

Dialect, LLC

August 1, 2025 Hearing Demonstratives

Google LLC v. Dialect, LLC

U.S. Patent No. 7,640,160 IPR2024-00753

'160 Patent, claim 12

12. A method for interpreting natural language utterances using knowledge-enhanced speech recognition engine, wherein the knowledge-enhanced speech recognition engine is configured to determine an intent and correct false recognitions of the natural language utterances, comprising:

receiving a transcription of a natural language utterance at a computer comprising the knowledge-enhanced speech recognition engine;

identifying one or more contexts that completely or partially match one or more text combinations contained in the transcription, wherein identifying the matching contexts

includes ***comparing the text combinations against the grammar expression entries in the context description grammar and against one or more expected contexts stored in a context stack***;

scoring each of the identified matching contexts;

selecting the matching context having a highest score to determine a most likely context for the utterance; and

communicating a request to a domain agent configured to process requests in the most likely context for the utterance, the request formulated using at least one grammar expression entry in the context description grammar.

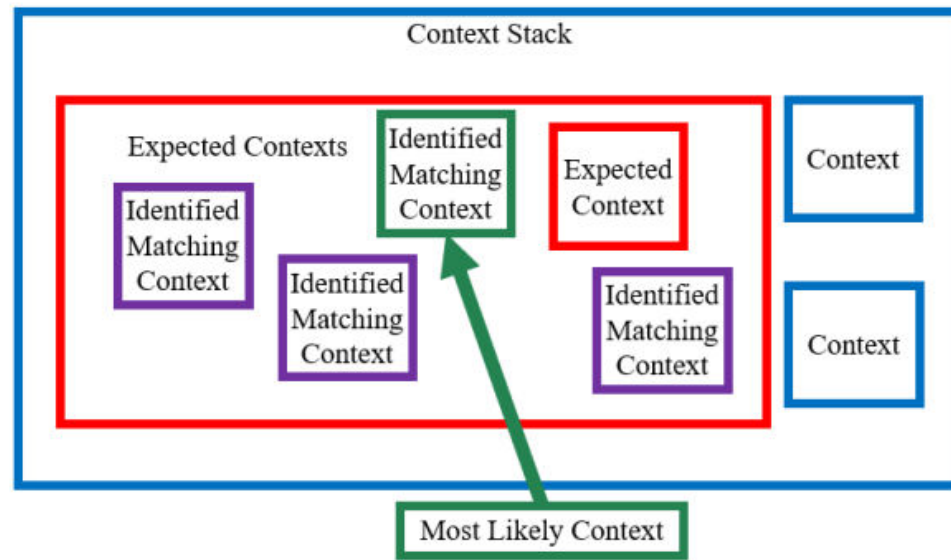
EX1001 ('160 Patent) at claim 12; Patent Owner Response, 9-10

'160 Patent, claim 12

- [b][1] *identifying one or more **contexts** that completely or partially match one or more text combinations contained in the transcription, wherein identifying **the matching contexts** includes [b][2] **comparing the text combinations against the grammar expression entries in the context description grammar and against one or more **expected contexts** stored in a context stack;***
- [c] *scoring each of **the identified matching contexts**;*
- [d] *selecting **the matching context having a highest score** to determine a most likely context for the utterance; and*

EX1001 ('160 Patent) at claim 12; Patent Owner Response, 18

'160 Patent, claim 12



Patent Owner Response, 21

'160 Patent, claim 12

Element	Step	Operates on:	Yields:
12[b][1], [2]	comparing [as part of identifying]	the text combinations against the grammar expression entries in the context description grammar and against one or more expected contexts stored in a context stack	Identification of “one or more contexts that completely or partially match one or more text combinations contained in the transcription”, i.e., “identified matching contexts” used in element 12[c]
12[c]	scoring	each of the identified matching contexts	“matching context” scores used in element 12[d]
12[d]	selecting	the matching context having a highest score	Determination of a “most likely context for the utterance”

Patent Owner Response, 20; Ex. 2010, ¶67

'160 Patent, claim 12

Thus, there are at least three categories of contexts that are required by claim 12: “one or more expected contexts,” the identified matching contexts that result from comparing text combinations from a user’s utterance against the one or more expected contexts, and a most likely context that results from the scoring of the identified matching contexts.

