determine, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

present the promotional content to the user.

77. (**Currently Amended**) A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:

receiving, at the one or more physical processors, a first natural language utterance;

providing, by the one or more physical processors, a response to the first natural language utterance;

receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;

obtaining, by the one or more physical processors, user profile information associated with [[the]] a user, wherein the user profile information specifies prior user interactions with items;

identifying, by the one or more physical processors, one or more requests associated with one or more of the first natural language utterance or the second natural language utterance;

determining, by the one or more physical processors, one or more applications for processing the one or more requests; and

identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information, wherein the categories relate to the one or more applications;

determining, by the one or more physical processors, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

presenting, by the one or more physical processors, the promotional content to [[a]] the user.

78. (**Currently Amended**) A system for providing promotional content related to one or more natural language utterances and/or responses, the system comprising:

one or more physical processors programmed to execute one or more computer program instructions which, when executed, cause the one or more physical processors to:

receive a first natural language utterance;

provide a response to the first natural language utterance;

receive a second natural language utterance relating to the first natural language utterance;

obtain user profile information associated with [[the]] a user, wherein the user profile information specifies prior user interactions with items;

identify one or more requests associated with one or more of the first natural language utterance or the second natural language utterance;

determine one or more applications for processing the one or more requests; and

identify categories of items based on the prior user interactions specified by the user profile information, wherein the categories relate to the one or more applications;

determine, based on the first natural language utterance and the second natural language utterance, promotional content associated with one of the categories; and

present the promotional content to [[a]] the user.

REMARKS

By this amendment, claim 56, 59, 77, and 78 has been amended. Applicant submits the remarks below pursuant to the requirements of MPEP § 714.16.

A. This amendment is necessary to correct minor errors in independent claims 56, 59, 77, and 78 that were discovered upon review of the above-referenced application prior to payment of the issue fee. In particular, independent claims 56, 59, 77, and 78 have been amended so that the phrase "a user" is recited prior to the phrase "the user."

B. The amendment to the claims would not require any additional search or examination because there is no substantive difference between the claims as amended and the corresponding allowed claims as pending prior to the entry of the amendment.

C. The claims as amended are patentable because there is no substantive difference between the claims as amended and the corresponding allowed claims as pending prior to the entry of the amendment.

D. The amendment to the claims was not presented earlier because the minor errors were discovered after the mailing of the Notice of Allowance on June 5, 2014, and prior to payment of the enclosed issue fee.

CONCLUSION

For at least the reasons set forth above, and because this Amendment is being submitted prior to payment of the enclosed issue fee, Applicant respectfully solicits entry of this Amendment into the record.

Respectfully submitted,

Date: **August 26, 2014**

PILLSBURY WINTHROP SHAW PITTMAN LLP

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS :	Tom FREEMAN *et al.*	CONFIRMATION No.:	2790
SERIAL NUMBER :	14/016,757	EXAMINER:	Brian Louis Albertalli
FILING DATE :	September 3, 2013	ART UNIT:	2657
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby makes of record in the above-identified application the documents listed on the attached Form PTO-1449.

Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This Supplemental Information Disclosure Statement is being filed more than three months after the filing date of a national application other than a continued prosecution

application under 37 C.F.R. § 1.53(d), or more than three months after the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, and after the mailing date of any of a Final Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution in the application, but on or before payment of the Issue Fee. 37 C.F.R. § 1.97(d).

Document B was cited by the U.S. Patent Office in co-pending Application Serial No. 13/690,997, filed November 30, 2012, in an Office Action dated August 1, 2014. I hereby certify that no item of information contained in this Supplemental Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to my knowledge after making reasonable inquiry, no item of information contained in this Supplemental Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Supplemental Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

Please charge the $90.00 fee [37 C.F.R. § 1.17(p)] to Deposit Account No. 03-3975. In addition, please charge any fee deficiencies, or credit any overpayment, to Deposit Account No. 03-3975 as needed to ensure consideration of the Supplemental Information Disclosure Statement.

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

By /Ngai B. Zhang/
Ngai B. Zhang
Registration No.: 65,473

Customer No.
00909

P. O. Box 10500
McLean, Virginia 22102
Telephone: (703) 770-7900
Telefax: (703) 770-7901

Dated: August 26, 2014

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Inventor(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A	2004/0122674	06/24/2004	Bangalore *et al.*	704	276	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

404736854v1

Electronic Patent Application Fee Transmittal

Application Number:	14016757
Filing Date:	03-Sep-2013
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Filer:	Ngai Bing Zhang/Susan Trader
Attorney Docket Number:	090611-0424941

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	2501	1	480	480
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
		Total in USD ($)		**570**

Electronic Acknowledgement Receipt

EFS ID:	19962622
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Susan Trader
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	26-AUG-2014
Filing Date:	03-SEP-2013
Time Stamp:	09:34:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$570
RAM confirmation Number	7700
Deposit Account	033975
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees) Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	0424941_IssueFee.pdf	89934 02ca3d8aeae12e2d718c1f20ae5e229a608c52a9	no	1
Warnings:					
Information:					
2		0424941_Amdt.pdf	603520 f5da897e7835d0292d8b99477c742f9da4d9e67e	yes	26

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment after Notice of Allowance (Rule 312)	1	1
Claims	2	24
Applicant Arguments/Remarks Made in an Amendment	25	26

Warnings:					
Information:					
3		0424941_SIDS.pdf	11245630 f6c39ccf2e7618485d7659245786693966e36063	yes	22

Multipart Description/PDF files in .zip description

Document Description	Start	End
Transmittal Letter	1	3
Information Disclosure Statement (IDS) Form (SB08)	4	4
Transmittal Letter	5	21
Information Disclosure Statement (IDS) Form (SB08)	22	22

Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	32197 e4a2eb1165ce4ba5ec4db0f1ebd95736ef03014f	no	2
Warnings:					
Information:					

Total Files Size (in bytes):	11971281

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Inventor(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A	8,738,380	05/27/2014	Baldwin *et al.*	704	257	
	B	2008/0154604	06/26/2008	Sathish *et al.*	704	257	
	C	2014/0156278	06/05/2014	Kennewick *et al.*	704	254	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

404736852v1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS :	Tom FREEMAN *et al.*	CONFIRMATION No.:	2790
SERIAL NUMBER :	14/016,757	EXAMINER:	Brian Louis Albertalli
FILING DATE :	September 3, 2013	ART UNIT:	2657
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

FURTHER SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby makes of record in the above-identified application the document listed on the attached Form PTO-1449.

Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This Further Supplemental Information Disclosure Statement is being filed more than three months after the filing date of a national application other than a continued prosecution application under 37 C.F.R. § 1.53(d), or more than three months after the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, and after the mailing date of any of a Final Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37

C.F.R. § 1.311, or an action that otherwise closes prosecution in the application, but on or before payment of the Issue Fee. 37 C.F.R. § 1.97(d).

I hereby certify that each item of information contained in this Further Supplemental Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Further Supplemental Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

The $90.00 fee [37 C.F.R. § 1.17(p)] is being paid with the Supplemental Information Disclosure Statement filed under even date herewith.

The document was cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided.

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

By /Ngai B. Zhang/
Ngai B. Zhang
Registration No.: 65,473

Customer No.
00909

P. O. Box 10500
McLean, Virginia 22102
Telephone: (703) 770-7900
Telefax: (703) 770-7901

Dated: August 26, 2014

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

909 7590 09/02/2014

Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

EXAMINER	
ALBERTALLI, BRIAN LOUIS	
ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
09/02/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket_ip@pillsburylaw.com
heather.marthers@pillsburylaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Application No. : 14016757
Applicant : Freeman
Filing Date : 09/03/2013
Date Mailed : 09/02/2014

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Notice of Allowance Mailed

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given two (2) months from the mail date of this Notice within which to respond. This time period for reply is extendable under 37 CFR 1.136(a) for only TWO additional MONTHS.

The application is not in compliance with 37 CFR 1.78, as indicated in the attachment. The consequences of failure to respond within the above-identified time period are set forth in the attachment.

Even if the Office has recognized a benefit claim and has entered it into the Office's database and included it on applicant's filing receipt, the benefit claim is not a proper benefit claim unless the reference in compliance with 37 CFR 1.78 is included, depending upon the application's filing date and as indicated in the attachment, in an application data sheet or in the first sentence(s) of the specification and all other requirements are met.

See attachment.

A copy of this notice MUST be returned with the reply. Please address response to "Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

/Vermel Wilson/
Publication Branch
Office of Data Management
(571) 272-4200

Application No. 14016757

APPLICATION FILED ON OR AFTER MARCH 16, 2013,
NOT IN COMPLIANCE WITH 37 CFR 1.78

[X] The 37 CFR 1.78(c)(2) reference on the application data sheet does not indicate the relationship (continuation, division, continuation-in-part) to the prior U.S. nonprovisional application or international application designating the U.S. See document coded ADS dated 09/03/2013, listing application number(s) 11/671,526.

[ ] The 37 CFR 1.78(c)(2) reference on the application data sheet does not provide the U.S. nonprovisional application number (series code and serial number) or, with respect to an international PCT application designating the U.S., it provides the international application number or international filing date but not both. See document coded dated , in which the following is missing: .

[ ] The 37 CFR 1.78(c)(2) reference on the application data sheet shows an incorrect, incomplete, or illegible U.S. nonprovisional application number, international PCT application number, or international PCT filing date. See document coded dated , in which the following error was made: .

[ ] The 37 CFR 1.78(c)(2) reference to the prior U.S. nonprovisional application or international application designating the U.S. is not present on an application data sheet, thus removing the validating link under 35 U.S.C. 119(a)-(d) to a prior foreign application or under 35 U.S.C. 119(e) to a prior U.S. provisional application.

[ ] The 37 CFR 1.78(c)(2) reference to the prior U.S. nonprovisional application or international application designating the U.S. is not present on an application data sheet.

[ ] The 37 CFR 1.78(a)(3) reference to the prior U.S. provisional application is not present on an application data sheet.

[ ] The 37 CFR 1.78(a)(3) reference to the prior U.S. provisional application on an application data sheet does not provide the provisional application number (series code and serial number). See document coded dated , in which the following is missing: .

[ ] The 37 CFR 1.78(a)(3) reference to the prior U.S. provisional application on an application data sheet shows an incorrect, incomplete, or illegible U.S. provisional application number. See document coded dated , in which the following error was made: .

[ ] Other: .

HOW TO RESPOND

A proper response to this notice would include: (1) a corrected Application Data Sheet (ADS) pursuant to 37 CFR 1.76(c) which provides the benefit information from the attached filing receipt which would make the benefit information comply with 37 CFR 1.78(c)(2) or 37 CFR 1.78(a)(3) or (2) a petition filed pursuant to the provisions of 37 CFR 1.78(b) or 37 CFR 1.78(d) if the benefit information from the attached filing receipt does not accurately reflect the benefits under 35 U.S.C. 119(e), 120, 121 or 365(c) as claimed by applicant (a grantable petition would include a corrected ADS as required by 37 CFR 1.78(b)(1) or 37 CFR 1.78(d)(1)).

WARNING: If Applicant fails to timely submit a proper response, the benefit information will be deleted and the patent will be printed without the benefit information present.

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Inventor(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A	8,738,380	05/27/2014	Baldwin *et al.*	704	257	
	B	2008/0154604	06/26/2008	Sathish *et al.*	704	257	
	C	2014/0156278	06/05/2014	Kennewick *et al.*	704	254	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	DATE CONSIDERED
/Brian Albertalli/	09/02/2014

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

404736852v1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.A./

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

INVENTOR(S):	Tom FREEMAN *et al.*
SERIAL NO.:	14/016,757
FILING DATE:	September 3, 2013
ATTORNEY DOCKET NO.:	090611-0424941
CONFIRMATION NO.:	2790
EXAMINER:	BRIAN LOUIS ALBERTALLI
ART UNIT:	2657
FOR:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXT

AMENDMENT UNDER 37 C.F.R. § 1.312

OK TO ENTER: /B.A./

09/02/2014

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.312, and prior to payment of the enclosed issue fee, please amend the above-identified application as follows:

Amendments to the Claims begin on page **2** of this paper.

Remarks/Arguments begin on page **25** of this paper.

It is believed that no extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. § 1.136(a), and any fees required therefore (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 033975 (**Ref. No. 090611-0424941**).

INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Docket Number	Application Number
	090611-0424941	14/016,757
	Inventor(s)	
	Tom FREEMAN *et al.*	
	Filing Date	Group Art Unit
Form PTO-1449	September 3, 2013	2657

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translations YES	Translations NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	DATE CONSIDERED
/Brian Albertalli/	09/02/2014

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

404736854v1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.A./

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

909 7590 09/08/2014

Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

EXAMINER	
ALBERTALLI, BRIAN LOUIS	
ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
09/08/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket_ip@pillsburylaw.com
heather.marthers@pillsburylaw.com

Supplemental Notice of Allowability	Application No. 14/016,757	Applicant(s) FREEMAN ET AL.	
	Examiner BRIAN ALBERTALLI	Art Unit 2657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *26 August 2014*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *21-23 and 27-78*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/BRIAN ALBERTALLI/
Primary Examiner, Art Unit 2657

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS :	Tom FREEMAN, *et al.*	CONFIRMATION NO.:	2790
SERIAL NUMBER :	14/016,757		
FILING DATE :	September 3, 2013	ART UNIT:	2657
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notice to File Corrected Application Papers mailed September 2, 2014, Applicant herewith submits the following:

☒ Corrected Application Data Sheet

The Commissioner is authorized to charge any required fee(s) or to credit any overpayments to Pillsbury Winthrop Shaw Pittman LLP's deposit account no. 03-3975 (Attorney Docket No. 090611-0424941).

Date: October 2, 2014

Respectfully submitted,

By: /Ngai B. Zhang/
Ngai B. Zhang
Reg. No. 65,473
Direct Dial: (703) 770-7532

Customer No. 00909

PILLSBURY WINTHROP SHAW PITTMAN LLP
1650 Tysons Boulevard
McLean, Virginia 22102
(703) 770-7900

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	090611-0424941	2790

909 7590 09/02/2014

Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

EXAMINER	
ALBERTALLI, BRIAN LOUIS	
ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
09/02/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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docket_ip@pillsburylaw.com
heather.marthers@pillsburylaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Application No. : 14016757
Applicant : Freeman
Filing Date : 09/03/2013
Date Mailed : 09/02/2014

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Notice of Allowance Mailed

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given two (2) months from the mail date of this Notice within which to respond. This time period for reply is extendable under 37 CFR 1.136(a) for only TWO additional MONTHS.

The application is not in compliance with 37 CFR 1.78, as indicated in the attachment. The consequences of failure to respond within the above-identified time period are set forth in the attachment.

Even if the Office has recognized a benefit claim and has entered it into the Office's database and included it on applicant's filing receipt, the benefit claim is not a proper benefit claim unless the reference in compliance with 37 CFR 1.78 is included, depending upon the application's filing date and as indicated in the attachment, in an application data sheet or in the first sentence(s) of the specification and all other requirements are met.

See attachment.

A copy of this notice MUST be returned with the reply. Please address response to "Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

/Vermel Wilson/
Publication Branch
Office of Data Management
(571) 272-4200

Application No. 14016757

APPLICATION FILED ON OR AFTER MARCH 16, 2013,
NOT IN COMPLIANCE WITH 37 CFR 1.78

[X] The 37 CFR 1.78(c)(2) reference on the application data sheet does not indicate the relationship (continuation, division, continuation-in-part) to the prior U.S. nonprovisional application or international application designating the U.S. See document coded ADS dated 09/03/2013, listing application number(s) 11/671,526.

[ ] The 37 CFR 1.78(c)(2) reference on the application data sheet does not provide the U.S. nonprovisional application number (series code and serial number) or, with respect to an international PCT application designating the U.S., it provides the international application number or international filing date but not both. See document coded dated , in which the following is missing: .

[ ] The 37 CFR 1.78(c)(2) reference on the application data sheet shows an incorrect, incomplete, or illegible U.S. nonprovisional application number, international PCT application number, or international PCT filing date. See document coded dated , in which the following error was made: .

[ ] The 37 CFR 1.78(c)(2) reference to the prior U.S. nonprovisional application or international application designating the U.S. is not present on an application data sheet, thus removing the validating link under 35 U.S.C. 119(a)-(d) to a prior foreign application or under 35 U.S.C. 119(e) to a prior U.S. provisional application.

[ ] The 37 CFR 1.78(c)(2) reference to the prior U.S. nonprovisional application or international application designating the U.S. is not present on an application data sheet.

