

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,

Petitioner,

v.

AUTONOMOUS DEVICES, LLC,

Patent Owner.

IPR2023-01054 (Patent 10,452,974 B1)

IPR2023-01055 (Patent 11,238,344 B1)

Record of Oral Hearing
Held: September 18, 2024

Before BARBARA A. PARVIS, ROBERT J. WEINSCHENK, and
RUSSELL E. CASS, *Administrative Patent Judges*.

IPR2023-01054 (Patent 10,452,974 B1)

IPR2023-01055 (Patent 11,238,344 B1)

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The above-entitled matters came on for hearing on Wednesday, September 18, 2024, commencing at 9:55 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 PARVIS: Good morning. We are convened for oral arguments in IPR2023-01054 which pertains to patentability challenges of claims in U.S. patent number 10,452,974 B1. I am Administrative Judge Parvis. Judges Weinschenk and Cass are appearing remotely.

We now turn to appearances for both parties for those who will be arguing today. If anyone else is attending in person or remotely but will not be speaking please identify them as well. We will start with appearances from Petitioner.

MR. RENNER: Thank you, Your Honors, Karl Renner on behalf of Tesla joined by colleagues, Counsel Nick Stephens and Usman Khan and soon to join the room will be from Tesla Ashraf Fawzy and on the public line we also have from Tesla Krista Carter.

JUDGE PARVIS: Thank you, Counsel.

For Patent Owner?

MR. JAIRAM: Good afternoon, Your Honors, Arvind Jairam on behalf of Patent Owner Autonomous Devices. I also have seated next to me Stuart McCommas and also in the room is Brandon Merrill, all of us from the McKool Smith firm. We also have joining by video Scott Hejny of McKool Smith and we also have joining through the public line J. Cosic of Autonomous Devices.

JUDGE PARVIS: Thank you, Counsel. And just as a clarification, we have today an attorney that's participating in the Legal Experience and Advance Program, the LEAP Program. That's the attorney for Patent Owner; is that correct?

1 MR. JAIRAM: Your Honor, we did submit a LEAP-related paper
2 but actually I will present all of the argument today so we will not be
3 invoking the LEAP for the additional time today.

4 JUDGE PARVIS: So both parties will have 60 minutes?

5 MR. JAIRAM: That is correct, Your Honor.

6 JUDGE PARVIS: Okay, thank you.

7 Welcome to both parties to the USPTO headquarters in Alexandria,
8 Virginia. Today's hearing provides you an opportunity to orally advocate for
9 your positions on the patentability of the challenged claims as raised in the
10 petition. The hearing today will be conducted in accordance with the
11 schedule and guidance provided in the order setting the oral argument,
12 which was entered August 12th, 2024 as Paper 37 in this proceeding.

13 We'll assume that you are familiar with the hearing order, as well as
14 the statutory and regulatory requirements for *inter partes* review proceedings
15 and the office guidance set forth in the November 2019 Consolidated Trial
16 Practice Guide. We will not repeat information you already have unless we
17 think it will be helpful to the parties.

18 A court reporter will provide a transcript of the hearing that will
19 become part of the public record in this proceeding. If the parties wish to
20 discuss any confidential information please notify us before discussing
21 anything confidential. Also, we will enter the transcript of the IPR2023-
22 01055 hearing in this record, and we also will enter this transcript in the
23 IPR2023-01055 proceeding so the parties can structure their arguments
24 accordingly. The hearing order stated that each party will have 60 minutes
25 to present argument in this case, and you may reserve rebuttal and
26 surrebuttal time.

1 After this hearing we will take a break for lunch and then we will
2 conduct the hearing in IPR2023-01055. We're planning approximately 45
3 minutes for lunch. I'll maintain the clock. I'll use the clock on the wall and
4 I'll endeavor to give each party a 5-minute warning.

5 We'll start today with Petitioner. Do you wish to reserve any
6 rebuttal time?

7 MR. RENNER: Yes, Your Honor. I'd like to reserve 15 minutes.

8 JUDGE PARVIS: You may continue.

9 MR. RENNER: May it please the Board, Karl Renner for Tesla,
10 Petitioner. Slide 2 of our demonstratives demonstrates a slide ordering and a
11 table of contents that's intended to track the positioning of the briefs, of the
12 issues in the briefing. You can see that it references the motion to amend at
13 the bottom of the table of contents at slide 44. What that is intended to do is
14 to provide you a secondary table of contents to deal with the issues that are
15 at play with respect to the motion to amend.

16 Go to slide 5, please? Slide 5 shows the grounds that are asserted as
17 it relates to the claims that remain pending in the case. As you will recall,
18 there were disclaimers filed after the petition was filed which reduced the
19 number of claims that are implicated. In any event, these are the three
20 grounds that remain as to the original claims.

21 I'll be spending beginning of our hearing talking about the
22 combination at issue in Ground 3. That would be the Grotmol-Hickman
23 competition. I'll be addressing that in terms of what is in Grotmol, what is in
24 Hickman and how a POSITA would naturally bring them together, as well as
25 reasonable expectation of success as there are arguments contending

1 hindsight has driven this combination and that it is born of incompatibility,
2 therefore not appropriate. We will address that as we go through.

3 After that, my colleague Usman Khan will be addressing the
4 applicability of that ground, the combinations to the original claims, and, of
5 course, to the motion to amend claims before returning to the 102 and 103
6 Grotmol alone reference materials.

7 Nick Stephens will then follow up, time permitting, with 101
8 arguments.

9 With that laying forward, I would just move us to slide 9, please. In
10 slide 9 you see that Figure 1 in the abstract of Grotmol are illustrated. With
11 this, we can see on the left in that Figure 1 that Grotmol has an autonomous
12 vehicle disclosed, which is a robot 160, which can operate in the training
13 mode but is progressing in Figure 1 toward a trajectory path that guides it to
14 item 176.

15 Along the way, and it's described in the abstract, in the training
16 mode there are opportunities for this robot to take pictures, to take images, to
17 collect images that have scenes in them and objects in the scenes. These
18 objects can be analyzed, as would be the scene, so as to create training data,
19 taking account of whatever commands or controls are given to that vehicle
20 along its way.

21 The training data would include, therefore, the user corrections and
22 we can see evidence of that in Grotmol at 23, 22 to 26, column 23, 22 to 26.
23 And I quote, "In the correct mode" -- it's called the correct mode -- "that it's
24 accurate or necessarily not accurate it's just that it's the mode where things
25 are being corrected." The robot may integrate, they say, what the teacher

1 commands with what the robot already knows. So, there's an integration that
2 goes on between known and new commands.

3 The correct mode on the table in the preceding paragraph, column
4 22, tells us that there's a combination of the teaching input and the
5 prediction. And this is described in even greater detail when we look into
6 Grotmol, column 33, for instance, 21 through 50.

7 What happens with this information? What happens with this, both
8 the guidance as to where it is and also what kind of motor controls are there
9 in terms of the scenes? Well, Grotmol has storage. Tells us that it teaches
10 an image and associated motor command or indication are stored in memory
11 components. They're referred to as memory or training buffers. Thirty-nine,
12 12 to 18 tells us during training images, that is, preprocessed images, for
13 instance, may be stored in a memory buffer or a training buffer.

14 And that same section tells it motor commands issued by a trainer
15 corresponding to time instances where the images that are required are
16 stored actually. Claim 12 of the Grotmol disclosure does the same.

17 And where are they stored? They're stored in non-volatile memory
18 but more than that, it's not just memory. It's said by Grotmol, "to include
19 any digital storage device adapted for storing digital data." That's column 7,
20 66 through 82. And the reason there is it's defining what is memory for the
21 purposes of this disclosure. It also gives you more on that at 38, 39 to 42
22 and saying that, "images may be stored in an ordered buffer in a non-volatile
23 memory," identifying 814 in Figure 8.

24 The result is that you have stored training information and that
25 stored training information is indexed by images and it's available for

1 matching against images reflecting the current scene of a robot to be
2 controlled in the movement along its path.

3 As for the autonomous operation, we can look to, for instance,
4 column 39, line 23 plus where we find that it says, "During autonomous
5 operation the robot may be configured to compare a given that is the most
6 current recent image with one or more of the frames for the training buffer."
7 And to this point during autonomous operation the robot is moving along
8 taking more pictures, taking more images, and with those images breaking
9 them down both with respect to the image itself, the scene that is, and the
10 objects in it so that it can make comparisons between what it sees currently
11 and what's in the training data.

12 Why? So that if a match can be made it can be used to surface
13 correlated motor instructions. Forty-three, line 6 tells us "motor commands
14 at a given time step may be obtained by taking the stored motor commands
15 from the training buffer that may correspond to the best matched stored
16 image."

17 Slide 10 of Grotmol gives context to some of this by showing you
18 Figure 20A, as well as the column 38. 20A depicts, as you can see, the top
19 one of the scenes that's captured by a robot's camera. It's 2000. On the
20 bottom another scene captured by that same robot's camera as it's
21 progressing, a little different in time. You can see the shift there by virtue of
22 arrow 2015 that's shown between the two.