EX1001 ('160 Patent) at claim 12; Patent Owner Response, 18-21;
Patent Owner Sur-Reply, 2

“expected contexts”

(’160 PATENT)

Claim Construction – Specification Support

According to another embodiment of the invention, if a match is not found, or only a partial match is found, between the text message and active grammars, then a knowledge-enhanced speech recognition system may be used to semantically broaden the search. The knowledge-enhanced speech recognition system may be used to determine the intent of the request and/or to correct false recognitions. The knowledge-enhanced speech recognition may access a set of expected contexts that are stored in a context stack to determine a most likely context. The knowledge-

Patent Owner Response, 8 (quoting Ex. 1007, 21)

Claim Construction – Expert Testimony

Thus, a POSITA would understand the “expected contexts” are a subset of the contexts in a context stack. Occhiogrosso, ¶56. For example, a particular set of contexts in the context stack could be “expected contexts” based on their use of the disclosed “context specific matchers.” As provided in the ’160 patent, “[t]he knowledge-enhanced speech recognition may use context specific matchers that are able to identify context such as time, location, numbers, dates, categories (e.g., music, movies, television, addresses, etc.) and other context.” ’160 patent, 14:2-6.

Patent Owner Response, 15; Ex. 2010, ¶56; Ex. 1001, 14:2-6

Claim Construction – Case Law

However, Petitioner's expert's opinion is that every context entry in Kennewick's context stack is a "possible context" and also an "expected context." *See* Ex. 2011, 70:14-15. A proper interpretation of the '160 patent's "expected contexts" does not include every entry in a context stack, as this would improperly omit "expected" from this claim term. *See Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004) ("[I]nterpretations that render some portion of the claim language superfluous are disfavored."); *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) ("A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.").

Patent Owner Response, 13; Ex. 2011, 70:14-15

Claim Construction – Petitioner’s Errors

Petitioner and its expert also failed to appreciate the differences between claim 12’s use of “expected contexts” and Kennewick’s embodiment of scoring all “possible contexts.” Petitioner’s expert confirmed at deposition that he views possible contexts and expected contexts as both including every context in a context stack. This is wrong. Kennewick’s “possible contexts” and the ’160 patent’s novel use of “expected contexts” are different, used differently, and implemented in different embodiments for attempting to determine a meaning of a user’s utterance.

Patent Owner Response, 3

Petitioner's Reply Theory re Entire Stack

Instead, the contexts in the claimed context stack could be “**expected**” by virtue of being in that context stack, while other, not-expected contexts may be stored elsewhere. (EX1016, ¶15.)

Patent Owner is wrong that the claim requires that “the step of ‘scoring’ is performed on each ‘identified matching context[]’ rather than on an entire context stack, or even on each ‘expected context[].’” (POR, p.19.)

Petitioner's Reply, 8 & 12

Petitioner's First Theory re Expected Contexts

B. Petitioner's First Theory of “expected contexts” in Kennewick Fails

Turning to each theory, Petitioner points to “possible contexts” in Kennewick, and contends that “because these ‘possible contexts’ are recognized as possibly matching the user’s intent, the ‘possible contexts’ are a first way that Kennewick discloses the ‘**one or more expected contexts.**’” Pet., 38 (citing Schmandt, ¶78); Reply, 2 (restating this theory from the Petition). Petitioner also argues that “neither claim 12 nor the written description imposes any requirement as to the point in time when a context may be ‘expected,’ nor is there any requirement that the system expressly flag or otherwise identify a context as ‘expected.’” Reply, 2.

Patent Owner Sur-Reply, 5-7

Petitioner's First Theory re Expected Contexts

*identifying one or more contexts that completely or partially match one or more text combinations contained in the transcription, wherein identifying the matching contexts includes **comparing the text combinations against the grammar expression entries in the context description grammar and against one or more expected contexts stored in a context stack;***

scoring each of the identified matches;
selecting the matching context having the highest score;
determine a most likely context

Even if Kennewick's "possible contexts" were sufficient to disclose the claimed "one or more expected contexts," Kennewick jumps right to scoring, without the predicate step in claim 12 of identifying matching contexts from among the "expected contexts."

