

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner,

v.

IQAR, INC.,
Patent Owner.

IPR2024-00499
Patent 10,829,002 B2

Record of Oral Hearing
Held: May 8, 2025

Before JASON W. MELVIN, SEAN P. O'HANLON, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

IPR2024-00499
Patent 10,829,002 B2

APPEARANCES:

ON BEHALF OF THE PETITIONER:

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The above-entitled matter came on for hearing on Thursday, May 8, 2025, commencing at 11:00 a.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

P R O C E E D I N G S

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JUDGE DOUGAL: Good morning. This is the oral hearing for IPR2024-00499 between Petitioner, Tesla, Incorporated, and Patent Owner, iQar, Incorporated, concerning U.S. Patent 10,829,002. I'm Judge Dougal and with me today are Judges Melvin and O'Hanlon.

Let's start by having appearances, beginning with Petitioner. Petitioner, who do you have with you today?

MR. DEVOTO: Yes, good morning, Your Honors. My name is Roberto Devoto of Fish & Richardson. I, along with my colleague Gretchen DeVries, will be representing Tesla today. Karl Renner, also Fish & Richardson, and Tesla's in-house counsel, Ashraf Fawzy, are present here as listeners at the hearing as well.

JUDGE DOUGAL: All right. Thank you. And who do we have for Patent Owner?

MR. HERMAN: Good morning, Your Honor. This is Patrick Herman from Orrick, Herrington & Sutcliffe here on behalf of Patent Owner. Listening in will be Bas de Blank, Patent Owner's backup counsel, and Greg Mathis, in-house counsel for Patent Owner.

JUDGE DOUGAL: Great. Thank you and welcome. So before we begin, I'll go over a few brief administrative matters. As you know, we understand that with every case that comes before us both parties have a lot at stake and we take our role very seriously. Our primary concern is your right to be heard. So if you get -- encounter any technical difficulties or lose your connection, please contact the team members who gave you the contact information right away.

1 Please identify yourself each time you speak. When not speaking,
2 please mute. As you know, we have the entire record before us. We've
3 reviewed it in full. When referring to the demonstratives, papers, or
4 exhibits, please do so clearly and explicitly by slide or page number. Please
5 also pause and give us a few seconds to find the document. This will help us
6 in the preparation of an accurate transcript.

7 Finally, please be aware that members of the public may be listening
8 to this oral hearing.

9 In our hearing order, we authorize 60 minutes of argument time per
10 side.

11 And with that, are there any questions from either side?

12 MR. DEVOTO: No questions, Your Honor.

13 MR. HERMAN: No questions.

14 JUDGE DOUGAL: Great. And Petitioner, would you like to reserve
15 any time for rebuttal?

16 MR. DEVOTO: Yes, we would. We'd like to reserve 10 minutes for
17 rebuttal, Your Honor.

18 JUDGE DOUGAL: And Mr. Herman, would Patent Owner like to
19 reserve any time for your battle?

20 MR. HERMAN: Yes, Your Honor, 15 minutes.

21 JUDGE DOUGAL: All right, thank you. Okay. Mr. Devoto,
22 whenever you're ready, you may begin.

23 MR. TOROSSIAN: Counselor, you're on mute. Please unmute your
24 mic. Thank you.

25 MR. DEVOTO: My apologies. I'd like to start now. Please turn to
26 slide 2. Your Honors, this slide shows the main issues in dispute in this

1 proceeding. I'm going to begin by providing a brief overview of the '002
2 patent as well as our petition. I will then turn to issue number 1, which
3 relates to a claim construction dispute between the parties as to the proper
4 construction of the recited feature data regarding multiple route segments.
5 In doing so, and consistent with our reply, I will explain why the implicit
6 construction of this feature upon which Patent Owner's arguments against
7 the grounds are based should be rejected as both unjustifiably departing from
8 claim meaning and also failing to be supported by the '002 patent
9 specification.

10 I will then proceed to issue 2 and show that not only do the grounds
11 advanced in our petition satisfy the data regarding multiple route segments
12 feature plainly read, but also satisfy this feature under the Patent Owner's
13 improperly narrow construction. I will then hand the presentation off to my
14 colleague, Gretchen DeVries, who will present the remaining issues related
15 to dependent claims 2, 3, and 10.

16 If you could please turn to slide 4, your Honors. This slide shows
17 the grounds we advanced against the claims of the '002 patent in our
18 petition. As you can see, we rely on *Kudo 325* as our primary reference in
19 combination with one or more of *Kudo 066*, *Bolger*, and *Tryon* as secondary
20 references.

21 Please turn to slide 5. Independent claim 1 of the '002 patent, which
22 is shown on this slide, is representative of the challenged claims. The main
23 limitation in dispute between the parties is the historical data limitation used
24 to predict a destination of a driver and specifically the route segment
25 features of this limitation.

1 If you could please turn to slide 6. An example implementation of
2 the historical data limitations is described in the '002 patent at column 12,
3 line 65 to column 13, line 63, which reference figures 3A and 3B. As shown
4 in this slide, the historical data of this example implementation includes the
5 data of 10 different trips that start from the same location. These 10
6 different trips are organized in accordance with what's called a schematic
7 route shown in figure 3A of the '002 patent and reproduced on this slide.

8 As shown in the table at column 13, lines 30 to 53 of the '002 patent,
9 this schematic route can be used with frequency information corresponding
10 to the 10 different trips to predict a destination of the driver. While not
11 described in detail, the '002 patent also identifies figure 3B as depicting a
12 process corresponding to one particular way to predict the driver's
13 destination using historical trip data.

14 Please turn to slide 9. As I previously stated, Your Honors, the
15 Patent Owner argues that the petition's grounds fail to satisfy the route
16 segment features in the recited historical data limitation. As noted in our
17 reply shown in this slide, however, the Patent Owner's arguments rely on
18 constructions for these features that depart from plain meaning, and yet the
19 Patent Owner has failed to provide the needed evidence required under the
20 law to justify such departure. That is, the Patent Owner has failed to identify
21 any inconsistency between the plain meaning and the '002 patent
22 specification, much less the required clear and unmistakable disclaimer,
23 disavowal, or redefinition in the intrinsic evidence needed to depart from
24 plain meaning.

25 Now, to understand the proper construction of the historical data
26 limitation, Your Honors, I will first turn to the route segment feature and

1 then turn to the data regarding multiple route segments feature. If you
2 would please turn to slide 11.

3 As shown in this slide, Your Honors, we submitted evidence into the
4 record that, "The plain meaning of 'segment' is 'a separate piece of
5 something,' and that the plain meaning of "route" is simply "a traveled way."
6 Of course, using the plain meaning of a term as its construction is only
7 proper when the plain meaning is consistent with the patent specification.
8 So, with that in mind, we also show in this slide the most relevant portion of
9 the '002 patent specification that characterizes a route and that characterizes
10 a segment. I will begin by first discussing the meaning of the term "route"
11 in light of the specification prior to discussing the meaning of the term
12 "segment" in light of the specification.

13 As you can see, Your Honors, the most relevant portion of the
14 specification related to the term "route" does not define the term. Instead, it
15 broadly says that, quote, "The route typically includes a starting position, an
16 example of which is the current position of the vehicle, which may be
17 indicated by GPS, an ending position, and any intermediate positions
18 between the initial and final positions, end quote.

19 Now, Your Honors, we can make three observations from this
20 sentence. First, it is consistent with the plain meaning of route, as the route
21 described in the '002 patent specification contemplates a vehicle traveling
22 from one position to another over time, and hence the vehicle is on a
23 traveled way. Second, the identified positions and being characterized as
24 encompassing positions received from a GPS would be in at least some
25 implementations understood to be latitude, longitude points and as such, this
26 disclosure expressly indicates that a route may be in some implementations

1 represented as simply an ordered sequence of points representing vehicle
2 positions, with a starting point followed by any number of intermediate
3 points and a final point. Third, no criteria is specified for identifying the
4 starting, ending, and intermediate positions or points that the '002 patent
5 says are typically included in a route. That is, nothing in the '002 patent
6 description of what a route typically includes demands a particular way of
7 choosing which specific points in a geographic map are required to be one of
8 the intermediate points or positions of the route.

9 Stated differently, contrary to some of Patent Owner's arguments, the
10 '002 patent specification fails to state that every traveled intersection shown
11 in a geographic map must be designated as one of the intermediate points of
12 route to be properly deemed a route. Instead, the '002 patent broadly states
13 that the route may include any intermediate positions, indicating a broad
14 conception of route that does not demand any particular number or type of
15 intermediate positions or points.

16 Your Honors, having shown that the plain meaning of "route" is
17 consistent with the '002 patent specification, we now turn to the plain
18 meaning of "segment." As shown on this slide, we placed evidence into the
19 record --

20 JUDGE DOUGAL: Counsel?

21 MR. DEVOTO: yes, Your Honor?

22 JUDGE DOUGAL: This is Judge Dougal. So, just to clarify, the
23 claim talks about route segments and whatnot, but it doesn't actually require
24 route segments to be calculated to be, you know, the entire segment to be
25 recorded. It just talks about data samples along the route, concerning a

1 route. You might have some general information along some segments of a
2 road recorded.

3 MR. DEVOTO: Correct.

4 JUDGE DOUGAL: To a certain extent, this is relevant to
5 understanding the claim, but doesn't really define what the claim requires.

6 MR. DEVOTO: Your Honors, we completely agree with you, and I'm
7 going to turn to what the term "data regarding multiple route segments"
8 means as soon as I'm done with the route segment part.

9 The reason why I'm spending this time on the route segment part is
10 because it's baked into a lot of arguments made by the Patent Owner.
11 They're really interpreting route segment and route in a very narrow way that
12 I'm going to show is not supported by the patent specification in more detail,
13 and thus these arguments should be dismissed or rejected. That's why I'm
14 spending this time on the route segment.

15 But you're entirely right that when you go to data regarding route
16 segment, you're dealing with simply data characterizing route segment, i.e.,
17 data that is concerned with the route segment, which is a much broader
18 scope of limitation than actually having to have data that, say, would define
19 a route segment. So you're entirely correct on that, and I'll touch upon that
20 shortly as I turn to that broader limitation "data regarding multiple route
21 segments." Right now I'm just focusing on route segment and then I'll move
22 to the broader term.

23 Does that make sense, Your Honors?

24 JUDGE DOUGAL: Yes. Thank you.

25 MR. DEVOTO: So, having shown that the plain mean of "route" is
26 consistent with the '002 specification, we now quickly turn to the plain

1 meaning of "segment." A segment just means a separate piece of something.
2 We've submitted evidence into the record of that. That's its plain meaning.
3 So a route segment plain meaning is a separate piece of a traveled weight of
4 a vehicle, and this is consistent with the '002 pound specification as also
5 shown on this slide, which broadly characterizes a segment as comprising
6 any distance to be traveled.

7 Now, unless Your Honors have any other questions, I now will turn to
8 the construction of the term "data regarding multiple route segments."

