

Preliminary Ineligibility Contentions for U.S. Patent 8,515,765

Pursuant to Chief Judge Gilstrap's Standing Order Regarding Subject Matter Eligibility Contentions, the following charts contain Samsung's Preliminary Ineligibility Contentions demonstrating that claims 1-14 of U.S. Patent No. 8,515,765 ("765 patent") are patent-ineligible under 35 U.S.C. § 101. Because the Court has yet to issue a claim construction in this case, and to the extent Plaintiff contends that there are factual disputes that relate to eligibility of the asserted claims of the '765 patent, fact and expert discovery is ongoing, these contentions are preliminary only and Samsung reserves the right to supplement or modify these contentions in accordance with the agreed patent-disclosure procedures and the Docket Control Order in this case. Additionally, and in further consideration of the preliminary stages of the case, Samsung notes that the pinpoint citations referenced in this chart are not exhaustive, and Samsung reserves the right to rely on additional citations within the asserted patent any cited reference. Furthermore, citations to any figure, table, or chart are meant to encompass the language describing the figure, table, or chart, and vice versa. To the extent applicable, Samsung incorporates by reference its citations in its eligibility contentions for the other asserted patents, which are related to the '765 patent.

To the extent applicable, Samsung further incorporates by reference its citation in the § 102/103 contentions, which illustrate that the claimed elements were well-understood, routine, and conventional.

Further, these charts may incorporate Plaintiff's apparent interpretation of the breakdown of elements within the asserted claims, as reflected in Plaintiff's infringement contentions to date. Samsung does not concede that such interpretation is correct, and reserves its right to supplement these contentions accordingly.

Samsung reserves its right to supplement these contentions based on further discovery, including any supplemental infringement contentions or to any interrogatory response provided by Plaintiff purporting to rebut these ineligibility contentions.

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No. 2:24-cv-00828-JRG (E.D. Tex.)
Defendants’ Invalidity Contentions – Appendix G-4

Pursuant to Judge Gilstrap’s Standing Order Regarding Subject Matter Eligibility Contentions, Samsung provides the following chart identifying each exception to eligibility (e.g., abstract idea, law of nature, and natural phenomenon) to which each Challenged Claim is directed and the factual and legal basis therefor, as well as identification of whether one or more of the Challenged Claims are representative of any other Challenged Claims. Samsung incorporates by reference the prior art identified in the ’765 patent, the prosecution history of the ’765 patent, any related litigations, and any related PTAB proceedings. Samsung further incorporates by reference any prior art identified or to be identified in its invalidity contentions and/or expert reports that will be provided according to the schedule provided by the Court’s Docket Control Order (Dkt. No. 42).

Challenged Claims	Exception to Eligibility
Claims 1-14	Each of the independent claims of the ’765 patent are directed to the abstract idea of, in the context of a conversation, determining a “type” of conversation, and then tailoring the response format consistent with the identified type. This is not a technological advancement in the art, but, the inventors have acknowledged a basic feature of all human communication. It has also been long known in the art as a basic feature of human communication. <i>See e.g., Talk in Action: Interactions, Identities, and Institutions</i> John Heritage and Steven Clayman 2010, ISBN: 978-1-405-18550-9 (collecting historical sources). And it has been long applied to spoken dialog systems. <i>See, e.g., Smith, Ronnie W., and D. Richard Hipp. Spoken Natural Language Dialog Systems: A Practical Approach.</i> Oxford University Press, 1994. Accordingly, the patent is subject to the “abstract idea” exception to patent eligibility under the Patent Act as construed by the Supreme Court in <i>Alice</i>. <u>Representativeness</u> As an initial matter, for the purpose of the <i>Alice</i> inquiry, Claim 1 is representative of all asserted claims of the ’765 patent. VBA asserts independent claims 1 and 10 and dependent claims 2-9 and 11-14 Starting with the independent claims, the claims are identical except for that claim 1 claims a method and claim 10 claims a system. This is displayed in the following table:

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Challenged Claims	Exception to Eligibility		
	Feature	Claim 1 (Method)	Claim 10 (System)
	Receives an utterance at a speech engine from a voice-enabled device	✓	✓
	Determines a conversation type of the utterance based on whether the user has a leader or supporter role	✓	✓
	Tailoring the response format to fit that role.	✓	✓
The dependent claims do not alter the analysis as the dependent claims are substantially similar, if not substantially identical, and linked to the same abstract idea. <i>See Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n</i>, 776 F.3d 1343, 1348 (Fed. Cir. 2014). For example, Claims 2 and 11 claim variants of Independent Claims 1 and 10 where determining the conversation type includes determining a “conversational goal” and adapting the format of the response to provide or receive one or more pieces of information to/from the user. Claim 3 further narrows Claim 2 by requiring the response format adapted to provide a single piece of information is shorter than the response format adapted to provide a plurality of pieces of information. Claims 4 and 12 similarly provide for determining a “conversational goal” and additionally require assigning a conversation type (query, didactic, or exploratory) corresponding to that goal. Claims 5 and 13 limit Independent Claims 1 and 10 by requiring the conversation type be determined as a query, didactic, or exploratory conversation based on the role the user has in the conversation. Claims 6 and 14 similarly narrow Claims 1 and 10 by requiring the			