23 And you'll notice that the objects in the images that are being
24 captured, those scenes, are the same objects. They're just taken at different
25 times. Time shifted.

1 You've got a tree 2002, a rectangle 2004, and a circle 2008 shown at
2 top, first scene, also shown in the next image capture down at the bottom
3 but, of course, shifted. In fact, the perspective changes just slightly as well
4 because after all you're now positioned slightly different relative to those
5 devices as you're moving forward. But they are indeed the same images or
6 same objects.

7 And in storing them as training data would have you store them, of
8 course, you would have those same images stored, Grotmol would have you.

9 If we go to slide 12, we see clips, if you will, or shifting of those
10 images so as to focus on similarities between them. And these are
11 operations that are described by Grotmol. There are various operations
12 described by Grotmol to focus on similarities and differences between
13 objects that are captured currently and those that are already in the training
14 data so as to enhance your training data as well as to match during
15 autonomous driving toward existing training data to get to the commands
16 that are already stored.

17 They reference similarity metrics being derived in order to describe
18 these kinds of similarities and differences because they're after, again, the
19 best match you can get. It's not always the case you'll get a match, but if you
20 can get a match you want the best match so you can pull up the right motor
21 commands or controls and indications.

22 Grotmol also teaches sharing of its training data among robots,
23 column 33, 27 to 35 is referenced and it tells us that "the trained
24 configuration may be loaded to one or more other robots in order to provide
25 learned behaviors." The recipients of those kinds of behaviors that are being

1 shared all kinds of robots are contemplated, Rovers, bipedal robots, wheeled
2 devices, aerial drones, et cetera. And that's 18, 34 to 36.

3 And here in the column 33 reference to sharing. Grotmol explains
4 that, "training data stored in the robot's training buffer it can be shared with
5 other robots of those various types." What it doesn't say is that the memory
6 that it's disclosed is changed in any way. What it doesn't say is that there's a
7 different structure for how you orient the training data relative to the images
8 that are there.

9 Instead, it leaves you with there is training memory and that
10 memory, the buffers, they house the data in the robot A, just like they'll
11 house the robot memory in Robot B. Grotmol leaves this, of course, to
12 reasonable inferences, which we think are quite reasonable.

13 With Grotmol on the mind, we move to Hickman. Slide 14, please?
14 Likewise and with the focus on leveraging cloud-based computing which
15 come into focus, Hickman also promotes sharing of training data among
16 autonomously controlled robots leveraging this cloud-based technology.

17 In its abstract, not shown here, but in its abstract and I'll quote from
18 it, "In the disclosed embodiments information in the shared robot knowledge
19 bases is updated based on robot experiences so that any particular robot may
20 benefit from prior experiences of other robots." The point is put the data in
21 the cloud so that robots everywhere can access, use, and benefit from it.

22 Those benefits are spoken of prolifically in Hickman. It tells us that
23 a cloud would increase the cloud-based application of training data and
24 storage, would increase processing power, and capability. That's at column
25 1, 59 to 62.

1 And if you look at slide 15, you can see excerpts from column 11 on
2 the right. They tell us that, "sharing with these multiple robots this
3 information enables knowledge benefits for all of the robots." It even talks
4 about when this becomes prolific around the world and robots around the
5 world use the technology that's involved here. What happens? Well, when
6 they're deployed around the world you get even greater benefits in terms of
7 the sharing.

8 Not a surprise, I suppose, but notice that none of these benefits are
9 specific as to a particular field or a particular orientation or a particular
10 configuration of Hickman's proposed design. The example, for instance,
11 that it gives us of one illustration at Figure 3. Back at 14 you can see that
12 Figure 3. It's important to show an example of how you implement
13 something, but it's not the case that Hickman is saying this is the and only
14 way to do it. When we get to the contests on obviousness that will become
15 important.

16 And yet Hickman does, as a good disclosure would, offer
17 implementation details in its Figure 3 example. At Figure 3 it shows 306,
18 for instance, as A and it labels it a shared knowledge base, a shared
19 knowledge base. Look at the boundary, if you could, in dashed lines. That
20 shared knowledge base includes the likes of three different sub-databases, if
21 you will, 307, 308, and 309, a unique object knowledge base 307 in purple, a
22 general object knowledge base 308 in yellow, a task knowledge base 309.

23 But if the dashed line weren't enough to tell you that these are not
24 separate necessarily, at least in Hickman, Hickman gets express about it. In
25 the green highlighted text shown here on slide 14 it tells us that each of the
26 307, 308 and 309 can be combined into a single knowledge base. It says

1 specifically, "The contents of the knowledge bases may be combined into a
2 single common knowledge base." Any contention that Hickman is limited to
3 separate knowledge bases is directly contrary to this disclosure.

4 Figure 3 also offers other details that are important, primarily though
5 with respect to the opposition to the motion to amend, but a full conversation
6 of Hickman in combination with Grotmol accounts for these as well. And
7 those would be, for instance, its reference to the various fields that it shows
8 you and what those fields represent, the IMG, the LOC, the SPC, and the
9 TASKS fields, which are shown amongst those that are here in Figure 3.

10 The IMG field is an image data field described, for instance, at
11 column 13, 28 to 31 and it says it may include one or more images, video
12 clips, 3D models, et cetera. The LOC field? Well, it's a location data.
13 Column 13, 67 to 14, 29 tells us that it may include GPS coordinates,
14 including last reported location.

15 The SPC field is a specification field giving you the details of the
16 objects that are stored 18, 10 to 14 tells us that it may include any of a
17 variety of information, including this different physical attributes, and I'm
18 quoting, "of a particular type of object, for instance, physical dimensions
19 with height, width, depth, shape, volume, area, weight, mass, color, texture,
20 material composition, et cetera.

21 The point is that Hickman is trying to say we are describing the
22 things that are in the image field. We are describing them completely in
23 many ways and crème de la crème, it goes to the TASKS field described at
24 18, 37 to 44 which is said to correspond to tasks that may be performed with
25 the object corresponding to the general object identifier.

1 And with respect to a driving car example at 1956, it tells us that it
2 might actually include physical movements in that TASKS field. Still,
3 Hickman clarifies what I said before. Figure 3 is merely an example, one
4 example it tells us of one embodiment. Ten, 61 to 66 tells us this and I
5 quote, "The distribution of information across various component
6 knowledge bases as shown in Figure 3 is merely one example of one
7 embodiment."

8 Slide 15, please? As I began, Hickman's knowledge bases can be
9 informed and shared by many robots. To this point, Hickman explains that
10 more than one robot can update the knowledge base. At left in the excerpt it
11 shows you at the underlying portion, and I'll read, "The individual robots" --
12 plural, it's important that's plural -- "the individual robots can update data in
13 the shared knowledge base 306 based on their individual experiences and
14 correspondingly sharing from that knowledge base is not limited to
15 information from an individual robot," the abstract again and cited.

16 At petition Page 63 and 65, when talking about Claims 4 and 11,
17 tells us, and I quote, "Information in that stored knowledge base is updated
18 based on robot experiences sure so that" -- and this is the important piece --
19 "any particular robot may benefit from prior experiences of other robots,"
20 plural. How can a robot benefit from the prior experience of other robots
21 plural if not receiving data that was derived with respect to those robots
22 plural?

23 It's direct disclosure from Hickman that you have multiple robots
24 contributing to the knowledge base and you have the benefit by a robot
25 receiving information from it of what has gone on with respect to those
26 multiple different robots.

1 And with this you have Hickman telling us that each robot benefits
2 from the collective experience of all the other robots that are in the cloud
3 that have the information in the cloud.

4 Slide 17, please? At the time of filing, the petition set forth a
5 proposed combination for the obviousness that would be rendered as a result
6 of these two references coming together. At the top box you can see it tells
7 us from the petition that Hickman teaches, "A shared robot knowledge base
8 that could advantageously be paired with Grotmol's autonomous robot
9 system in order to further facilitate the shared learning behaviors." What it's
10 saying is you stay with Grotmol with respect to the autonomous robot
11 system but you augment it with the cloud-based storage capability that
12 Hickman suggests.

13 Slide 18. With input from Dr. Janet, Petitioner explained in the
14 petition that a POSITA would been motivated to make this combination of
15 Grotmol and Hickman for several reasons, many drawn straight from
16 Hickman as we had talked about earlier. I'll review them briefly.

17 Petition at 59 through 61 is where you find this material and citing
18 to Hickman, as I will make note. So 11, 31 to 41 of Hickman tells us, of
19 course, that information learned by any and all robots is made accessible to
20 all robots enabling each to benefit from the collective's information learned
21 by many others. Five, 42 to 46 of Hickman, "Cloud computing allows more
22 processing to be performed by the cloud computing system thereby taking
23 advantage of the cloud computing system's processing power and
24 capability." It goes on to talk about installation and maintenance tasks that
25 can be reduced for the users when using this kind of an approach.