9 Okay. Hearing none, please turn to slide 15. So, given the plain
10 meaning of "route segment," it follows that the plain meaning of the term
11 "data regarding multiple route segments" is simply data regarding multiple
12 separate pieces of a traveled way of a vehicle as shown in this slide. Please
13 turn to slide 16.

14 Now, this slide shows examples of the various types, this slide, slide
15 16, shows examples of the various types of historical data we identified in
16 the *Kudo 325* reference, our primary reference, as corresponding to the
17 recited data regarding multiple route segments feature. This data includes
18 identification of nodes at the start and/or end of route segments, dates and
19 times in which the driver was at the nodes at the start and/or end of a route
20 segment, identity of the driver and/or passenger of the vehicle when at the
21 start and/or end of a route segment, and the frequency with which the driver
22 was located at the nodes at the start and/or end of the route segment. If
23 you'd please turn to slide 17.

24 Now, as shown in this slide, Your Honors, in an effort to distinguish
25 *Kudo 325*, the Patent Owner asserts that *Kudo 325*'s historical data fails to

1 satisfy the data regarding multiple route segments feature because, quote, "It
2 ignores intersections the vehicle simply passed through," end quote.

3 Could you please turn to slide 18, Your Honors? As shown on this
4 slide, the Patent Owner also asserts that *Kudo 325*'s historical data fails
5 because, according to the Patent Owner, *Kudo 325* simply stores data
6 relating to individual points along a route and, quote, "point-specific data
7 provides no information regarding an actual route or a portion of an actual
8 route that was traveled because 'it provides no information regarding the
9 route the vehicle traveled between the points.'" Please turn to slide 19.

10 So to better illustrate this argument, the Patent Owner draws a figure
11 as shown in this slide, visually depicting its main complaint against *Kudo*
12 *325*. According to the Patent Owner, historical data like that disclosed in
13 *Kudo 325* fails to satisfy the data regarding route segments features because
14 it fails to record as nodes intermediate intersections on a local route because
15 the vehicle never or infrequently turns at those intersections. If you'd please
16 turn to slide 20.

17 Now, Your Honors, as we stated in our reply and as shown on this
18 slide, Patent Owner's arguments are not credible because they impose
19 requirements not found in the plain meaning of the route segment's features.
20 That is, the Patent Owner assumes that the recited historical data must
21 include particular characteristics or elements that enable the route or route
22 segment to be uniquely identified from all other possible traveled routes or
23 route segments between a starting point and an ending point shown on a
24 geographic map.

25 But such a requirement is not found in the plain meaning. Instead,
26 all that is required is that the data be regarding the route or route segment.

1 In other words, all that is required is that the data characterize a route or
2 route segment in some way, even if the characterization fails to uniquely
3 identify the route or route segment in a manner that disambiguates it from all
4 other possible traveled routes or route segments on a geographic map.

5 Moreover, as I will describe next, Patent Owner's arguments are
6 based on a mischaracterization of the '002 patent and are, simply put, not
7 supported by the '002 patent specification.

8 Please turn back to slide 12. To understand why the Patent Owner's
9 arguments mischaracterize the '002 patent and are not supported by the '002
10 patent specification, we need to analyze figure 3A and its associated
11 description in more detail. Figure 3A of the '002 patent shows an example
12 of what the '002 patent calls a schematic route. In the example shown in
13 figure 3A, the schematic route includes 10 different locations, which the
14 '002 calls junctions and which are labeled A through J. These junctions are
15 largely identical to the nodes of *Kudo 325* in that they represent individual
16 locations or positions along a traveled way and hence along a route. The
17 junctions of the '002 patent, like the nodes of *Kudo 325*, segment the route
18 into multiple route segments, with each route segment extending from one
19 junction to another.

20 Now, the '002 patent, Your Honors, distinguishes between two types
21 of junctions: those that only have one choice of intersection and those that
22 have more than one choice of direction -- excuse me, those that only have
23 one choice of direction and those that only have -- or that have more than
24 one choice of direction that a driver may go in, with the second type being
25 called an intersection. Specifically, as shown highlighted in this slide, quote,

1 "An intersection is a junction having more than one choice of direction you
2 may go in."

3 Now, Your Honors, this distinction is identical to *Kudo 325's*
4 distinction between intersection nodes and landmark nodes in its map
5 database shown in figure 2 of *Kudo 325*. As such, from the figure 3A round
6 schematic we know the following for sure. We know that 3 of the 10
7 junctions, at least three, specifically junctions A, C, and G, are intersection
8 junctions because figure 3A shows them as having more than one choice of
9 direction a driver may go in. But figure 3A and indeed the whole
10 description in the '002 path relating to predicting a destination does not tell
11 us how the 10 junctions shown in figure 3A were identified for inclusion in
12 the schematic route.

13 I'm going to repeat this, Your Honors, because it is central to the
14 mistake made by the Patent Owner. The '002 patent does not tell us how it
15 identified the 10 junctions shown in figure 3A from a geographic map. That
16 is, unlike the *Kudo 325* reference, which provides a lot of detail as to how it
17 decides whether a given location on a geographic map, such as an
18 intersection should or should not be labeled as a node for characterizing
19 routes for destination prediction, the '002 patent fails to give us any detail
20 how it decides whether a given geographic location on a geographic map
21 should or should not be labeled as a junction for characterizing routes for
22 destination prediction.

23 For example, the '002 patent does not tell us whether or how the
24 accumulated Tribal history data was used to determine whether or not to
25 label a particular geographic location as a junction in the '002 patent's
26 schematic route of figure 3A. For instance, we do not know whether a

1 geographic location of an intersection was labeled and included as a junction
2 in the schematic route of figure 3A simply because it is an intersection that
3 is shown on a geographic map regardless of travel history, or instead
4 because it is an intersection that is both shown on a geographic map and was
5 previously traversed by the driver in at least one direction, which would
6 include passthrough intersections as junctions for characterizing routes for
7 use in destination prediction.

8 Or instead because there's an intersection that is both shown on a
9 geographic map and was previously traveled by the driver in at least two
10 directions, which would exclude passthrough intersections as junctions for
11 characterizing routes for use in destination prediction. If you could please
12 turn to slide 13, Your Honors.

13 In fact, while not expressly stated in the '002 patent, it is entirely
14 possible, Your Honors, that intersections A, G, and C were labeled as
15 junctions and included in the schematic route of figure 3A because each of
16 them is an intersection that is both shown in a geographic map as an
17 intersection and based on the 10 trip travel history provided in the '002
18 patent, it was also previously traversed by the driver in at least two
19 directions. And we can see this from the example travel history data
20 provided in the '002 patent. As shown in this slide, the accumulated travel
21 history data shown in the '002 patent characterizes each trip or route as an
22 ordered sequence of junctions, with the ordered sequence of junctions
23 defining route segments.

24 For example, trip one is a route that starts at the start location and
25 proceeds in order to junction A, then to junction C, and finally ends at
26 junction E. Now, we can readily see from the list and also the table shown

1 in column 13, lines 30 to 50, of the '002 patent that, based on its trip history
2 data, intersection A was traveled in two directions by the driver in the past,
3 or at least two directions by the driver in the past, intersection C was
4 traveled in three directions by the driver in the past, and intersection G was
5 traveled in two directions by the driver in the past.

6 As such, it is entirely possible, Your Honors, that intersections A, G,
7 and C were labeled for inclusion as junctions for characterizing routes for
8 use in destination prediction using the same criteria as that used in some
9 examples of the *Kudo 325* system for labeling intersections as nodes for
10 destination prediction. And that criteria is that the travel history data shows
11 that the intersections were traveled in two or more directions by the driver in
12 the past.

13 But of course, Your Honors, our main point is really simply that the
14 '002 patent does not tell us how its system determines which map locations
15 such as intersections should or should not be labeled as junctions for
16 characterizing routes for use in destination prediction. Using the 10 trip
17 travel history shown in the -- as provided as an example in the '002 patent
18 specification to try to figure out how the '002 patent's route prediction
19 system might be, determining which geographic locations to label as
20 junctions is an exercise in futility, Your Honors, because the trip history
21 provided by the '002 patent is incomplete.

22 For example, clearly the driver who took these 10 example trips
23 would have had return trips not included in the listed 10 trips in order to at
24 least get back to the starting location between each of the 10 trips. But we
25 know nothing about these return trips, Your Honors. And this matters
26 because the lack of knowing the full trip history of the driver prevents us

1 from being able to determine whether or not the '002 patent labels
2 Intersections that are merely passthrough intersections as junctions.

3 For example, while junctions D and J shown in figure 3A may
4 appear to be passthrough intersections when only considering the 10 trips
5 that start at the start location, they may not be passthrough intersections
6 when you further account for other trips beyond those 10 trips, such as the
7 return trips or trips that start at other starting locations. When accounting for
8 these other trips, it is entirely possible that junctions D and J are traveled in
9 two or more directions and, therefore, are not passthrough intersections.

10 Now, Your Honors, again I state that the bigger point is simply that
11 we do not know the impact or lack thereof of travel history and how the
12 junctions used to characterize routes in the '002 patent specification for
13 destination prediction were identified as we don't even have a complete
14 picture of the travel history of the driver.

15 Now, turning to the Patent Owner's various assertions regarding the
16 historical data recited in the challenged claims, first, the Patent Owner states
17 that *Kudo 325*'s historical data fails because it, quote, "ignores intersections
18 vehicles simply pass through." But as I just explained, the '002 patent
19 specification does not support this distinction because it does not explain
20 how it identifies its junctions for characterizing routes for destination
21 prediction and thus it also may similarly ignore intersections the vehicles
22 simply pass through.

23 Second, the Patent Owner states that *Kudo 325*'s data fails because,
24 quote, "point-specific data provides no information regarding an actual route
25 or a portion of an actual route that was traveled." But the '002 patent
26 specification also does not support this distinction. Just like *Kudo 325*, the

1 '002 patent itself characterizes a route and a set of route segments as an
2 ordered sequence of points, with the '002 patent simply labeling its points as
3 junctions rather than nodes.

4 Lastly, the Patent Owner argues that *Kudo 325* fails because its
5 historical data does not record intermediate intersections on a local route
6 because, according to the vehicle's travel history, the driver never or
7 infrequently turned at those intersections. But as I also just explained, the
8 '002 patent specification does not support this distinction because it does not
9 explain how it identifies its junctions for characterizing routes for
10 destination prediction. In fact, as I've just shown, it is entirely possible that
11 the '002 patent excludes these intermediate passthrough intersections, just
12 like some examples of *Kudo 325* system when accounting for the full trip
13 history of the driver, which would clearly include other trips such as return
14 trips beyond the identified 10 trips.

15 In sum, Your Honors, the Patent Owner's arguments not only fail to
16 justify departure from plain meaning, but also failed to be supported by the
17 '002 patent zone specification.

18 Now, unless Your Honors have any questions, I would like to now
19 briefly turn to how our proposed combination of *Kudo 325* and *Kudo 066*
20 satisfies the historical data limitation recited in the challenge claims.

21 Hearing none, we could please turn to slide 32. So, Your Honors, as
22 shown in this slide, we asserted in our petition that the travel history stored
23 by *Kudo 325* system corresponds to the recited historical data. If you could
24 please turn to slide 33.