Challenged Claims	Exception to Eligibility
	conversation type be determined as a query, didactic, or exploratory conversation based on the allocation of information between the user and the speech engine. Claim 7 narrows Claim 1’s conversation type determining step by requiring a determination of the allocation of information between the user and the speech engine. Claim 8 claims a variant of Claim 1 where the generated response is adapted based on whether the conversation type is query or didactic. Claim 9 narrows Claim 1, where the leader/supporter role determination is based on “determining whether the user controls the conversation or whether the user provides information to the speech engine during the conversation.” As detailed above, all of the asserted dependent claims merely narrow the scope of the independent claims to use specific modalities or decision processes for obtaining the same abstract idea claimed in the independent claims. Because these limitations do not provide any additional inventive concept, their eligibility under 101 rises and falls with the independent claims. <u>The ’765 Patent Claims an Abstract Idea</u> In <i>Beteiro, LLC v. DraftKings Inc.</i>, the Federal Circuit recently identified certain “well-settled indicators of abstractness.” 104 F. 4th 1350, 1355 (Fed. Cir. 2024). These are: (1) claims that broadly recite generic steps; (2) claims drafted using largely result-focused functional language, and (3) claims that can be analogized to “longstanding ‘real-world’ activities. <i>Id.</i> While each of these indicators are sufficient to demonstrate abstractness, the claims of the ’765 patent exhibit all of the features identified by that court. <i>First</i>, the claims are broad and cite generic steps. In considering the breadth and genericness of the claims, the focus must be on the actual claims. <i>See ChargePoint, Inc. v. SemaConnect, Inc.</i>, 920 F.3d 759, 769 (Fed. Cir. 2019) (“[T]he § 101 inquiry must focus on the language of

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	the Asserted Claims themselves” (quoting <i>Synopsys, Inc. v. Mentor Graphics Corp.</i>, 839 F.3d 1138, 1149 (Fed. Cir. 2016)); <i>Alice</i>, 573 U.S. at 219, 134 S.Ct. 2347 (“On their face, the claims before us are drawn to the concept of intermediated settlement” (emphasis added)). When evaluating the claim language, the court must evaluate “the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” <i>Intell. Ventures I LLC v. Erie Indem. Co.</i>, 850 F.3d 1315, 1325 (Fed. Cir. 2017) (quoting <i>Affinity Labs of Tex., LLC v. DIRECTV, LLC</i>, 838 F.3d 1253, 1257 (Fed. Cir. 2016)). While claim 1 of the ’765 patent includes extraneous verbiage designed to provide a perception of technological advance and complexity of the alleged invention in an attempt to remove it from the realm of ineligible subject matter, it boils down to a claim over the following three-step process: (1) receiving an utterance, (2) determining whether the user or the device is leading the conversation or supporting the conversation, and (3) tailoring the response format to fit that role. This mapping of the patent elements to the claimed concept is exemplified below: <table> <tr> <th>’765 patent</th><th>Claimed Concept</th></tr> <tr> <td>[1pre]: A method of providing a voice interface, comprising:</td><td>A method of providing a voice interface, comprising:</td></tr> <tr> <td>[1A] receiving, at a speech engine, a natural language utterance from a voice-enabled device, the natural language utterance corresponding to a conversation type;</td><td>Step 1: Receiving an utterance</td></tr> <tr> <td>[1B] determining the conversation type corresponding to the natural language utterance based on whether a user that spoke the natural language utterance has a leader</td><td>Step 2: determining whether the user or the device is leading the conversation or supporting the conversation</td></tr> </table>	’765 patent	Claimed Concept	[1pre]: A method of providing a voice interface, comprising:	A method of providing a voice interface, comprising:	[1A] receiving, at a speech engine, a natural language utterance from a voice-enabled device, the natural language utterance corresponding to a conversation type;	Step 1: Receiving an utterance	[1B] determining the conversation type corresponding to the natural language utterance based on whether a user that spoke the natural language utterance has a leader	Step 2: determining whether the user or the device is leading the conversation or supporting the conversation
’765 patent	Claimed Concept								
[1pre]: A method of providing a voice interface, comprising:	A method of providing a voice interface, comprising:								
[1A] receiving, at a speech engine, a natural language utterance from a voice-enabled device, the natural language utterance corresponding to a conversation type;	Step 1: Receiving an utterance								
[1B] determining the conversation type corresponding to the natural language utterance based on whether a user that spoke the natural language utterance has a leader	Step 2: determining whether the user or the device is leading the conversation or supporting the conversation								

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	role in an interaction with the voice-enabled device or has a supporter role in the interaction with the voice-enabled device; and	
	[1C] generating a response to the natural language utterance with a format based on the conversation type,	Step 3: tailoring the response format to fit that role.
	[1C.1] wherein the format is adapted to limit the user's future input to interjecting queries or requests for clarification if the user has the supporter role.	Step 3: tailoring the response format to fit that role.
These steps—receiving an utterance determining a conversation type, and tailoring the response to the conversation type—are exactly the type of steps that the Federal Circuit has “frequently” held to be abstract. <i>See, e.g., AI Visualize, Inc. v. Nuance Commc’ns, Inc.</i>, 97 F.4th 1371, 1378 (Fed. Cir. 2024) (“We have explained that the steps of obtaining, manipulating, and displaying data, particularly when claimed at a high level of generality, are abstract concepts.”); <i>Elec. Power Grp. LLC v. Alstom S.A.</i>, 830 F.3d 1350, 1354 (Fed Cir. 2016) (finding “a process of gathering and analyzing information of a specified content, then displaying the results” abstract); <i>Intell. Ventures I LLC v. Capital One Bank (USA)</i>, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (finding “tailoring content based on the [user's] location” abstract); <i>buySAFE, Inc. v. Google, Inc.</i>, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (claiming “a computer receiv[ing] and send[ing] information over a network – with no further specification – is not even arguably inventive”).		