1 And we have evidence in the record at 60 cited that POSITAs would
2 have been familiar with the teachings of Grotmol and Hickman. They would
3 have readily appreciated the advantages of their combination. But here
4 there's an unusual piece of evidence that complements the record because we
5 see an interview done with the CEO who became the assignee of Grotmol in
6 2014.

7 And there's a quote from this in the record, and it's from Exhibit
8 1006 in a magazine called the 2014 article in Science magazine where he
9 predicts the benefits of the Internet and sharing of information, like what
10 Hickman is disclosing, on robot learning in autonomous vehicles. And he
11 says, and I quote, this is the CEO again of the assignee of Grotmol, he says,
12 "The Internet will allow far-flung robots to share lessons and skills. A robot
13 that learns how to pick a strawberry without crushing it, for instance, could
14 uplink into a cloud that skill for the benefit of its kind around the globe."

15 This demonstrates to you that people of skill were thinking about the
16 fact that you can take Grotmol's teachings and do exactly what we're saying
17 about them, that is combine them with a reference like Hickman for the
18 benefit of dispersed learning.

19 Reasonable expectation of success, we think we've already covered
20 that with those quotes, but just in case there's more. Petition at 60 and 61
21 tells that Grotmol-Hickman describes similar problems. That is robot
22 learning. Grotmol tells us that it thinks of these problems as complex.
23 Hickman comes along and says, you know, the task can be optimized.

24 These complex tasks can be optimized based on the collective
25 experiences of many different robots. So you're taking and you're
26 demonstrating that the complex problems can be solved more easily.

1 Petition at 61, citing to Dr. Janet, tells us the resulting combination is
2 therefore and otherwise one that would be expected and predictable.

3 Slide 39, please?

4 JUDGE PARVIS: Patent Owner argues that Hickman teaches away
5 from the proposed combination. If you'd like to respond to that?

6 MR. RENNER: Yes, I would. Thank you very much. And if you
7 go to Slide 39 with me, this is the first slide that starts into what their
8 contentions are as it relates to the teaching away or the incompatibility that
9 would result in hindsight. There were two arguments that we focus on here.

10 If I go to slide 40 perhaps it's a better place to start. The primary
11 argument they seem to be making is that Hickman teaches multiple and
12 differentiated databases, never a shared database, never a common database,
13 never a database where all the data that would include the image, the tasks
14 that would be all the operations, the commands, and many of the other
15 pieces of information are together.

16 But what we saw earlier when we discussed Figure 3, for instance,
17 of Hickman was that illustration of the example at Hickman showing 307,
18 308 and 309 separately. They are all within the dashed line of what is called
19 a shared knowledge base 306. And we saw the express disclosure in
20 Hickman, and it's cited at column 10, 35 to 66 reproduced at slide 14. If you
21 go to 14 that's that green text. The contents from that knowledge bases may
22 be combined into a single knowledge base.

23 So the snippet on the right here in slide 40, if we go back to slide 40,
24 further emphasizes the point that Hickman explicitly teaches that the
25 contents of its knowledge base, as we had mentioned, they can be combined

1 into a single shared knowledge base. They're not separate and defined and
2 necessarily separate, at least.

3 And this is further evident from that review of Figure 3 that we had
4 earlier talked about where you saw the dashed line and the shared
5 knowledge base 306 collecting the information in one knowledge base. That
6 is shown on Figure 3. And then that comment by Hickman expressly saying
7 even if you wanted to take all three of those sub-categories and push them
8 into one common database you can do that as well.

9 And this is reinforced by Dr. Janet who explains that the, and it's the
10 bottom right on slide 40, that "a strength of Hickman's system is its
11 flexibility in design," and that Hickman system "can accommodate a single
12 common knowledge base," which, of course, Hickman expressly discloses.

13 Slide 42 continues with the theme of flexibility with Hickman. Here
14 in the lower right you can see a quote from a clip in column 12 where it
15 says, "Unique knowledge base 307," so even if you look into the specific
16 knowledge bases shown on Figure 3 and you look at 307, which is where
17 you've got a lot of the content, said, "That may have many more additional
18 categories of data than the categories shown in the conceptual data structure
19 313." What it's saying is that no one of 7, 8, 9 or these others are bound to
20 what they're showing in three. Figure 3 is there as exemplary to give you a
21 sense of what might be in them.

22 Dr. Janet also explained the type of flexibility described Hickman
23 that would be combining the various knowledge bases or adding more fields
24 to any one of them. That would have been well within the capabilities of a
25 POSITA through known programming techniques.

1 And with this, we think the first and primary argument that seems to
2 be advanced by Patent Owners is debunked and, frankly, contrary to what
3 they've been describing and is integrating into the combination that we've
4 advanced.

5 There is a second argument that we could lean, we think. Slide 43
6 sets that out or addresses it at least. Patent Owner argued that Grotmol and
7 Hickman are incompatible here it says because it contributes to Grotmol a
8 single, I'm sorry, a scene. And it says that Hickman is limited to a single
9 object, information, or manipulation.

10 We think that that argument is it's faulty for three different reasons.
11 The first of those reasons is that Patent Owner assumes that a POSITA
12 would interpret Hickman as being limited to implementations of its IMG
13 field. Recall that IMG field, which is where you have the images to
14 representing a particular kind of image, a single object rather than a scene or
15 any other kind of object. But what we saw from Hickman when he
16 described it at 13, 28 to 31, he tells us one or more images, one or more
17 objects, rather, can be represented by the IMG field, as well as other things
18 like video clips and whatnot.

19 Hickman just simply does not limit the content of what it discloses
20 in conjunction with that field to a single object, which is necessary for this
21 argument to prevail. Instead, it goes out of its way to convey the flexibility
22 we talked about earlier. The excerpt to the right starts to show you this.
23 Two, 51 to 64 tells us that there's an expansive inventory of objects that can
24 be contemplated with respect to the IMG field.

25 And again, I'd return us to that 13, 28 to 31 where the IMG field is
26 to some extent defined for purposes of that example, at least, as one that is

1 flexible and has one or more images. And to this point, there's just simply
2 nothing cited, no part of Hickman that's cited that teaches that his method is
3 to limit to a single object manipulation or a single object in that image field.

4 The second issue with this argument is that it fails to account for the
5 actual combination that we set forth. Our combination, of course, was to
6 maintain what Grotmol was doing and to augment it with the cloud-based
7 storage and training and collective wisdom that comes from Hickman.

8 It wasn't a change up what Grotmol was doing on a process by
9 process basis for the original claims. And by doing that, what you have is
10 not a conflict between what would be the memory of Grotmol and the
11 storage capabilities and designs of Hickman, even if you integrated those
12 details because, after all, you're using Hickman's memory. That's how
13 you're trying to get information to be shared in a collective way.

14 So the combination that's advanced against the original claims didn't
15 integrate any particular configuration of that Hickman Figure 3 design but
16 instead was the notion of putting the memory in this cloud and enabling
17 what Grotmol was doing but having that memory be able to share the
18 training information.

19 Third and finally, even if Hickman were somehow considered by the
20 POSITA to be limited to storage of a particular kind of object, which the
21 record fails to establish, Patent Owner's allegations of incompatibility are,
22 we believe, unfounded. After all, returning to Grotmol recall that the
23 process it evokes is to assess the scene captured in an image, break that
24 scene down, look at objects that are in that scene, and use mathematics and
25 other processes to figure out whether, in fact, those objects in that scene
26 match training data objects and scenes.

1 Well, storage of those objects in rows, which is what Hickman is
2 said to do, in rows in the database would not be seen as frustrating
3 implementation of Grotmol but instead would be seen as facilitating it.

4 Your Honors, if there are any further questions I'd be happy to take
5 them on the combination. If there aren't, I'd ask my colleague to come up
6 and talk about the application of the combination to the claims and
7 allegations that there were differences between them.

8 JUDGE PARVIS: There's no questions.

9 MR. RENNER: Thank you, Your Honor.

10 MR. KHAN: Good morning, Your Honors, and may it please the
11 Board, my name is Usman Khan. I'll be addressing the amended claims and
12 then some of the original '974 dependent claims. If Your Honors could
13 please turn to slide 60?

14 So my colleague Mr. Renner just explained why the combination of
15 Grotmol would have been obvious to a POSITA. I'll stick to the
16 combination and address the specific limitations in the newly amended
17 claims to explain how the combination also renders the newly amended
18 things obvious.

19 But before I get to the actual limitations, I wanted to note that the
20 Patent Owner has amended the original claims to incorporate additional
21 limitations. These limitations are the same across all of the amended claims.
22 Thus, the discussion of the specific claim features actually applies to all the
23 amended claims.

