

Dialect, LLC

August 5, 2025 Hearing Demonstratives

Google LLC v. Dialect, LLC

U.S. Patent No. 8,849,652 IPR2024-00752

'652 Patent, claim 1

1. A system for processing natural language utterances where recognized words of the natural language utterances alone are insufficient to completely determine one or more commands or requests, the system comprising:

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

generate a first context stack associated with a first device, the first context stack comprising context information that corresponds to a plurality of prior utterances;

synchronize the first context stack with a second context stack

associated with a second device such that the context information of the first context stack is updated based on related context information of the second context stack;



receive a natural language utterance associated with a command or request;
determine one or more words of the natural language utterance by performing speech recognition on the natural language utterance; and
determine the command or request based on the one or more words and the updated context information.

synchronize the first context stack with a second context stack
associated with a second device such that the context information of the first context stack is updated based on related context information of the second context stack;

EX1001 ('652 Patent) at claim 1; Patent Owner Response, 8-9

'652 Patent, claims 14, 20

Claim 14

synchronizing the first context stack with a second context stack

associated with a second device such that the context
information of the first context stack is updated based on
related context information of the second context stack;

Claim 20

synchronizing the first context set with a second context set

associated with a second device such that the context
information of the first context set is updated based on related
context information of the second context set;

EX1001 ('652 Patent) at claims 14, 20; Patent Owner Response, 8-9

Petition's Theory on Coffman

Coffman further makes clear that a master device's context stack ("the first context stack") is "synchronized" with a slave device's context stack ("a second context stack associated with a second device"), explaining:

With a master/slave network configuration, the master dialog manager can compile all the lists and match the functions and needs with conversational capabilities. In addition, context information may be transmitted by indicating passing or pointing to the context stack/history of the device or application that the controller can access and add to its context stack.

i.e., adding information is enough to satisfy the requirement to synchronize two context stacks

Petition, 30-32 (citing Coffman, 25:10-14, Schmandt, ¶70)

Petition's Theory on Coffman

A POSITA would have further understood and found it obvious that, as a result of synchronizing device context stacks in Coffman's system, “the context information of the first context stack is updated based on related context information of the second context stack.” (Schmandt, ¶71.)

i.e., synchronizing two context stacks yields updating a stack's context information (“as a result”)

Petition, 30-32 (citing Schmandt, ¶71)

Petitioner's Reply Theory on Coffman

Starting with the claim language, the claim itself describes what “**synchroniz[ing]**” entails. The claim states that context stacks are “**synchronized**” “**such that the context information of the first context stack is updated based on related context information of the second context stack.**” (’652, 38:50-54 (claim 1) (underlining added); *see also id.*, 40:47-51 (claim 14, same), 41:58-61 (claim 20, same with “context set”).) The claim does not state, for example, that synchronizing causes the first context stack’s content and ordering to be identical with the second context stack. (EX1017 (Schmandt Reply Declaration), ¶10.) Instead, according to the claim itself, “**updating**” the first context stack’s context information “**based on related context information**” of the second context stack is enough. (EX1017, ¶10.)

i.e., synchronizing is not needed, only updating

Reply, 5-6

***“synchronize the first
context stack with a
second context stack”***

(’652 PATENT, CLAIMS 1 AND 14; SEE ALSO CLAIM 20 (“SET”))

Petition on Claim Construction

V. CLAIM CONSTRUCTION

Express claim construction is unnecessary because the prior art renders the challenged claims obvious **under any reasonable construction**, but Petitioner reserves its right to respond to claim construction arguments by Patent Owner.

Petition, 18

Petitioner's Expert on “synchronized”

14 Q Let's talk a little bit more
15 about context stacks kind of generally
16 and if I had a context stack that had
17 entries ABCD and I had another context
18 stack that was entries DCAB, would a
19 POSITA consider that those two context
20 stacks are synchronized?

21 MR. MACE: Object to form.

22 A That would depend on how the
23 POSITA understood synchronized, which is
24 nuanced by what the application is
25 (inaudible) and what the context is. In

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Patent Owner Sur-Reply, 5; Ex. 2014, 26:14-25

Petitioner's Expert on “synchronized”

Explaining further, he stated that “I would say a stack with different ordering is not identical, but that doesn’t mean it is [not] synchronized and depending on what’s going on with the way in which the stack is being used, synchronization may or may not require – be required to be absolutely perfect.”