Challenged Claims	Exception to Eligibility
	<i>Second</i>, the claims are drafted using largely result-focused functional language that “contain[s] no specificity about how the purported invention achieves those results.” <i>Beteiro, LLC v. DraftKings Inc.</i>, 104 F.4th 1350, 1356 (Fed. Cir. 2024). As the Federal Circuit has observed “Claims of this nature are almost always found to be ineligible for patenting under Section 101.” <i>Id.</i> (citing <i>Elec. Power Grp.</i>, 830 F.3d at 1356 (“[T]he essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101, especially in the area of using generic computer and network technology to carry out economic transactions.”); <i>Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC</i>, 874 F.3d 1329, 1337 (Fed. Cir. 2017) (“The claim requires the functional results of ‘converting,’ ‘routing,’ ‘controlling,’ ‘monitoring,’ and ‘accumulating records,’ but does not sufficiently describe how to achieve these results in a non-abstract way.”)). Namely, as illustrated with claim 1, the claims recite that utterances are “received,” without disclosing any technical insight into how they are received; that the conversation type is “determined” based on whether the a user has a leader role or a supporter role without any insight into how those roles are determined, and that a response is “generated,” in a matter tailored to the conversation type, without any insight into how that response is generated. At no point do the inventors disclose “how” these steps are accomplished. <i>Third</i>, the claims are directly analogous to “longstanding ‘real-world’ (‘brick-and-mortar’) activities.” <i>Beteiro, LLC v. DraftKings Inc.</i>, 104 F.4th at 1356; <i>see also PersonalWeb Techs. LLC v. Google LLC</i>, 8 F.4th 1310, 1316 (Fed. Cir. 2021) (claims that “can be performed in the human mind” or “using a pencil and paper” are “a telltale sign of abstraction”); <i>Intell. Ventures I LLC v. Symantec Corp.</i>, 838 F.3d 1307, 1314 (Fed. Cir. 2016) (a claimed method’s similarity to “fundamental ... practices long prevalent” is yet another clue that the claims may be abstract and unpatentable). For example, since the beginning of language, humans have evaluated their role in a conversation to facilitate adaptive responses. That the patent claims performing this process using electronic devices and speech recognition software or hardware does not change the ultimate conclusion that the patent is directed to the

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	abstract idea of improving natural language processing using conversational principles. Indeed, the Federal Circuit has repeatedly held that a patent is directed to an abstract idea when the claimed invention simply automates via computer a process that has been and can be effectuated by humans. <i>See CyberSource Corp., v. Retail Decisions, Inc.</i>, 654 F.3d 1366, 1373 (Fed. Cir. 2011). <i>See also Voter Verified, Inc. v. Election Sys. & Software LLC</i>, 887 F.3d 1376, 1385 (Fed. Cir. 2018) (holding patent claims directed to auto-verification of a ballot to be abstract because “[h]umans have performed [the act of voting] . . . for hundreds of years.”); <i>Repifi Vendor Logistics, Inc. v. IntelliCentrics, Inc.</i>, 2022 WL 794981, *2-3 (Fed. Cir. 2022) (claims were “directed to the abstract idea of credentialing visitors and checking them in and out”—a “long-standing human process” (quotation marks omitted)); <i>CardioNet, LLC v. InfoBionic, Inc.</i>, 816 F. App’x 471, 476–77 (Fed. Cir. 2020) (measuring heart data claims abstract because process “could otherwise be performed by a human”); <i>Perry St. Software, Inc. v. Jedi Techs., Inc.</i>, 548 F. Supp. 3d 418, 432 (S.D.N.Y. 2021) (“Jedi seeks to apply these age-old processes to the context of internet chatrooms. But facilitating human interactions or relationships – which could occur offline and without automation – is not a patent-eligible idea. It is, as Judge Sleet found in connection with Jedi's earlier patents, nothing more than the mechanization of traditional processes designed to satisfy humanity's desire for companionship.”)

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Pursuant to Judge Gilstrap’s Standing Order Regarding Subject Matter Eligibility Contentions, Samsung provides the following chart identifying a description of the industry, at the relevant time, in which the Challenged Claims are alleged to be well understood, routine, and conventional, and the factual and legal basis therefor; and a description of how each element of each Challenged Claim, both individually and in combination with the other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time, and the legal and factual basis therefor.¹

The claims of the 765 patent amount to nothing more than the practice of an abstract idea using conventional (even as of 2006) electronics. Such claims are not eligible for patent under current Section 101 jurisprudence. *See, e.g., Alice*, 573 U.S. at 223, 134 S.Ct. 2347 (“[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”); *BSG Tech.*, 899 F.3d at 1290-91 (“If a claim’s only ‘inventive concept’ is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of an abstract idea.”). Accordingly, the district court rightly dismissed the complaints.

Claim Language	Description of the Industry and Description of How Each Element Was Well-Understood, Routine, and Conventional
[1A] A method of providing a voice interface, comprising:	The claimed method of providing a voice interface was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to provide a voice interface beyond the high-level description. This lack of technical detail indicates that providing voice interfaces was well understood, routine, and conventional in the relevant industry at the relevant time period.

¹ Samsung notes that under Supreme Court and Federal Circuit precedent, the Court need not, and should not, consider whether each and every element of each Challenged Claim was well understood, routine, and conventional. Rather, the only elements which should be considered under *Alice* step 2 are the elements that fall outside the scope of the abstract idea. *See Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 221-224 (2014); *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (“It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.”).