24 Of the newly recited features, two are at issue between the parties.
25 The first set of claim features, as shown here in the red text, is directed to a
26 first and second data structures or first and second data structures. The

1 amended claims require that the first data structure includes labels indicating
2 types of the multiple objects and coordinates indicating locations of the
3 multiple objects. The similar limitations are recited with respect to a second
4 data structure.

5 Now because of the antecedent bases, the multiple objects that are
6 referred to in the first data structure and the second data structure, these are
7 the same. You can see these before the multiple objects. Now, this links to
8 the argument that Patent Owner raises. Specifically, they say that the
9 Grotmol-Hickman combination fails because these two data structures in the
10 combination do not include data on the same types of objects. That's
11 incorrect and let me just show you.

12 If you could turn the slide 61? On slide 61, on the left side, you can
13 see the two images that we discussed earlier. There is scene 2000 at the top
14 and right below is scene 2010. These correspond to the first and second
15 circumstance representation. These are scenes of images taken at two times.
16 The bottom line is after the robot has taken a right turn.

17 As is clear from these pictures, Grotmol teaches that the same
18 objects are captured in these two images. Accordingly, when a knowledge
19 base is populated with data regarding these detected objects, as taught by
20 Grotmol and Hickman, the knowledge base would then also include two data
21 structures corresponding to the two images in different rows.

22 So as we see on the right side, what you would have is in the purple
23 box, for instance, those are the objects that are detected in the first
24 circumstance representation. Right below it you'd have a second box which
25 are the objects detected in the second circumstance representation. And
26 within each one of these boxes these are rows corresponding to the data

1 structure in Hickman, you would see that both have the tree, both have the
2 rectangle and both have a circle.

3 JUDGE WEINSCHENK: Mr. Khan?

4 MR. KHAN: Yes.

5 JUDGE WEINSCHENK: I have a question about this. In your
6 figure here it looks like you're taking the first row of knowledge base 313
7 and combining it with the first row of knowledge base 314 to make one
8 single row; is that correct?

9 MR. KHAN: Yes, Your Honors, that's right. And as Mr. Renner
10 had indicated earlier, Hickman's disclosure indicates a very flexible design
11 of the knowledge bases where it indicates that all the knowledge bases can
12 be combined into a single one or that individual knowledge bases can have
13 additional data fields. And so whether you would like to combine the two or
14 add additional data fields that's really a design choice, but the information
15 that is captured would be there regardless.

16 JUDGE WEINSCHENK: Yeah, I understand that it teaches that
17 you can, sort of, have these different knowledge bases combined into one. Is
18 there any specific teaching though of taking, you know, a row from one and
19 a row from another and making it one single data structure? Is there any
20 specific teaching of that?

21 MR. KHAN: So, when we look at the knowledge bases, for
22 instance, if we look at UID, the first row UID-1, you'll see that right next to
23 it has a GID, right? And then when you go to the next database 314 you see
24 that it starts with GID also. So this is unique. So if you have an object
25 there's a unique ID assigned to it. You will also have a general ID.

1 And then if you want to look at what the general ID information is
2 you can go to the GID and knowledge base 314 and you can get the
3 information for that general ID as well. So, essentially these are all linked
4 knowledge bases.

5 JUDGE WEINSCHENK: Yeah. I guess the question I have about
6 it, though, is that the claim requires these two pieces of information to be in
7 a single data structure. Are we able to interpret the claims such that a
8 reference from the first row of 313 to the first row of 314 is a single data
9 structure? Or are those separate data structures that are just, sort of, you
10 know, have a link to using the GID?

11 MR. KHAN: Well, I think that Hickman teaches that these, and I
12 think it's pretty explicit, there is -- that is a single combined knowledge base
13 and that's expressly disclosed in Hickman. And I think that's what -- even
14 though, and my colleague Mr. Renner was alluding to, is that what you see
15 in Figure 3 of Hickman is an example. What you learn from the disclosure
16 also is that you can combine these into a single knowledge base. And that's
17 what we are showing that if you have a single knowledge base as taught by
18 Hickman you would come -- you would see what is shown here on the right
19 side of this slide.

20 JUDGE WEINSCHENK: Okay, thank you.

21 MR. KHAN: If Your Honors could please turn to slide 63?

22 JUDGE CASS: Counsel, let me ask another question. Looking at
23 the same slide, I'm trying to understand how this would work in practice. So
24 you've got a unique image. Let's take the first (inaudible 1:39:23) and that's
25 linking to a specific general ID and the general ID has various features in it

1 including tasks, which I guess you'd say are instructions that could get
2 executed.

3 So in practice, you know, how would this work? So if you have,
4 let's say you have, like, a tree for instance, you know, wouldn't the GID be,
5 like, a particular tree or a particular scene? And how would that relate to the
6 GID?

7 MR. KHAN: Thank you, Your Honors. I think it's a great question
8 and I think it goes to my answer will demonstrate the flexibility of
9 Hickman's structure. So, Hickman recognizes that when you have images
10 sometimes you can from the image obtain very clear information. Other
11 times it may not be so clear.

12 So, for instance, if you're seeing a vehicle maybe the resolution of
13 the image is not so clear. You can identify that it's a vehicle but you can't
14 identify what model of a vehicle it is, right? And so depending on the
15 circumstances that you may have and depending on the image that you are
16 able to obtain, in some cases you'd be able to have a unique object ID where
17 you can actually identify a very specific car, a specific model.

18 In other cases it may be general. So, you could say, oh, this is a
19 SUV or this is a pickup truck, right? And you can't tell more than that. And
20 as Mr. Renner was saying earlier, you know, Hickman expressly states that,
21 you know, these robots are all over the world and so they want a knowledge
22 base that can accommodate all types of information and data, some that
23 robots will be seeing for the first time. And that's why these knowledge
24 bases also have to be very flexible.

25 Sometimes they'll be coming across objects that they haven't seen
26 before so they need to describe it in certain ways. Maybe some additional

1 data fields are needed and that's why Hickman accommodates the ability to
2 add additional data fields.

3 Furthermore, also, Hickman teaches, and to the earlier question,
4 Hickman also indicates that not just the knowledge bases can be combined
5 but also the contents within the knowledge bases can be combined. And so
6 to answer your question, the reason why it's so flexible is because these
7 robots can be used in any type of scenario that encounter any type of image
8 or object, and it needs to be able to accommodate that, store that, and share
9 that with robots all over the world.

10 JUDGE CASS: Okay, thank you, Counsel. I have another question.
11 Could you find us, and I apologize I don't remember which slide it was, to
12 the evidence that you -- the argument, the specific argument and evidence
13 that (inaudible 1:36:14) would be obvious to take these two data structures
14 from Hickman and have one combined data structure?

15 MR. KHAN: I'm sorry. Could you just repeat that? I want to make
16 sure I answer you.

17 JUDGE CASS: Yes. Yes. I was wondering if you could point us
18 more specifically to the argument and the evidence that you introduce
19 showing that one of ordinary skill could combine these two different, these
20 two data structures of Hickman that are on the slide?

21 MR. KHAN: Yes.

22 JUDGE CASS: Or reading them at the moment, combining them
23 into one data structure?

24 MR. KHAN: Yes. You can find that disclosure in Hickman's
25 column 10, lines 35 to 66. I think there's also some additional disclosure in
26 other parts but that's definitely one place you could find it.

1 JUDGE CASS: Okay, give me a second. I'll just go there to 10.

2 MR. KHAN: And maybe slide 14, let me --

3 JUDGE CASS: If you've got a slide number it might be easier.

4 Slide 14 you said?

5 MR. KHAN: Yes. You can see on the bottom left side where we
6 have highlighted in green the contents of the knowledge bases may be
7 combined into a single common knowledge base.

8 JUDGE CASS: Yeah. So does that mean that you're combining the
9 data structures? Or does that mean that, you know, as it's shown here the
10 knowledge bases, you know, appear to be potentially stored on different
11 media. Maybe that's not strictly speaking required, but how do we know
12 that combining into a single knowledge base is the same as combining the
13 data structures themselves?

14 MR. KHAN: Thank you, Your Honor. If you could turn to slide 71,
15 please? So when we look at the '974 and we look at how it defines a data
16 structure, it actually defines a data structure extremely broadly where it says
17 a data structure can be essentially anything. It can include one or more
18 fields or data fields. It can be a tree, a graph, a map, a grid or matrix, a table,
19 a database. It has essentially any type of form of data structure is a data
20 structure and the '974.

21 It's very broad. And we think that the disclosure in Hickman and the
22 combination of the knowledge bases reasonably aligns with the data
23 structure description in the '974.

24 JUDGE CASS: So, based on that, your contention that really these
25 two linked data structures in Hickman really could be considered one data
26 structure under this broad definition?

1 MR. KHAN: Absolutely. Absolutely, Your Honor. We think that
2 they can all be combined into a single knowledge base, single data structure.