[ ] The 37 CFR 1.78(a)(3) reference to the prior U.S. provisional application is not present on an application data sheet.

[ ] The 37 CFR 1.78(a)(3) reference to the prior U.S. provisional application on an application data sheet does not provide the provisional application number (series code and serial number). See document coded dated , in which the following is missing: .

[ ] The 37 CFR 1.78(a)(3) reference to the prior U.S. provisional application on an application data sheet shows an incorrect, incomplete, or illegible U.S. provisional application number. See document coded dated , in which the following error was made: .

[ ] Other: .

HOW TO RESPOND

A proper response to this notice would include: (1) a corrected Application Data Sheet (ADS) pursuant to 37 CFR 1.76(c) which provides the benefit information from the attached filing receipt which would make the benefit information comply with 37 CFR 1.78(c)(2) or 37 CFR 1.78(a)(3) or (2) a petition filed pursuant to the provisions of 37 CFR 1.78(b) or 37 CFR 1.78(d) if the benefit information from the attached filing receipt does not accurately reflect the benefits under 35 U.S.C. 119(e), 120, 121 or 365(c) as claimed by applicant (a grantable petition would include a corrected ADS as required by 37 CFR 1.78(b)(1) or 37 CFR 1.78(d)(1)).

WARNING: If Applicant fails to timely submit a proper response, the benefit information will be deleted and the patent will be printed without the benefit information present.

PTO/AIA/14 (12-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	090611-0424941
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	TOM		FREEMAN	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	MERCER ISLAND	State/Province	WA	Country of Residence	US

Mailing Address of Inventor:

Address 1	6735 83RD AVENUE, S.E.		
Address 2			
City	MERCER ISLAND	State/Province	WA
Postal Code	98040	Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	MIKE		KENNWICK	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	BELLEVUE	State/Province	WA	Country of Residence	US

Mailing Address of Inventor:

Address 1	13407 N.E. 37TH PLACE		
Address 2			
City	BELLEVUE	State/Province	WA
Postal Code	98077	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

PTO/AIA/14 (12-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	090611-0424941
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	

☐ **An Address is being provided for the correspondence Information of this application.**			
Customer Number	00909		
Email Address	Docket_ip@pillsburylaw.com	Add Email	Remove Email

Application Information:

Title of the Invention	SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		
Attorney Docket Number	090611-0424941	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	3	**Suggested Figure for Publication (if any)**	

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	00909		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	090611-0424941
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the application number blank.

Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14/016757	Continuation of	13/371870	2012-02-13	8527274	2013-09-03
Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13/371870	Continuation of	12/847564	2010-07-30	8145489	2012-03-27
Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12/847564	Continuation of	11/671526	2007-02-06	7818176	2010-10-19

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	090611-0424941
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date o f filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	090611-0424941
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◉ Assignee	○ Legal Representative under 35 U.S.C. 117	○ Joint Inventor
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☒

Organization Name	VOICEBOX TECHNOLOGIES CORPORATION		
Mailing Address Information For Applicant:			
Address 1	11980 N.E. 24TH STREET		
Address 2	SUITE 100		
City	BELLEVUE	**State/Province**	WA
Country	US	Postal Code	98005
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not subsitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication . An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☒

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	090611-0424941
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR DELIVERING TARGET ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	

Organization Name	VOICEBOX TECHNOLOGIES CORPORATION

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1	11980 N.E. 24TH STREET		
Address 2	SUITE 100		
City	BELLEVUE	**State/Province**	WA
Country	US	Postal Code	98005
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Signature	/NGAI B. ZHANG/			Date (YYYY-MM-DD)	2014-10-02
First Name	NGAI	Last Name	ZHANG	Registration Number	65473

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent C o o p eration Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	20313018
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Monet Noel
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	02-OCT-2014
Filing Date:	03-SEP-2013
Time Stamp:	15:14:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		0424941_Response2NTCAP.PDF	295046 0717398e16556a03e8bf73781e59b05cddd43e81	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Applicant Response to Pre-Exam Formalities Notice	1	4
	Application Data Sheet	5	11
Warnings:			
Information:			
	Total Files Size (in bytes):	295046	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	11/11/2014	8886536	090611-0424941	2790

909 7590 10/22/2014

Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

VoiceBox Technologies Corporation, Bellevue, WA, Assignee (with 37 CFR 1.172 Interest);
Tom Freeman, Mercer Island, WA;
Mike Kennewick, Bellevue, WA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS :	Tom FREEMAN *et al.*	CONFIRMATION No.:	2790
PATENT NUMBER :	8,886,536 B2	SERIAL No.:	14/016,757
ISSUE DATE :	November 11, 2014	FILING DATE:	September 3, 2013
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

REQUEST FOR CERTIFICATE OF CORRECTION

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

The assignee of the above-identified patent, through its attorneys, hereby requests issuance of a Certificate of Correction. A certificate is required to correct the error as set forth below.

The error is considered to be the fault of the United States Patent and Trademark Office ("PTO"). Therefore, no fee is required. However, in the event that it is determined that fees are due, the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 03-3975 (Reference No. 090611-0424941).

Correction of Second Inventor's Name

The second inventor of this application is Mike Kennewick. However, the title page of the patent that issued on this application lists his name as "Mike Kennwick". Accordingly, Item (72) Inventors should be corrected to change "Kennwick" to "Kennewick". The undersigned has provided a copy of the Filing Receipt mailed September 30, 2013, which correctly shows the spelling of the second inventor's last name as "Kennewick", thus supporting the contention that PTO error resulted in the incorrect spelling of the second inventor's last name on the title page of the patent.

CONCLUSION

It is respectfully requested that a Certificate of Correction be issued to correct this error. Form PTO/SB/44 is attached for this purpose.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

By /Ngai B. Zhang/
Ngai B. Zhang
Registration No.: 65,473

Customer No.
00909

P. O. Box 10500
McLean, Virginia 22102
Telephone: (703) 770-7900
Telefax: (703) 770-7901

Dated: February 3, 2015

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/016,757	09/03/2013	2658	800	090611-0424941	20	2

CONFIRMATION NO. 2790

909
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

FILING RECEIPT

OC000000063914321

Date Mailed: 09/30/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Tom Freeman, Mercer Island, WA;
Mike Kennewick, Bellevue, WA;

Applicant(s)

VoiceBox Technologies Corporation, Bellevue, WA

Assignment For Published Patent Application

VoiceBox Technologies Corporation, Bellevue, WA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 13/371,870 02/13/2012 PAT 8527274
which is a CON of 12/847,564 07/30/2010 PAT 8145489
which is a CON of 11/671,526 02/06/2007 PAT 7818176

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 09/19/2013
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/016,757**
Projected Publication Date: 01/09/2014
Non-Publication Request: No
Early Publication Request: No

**** SMALL ENTITY ****

Title

SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS

Preliminary Class

704

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

PTO/SB/44 (09-07)
Approved for use through 08/31/2013. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,886,536 B2

APPLICATION NO.: 14/016,757

ISSUE DATE : November 11, 2014

INVENTOR(S) : Tom FREEMAN et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, in Item (72) Inventors,

change "Mike Kennwick" to --Mike Kennewick--.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

PILLSBURY WINTHROP SHAW PITTMAN LLP
P. O. Box 10500
McLean, VA 22102

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	21383535
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	Ngai Bing Zhang/Susan Trader
Filer Authorized By:	Ngai Bing Zhang
Attorney Docket Number:	090611-0424941
Receipt Date:	03-FEB-2015
Filing Date:	03-SEP-2013
Time Stamp:	14:03:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	090611-0424941_Request.pdf	4538769 ab41b4fb22b48c3458ee55bdc3b3ca024e2236e5	no	6

Warnings:	
Information:	

Total Files Size (in bytes):	4538769

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO.	: 8,886,536 B2
APPLICATION NO.	: 14/016757
DATED	: November 11, 2014
INVENTOR(S)	: Tom Freeman et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, in Item (72) Inventors,

change "Mike Kennwick" to --Mike Kennewick--.

Signed and Sealed this
Twenty-eighth Day of April, 2015

Michelle K. Lee

Michelle K. Lee
Director of the United States Patent and Trademark Office

PTO/AIA/82A (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	14/016,757
Filing Date	09/03/2013
First Named Inventor	Tom FREEMAN
Title	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
Art Unit	2657
Examiner Name	ALBERTALLI, BRIAN LOUIS
Attorney Docket Number	090611-0424941

SIGNATURE of Applicant or Patent Practitioner

Signature	/James G. Gatto/	Date (Optional)	September 25, 2015
Name	James G. Gatto	Registration Number	32,694
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 133759

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

VOICEBOX TECHNOLOGIES CORPORATION

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	
Name	MIKE KENNEWICK		
Title	CEO OF VOICEBOX TECHNOLOGIES CORPORATION		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	23610986
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	909
Filer:	James G. Gatto/Todd Yarborough
Filer Authorized By:	James G. Gatto
Attorney Docket Number:	090611-0424941
Receipt Date:	25-SEP-2015
Filing Date:	03-SEP-2013
Time Stamp:	17:08:21
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	VoiceBox_AIA0082_POA_0424941.pdf	892406 795564fd4f6ec211bc484a6ec251ece51930e63b	no	2

Warnings:	
Information:	

Total Files Size (in bytes):	892406

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/016,757	09/03/2013	Tom Freeman	090611-0424941

CONFIRMATION NO. 2790

133759
Sheppard Mullin Richter & Hampton LLP
12275 El Camino Real, Suite 200
San Diego, CA 92130

POA ACCEPTANCE LETTER

OC000000077856356

Date Mailed: 10/06/2015

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/25/2015.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/agizaw/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/016,757	09/03/2013	Tom Freeman	090611-0424941

CONFIRMATION NO. 2790

909
Pillsbury Winthrop Shaw Pittman, LLP (NV)
PO Box 10500
McLean, VA 22102

POWER OF ATTORNEY NOTICE

OC000000077856331

Date Mailed: 10/06/2015

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/25/2015.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/agizaw/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS :	Tom FREEMAN *et al.*	CONFIRMATION NO.:	2790
SERIAL NUMBER :	14/016,757	PATENT NO.:	8,886,536
FILING DATE :	September 3, 2013	ISSUE DATE:	November 11, 2014
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

DEFICIENCY PAYMENT UNDER 37 C.F.R. § 1.28(c)

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is being submitted to address a good faith error in payment of small entity fees. In this application, small entity status was established in good faith, and fees as a small entity were paid in good faith. It was later discovered that such status as a small entity was established in error. As such, Applicant believes small entity status is no longer appropriate in the instant application. Applicant notes that the erroneous payments of small entity fees were made inadvertently, without deceptive intent.

Pursuant to 37 C.F.R. § 1.28(c)(1)-(2), the fees paid in error and an itemization of the deficiencies owed for each previous fee erroneously paid as a small entity is attached as **APPENDIX A**, including an itemization of the requirements of 37 C.F.R. § 1.28(c)(2)(ii).

Accordingly, pursuant to 37 C.F.R. § 1.28(c), Applicant requests that the Commissioner excuse the good faith error in payment of small entity fees, and charge the deficiency payment owed, which is calculated to be **$7,730.00,** to Deposit Account No. 504561 **(Ref. No. 62KC-218263).**

Respectfully submitted,

SHEPPARD MULLIN RICHTER & HAMPTON LLP

By /Mark A. Patrick/
Mark A. Patrick
Registration No.: 72,958

2099 Pennsylvania Avenue, NW
Suite 100
Washington, D.C. 20006-6801
Telephone: (202) 747-2192

Customer No.
133759

Dated: June 5, 2019

APPENDIX A
ITEMIZATION OF DEFICIENCY PAYMENTS

Deficient Payment	Type of Fee Erroneously Paid as Small Entity 37 C.F.R. 1.28(c)(2)(ii)(A)	Current Fee for Non-Small Entity 37 C.F.R. 1.28(c)(2)(ii)(A)	Small Entity Fee Actually Paid 37 C.F.R. 1.28(c)(2)(ii)(B)	Date Small Entity Fee Paid 37 C.F.R. 1.28(c)(2)(ii)(B)	Deficiency Owed 37 C.F.R. 1.28(c)(2)(ii)(C)
First Deficient Payment	Basic Filing Fee – Utility (electronic filing for small entities) – Fee Code 4011	$300.00	$70.00	Application filed September 3, 2013	$300.00 - $70.00 = **$230.00**
Second Deficient Payment	Utility Search Fee – Fee Code 2111	$660.00	$300.00	Application filed September 3, 2013	$660.00 - $300.00 = **$360.00**
Third Deficient Payment	Utility Examination Fee – Fee Code 2311	$760.00	$360.00	Application filed September 3, 2013	$760.00 - $360.00 = **$400.00**
Fourth Deficient Payment	Surcharge – Late filing fee, search fee, examination fee, inventor's oath or declaration – Fee Code 2051	$160.00	$70.00	Application filed September 3, 2013	$160.00 - $70.00 = **$90.00**
Fifth Deficient Payment	15 Claims in excess of 20 – Fee Code 2202	$1,500.00	$600.00	Preliminary Amendment filed November 5, 2013	$1,500.00 - $600.00 = **$900.00**
Sixth Deficient Payment	Extension – 1 month with $0 paid – Fee Code 2251	$200.00	$100.00	Response filed May 9, 2014	$200.00 - $100.00 = **$100.00**
Seventh Deficient Payment	11 Independent claims in excess of 3 – Fee Code 2201	$5,060.00	$2,310.00	Response filed May 9, 2014	$5,060.00 - $2,310.00 = **$2,750.00**

Deficiency Payment Under 37 C.F.R. § 1.28(c)
Application Serial No.: 14/016,757
Patent No.: 8,886,536
Attorney Docket No.: 62KC-218263

EIGHTH DEFICIENT PAYMENT	20 Claims in excess of 20 – Fee Code 2202	$2,000.00	$800.00	Response filed May 9, 2014	$2,000.00 - $800.00 = **$1,200.00**
NINTH DEFICIENT PAYMENT	Information Disclosure Statement – Fee Code 2806	$240.00	$90.00	Information Disclosure Statement filed May 9, 2014	$240.00 - $90.00 = **$150.00**
TENTH DEFICIENT PAYMENT	Information Disclosure Statement – Fee Code 2806	$240.00	$90.00	Information Disclosure Statement filed August 26, 2014	$240.00 - $90.00 = **$150.00**
ELEVENTH DEFICIENT PAYMENT	Utility Issue Fee – Fee Code 2501	$1,000.00	$480.00	Issue Fee paid August 26, 2014	$1,000.00 - $480.00 = **$520.00**
TWELFTH DEFICIENT PAYMENT	3.5-Year Maintenance Fee – Fee Code 2551	$1,600.00	$800.00	Maintenance Fee paid May 31, 2018	$1,600.00 - $800.00 = **$800.00**
THIRTEENTH DEFICIENT PAYMENT	Surcharge – 3.5-Year – Late Payment Within 6 Months – Fee Code 2554	$160.00	$80.00	Surcharge paid May 31, 2018	$160.00 - $80.00 = **$80.00**
TOTAL DEFICIENCY PAYMENT OWED **37 C.F.R. 1.28(c)(2)(ii)(D)**	$230.00 + $360.00 + $400.00 + $90.00 + $900.00 + $100.00 + $2,750.00 + $1,200.00 + $150.00 + $150.00 + $520.00 + $800.00 +$80.00 = **$7,730.00** Total Deficiency Owed				

United States Patent and Trademark Office

- Sales Receipt -

06/07/2019 DALLEN 00000003 504561 14016757

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UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
14/016,757	09/03/2013	Tom Freeman	62KC-218263	89182

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 06/05/2019 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

X Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Mark A. Patrick/
Name:	Mark A. Patrick
Registration Number:	72958

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 06/27/2019

SMOHAMM2 SALE #00000007 Mailroom Dt: 06/05/2019 504561 14016757
01 FC : 1461 6,850.00 DA

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 06/27/2019

SMOHAMM2 ADJ #00000008 Mailroom Dt: 06/05/2019
Seq No: 3 Sales Acctg Dt: 06/07/2019 504561 14016757
01 FC : 1599 6850.00 CR

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 06/27/2019

SMOHAMM2 SALE #00000006 Mailroom Dt: 06/05/2019 14016757

01	FC : 1559	880.00	DA

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 06/27/2019

SMOHAMM2 ADJ #00000007 Mailroom Dt: 06/05/2019
Seq No: 4 Sales Acctg Dt: 06/07/2019 14016757
01 FC : 1599 880.00 CR

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS :	Tom FREEMAN *et al.*	CONFIRMATION NO.:	2790
SERIAL NUMBER :	14/016,757	PATENT NO.:	8,886,536
FILING DATE :	September 3, 2013	ISSUE DATE:	November 11, 2014
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

DEFICIENCY PAYMENT UNDER 37 C.F.R. § 1.28(c)

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is being submitted to address a good faith error in payment of small entity fees. In this application, small entity status was established in good faith, and fees as a small entity were paid in good faith. It was later discovered that such status as a small entity was established in error. As such, Applicant believes small entity status is no longer appropriate in the instant application. Applicant notes that the erroneous payments of small entity fees were made inadvertently, without deceptive intent.