Claim Language	Description of the Industry and Description of How Each Element Was Well-Understood, Routine, and Conventional
	The development and deployment of voice interfaces—systems enabling users to interact with computers or devices through spoken input—was well-established long before the relevant time. McTear’s <i>Spoken Dialogue Technology</i> (2004) discusses the principles and components required for creating voice interfaces, including speech recognition, language understanding, dialogue management, and speech output generation. These sources demonstrate that providing a functional voice interface was a conventional design practice in the field of spoken dialogue systems. Consistently, the intrinsic record, including the specification of the ’765 patent, disclose that numerous voice user interfaces existed as of the time of the ’765 patent. <i>See e.g.</i>, ’765 patent at 1:38-44 (“Incorporating a speech interface helps to alleviate this burden by making interaction easier and faster, but existing speech interfaces (when they actually work) still require significant learning on the part of the user. That is, existing speech interfaces are unable to bridge the gap between archaic Human-to-Machine interfaces and conversational speech that would make interaction with systems feel normal.”); ’765 patent at 1:50-55 (“existing speech interfaces force users to dumb down their requests to match simple sets of instructions in simple languages in order to communicate requests in ways that systems can understand. Using existing speech interfaces, there is virtually no option for dialogue between the user and the system to satisfy mutual goals.”) The ’765 patent also discloses numerous prior art references that discuss or disclose voice-user interfaces, such as: 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, Jun. 2002, pp. 37-46; Turunen, “Adaptive Interaction Methods in Speech User Interfaces”, Conference on Human Factors in Computing Systems, Seattle, Washington, 2001, pp. 91-92; Lin, Bor-

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	shen, et al., “A Distributed Architecture for Cooperative Spoken Dialogue Agents with Coherent Dialogue State and History”, ASRU’99, 1999. Finally, the ’765 patent specification includes only superficial descriptions of the hardware used to implement the claims. To the extent any hardware is disclosed, it is generic, consisting of devices such as a microphone to receive the utterance or a speaker to deliver the generated response. ’765 patent at 7:16-19, 17:31-34. Such devices were standard technology at the time of the invention, and thus, the claims of the ’765 patent do not recite any improvement in computer technology.
[1B] receiving, at a speech engine, a natural language utterance from a voice-enabled device, the natural language utterance corresponding to a conversation type;	The claimed method of receiving, at a speech engine, a natural language utterance from a voice-enabled device, with the utterance corresponding to a conversation type, was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to receive a natural language utterance corresponding to a conversation type beyond the general concept. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Receiving natural language utterances from voice-enabled devices and associating them with known conversation types was a standard practice in voice and dialogue systems well before the relevant time. Smith and Hipp’s <i>Spoken Natural Language Dialog Systems: A Practical Approach</i> (1994) discusses speech engines designed to receive and interpret natural language input as part of structured conversations, each associated with specific task or dialogue types. McTear’s <i>Spoken Dialogue Technology</i> (2004) similarly describes categorizing incoming user utterances by conversation type or goal to manage dialogue flow effectively.

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	These references show that processing natural language utterances tied to conversation categories was a conventional and established approach in the field. The intrinsic record supports this. For example, the intrinsic record describes how “[t]he utterance component of input 105 may be processed by a speech recognition engine 110 (which may alternatively be referred to herein as Automatic Speech Recognizer 110, or as shown in FIG. 1, ASR 110) to generate one or more pre liminary interpretations of the utterance. The speech recognition engine 110 may process the utterance using any Suitable technique known in the art. For example, in one implementation, the speech recognition engine 110 may interpret the utterance using techniques of phonetic dictation to recognize a phoneme stream, as described in U.S. patent application Ser. No. 1 1/513,269, entitled “Dynamic Speech Sharpening filed Aug. 31, 2006, which issued as U.S. Pat. No. 7,634.409 on Dec. 15, 2009, and which is hereby incorporated by reference in its entirety. The one or more preliminary interpretations generated by the speech recognition engine 110 may then be provided to a conversational speech engine 115 for further processing. Conversational speech engine 115 may include a conversational language processor 120 and/or a voice search engine 125, described in greater detail in FIG.2 below.” ’765 patent at 7:24-43
[1C] determining the conversation type corresponding to the natural language utterance based on whether a user that spoke the natural language utterance has a leader role in an interaction with the voice-enabled device or has	The claimed method of determining the conversation type corresponding to the natural language utterance based on whether the user has a leader role or a supporter role in the interaction with the voice-enabled device was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to determine a conversation type based on user roles such as leader or supporter. This

Claim Language	Description of the Industry and Description of How Each Element Was Well-Understood, Routine, and Conventional
a supporter role in the interaction with the voice-enabled device; and	lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. The concept of assigning roles to participants in a conversation and using those roles to influence dialogue management decisions was well known in dialogue system design. Smith and Hipp’s Spoken Natural Language Dialog Systems: A Practical Approach (1994) discuss the distinction between system-led and user-led interactions, reflecting different control structures depending on the user’s role in the dialogue. McTear’s Spoken Dialogue Technology (2004) similarly addresses modeling dialogue initiative and role-based interaction strategies, where user input is categorized differently depending on whether the system or the user is driving the interaction. These references confirm that determining conversational structure based on participant roles was a conventional and well-understood practice in the field. What disclosures do exist in the specification relating to this limitation indicate that determining a conversation type is simply a function of human behavior that is well understood: • “Just as humans rely on knowledge shared by participants to examine how much and what kind of information was available, Intelligent Hypothesis Builder 310 may leverage the identified conversation type and short-term and long-term shared knowledge to generate a degree of certainty for each hypothesis.” (’765 patent at 15:49-54). Further, Freeman and Baldwin (2006), citing Grice (1975), discuss the importance of identifying “the type of conversation a user is having” based on conversation goals (e.g., “request/command, learning, survey input, or is it a spontaneous exchange”). Tom Freeman and Larry Baldwin, Enhancing the VUE™ (Voice-

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	User-Experience) Through Conversational Speech, SAE Technical Paper Series (2006).
[1D] generating a response to the natural language utterance with a format based on the conversation type, wherein the format is adapted to limit the user's future input to interjecting queries or requests for clarification if the user has the supporter role.	The claimed method of generating a response to the natural language utterance with a format based on the conversation type, wherein the format is adapted to limit the user's future input to interjecting queries or requests for clarification if the user has the supporter role, was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to generate a response with a format specifically adapted to limit future user input based on the user's role. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Structuring system responses to control or limit future user inputs based on conversational roles was a well-known design technique. Whittaker and Stenton's Cues and Control in Expert-Client Dialogues (ACL 1988), for instance, describes how dialogue systems can manage conversational initiative by structuring responses to control user input, particularly in expert-client scenarios, limiting user replies to clarifications, acknowledgments, or simple requests when the user occupies a secondary role in the dialogue. Smith and Hipp's <i>Spoken Natural Language Dialog Systems: A Practical Approach</i> (1994) also describes dialogue systems that control initiative and user participation depending on the dialogue state and expected user role, limiting user input in certain cases to clarifications or acknowledgments. McTear's <i>Spoken Dialogue Technology</i> (2004) also discusses managing user contributions by shaping the system's prompts and responses according to role expectations,