25 As shown on this slide, Tribal history data mapped in our petition to
26 the recited historical data is the stored transition state information and/or the

1 data stored in the history accumulation database. Please turn to slide 34 now
2 Your Honors.

3 Now, Your Honors, this slide shows figures depicting the structure
4 of *Kudo 325*'s travel history data, both when stored as individual trip data
5 records in the history accumulation database and also when stored as
6 transition state information for use in three different sequential operations
7 performed by the destination prediction process of *Kudo 325*. Specifically,
8 determining an optimum set of conditions for predicting a destination, that
9 operation requires accessing the transition state information; predicting a
10 destination using the determined optimum set of conditions, which also
11 implicates use of the transition state information; and finally, calculating the
12 necessary time for the driver to reach the destination.

13 Now, the travel history data stored in the history accumulation
14 database, Your Honors, corresponds to the recited historical data because it
15 includes data that characterizes each of multiple past trips in a manner
16 largely identical to how the '002 patent itself characterizes each of the
17 multiple past 10 trips used in its example at column 13, lines 13 to 24.
18 Specifically, as shown in figure 3A of *Kudo 325* reproduced on this slide, it
19 characterizes each pass, trip, or route in an individual trip data record as an
20 ordered sequence of nodes from a starting node to an ending node, just like
21 the '002 patent itself characterizes each of its past trips or routes as an
22 ordered sequence of junctions from a starting location to an ending junction.

23 And of course, the individual trip records of *Kudo 325* store route
24 segments and sequences of route segments in the same way as the '002
25 patent itself, by simply segmenting the trip or route using nodes just like the
26 '002 patent itself segments a trip or route using junctions.

1 Turning now to the stored transition state information, this
2 information also corresponds to the recited historical data because it includes
3 data that characterizes each of multiple pass trips using a single schematic
4 data structure shown in figure 5 of *Kudo 325* that is similar to the route
5 schematic data structure shown in figure 3A of the '002 patent. Specifically,
6 like the route schematic data structure of figure 3A of the '002 patent, which
7 is also used for route prediction, the data structure of the stored transition
8 state information organizes the data characterizing multiple trips to eliminate
9 repetition of nodes that are used in more than one trip by consolidating the
10 data of different trips into a single node structure.

11 In doing so, of course, the transition state information preserves the
12 node sequences characterizing each individual trip by including multiple
13 links between the consolidated nodes in the exact same way that the route
14 schematic data structure of figure 3A of the '002 patent preserves individual
15 trip information through use of multiple links between consolidated
16 junctions.

17 Given this similarity, it really should come as no surprise, Your
18 Honors, that the stored transition state information also satisfies the
19 historical data limitation in that it stores routes and multiple travel
20 destinations by storing data. It characterizes each pass trip as an ordered
21 sequence of nodes starting from a topmost layer shown in figure 5, which
22 shows nodes corresponding to trip starting locations and ending at the
23 bottom layer shown in figure 5, which shows nodes corresponding to trip
24 ending positions.

25 It also stores route segments and sequences of route segments in the
26 same way as depicted by the route schematic shown in figure 3A of the '002

1 patent by simply consolidating the data characterizing the multiple trips into
2 a single schematic and segmenting each trip or route using consolidated
3 nodes, just like the '002 patent's route schematic uses consolidated junctions
4 to segment its trips or routes.

5 Unless Your Honors have any questions, I would like to now briefly
6 explain why *Kudo 325*'s disclosure also satisfies the reciter's historical data
7 limitation even under the Patent Owner's incorrect and overly narrow
8 construction.

9 Okay. Hearing none, if we could please turn to slide 50. Now, Your
10 Honors, in its Patent Owner response, the Patent Owner asserts that *Kudo*
11 *325*'s historical data is incomplete because it only includes nodes traveled in
12 two or more directions by a vehicle and, therefore, fails to include nodes of
13 passthrough intersections. As explained in our reply, this failure to include
14 passthrough intersections is only found in one example implementation of
15 the system of *Kudo 325*. *Kudo 325*'s teachings are broader, stating at
16 paragraph 0085 that, quote, "Any nodes can be added or deleted according to
17 a user's travels."

18 Now, Your Honors, given that *Kudo* identifies only three different
19 types of nodes, an intersection node, a landmark node, and an area node, and
20 given the fact that the term "any node" certainly encompasses all nodes and
21 hence all nodes of each of these three different types, labeling every
22 intersection, even passthrough intersections, to which a user travels as a
23 node is clearly contemplated by this statement.

24 Could you please turn to slide 52? As we also noted in our
25 Petitioner's reply, Patent Owner also argues that *Kudo 325*'s disclosure is
26 deficient because it ignores less frequently traveled nodes. But this again

1 corresponds to only one implementation example of *Kudo* 325. As shown
2 on this slide, Your Honor's, *Kudo*'s disclosure is broader, encompassing
3 other examples where the transition state information is generated using all
4 nodes, including those less frequently traveled.

5 Now, unless Your Honors have any questions, I will now turn the
6 presentation over to my colleague Gretchen DeVries, who will present the
7 remaining issues related to dependent claims -- to the dependent claims. Do
8 Your Honors have any questions for me?

9 Okay. Hearing none, Gretchen? Thank you, Your Honors.

10 MS. DeVRIES: All right. Good morning, Your Honors. My name is
11 Gretchen DeVries, and I'd like to talk briefly about dependent claims 2, 3,
12 and 10. Let's start on slide 56, please.

13 Claims 2 and 3 are shown at the bottom left, and both of these claims
14 relate to map coordinates. Claims 2 and 3 depend from claim 1, so let's start
15 at claim 1 to understand exactly what's required by claims 2 and 3. Claim 1
16 specifies that sensor data samples are received and stored to later be
17 analyzed as part of the destination prediction process. That's the first two
18 features of claim 1. And claim 1 also states at the end of the excerpt of part
19 of claim 1 here that at least one of the sensor data samples includes
20 telemetry data. This is where claims 2 and 3 come in. They further specify
21 that the telemetry data includes map coordinates. Slide 57, please.

22 The *Kudo* combination relies on *Kudo* 066, which you see at the left
23 here, for the idea that vehicle position can be represented using map
24 coordinates, like latitude and longitude coordinates from a GPS. Slide 58,
25 please.

1 We'll discuss briefly how these map coordinates relate to vehicle
2 position as position is used for destination prediction in the *Kudo* system.
3 We just said that vehicle position information is determined by GPS, and we
4 know that a representation of that position is stored in the *Kudo* database to
5 thus build a travel history that can be used for destination prediction.
6 Specifically, what happens is that one representation of the vehicle's
7 position, those GPS coordinates, for instance, is converted into a different
8 representation of that same physical vehicle position. So, for instance, the
9 GPS coordinates are converted into a corresponding node ID, and it's the
10 node ID that's stored and used for destination predictions. So what this
11 means is that in the *Kudo* combination, the node ID corresponds to and
12 represents the vehicle's GPS coordinates, and both the node ID and the GPS
13 coordinates fundamentally correspond to and represent the same physical
14 position of the vehicle. Slide 59.

15 There's no dispute that this is how the *Kudos* system works. And
16 there's also no dispute that both the GPS coordinates and the corresponding
17 node IDs are examples of telemetry data. This is explained in the right-hand
18 box on slide 59, which we provided here for your convenience. So, in other
19 words, there's no dispute that the *Kudo* system stores telemetry data in the
20 form of node IDs, and there's also no dispute that the *Kudo* system also
21 includes telemetry data in the form of GPS coordinates. Patent Owner's
22 objection to the petition's treatment of claims 2 and 3 --

23 JUDGE DOUGAL: Counsel?

24 MS. DeVRIES: Yes.

25 JUDGE DOUGAL: This is Judge Dougal.

26 MS. DeVRIES: Yes.

1 JUDGE DOUGAL: So are the GPS coordinates stored or is it just the
2 node -- every time you pass through the node, it receives the GPS
3 coordinates, sees if you're in the node, and then it stores the node
4 coordinates?

5 MS. DeVRIES: So the way the *Kudo* system works is that the GPS
6 coordinates are detected and converted to a node ID, and it's the node ID
7 that's stored in the map database. It may well be storage of the GPS
8 coordinates temporarily while that conversion process is happening. But
9 what we'd like to emphasize is that both the GPS coordinates and the node
10 IDs are really just representations of the same fundamental information,
11 which is the vehicle position information. And that's what's being used to
12 detect and also -- to detect position and also to then predict the destination of
13 the vehicle.

14 JUDGE DOUGAL: So Patent Owner makes an argument that the
15 node ID represents a range or, you know, like a region on a map, and so it's
16 not an exact coordinate. Is that true? Is that a problem for you? Can you
17 respond to that argument by Patent Owner?

18 MS. DeVRIES: Yeah, absolutely. That's a great question. So *Kudo*
19 325 does indeed describe that each node ID corresponds to a center latitude-
20 longitude coordinate, and then it has a radius around that coordinate. And
21 that might encompass many latitude-longitude coordinates, but really GPS
22 coordinates, too, can represent ranges of positions. It all depends on the
23 precision of the coordinates and how many decimal places you use. So in a
24 sense, both node ID and latitude-longitude coordinates are representing
25 ranges of positions.

1 I think the underlying issue is that we believe that the map
2 coordinates and the node IDs are both representing the same piece of
3 information in two different ways. And both the '002 patent and the *Kudo*
4 combination are using this position in the same way. They're using it to
5 record where the vehicle is and then to build up a travel history of that
6 vehicle to be used to predict the destination for a current trip.

7 So the important idea is that data representative of vehicle position is
8 recorded and stored and analyzed. And these representations, node ID and
9 GPS coordinates, and even maybe the underlying machine readable code,
10 they're all just representations of the same fundamental piece of information
11 that's being used for all of these processes.

12 JUDGE DOUGAL: Counsel, do we have anything that would help us
13 define map coordinates? Or is there anything in the spec that says map
14 coordinates are exact latitude and longitude or a range or, you know,
15 triangulation?

16 MS. DeVRIES: Yeah, that's a -- I'm sorry. Go ahead.

17 JUDGE DOUGAL: Just a particular amount of triangulation or, you
18 know, like what -- is there anything we can turn to in the spec or otherwise
19 that helps us determine that question of what are map coordinates?

20 MS. DeVRIES: Yeah, that's an excellent question. We don't see any
21 details in the spec that could provide any kind of detailed understanding
22 about what exactly is meant by map coordinates. Certainly the word "GPS"
23 is used in the spec, but there's really not enough information to understand
24 how the '002 patent is using map coordinates, how it's performing that
25 conversion from map coordinates to something that's used in the destination
26 prediction process.

1 And actually, to answer that question, I'll refer you to slide 61, which
2 has a flowchart from the '002 patents. This is figure 3B. And you can see at
3 box 307 -- let me say figure 3B is the destination prediction process in the
4 '002 patents. And box 307 is really the best that we see in terms of how the
5 '002 patent uses map coordinates in destination prediction. And it simply
6 says, "Read current location from GPS. Set location equals next
7 intersection." So if we imagine that the current location from GPS is maybe
8 some map coordinates, this box 307 is telling us that those map coordinates
9 are converted to an intersection and it's these intersections that are used for
10 destination prediction, and, in fact, that's just what Mr. Devoto explained
11 earlier with respect to figure 3A, the intersections that are used for
12 destination prediction.