Pursuant to 37 C.F.R. § 1.28(c)(1)-(2), the fees paid in error and an itemization of the deficiencies owed for each previous fee erroneously paid as a small entity is attached as **APPENDIX A**, including an itemization of the requirements of 37 C.F.R. § 1.28(c)(2)(ii).

Accordingly, pursuant to 37 C.F.R. § 1.28(c), Applicant requests that the Commissioner excuse the good faith error in payment of small entity fees, and charge the deficiency payment owed, which is calculated to be **$7,730.00,** to Deposit Account No. 504561 **(Ref. No. 62KC-218263).**

Respectfully submitted,

SHEPPARD MULLIN RICHTER & HAMPTON LLP

By /Mark A. Patrick/
Mark A. Patrick
Registration No.: 72,958

2099 Pennsylvania Avenue, NW
Suite 100
Washington, D.C. 20006-6801
Telephone: (202) 747-2192

Customer No.
133759

Dated: June 5, 2019

APPENDIX A
ITEMIZATION OF DEFICIENCY PAYMENTS

Deficient Payment	Type of Fee Erroneously Paid as Small Entity 37 C.F.R. 1.28(c)(2)(ii)(A)	Current Fee for Non-Small Entity 37 C.F.R. 1.28(c)(2)(ii)(A)	Small Entity Fee Actually Paid 37 C.F.R. 1.28(c)(2)(ii)(B)	Date Small Entity Fee Paid 37 C.F.R. 1.28(c)(2)(ii)(B)	Deficiency Owed 37 C.F.R. 1.28(c)(2)(ii)(C)
First Deficient Payment	Basic Filing Fee – Utility (electronic filing for small entities) – Fee Code 4011	$300.00	$70.00	Application filed September 3, 2013	$300.00 - $70.00 = **$230.00**
Second Deficient Payment	Utility Search Fee – Fee Code 2111	$660.00	$300.00	Application filed September 3, 2013	$660.00 - $300.00 = **$360.00**
Third Deficient Payment	Utility Examination Fee – Fee Code 2311	$760.00	$360.00	Application filed September 3, 2013	$760.00 - $360.00 = **$400.00**
Fourth Deficient Payment	Surcharge – Late filing fee, search fee, examination fee, inventor's oath or declaration – Fee Code 2051	$160.00	$70.00	Application filed September 3, 2013	$160.00 - $70.00 = **$90.00**
Fifth Deficient Payment	15 Claims in excess of 20 – Fee Code 2202	$1,500.00	$600.00	Preliminary Amendment filed November 5, 2013	$1,500.00 - $600.00 = **$900.00**
Sixth Deficient Payment	Extension – 1 month with $0 paid – Fee Code 2251	$200.00	$100.00	Response filed May 9, 2014	$200.00 - $100.00 = **$100.00**
Seventh Deficient Payment	11 Independent claims in excess of 3 – Fee Code 2201	$5,060.00	$2,310.00	Response filed May 9, 2014	$5,060.00 - $2,310.00 = **$2,750.00**

EIGHTH DEFICIENT PAYMENT	20 Claims in excess of 20 – Fee Code 2202	$2,000.00	$800.00	Response filed May 9, 2014	$2,000.00 - $800.00 = **$1,200.00**
NINTH DEFICIENT PAYMENT	Information Disclosure Statement – Fee Code 2806	$240.00	$90.00	Information Disclosure Statement filed May 9, 2014	$240.00 - $90.00 = **$150.00**
TENTH DEFICIENT PAYMENT	Information Disclosure Statement – Fee Code 2806	$240.00	$90.00	Information Disclosure Statement filed August 26, 2014	$240.00 - $90.00 = **$150.00**
ELEVENTH DEFICIENT PAYMENT	Utility Issue Fee – Fee Code 2501	$1,000.00	$480.00	Issue Fee paid August 26, 2014	$1,000.00 - $480.00 = **$520.00**
TWELFTH DEFICIENT PAYMENT	3.5-Year Maintenance Fee – Fee Code 2551	$1,600.00	$800.00	Maintenance Fee paid May 31, 2018	$1,600.00 - $800.00 = **$800.00**
THIRTEENTH DEFICIENT PAYMENT	Surcharge – 3.5-Year – Late Payment Within 6 Months – Fee Code 2554	$160.00	$80.00	Surcharge paid May 31, 2018	$160.00 - $80.00 = **$80.00**
TOTAL DEFICIENCY PAYMENT OWED **37 C.F.R. 1.28(c)(2)(ii)(D)**	$230.00 + $360.00 + $400.00 + $90.00 + $900.00 + $100.00 + $2,750.00 + $1,200.00 + $150.00 + $150.00 + $520.00 + $800.00 +$80.00 = **$7,730.00** Total Deficiency Owed				

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS :	Tom FREEMAN *et al.*	CONFIRMATION NO.:	2790
SERIAL NUMBER :	14/016,757	PATENT NO.:	8,886,536
FILING DATE :	September 3, 2013	ISSUE DATE:	November 11, 2014
FOR :	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS		

PETITION TO EXPEDITE UNDER 37 C.F.R.§ 1.182

Office of Petitions
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a Petition to Expedite Under 37 C.F.R. § 1.182 to expedite the processing of the Deficiency Payment Under 37 C.F.R. § 1.28(c) filed herewith.

Please charge the processing fee required under 37 C.F.R. § 1.17(f) in the amount of $400.00 for this Petition to Expedite to Deposit Account No. 504561 (Ref. No. **62KC-218263**). Please contact the undersigned by telephone if there are any questions regarding this matter.

Respectfully submitted,

SHEPPARD MULLIN RICHTER & HAMPTON LLP

By /Mark A. Patrick/
Mark A. Patrick
Registration No.: 72,958

Customer No.
133759

2099 Pennsylvania Avenue, NW
Suite 100
Washington, D.C. 20006-6801
Telephone: (202) 747-2192

Dated: June 5, 2019

Electronic Patent Application Fee Transmittal

Application Number:	14016757
Filing Date:	03-Sep-2013
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Filer:	Mark Andrew Patrick/Diane Bogusz
Attorney Docket Number:	62KC-218263

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE- 37 CFR 1.17(F) (GROUP I)	1462	1	400	400
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**400**

Electronic Acknowledgement Receipt

EFS ID:	36216041
Application Number:	14016757
International Application Number:	
Confirmation Number:	2790
Title of Invention:	SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS
First Named Inventor/Applicant Name:	Tom Freeman
Customer Number:	133759
Filer:	Mark Andrew Patrick/Diane Bogusz
Filer Authorized By:	Mark Andrew Patrick
Attorney Docket Number:	62KC-218263
Receipt Date:	05-JUN-2019
Filing Date:	03-SEP-2013
Time Stamp:	18:38:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$400
RAM confirmation Number	060619INTEFSW00005514504561
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Notification of loss of entitlement to small entity status	62KC-218263_Deficiency_Payment.pdf	151848 147a2e2f7a852296f9a5227fb8ce1d1dff6a8fc8	no	4
Warnings:					
Information:					
2	Petition for review by the Office of Petitions	62KC-218263_Petition_to_Expedite.pdf	112219 eb0d3a4672f3cbe46b8d025b706f12f690fa8c95	no	1
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30971 97adf5388746122ef410333ecd60b62f0a83ab26	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	295038		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/016,757	09/03/2013	Tom Freeman	62KC-218263	2790

133759 7590 07/01/2019

Sheppard Mullin Richter & Hampton LLP
650 Town Center Drive, 10th Floor
Costa Mesa, CA 92626

EXAMINER	
ALBERTALLI, BRIAN LOUIS	

ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
07/01/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

SheppardMullin_Pair@firsttofile.com
dmipdocketing@sheppardmullin.com

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of	:	
Freeman et al.	:	
Application No. 14/016,757	:	
Filed: 3 Sep 2013	:	DECISION ON PETITION
For: SYSTEM AND METHOD FOR DELIVERING TARGETED ADVERTISEMENTS AND TRACKING ADVERTISEMENT INTERACTIONS IN VOICE RECOGNITION CONTEXTS	:	

This is a decision in response to the petition under 37 CFR 1.182, filed June 5, 2019 to expedite consideration of a simultaneously filed petition, for acceptance of a fee deficiency submission under 37 CFR 1.28(c).

The file does not indicate a change of address has been submitted, although the address given on the petition differs from the address of record. If appropriate, a change of address should be filed in accordance with MPEP 601.03. A courtesy copy of this decision is being mailed to the address given on the petition; however, the Office will mail all future correspondence solely to the address of record.

The Office no longer investigates or rejects original or reissue applications under 37 CFR 1.56. **1098 Off. Gaz. Pat. Office 502 (January 3, 1989)**. Therefore, nothing in this Notice is intended to imply that an investigation was done.

The petition under 37 CFR 1.182 is **GRANTED**. A decision on the request for acceptance of a fee deficiency under 37 CFR 1.28(c) follows.

Your fee deficiency submission under 37 CFR 1.28(c) is hereby **ACCEPTED**.

Applicant is reminded that 37 CFR 1.28(c)(2)(i) requires that "the deficiency owed for each previous fee erroneously paid as a small entity is the difference between the current fee amount (for other than a small entity) on the date the deficiency is paid in full and the amount of the previous erroneous (small entity) fee payment…Where a fee paid in error as a small entity was subject to a fee decrease between the time the fee was paid in error and the time the deficiency is paid in full, the deficiency owed is equal to the amount (previously) paid in error;" Emphasis added

If the itemization submitted with the present request does not comply with 37 CFR 1.28(c)(2)(i) because a fee has decreased, applicant should, within ONE MONTH of the date of this Notice, submit a renewed request for acceptance of a fee deficiency under 37 CFR 1.28(c) along with balance of the correct fee deficiency in compliance with 37 CFR 1.28(c)(2)(i) and a replacement itemized listing of each fee erroneously paid as a small entity in compliance with 37 CFR 1.28(c)(2)(ii). **NO EXTENSION OF TIME UNDER 37 CFR 1.136 IS PERMITTED.**

Status a small entity has been removed. Accordingly, all future fees paid in this patent must be paid at the undiscounted entity rate.

Inquiries related to this communication should be directed to the undersigned at (571) 272-1058.

/Angela Walker/
Angela Walker
Paralegal Specialist
Office of Petitions

cc: Mark A. Patrick
2099 Pennsylvania Ave., NW
Suite 100
Washington, DC 2006-6801

Transmittal Communication on Petition	Application/Control No. 14/016,757	Applicant(s)/Patent Under Reexamination Freeman et al.	
	Deciding Official ALBERTALLI, BRIAN LOUIS	Office of Petitions OPET	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

(ADDITIONAL PARTY'S CORRESPONDENCE ADDRESS)

Mark A. Patrick
2099 Pennsylvania Ave., NW
Suite 100
Washington, DC 2006-6801

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above-identified Application/Patent.

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the District of Delaware on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF VB Assets, LLC		DEFENDANT Amazon.com, Inc, Amazon.com LLC; Amazon Web Services, Inc.; A2Z Development Center, Inc. d/b/a Lab126; Rawles LLC; AMZN Mobile LLC; AMZN Mobile 2 LLC; Amazon.com Services, Inc. f/k/a Amazon, et al.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 8,073,681 B2	12/6/2011	VB Assets, LLC
2	US 9,015,049 B2	4/21/2015	VB Assets, LLC
3	US 9,626,703 B2	4/18/2017	VB Assets, LLC
4	US 7,818,176 B2	10/19/2010	VB Assets, LLC
5	US 8,886,536 B2	11/11/2014	VB Assets, LLC

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the District of Delaware on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF VB Assets, LLC		DEFENDANT Amazon.com, Inc, Amazon.com LLC; Amazon Web Services, Inc.; A2Z Development Center, Inc. d/b/a Lab126; Rawles LLC; AMZN Mobile LLC; AMZN Mobile 2 LLC; Amazon.com Services, Inc. f/k/a Amazon, et al.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 9,269,097 B2	2/23/2016	VB Assets, LLC
2			
3			
4			
5			

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

Trials@uspto.gov
571-272-7822

Paper 10
Entered: February 4, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC., AMAZON.COM LLC, AMAZON WEB SERVICES, INC., A2Z DEVELOPMENT CENTER, INC. D/B/A LAB126, RAWLES LLC, AMZN MOBILE LLC, AMZN MOBILE 2 LLC, AMAZON.COM SERVICES, INC. F/K/A AMAZON FULFILLMENT SERVICES, INC., and AMAZON.COM SERVICES LLC (FORMERLY AMAZON DIGITAL SERVICES LLC),
Petitioner,

v.

VB ASSETS, LLC,
Patent Owner.

IPR2020-01377
Patent 8,886,536 B2

Before ROBERT L. KINDER, SCOTT C. MOORE, and SEAN P. O'HANLON, *Administrative Patent Judges*.

O'HANLON, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background

Amazon.com, Inc., Amazon.com LLC, Amazon Web Services, Inc., A2Z Development Center, Inc. d/b/a Lab126, Rawles LLC, AMZN Mobile LLC, AMZN Mobile 2 LLC, Amazon.com Services, Inc. f/k/a Amazon Fulfillment Services, Inc., and Amazon.com Services LLC (formerly Amazon Digital Services LLC) (collectively, "Petitioner") filed a Petition for *inter partes* review of claims 1, 2, 7–13, 16–23, 25, 27, 30, 39, 41, 42, 44, 47, 48, and 50–52 ("the challenged claims") of U.S. Patent No. 8,886,536 B2 (Ex. 1001, "the '536 patent"). Paper 1 ("Pet."), 1. VB Assets, LLC ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

Institution of an *inter partes* review is authorized by statute only when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a) (2018). A decision to institute may not institute on fewer than all claims challenged in the petition. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60 (2018). If the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition. *See* Patent Trial and Appeal Board Consolidated Trial Practice Guide ("CTPG") 64 (Nov. 2019) ("The Board will not institute on fewer than all claims or all challenges in a petition."); *see also AC Techs. S.A.. v. Amazon.Com, Inc.*, 912 F.3d 1358, 1364 ("[I]f

the Board institutes an IPR, it must . . . address all grounds of unpatentability raised by the petitioner.").[1]

We have authority, acting on the designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we conclude that the information presented in the Petition fails to establish a reasonable likelihood that Petitioner would prevail in showing the unpatentability of any of the challenged claims. Accordingly, we decline to institute an *inter partes* review.

B. Real Parties in Interest

Petitioner identifies each of its individual entities as the real parties in interest. Pet. 2.

Patent Owner identifies itself as the sole real party in interest. Paper 5, 2.

C. Related Matters

The parties indicate that the '536 patent is the subject of the following district court proceeding:

> *VB Assets, LLC v. Amazon.com Inc.*, No. 1:19-cv-01410 (D. Del. filed July 29, 2019).

Pet. 2; Paper 5, 2. The '536 patent is also the subject of a petition for *inter partes* review filed by Petitioner in IPR2020-01374. Patent Owner further

[1] *Available at* https://www.uspto.gov/TrialPracticeGuideConsolidated.

notes various petitions for *inter partes* review concerning separate patents. Paper 5, 2–3.