Ex. 2014, 28:2-9; Ex. 2015 (errata).

Patent Owner Sur-Reply, 5; Ex. 2014, 28:2-9

Petitioner's Expert on “synchronized”

When this topic was revisited later in the deposition, Mr. Schmandt said that “synchronizing is in the eye of the beholder,” and spent nearly four pages of deposition transcript discussing factors that would be relevant to how a POSITA would understand the term, “synchronizing.” Ex. 2014, 38:9-42:2.

Patent Owner Sur-Reply, 3; Ex. 2014, 38:9-42:2

Petitioner's Expert on "synchronized"

1 C. Schmandt
2 (A lunch recess was taken.)
3 (Time noted: 1:32 p.m.)

1 C. Schmandt
2 context stack in the frame of the context
3 stack, let's say we put a timestamp on
4 it, that's common in systems that, you
5 know, have a history or multi media
6 especially, so you want to put a
7 timestamp on it. Well, let's say your
8 computer sends to my computer some new
9 information to put in the context stack,
10 well, your computer is not telling the
11 same time as my computer. Eh, they're
12 close, but it's not really -- it's not
13 really the same time, but that probably
14 doesn't matter. It doesn't matter if
15 it's off by a minute, 30 seconds, 150
16 microseconds.

17 There are systems, you know,
18 transaction -- transaction style systems,
19 for example stock exchanges and things
20 like that, banks, financial transactions
21 in which time has to be incredibly
22 highly -- incredibly high resolution and
23 in fact most of these systems unbeknownst
24 to a lot of people, a lot of these
25 systems rely on GPS. GPS not only tells

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1 C. Schmandt
2 could those stacks get out of order?
3 If one process is deciding
4 what is on a stack, then every time that
5 process adds to the stack, adds a new
6 context to the stack in this example, it
7 could tell the other process add
8 something, add this to the stack or if it
9 deletes something from the stack, then it
10 could tell the other process delete this
11 from the stack. So the only way in that
12 case you could get a lack of
13 synchronization of order would be if
14 multiple processes were putting things on
15 and off the stack and not paying
16 attention to what other processes were
17 telling them, right.

18 So it's the issue, the
19 nuance is how precise is the data being
20 represented and how precise does it need
21 to be represented and what is the
22 mechanism whereby order is being -- order
23 or contents of the interior of a stack,
24 what's actually the content of it, which
25 system is changing that and how is that

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Patent Owner's
Sur-Reply, 5-6
Ex. 2014, 38:9-42:2

Petitioner's Expert on "synchronized"

1 C. Schmandt
2 (A lunch recess was taken.)
3 (Time noted: 1:32 p.m.)
4 Q Mr. Schmandt, earlier we
5 talked about there being some nuance in
6 the term synchronizing two context
7 stacks. Could you explain what that
8 nuance is?
9 A Sure. You know, I would say
10 synchronizing is in the eye of the
11 beholder. It's a question of what level
12 of granularity things need to be
13 synchronized and that is really a
14 function of what applications or systems
15 are co-dependent on some piece of data,
16 right.
17 So synchronization may be
18 required to be perfect. If
19 synchronization is perfect, then
20 everything about two pieces of data or in
21 what we've been talking about context
22 stacks would be identical, but that might
23 be -- that might be unusual.
24 Let's say, for example, that
25 every time there is a change in the
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17 So synchronization may be
18 required to be perfect. If
19 synchronization is perfect, then
20 everything about two pieces of data or in
21 what we've been talking about context
22 stacks would be identical, but that might
23 be -- that might be unusual.
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1 C. Schmandt
2 could those stacks get out of order?
3 If one process is deciding
4 what is on a stack, then every time that
5 process adds to the stack, adds a new
6 context to the stack in this example, it
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Patent Owner's
Sur-Reply, 5-6
Ex. 2014, 38:17-23

Petitioner's Expert on "synchronized"