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	particularly when users are in a secondary or supporter role. These sources demonstrate that formatting responses to constrain or guide user input based on conversational roles was a conventional practice in dialogue system design. What disclosures do exist in the specification indicate that adapting a response based on conversation type is simply a function of human behavior that is well understood: • “Just as humans rely on knowledge shared by participants to examine how much and what kind of information was available, Intelligent Hypothesis Builder 310 may leverage the identified conversation type and short-term and long-term shared knowledge to generate a degree of certainty for each hypothesis.” (’765 patent at 15:49-54). Further, Freeman and Baldwin (2006) disclose how cooperative conversation concepts were first described by Paul Grice in 1975 and how human-to-computer speech should, ideally, “follow the same model of human-to-human conversation” described in Grice’s 1975 paper, <i>Logic and Conversation</i>. One of those elements of “cooperativeness,” as identified by Freeman and Baldwin (2006), was identifying “the type of conversation a user is having.” Namely, “is the conversation based on a request/command, learning, survey input, or is it a spontaneous exchange?” Freeman and Baldwin (2006) also disclose the step of an “adaptive response,” described as follows: <u>Adaptive Responses</u> As in a human conversation, the response of the system should be based on how confident the system is that its conclusion is correct. If it is certain, it should just

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	execute the request. If it is less than certain but the range of choices are few or none, it should execute. If it is less than certain and the choices are many, it should ask.” Tom Freeman and Larry Baldwin, Enhancing the VUE™ (Voice-User-Experience) Through Conversational Speech, SAE Technical Paper Series (2006). Under oath, Mr. Freeman admitted that the described “adaptive response” from Freeman and Baldwin corresponds to the limitation in the claim: Q. And this marketing paper where you describe these principles that Mr. Grice had laid out, this is essentially the '681 patent in ordinary language, right? A. So this is '681 but '681 takes this to a machine, as opposed to human to human. <i>(Trial Tr. 289:20-24, VB Assets v. Amazon.com Services LLC, No. 19-cv-01410, at ECF No. 304 (D. Del. Dec. 12, 2023).)</i> And Mr. Freeman further confirmed that this concept of an “adaptive response” also came from Mr. Grice: Q. And adaptive response, that also came from Mr. Grice's paper? A. Correct. <i>(Trial Tr. 289:17-19, VB Assets v. Amazon.com Services LLC, No. 19-cv-01410, at ECF No. 304 (D. Del. Dec. 12, 2023).)</i> Ultimately, no portion of the intrinsic record describes how a voice-user interface programmatically formats a response to limit future input. Consequently, this step reflects an abstract, human-model-based idea—not a new or unconventional

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	technical solution. As such, what is claimed was well understood, routine, and conventional in the relevant industry.
[2] The method recited in claim 1, wherein determining the conversation type comprises determining a conversational goal corresponding to the natural language utterance, wherein the format of the response is adapted to provide a discrete piece of information to the user, to provide a plurality of pieces of related information to the user, or to obtain one or more pieces of information from the user.	Claim 2 is ineligible for at least the reasons set forth above. <i>See</i> claim [1]. The claimed method of determining the conversation type by determining a conversational goal corresponding to the natural language utterance, and adapting the response format to either provide discrete information, related pieces of information, or obtain information from the user, was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to determine a conversational goal based on the utterance or how to adapt the response format accordingly. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Structuring dialogue interactions based on conversational goals—whether to provide isolated facts, deliver related information, or solicit further input—was a well-known design pattern in voice interface and dialogue management systems. Smith and Hipp’s <i>Spoken Natural Language Dialog Systems: A Practical Approach</i> (1994) describe goal-driven dialogue management systems that adjust responses depending on the nature of the conversational task, including providing single answers, extended explanations, or prompting users for needed information. McTear’s <i>Spoken Dialogue Technology</i> (2004) similarly explains adapting response formats based on dialogue goals, distinguishing between information-providing and information-seeking dialogues.

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	Moreover, at bottom, claim 2 simply states that a response can either (1) provide one piece of information, (2) provide multiple pieces of information, or (3) request information from the user. Not only have spoken dialog systems been configured as such for decades, <i>see</i> McTear’s Spoken Dialogue Technology (2004), but has been known for all of time as a basic fact of human conversation.
[3] The method recited in claim 2, wherein the response generated in the format that is adapted to provide the discrete piece of information is shorter than the response generated in the format that is adapted to provide the plurality of pieces of related information.	Claim 3 is ineligible for at least the reasons set forth above. <i>See</i> claim [2]. The claimed method of generating a response in a format adapted to provide a discrete piece of information that is shorter than a response adapted to provide a plurality of pieces of related information was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to generate a shorter response for discrete information compared to a longer response for multiple related pieces of information. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Adapting the length and complexity of system responses based on the type and quantity of information to be conveyed was a well-established technique in dialogue system design. Smith and Hipp’s <i>Spoken Natural Language Dialog Systems: A Practical Approach</i> (1994) explain that responses can vary in length depending on whether the system needs to deliver a simple, discrete fact or a more elaborated set of related information. McTear’s <i>Spoken Dialogue Technology</i> (2004) similarly discusses adjusting response length. Similarly, Freeman and Baldwin 2006 disclose the step of an “adaptive response”, described as follows:

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	<u>Adaptive Responses</u> As in a human conversation, the response of the system should be based on how confident the system is that its conclusion is correct. If it is certain, it should just execute the request. If it is less than certain but the range of choice are few or none, it should execute, if it is less than certain and the choices are many, it should ask. Under oath, Mr. Freeman admitted that the described “adaptive response” from Freeman and Baldwin corresponds to the limitation in the claim: Q. And this marketing paper where you describe these principles that Mr. Grice had laid out, this is essentially the '681 patent in ordinary language, right? A. So this is '681 but '681 takes this to a machine, as opposed to human to human. Trial Tr. 289:20-24 <i>VB Assets v. Amazon.com Services LLC</i>, No. 19-cv-01410, at ECF No. 304 (D. Del. Dec. 12, 2023). And Mr. Freeman further confirmed that this concept of an “adaptive response” also came from Mr. Grice: Q. And adaptive response, that also came from Mr. Grice's paper? A. Correct.

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	Trial Tr. 289:17-19 <i>VB Assets v. Amazon.com Services LLC</i>, No. 19-cv-01410, at ECF No. 304 (D. Del. Dec. 12, 2023). Finally, at bottom, claim 3 simply states that a response with more information is longer than a response with less information, which is patent-ineligible.
[4] The method recited in claim 1, wherein determining the conversation type includes determining a conversational goal corresponding to the natural language utterance, wherein the conversation type is determined as a query conversation if the conversational goal is to gather discrete information or perform a discrete task, is determined as a didactic conversation if the conversational goal is to gather related information, or is determined as an exploratory conversation if the natural language utterance has no specific goal.	Claim 4 is ineligible for at least the reasons set forth above. <i>See</i> claim [1]. The claimed method of determining the conversation type by determining a conversational goal corresponding to the natural language utterance, and classifying the conversation as a query conversation, a didactic conversation, or an exploratory conversation based on the nature of the goal, was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to determine the conversation type in relation to a conversational goal or how to classify the conversation accordingly. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Dialogue system design routinely involved classifying interactions based on the conversational goal to manage dialogue flow appropriately. Smith and Hipp’s <i>Spoken Natural Language Dialog Systems: A Practical Approach</i> (1994) describe systems that differentiate between task-oriented dialogues (focused on discrete information or actions) and more exploratory dialogues where user goals are less specific. McTear’s <i>Spoken Dialogue Technology</i> (2004) similarly discusses

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	different dialog systems—such as information-seeking, tutoring (didactic), and open-ended interactions—based on the users underlying conversational goal. Further, as explained above, the specification makes clear that determining a conversational goal or conversation type is merely a function of human behavior: • “Just as humans rely on knowledge shared by participants to examine how much and what kind of information was available, Intelligent Hypothesis Builder 310 may leverage the identified conversation type and short-term and long-term shared knowledge to generate a degree of certainty for each hypothesis.” (’765 patent at 15:49-54). Further, Freeman and Baldwin (2006) disclose how cooperative conversation concepts were first described by Paul Grice in 1975 and how human-to-computer speech should, ideally, “follow the same model of human-to-human conversation” described in Grice’s 1975 paper, <i>Logic and Conversation</i>. One of those elements of “cooperativeness,” as identified by Freeman and Baldwin (2006), was identifying “the type of conversation a user is having.” Namely, “is the conversation based on a request/command, learning, survey input, or is it a spontaneous exchange?” Tom Freeman and Larry Baldwin, Enhancing the VUE™ (Voice-User-Experience) Through Conversational Speech, SAE Technical Paper Series (2006).
[5] The method recited in claim 1, wherein the conversation type is determined as a query conversation if the user that spoke the natural language utterance has the leader role, is determined as a didactic conversation if the user	Claim 5 is ineligible for at least the reasons set forth above. <i>See</i> claim [1]. The claimed method of determining the conversation type based on whether the user has a leader role, supporter role, or both—with classification as a query conversation, a didactic conversation, or an exploratory conversation

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that spoke the natural language utterance has the supporter role, or is determined as an exploratory conversation if the user that spoke the natural language utterance has both the leader role and the supporter role.	accordingly—was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to determine conversation type based on user roles or how to assign classifications such as query, didactic, or exploratory conversations based on the user's leadership or supporter status. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Dialogue systems routinely accounted for user roles to shape conversational strategies and interaction types. Smith and Hipp’s Spoken Natural Language Dialog Systems: A Practical Approach (1994) discuss how dialogue systems vary initiative, task structure, and information flow depending on the perceived leadership role of the user. McTear’s Spoken Dialogue Technology (2004) similarly addresses how different conversation types (task-oriented, tutoring, conversational) emerge from variations in user initiative and role in the interaction. Whittaker and Stenton’s Cues and Control in Expert-Client Dialogues (ACL 1988) emphasize the influence of role assignment on dialogue control, noting that expert-client (leader-supporter) structures shape depending on who holds initiative and how it shifts.
[6] The method recited in claim 1, wherein determining the conversation type is based on an allocation of information between the user and the speech engine, wherein the conversation type is determined to be a query conversation or a	Claim 6 is ineligible for at least the reasons set forth above. <i>See</i> claim [1]. The claimed method of determining the conversation type based on an allocation of information between the user and the speech engine—wherein the conversation type is classified as a query or didactic conversation depending on