3 JUDGE CASS: All right, thank you.

4 MR. KHAN: All right. If Your Honors could please turn to slide
5 63? The next set of claim features that are at issue are correlation features.
6 Specifically, the amended claims --

7 JUDGE PARVIS: Excuse me. I'll just let you know you have three
8 minutes until you go into your rebuttal time.

9 MR. KHAN: Three minutes, okay. Thank you, Your Honors. I will
10 -- thank you very much for the notice. I will skip to slide 29, please, if that's
11 okay? And I will briefly discuss Claim 5. For Claim 5, this is part of the
12 original claims. Claim 5 recites determining a number of at least partially
13 matching portions of the third circumstance representation and a portion of
14 the first circumstance representation exceeds the threshold number.

15 There's an alternative limitation in which the word number is
16 replaced by percentage so you see the brackets there. Now, before we turn
17 to the disclosure of Grotmol, as this was under anticipation ground for
18 Grotmol, we wanted to note and point out that this language is much broader
19 than the Patent Owner gives it credit.

20 For instance, the claim limitations recite number in portions without
21 specifying what the number of portions are. It also recites threshold number
22 without reciting with threshold number is. Thus, the claim does not impose
23 limitations on the type of threshold or the type or the number of portions of
24 threshold amount.

25 And if you could turn to slide 31, please? So, slide 31 includes
26 some snippets from Grotmol's disclosure which describe how images or

1 circumstance representations in Grotmol compared. For instance, as shown
2 in the top left, Grotmol teaches that a current obtained image can be
3 compared with an image stored in the training buffer.

4 As noted in the snippet in the bottom left side, the portions that the
5 comparisons perform for may be limited to certain regions if that
6 information is available. You may also recall from Mr. Renner's earlier
7 comments that when two images are compared that they can be processed,
8 shifted, trimmed, and then compared, and a similarity metric is used to
9 determine how similar they are. That disclosure is shown on the right side
10 of slide 31.

11 And on the bottom right you'll see that Grotmol teaches that the
12 similarity measure characterizes similarity between features of images and
13 that similarity measure is compared against the threshold. From this explicit
14 disclosure it's clear that portions of images are compared and then that
15 similarity metric is used to compare with a threshold number. All that is
16 done in Grotmol.

17 If Your Honors could turn to slide 30, please? The Patent Owner
18 argues that this disclosure is just not sufficient. Why? Because according to
19 Patent Owner, the claim features require, and you can see here in the
20 highlighted portions, they say it requires counting the portions and
21 determining whether this counted number of portions exceeds a numerical
22 threshold. They say, look, this claim requires counting. It has to exceed the
23 threshold.

24 Well, let's turn back one slide, if you may, to slide 29. Let's
25 compare this to the claim language. You'll find nowhere in Claim 5 is there
26 the word counting. And as I mentioned earlier, this is a fairly broad claim.

1 It would be satisfied when, for example, the system has determined that
2 there is at least one matching portion, so the number is one, at least one
3 matching portion of the two images, the two circumstance representations
4 and that number one exceeds a threshold number zero.

5 So you can have situations where two images you're looking for
6 something common, they may not have anything in common, right? So, you
7 have no match here. That's zero. You have something in common that's
8 one. That exceeds the threshold.

9 So, Claim 5 is, in fact, just a classic example of Patent Owner
10 attempting to capture a broad scope and then trying to attempt to narrow that
11 scope when faced with an invalidity challenge. I believe that --

12 JUDGE CASS: Counsel, excuse me. Let me ask you a question.

13 MR. KHAN: Yes, Your Honor.

14 JUDGE CASS: So, would you agree that the claim, Claim 5,
15 requires determining, not me, let me back up and ask you this. When the
16 claim refers to partially matching portions, is that saying it's taking different
17 pieces of the images taken by the camera, let's say 2,000, spend their time
18 taking different images, different portions of the image that's recorded, let's
19 say five, six, and then comparing one portion in one image to the same
20 portion in another image and the second portion of the first image to another
21 portion of the second image? (Inaudible 1:27:03)?

22 MR. KHAN: Yes, Your Honor. I think the claim is pretty broad, as
23 I mentioned earlier. The claim doesn't specify what these portions are, right,
24 whether it's a small part of it or it could be the whole thing. It's not clear
25 from the claim. I think the claim is broad enough to encompass, you know,
26 comparing the image or objects, right?

1 And I think all that's required essentially is there's a match and there
2 is a number of partially matched portions. So, you know, one example
3 maybe I could give is, let's say the robot is at the beach and it sees the ocean,
4 right? And then you have another image it's comparing to against in the
5 city, right? And it compares that. There's no matching portion there, right?
6 There's an ocean. There's a city.

7 And then you take that -- you know, another example where you
8 might have a robot and there's building there and in the image there's another
9 building that might be similar and there's matching there and that would be
10 sufficient to satisfy this claim. This claim is really broad.

11 JUDGE CASS: So in other words, if you have, let's say, a picture of
12 a building and then you have another picture and just compare those two
13 pictures and see if they're close enough, would that meet this claim
14 language? I mean, if you're just doing a similarity comparison (inaudible
15 1:25:38.1) that meets the claim language?

16 MR. KHAN: I think this claim is broad enough to encompass that.

17 JUDGE CASS: Okay. So, really any near view or any, kind of,
18 matching, a similarity measure of one image against another satisfy this
19 claim?

20 MR. KHAN: Yeah. I think the claim requires that there's a number
21 of partially matching portions that exceeds the threshold number. So --

22 JUDGE CASS: That number you said could be one. Is that what
23 you said?

24 MR. KHAN: Yeah, exactly. And because they didn't define -- they
25 could have said a non-zero threshold number. They could have recited.
26 They didn't say that, right? They left it open-ended.

1 JUDGE CASS: All right, thank you.

2 MR. KHAN: Thank you very much, Your Honors. Your Honors,
3 could we get one extra minute or a couple extra minutes?

4 JUDGE PARVIS: You're going into your rebuttal time, so if you
5 want to do that?

6 MR. KHAN: Yes. That would be okay. Thank you, Your Honors.
7 And my colleague Nick Stephens will address the one-on-one issues.

8 MR. STEPHENS: Thank you, Your Honors, Nick Stephens on
9 behalf of Tesla. I just want to make two -- three points on the 101 rejection
10 that we raised in our opposition to Patent Owners' motion to amend.

11 We characterized the claims as directed to an abstract idea which the
12 Patent Owner argued against in its reply. And they said that the subject
13 matter of the claims exist exclusively in the realm of computers, computers
14 and control systems and cannot be practically performed in the human mind.

15 We think this is problematic and invites legal error because Patent
16 Owner's position would risk turning Alice on its head if we credit the fact
17 that a claim recites operations performed by a processor or a physical device
18 as a reason that the claim cannot recite a mental process.

19 We know that's inconsistent with both Federal Circuit case law and
20 even the office's recent guidelines that memorialize the notion that even
21 technological solutions such as deep neural networks can recite abstract
22 ideas.

23 The second point I would make is that the record that's been
24 developed on 101 is one-sided. It's hard for us to say that the Patent Owner
25 has developed substantial evidence in support of its positions. In fact, Patent
26 Owner in its reply to the opposition to a motion to amend elected not to put

1 in any evidence when it had the ability to do addressing the rejections that
2 were raised in our opposition.

3 Patent Owner statements therefore in its reply regarding alleged
4 technological improvements given by the additional claim limitations and
5 other benefits allegedly achieved by those claims are unsupported and
6 uncorroborated attorney arguments.

7 And with that, we'll reserve the balance of our time for rebuttal.

8 JUDGE PARVIS: Thank you.

9 MR. STEPHENS: Thank you.

10 JUDGE PARVIS: Petitioner has 8 minutes for rebuttal.

11 Patent Owner?

12 MR. JAIRAM: Good morning, Your Honors, and may it please the
13 Board, again, this is Arvind Jairam on behalf of Patent Owner. Before I get
14 into the details of the issues, I'll just note that Patent Owner has streamlined
15 this case substantially to present a narrowed set of issues. Patent Owner has
16 carefully identified in its briefing numerous flaws in Petitioner's arguments
17 regarding the narrowed set of issues.

18 We have also filed a contingent motion to amend in accordance with
19 the Board's rules. And in relation to that, we carefully drafted the claim
20 amendments to comply with the statutory requirements.

21 We have also filed a reply in support of our motion to amend, again
22 in accordance with the Board's rules, and paying close attention to the
23 Board's preliminary guidance.

24 In contrast, Petitioner has violated the Board's rules, injecting new
25 arguments improperly at virtually every stage. We explained in our sur-
26 reply that Petitioner's reply contained several new arguments and Petitioner's

1 sur-reply regarding the motion to amend, which I'll just call the MTA sur-
2 reply for convenience, also contains numerous new arguments and basically
3 changes the entire course of their theories. That is plain to see by comparing
4 Petitioner's MTA opposition with its MTA sur-reply. In short, Patent Owner
5 has followed the rules and Petitioner has violated the rules.

