

Claims 1, 2, 4-9, 12-14	
[1.1]	A method responsive to a user generated natural language speech utterance, comprising:
[1.2]	receiving the user generated natural language speech utterance, the received user utterance containing at least one request;
[1.3]	maintaining a dynamic set of prior probabilities or fuzzy possibilities usable at each stage of processing the received user utterance;
[1.4]	recognizing words and phrases contained in the received utterance using information in one or more dictionary and phrase tables;
[1.5]	parsing the recognized words and phrases to determine a meaning of the utterance, wherein determining the meaning includes determining a context for the at least one request contained in the utterance based on one or more keywords contained in the recognized words and phrases;
[1.6]	selecting at least one domain agent based on the determined meaning, the selected domain agent being an autonomous executable that receives, processes, and responds to requests associated with the determined context;
[1.7]	formulating the at least one request contained in the utterance in accordance with a grammar used by the selected domain agent to process requests associated with the determined context;
[1.8]	invoking the selected domain agent to process the formulated request; and
[1.9]	presenting results of the processed request to the user, the presented results generated as a result of the invoked domain agent processing the formulated request.
[2.1]	The method according to claim 1, wherein recognizing the words and phrases contained in the received utterance includes:
[2.2]	dynamically updating the information in the dictionary and phrase tables based on the dynamic set of prior probabilities or fuzzy possibilities;
[2.3]	determining an identity of the user based on voice characteristics of the utterance; and
[2.4]	associating the recognized words and phrases and a pronunciation of the recognized words and phrases with the identity of the user, the determined context, and the at least one request when the recognized words and phrases satisfy a predetermined confidence level.

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[4.1]	The method according to claim 1, wherein determining the context for the at least one request contained in the utterance includes:
[4.2]	matching the keywords contained in the recognized words and phrases to a dynamically updated set of keywords, the dynamically updated set of keywords associated with the dynamic set of prior probabilities or fuzzy possibilities;
[4.3]	scoring one or more possible contexts for the matched keywords using one or more of a profile of the user, data content associated with the domain agents, or a context stack of one or more recent contexts; and
[4.4]	determining the context by selecting one or more of the possible contexts having a score satisfying a predetermined confidence level.
[5.1]	The method according to claim 4, wherein determining the context for the at least one request contained in the utterance further includes:
[5.2]	requesting the user to verify the recognized words and phrases when none of the possible contexts have a score satisfying the predetermined confidence level; and
[5.3]	determining the context based on information provided by the user in one or more subsequent natural language speech utterances.
[6.1]	The method according to claim 1, wherein formulating the at least one request in accordance with the grammar used by the selected domain agent includes:
[6.2]	determining one or more required values and one or more optional values for a request in the grammar used by the selected domain agent;
[6.3]	extracting one or more criteria and one or more parameters from the keywords contained in the recognized words and phrases using procedures sensitive to the determined context;
[6.4]	inferring one or more criteria and one or more parameters using the dynamic set of prior probabilities or fuzzy possibilities; and
[6.5]	transforming the extracted and the inferred criteria and parameters into a format compatible with the grammar used by the selected domain agent, the transformed criteria and parameters including all of the required values and one or more of the optional values.

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[7.1]	The method according to claim 1, wherein the at least one request contained in the utterance includes at least one question and at least one command,
[7.2]	wherein the invoked domain agent processes the formulated request by:
[7.3]	directing the at least one command to local or remote processing devices; and
[7.4]	querying local or network information sources to resolve information requested in the at least one question.
[8.1]	The method according to claim 7, wherein querying the local or network information sources to resolve the information requested in the at least one question includes:
[8.2]	submitting a plurality of asynchronous queries to the information sources, the plurality of queries including a plurality of duplicate queries submitted to distinct information sources;
[8.3]	a synchronously receiving a plurality of results of the queries from the information sou
[8.4]	scoring a relevance of each of the asynchronously received results using the dynamic set of prior probabilities or fuzzy possibilities to determine one or more best responses to the at least one question.
[9.1]	The method according to claim 8, wherein determining the one or more best responses to the at least one question includes:
[9.2]	determining one or more tokens required to formulate a response to the question;
[9.3]	extracting one or more values for the determined tokens from the asynchronously received results, the one or more values extracted by applying one or more scraping criteria to the asynchronously received results;
[9.4]	evaluating the extracted values using the dynamic set of prior probabilities or fuzzy possibilities, wherein evaluating the extracted values includes resolving ambiguous, incomplete, or conflicting information; and
[9.5]	selecting one or more best values for the determined tokens from the evaluated values, wherein the one or more best responses include the one or more selected best values.
[12.1]	The method according to claim 9, wherein determining the one or more best responses to the at least one question further includes:

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[12.2] determining that the dynamic set of prior probabilities or fuzzy possibilities has failed to resolve the ambiguous, incomplete, or conflicting information; and
[12.3] resolving the ambiguous, incomplete, or conflicting information by requesting the user to provide additional information for resolving the ambiguous, incomplete, or conflicting information.
[13.1] The method according to claim 9, wherein presenting results of the processed request to the user includes:
[13.2] selecting a format template for presenting the one or more best responses;
[13.3] selecting a personality for presenting the one or more best responses;
[13.4] determining an order for presenting the tokens contained in the response; and
[13.5] performing variable substitutions and transformations on the best values selected for the tokens, wherein performing the variable substitutions and transformations includes using the dynamic set of prior probabilities or fuzzy possibilities to vary a terminology of the best values.
[14.1] The method according to claim 13, wherein presenting results of the processed request to the user further includes:
[14.2] formatting the best responses in accordance with the selected format template, wherein a text to speech engine reads the formatted best responses to create a system generated speech utterance that presents the best responses to the user.