13 We don't see any more detail about how the '002 patent might be
14 using those map coordinates other than this general idea of converting
15 coordinates to intersections, just like the *Kudo* combination converts GPS
16 coordinates to node IDs to use those coordinates -- I'm sorry, to use the
17 vehicle location information for destination predictions.

18 Does that answer your question, Your Honor?

19 All right. So I'll just conclude on these two claims with a brief
20 summary that we really believe that, like Your Honor seems to recognize,
21 Patent Owner is demanding more from these claims than what's specifically
22 recited in the claims. They don't recite how to use the map coordinates.
23 And also, they're demanding more from these claims than what's delivered
24 by the '002 patent itself, which also provides no detail that would justify any
25 kind of specific implementation or usage for the map coordinates of claims 2
26 and 3.

1 So if there's no more questions on claims 2 and 3, I'd like to turn
2 briefly to claim 10, and we can go to slide 63 for that.

3 Now, just like Patent Owner's error with respect to claims 2 and 3,
4 they're demanding more from the claim than what is justified. And just like
5 they've done with respect to claim 1, as you heard earlier from Mr. Devoto,
6 there's a fundamental similar problem with Patent Owner's position on claim
7 10, which is that they want the claim to require more than what the claim
8 language permits. Now, I'll just talk very briefly about the issue with claim
9 10. And in fact, on slide 64 we're going to start with claim 8, because claim
10 10 depends from claim 8.

11 The petition explained, and you can see this on slide 64, that when
12 the vehicle reaches its final destination, if that destination corresponds to the
13 predicted destination, the node ID that's transmitted to the remote database
14 that's shown here in blue is the node ID of the predicted destination. That's
15 exactly what claim 8 says, that the predicted destination is transmitted to a
16 remote database.

17 Patent Owner objects to this mapping and their objection is shown in
18 brief on slide 69, saying that the predicted destination of claim 8 must be a
19 future destination. But again, as they've done in the past, they've tried to
20 read more language into the claim than is present. There's simply no such
21 temporal requirements in the claim.

22 And then if we turn briefly to claim 10 itself, that's on slide 68, to
23 satisfy claim 10 the petition explains that when the history database is a
24 remote database implemented at a server, and when the destination
25 prediction is performed on the vehicle, that means that what happens is the
26 stored history data from that remote database is provided back down to the

1 vehicle for the destination prediction processing. Patent Owner's objection
2 to this portion of the petition is that this split functionality, having the
3 database on the server and the destination prediction on the vehicle, is
4 inconsistent with *Kudo*'s disclosure.

5 But I'll refer you to slide 65 to demonstrate that this simply isn't the
6 case. *Kudo* 325 specifically contemplates implementation of a remote
7 history database; that's on the left excerpts of slide 65. And it also explicitly
8 contemplates that only parts of the system's functionality can be
9 implemented at the server, so that is *Kudo* 325 tells us that we can have this
10 split functionality that the petition uses to address claim 10.

11 So if there are no further questions, I'll stop there and I'll ask that we
12 please be able to reserve the remainder of our time for rebuttals, if that's
13 okay. Thanks very much, Your Honor, for your attention.

14 JUDGE DOUGAL: Thank you, Ms. DeVries.

15 Mr. Herman, whenever you are ready.

16 MR. HERMAN: One moment, Your Honors. Good morning, Your
17 Honors. We're here today to discuss the '002 patent. And I'll begin my
18 presentation today the same way I began the discussion of the '399 patent
19 last week with a reminder that the '002 patent, like any patent, is defined by
20 its claims. This is important because Petitioner once again asked the Board
21 to engage in the same type of erroneous analysis it presented for others of
22 Patent Owner's patents. Rather than focusing on the claims, it repeatedly
23 points to a single embodiment in the specification.

24 According to Petitioner, because it found one embodiment in the
25 specification that sounds remotely like its prior art, the claims must be
26 obvious. But this is not how claims are construed, and it is not how

1 unpatentability is shown. Indeed, the various arguments Petitioner is
2 making across the proceedings addressing Patent Owner's, various patents
3 which all share a specification, serves to highlight the issue with this.

4 So last week, Petitioner told the Board that figure 5 is the most
5 important part of the specification. And because that figure is in the
6 specification, Petitioner argued that the '399 patent claims must embrace the
7 prior art. But according to Petitioner today, figure 5 is no longer the most
8 important part of the patent. Now it's figures 3A and 3B that are most
9 important. Petitioner is pointing to these different specification
10 embodiments, which, again, are all present in the same shared specification
11 for one reason and one reason only: they sound like they're prior art.

12 They're using specification embodiments to negate claim limitations,
13 to stretch and distort the claims, and deprive the claims of meaning. They're
14 using specification embodiments to improperly analogize the claims to the
15 prior art. This is no more appropriate here than it was for the '399 patent.

16 The '002 patent includes a lengthy specification that discloses many
17 different aspects of a vehicle optimization system. The claims embrace one
18 specific aspect. So the mere fact that the Petitioner has found something in
19 the specification that sounds like its prior art is entirely irrelevant. The
20 specification also discusses the very functionality the claims require. That's
21 why I'm going to point Your Honors to the specification today, not because
22 the specification redefines the claim terms in a way that departs from their
23 plain and ordinary meaning. The claims use readily understandable
24 language and can be afforded their plain and ordinary meanings.

25 I'm pointing you to the specification not because it's necessary for
26 claim construction, but because it shows the fundamental flaw with

1 Petitioner's approach. There is not just one embodiment in the '002 patents
2 that must necessarily be within the claim scope. There are many
3 embodiments, and Petitioner is focused on the wrong one, an embodiment
4 that just doesn't do what the claims require.

5 Moreover, the mere fact that Petitioner's view of the most important
6 embodiment in the specification changes by the day, it was one thing last
7 week, a different thing this morning, and will be yet another different thing
8 this afternoon, should tell Your Honors everything you need to know about
9 Petitioner's positions. They ignore the claims. Instead they invite error with
10 the specification to prior art comparison. There is no legal principle that
11 says that every single embodiment within the four corners of the
12 specification must necessarily be embraced by the claims. So this repeated
13 effort to analogize the specification with the prior art, with a focus on a
14 different portion of the specification every time, is simply error.

15 So now I'd like to turn to slide 2 of Patent Owner's demonstratives.
16 What is the '002 patent as claimed actually about? As shown in the
17 specification excerpt on this slide, the patent recognizes a problem with the
18 prior art. In the prior art, traditional cruise control devices employ what the
19 patent calls a set velocity as the vehicle moves from point to point to point.
20 The vehicle does not, however, account for the different terrain or conditions
21 that it is moving through.

22 Turning to slide 3, this slide summarizes the '002 patent inventive
23 solution. A vehicle includes what is called a "power management system."
24 The system receives various inputs about the vehicle and uses those inputs to
25 optimize the power applied to the vehicle. So one of those inputs, as shown

1 by the first red underlining towards the top of the slide, is information about
2 the route.

3 Further, as shown by the bottom callout on the slide, the '002 patent
4 explains that the received route can be broken up into segments. According
5 to the patents, the more segments the route is divided into, the better the
6 optimization calculations. So this is the focus of the '002 how the system
7 goes about determining the route, and obtaining information about the
8 segments or pieces of that route as is needed to properly optimize the applied
9 power to the vehicle.

10 Turning on to slide 4, this is all reflected in the claims. Claim 1 of
11 the '002 patent is reproduced on this slide. The claim is directed to a power
12 management device. The claim first references a sensor interface that
13 received vehicle data. Note that that data is collected during operation. It's
14 not historical data.

15 Next, the claim references a memory that stores the collected sensor
16 data about vehicle operation. The following claim limit references a
17 processor that operates to predict the vehicle destination. To do so, it
18 considers patterns in the stored vehicle operation sensor data along with
19 historical data, and the final lengthy limitation explains what that historical
20 data must be. Per the claims, the historical data is not just individual points
21 along a vehicle route. Instead, it must be both data regarding multiple route
22 segments and data regarding multiple sequences of route segments. And
23 you see that in the final two bits of highlighting on the slide. Those
24 limitations are the focus of the party's dispute here.

25 So I'll turn on to slide 6. So slide 6, what's missing from the prior
26 art? First, Patent Owner submits that there is no teaching of a system that

1 stores and then uses the claimed data regarding route segments for purposes
2 of predicting a vehicle destination. So for this particular limitation,
3 Petitioner points only to *Kudo 325*. But *Kudo 325* stores only points through
4 which the vehicle is traveled. It does not store any data regarding route
5 segments or data regarding sequences of route segments. And I'll explain
6 now why that's the case.

7 So, turning on to slide 7, I'll begin my discussion by talking about
8 the meaning of the term "route segment" in the '002 patent. Again, as I've
9 noted, the claim language is clear in its face. A route segment is simply a
10 portion of the path a vehicle is following from its current destination to its
11 final or predicted intermediate destination. So why am I pointing you to the
12 specification here? Because Petitioner is trying to twist and mutate the plain
13 meaning of route segment. Rather than affording it its plain meaning, it
14 wants the term to more broadly embrace something akin to what is shown in
15 figures 3A and 3B, a collection of individual points or destinations standing
16 alone with no information at all about how the vehicle travels between the
17 points.

18 So I'm pointing you to the specification here to show that it does not
19 use the term "route segments" in the same unusual and overbroad way that
20 Petitioner does. Instead, the specification uses the term "route segment" in
21 its ordinary sense to refer to portions of a route, and you can see examples of
22 that on this slide. As shown, a route segment is a portion or a piece of a
23 route. You get a route segment by breaking the overall route into pieces.
24 Turning to slide --

25 JUDGE DOUGAL: Counsel?

26 MR. HERMAN: Yes?

1 JUDGE DOUGAL: I totally understand and I agree with what you're
2 saying about what a route segment is. The problem I have is the claim
3 doesn't say recording the entirety of a route segment or taking a data sample
4 every two seconds as you drive along. It very broadly says "data regarding."
5 So I don't understand why something that's so broadly worded like "data
6 regarding" requires a more finer point or additional data points in the
7 beginning and ending of a route segment. Could you explain that to me?

8 MR. HERMAN: Sure, Your Honor. So it's Patent Owner's view that
9 that particular claim limitation and that particular claim verbiage, data
10 regarding multiple route segments and data regarding multiple sequences of
11 route segments, requires at the very least that you be able to identify the
12 route segments. So the data must be sufficient to distinguish one route
13 segment from another. It is not enough to just collect data as you travel
14 along a route segment and store that if that data is unable to distinguish one
15 route segment from another.