6 I will discuss some of the issues regarding the substitute claims, as
7 well as some of the issues regarding the existing claims, but before that I
8 actually want to take a couple of moments to address some of the discussion
9 that we heard during the earlier segment here.

10 JUDGE PARVIS: Quick question. Does Patent Owner want to
11 reserve rebuttal time?

12 MR. JAIRAM: Thank you, Your Honor. Twenty minutes please.
13 We heard a couple of questions posed to Petitioner's counsel, and I'd like to
14 offer our thoughts regarding the questions and answers that were discussed.
15 With respect to Petitioner's slide 61, there was some discussion about
16 whether the same object is present in two different images of Grotmol.

17 But I'll note that Hickman and Tolstedt, the two secondary
18 references for the motion to amend related analysis, were what Petitioner
19 pointed to regarding the claimed first and second data structures and not
20 Grotmol. So it's unclear exactly where Petitioner is trying to go with that
21 somehow suggesting that something in Grotmol discloses some feature
22 regarding the multiple data structures that as the preliminary guidance
23 correctly noted have to have some information pertaining to the same
24 objects.

25 A second question that was raised was Judge Weinschenk asking if
26 there is any specific teaching, I guess in Hickman, about combining the two

1 rows? And I think the answer that we heard from Petitioner's counsel
2 referred to a so-called GID, which he referred to as linking or, I guess, kind
3 of, being a key that links two different things.

4 And I'll just note that the claim language in the proposed substitute
5 claims is plain on its face. We have set forth exactly what is required and,
6 you know, a data structure that has certain information, another data
7 structure that has certain information.

8 And I think it's improper to just, kind of, open that up to say that,
9 well, you can link two things together to get something else. I mean what
10 they have pointed to is simply not a data structure. It's really hard to parse
11 out exactly what they have mapped, at least in their papers, to the claimed
12 data structures. This is again referring to the substitute claims.

13 And just as, kind of, a common sense recognition point, if you just
14 take a very broad almost boilerplate sentence in Hickman that says you can
15 combine different things and if you just say, well, you know what? We can
16 then render essentially all the databases or information that we want in the
17 entire world to be obvious, that would be absurd. We have specifically set
18 forth claimed data structures with certain information in them. And it is
19 improper to, kind of, aspirationally or conjecturally expand Hickman and
20 Grotmol, but specifically here Hickman, to arrive at whatever is desired.
21 That would be impermissible hindsight and that violates numerous principles
22 of patent law.

23 JUDGE PARVIS: Petitioner points to --

24 JUDGE CASS: Counsel?

25 JUDGE PARVIS: Oh, go ahead.

1 JUDGE CASS? Oh, all right. Thank you. We saw during
2 Petitioner's presentation we saw they had a definition of what a data
3 structure is, and it was extremely broad and included things like data pieces
4 that happen to have language affirming them, but it did seem extremely
5 broad. So, given that by definition, you know, why I wouldn't even just
6 these two linked data structures from Hickman, why wouldn't it qualify as a
7 data structure?

8 MR. JAIRAM: Thank you, Your Honor for the question. I'll note
9 initially that the term data structure is not one that either party has sought to
10 construe. I believe Hickman actually does refer to specific things as data
11 structures, you know, with certain reference numerals identifies a certain
12 data structure or a certain other data structure. What I believe Petitioner is
13 trying to do is to somehow merge things from specifically identified data
14 structures to arrive at some other broader thing, but it simply is not disclosed
15 in Hickman.

16 So, basically to answer your question, Your Honor whatever data
17 structure is, while Hickman seems to know what a data structure is and says
18 here's the data structure and here's the other data structure and it appears that
19 Petitioner has cherry-picked portions of various data structures in a
20 confusing way. Reading the opposition brief it's very difficult to see exactly
21 what they are picking and choosing but it would be speculative to then say,
22 well, you know what? We need to have a data structure that includes these
23 two things so there you go. That's impermissible hindsight.

24 JUDGE CASS: Well, Counsel, there wasn't a -- I mean, isn't what's
25 operative here the definition or understanding of data structure that comes
26 from the '974 patent? If it meets that then it doesn't really matter what

1 terminology Hickman uses to describe the data structure as long as it fits into
2 the broad definition of the '974 patent. Isn't that good enough?

3 MR. JAIRAM: Well, '974 patent is certainly what is operative here
4 and it may refer to a data structure in the way that you mentioned and that
5 Petitioner mentioned, but the presence of two different data structures in
6 Hickman does not mean that Hickman somehow has a data structure in the
7 sense of what '974 is.

8 Certainly, Petitioner has not set that forth with any precision or
9 clarity in its papers, including its opposition papers saying you know what?
10 It would have been obvious or something to combine these two data
11 structures to arrive at the claimed data structure for X reason or Y reason.
12 They have instead, basically when convenient to them, chosen parts of one
13 data structure of Hickman, chosen parts of another data structure of
14 Hickman and then relied on the boilerplate, kind of, as a, you know, as a
15 deus ex machina to just relieve them of their obligation to set forth their
16 arguments with particularity.

17 JUDGE CASS: All right. Thank you, Counsel.

18 MR. JAIRAM: A third argument that Your Honor Judge Cass
19 raised was how would it work? And, frankly, I think the answer is it's
20 unknown and it's not clear. The combination theory that Petitioner has set
21 forth has been vague and shifting at every stage. Trying to figure out exactly
22 what is mapped and how it would work is perplexing.

23 As we laid out in our Patent Owner's sur-reply, we attempted to ask
24 Petitioner's expert Dr. Janet exactly what the mapping is, what is relied on in
25 Hickman, what is the gap in Grotmol, and this is referring to, I believe,

1 Claims 4 and 11. What is the gap in Grotmol? How is there some teaching
2 in Hickman that cures that deficiency or gap?

3 And the answers that we got from Dr. Janet were quite startling, at
4 one point saying that, well, Grotmol has everything and therefore he, kind
5 of, doesn't need to say exactly what's in Hickman that he's using for curing
6 some unknown gap of Grotmol. Without even a basic explanation of what
7 exactly the mapping is it's really hard to say how it would work.

8 I mean, we saw some --

9 JUDGE PARVIS: Counsel, a question. Petitioner points to column
10 10, lines 35 to 60 and in particular Petitioner has highlighted the sentence,
11 "The contents of the knowledge bases may be combined into a single
12 common knowledge base." Is that disclosure in Hickman, does that remedy
13 the deficiencies as Petitioner argues?

14 MR. JAIRAM: I'm not sure and I don't think so. I'm not even sure
15 because it's not clear exactly what the deficiencies that they have set forth of
16 Grotmol for the purpose of the obviousness ground are. It would be one
17 thing to say, well, Grotmol doesn't have this or even saying to the extent
18 Grotmol doesn't have this, here's how Hickman fixes it.

19 Instead, Hickman is presented as some, sort of, a very general, like,
20 a cure-all for some unspecified gap or deficiency. We heard a lot of
21 discussion from Petitioner's counsel how the combination of Grotmol and
22 Hickman, but that was all very generalized and not really tied to specific
23 claim language. And so the situation is, of course, different for each of these
24 claims because the claims have different limitations.

25 So, for certain particular claims we can look to see well, you know,
26 can you take something in Grotmol, something else is missing in grant

1 Grotmol for this claim language, and how would you use the teachings of
2 Hickman? And how would a person of ordinary skill arrive at all the claim
3 limitations.

4 But just taking a very broad statement in Hickman that you can
5 combine knowledge bases doesn't help for the various specific claim
6 language of the various claims, both the existing claims and also the
7 substitute claims regarding the requirement to have different data structures
8 that include, you know, various information.

9 JUDGE CASS: Counsel, let me follow up on the last question there,
10 if I may? I managed to locate the quote (inaudible 1:06:50) from the '974
11 patent on Petitioner's slide 71. I think you have that handy. But and it's the
12 '974 patent starting at column 65, 45 through 57, and it says, "When a
13 reference to a data structure is used herein, it should be understood that any
14 variety of data structures can be used such as, for example, array, list, linked
15 list, doubly linked list, queue, tree, heap, graph, map, grid, matrix, multi-
16 dimensional matrix, table, database, database management system, file,
17 neural network and/or any other type or form of data structure, including a
18 custom one." Would you agree that that definitional limits them attempting
19 to acting as their own lexicographer?

20 MR. JAIRAM: You're saying as Hickman acting as their own
21 lexicographer? I'm sorry.

22 JUDGE CASS: And that's from the '974 patent.

23 MR. JAIRAM: I'm not sure if --

24 JUDGE CASS: Is that the -- in reference to the '974 patent acting as
25 their own lexicographer.

1 MR. JAIRAM: I don't think so. I don't think that there was any
2 special lexicography of data structure, and I certainly don't believe that that
3 has been raised by either party. So, I'm not -- I would have to look into that
4 further, but I don't -- off the cuff I don't think that that is special
5 lexicography.