D. The Challenged Patent

The '536 patent discloses a system for "selecting and presenting advertisements based on natural language processing of voice-based input." Ex. 1001, 1:29–31. Figure 3 illustrates a method of using the system and is reproduced below:

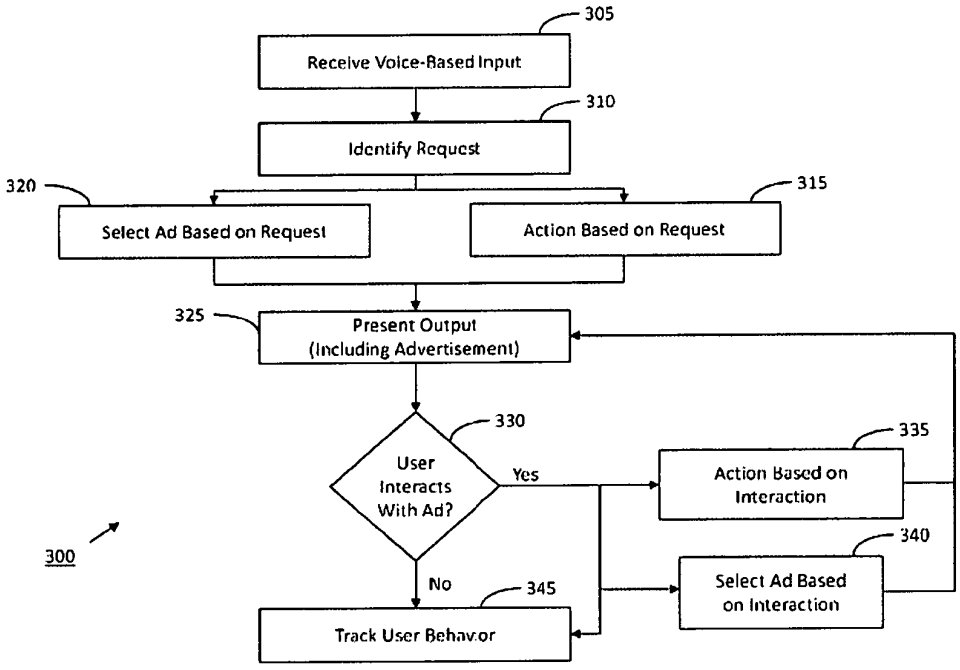


Figure 3

Figure 3 "illustrates a flow diagram of an exemplary method for selecting and presenting advertisements based on voice-based inputs." *Id.* at 3:12–14. The method begins with receiving voice-based input, also referred to as an utterance, from a user (step 305). *Id.* at 7:29–32. One or more requests within the input are then identified (step 310). *Id.* at 7:38–39. The requests

can include, for example, a request for information, such as a navigation route, or to perform a task, such as placing a telephone call. *Id.* at 7:39–59. The requests may be recognized by processing the input using an automatic speech recognizer that generates one or more preliminary interpretations of the utterance using various techniques. *Id.* at 3:59–4:8. The requests may be part of a conversational interaction between the user and the system, whereby the interpretation can be based on previous utterances or a request can be reinterpreted based on subsequent utterances and requests. *Id.* at 4:9–23, 7:60–8:9. The system performs the requested action (step 315), which may include interaction with one or more applications. *Id.* at 4:24–26, 8:19–27. Example applications include a navigation application, an advertising application, a music application, and an electronic commerce application. *Id.* at 4:31–34. Information in the input is also communicated to an advertising server to select one or more advertisements related to the request (step 320). *Id.* at 8:27–33. The advertisement and any result of the action are then presented to the user (step 325) in various manners, such as an audible response or via a display device. *Id.* at 8:34–51, 10:57–11:11. The advertisement may be interactive, and subsequent actions can be taken (step 335) and additional advertisements selected (step 340) based on the user's interaction with the advertisement (step 330). *Id.* at 11:12–37. The system can track the user's interaction with advertisements (step 345) to tailor the selection of future advertisements to the user. *Id.* at 11:38–62.

E. The Challenged Claims

Petitioner challenges claims 1, 2, 7–13, 16–23, 25, 27, 30, 39, 41, 42, 44, 47, 48, and 50–52 of the '536 patent. Pet. 1. Claims 1, 39, 44, and 50

are independent. Claim 1 is illustrative of the challenged claims and is reproduced below:

> 1. A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:
>
> receiving, at the one or more physical processors, a first natural language utterance;
>
> providing, by the one or more physical processors, a response to the first natural language utterance;
>
> receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;
>
> performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;
>
> determining, by the one or more physical processors, domain information for the one or more recognized words based on the first natural language utterance;
>
> processing, by the one or more physical processors, based on the domain information, the one or more recognized words to determine an interpretation of the second natural language utterance, wherein processing the one or more recognized words comprises:
>
> providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;
>
> obtaining a first interpretation of the second natural language utterance from the first domain agent;
>
> obtaining a second interpretation of the second natural language utterance from the second domain agent; and
>
> determining the interpretation based on one or more of the first interpretation or the second interpretation;

determining, by the one or more physical processors, promotional content based on the interpretation; and

presenting, by the one or more physical processors, the promotional content to a user.

Ex. 1001, 12:32–13:4.

F. Asserted Grounds of Unpatentability

The Petition relies on the following prior art references:

Name	Reference	Exhibit
Kennewick	US 2004/0193420 A1, published Sept. 30, 2004	1003
Cohen	US 6,859,776 B1, issued Feb. 22, 2005	1012
Yonebayashi	JP 2002-297626A, published Oct. 11, 2002	1015[2]
Treyz	US 6,526,335 B1, issued Feb. 25, 2003	1023

Petitioner asserts the following grounds of unpatentability:

Claims Challenged	35 U.S.C. §	Reference
1, 13, 16, 25, 27, 30, 39, 44, 50	103(a)[3]	Kennewick, Yonebayashi
2, 7–12, 17, 18, 21–23, 41, 42, 47, 48, 51, 52	103(a)	Kennewick, Yonebayashi, Cohen
19, 20	103(a)	Kennewick, Yonebayashi, Cohen, Treyz

Pet. 4. Petitioner submits a declaration of Padhraic Smyth, Ph.D. (Ex. 1002, "the Smyth Declaration") in support of its contentions.

[2] Exhibit 1015 is a certified translation (*see* Ex. 1016) of the original Japanese document (Ex. 1017).

[3] The application resulting in the '536 patent claims priority to a date prior to the date when the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112–29, 125 Stat. 284 (2011), took effect. Thus, we refer to the pre-AIA version of section 103.

II. DISCRETIONARY DENIAL

Patent Owner argues that we should exercise our discretion to deny institution under 35 U.S.C. § 314(a), asserting that Petitioner fails to explain persuasively why a second petition challenging the claims of the '536 patent is required. Paper 9. Given that we are not instituting review based on the shortcomings of the Petition as discussed below, we need not consider Patent Owner's arguments that we should exercise our discretion to deny institution.

III. ANALYSIS

A. Principles of Law

Petitioner bears the burden of persuasion to prove unpatentability, by a preponderance of the evidence, of the claims challenged in the Petition. 35 U.S.C. § 316(e). This burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition and Patent Owner's Preliminary Response shows that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. 35 U.S.C. § 314(a).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying

factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, any objective evidence of non-obviousness.[4] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner contends that a person having ordinary skill in the art at the time of the invention ("POSITA") "would have at least a Bachelor-level degree in computer science, computer engineering, electrical engineering, or a related field in computing technology, and two years of experience with automatic speech recognition and natural language understanding, or equivalent education, research experience, or knowledge." Pet. 4 (citing Ex. 1002 ¶¶ 27–30).

Patent Owner does not contest Petitioner's definition or proffer an alternate definition. *See generally* Prelim. Resp.

The level of ordinary skill in the art often is evidenced by the prior art references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). The level of ordinary skill proposed by Petitioner appears to be consistent with that of the references, and we apply Petitioner's proposed level of ordinary skill for purposes of this Decision.

[4] The parties have not directed us to any such objective evidence.

C. Claim Construction

In an *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b), including construing the claims in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b). Thus, we apply the claim construction standard as set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Claim terms are generally given their ordinary and customary meaning as would be understood by one with ordinary skill in the art in the context of the specification, the prosecution history, other claims, and even extrinsic evidence including expert and inventor testimony, dictionaries, and learned treatises, although extrinsic evidence is less significant than the intrinsic record. *Phillips*, 415 F.3d at 1312–17. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* at 1315.

Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner asserts that "[t]he challenged claims should be interpreted in accordance with 'the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.'" Pet. 7–8 (quoting 37 C.F.R. § 42.100(b)).

Patent Owner notes that our rules require a petition to set forth how the challenged claims are to be construed and argues that "the [P]etition wholly fails to satisfy the claim construction requirement, leaving Patent Owner and the Board to do Petitioner['s] job and propping the door open for gamesmanship." Prelim. Resp. 3. Patent Owner argues that "Petitioner['s] failure to provide any claim construction is a significant deficiency" because "[t]hroughout the [P]etition, Petitioner[] appear[s] to rely on broad constructions of the claim limitations in order to stretch the prior art to cover the claims." *Id.* at 3–4. Patent Owner offers an example of a claim term it argues is critical to understanding Petitioner's arguments: "determining . . . domain information." *Id.* at 4. Patent Owner argues that failing to offer constructions "opens the door for Petitioner[] to engage in gamesmanship, such as offering an inconsistently narrower construction in the underlying [district court] litigation." *Id.* For these reasons, Patent Owner argues that we should deny institution. *Id.* at 4–5.

We are not persuaded that we should exercise our discretion to deny institution based on Petitioner's alleged failure to set forth adequate claim constructions. By arguing that the claim terms should be construed according to their "ordinary and customary meaning" (Pet. 7–8), Petitioner has complied with our rule that the Petition must identify how the challenged claims are to be construed. *See* 37 C.F.R. § 42.104(b)(3). Nor do Patent Owner's assertions of a possibility of "gamesmanship" in the district court litigation concerning the '536 patent provide a reason compelling us to deny institution, as Patent Owner's arguments are merely speculation about possible future actions in another proceeding.

For purposes of this Decision, and based on the record before us, we determine that no express construction of any term is necessary.

D. Overview of the Asserted Prior Art

1. Kennewick

Kennewick discloses a system that performs "retrieval of online information and processing of commands through a speech interface in a vehicle environment." Ex. 1003 ¶ 2. Figure 5 illustrates the system and is reproduced below:

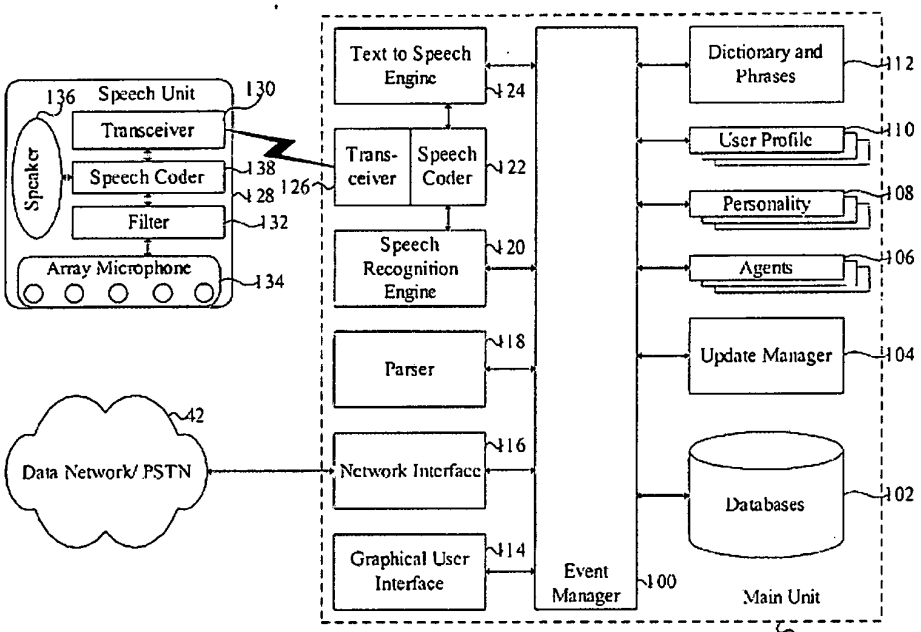


Figure 5. Speech Processing System Block Diagram

Figure 5 "shows an overall diagrammatic view of the interactive natural language speech processing system according to one embodiment of the invention." *Id.* ¶ 118. Speech unit 128 detects speech using microphone 134. *Id.* ¶ 121. The detected speech passes through filter 132 to coder 138 for encoding and compression. *Id.* The coded speech is then

transmitted via transceiver 130 to transceiver 126 of main unit 98, and then decoded and decompressed by speech coder 122. *Id.* ¶¶ 121, 123, Fig. 5. Speech recognition unit 120 processes the decoded speech to detect words and phrases. *Id.* ¶ 123. Parser 118 transforms the recognized words and phrases into complete commands and questions using data supplied by domain agents 106. *Id.* ¶¶ 123, 160. The parser determines the context for the speech, and from the context determines the domain and, thereby, the domain agent to be invoked. *Id.* ¶ 160. The agents then process the commands or questions using one or more devices under their control, and return appropriate responses to the user. *Id.* ¶¶ 120, 123–124. Generally, the agents are specific to a single domain. *Id.* ¶¶ 17, 126. In one embodiment, the system provides offers and promotions for goods and services based on the user's location. *Id.* ¶¶ 65–66.

2. Yonebayashi

Yonebayashi recognizes that various electronic devices, such as personal computers and microwave ovens, can be connected to and receive advertisement information from other devices via networks, such as a Local Area Network. Ex. 1015 ¶ 2. Yonebayashi purports to improve upon such systems by providing advertisements having more appropriate content for the user and enabling interaction between the user and the advertisement. *Id.* ¶ 8.

Yonebayashi discloses a computer-based advertisement presentation device. Ex. 1015 ¶ 17. The device includes a dictionary storage unit that stores various types of advertisement information, including active advertisement information and response advertisement information. *Id.* ¶¶ 34–36. Active advertisement information is information for the system to

actively present advertisements to the user. *Id.* ¶ 35. Response advertisement information is information for advertising in accordance with the user's remarks and inquiries. *Id.* ¶ 36. The dictionary storage unit also includes a case dictionary that contains a series of if-then rules, called cases, and user information by which the advertisement information is selected and formatted for presentation to the user. *Id.* ¶¶ 39–41. Figure 5 illustrates an example of a dialog between the system, referred to as the "agent," and a user and is reproduced below:

[FIGURE 5]

<Conversation example between user and agent>

(a)

User : I've been fatigued recently.
Agent : "Rogain J" by Yonkyo Co., Ltd. is recommended for hardworking businessmen.
User : I don't need that now • • •
Agent : Oh, I'm sorry. I'll stop the advertisement.

(b)

User : I've been fatigued recently.
Agent : "Rogain J" by Yonkyo Co., Ltd. is recommended for hardworking businessmen.
User : I want to see an advertisement for a different manufacturer.
Agent : Then how about Chuho Pharmaceutical's 'Neovita Drink" • • •

<If-then rule representing an action determination means by means of case reference>

(c)

```
• • • •
if (keyword[fatigue]) then
{
advertise[energy drink (first candidate)]
if (keyword[don't need]) then
{
    reply[Oh, I'm sorry. I'll stop the advertisement.]
}
else if (keyword[different] and keyword[manufacturer]) then
{
    advertise[energy drink (second candidate)]
}
}
```

Figure 5 shows conversation examples between a user and an agent in a case of presenting an advertisement for an energy drink. *Id.* at 26. The process begins with the user saying "I've been fatigued lately." *Id.* ¶ 49. The system's character string acquisition means receives the user's remarks and the preprocessing means identifies the words therein. *Id.* ¶¶ 49–50. The action determination unit compares the detected words to the "if" portion of the rules and, recognizing the keyword "fatigue," determines "energy drink (first candidate)" to be the appropriate action. *Id.* ¶ 50. The presentation means then presents the advertisement for the first candidate energy drink in the advertisement information dictionary. *Id.* ¶ 51. The system then awaits further user remarks and reacts appropriately. *Id.* ¶¶ 52, 53. For example, if the user indicates that no advertisements are desired, the advertisement is terminated, and if the user indicates that another brand of energy drink is desired, the system presents an advertisement for the next highest rank candidate. *Id.*

3. Cohen

Cohen discloses a system for facilitating interaction between a human user and a processing system. Ex. 1012, 3:22–24. Figure 1B illustrates the system and is reproduced below:

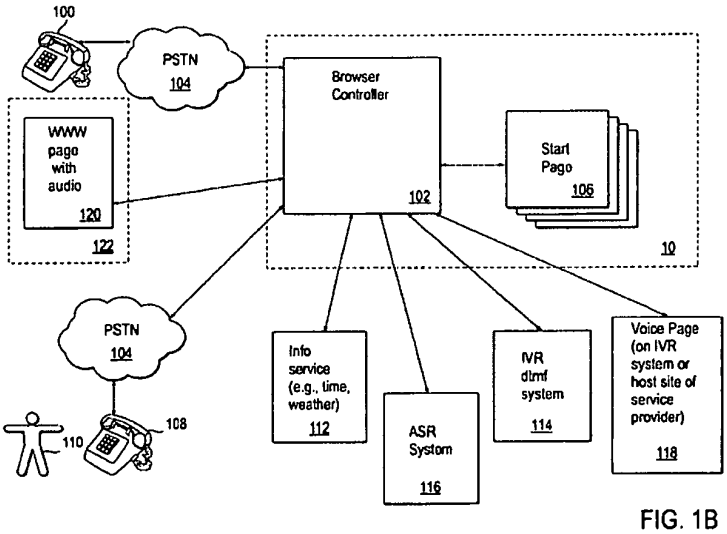


FIG. 1B

Figure 1B shows a network incorporating the system. *Id.* at 6:23–25. The system includes browser 10 having browser controller 102. *Id.* at 5:53–55. A user accesses the browser by dialing a number using a telephone, such as conventional telephone 100 using PSTN connection 104. *Id.* at 6:28–31, 6:38–39. The browser includes natural language speech recognition engine 94 that listens for a wake-up word to activate the browser controller. *Id.* at 7:37–53. The controller can provide access to voice-enabled web pages and can broker information between the user and the web pages. *Id.* at 5:9–11, 8:40–42.