16 If the claim required only that, simply storing data that was collected
17 as a vehicle traveled along a route, it would have said so. In fact, it says that
18 at the beginning of the claim. The beginning of the claim, the claim
19 references a memory configured to store sensor data samples for different
20 points in time along a route segment traveled by said vehicle. So the claim
21 knows how to say when it wants only to collect data that's -- only to store
22 data that's collected as the vehicle travels along.

23 But when you get to the end of the claim, the claim requires
24 something else. It requires something more. It requires data regarding
25 multiple route segments and data regarding multiple sequences of route
26 segments. And that's referring to the path the vehicle traveled, either the

1 route segment path or the series of route segments that form a sequence, that
2 path. So by referring data regarding --

3 JUDGE MELVIN: Wait. I have a question. This is Judge Melvin. If
4 I understand you correctly, you're saying that "along a route segment" is
5 broader than "regarding a route segment." Is that right?

6 MR. HERMAN: So what I'm saying is that collecting data along a
7 route segment. So when you were traveling along the route segment and
8 collecting data that does not necessarily identify and characterize that route
9 segment, that is different from data regarding multiple route segments or
10 data regarding multiple sequences of route segments. To be data regarding
11 multiple route segments, you need to actually identify what the route
12 segment is. That's the fundamental requirement to be data regarding
13 multiple route segments. You need to characterize the route segment.

14 JUDGE MELVIN: Yeah. And, well, I understand that's your
15 position. I'm trying to understand what claim language would counsel in
16 favor of that position. And it seems that the difference between those two
17 phrases is, one, "along" versus "regarding" and, two, that the second -- the
18 regarding phrase -- involves multiple route segments. So which is it? Is it
19 that there are multiple route segments or is it that "regarding" is more
20 specific than "along"?

21 MR. HERMAN: I think it's both of those things, Your Honor.

22 JUDGE MELVIN: You do, huh?

23 MR. HERMAN: Yes, "along" does not necessarily require data that
24 characterizes the route segment. It just explains when the data is collected.
25 But the word "regarding" necessitates that the data actually identify the route
26 segments in question. And it's Patent Owner's view, when you read that

1 entire limitation in context, that final limitation, it refers to both data
2 regarding multiple routes segments and data regarding multiple sequences of
3 route segments. And in particular, the word "sequence" there makes it plain
4 that the claim is referring to past information, not just information that's
5 collected while you travel route segments, but information that does not
6 allow you to identify what those route segments or the sequence of those
7 route segments are.

8 So, turning to slide 9. Respectfully, *Kudo 325* does not store any
9 such data regarding multiple route segments or multiple sequences of route
10 segments. Slide 9 includes figure 5 of *Kudo 325*. This figure shows *Kudo*
11 *325* storage of what it calls historical transition state information. And this
12 is the only thing that Petitioner pointed to as corresponding to the claimed
13 data regarding multiple route segments and data regarding multiple
14 sequences of route segments.

15 *Kudo 325* calls the circles in these figures nodes. According to
16 Petitioner, the path between these nodes are the claimed route segments.
17 You can see that highlighted in green on the slide. Those green annotations
18 are Petitioner's. They obviously were not present in *Kudo 325*.

19 So, turning to slide 10, *Kudo 325* does not, however, actually store
20 any information about the path the vehicle traveled or the sequence of path
21 segments that the vehicle traveled. No information is stored about the
22 vehicle's overall route and no information is stored about the portions of that
23 route. And respectfully, it's Patent Owner's view that that is exactly what the
24 claims here require.

25 The claims again, do not say that it is enough to just collect data
26 along a route or along a route segment. Instead, the data must be regarding

1 multiple route segments and regarding multiple sequences of route
2 segments. And as I've noted, that requires that the data at the very least
3 identify the historically traveled route segments.

4 So what does *Kudo 325* store in its transition state information in
5 figure 5? Only the points through which the vehicle traveled. And you see
6 that in paragraph 93 from *Kudo 325* on slide 10. As explained, *Kudo 325*
7 stores a collection of nodes arranged in a tree structure. The nodes are
8 intersections. Landmarks are areas that the vehicle passed through at
9 particular times.

10 Turning on to slide 11, slide 11 similarly explains that the stored
11 nodes are simply intersections, landmarks, and areas. Further, as shown by
12 the bottom callout, each intersection can be a 10-meter range around a single
13 point. This is what *Kudo 325* stores in the transition state data shown in
14 figure 5, a collection of intersections, landmarks, and areas through which
15 the vehicle passed. And each of these has been abstracted to, for instance, a
16 10-meter circle of area.

17 In addition to the points themselves, *Kudo 325* also stores the time
18 the vehicle passed through each intersection and area. And it also maintains
19 a list of what intersections, landmarks, or areas the vehicle went to next. But
20 that is it. Nothing else is stored. What is missing from this? Any
21 information regarding how the vehicle got from one intersection or one area
22 to another. No such path of travel information is stored.

23 Moving on to slide 12. In fact, not only does *Kudo 325* --

24 JUDGE DOUGAL: Counsel? Sorry, did you just say, and I think this
25 is correct from reading *Kudo*, at the node *Kudo* stores the information about
26 which node the vehicle traveled to next?

1 MR. HERMAN: That's --

2 JUDGE DOUGAL: So you have the --

3 MR. HERMAN: Yes, go ahead.

4 JUDGE DOUGAL: -- information. So basically, you have some
5 information about a route segment in -- not the entire -- you know, I know
6 you have your example of, you know, whether in a straight line or whether
7 you took the bypass around, but you know that it hit C7 and C9 next? Is that
8 correct?

9 MR. HERMAN: So at any particular node, *Kudo* scores the complete
10 list of all of the nodes to which it went to from that particular point, not just
11 one node. So, for instance, in figure 5 on slide 9, looking for instance at that
12 node L6 at the top left, that would include a very long list that would include
13 all of the other nodes that the vehicle ever went to from point L6. So it's not
14 specific to one place. It is generic to every place the vehicle went to from
15 L6. Does that answer Your Honor's question?

16 JUDGE DOUGAL: Yes.

17 MR. HERMAN: And as I'll get to in more detail, that does not tell
18 you anything about the particular path the vehicle has traveled. Effectively,
19 all *Kudo* does is say, this is where I started, this is where I ended up, it does
20 not matter what path I took. There could be 100 paths between where I
21 started and where I ended up. I'm not going to say which one. I'm just
22 going to say this is where I started and this is where I ended.

23 So, moving on to slide 12. In fact, not only does *Kudo* 325 does not
24 store path information, but it explains that it purposely ignores the vehicle's
25 travel path. It purposely does not store information from which different
26 paths of travel could be distinguished. This slide includes an example of

1 that. So figure 30(a) is reproduced on the right. The figure provides an
2 example road network with three labeled intersections, A, B, and C. The
3 vehicle passes through all intersections at various points in time. But *Kudo*
4 325 says it stores only intersections A and C as nodes. It does not store
5 intermediate intersection B.

6 Why? Because the vehicle always does the same thing at intersection
7 B. As shown from the textual passage on the left, the user has traveled in
8 only one direction. Put another way, *Kudo 325's* transition state data only
9 stores intersections where the vehicle has done something differently, i.e.,
10 gone in two different places or two different directions. This makes logical
11 sense. The transition state data is simply a decision tree, so only those
12 points where different decisions are made are stored.

13 Turning on to slide 13, not only does *Kudo 325* ignore intersections
14 where the vehicle does not make different decisions, but it also will only
15 store an intersection as a node if the vehicle frequently turns at that
16 intersection. Infrequent turns will not result in an intersection being
17 designated as a node. And you see that in the excerpt from *Kudo 325* on this
18 slide. According to *Kudo*, only nodes that appear with a frequency
19 exceeding a predetermined value are stored. Why does *Kudo* not store all
20 nodes as shown by the excerpt here? This increases the retrieval efficiency
21 by reducing the size of the data to be retrieved.

22 Moving on to slide 14.

23 JUDGE DOUGAL: Counsel?

24 MR. HERMAN: Yes.

25 JUDGE DOUGAL: Judge Dougal again. So I struggle with this
26 thought a little bit as to what exactly this requires. You know, like this, you

1 know, exclude all digital sensors that take samples. Those have to be a
2 completely, you know -- or all information along the segment, you know,
3 like other driver -- other information on the segment could be the driver,
4 right? So, like, if I stop in between two intersections, my kid gets in because
5 he's learning to drive, you know, does the system have to be able to record
6 all new information that comes up along a segment? You know, anytime
7 you pass a driveway, you know, a street you could turn on, like what
8 requires, you know, such detail? And like, you know, what -- I'm just
9 struggling as to how far this goes, right, as to what this excludes and what
10 level of detail is required for your construction.

11 MR. HERMAN: So, Your Honor, the only information that is
12 required is some information that identifies the segments and the sequences
13 of segments. So the path and the sequences of paths that the vehicles
14 followed in the path, that's all that's required. So that's all that needs to be in
15 the historical information. Everything else is extra and can be there.

16 So you can also store, if you're so inclined, information about the
17 driver who drove on this particular segment. You can also store, if you're so
18 inclined, information about the time that the vehicle traversed this particular
19 segment. You can also store, if you're so inclined, information about how
20 many times the vehicle traversed this particular segment. But the
21 fundamental thing that's required is the segment information.

22 JUDGE DOUGAL: Doesn't the data regarding the multiple segments,
23 I mean, can't it be the driver? Isn't that the data -- one of the data points that
24 can be recorded to satisfy this limitation?

25 MR. HERMAN: So, Your Honor, if you were to store just the driver,
26 so Patrick Herman, that's all you store in the database, right? Then that

1 would not satisfy the claims because just storing me, my name, is not data
2 regarding the route segment because I am not associated with a particular
3 route segment. To satisfy the claims, you need to have some data storage
4 that identifies the route segment as a fundamental requirement. Otherwise,
5 the data you're storing is not regarding a route segment. You're just storing
6 the driver. And that's not what the claim says, just store the driver, just store
7 the time, or just store intersection A. It requires data regarding a route
8 segment.

9 So the fundamental requirement is the data needs to identify the
10 different route segments and then whatever other data you want to store in
11 connection with those route segments is fine. But that fundamental data
12 needs to be there. The data that's able to distinguish one route segment from
13 another.

14 JUDGE DOUGAL: Okay. That makes sense. So, but going back to
15 my, I guess, more fundamental question, what level of detail is required for
16 this segment? So you're arguing that you have to identify each turn off or
17 potential route you took in between two different points. But it's a question
18 where, how far does that go? You know, like if I'm going along a straight
19 path, but I swerve out of the way, right, does it have to record that I swerved
20 because it wasn't a straight path? You know, like why this fine a detail of an
21 intersection versus, you know, a finer -- even finer point than this, right?
22 Like I turned into 7-Eleven and I turned back onto the road. You know, like
23 what -- how do we determine, you know, what -- how fine a point we have
24 to put on this determine it's a route segment?

25 MR. HERMAN: So maybe an analogy will help with this. But what
26 *Kudo* essentially does is it stores information like this, that I drove from

1 Baltimore to Washington. That's all it says. But the claims here require
2 more than that. The claims require storing information that says I drove
3 from Baltimore to Washington taking the Baltimore-Washington Parkway.
4 That's the information. You need the information about the path you took.
5 You don't need to store information about every zig and zag you took along
6 that particular path, but you need some level of path information. You need
7 to be able to distinguish between the different possible paths between
8 destination A and destination B. And that's what the claims require and
9 that's what's missing in the prior art.