6 JUDGE CASS: So, this is not -- your (inaudible 1:05:25) position
7 then. Is that what --

8 MR. JAIRAM: The position, I don't have a position standing here
9 and I don't think it's been developed because neither party has raised that.

10 JUDGE CASS: All right. So, the next question is, you know, the
11 term knowledge-based systems in Hickman, is that a database? You know,
12 what is that computer structure?

13 MR. JAIRAM: It's some sort of an organization of knowledge. I'm
14 not sure exactly how Hickman described it, partly because I don't think
15 Petitioner's papers probably didn't say exactly what a knowledge base is. I
16 think it's first referred to in Hickman at column 5, line 63 to 64, and it just
17 starts talking about the knowledge base so I'm not sure exactly what that
18 would be. But I would note that our claims when we talk about a data
19 structure we talk about a data structure including certain specific things. I
20 think that it would be fair to say that that is just talking about fields of a
21 specific data structure. And I can't think of a way to, kind of, set this forth
22 any clearer than we did in our claims, and we would look to see if there's
23 commensurate disclosure in the prior art. And we just haven't seen that.

24 JUDGE CASS: All right. Thank you, Counsel.

25 MR. JAIRAM: Another question that was raised or written in the
26 earlier segment of Petitioner's argument regarded Claim 5, and I would just

1 urge the Board to just look at the claim language. The claim language is
2 very plain and straightforward. And, in fact, the institution decision of the
3 Board noted this at Page 38, and it's really, I think, an instance of Petitioner
4 trying to obfuscate things by essentially ignoring the actual claim language
5 and pointing to all kinds of other things.

6 I'm going to touch on a couple of issues regarding the motion to
7 amend first and then as time permits I may also touch on some of the issues
8 for Claims 4 and 11, but I think Claims 4 and 11 have been very well-briefed
9 in the parties' papers. Regarding the --

10 JUDGE CASS: Counsel, I think you, sort of, touched on Claim 5,
11 so while we're there?

12 MR. JAIRAM: Okay.

13 JUDGE CASS: Maybe you could respond to the argument that
14 Petitioner made which was essentially that, you know, Claim 5 is broad
15 enough to cover, you know, really getting some matching between one
16 image and another because the claim language doesn't define it. It says a
17 number but it doesn't define the numbers and (inaudible 1:02:09) some
18 matching going on. And you could say, yes, this is a match that's above the
19 threshold number of zero (inaudible 1:02:01). What's your response to that?

20 MR. JAIRAM: I would say that the claim specifically sets forth the
21 way in which the matching is done. A common refrain or a common
22 complaint people have about claims, and I'm not referring to our claims. I'm
23 just talking in general in patent law is we say, well, the claim just says, you
24 know, do it but doesn't say how to do it. Well, here it's quite the contrast.
25 Here we specifically set forth a technique. We say either of these two

1 disjunctive prongs, you know, based on a number or a percentage we're
2 saying you have to do it this way.

3 And for the relevant discussion here I'll focus on number, but, you
4 know, it could equally apply it to percentage. I don't think Petitioner has
5 mapped it to the percentage. So, you have to actually do what the claim
6 language says. Determine that a number -- now, at some point you have to
7 say, well, you know, is that met? Are you determining that a number of
8 portions exceeds a threshold number? I mean, that's really rather blunt and
9 straightforward.

10 And I understand what Petitioner is trying to do, to try and, you
11 know, they can't point to anything about that. And, you know, they saw the
12 institution decision noting this problem and so now they're coming up with
13 the theory that, well, you know, it can be met in some other way. But it just
14 -- it's not determining that a number exceeds a threshold number. I mean,
15 this is almost like elementary school arithmetic. You know, is there a
16 number and does it exceed a threshold number?

17 I think that trying to get into some other more complicated analysis
18 is basically it's a diversion because it simply is not there. I understand that
19 Grotmol does some sort of similarity based matching, but it's simply a
20 different technique, as we explained in our Patent Owner response.

21 JUDGE CASS: So, can the threshold, could the number from
22 partially matching portions of Claim 1 and the threshold could be zero
23 thereby meeting the claim? Is that permissible reading of the claim
24 language?

25 MR. JAIRAM: I think if the prior art clearly set forth that there is a
26 number and said here, here's the number and it's one and if it's said here's the

1 threshold and the threshold here is set to zero. But where the prior art
2 doesn't even say anything about a number or trying to use any kind of a
3 threshold, I think that Petitioner's approach is over broad. It's trying to, kind
4 of, map everything in the prior art into some kind of alternate claim to try
5 and make it analogous to the claim language, but I think that it is turning a
6 relatively simple claim, you know, on its face.

7 JUDGE CASS: All right. Thank you, Counsel.

8 MR. JAIRAM: Thank you, Your Honor. And --

9 JUDGE WEINSCHENK: Mr. Jairam?

10 MR. JAIRAM: Yes.

11 JUDGE WEINSCHENK: Before you move on to the motion to
12 amend, can we talk for a minute about Claim 7? I believe that's the claim
13 that includes the term connection which you proposed construing as a
14 relationship that includes a link. I was wondering if you could help me
15 understand what link means or what link requires? Because I worry here
16 that you pose a construction that might be difficult for us to apply, and I'm
17 curious if you can shed some light on what that means about link?

18 MR. JAIRAM: Sure thing, Your Honor. And I'll note at the outset
19 that we actually didn't propose a construction in our preliminary response,
20 and we included a construction, proposed construction, in our Patent Owner
21 response basically at the invitation of the Board in the institution decision
22 where the Board noted that, you know, the Board may appreciate some
23 further development on that. But I don't think that it's really needed.

24 I think the plain and ordinary meaning would suffice. And so we've
25 tried to put forth a construction that we think is reflecting the plain and
26 ordinary meaning in the context of the specification and drawings.

1 If you look at Figure 17, which is shown here on our slide 29, there's
2 an example of a link in the context of, I think, here it's showing a model A,
3 model B. These are networks. There's various examples that are described
4 in the spec and in the specification. In the snippet of text shown here you
5 can see some mention of a neural network.

6 Basically, a POSITA would be familiar with various types of things
7 like neural networks and other types of computer-related graph networks
8 that are described and within the scope of the specification and claims, can
9 have essentially a link between them. I guess it could be implemented in
10 various computer-specific ways, things like, you know, having a pointer to
11 another node or some sort of an identity of another node. And the other
12 node might be connected back, linked back to it or not.

13 That's basically what the link is, the link is mentioned in a couple of
14 places. I'm going to see if I can find one of our slides. Slide 30 notes that
15 knowledge cells can be interlinked into knowledge structures. So basically,
16 the way you build up more complicated knowledge structures is by linking
17 them.

18 And it's, kind of, hard to come up with a better word here than what
19 we already have come up with in the specification, the link, and therefore,
20 you know, put forth into the construction. You can, I guess, join. You can
21 cause one cell to adjoin another cell and they are linked. And our
22 construction notes that a relationship that includes a link, because I don't
23 think it's limited to as in Figure 17 here on slide 29, I don't think they have
24 to be directly adjacent, I guess, from level n to level $n + 1$, but they can still
25 be connected. You know, the various nodes in the network are connected as
26 would be consistent with how a POSITA would understand all of this.

1 I think that we were basically trying to address the Board's request
2 for some sort of a construction, but I don't think it's really needed here
3 because whatever plain and ordinary meaning or our specific construction is
4 adopted, Grotmol just doesn't have that. If you go look at what the petition
5 tries to map for the connection that's generated, it just doesn't really make
6 sense trying to say, well, where is something --

7 JUDGE WEINSCHENK: Well, wait, Mr. Jairam. It might be
8 helpful. I understand your point that you, sort of, proposed this in response
9 to us and I appreciate you being honest that it may not be necessary, but
10 maybe you can help me then put this in context and dispute that. I think, if I
11 understand you correctly, Petitioner is relying on maybe it's images or
12 something else that are stored sequentially and that that results in links
13 between them because there's this sequential order.

14 Is there some particular reason why even under the plain and
15 ordinary meaning that that wouldn't be a connection? When you've got
16 things in order they're connected in the sense that they're stored in order. Is
17 there some reason that's not a connection then?

18 MR. JAIRAM: I don't think just storing things in order means that
19 they are connected. I'll also note that I believe the claim requires connection
20 generated. I mean, even if you said that things are connected just because
21 they're in order, I mean, I guess, two people walk in a line to a concert,
22 they're standing in line, well, I mean, essentially everything in the universe
23 has things that are ordered or possibly unordered. But that doesn't really
24 seem to be a fair reading of the connection.

25 I realize that that example is just, kind of, outside of the technical
26 scope here but I'm just trying to point out that generating a connection, in

1 this case the claim language of Claim 7, specifically refers to connections
2 that are generated. It's not even talking about, well, there might be some,
3 kind of, intrinsic kind of relationship that you can discern that could
4 somehow be considered to be a connection. It's specifically requiring
5 connection that's generated and another connection that's generated, and it's
6 referring to very specific technical things that are here the context of the
7 specification.