Patent Owner Sur-Reply, 5-7

Petitioner's Second Theory re Expected Contexts

C. Petitioner's Second Theory of “expected contexts” in Kennewick Also Fails

Second, Petitioner contends that Kennewick's “one or more contexts associated with earlier question(s) is another way that Kennewick discloses and renders obvious the ‘one or more expected contexts.’” Pet., 39 (citing Schmandt, ¶78); *see also* Reply, 3-4 (recounting Petition's second theory). But again this theory fails because Kennewick expressly discloses the use of “previous context” in the scoring process of Kennewick's embodiment. Ex. 2010 (Occhiogrosso Declaration), ¶88.

Patent Owner Sur-Reply, 7-8

Petitioner's Second Theory re Expected Contexts

*identifying one or more contexts that completely or partially match one or more text combinations contained in the transcription, wherein identifying the matching contexts includes **comparing the text combinations against the grammar expression entries in the context description grammar and against one or more contexts in a context stack**;*

scoring each of the identified matches;
selecting the matching context having the highest score;
determine a most likely context

Element 12[c] is claim 12's "scoring" step, but Petitioner's second theory fails because Kennewick's previous context, which is used as part of the scoring step, does not fit the concept or use of "expected contexts" recited in element 12[b], where expected contexts are used to identify matching contexts rather than being scored. Ex. 2010 (Occhiogrosso Declaration), ¶¶89-90.

Patent Owner Sur-Reply, 7-8

Petitioner's Third Theory re Expected Contexts

In the Petition, Petitioner contended “a person of ordinary skill in the art, seeking to further understand or implement Kennewick’s disclosures, would have appreciated that Ross picks up where Kennewick leaves off and would have turned to Ross for its more detailed teachings.” Pet., 37. And Petitioner’s Reply fails to rebut Patent Owner’s discussion of Ross as presented in the POR. *See* POR, 31-38. As such, Petitioner continues to suggest that Ross solves the deficiencies of Kennewick in its first and second theories, but this is incorrect.

Patent Owner Sur-Reply, 8-13

Petitioner's Third Theory re Expected Contexts

In other words, rather than “pick[ing] up where Kennewick leaves off,” Ross provides a different search technique that reorders a context stack so that Ross’s search can end upon finding a matching context—in contrast to scoring the entire context stack as performed by Kennewick.

Petitioner’s Reply confirms this. In Reply, Petitioner only relies on Ross’s reordering of its context stack to provide the claimed “expected contexts.” Reply, 18-20 (“Ross discloses “**expected contexts**” by virtue of matching and subsequently reordering contexts in a context stack.”) (emphasis in original).

Patent Owner Sur-Reply, 8-13

Petitioner's Third Theory re Expected Contexts

Even with reordering of Kennewick's context stack entries in the combination, the proposed combination of Kennewick and Ross, according to Petitioner's expert, would still have to use the entire stack search methodology of Kennewick. In fact, Petitioner's expert sought to further modify the proposed combination, based on something Ross was "agnostic" to (that is, does not disclose), to add a context specific matcher—like found in the '160 patent—of a "timestamp" so as to narrow the entire context stack down and only search "newer" contexts (Ex. 2014, 14:21-16:6) (emphasis added):

[T]he e-mail application is at the top of this stack because I've used it very recently, but the calendar application is pretty far down, okay and *must postulate further that we keep timestamp*, which is typical of these kinds of system.

Patent Owner Sur-Reply, 8-13

Petitioner's Third Theory re Expected Contexts

*identifying one or more contexts that completely or partially match one or more text combinations contained in the transcription, wherein identifying the matching contexts includes **comparing the text combinations against the grammar expression entries in the context description grammar and against one or more expected contexts stored in a context stack;***

scoring each of the identified matching contexts;
selecting the matching context having a highest score;
determine a most likely context for the utterance

Even with reordering of Kennewick's context stack entries in the combination, the proposed combination of Kennewick and Ross, according to Petitioner's expert, would still have to use the entire stack search methodology of Kennewick.

Patent Owner Sur-Reply, 8-13