4. Treyz

Treyz discloses an automobile personal computer system that is operable under voice control. Ex. 1023, 1:6–8, 1:41–46. The system communicates wirelessly with various devices, such as a touch screen device located in the user's home. *Id.* at 1:28–32, 2:5–11. The system allows users to make remote purchase transactions, during which promotional content may be downloaded and provided to the user. *Id.* at 2:52–62. The system

gathers information about the user, including location information, and presents targeted advertisements to the user based on this information. *Id.* at 3:14–20.

E. Asserted Obviousness in View of Kennewick and Yonebayashi

Petitioner argues that claims 1, 13, 16, 25, 27, 30, 39, 44, and 50 would have been obvious over Kennewick and Yonebayashi. Pet. 15–42. In support of its showing, Petitioner relies upon the Smyth declaration. *Id.* (citing Ex. 1002). We have reviewed Petitioner's assertions and supporting evidence. For the reasons discussed below, and based on the record before us, we determine that Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that these claims would have been obvious over the combination of Kennewick and Yonebayashi.

1. Claims 1, 13, 16, 25, 27, and 30

Petitioner relies on Kennewick to disclose most of the recitations of claim 1, and relies on Yonebayashi to provide additional teaching regarding providing promotional content based on the interpretation of natural language utterances and presenting the promotional content to the user. Pet. 17–32.

Independent claim 1 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including receiving a second natural language utterance relating to a received first natural language utterance, performing speech recognition to recognize one or more words of the second natural language utterance, determining domain information for the one or more recognized words based on the first natural

language utterance, and processing the one or more recognized words based on the domain information to determine an interpretation of the second natural language utterance. Ex. 1001, 12:32–55. This processing comprises:

> providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;
> obtaining a first interpretation of the second natural language utterance from the first domain agent;
> obtaining a second interpretation of the second natural language utterance from the second domain agent; and
> determining the interpretation based on one or more of the first interpretation or the second interpretation.

Id. at 12:55–67.

Petitioner argues that Kennewick's speech recognition engine 120 processes received utterances to recognize words and phrases, which parser 118 transforms into complete commands and questions using data supplied by domain agents. Pet. 21 (citing Ex. 1003 ¶ 123). According to Petitioner,

> The final goal of the parser is to "invoke the correct agent" to have a question answered or command executed. [Ex. 1003 ¶ 162]. Before that can happen, the parser must obtain an interpretation of the utterance, confirm its context and domain, and fill in any missing criteria or parameters. *Id.* Domain agents fulfill these tasks for the parser even before the "correct" one is invoked.

Pet. 25. Petitioner argues that a recognized keyword may invoke multiple domains, and to determine which is the correct domain,

> the parser may "dynamically receive[] keyword and associated prior probability or fuzzy possibility updates" from the system agent or an "already active domain agent." [Ex. 1003 ¶ 160]. The parser uses this information to score the "possible contexts," and "the top one or few are used for further

> processing." *Id.* It would have been obvious to a POSITA that obtaining relevant probability or possibility information from domain agents for different domains would require providing them with the recognized words.

Pet. 25–26 (first alteration in original) (citing Ex. 1002 ¶¶ 89–90). Petitioner argues that "domain agents provide domain-specific information, including probability or possibility information, to assist in determining the correct context and interpretation of the utterance" and "[t]he agents use domain-specific knowledge to provide unambiguous interpretations." *Id.* at 26 (citing Ex. 1003 ¶¶ 31, 123, 160–163). "Using domain specific agents to obtain and score possible contexts and corresponding interpretations would require using multiple agents." *Id.* at 27 (citing Ex. 1003 ¶ 31; Ex. 1002 ¶ 94).

Patent Owner argues that the "core problem" with the Petition is, "while the claims require receiving interpretations from two domain agents, Petitioner[] cite[s] no such disclosure in Kennewick. Rather, the cited prior art describes a parser interpreting a user's speech rather than an agent, based on contributions from at most a single agent." Prelim. Resp. 5–6. Patent Owner argues that Petitioner's contention that Kennewick's domain agents interpret the utterance, confirm its context and domain, and fill in missing criteria or parameters is unsupported. *Id.* at 10–11 (quoting Pet. 25). Rather, Patent Owner argues, "[a]ll of these functions are performed by the parser not a domain agent." *Id.* at 11. "Kennewick does not disclose providing recognized words to an 'already active domain agent,' it discloses receiving keyword information *from* a domain agent." *Id.* at 12 (citing Ex. 1003 ¶ 160). Patent Owner also argues that "Kennewick does not

disclose use of two domain agents, only a system agent *or* a domain agent." *Id.* (citing Ex. 1003 ¶ 160).

Kennewick's speech unit detects speech using microphone 134. Ex. 1003 ¶ 121. The speech passes through filter 132 to coder 138 for encoding and compression. *Id.* The coded speech is then transmitted to transceiver 130 of main unit 98, and then decoded and decompressed by speech coder 122. *Id.* ¶¶ 121, 123, Fig. 5. Speech recognition unit 120 processes the decoded speech to detect words and phrases. *Id.* ¶ 123. Parser 118 transforms the recognized words and phrases into complete commands and questions using data supplied by domain agents 106. *Id.* ¶¶ 123, 160. The parser determines the context for the speech, and from the context determines the domain and, thereby, the domain agent to be invoked. *Id.* ¶ 160. The domain agent then processes the commands or questions using one or more devices under its control, and returns appropriate responses to the user. *Id.* ¶¶ 120, 123–124. Thus, on this record, we are persuaded by Patent Owner's assertion that the parser, not the domain agents, interprets the detected speech.

When a recognized keyword implies multiple contexts, "[t]he parser dynamically receives keyword and associated prior probability or fuzzy possibility updates from the system agent 150 or an already active domain agent 156. Based on these probabilities or possibilities the possible contexts are scored and the top one or few are used for further processing." Ex. 1003 ¶ 160. "The parser 118 may use a scoring system to determine the most[] likely context or domain for a user's question or command. . . . Based on this scoring, the system may invoke the correct agent." *Id.* ¶ 161; *see also id.* ¶ 162 (explaining that, when formulating a question or command for an

agent, "the parser will preferably determine required and optional values for the criteria or parameters," which may be "determined by applying probabilistic or fuzzy reasoning to tables of possible values"). Thus, even when the detected utterance may apply to more than one context, the parser determines the single appropriate context. Based on the record before us, Petitioner fails to establish persuasively that Kennewick's domain agents interpret the detected speech.

We likewise find unpersuasive the testimony of Petitioner's declarant that "the Kennewick parser processes recognized words *with the assistance of domain agents*." Ex. 1002 ¶ 89 (emphasis added) (citing Ex. 1003 ¶¶ 161–162, 170). Rather, Kennewick discloses that the parser processes recognized words using *data* supplied by the domain agents. Ex. 1003 ¶ 123. This data includes updated keywords and prior probabilities associated with the keywords. *Id.* ¶ 160; *see also id.* ¶ 134 (explaining that the user can add new keywords to domain agents). By indicating that the parser receives keyword *updates*, Kennewick indicates that the parser already has keywords associated with the various agents. Neither Petitioner nor Petitioner's declarant provides adequate support for the contention that the domain agents perform any role in recognizing words. Nor does Petitioner or Petitioner's declarant explain adequately how providing data to the parser constitutes interpreting the utterance.

We further agree with Patent Owner's arguments that the Petition does not explain adequately how Kennewick uses two domain agents as required by claim 1. *See, e.g.*, Prelim. Resp. 15. To the contrary, Kennewick consistently describes the parser as invoking a single domain agent. *See, e.g.*, Ex. 1003 ¶¶ 162 ("Once the context for the question or

command has been determined, the parser 118 can invoke the correct agent 156, 150."), 165 ("Based on the context, the parser can evoke the correct agent to process the question or command."), 167 ("Specific questions may be generally directed to one of the domain agents 156."), 177 ("Specific commands are generally directed to one of the domain agents 156.").

For the reasons explained above, the arguments and evidence presented in the Petition fail to provide sufficient support for Petitioner's contention that Kennewick's domain agents provide first and second interpretations as required by claim 1 and incorporated into dependent claims 13, 16, 25, 27, and 30. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging these claims.

2. Claim 39 and 44

Claims 39 and 44 require identifying multiple requests associated with a single utterance. For the reasons set forth below, we determine that Petitioner has not established a reasonable likelihood of prevailing on its challenge to these claims.

Independent claim 39 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including receiving a second natural language utterance relating to a received first natural language utterance and "identifying . . . requests associated with the second natural language utterance, wherein the requests include a first request associated with a first application and a second request associated with a second application different than the first application." Ex. 1001, 18:54–19:11.

Petitioner argues that claim 39 would have been obvious for the reasons it sets forth regarding claims 1, 16, and 25. Pet. 40–41. Petitioner relies on Kennewick to disclose identifying multiple requests associated with different applications. *Id.* at 36–37 (regarding claim 25). Petitioner argues that "[t]he utterance may include 'questions, queries, and commands,' each pertaining to a request the system processes and responds to." *Id.* at 35 (citing Ex. 1003 ¶¶ 17, 27 regarding claim 16). Petitioner argues that "travel services may include applications providing 'directories of travel and entertainment services, or reservations for entertainment restaurants, hotels and other accommodation.'" *Id.* at 37 (citing Ex. 1003 ¶ 68 regarding claim 25). Continuing, Petitioner asserts that "[a]nother application, which a POSITA would understand could apply to groceries and prepared foods, enables 'remote ordering and payment for goods and services' by providing an interactive menu or catalog." *Id.* (citing Ex. 1003 ¶ 67 regarding claim 25).

Patent Owner asserts that the Petition "do[es] not even argue that Kennewick identifies multiple requests associated with the second natural language utterance." Prelim. Resp. 25. We agree.

Although Petitioner asserts that Kennewick discloses multiple applications with which a request can be associated, claim 39 recites first and second requests associated with the second natural language utterance. Ex. 1001, 19:1–6. The Petition does not address adequately two requests stemming from a single utterance. To the extent Petitioner's mention of "'questions, queries, and commands,' each pertaining to a request" (Pet. 35 (citing Ex. 1003 ¶¶ 17, 27)) is intended to show this requirement, we are not persuaded. The cited portions of Kennewick disclose in general terms that

the system responds to requests. *See, e.g.*, Ex. 1003 ¶ 27 ("The system, according to one aspect of the invention, can process and respond to questions, queries and commands."). The Petition does not explain persuasively how any disclosure in Kennewick would teach or suggest identifying multiple requests associated with a single utterance. The testimony of Petitioner's declarant, which is substantially the same as the Petition, likewise fails to demonstrate persuasively that Kennewick teaches or suggests this limitation. *See* Ex. 1002 ¶¶ 111–112, 116.

For the reasons explained above, the arguments and evidence presented in the Petition fail to provide sufficient reasoning and evidence to support Petitioner's contention that Kennewick discloses identifying two requests associated with a single utterance as required by claim 39. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging this claim.

Independent claim 44 contains similar recitations as claim 39, including "identifying, by the one or more physical processors, requests associated with the second natural language utterance, wherein the requests include a first request to be processed by a first device associated with a user and a second request to be processed by a second device associated with the user." Ex. 1001, 19:51–20:8. Petitioner makes arguments substantially similar to those made with respect to claim 39's requirement of two requests associated with a single utterance. Pet. 37–38 (regarding claim 27), 41 (citing same regarding claim 44). For reasons similar to those explained above in our analysis of claim 39, Petitioner fails to support adequately its arguments regarding identifying two requests associated with a single

utterance as required by claim 44. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging this claim.

3. Claim 50

Claim 50 requires obtaining a user's profile information that specifies prior user interaction with items. For the reasons set forth below, we determine that Petitioner has not established a reasonable likelihood of prevailing on its challenge to this claim.

Independent claim 50 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including "obtaining, by the one or more physical processors, user profile information associated with a user, wherein the user profile information specifies prior user interactions with items" and "identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information." Ex. 1001, 20:50–21:9.

Petitioner relies on its prior arguments made regarding claims 1 and 30. Pet. 41–42. Petitioner notes that Kennewick's system stores "'[u]ser profile data' [that] can be 'learned by the system based on user behavior,'" which, Petitioner argues, "a POSITA would understand to include prior user interactions with items." *Id.* at 39 (citing Ex. 1002 ¶ 118; Ex. 1003 ¶ 143) (regarding claim 30). Petitioner's declarant identifies "promotional content" as such an item because "Kennewick does not expressly limit the type of interaction that its system considers in processing and responding to user requests." Ex. 1002 ¶ 118.

Patent Owner argues that "[t]he petition does not identify any prior user interactions with *items* in Kennewick that are stored in a user profile." Prelim. Resp. 29. We agree.

Neither Petitioner nor its declarant explains persuasively why "learned" personal data necessarily includes interaction with "items." Nor is any supporting reasoning apparent from Kennewick's disclosure, which explains that the learned data includes spelling preferences, birth dates, income level, and similar information. Ex. 1003 ¶ 143; *see also* Pet. 48 (citing same).

Additionally, Petitioner's declarant does not explain adequately why "promotional content" should be considered an "item." *See* Ex. 1002 ¶ 118. The '536 patent uses "item" in its ordinary and customary meaning. *See, e.g.*, Ex. 1001, 13:66–67 (defining item as "a purchasable good" in claim 11). Accordingly, we accord this testimony little or no weight. *See* 37 C.F.R. § 42.65(a).

Finally, claim 50 requires that the determining of promotional content be based on the first *and* second utterances. Ex. 1001, 21:4–7. Petitioner does not address this recitation adequately. Although Petitioner cites to its showing for claim 1 (*see* Pet. 41–42), claim 1 determines promotional content based on the interpretation of only the second utterance.

For the reasons explained above, the arguments and evidence presented in the Petition fail to provide sufficient support for Petitioner's contentions that Kennewick's user profile information specifies prior user interactions with items or that the proposed combination of Kennewick and Yonebayashi would determine promotional content based on the first and

second utterances as required by claim 50. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging this claim.

F. Asserted Obviousness in View of Kennewick, Yonebayashi, and Cohen

Petitioner asserts that claims 2, 7–12, 17, 18, 21–23, 41, 42, 47, 48, 51, and 52 would have been obvious over Kennewick, Yonebayashi, and Cohen. Pet. 42–59. Petitioner relies on Kennewick and Yonebayashi as set forth in § III.E above and relies on Cohen to teach performing an activity based a received utterance, recognizing reference words, and initiating a purchase transaction. *Id.*

Claims 2, 7–12, 17, 18, and 21–23 depend, directly or indirectly, from claim 1, claims 41 and 42 depend, directly or indirectly, from claim 39, claims 47 and 48 depend, directly or indirectly, from claim 44, and claims 51 and 52 depend, directly or indirectly, from claim 50. As Petitioner has failed to establish that Kennewick and Yonebayashi satisfy the recitations of the parent claims discussed above, Petitioner has likewise failed to establish how these recitations are satisfied with respect to these dependent claims. Thus, Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that claims 2, 7–12, 17, 18, 21–23, 41, 42, 47, 48, 51, and 52 would have been obvious over Kennewick, Yonebayashi, and Cohen.