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didactic conversation if the user that spoke the natural language utterance has a lower allocation of information related to the natural language utterance than the speech engine, or is determined as a didactic conversation if the user and the speech engine have an equal or alternating allocation of information related to the natural language utterance.	whether the user has a lower, equal, or alternating share of information—was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to determine conversation type based on comparative information allocations between the user and the speech engine. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Dialogue system design frequently incorporated assumptions about the distribution of knowledge between the system and the user to determine conversational structure. Smith and Hipp's Spoken Natural Language Dialog Systems: A Practical Approach (1994) explain that dialogue flow and conversation type can be adapted based on who possesses greater domain knowledge—the user or the system—and how initiative and content control are allocated. McTear's Spoken Dialogue Technology (2004) similarly discusses designing dialogue systems that adjust strategies based on asymmetrical or balanced information sharing between the user and the system. Guinn's Mechanisms for Mixed-Initiative Human-Computer Collaborative Discourse (1996) further explains that conversational initiative and system response structures are dynamically adapted based on evaluating the comparative knowledge held by the system and the user, with initiative shifting to the participant better equipped to resolve the current conversational goal. Further, there is no technical disclosure or explanation in the specification about how the system determines or quantifies an "allocation of information." Instead, the specification merely references general conversation theory principles. The intrinsic record states that "just as humans rely on knowledge shared by

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	participants to examine how much and what kind of information was available," a conversational system may similarly leverage shared knowledge to generate a degree of certainty (’765 patent at 15:49–54). However, no technical means is provided for measuring or computing an allocation of information between participants in a conversation. Further, Freeman and Baldwin 2006, citing Grice (1975), describe how human conversations naturally involve an implicit allocation of knowledge between participants. However, the references do not describe any specific computational method for determining or tracking such allocations within a machine-implemented system. The lack of technical disclosure indicates that this limitation simply applies human conversation models without any new technological advancement. Accordingly, this claim reflects well-understood, routine, and conventional principles at the time of filing. Further, as explained above, the specification makes clear that determining a conversational goal or conversation type is merely a function of human behavior: • “Just as humans rely on knowledge shared by participants to examine how much and what kind of information was available, Intelligent Hypothesis Builder 310 may leverage the identified conversation type and short-term and long-term shared knowledge to generate a degree of certainty for each hypothesis.” (’765 patent at 15:49-54). The references to “human-to-human” or “cooperative conversation” (Freeman and Baldwin 2006; Grice 1975) show that this is a theoretical or conceptual approach. The patent does not present any improved technology or specialized method for measuring the “allocation of information.”

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[7] The method recited in claim 1, wherein determining the conversation type further comprises determining an allocation of information between the user and the speech engine.	Claim element 7 is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [6].
[8] The method recited in claim 1, wherein generating the response comprises generating, if the conversation type is a query conversation, a response that only provides information requested by the natural language utterance, and generating, if the conversation type is a didactic conversation, a response that controls the conversation and limits the user’s future input to a request or query for clarification.	Claim 8 is ineligible for at least the reasons set forth above. See claim [1]. The claimed method of generating a response that only provides the information requested by the natural language utterance if the conversation type is a query conversation, and generating a response that controls the conversation and limits the user’s future input to requests or queries for clarification if the conversation type is a didactic conversation, was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to generate responses differently based on the conversation type to either narrowly answer or to control and limit future user input. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. It was a well-established practice to adjust system responses based on conversational type. Smith and Hipp’s <i>Spoken Natural Language Dialog Systems: A Practical Approach</i> (1994) discuss generating targeted responses when answering discrete user queries and designing controlling responses when the dialogue system needs to maintain leadership over an informational exchange. McTear’s <i>Spoken Dialogue Technology</i> (2004) similarly explains

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	shaping dialogue behavior based on user roles and conversational goals, providing direct answers for simple queries and guiding user input during extended or didactic conversations. Whittaker and Stenton's <i>Cues and Control in Expert-Client Dialogues</i> (ACL 1988) emphasize how responses can either satisfy isolated requests or limit user contributions to clarifications depending on the context. In addition, it had long been known that in tutorial or expert-client systems, maintenance of dialog control was critical and numerous systems, e.g., AutoTutor, had developed various tools for controlling or maintaining dialog control. The specification does not disclose any method for structuring responses differently based on whether the conversation is classified as a "query conversation" or a "didactic conversation." Instead, the references discuss general conversation models and response adaptation concepts. Freeman and Baldwin 2006 describe "adaptive responses," explaining: "As in a human conversation, the response of the system should be based on how confident the system is that its conclusion is correct. If it is certain, it should just execute the request. If it is less than certain but the range of choices are few or none, it should execute; if it is less than certain and the choices are many, it should ask." Tom Freeman and Larry Baldwin, Enhancing the VUE™ (Voice-User-Experience) Through Conversational Speech, SAE Technical Paper Series (2006).

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	Further, Mr. Freeman admitted that these response-adaptation principles were based on Grice (1975): Q. "And adaptive response, that also came from Mr. Grice's paper?" A. "Correct." (Trial Tr. 289:17–19, VB Assets v. Amazon.com Services LLC)
[9] The method recited in claim 1, wherein the natural language utterance is part of a conversation that comprises related natural language utterances from the user, wherein determining whether the user has the leader role or the supporter role comprises determining whether the user controls the conversation or whether the user provides information to the speech engine during the conversation.	The claimed method of determining whether the user has the leader role or the supporter role based on whether the user controls the conversation or provides information to the speech engine during a conversation comprising related natural language utterances was well understood, routine, and conventional in the relevant industry at the relevant time. There is no technical disclosure or explanation in the specification about how to determine user roles based on conversational control or information provision during a conversation comprising related utterances. This lack of technical detail indicates that these processes were well understood, routine, and conventional in the relevant industry at the relevant time period. Dialogue systems commonly evaluated user behavior during a conversation to determine roles such as leader or supporter based on conversational initiative and the direction of information flow. Smith and Hipp's <i>Spoken Natural Language Dialog Systems: A Practical Approach</i> (1994) describe monitoring user initiative and contribution to adjust dialogue management, distinguishing users who control task flow from users who respond to system prompts. McTear's <i>Spoken Dialogue Technology</i> (2004) similarly discusses role identification based on whether the user initiates new conversational moves or primarily provides requested