10 JUDGE DOUGAL: But when *Kudo* gives you -- it does record, you
11 know, I started in Baltimore and ended up in Washington, D.C., but it also
12 gives you landmarks and intersections along the way. Not printing out all of
13 them -- or not necessarily all of them. I think Petitioner's arguing that they
14 could record every intersection and landmark along the way. So it is
15 recording the path, the nodes, right, that it took, but maybe not all paths or
16 all nodes or all intersections along the way.

17 MR. HERMAN: So that argument you're referring to, Your Honor,
18 where every single intersection along the way is recorded, I'll get to that in a
19 moment. It's Patent Owner's view that that's an improper new argument, that
20 decision are made in reply that's supported only by attorney argument and
21 not evidence. But perhaps it will be useful to look at Patent Owner's
22 demonstrative slide 15, because I think this helps elucidate this particular
23 point that I'm trying to make here.

24 So slide 15 includes an annotated version of figure 5. And again,
25 figure 5 is the transition state data that Petitioner says corresponds to the
26 types of historical data that the claims require. And what does Petitioner

1 say? It says that knowing the start and end of a route segment, so like the L6
2 and the C9 on this particular figure, is enough to be data regarding multiple
3 route segments. And it's not. And why is that? For the same reason that
4 simply saying, like my analogy, that I started in Philadelphia and traveled to
5 Washington, D.C., it tells you nothing about the actual route that was taken.
6 Yes, you know the start and the end destination, but you know nothing about
7 the path in between. That's what a route is, it's the particular path the vehicle
8 takes from point A to point B. So just like a start and an end with no path in
9 between says nothing about a route, a start and an end with no in between
10 says nothing about a route segment.

11 So the time information that *Kudo 325* stores also does not convert
12 its nodes into route segment information. And the annotations that I've
13 added to figure 5 on the slide actually show and exhibit this as shown by the
14 yellow and red highlighting on the slide. The stored data shows that the
15 vehicle passed through node L6 on both June 3rd and July 28th. Sorry, that's
16 both the yellow and the red highlighting show that. And the yellow and the
17 red highlighting also show that the vehicle passed through node C9 on the
18 same dates.

19 Now, this figure shows that it took only three minutes to make this
20 trip on June 3rd, but the trip took five minutes on July 28th. The issue is
21 that given that data stored, it is impossible to tell if this difference in travel
22 time resulted from taking a different route, so taking a different series of
23 roads, getting from point L6 to C9, or if there was traffic, weather problems,
24 slower driving, or something else. So from the data, the route could be the
25 same or the route could be different. *Kudo 325* does not care. It does not
26 store information that indicates this. Instead, it stores only intersections with

1 no way to tell the path that's taken from one intersection to another. And it
2 does that on purpose because it wants to simplify its ability to determine
3 what the final destination is. But this missing information is exactly what
4 the '002 patents claims require. The claims require data regarding multiple
5 route segments.

6 Now, turning on to slide 16, I'll finish up my discussion of the
7 independent claims by pointing out that Petitioner has attempted to interject
8 an untimely and what Patent Owner views as an inappropriate new argument
9 in reply. In its petition, Petitioner pointed to *Kudo 325* node judgment
10 section and the data in figure 5 when explaining why the claims are satisfied,
11 and you see that in yellow highlighted excerpts at the top of slide 16. The
12 node judgment section is the part of *Kudo 325* that decides whether to store
13 an intersection as a node or ignore it. Again, this node judgment section
14 doesn't store intersections where the vehicle doesn't turn, and it doesn't store
15 intersections where the vehicle infrequently turns. So this is the type of data
16 that's shown in figure 5. It's incomplete data where only some but not all
17 intersections of the vehicle passes are stored as nos. And this is all the
18 Petitioner pointed to in his petition.

19 Then in reply, Petitioner changed course. In reply it said that it is
20 relying on additional functionality instead of just pointing to figure 5 -- at
21 figure 5, incomplete, no storage. It says that *Kudos 325* brought it up such
22 that it could be configured to store all intersections through which a vehicle
23 passes. And Patent Owner submits that there are layers of issues with this.

24 First, it is a new argument that relies on materially different
25 functionality than the petition to satisfy a Petitioner's burden. That was
26 improper. Petitioner did not argue in the petition that *Kudo 325* operates to

1 store every single intersection it passes. It relies only on figure 5, which
2 doesn't do this.

3 Second, the mere fact that *Kudo 325* could be implemented in an
4 unusual way does not show obviousness. Petitioner needed to explain why
5 this would have actually been obvious and it did not do so.

6 Third, this entire argument is supported only by attorney statements.
7 There is no actual evidence and that does not and cannot carry Petitioner's
8 burden.

9 Moving on to slide 17, I'll now move on to discuss certain of the '002
10 patents dependent claims, starting with claims 2 and 3.

11 Turning to slide 18 as shown on this slide, these claims require that
12 the vehicle receive and then store in its memory for later analysis map
13 coordinates. And Your Honors asked if there's anything in the '002 patent
14 that discusses what these map coordinates are, and Patent Owner submits
15 that there is, but the patent -- the specification specifically refers to map
16 coordinates, and it specifically refers to the collection of GPS information.
17 And for instance, in column 8, in a paragraph spanning about lines 7 through
18 21, the specification explains that GPS information can be correlated with
19 geographical and topographical information on a map.

20 So by referring to map coordinates, the patent is plainly referring to
21 the types of longitude and latitude information that's collected by GPS. And,
22 in fact, that's also how the prior art, *Kudo 325*, refers to map coordinates.

23 So, turning on to slide 19, this is not what *Kudo 325* stores, and you
24 can see that on slide 19. What does *Kudo 325* store? It stores only nodes.
25 The stored nodes are not map coordinates. They are a letter which indicates
26 whether the node is an intersection, a landmark, or an area, and an indexing

1 number. Further, each intersection, landmark, or area is not correlated with
2 a single coordinate on a map. The intersection is a 10-meter area, an area
3 node is a 1-kilometer area of coordinates, and so on. Petitioner argues that
4 this doesn't matter. It argues that storing nodes is effectively the same as
5 storing map coordinates. It argues that nodes are simply a different form of
6 data in comparison to map coordinates. But the sole point of claims 2 and 3
7 is to limit the type of data that is stored to one particular kind: map
8 coordinates. Arguing that you can satisfy the claim without actually storing
9 map coordinates renders claims 2 and 3 effectively meaningless.

10 Importantly, this is not a case where a Petitioner argued that it would
11 have been obvious to modify *Kudo 325* to store map coordinates instead of
12 nodes. Instead, it argues only that the form of data storage doesn't matter for
13 purposes of the claims. Respectfully, this cannot be squared with claims 2
14 and 3. In these claims, the form of stored data does matter. You can't
15 satisfy the claims without storing the right kind of data, map coordinates.
16 And that isn't what *Kudo 325* stores.

17 Turning on to slide 20, next, the art also does not teach what claim
18 10 requires. So slide 21 reproduces claims 8 and 10.

19 JUDGE DOUGAL: Counsel? Sorry. Let's pause there on claims 2
20 and 3 for a second. So *Kudo* gets the GPS signal, right? That's not
21 contested. It's contested that when *Kudo* correlates that signal with the node,
22 that the node, even though it refers to a general area on a map, right, that's
23 not specific enough to be a map coordinate or the map coordinate has to be
24 latitude and longitude GPS position? Let me just go in a little bit more detail
25 as to why the kind of the general information -- if I'm -- correct me if I'm
26 wrong, a node could include a latitude and longitude position, but maybe not

1 the exact position of -- that the vehicle is currently traveling. Right? I think
2 I saw that in the briefing. So just give me a little more detail on that, your
3 argument.

4 MR. HERMAN: So, Your Honor, the only information that Petitioner
5 points to as corresponding to telemetry data, which is what claims 2 and 3
6 require to be stored, are the node IDs. And you can see that on slide 58 of
7 their demonstratives. They label in the middle of figure 1 of *Kudo 325* the
8 node ID, and they identify that as the telemetry data that claims 2 and 3
9 require. And claims 2 and 3 require a specific type of telemetry data: map
10 coordinates, so a latitude and longitude position on a map, one position on a
11 map.

12 The issue with identifying the node ID as a map coordinate is that it
13 is no longer a map coordinate. Yes, *Kudo 325* includes a GPS in this
14 vehicle. And yes, it collects GPS information as the vehicle travels along.
15 But then it sends that GPS information to a remote database and that remote
16 database turns that GPS information, which is a map coordinate, into
17 something else. And what's the something else that it turns it into? A letter-
18 number combination that represents an intersection, an area, or a landmark,
19 and each of those things, the intersection, the area, and the landmark, are not
20 a map coordinate. Instead, they are a range of different coordinates. Right?
21 So they are not one precise area on a map, which is what the claims here
22 require. They are a range of areas representing the --

23 JUDGE MELVIN: How precise do the claims require a map
24 coordinate to be?

25 MR. HERMAN: The claim just says map coordinate, so it would
26 need to be --

1 JUDGE MELVIN: Right.

2 MR. HERMAN: -- latitude and longitude, but not an intersection or
3 West Virginia or the state capital of New York. But it needs to be more
4 specific than that.

5 JUDGE MELVIN: So it has to be more specific than the prior art, but
6 nothing actually specific. Is that right?

7 MR. HERMAN: It needs to be a latitude and longitude, Your Honor.
8 And that's what --

9 JUDGE MELVIN: Well, with how much precision? Latitude and
10 longitude is a varying degree of precision, is it not?

11 MR. HERMAN: So depending upon how many decimal points you
12 take it to, yes, Your Honor.

13 JUDGE MELVIN: That is one way to express a latitude and
14 longitude. I imagine others, but, yeah, they're not as good.

15 MR. HERMAN: The point here, Your Honor, is that the claims
16 require storage of a specific type of information. They require the storage of
17 map coordinates. And all that *Kudo* (inaudible) is a lens --

18 JUDGE MELVIN: So it's not about the precision. Is that right?

19 MR. HERMAN: It's about the form of data that's stored. Right. You
20 need to actually store a map coordinate.

21 So I'll give you an analogy. Imagine your child's school instructs
22 you and says you have to write your address on your child's backpack, but
23 that's the school's rule. Instead of writing the address on the child's
24 backpack, you write the number 2 and a message that says, see the piece of
25 paper that's stored in my home with the address on it? But you have not
26 followed the rule. You've not written the right information on the backpack.

1 But that's the issue with *Kudo 325* here. It has not stored the map
2 coordinates. It has stored a secret code that is different than the map
3 coordinates. It stored a letter and a number. The claims here require storing
4 map coordinates, not something else.

5 JUDGE MELVIN: So map coordinates is a phrase that means, you
6 know, information that is universally understood to correspond to latitude
7 and longitude. Is that right?