1 C. Schmandt
2 (A lunch recess was taken.)
3 (Time noted: 1:32 p.m.)

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1 C. Schmandt
2 context stack in the frame of the context
3 stack, let's say we put a timestamp on
4 it, that's common in systems that, you
5 know, have a history or multi media
6 especially, so you want to put a
7 timestamp on it. Well, let's say your
8 computer sends to my computer some new
9 information to put in the context stack,
10 well, your computer is not telling the
11 same time as my computer. Eh, they're
12 close, but it's not really -- it's not
13 really the same time, but that probably
14 doesn't matter. It doesn't matter if

1 C. Schmandt
2 you your position, but it also tells you
3 the time because the GPS satellites have
4 atomic clocks in our computers. So if I
5 wanted to get perfect synchronization, I
6 wouldn't note -- if I wanted to note when
7 some change happened, I would consult the
8 GPS and then I could have complete
9 perfect synchronization with respect to
10 time.

11 So it's sort of a question
12 of -- there's sort of two aspects of it.
13 One aspect is what is the data and how
14 carefully does the data need to match
15 between two different structures
16 presumably at two different computers,
17 but on the other side another aspect of
18 it is how is the data -- how is the data

He noted also that a proper understanding of what is required by
synchronization depends on “what is the data and how carefully does the data need
to match between two different structures presumably at two different computers
...” Ex. 2014, 40:11-16.

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Patent Owner's
Sur-Reply, 6;
Ex. 2014, 40:11-16

Petitioner's Expert on “synchronized”

Also, Petitioner does not present any argument or expert testimony concerning the desirability of synchronized context stacks in Coffman.

Petitioner's expert and does not state any benefit, use, or improvement that would be achieved to Coffman if synchronized context stacks were present in Coffman (which they are not), or any additional reasoning why Coffman's disclosure would lead a POSITA to understand that Coffman discloses or suggests the required synchronizing of context stacks or context sets.

Patent Owner
Response, 35-36;
Ex. 2014, 44:15-20

Petitioner's Expert on “synchronized”

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	C. Schmandt (A lunch recess was taken.) (Time noted: 1:32 p.m.) Q Mr. Schmandt, earlier we talked about there being some nuance in	1 2 3 4	you y the t atomi	1 2	C. Schmandt could those stacks get out of order?
In Mr. Schmandt's opening and reply declarations, he provided none of this discussion, and offered no opinion on how a POSITA would have understood the claim term, “synchronize,” or even what factors would be relevant to a proper construction.					
every time there is a change in the Page 38 Veritext Legal Solutions Calendar-CA@veritext.com 866-299-5127 Patent Owner's Exhibit 2014 Page 38 of 76		tions n and nownst tells Page 39 Veritext Legal Solutions Calendar-CA@veritext.com 866-299-5127 Patent Owner's Exhibit 2014 Page 39 of 76	23 24 25	syste their know,	21 22 23 24 25 to be represented and what is the mechanism whereby order is being -- order or contents of the interior of a stack, what's actually the content of it, which system is changing that and how is that Page 41 Veritext Legal Solutions Calendar-CA@veritext.com 866-299-5127 Patent Owner's Exhibit 2014 Page 41 of 76

Sur-Reply, 6;
Ex. 2014, 44:15-20

Synchronizing Content vs. Synchronizing Stacks

Specifically, the examiner stated, “the limitation [of the claim being examined] ...is also **more narrow** in that not only is the context synchronized, but context stacks/sets of distinct devices are synchronized.” Ex. 1012, 447 (emphasis in original); *see also id.*, 171. As the examiner correctly understood, synchronizing a context stack/set across devices is a narrower limitation than just synchronizing a context across devices.

Patent Owner Response, 2-3, 11-12; Patent Owner Sur-Reply, 7; Ex. 1012, 447

Synchronizing Content vs. Synchronizing Stacks

3. The following is an examiner's statement of reasons for allowance:

As described in the Notice of Allowability mailed 11/1/10 in Application 12/617506, Mumick et al. (US 2003/0046346) teaches synchronizing plural browsers on a plurality of mobile devices including a state manager that stores navigation histories in a data store so that a user can switch from a visual browser on one device to a voice browser on a second device without losing navigation state, but synchronization of navigation state is not the claimed synchronization of context across multiple devices (page 2).