G. Asserted Obviousness in View of Kennewick, Yonebayashi, Cohen, and Treyz

Petitioner asserts that claims 19 and 20 would have been obvious over Kennewick, Yonebayashi, Cohen, and Treyz. Pet. 59–64. Petitioner relies on Kennewick, Yonebayashi, and Cohen as set forth in §§ III.E and III.F

above and relies on Treyz to teach calculating a navigation route, determining promotional content based on a navigation route, and selecting a media item and different promotional content based on the media item. *Id.*

Claims 19 and 20 depend indirectly from claim 1. As Petitioner has failed to establish that Kennewick and Yonebayashi satisfy the recitations of parent claim 1 discussed above, Petitioner has likewise failed to establish how these recitations are satisfied with respect to these dependent claims. Thus, Petitioner does not demonstrate a reasonable likelihood of prevailing in showing that claims 19 and 20 would have been obvious over Kennewick, Yonebayashi, Cohen, and Treyz.

IV. CONCLUSION

For the foregoing reasons, we are not persuaded that the Petition establishes a reasonable likelihood that Petitioner would prevail in any of its challenges to claims 1, 2, 7–13, 16–23, 25, 27, 30, 39, 41, 42, 44, 47, 48, and 50–52 of the '536 patent.

V. ORDER

In consideration of the foregoing, it is hereby ordered that the Petition is *denied*, and no trial is instituted.

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Paper 10
Entered: February 4, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC., AMAZON.COM LLC, AMAZON WEB SERVICES, INC., A2Z DEVELOPMENT CENTER, INC. D/B/A LAB126, RAWLES LLC, AMZN MOBILE LLC, AMZN MOBILE 2 LLC, AMAZON.COM SERVICES, INC. F/K/A AMAZON FULFILLMENT SERVICES, INC., and AMAZON.COM SERVICES LLC (FORMERLY AMAZON DIGITAL SERVICES LLC),
Petitioner,

v.

VB ASSETS, LLC,
Patent Owner.

IPR2020-01374
Patent 8,886,536 B2

Before ROBERT L. KINDER, SCOTT C. MOORE, and SEAN P. O'HANLON, *Administrative Patent Judges*.

O'HANLON, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background

Amazon.com, Inc., Amazon.com LLC, Amazon Web Services, Inc., A2Z Development Center, Inc. d/b/a Lab126, Rawles LLC, AMZN Mobile LLC, AMZN Mobile 2 LLC, Amazon.com Services, Inc. f/k/a Amazon Fulfillment Services, Inc., and Amazon.com Services LLC (formerly Amazon Digital Services LLC) (collectively, "Petitioner") filed a Petition for *inter partes* review of claims 1, 3–6, 13–16, 24–40, 43–46, 49, 50, and 53–55 ("the challenged claims") of U.S. Patent No. 8,886,536 B2 (Ex. 1001, "the '536 patent"). Paper 1 ("Pet."), 1. VB Assets, LLC ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

Institution of an *inter partes* review is authorized by statute only when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a) (2018). A decision to institute may not institute on fewer than all claims challenged in the petition. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60 (2018). If the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition. *See* Patent Trial and Appeal Board Consolidated Trial Practice Guide ("CTPG") 64 (Nov. 2019) ("The Board will not institute on fewer than all claims or all challenges in a petition."); *see also AC Techs. S.A.. v. Amazon.Com, Inc.*, 912 F.3d 1358, 1364 ("[I]f the Board institutes an IPR, it must . . . address all grounds of unpatentability raised by the petitioner.").[1]

[1] *Available at* https://www.uspto.gov/TrialPracticeGuideConsolidated.

We have authority, acting on the designation of the Director, to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). Institution is discretionary, even if the statutory requirements are satisfied. *See SAS*, 138 S. Ct. at 1356 ("§ 314(a) invests the Director with discretion on the question *whether* to institute review"). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we conclude that the information presented in the Petition fails to establish a reasonable likelihood that Petitioner would prevail in showing the unpatentability of 31 of the 35 challenged claims. Accordingly, we exercise our discretion under 35 U.S.C. § 314(a) and decline to institute an *inter partes* review.

B. Real Parties in Interest

Petitioner identifies each of its individual entities as the real parties in interest. Pet. 2.

Patent Owner identifies itself as the sole real party in interest. Paper 5, 2.

C. Related Matters

The parties indicate that the '536 patent is the subject of the following district court proceeding:

VB Assets, LLC v. Amazon.com Inc., No. 1:19-cv-01410 (D. Del. filed July 29, 2019).

Pet. 2; Paper 5, 2. The '536 patent is also the subject of a petition for *inter partes* review filed by Petitioner in IPR2020-01377.[2] Patent Owner further notes various petitions for *inter partes* review concerning separate patents. Paper 5, 2–3.

D. The Challenged Patent

The '536 patent discloses a system for "selecting and presenting advertisements based on natural language processing of voice-based input." Ex. 1001, 1:29–31. Figure 3 illustrates a method of using the system and is reproduced below:

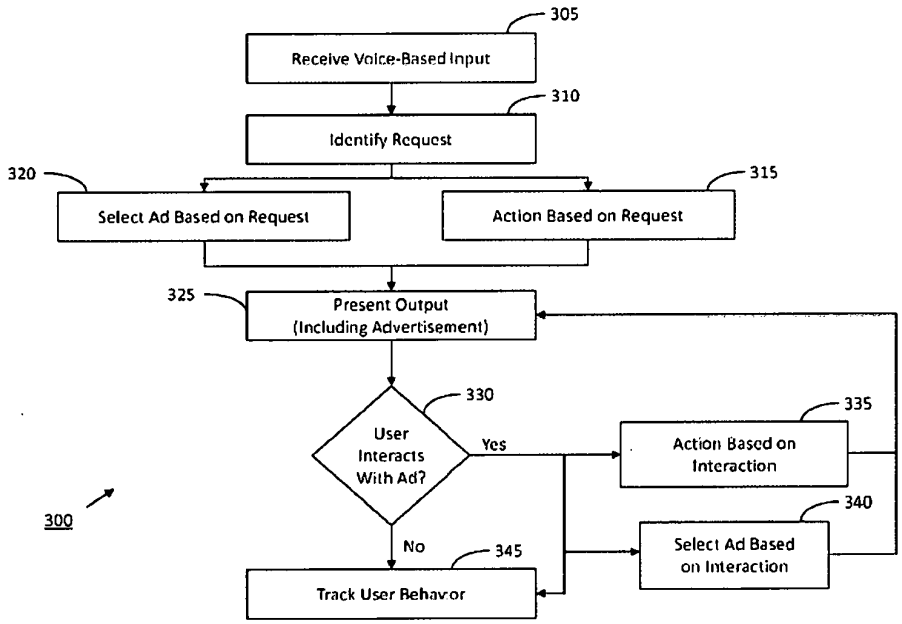


Figure 3

[2] Petitioner filed the Petition in this proceeding one day before filing the petition in IPR2020-01377. Pursuant to our Order (Paper 7), Petitioner filed a Notice in which it requests that we consider the Petition in this proceeding prior to considering the petition in IPR2020-01377. Paper 8, 3–4.

Figure 3 "illustrates a flow diagram of an exemplary method for selecting and presenting advertisements based on voice-based inputs." *Id.* at 3:12–14. The method begins with receiving voice-based input, also referred to as an utterance, from a user (step 305). *Id.* at 7:29–32. One or more requests within the input are then identified (step 310). *Id.* at 7:38–39. The requests can include, for example, a request for information, such as a navigation route, or to perform a task, such as placing a telephone call. *Id.* at 7:39–59. The requests may be recognized by processing the input using an automatic speech recognizer that generates one or more preliminary interpretations of the utterance using various techniques. *Id.* at 3:59–4:8. The requests may be part of a conversational interaction between the user and the system, whereby the interpretation can be based on previous utterances or a request can be reinterpreted based on subsequent utterances and requests. *Id.* at 4:9–23, 7:60–8:9. The system performs the requested action (step 315), which may include interaction with one or more applications. *Id.* at 4:24–26, 8:19–27. Example applications include a navigation application, an advertising application, a music application, and an electronic commerce application. *Id.* at 4:31–34. Information in the input is also communicated to an advertising server to select one or more advertisements related to the request (step 320). *Id.* at 8:27–33. The advertisement and any result of the action are then presented to the user (step 325) in various manners, such as via an audible response or a display device. *Id.* at 8:34–51, 10:57–11:11. The advertisement may be interactive, and subsequent actions can be taken (step 335) and additional advertisements selected (step 340) based on the user's interaction with the advertisement (step 330). *Id.* at 11:12–37. The

system can track the user's interaction with advertisements (step 345) to tailor the selection of future advertisements to the user. *Id.* at 11:38–62.

E. The Challenged Claims

Petitioner challenges claims 1, 3–6, 13–16, 24–40, 43–46, 49, 50, and 53–55 of the '536 patent. Pet. 1. Claims 1, 32, 33, 36–39, 43, 44, 49, 50, and 53–55 are independent. Claim 1 is illustrative of the challenged claims and is reproduced below:

> 1. A computer-implemented method of providing promotional content related to one or more natural language utterances and/or responses, the method being implemented by a computer system that includes one or more physical processors executing one or more computer program instructions which, when executed, perform the method, the method comprising:
>
> receiving, at the one or more physical processors, a first natural language utterance;
>
> providing, by the one or more physical processors, a response to the first natural language utterance;
>
> receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;
>
> performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;
>
> determining, by the one or more physical processors, domain information for the one or more recognized words based on the first natural language utterance;
>
> processing, by the one or more physical processors, based on the domain information, the one or more recognized words to determine an interpretation of the second natural language utterance, wherein processing the one or more recognized words comprises:

providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;

obtaining a first interpretation of the second natural language utterance from the first domain agent;

obtaining a second interpretation of the second natural language utterance from the second domain agent; and

determining the interpretation based on one or more of the first interpretation or the second interpretation;

determining, by the one or more physical processors, promotional content based on the interpretation; and

presenting, by the one or more physical processors, the promotional content to a user.

Ex. 1001, 12:32–13:4.

F. Asserted Ground of Unpatentability

The Petition relies on the following prior art references:

Name	Reference	Exhibit
Kennewick	US 2004/0193420 A1, published Sept. 30, 2004	1003
Yonebayashi	JP 2002-297626A, published Oct. 11, 2002	1015[3]

Petitioner asserts the following ground of unpatentability:

Claims Challenged	35 U.S.C. §	References
1, 3–6, 13–16, 24–40, 43–46, 49, 50, 53–55	103(a)[4]	Kennewick, Yonebayashi

[3] Exhibit 1015 is a certified translation (*see* Ex. 1016) of the original Japanese document (Ex. 1017).

[4] The application resulting in the '536 patent claims priority to a date prior to the date when the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112–29, 125 Stat. 284 (2011), took effect. Thus, we refer to the pre-AIA version of section 103.

Pet. 3. Petitioner submits a declaration of Padhraic Smyth, Ph.D. (Ex. 1002, "the Smyth Declaration") in support of its contentions.

II. ANALYSIS

A. Principles of Law

Petitioner bears the burden of persuasion to prove unpatentability, by a preponderance of the evidence, of the claims challenged in the Petition. 35 U.S.C. § 316(e). This burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition and Patent Owner's Preliminary Response shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the Petition. 35 U.S.C. § 314(a). However, the Board may deny institution even if some of the challenges are meritorious. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) ("[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.").

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, any objective

evidence of non-obviousness.[5] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner contends that a person having ordinary skill in the art at the time of the invention ("POSITA") "would have at least a Bachelor-level degree in computer science, computer engineering, electrical engineering, or a related field in computing technology, and two years of experience with automatic speech recognition and natural language understanding, or equivalent education, research experience, or knowledge." Pet. 4 (citing Ex. 1002 ¶¶ 27–30).

Patent Owner does not contest Petitioner's definition or proffer an alternate definition. *See generally* Prelim. Resp.

The level of ordinary skill in the art often is evidenced by the prior art references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). The level of ordinary skill proposed by Petitioner appears to be consistent with that of the references, and we apply Petitioner's proposed level of ordinary skill for purposes of this Decision.

C. Claim Construction

In an *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b), including construing the claims in

[5] The parties have not directed us to any such objective evidence.

accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b). Thus, we apply the claim construction standard as set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Claim terms are generally given their ordinary and customary meaning as would be understood by one with ordinary skill in the art in the context of the specification, the prosecution history, other claims, and even extrinsic evidence including expert and inventor testimony, dictionaries, and learned treatises, although extrinsic evidence is less significant than the intrinsic record. *Phillips*, 415 F.3d at 1312–17. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* at 1315.

Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner asserts that "[t]he challenged claims should be interpreted in accordance with 'the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.'" Pet. 7 (quoting 37 C.F.R. § 42.100(b)).

Patent Owner notes that our rules require a petition to set forth how the challenged claims are to be construed and argues that "the [P]etition wholly fails to satisfy the claim construction requirement, leaving Patent Owner and the Board to do Petitioner['s] job and propping the door open for

gamesmanship." Prelim. Resp. 3. Patent Owner argues that "Petitioner['s]' failure to provide any claim construction is a significant deficiency" because "[t]hroughout the [P]etition, Petitioner[] appear[s] to rely on broad constructions of the claim limitations in order to stretch the prior art to cover the claims." *Id.* at 3–4. Patent Owner offers two examples of claim terms it argues are critical to understanding Petitioner's arguments: "determining . . . domain information" and "'processing . . . to determine a reinterpretation' of a previous utterance." *Id.* at 4. Patent Owner argues that failing to offer constructions "opens the door for Petitioner[] to engage in gamesmanship, such as offering an inconsistently narrower construction in the underlying [district court] litigation." *Id.* at 4–5. For these reasons, Patent Owner argues that we should deny institution. *Id.* at 5.

We are not persuaded that we should exercise our discretion to deny institution based on Petitioner's alleged failure to set forth adequate claim constructions. By arguing that the claim terms should be construed according to their "ordinary and customary meaning" (Pet. 7), Petitioner has complied with our rule that the Petition must identify how the challenged claims are to be construed. *See* 37 C.F.R. § 42.104(b)(3). Nor do Patent Owner's assertions of a possibility of "gamesmanship" in the district court litigation concerning the '536 patent provide a reason compelling us to deny institution, as Patent Owner's arguments are merely speculation about possible future actions in another proceeding.

For purposes of this Decision, and based on the record before us, we determine that no express construction of any term is necessary.

D. Overview of the Asserted Prior Art

1. Kennewick

Kennewick discloses a system that performs "retrieval of online information and processing of commands through a speech interface in a vehicle environment." Ex. 1003 ¶ 2. Figure 5 illustrates the system and is reproduced below:

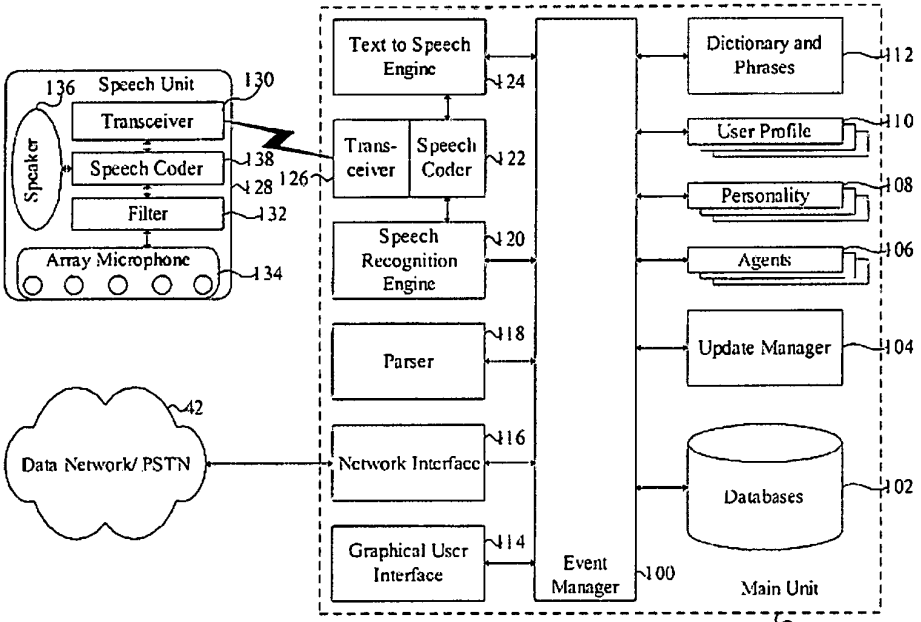


Figure 5. Speech Processing System Block Diagram

Figure 5 "shows an overall diagrammatic view of the interactive natural language speech processing system according to one embodiment of the invention." *Id.* ¶ 118. Speech unit 128 detects speech using microphone 134. *Id.* ¶ 121. The detected speech passes through filter 132 to coder 138 for encoding and compression. *Id.* The coded speech is then transmitted via transceiver 130 to transceiver 126 of main unit 98, and then decoded and decompressed by speech coder 122. *Id.* ¶¶ 121, 123, Fig. 5. Speech recognition unit 120 processes the decoded speech to detect words

and phrases. *Id.* ¶ 123. Parser 118 transforms the recognized words and phrases into complete commands and questions using data supplied by domain agents 106. *Id.* ¶¶ 123, 160. The parser determines the context for the speech, and from the context determines the domain and, thereby, the domain agent to be invoked. *Id.* ¶ 160. The agents then process the commands or questions using one or more devices under their control, and return appropriate responses to the user. *Id.* ¶¶ 120, 123–124. Generally, the agents are specific to a single domain. *Id.* ¶¶ 17, 126. In one embodiment, the system provides offers and promotions for goods and services based on the user's location. *Id.* ¶¶ 65–66.