8 MR. HERMAN: Yes, Your Honor. I think that would be a fair
9 characterization. And that's certainly how *Kudo 325* uses the term.

10 JUDGE MELVIN: Uses the term "map coordinates"?

11 MR. HERMAN: It refers to latitude and longitude information as
12 reflecting coordinates on the map. And then it converts that coordinate
13 information into node IDs, which is something different. But the node IDs
14 are not coordinates on a map. They are effectively *Kudo 325* code that it
15 uses for purposes of reducing the amount of data that it's storing.

16 Are there further questions on claim 2 and 3? If not, I'll move on to
17 claim 10.

18 So, turning on to slide 21. Slide 21 reproduces claims 8 and 10. As
19 shown claim 10 depends on claim 1 through claim 8. Together, both of
20 these claims require transmission of two different things to a remote
21 database: number one, a predicted destination and, number two, the
22 collected sensor data samples.

23 Turning to slide 22, Petitioner points to the paragraph that's
24 reproduced on this slide in *Kudo 325* in connection with this limitation.
25 Here *Kudo 325* notes that it transmits all the data it collects as it drives along
26 to a remote server to allow that remote server instead of the vehicle, to

1 predict the vehicle's destination. Petitioner then makes two erroneous
2 arguments.

3 First, it argues that this teaches claim 8 and 10 because when the
4 vehicle eventually reaches its destination, that destination will be sent to the
5 server. Petitioner argues that this means that *Kudo 325* transmits both the
6 data it collects since it travels and the predicted destination. Respectfully, it
7 does not. Transmitting the vehicle's actual location upon arrival at its
8 destination is not transmitting a predicted destination. The destination is no
9 longer predicted once you've arrived at it. It is now the actual destination.
10 The claims here require transmission of a predicted destination, not just the
11 actual destination of the vehicle.

12 Second, Petitioner argues that a person having ordinary skill in the
13 art could slice and dice the passage that's shown on this slide by sending all
14 data to the remote server while still doing prediction on the vehicle and then,
15 for some reason, sending the prediction separately to the remote server. But
16 this isn't what *Kudo 325* says. *Kudo 325* has two options: either it does the
17 prediction on the vehicle and keeps the data collected during travel on the
18 vehicle to allow the prediction to be done there or it sends the data to a
19 remote database to let the database do the prediction.

20 The hybrid proposal that Petitioner makes is found nowhere in *Kudo*
21 *325* and it makes no sense. *Kudo 325* plainly wants the data collected during
22 driving to be stored by the same device doing the prediction, not a different
23 one. The claims here, however, require both transmission of collected data
24 to a remote database and performance of prediction on the vehicle with
25 transmission of that prediction off the vehicle. This is something that simply
26 is not taught by the prior art here.

1 With that, unless there are further questions, I will preserve my
2 remaining time for rebuttal.

3 JUDGE DOUGAL: Okay. Thank you. All right, Petitioner.

4 MR. DEVOTO: You're ready?

5 JUDGE DOUGAL: I'd say you've got about 21 minutes.

6 MR. DEVOTO: Wonderful.

7 JUDGE DOUGAL: And I do want to note that since your time is split
8 up between the two of you, just want to make sure I do want to talk with Ms.
9 DeVries about claims 2 and 3.

10 MR. DEVOTO: Would it be possible then, Your Honors, for you to
11 give me a signal when we have five minutes left in the rebuttal? Would that
12 be --

13 JUDGE DOUGAL: Can you see the time? The clock on --

14 MR. DEVOTO: I'm all set. I'll be able to track it myself. Thank you
15 so much.

16 JUDGE DOUGAL: Thank you.

17 MR. DEVOTO: So I'd like to begin then, Your Honor. I want to
18 address one of the framings that Opposing Counsel advanced at the very
19 beginning of his presentation. He argued that -- you know, he asserted that
20 it was kind of odd that we were shifting from pointing to certain figures in
21 the specification, say here at this '002 patent proceeding versus what
22 happened at the '399 patent proceeding earlier. Of course, we all know that
23 claims are always interpreted in light of the specification. So it's entirely
24 appropriate to look at the specification in order to understand the breadth,
25 the leaps and bounds of what a claim was contemplating.

1 And in this particular case, Your Honors, unlike, say, the claims of
2 the '399 patent, we know that the claims of the '002 patent are really focused
3 on destination prediction. And when you look at the spec and you look for
4 the stuff that talks about, hey, using historical data to predict the driver's
5 destination, you find that it really is focused in only one area of the
6 specification, and that's the area directed to operation 201 of figure 2. So
7 figure 2 shows you kind of a process flow diagram of this whole system
8 that's described in the aggregate omnibus specification. And operation 201,
9 which is to determine the route operation, is really the only part of that
10 specification that specifically teaches and is indeed the most relevant part
11 regarding how you go about predicting a travel destination, a driver's travel
12 destination, based on historical data. And of course, given this, it makes
13 perfect sense for us to focus on that part, and hence on figures 3A and 3B,
14 when we're trying to understand the meaning and scope of these claims.

15 Moreover, you don't actually have to take my word for it, Your
16 Honors. The Patent Owner itself pointed to figures -- to text corresponding
17 to figures 3A and 3B and the 10 junctions on pages 4 and 7 of its server
18 plug. So to argue that we are somehow running afoul and improperly
19 bringing the spec into it, that's just not correct. It's not a proper
20 characterization. We -- as we did, we explained our construction for it. We
21 explained why it's inconsistent with the spec, as we should. And then what
22 we did is we explained that their arguments are not supported by the
23 underlying spec. They're really trying to draw distinctions that really are not
24 found in the underlying spec, and that's why we referenced that spec.

25 In fact, Your Honors, we showed that the *Kudo 325* reference
26 satisfies the historical data limitation in the exact same way that it is actually

1 supported by the '002 patent specification, with the data records of the
2 accumulation Travel History database shown in figure 3A of *Kudo 325*
3 characterizing routes in the same exact way as the '002 patent itself
4 characterizes routes in its 10 trip example, and with the transition state
5 information shown in figure 5 of *Kudo 325* characterizing routes in a single
6 schematic in the same way that the '002 patent itself characterizes routes in a
7 single schematic route shown in figure 3A of the '002 patent.

8 Now, given this, Your Honors, it really isn't that surprising that to
9 distinguish *Kudo 325* the Patent Owner really is really applying four
10 different tactics. First, it conjures distinctions between the recited historical
11 data and *Kudo 325*'s disclosure, which are not supported by the underlying
12 '002 patent, and they really are based on a mischaracterization of the '002
13 patent, as I explained in detail during my earlier presentation. Second, it
14 myopically focuses on a subset of *Kudo 325*'s teachings, often
15 mischaracterizing them while turning a blind eye to the broader teachings in
16 the reference. Third, it straw-mans many of our positions, making them
17 easier to contend with. And fourth, it argues new arguments and other
18 procedural deficiencies largely when we attempt to explain the Patent
19 Owner's deficiencies with respect to these first three tactics. All of these
20 tactics, Your Honors, you should see through them and they should be
21 rejected.

22 For example, one of the procedural arguments they make is that we
23 should not be allowed to point to other sections that weren't directly cited in
24 the petition for arguing that the *Kudo 325* reference still satisfies the route
25 segment features of the historical data limitation under their improperly and
26 unjustifiably narrow and, frankly, unforeseeably narrow claim construction

1 of this feature. But we know from the Federal Circuit that it's entirely
2 appropriate for us to be able to do that to respond -- to submit a new
3 argument in response to an entirely new construction where -- and you'll
4 notice here, we really didn't change any of our mappings in this new
5 construction. We simply pointed to the part of the *Kudo 325* that shows that
6 this alleged limitation drawn by the Patent Owner that suggested, oh, *Kudo*
7 *325* doesn't meet this, is not a limitation. So we're really responding to them
8 saying, oh, *Kudo 325* teaching is limited to ignoring pass through
9 intersections. And we're responding, no, it's not. Here's the sentence that
10 shows that it's not. Entirely appropriate type of new argument in response to
11 a new construction.

12 Now, a couple -- I would like to touch upon a couple additional points
13 as well, Your Honors, that he said. First, he said that *Kudo 325* purposefully
14 ignores the route taken and instead focuses exclusively on start and end
15 positions. In doing so, it fails to store data regarding route segments. Your
16 Honor, this is plainly false.

17 For example, *Kudo 325* has to account for the intermediate nodes
18 and, therefore, corresponding route segments connecting a starting node in
19 order to identify the possible candidate destination nodes for its destination
20 prediction. And this information is stored in two locations. First in the
21 individual trip data records in *Kudo's* history accumulation database and in
22 the stored transition state information shown in figure 5 of *Kudo 325*, which
23 is repeatedly accessed during the prediction process.

24 And on page 54 of our petition we identified both of these, not just
25 one. I know the Patent Owner wants to straw man us and say, no, you only
26 relied on the stored state information. That is plainly false. We relied on

1 both as alternative ways. Look no further than page 54 of our petition for
2 that.

3 Now, the Patent Owner also states that the prior art stores only data
4 relating to one-dimensional points which a vehicle passed and, therefore, is
5 indifferent to route or route segments the vehicle passed. This is inaccurate
6 as it does not store in isolation a bag of points. Instead, it stores points in a
7 particular sequence that the vehicle passed that the vehicle passed these
8 points on a trip. And this is exactly what is stored by the '002 patent itself
9 for its historical data.

10 Keep in mind, this is predicting a destination in response to historical
11 data that was stored. Look no further than '002 patent's own historical data
12 that was stored and the way it formats that data and the way it characterizes
13 that data. It characterizes in two different ways, but they're both the same
14 data. One as a series of junctions shown, for example, in the 10 TRIPS that
15 are shown in the '002 patent. It's just a series of junctions from a starting
16 location all the way to an ending junction, a sequence in series. Well, that's
17 exactly how the database, the travel history or accumulation history database
18 of *Kudo 325* stores its trips, its historical data.

19 Similarly, it also stores it as the figure 3A schematic route. Well,
20 that's no different than the figure 5 *Kudo 325* transition state information.
21 It's the same data just shown and they're organized in a different way
22 through consolidation of nodes, i.e., junctions in a sense, where the nodes
23 are just the junctions being consolidated into single nodes or single junctions
24 with multiple links between them to reflect and preserve the sequence of the
25 individual trips.

1 Now, the Patent Owner also states that if the stored data is unable to
2 distinguish between different route segments that it does not meet the claim.
3 This is inaccurate as the plain meaning of the claims do not demand data to
4 uniquely identify route segments. Instead they merely demand data
5 regarding the route segments. Moreover, the sequences of nodes in *Kudo*
6 325 is data regarding route segments in the same way that the '002 patent's
7 listing of 10 trips and organization of trips and a route schematic are data
8 regarding route segments.

9 They also say that *Kudo 325* stores only individual node IDs such as
10 intersections, landmarks, or areas through the vehicle that the vehicle was
11 passed through. Well, first, this fails to account for the full teachings of
12 *Kudo 325*, and second, it straw-mans our position.