While the claim language at issue is not identical, the limitation in claim 63 is directed to a similar concept which is also **more narrow** in that not only is context synchronized, but context stacks/sets of distinct devices are synchronized.

Patent Owner Response, 2-3, 11-12; Patent Owner Sur-Reply, 7; Ex. 1012, 447

Experts Agree: Order is an Attribute of a Stack

For two stacks to be synchronized, it is not enough that they contain the same entries; they also must contain those entries in an identical order because order is an attribute of a stack. Ex. 2011 (transcript of the first Schmandt deposition), 13:10-17, *see also id.*, 14:13-16 (Q: “And I think we both agree that order of data within a stack is an attribute of a stack, correct? A: Yes, correct.”); 14:25-15:6 (“So if one stack has different data or more data than the other stack, then they are not identical ...”). Patent Owner’s expert also agreed (Ex. 2013, ¶¶73), and explained that a POSITA would not interpret two stacks containing different context entries, or even equivalent context entries but in different orders, as being synchronized. Ex. 2013, ¶¶70, 73-74.

Patent Owner Response, 2, 33-34;
Patent Owner Sur-Reply, 9;
Ex. 2011, 13:10-17, 14:13-16, 14:25-15:6;
Ex. 2013, ¶¶70, 73-74

Petitioner's New Reply Theory (“could ... be”)

But even if the claims did require “perfect” synchronization, a person of ordinary skill in the art would have understood and found it obvious that Coffman’s synchronization **could at least sometimes be “perfect”**—which is enough to meet the claim. *See, e.g., Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1326

But this is a new impermissible theory unsupported by the Petition, Coffman, or any credible evidence. In any event, obviousness is not established by possibilities, and it is pure speculation that context stack updates per Coffman “could ... result” in identical context stacks. *See Reply, 7.*

Reply, 7;
Patent Owner Sur-Reply, 9

Dependent Claims 8, 18, & 24

Coffman also fails to disclose every claimed requirement of at least dependent claims 8, 18, 24, and their respective dependent claims. Claim 8 of the '652 patent depends from claim 1 via claim 3 and recites, in relevant part, one or more physical processors caused to “identify one or more domain agents associated with the one or more context entries, wherein the one or more domain agents are configured to process the command or request; and generate a response to the command or request using the one or more domain agents.” As Petitioner contends, claims 18 and 24 include substantially similar features as claim 8, although they depend from different base claims. Pet., 59, 60.

Patent Owner Response, 37-47
Patent Owner Sur-Reply, 12-13

Petitioner Misunderstands Coffman's Claim 11

The full element recites “a

dialog manager for managing dialog across the applications and for selecting an active dialog, context and application based on input queries.” Coffman, 65:12-13.

Of course a dialog manager managing dialogs for multiple applications would need to be able to distinguish the dialog, context, and application associated with a user's input. Moreover, claim 11 also recites a “conversational task dispatcher for coordinating and dispatching conversational tasks,” and nowhere does the claim (or Coffman) discuss a task dispatcher attempting to determine which conversationally-aware application could process a user's voice request, and dispatch a task to the selected conversationally-aware application.

Patent Owner Sur-Reply, 14; Reply 12-13

Coffman's Task Dispatcher

“task dispatcher/controller 402 feeds input from the conventional and conversational subsystems services 412, 406 to the context stack 405 (via the dialog controller 404 which selects the active context) and *feeds the output of the different tasks to the different subsystems and prioritizes them.*” Coffman, 31:15-18 (emphasis added); *see also* Coffman, 30:26-31:23.

Coffman's Task Dispatcher does not select a conversationally aware application to process a user's request

Patent Owner Sur-Reply, 15 (discussing Coffman, 31:15-18, 30:26-31:23)

Dependent Claims 8-11, 18, & 24-27

As presented in Patent Owner's Response and as supported with expert testimony, Petitioner is wrong in trying to establish that Coffman's conversationally-aware applications disclose the claimed "one or more domain agents" of dependent claims 8, 18, and 24. For these reasons, Petitioner has also failed to establish the unpatentability of dependent claims 8, 18, and 24, and their respective dependent claims 9-11 and 25-27.

Patent Owner Sur-Reply, 12-16