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	information. Guinn's <i>Mechanisms for Mixed-Initiative Human-Computer Collaborative Discourse</i> (1996) further supports tracking initiative shifts and information contributions to determine control roles and to dynamically adapt the dialogue strategy accordingly.
[10P] A system for providing a voice interface, comprising:	Claim element 10P is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [1P].
[10A] a speech engine configured to receive a natural language utterance from a voice-enabled device, the natural language utterance corresponding to a conversation type, wherein the speech engine includes a processor configured to:	Claim element 10A is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [1A].
[10B] determine the conversation type corresponding to the natural language utterance based on whether a user that spoke the natural language utterance has a leader role in an interaction with the voice-enabled device or has a supporter role in the interaction with the voice-enabled device;	Claim element 10B is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [1B].
[10C] a response builder configured to generate a response to the natural language utterance with a format based on the conversation type, wherein the format is adapted to limit the user's future	Claim element 10C is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [10C].

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input to interjecting queries or requests for clarification if the user has the supporter role.	
[11] The system recited in claim 10, wherein the speech engine is configured to determine the conversation type further based on a conversational goal corresponding to the natural language utterance, and wherein the format of the response is adapted to provide a discrete piece of information to the user, to provide a plurality of pieces of related information to the user, or to obtain one or more pieces of information from the user.	Claim element 11 is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [2].
[12] The system recited in claim 10, wherein the speech engine is configured to determine the conversation type further based on a conversational goal corresponding to the natural language utterance, and wherein the conversation type is determined to be a query conversation if the conversational goal is to gather discrete information or perform a discrete task, is determined to be a didactic conversation if the conversational goal is to gather related information, or is determined to be an exploratory conversation if the natural language utterance has no specific goal.	Claim element 12 is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [4].

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[13] The system recited in claim 10, wherein the speech engine is configured to determine the conversation type based on the role of the user, wherein the conversation type is determined to be a query conversation if the user that spoke the natural language utterance has the leader role, is determined to be a didactic conversation if the user that spoke the natural language utterance has the supporter role, or is determined to be an exploratory conversation if the user that spoke the natural language utterance has both the leader role and the supporter role.	Claim element 13 is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [5].
[14] The system recited in claim 10, wherein the speech engine is configured to determine the conversation type based on an allocation of information between the user and the speech engine, wherein the conversation type is determined to be a query conversation or a didactic conversation if the user that spoke the natural language utterance has a lower allocation of information related to the natural language utterance than the speech engine or is determined to be a didactic conversation if the user and the speech engine have an equal or alternating allocation of information.	Claim element 14 is <u>well-understood, routine, and conventional</u> for at least the reasons set forth above. See claim element [6].

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Pursuant to Judge Gilstrap’s Standing Order Regarding Subject Matter Eligibility Contentions, Samsung provides the following chart identifying any other factual or legal basis for why the Challenged Claims are otherwise ineligible for patent protection.

Challenged Claims	Other Bases for Why the Challenged Claims are Patent-Ineligible
1-14	The challenged claims reflect long-understood and well-known concepts in linguistics, computational linguistics, and natural language understanding, as reflected in the cited references, in addition to the following: Bub, T., Wahlster, W., & Waibel, A. Verbmobil: The combination of deep and shallow processing for spontaneous speech translation. German Research Center for Artificial Intelligence; Carnegie Mellon University. Oh, A. H., & Rudnicky, A. I.. Stochastic language generation for spoken dialogue systems. Carnegie Mellon University. Batliner, A., Zeißler, V., Frank, C., Adelhardt, J., Shi, R. P., & Nöth, E. (2003). We are not amused – But how do you know? User states in a multi-modal dialogue system. University of Erlangen-Nuremberg. Aust, H., Oerder, M., Seide, F., & Steinbiss, V. (1995). A spoken language inquiry system for automatic train timetable information. Philips Research Laboratories. Jönsson, A.. A dialogue manager using initiative-response units and distributed control. Linköping University. Aust, H., Oerder, M., Seide, F., & Steinbiss, V. (1994). Experience with the Philips automatic train timetable information system. Philips Research Laboratories. Juneja, A. (2004). Approaches to dialogue system design. Carnegie Mellon University.

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	Allen, J. F., Byron, D. K., Dzikovska, M., Ferguson, G., Galescu, L., & Stent, A. (2001). Towards conversational human-computer interaction. <i>AI Magazine</i>, 22(4), 27–37. Gorin, A. L., Parker, B. A., Sachs, R. M., & Wilpon, J. G. (1996). How may I help you? AT&T Research. Allen, J., Byron, D., Dzikovska, M., Ferguson, G., Galescu, L., & Stent, A. (1998). An architecture for a generic dialogue shell. <i>Natural Language Engineering</i>, 1(1), 1–24. Veldhuijzen van Zanten, G. (1998). Adaptive mixed-initiative dialogue management. IPO Center for Research on User-System Interaction. Allen, J., Ferguson, G., & Stent, A. (2001). An architecture for more realistic conversational systems. University of Rochester. Banuazizi, A., & Creswell, C. (n.d.). Is that a real question?: Final rises, final falls and discourse function in yes-no question intonation. University of Pennsylvania. Bohus, D., Raux, A., Harris, T. K., Eskenazi, M., & Rudnicky, A. I. (2007). Olympus: An open-source framework for conversational spoken language interface research. Carnegie Mellon University. Blaylock, N. (2002). Managing communicative intentions in dialogue using a collaborative problem-solving model (Technical Report 774). University of Rochester. Microsoft. (2004). Microsoft Speech Server 2004: Product datasheet. Microsoft Corporation. Graesser, A. C., VanLehn, K., Rosé, C. P., Jordan, P. W., & Harter, D. (2001). Intelligent tutoring systems with conversational dialogue. <i>AI Magazine</i>, 22(4), 39–51.

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