2. Yonebayashi

Yonebayashi recognizes that various electronic devices, such as personal computers and microwave ovens, can be connected to and receive advertisement information from other devices via networks, such as a Local Area Network. Ex. 1015 ¶ 2. Yonebayashi purports to improve upon such systems by providing advertisements having more appropriate content for the user and enabling interaction between the user and the advertisement. *Id.* ¶ 8.

Yonebayashi discloses a computer-based advertisement presentation device. Ex. 1015 ¶ 17. The device includes a dictionary storage unit that stores various types of advertisement information, including active advertisement information and response advertisement information. *Id.* ¶¶ 34–36. Active advertisement information is information for the system to actively present advertisements to the user. *Id.* ¶ 35. Response advertisement information is information for advertising in accordance with the user's remarks and inquiries. *Id.* ¶ 36. The dictionary storage unit also

includes a case dictionary that contains a series of if-then rules, called cases, and user information by which the advertisement information is selected and formatted for presentation to the user. *Id.* ¶¶ 39–41. Figure 5 illustrates an example of a dialog between the system, referred to as the "agent," and a user and is reproduced below:

[FIGURE 5]

<Conversation example between user and agent>

(a)

User : I've been fatigued recently.
Agent : "Rogain J" by Yonkyo Co., Ltd. is recommended for hardworking businessmen.
User : I don't need that now • • •
Agent : Oh, I'm sorry. I'll stop the advertisement.

(b)

User : I've been fatigued recently.
Agent : "Rogain J" by Yonkyo Co., Ltd. is recommended for hardworking businessmen.
User : I want to see an advertisement for a different manufacturer.
Agent : Then how about Chuho Pharmaceutical's 'Neovita Drink" • • •

<If-then rule representing an action determination means by means of case reference>

(c)

```
• • • •
if (keyword[fatigue]) then
{
advertise[energy drink (first candidate)]
if (keyword[don't need]) then
{
    reply[Oh, I'm sorry. I'll stop the advertisement.]
}
else if (keyword[different] and keyword[manufacturer]) then
{
    advertise[energy drink (second candidate)]
}
}
```

Figure 5 shows conversation examples between a user and an agent in a case of presenting an advertisement for an energy drink. *Id.* at 26. The process begins with the user saying "I've been fatigued lately." *Id.* ¶ 49. The system's character string acquisition means receives the user's remarks and the preprocessing means identifies the words therein. *Id.* ¶¶ 49–50. The action determination unit compares the detected words to the "if" portion of the rules and, recognizing the keyword "fatigue," determines "energy drink (first candidate)" to be the appropriate action. *Id.* ¶ 50. The presentation means then presents the advertisement for the first candidate energy drink in the advertisement information dictionary. *Id.* ¶ 51. The system then awaits further user remarks and reacts appropriately. *Id.* ¶¶ 52, 53. For example, if the user indicates that no advertisements are desired, the advertisement is terminated, and if the user indicates that another brand of energy drink is desired, the system presents an advertisement for the next highest rank candidate. *Id.*

E. Asserted Obviousness of the Challenged Claims

Petitioner argues that claims 1, 3–6, 13–16, 24–40, 43–46, 49, 50, and 53–55 would have been obvious over Kennewick and Yonebayashi. Pet. 12–57. In support of its showing, Petitioner relies upon the Smyth declaration. *Id.* (citing Ex. 1002). We have reviewed Petitioner's assertions and supporting evidence. For the reasons discussed below, and based on the record before us, we determine that Petitioner demonstrates a reasonable likelihood of prevailing in showing that claims 33–36 would have been obvious over the combination of Kennewick and Yonebayashi, but does not

demonstrate a reasonable likelihood of prevailing as to the remaining 31 challenged claims.

1. Claims 1, 3–6, 13–16, and 24–32

Petitioner relies on Kennewick to disclose most of the recitations of claim 1, and relies on Yonebayashi to provide additional teaching regarding providing promotional content based on the interpretation of natural language utterances and presenting the promotional content to the user. Pet. 14–30.

Independent claim 1 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including receiving a second natural language utterance relating to a received first natural language utterance, performing speech recognition to recognize one or more words of the second natural language utterance, determining domain information for the one or more recognized words based on the first natural language utterance, and processing the one or more recognized words based on the domain information to determine an interpretation of the second natural language utterance. Ex. 1001, 12:32–55. This processing comprises:

> providing the one or more recognized words to a first domain agent associated with a first domain and a second domain agent associated with a second domain;
>
> obtaining a first interpretation of the second natural language utterance from the first domain agent;
>
> obtaining a second interpretation of the second natural language utterance from the second domain agent; and
>
> determining the interpretation based on one or more of the first interpretation or the second interpretation.

Id. at 12:55–67.

Petitioner argues that Kennewick's speech recognition engine 120 processes received utterances to recognize words and phrases, which parser 118 transforms into complete commands and questions using data supplied by domain agents. Pet. 19 (citing Ex. 1003 ¶ 123). According to Petitioner,

> The final goal of the parser is to "invoke the correct agent" to have a question answered or command executed. [Ex. 1003 ¶ 162]. Before that can happen, the parser must obtain an interpretation of the utterance, confirm its context and domain, and fill in any missing criteria or parameters. *Id.* Domain agents fulfill these tasks for the parser even before the "correct" one is invoked.

Pet. 22–23. Petitioner argues that a recognized keyword may invoke multiple domains, and to determine which is the correct domain,

> the parser may "dynamically receive[] keyword and associated prior probability or fuzzy possibility updates" from the system agent or an "already active domain agent." [Ex. 1003 ¶ 160]. The parser uses this information to score the "possible contexts," and "the top one or few are used for further processing." *Id.* It would have been obvious to a POSITA that obtaining relevant probability or possibility information from domain agents for different domains would require providing them with the recognized words.

Pet. 23 (first alteration in original) (citing Ex. 1002 ¶¶ 84–85). Petitioner argues that "domain agents provide domain-specific information, including probability or possibility information, to assist in determining the correct context and interpretation of the utterance" and "[t]he agents use domain-specific knowledge to provide unambiguous interpretations." *Id.* at 24 (citing Ex. 1003 ¶¶ 31, 123, 160–163). "Using domain specific agents to obtain and score possible contexts and corresponding interpretations would

require using multiple agents." *Id.* at 25 (citing Ex. 1003 ¶ 31; Ex. 1002 ¶ 89).

Patent Owner argues that the "core problem" with the Petition is, "while the claims require receiving interpretations from two domain agents, Petitioner[] cite[s] no such disclosure in Kennewick. Rather, the cited prior art describes a parser interpreting a user's speech rather than an agent, based on contributions from at most a single agent." Prelim. Resp. 6. Patent Owner argues that Petitioner's contention that Kennewick's domain agents interpret the utterance, confirm its context and domain, and fill in missing criteria or parameters is unsupported. *Id.* at 11 (quoting Pet. 23). Rather, Patent Owner argues, "[a]ll of these functions are performed by the parser not a domain agent." *Id.* "Kennewick does not disclose providing recognized words to an 'already active domain agent,' it discloses receiving keyword information *from* a domain agent." *Id.* at 12 (citing Ex. 1003 ¶ 160). Patent Owner also argues that "Kennewick does not disclose use of two domain agents, only a system agent *or* a domain agent." *Id.* (citing Ex. 1003 ¶ 160).

Kennewick's speech unit detects speech using microphone 134. Ex. 1003 ¶ 121. The speech passes through filter 132 to coder 138 for encoding and compression. *Id.* The coded speech is then transmitted to transceiver 130 of main unit 98, and then decoded and decompressed by speech coder 122. *Id.* ¶¶ 121, 123, Fig. 5. Speech recognition unit 120 processes the decoded speech to detect words and phrases. *Id.* ¶ 123. Parser 118 transforms the recognized words and phrases into complete commands and questions using data supplied by domain agents 106. *Id.* ¶¶ 123, 160. The parser determines the context for the speech, and from the

context determines the domain and, thereby, the domain agent to be invoked. *Id.* ¶ 160. The domain agent then processes the commands or questions using one or more devices under its control, and returns appropriate responses to the user. *Id.* ¶¶ 120, 123–124. Thus, on this record, we are persuaded by Patent Owner's assertion that the parser, not the domain agents, interprets the detected speech.

When a recognized keyword implies multiple contexts, "[t]he parser dynamically receives keyword and associated prior probability or fuzzy possibility updates from the system agent 150 or an already active domain agent 156. Based on these probabilities or possibilities the possible contexts are scored and the top one or few are used for further processing." Ex. 1003 ¶ 160. "The parser 118 may use a scoring system to determine the most[] likely context or domain for a user's question or command. . . . Based on this scoring, the system may invoke the correct agent." *Id.* ¶ 161; *see also id.* ¶ 162 (explaining that, when formulating a question or command for an agent, "the parser will preferably determine required and optional values for the criteria or parameters," which may be "determined by applying probabilistic or fuzzy reasoning to tables of possible values"). Thus, even when the detected utterance may apply to more than one context, the parser determines the single appropriate context. Based on the record before us, Petitioner fails to establish persuasively that Kennewick's domain agents interpret the detected speech.

We likewise find unpersuasive the testimony of Petitioner's declarant that "the Kennewick parser processes recognized words *with the assistance of domain agents*." Ex. 1002 ¶ 84 (emphasis added) (citing Ex. 1003 ¶¶ 161–162, 170). Rather, Kennewick discloses that the parser processes

recognized words using *data* supplied by the domain agents. Ex. 1003 ¶ 123. This data includes updated keywords and prior probabilities associated with the keywords. *Id.* ¶ 160; *see also id.* ¶ 134 (explaining that the user can add new keywords to domain agents). By indicating that the parser receives keyword *updates*, Kennewick indicates that the parser already has keywords associated with the various agents. Neither Petitioner nor Petitioner's declarant provides adequate support for the contention that the domain agents perform any role in recognizing words. Nor does Petitioner or Petitioner's declarant explain adequately how providing data to the parser constitutes interpreting the utterance.

We further agree with Patent Owner's arguments that the Petition does not explain adequately how Kennewick uses two domain agents as required by claim 1. *See, e.g.*, Prelim. Resp. 15. To the contrary, Kennewick consistently describes the parser as invoking a single domain agent. *See, e.g.*, Ex. 1003 ¶¶ 162 ("Once the context for the question or command has been determined, the parser 118 can invoke the correct agent 156, 150."), 165 ("Based on the context, the parser can evoke the correct agent to process the question or command."), 167 ("Specific questions may be generally directed to one of the domain agents 156."), 177 ("Specific commands are generally directed to one of the domain agents 156.").

For the reasons explained above, the arguments and evidence presented in the Petition fail to provide sufficient support for Petitioner's contention that Kennewick's domain agents provide first and second interpretations as required by claim 1 and incorporated into dependent

claims 3–6, 13–16, and 24–31. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging these claims.

Independent claim 32 recites a system comprising one or more physical processors programmed to execute the steps recited in claim 1. Ex. 1001, 16:23–60. Petitioner argues that claim 32 would have been obvious for the reasons set forth regarding claim 1. Pet. 51–52. For the same reasons as set forth above in our analysis of claim 1, the Petition has not demonstrated a reasonable likelihood of success in challenging claim 32.

2. Claims 33–36

Although the previously discussed claims require receiving interpretations from two domain agents, claims 33–36 do not require these same limitations. Instead, this claim set requires an interactive session between a user and the computer system in which the user makes three utterances. For the reasons set forth below, we determine that Petitioner has established a reasonable likelihood of prevailing on its challenge to these claims.

Independent claim 33 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including

> receiving, at the one or more physical processors, a first natural language utterance during an interactive session between a user and the computer system;
>
> providing, by the one or more physical processors, a response to the first natural language utterance;
>
> receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance during the interactive session;

performing, by the one or more physical processors, speech recognition to recognize one or more words of the second natural language utterance;

processing, by the one or more physical processors, based on the first natural language utterance, the one or more recognized words to determine an interpretation of the second natural language utterance;

receiving, at the one or more physical processors, a third natural language utterance during the interactive session;

processing, by the one or more physical processors, based on the third natural language utterance, the one or more recognized words to determine a reinterpretation of the second natural language utterance;

determining, by the one or more physical processors, promotional content based on one or more of the interpretation or the reinterpretation; and

presenting, by the one or more physical processors, the promotional content to the user.

Ex. 1001, 16:61–17:27. In summary, claim 33 requires an interactive session between a user and the computer system during which the processors: receive three natural language utterances, the second utterance being related to the first; provide a response to the first utterance; process the second and third utterances to interpret (or reinterpret) the second utterance; and determine and present to the user promotional content based on the interpretation or reinterpretation.

Petitioner argues that claim 33 would have been obvious for the reasons it sets forth regarding claims 1 and 13–15. Pet. 52. Petitioner relies on Kennewick's disclosure of a user's dialog with the system and argues that the system receives a third utterance in response "to a follow-up question from the system if the second (clarifying) utterance itself does not fully

resolve the ambiguity" with a first utterance. *Id.* at 35 (regarding claim 13).[6] Petitioner relies on Yonebayashi to teach determining promotional content based on a reinterpreted utterance. *Id.* at 36–38.

Petitioner argues that it would have been obvious to a person having ordinary skill in the art to modify Kennewick's system to base its selection of promotional content on the interpretation of the user's voice input and enable interaction with the content so the system could select from a wider range of possible advertisements in response to a user's request. Pet. 14.

Patent Owner argues that the Petition does not identify a third utterance in Kennewick or explain how such an utterance would be used to reinterpret a second utterance. Prelim. Resp. 27–28. Patent Owner argues that the Petition does not explain adequately how promotional content is determined. *Id.* at 28. Patent Owner argues that the Petition fails to provide a sufficient rationale to combine Kennewick and Yonebayashi. *Id.* at 29.

Kennewick discloses a system that performs "retrieval of online information and processing of commands through a speech interface in a vehicle environment." Ex. 1003 ¶ 2. A user may conduct a dialog with the system, during which the system recognizes and interprets the user's speech. *See, e.g.*, *id.* ¶ 156. Parser 118 interprets recognized words into complete commands and questions using a scoring system to determine the most likely context for a user's question or command. *Id.* ¶¶ 123, 160–161. "If the confidence level of the score is not high enough to ensure a reliable

[6] Although Petitioner offers another option for receiving a third utterance as "the next step of the dialog" (Pet. 35), Petitioner does not explain how this utterance is processed to determine a reinterpretation of the second utterance (*id.* at 36).

response, the system can ask a question of the user to verify the question or command is correctly understood." *Id.* ¶ 161. If the user's response does not clarify the interpretation, "the system can ask one or more questions to attempt to resolve the ambiguity." *Id.* Thus, in light of these disclosures regarding a user's (1) initial question or command, (2) response to a verification of this question or command, and (3) response to question(s) directed to resolving any uncertainty, Kennewick supports Petitioner's contentions that the system receives three utterances from a user and how a third such utterance is used to reinterpret a second utterance.

Kennewick discloses that its interactive system can provide location-based marketing programs. Ex. 1003 ¶¶ 65–66. "Occupants can query the system for offers and promotions for goods and services along the travel route." *Id.* ¶ 66. Thus, Kennewick supports Petitioner's contentions that the system determines and presents promotional content based on the interpretation or reinterpretation of a user's utterance.