13 Regarding the first, *Kudo 325* discloses not only individual node IDs,
14 but also discloses those node IDs in a temporal sequence that characterize
15 individual trips or routes in exactly the same manner that the '002 Penn
16 characterizes individual trips or routes using a sequence of junction IDs.

17 Regarding the second, that is the straw-manning of our position, we
18 pointed more broadly to the data stored in the accumulated travel history
19 database and in this transition state information which does not merely store
20 individual node IDs in isolation, but rather stores them in a particular
21 sequence representing different trips.

22 I think that may be all I wanted to say. Do Your Honors have any
23 questions for me?

24 Hearing none, I'll hand the rest of the rebuttal over to my -- to Ms.
25 DeVries. Thank you.

1 MS. DeVRIES: All right. Hello again, Your Honor. This is
2 Gretchen DeVries. I was hoping to just make two quick points on claims 2
3 and 3, and then of course, I'd be happy to answer any other questions that
4 you might have on those claims.

5 So first, I heard Patent Owner earlier indicate that map coordinates
6 are different from node IDs because of what sounds like a question of scale.
7 They suggested, for instance, that *Kudo 325* nodes might correspond to
8 Washington and Baltimore, and it sounds like in this context they believe
9 that the node IDs are simply too granular to represent the same underlying
10 physical reality as the corresponding coordinates. So if you could just take a
11 look at paragraph 87 of *Kudo 325*. This is giving you a specific example of
12 a vehicle trip. And this paragraph says that the vehicle passes through node
13 L6 at 8:05 a.m., and then it goes on to say that it passes through node C8 at
14 8:06 a.m. There's no way these two adjacent nodes are Washington and
15 Baltimore. They're local intersections.

16 And if you look, too, at paragraph 83 of *Kudo 325*, I think I
17 answered earlier to one of your questions by explaining that *Kudo 325* nodes
18 have a center and a range. Then I'd just like to clarify here the range as
19 given in paragraph 83 can be 10 meters. That's small. Again, we're not
20 talking about Washington and Baltimore. We're talking about regular
21 neighborhood intersections for these nodes.

22 The second thing I wanted to point out regarding map coordinates is
23 responsive to a question that you asked Patent Owner. You asked about how
24 map coordinates relate to GPS latitude-longitude coordinates. And I believe
25 the Patent Owner answered is that the map coordinates are defined as
26 latitude-longitude coordinates. I'll just note that certainly latitude and

1 longitude coordinates are an example of map coordinates, but we haven't
2 seen any evidence on this record that latitude and longitude coordinates are
3 necessarily the definition of map coordinates.

4 And actually, Patent Owner pointed to the '002 patents as column 8,
5 lines 7 through 21, to try to support their idea for the '002 patent use of maps
6 coordinates as distinguished from node IDs. And I'll just point out, Your
7 Honors, that the word "coordinate" is simply not in that paragraph. We've
8 done a word search. The '002 patent mentions map coordinates at column 5,
9 lines 35 to 38, in the context of destination prediction. So this is very close
10 to what we're talking about for these '002 patent claims. But there's no detail
11 here about how those math coordinates are used. That's the only relevant
12 instance we see of the term "map coordinates" in the '002 patents.

13 So, again, we're left back to the figures 3A to 3B description from
14 the '002 patents that we've already discussed to understand how map
15 coordinates are used in the context of this destination prediction. And so in
16 this context, I'll again remind you that box 307 of figure 3B gives us the best
17 understanding we can find about how GPS data, which might be coordinates,
18 appear to be converted to intersections for destination predictions, just as is
19 the case in *Kudo* 325.

20 Your Honors have any other questions about claims 2 and 3?

21 All right. I think that we are all set, so we will give back the rest of
22 our time. And I thank you very much for your attention, Your Honors.

23 JUDGE DOUGAL: Thank you, Counsel.

24 Patent Owner, whenever you'd like to begin.

25 MR. HERMAN: Thank you, Your Honors. The issue here is
26 straightforward. The claims require storing specific types of historical data

1 that includes data regarding multiple route segments and data regarding
2 multiple sequences of route segments. In other words, the data must be
3 about the path between the destinations the vehicle has taken in the past and
4 the sequences of paths that the vehicle has taken. That is what the term
5 "route segment" plainly means and plainly refers to.

6 Indeed, Petitioner agrees that a route segment is a piece of or a
7 portion of a route the vehicle has traveled. Yes, the '002 patent specification
8 includes an example where it considers what it calls "segment destinations,"
9 so points along a route when predicting a destination. But that embodiment
10 is not the totality of the claims here. As I've shown, the specification also
11 uses the phrase "route segment" repeatedly in the same way as the claims.

12 Again and again the specification explains that a route segment is a
13 portion or a part of the route that the vehicle is traveling from its current
14 location to its destination. So again, this highlights the issue with
15 Petitioner's approach to claim construction. It wants to abandon the plain
16 meaning of the claims and it wants to replace what the claims actually say,
17 which is one of the many embodiments in the specifications. It does that
18 with the independent claims and it also attempts to do that with the
19 dependent claims.

20 It wants to do that because the embodiments that it finds in the
21 specification, the limited embodiments that it points to, are more like the
22 prior art than the claims are. But that is not how claims are construed. You
23 don't force every single embodiment in the specification into the claim
24 scope. You don't compare specification embodiments to the prior art. And
25 you certainly don't do this when there are many embodiments, including
26 embodiments that actually do relate to the claims in the specification. The

1 claims control and the prior art here simply does not store the types of
2 information that the claims require.

3 So next, during its presentation, Petitioner showed you a slide where
4 it purports to list examples of data regarding route segments. The list
5 identified things such as dates and times the driver was at a particular route -
6 - or a particular node, who the driver was at a node, and the frequency the
7 driver arrives at particular nodes. The '002 patent does not say that that data
8 alone, without any indication whatsoever of the historical route segment to
9 which it corresponds, can be data regarding historical route segments. The
10 claims here require data regarding route segments, so there must be data
11 identifying the route segments themselves in the first instance, data that
12 identifies the segments traveled in the past.

13 While *Kudo 325* may collect point in time and driver data while the
14 vehicle drives along a route, it does not correlate that data with historical
15 route segments. Merely collecting data while driving along a route does not
16 automatically turn that data into data regarding route segments or data
17 regarding sequences of route segments. For data to be regarding route
18 segments, it must characterize the route segment or the path the vehicle
19 traveled in some way. You must be able to tell the route segment from the
20 data.

21 And the Petitioner itself appears to recognize that this is what it
22 means for data to be regarding a route segment. You can see that on slide 20
23 of its demonstratives. There, Petitioner quotes his own reply and says that
24 data is regarding a route segment if it characterizes the route segment.
25 That's the word that Petitioner itself chose to use, "characterize."

1 None of the data identified by Petitioner in *Kudo 325* does this.
2 Individual points say nothing about and do not characterize the path or any
3 portion of the path the vehicle is traveling. You can't tell the route traveled
4 from points. Who the driver was at a particular point says nothing about and
5 does not characterize the path or any portion of the path the vehicle traveled.
6 You can't tell the route travels from just the driver. The frequency the
7 vehicle passed a particular point says nothing about and does not
8 characterize the path the vehicle traveled. You can't tell the route or any
9 portion of the route travels from this information. And finally, a start and
10 endpoint says nothing about the path in between.

11 This path data, respectfully, is what the claims here require. So
12 Petitioner is proposing that you rewrite the claims by arguing that individual
13 point data and the type of data in *Kudo 325* should count. They are
14 removing the regarding route segments from the claims and replacing it with
15 something akin to just data collected as the vehicle traverses route segments.
16 As I've explained, that's not what the final limitation of the claim says. That
17 final limitation requires data regarding route segments, so the data must be
18 about and must characterize the route segments in some way. It is not
19 enough to simply collect data while traveling along a route. The collected
20 data must characterize, thus identify the different route segments that the
21 vehicle travels in the past.

22 Relatedly, the language of the claim itself plainly requires that the
23 collected data uniquely identify traveled route segments. Here, the claim
24 references both data regarding route segments and sequences of route
25 segments. As I've explained, this is referring to the path traveled and the
26 collection of paths traveled. So it is the path that is important, and it is data

1 about the path that at the very least must be stored. Merely collecting a
2 starting point and an end point, but no path is not enough because it tells you
3 nothing about the path or sequences of paths that were followed.

4 The same applies to time and driver information. These things
5 standing alone do not provide data regarding the path followed or the
6 sequences of paths followed. And that's what the claims require. *Kudos 325*
7 data does not do that. It does not do that because it provides no information
8 about the segments that were actually traveled. One route segment cannot
9 be distinguished from another from the data stored.

10 Patent Owner's expert explained this at length in his declaration. He
11 explained why it is not possible to tell from the data stored in figure 5 what
12 path the vehicle actually traveled. The data does not store information about
13 the path traveled because *Kudo 325* stores only points where the vehicle
14 frequently turns. It does not store intermediate points where the vehicle does
15 not turn or only infrequently turns. Thus, the vehicle may have taken a
16 variety of paths between any two stored nodes in that transition state data.
17 It's impossible to tell from what's actually stored in figure 5. Simply saying
18 I started at point A and arrived at point B says nothing about the path
19 between. And the claims here again require that path data.

20 Also note that Petitioner made even further new arguments in its
21 rebuttal here today. It pointed you to page 54 of the petition and attempted
22 to argue that it somehow pointed to something other than figure 5's transition
23 state data as being the claimed data regarding multiple route segments and
24 data regarding multiple sequences of route segments. That page says
25 nothing of the sort. All that it does there is reference the transition state

1 information in figure 5. In fact, reference to that occurs somewhere
2 approaching 10 times on that particular page of the petition.

3 So Petitioner did not point to the storage of specific trip information
4 shown in figure 3 as corresponding to the data regarding route segments and
5 data regarding multiple sequences of route segments. And they did not point
6 to that because *Kudo 325* does not use the data in figure 3 to predict the
7 destination. Instead, it uses only the transition state data in figure 5. That's
8 why the Petitioner pointed to figure 5 and argued that the data in figure 5
9 corresponds to the data regarding multiple route segments and multiple
10 sequences of route segments.

11 So I'll conclude with a reminder that there are multiple dependent
12 claims at issue here and the prior art simply does not do what those claims
13 require. Claims 2 and 3 require storing the map coordinates and *Kudo 325*
14 purposely does not store map coordinates. It changes the form of its data
15 and stores only nodes. It does this to simplify its ability to traverse its tree
16 data structure when determining the vehicle's destination.

17 Further, claims 8 and 10 require transmitting a predicted destination
18 to a remote control database, and *Kudo 325* also does not do this. It
19 transmits all the data it collects to a remote database so that prediction can
20 be done there.

21 So with that, I'll be happy to answer any remaining questions Your
22 Honors have.

23 JUDGE DOUGAL: Seeing none, this concludes our hearing today.
24 We thank you all for your time and preparation. It's been very helpful for us
25 as we have thought about your case. And so the case is now submitted and
26 this hearing is adjourned.

1 (Whereupon, the proceedings at 12:53 p.m. were concluded.)

IPR2024-00499
Patent 10,829,002 B2

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