Yonebayashi discloses a system that provides tailored advertisements to the user and enables interaction between the user and the advertisement. Ex. 1015 ¶ 8. Upon presenting an initial advertisement to the user, the system monitors for any user response and reacts accordingly. *Id.* ¶¶ 52–53. For example, if the user requests to see an advertisement for a different manufacturer, the system provides another advertisement. *Id.* ¶ 53. Thus, Yonebayashi supports Petitioner's contentions that its system allows the user to interact with the system to provide supplemental or substitute promotional content per a user's request. We determine, based on this record, that the Petition sets forth reasoning with rational underpinning explaining why it would have been obvious to incorporate this functionality into Kennewick's

system. *See* Pet. 14 (arguing that the combination would enable interaction with the content so the system could select from a wider range of possible advertisements in response to a user's request).

Accordingly, at this stage of the proceeding, we determine that Petitioner has established a reasonable likelihood of prevailing on its assertion that claim 33 would have been obvious over the combination of Kennewick and Yonebayashi.

Claims 34 and 35 depend directly from claim 33. Ex. 1001, 17:28–38. The Petition maps these challenged dependent claims to Kennewick and Yonebayashi. Pet. 53 (citing *id.* at 26–28, 36–39). Patent Owner does not challenge separately the arguments and evidence presented for the dependent claims. *See* Prelim. Resp. 5. Based on our review of the record before us, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claims 34 and 35.

Independent claim 36 recites a system comprising one or more physical processors programmed to execute the steps recited in claim 33. Ex. 1001, 17:39–67. Petitioner argues that claim 36 would have been obvious for the reasons set forth regarding claim 33. Pet. 53 (citing *id.* at 51–52). Patent Owner similarly relies on its arguments set forth for claim 33. Prelim. Resp. 29–30. For the same reasons as set forth above in our analysis of claim 33, the Petition establishes a reasonable likelihood of success in challenging claim 36.

3. Claims 37 and 38

Claims 37 and 38 require interpreting an ambiguous utterance based on subsequent user interaction with an advertisement. For the reasons set

forth below, we determine that Petitioner has not established a reasonable likelihood of prevailing on its challenge to these claims.

Independent claim 37 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including,

> receiving, at the one or more physical processors, a first natural language utterance;
>
> providing, by the one or more physical processors, a response to the first natural language utterance;
>
> receiving, at the one or more physical processors, a second natural language utterance relating to the first natural language utterance;
>
> identifying, by the one or more physical processors, one or more requests associated with the second natural language utterance;
>
> determining, by the one or more physical processors, that at least one request of the one or more requests is incomplete or ambiguous;
>
> determining, by the one or more physical processors, promotional content that relates to the one or more requests;
>
> presenting, by the one or more physical processors, the promotional content to a user;
>
> monitoring, by the one or more physical processors, interaction of the user with the promotional content; and
>
> interpreting, by the one or more physical processors, the at least one incomplete or ambiguous request based on the interaction.

Ex. 1001, 18:1–30. In summary, claim 37 requires the processors to determine promotional content based on an incomplete or ambiguous request, monitor the user's interaction with the promotional content, and interpret the request based on this interaction.

Petitioner argues that claim 37 would have been obvious for the reasons it sets forth regarding claims 1, 16, and 24. Pet. 53. Petitioner relies

on Kennewick to disclose determining that a user request is ambiguous, in which case the system "prompt[s] the user to provide a second natural language utterance to clarify the ambiguous first natural language utterance." Pet. 18 (regarding claim 1), 42 (citing same regarding claim 24). Petitioner relies on Yonebayashi to teach the monitoring and interpreting recitations. *Id.* at 42–44 (regarding claim 24). In particular, Petitioner relies on Yonebayashi's example of providing an advertisement for an energy drink when the user remarks "I've been fatigued recently." *Id.* (citing Ex. 1015 ¶¶ 49–53). Petitioner characterizes this utterance as "incomplete or ambiguous" and as a "vague request." *Id.* at 43. Petitioner notes that, if the user says "I want to see an advertisement for a different manufacturer," the system will present an advertisement for a different company's energy drink. *Id.* at 44 (citing Ex. 1015 ¶ 53). Petitioner characterizes this as "re-interpreting the original request of 'I've been fatigued' based on how the user responds to the initially presented advertisement." *Id.* (citing Ex. 1002 ¶ 131).

Patent Owner argues that the Petition does not explain adequately how the Yonebayashi user's statement "I've been fatigued recently" is ambiguous or how subsequent interaction with an advertisement presented based on the statement constitutes interpreting the statement. Prelim. Resp. 35–36. We agree.

Yonebayashi discloses that, upon presenting a first energy drink advertisement to the user, its system monitors for any response the user may provide. Ex. 1015 ¶¶ 52–53. If the user expresses disinterest in the advertised product, the system terminates the advertisement and takes no further action. *Id.* ¶ 52. If the user requests to see an advertisement for a

different manufacturer, the system provides another advertisement. *Id.* ¶ 53. Petitioner does not provide adequate support for its assertion that the initial "I've been fatigued recently" utterance is ambiguous. To the contrary, Yonebayashi's system monitors the user's response to (interaction with) the advertisement and proceeds according to the user's response. However, there is no disclosure of the system reinterpreting the initial utterance based on this response.

Nor do we find Dr. Smyth's testimony persuasive. Dr. Smyth opines that "a POSITA would understand the user's disinterest in the 'Rogain J' advertisement despite being 'fatigued recently' to indicate the user's request was incomplete or ambiguous." Ex. 1002 ¶ 131. Dr. Smyth provides no explanation for this conclusion, nor is any support apparent from Yonebayashi. Because the declaration fails to provide any information on which this opinion is based, it "is entitled to little or no weight." 37 C.F.R. § 42.65(a).

For the reasons explained above, the arguments and evidence presented in the Petition fail to provide sufficient support for Petitioner's contention that the combination of Kennewick and Yonebayashi disclose or suggest interpreting an incomplete or ambiguous request based on the user's interaction with promotional content as required by claim 37. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging this claim.

Independent claim 38 recites a system comprising one or more physical processors programmed to execute the steps recited in claim 37. Ex. 1001, 18:31–53. Petitioner argues that claim 38 would have been obvious for the reasons set forth regarding claim 37. Pet. 54. For the same

reasons as set forth above in our analysis of claim 37, the Petition has not demonstrated a reasonable likelihood of success in challenging this claim.

4. Claims 39, 40, 43, 44–46, and 49

Claims 39, 40, 43, 44–46, and 49 require identifying multiple requests associated with a single utterance. For the reasons set forth below, we determine that Petitioner has not established a reasonable likelihood of prevailing on its challenge to these claims.

Independent claim 39 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including receiving a second natural language utterance relating to a received first natural language utterance and "identifying . . . requests associated with the second natural language utterance, wherein the requests include a first request associated with a first application and a second request associated with a second application different than the first application." Ex. 1001, 18:54–19:11.

Petitioner argues that claim 39 would have been obvious for the reasons it sets forth regarding claims 1, 16, and 25. Pet. 54. Petitioner relies on Kennewick to disclose identifying multiple requests associated with different applications. *Id.* at 44–45 (regarding claim 25). Petitioner argues that "[t]he utterance may include 'questions, queries, and commands,' each pertaining to a request the system processes and responds to." *Id.* at 40 (citing Ex. 1003 ¶¶ 17, 27 regarding claim 16). Petitioner argues that "travel services may include applications providing 'directories of travel and entertainment services, or reservations for entertainment restaurants, hotels and other accommodation.'" *Id.* at 45 (citing Ex. 1003 ¶ 68 regarding

claim 25). Continuing, Petitioner asserts that "[a]nother application, which a POSITA would understand could apply to groceries and prepared foods, enables 'remote ordering and payment for goods and services' by providing an interactive menu or catalog." *Id.* (citing Ex. 1003 ¶ 67 regarding claim 25).

Patent Owner asserts that the Petition "does not even argue that Kennewick identifies multiple requests associated with the second natural language utterance." Prelim. Resp. 37. We agree.

Although Petitioner asserts that Kennewick discloses multiple applications with which a request can be associated, claim 39 recites first and second requests associated with the second natural language utterance. Ex. 1001, 19:1–6. The Petition does not address adequately two requests stemming from a single utterance. To the extent Petitioner's mention of "'questions, queries, and commands,' each pertaining to a request" (Pet. 40 (citing Ex. 1003 ¶¶ 17, 27)) is intended to show this requirement, we are not persuaded. The cited portions of Kennewick disclose in general terms that the system responds to requests. *See, e.g.*, Ex. 1003 ¶ 27 ("The system, according to one aspect of the invention, can process and respond to questions, queries and commands."). The Petition does not explain persuasively how any disclosure in Kennewick would teach or suggest identifying multiple requests associated with a single utterance. The testimony of Petitioner's declarant, which is substantially the same as the Petition, likewise fails to demonstrate persuasively that Kennewick teaches or suggests this limitation. *See* Ex. 1002 ¶¶ 122–123, 132.

For the reasons explained above, the arguments and evidence presented in the Petition fail to provide sufficient support for Petitioner's

contention that Kennewick discloses identifying two requests associated with a single utterance as required by claim 39 and incorporated into dependent claim 40. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging these claims.

Independent claim 43 recites a system comprising one or more physical processors programmed to execute the steps recited in claim 39. Ex. 1001, 19:31–50. Petitioner argues that claim 43 would have been obvious for the reasons set forth regarding claim 39. Pet. 54. For the same reasons as set forth above in our analysis of claim 39, the Petition has not demonstrated a reasonable likelihood of success in challenging claim 43.

Independent claim 44 contains similar recitations as claim 39, including "identifying, by the one or more physical processors, requests associated with the second natural language utterance, wherein the requests include a first request to be processed by a first device associated with a user and a second request to be processed by a second device associated with the user." Ex. 1001, 19:51–20:8. Petitioner makes arguments substantially similar to those made with respect to claim 39's requirement of two requests associated with a single utterance. Pet. 46–47 (regarding claim 27), 55 (citing same regarding claim 44). For reasons similar to those explained above in our analysis of claim 39, Petitioner fails to support adequately its arguments regarding identifying two requests associated with a single utterance as required by claim 44 and incorporated into dependent claims 45 and 46. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging these claims.

Independent claim 49 recites a system comprising one or more physical processors programmed to execute the steps recited in claim 44.

Ex. 1001, 20:30–49. Petitioner argues that claim 49 would have been obvious for the reasons set forth regarding claim 44. Pet. 55. For the same reasons as set forth above in our analysis of claims 39 and 44, the Petition has not demonstrated a reasonable likelihood of success in challenging claim 49.

5. Claims 50 and 53–55

Claims 50 and 53–55 require obtaining a user's profile information that specifies prior user interaction with items. For the reasons set forth below, we determine that Petitioner has not established a reasonable likelihood of prevailing on its challenge to these claims.

Independent claim 50 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including "obtaining, by the one or more physical processors, user profile information associated with a user, wherein the user profile information specifies prior user interactions with items" and "identifying, by the one or more physical processors, categories of items based on the prior user interactions specified by the user profile information." Ex. 1001, 20:50–21:9.

Petitioner relies on its prior arguments made regarding claims 1 and 30. Pet. 56. Petitioner notes that Kennewick's system stores "'[u]ser profile data' [that] can be 'learned by the system based on user behavior,'" which, Petitioner argues, "a POSITA would understand to include prior user interactions with items." *Id.* at 48 (citing Ex. 1002 ¶ 138; Ex. 1003 ¶ 143) (regarding claim 30). Petitioner's declarant identifies "promotional content" as such an item because "Kennewick does not expressly limit the type of

interaction that its system considers in processing and responding to user requests." Ex. 1002 ¶ 138.

Patent Owner argues that "[t]he petition does not identify any prior user interactions with *items* in Kennewick that are stored in a user profile." Prelim. Resp. 43. We agree.

Neither Petitioner nor its declarant explains persuasively why "learned" personal data necessarily includes interaction with "items." Nor is any supporting reasoning apparent from Kennewick's disclosure, which explains that the learned data includes spelling preferences, birth dates, income level, and similar information. Ex. 1003 ¶ 143; *see also* Pet. 48 (citing same).

Additionally, Petitioner's declarant does not explain adequately why "promotional content" should be considered an "item." *See* Ex. 1002 ¶ 138. The '536 patent uses "item" in its ordinary and customary meaning. *See, e.g.*, Ex. 1001, 13:66–67 (defining item as "a purchasable good" in claim 11). Accordingly, we accord this testimony little or no weight. *See* 37 C.F.R. § 42.65(a).

Finally, claim 50 requires that the determining of promotional content be based on the first *and* second utterances. Ex. 1001, 21:4–7. Petitioner does not address this recitation adequately. Although Petitioner cites to its showing for claim 1 (*see* Pet. 56), claim 1 determines promotional content based on the interpretation of only the second utterance.

For the reasons explained above, the arguments and evidence presented in the Petition fail to provide sufficient support for Petitioner's contentions that Kennewick's user profile information specifies prior user interactions with items or that the proposed combination of Kennewick and

Yonebayashi would determine promotional content based on the first and second utterances as required by claim 50. Therefore, the Petition has not demonstrated a reasonable likelihood of success in challenging this claim.

Independent claim 53 recites a system comprising one or more physical processors programmed to execute the steps recited in claim 50. Ex. 1001, 21:23–44. Petitioner argues that claim 53 would have been obvious for the reasons set forth regarding claim 50. Pet. 56. For the same reasons as set forth above in our analysis of claim 50, the Petition has not demonstrated a reasonable likelihood of success in challenging claim 53.

Independent claim 54 recites a computer-implemented method in which one or more physical processors of a computer system execute computer program instructions to perform various functions, including "obtaining . . . user profile information associated with a user, wherein the user profile information specifies prior user interactions with items." Ex. 1001, 21:45–22:24. Petitioner argues that claim 54 would have been obvious for the reasons set forth regarding claims 1, 31, and 50. Pet. 57. Notably, Petitioner's arguments regarding the "obtaining" recitation of claim 31 rely on those made for claim 30. *Id.* at 50–51. Therefore, for the same reasons as set forth above in our analysis of claim 50, the Petition has not demonstrated a reasonable likelihood of success in challenging claim 54.

Independent claim 55 recites a system comprising one or more physical processors programmed to execute the steps recited in claim 54. Ex. 1001, 22:25–53. Petitioner argues that claim 55 would have been obvious for the reasons set forth regarding claim 54. Pet. 57. For the same reasons as set forth above in our analysis of claims 50 and 54, the Petition

has not demonstrated a reasonable likelihood of success in challenging claim 55.

F. Exercise of Discretion Under 35 U.S.C. § 314

At institution, the Board is required to make "a binary choice—either institute review or don't." *SAS*, 138 S. Ct. at 1355. When a petition fails to meet the reasonable likelihood standard as to some challenges, the Board evaluates "all the challenges and determine[s] whether, in the interests of efficient administration of the Office and integrity of the patent system, the entire petition should be denied." CTPG 64 (citing 37 C.F.R. §§ 316(b), 326(b)). In determining whether to institute in circumstances such as those presented here, we take into account the efficient use of the Board's time and resources. *See Deeper, UAB v. Vexilar, Inc.*, IPR2018-01310, Paper 7 at 41–43 (PTAB Jan. 24, 2019) (designated informative); *Chevron Oronite Co. v. Infineum USA L.P.*, IPR2018-00923, Paper 9 at 10–11 (PTAB Nov. 7, 2018) (designated informative). In *Chevron*, the Board found that instituting a trial with respect to twenty challenged claims would not be an efficient use of the Board's time and resources because, in light of its decision on a matter of claim interpretation, the petitioner had demonstrated, at best, a reasonable likelihood of prevailing with respect to only two of the twenty challenged claims. *Chevron*, Paper 9 at 11. Similarly, in *Deeper*, the Board concluded that "instituting a trial with respect to all twenty-three claims and on all four grounds based on evidence and arguments directed to only two claims and one ground would not be an efficient use of the Board's time and resources." *Deeper*, Paper 7 at 43.

The Petition challenges 35 claims of the '536 patent. Pet. 1. As discussed above, Petitioner fails to demonstrate a likelihood of prevailing with respect to its challenge to 31 of these claims. Thus, were we to institute review, the resulting trial would go forward on all 35 claim challenges although we find only four claim challenges demonstrate a reasonable likelihood of prevailing. We find that instituting trial, therefore, would not be an efficient use of the Board's time and resources. Consequently, we exercise our discretion to deny institution of the entire Petition under 35 U.S.C. § 314.

III. ORDER

In consideration of the foregoing, it is hereby ordered that the Petition is *denied*, and no trial is instituted.

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