8 All of these things that are connected in the various examples shown
9 in the specification and the figures are in the context of things like, well, you
10 formed, let's say, a computing node that represents a correlation and the
11 correlation itself has to do, you know, with yet another something else.
12 Connecting in that sense is clearly, we think, more than just saying, well,
13 there's two things and they happen to exist and since they are close together I
14 guess they're in order or in memory or something as Petitioner proposes.

15 That is a connection that's generated. I would say it's not a
16 connection under either the plain and ordinary meaning or our proposed
17 construction, nor is it generated. Even if Petitioner wins on the construction
18 aspect of the dispute, the petition, I believe, does not even address how such
19 connections are generated. And I don't believe that the claim language
20 should be read out.

21 JUDGE WEINSCHENK: All right. Thank you, Mr. Jairam.

22 MR. JAIRAM: Thank you. I guess I will turn briefly to the motion
23 to amend related discussion. And I appreciate that there's already been some
24 discussion both in Petitioner's argument, as well as quite an exposition of the
25 topics in the papers, but I'll just, kind of, note a few common themes. The
26 biggest theme that I can perceive is that if you go look at this the last paper

1 that was filed, and that's by Petitioner because that's how the rules are set up,
2 and we didn't get a chance to respond in writing to that, it's basically a whole
3 bunch of new arguments.

4 And it's really hard to even tell exactly how those relate to anything
5 from the opposition, which is where Petitioner had its chance to fully
6 develop its opposition theories and to use its expert and to set forth whatever
7 prior art they wanted to. They had their chance.

8 But they have essentially engaged in sandbagging by presenting
9 very different theories in the sur-reply. And, obviously, we are only able to
10 respond to it to the extent we're even as Patent Owner able to respond to it.
11 It's by my remarks here orally in the context of a time constraint where, you
12 know, it just seems really unfair. We have played by the rules --

13 JUDGE WEINSCHENK: Mr. Jairam?

14 MR. JAIRAM: Yes.

15 JUDGE WEINSCHENK: It might be helpful, could you -- I mean, I
16 understand you think there's multiple examples of this, but could you give us
17 one example of where you think, or maybe the most critical one, where you
18 think they have presented not just a new argument but I think a new theory
19 of unpatentability here?

20 MR. JAIRAM: Yes. And when we say the new theory, we'll look at
21 what the mapping is because you can't go from one mapping to a different
22 mapping even if it's still in the context of the same two references. I
23 understand that they have not introduced yet another third reference. That's
24 not what I'm saying.

25 But let's take an essentially the very first thing in their sur-reply in
26 Page 2 -- on Page 2 of their MTA sur-reply they've got to come up with the

1 multiple data structures that include information for the same multiple
2 objects. Well, in the context of the opposition you can just go look at the
3 pages and they were page constrained so it's very short, and you can see
4 what they pointed to for the data structures. They pointed to something in
5 Hickman. They pointed to something in Tolstedt. But let's just take the
6 Page 2 discussion.

7 They say that, "The preliminary guidance erred by focusing on
8 Hickman alone," and they pivot to Grotmol. Well, they didn't discuss a
9 mapping to Grotmol so everything is just, kind of, turned on its head now
10 because you can't now go and say, well, it's actually in Grotmol. They had
11 the chance to map if they wanted to to something in Grotmol.

12 I'll give you another example --

13 JUDGE WEINSCHENK: Well, Mr. Jairam, before you move on, I
14 do have a question about this because I think, if I understand their sur-reply
15 here, they're explaining that Grotmol talks about images that, you know,
16 having multiple images that represent the same objects because I think that
17 was an issue in the preliminary guidance.

18 And I do think that I saw in opposition they do not, at least that
19 portion of it, to Grotmol, for example. If we look on page, I believe it's 19
20 of the opposition, they rely on Grotmol's Figures 20A and 20B to show
21 object representations that represent multiple objects detected at a first time.

22 So Grotmol is relied upon here. I'm not sure if I understand how
23 that's a new theory when the images or the figures in Grotmol, 20A and 20B
24 that they're relying on in the sur-reply are cited on Page 19 of opposition
25 here.

1 MR. JAIRAM: When they are trying to do the correlation they
2 jump back and forth between Grotmol -- in the sur-reply Petitioner jumps
3 basically back and forth between Grotmol and Hickman, but when I'm trying
4 to look to see what exactly is correlated it looks like they did not rely on
5 Grotmol in the opposition.

6 So, one second please, Your Honors. Let me find an example. So,
7 at Pages 5 and into 6 of the MTA sur-reply where the data structures have to
8 be correlated with the instruction sets, Petitioner says, "Grotmol's training
9 sets themselves correlate." They are clearly now mapping to Grotmol.
10 Okay? But this is an argument that simply was not presented in the
11 opposition, and I will point to the opposition and we'll look at exactly where
12 the correlation is discussed. The pages in their oppositions at Pages 23 and
13 into 24. Twenty-three has three lines at the bottom that just basically put the
14 heading and just say what the limitation is.

15 For 24, Page 24, they have a single paragraph on Hickman where
16 there's no mention of Grotmol and there's very cursory discussion of
17 Hickman. So, I think it is rather unfair to now be permitted -- for Petitioner
18 to now be permitted to say, well, Grotmol itself does the correlation and
19 essentially change mapping. And to say, well, now data structures are
20 applied to Grotmol's training sets. That's about midway down on Page 6 of
21 the sur-reply. When there is no mention of group Grotmol in that relevant
22 portion of the opposition.

23 We, in our MTA reply, dealt with the arguments that are actually
24 presented in the opposition, just as Your Honors in the preliminary guidance
25 could only deal with the arguments that are actually presented in the
26 opposition. It's coming out of I won't even say left field. It's coming out of

1 like, you know, somebody skydiving into the stadium that now the theory
2 changes to be based on some other thing about Grotmol when there is no
3 discussion about it.

4 Similar deficiencies absolutely apply with respect to Tolstedt and
5 throughout. Actually, it's rather telling that their theory is basically are, kind
6 of, attacking the preliminary guidance which, obviously, Your Honors have
7 provided to the Patent Owner in the context of a motion to amend
8 proceeding to make this entire protocol, this motion to amend somewhat
9 reasonable. As Your Honors certainly know, a motion to amend is rather
10 difficult for Patent Owners and rarely achieved. We have done everything
11 possible to play by the rules and to narrow the claims, comply with the 112
12 requirements, comply with every known requirement, conduct a conference
13 call, carefully try and clearly narrow the claim, not just add one or two
14 throwaway limitations, substantially add limitations to the claims, and
15 carefully dissect the opposition, which Your Honors know we have done
16 correctly.

17 JUDGE PARVIS: I'm just going to interject. You are going into
18 your rebuttal time. Sorry, I didn't want to interrupt you earlier so --

19 MR. JAIRAM: No, I appreciate that Judge Parvis. Thank you. I'll
20 wrap up here briefly and then I'll sit down.

21 JUDGE PARVIS: I do have one question. Petitioner argued that
22 Patent Owner has not provided substantial evidence supporting that the
23 amended claims are patentable subject matter under 101. Would Patent
24 Owner like to respond to that?

25 MR. JAIRAM: Yes, please. Thank you. The 101 challenge here is
26 basically absurd. If these claims are not patent eligible and you can see how

1 long these claims are and we have added numerous limitations, then it's
2 really hard to conceive of what in this field could be patent eligible. And I
3 don't think that is the correct reading or purpose or anything of Alice or step
4 one.

5 I'll note that the preliminary guidance, the Board's preliminary
6 guidance, was able to identify patent eligibility at step one just on the basis
7 of the existing limitations of just Claim 1. We have actually amended to
8 incorporate numerous other limitations of not just Claim 1, but then other
9 claims and then add a slew of limitations that are very clearly computer-
10 related.

11 I'll note that the claims themselves are evidence. There is no
12 requirement that I'm aware of that an expert must present testimony on 101.
13 In fact, 101 seems to me to be the best primed for adjudicative bodies to
14 look at it and to just look at the claim language and as the Board did at the
15 preliminary guidance stage to figure out if it passes muster under step one.

16 The claims recite numerous limitations regarding things like
17 autonomous execution, which, you know, we heard some discussion by
18 Patent Owners -- by Petitioner's counsel, excuse me, about whether there is
19 or is not evidence of improvements. I'll just respectfully submit that
20 autonomously executing a device in the specific way that's claimed, you
21 know, under the rubric of all the various claim limitations, autonomous
22 execution seems to me to be a pretty darn good benefit of the device. That is
23 an improvement of the device.

24 The claims contain limitations that can be plainly read and
25 particularly as where here Petitioner's expert has repeatedly just parroted the
26 language of the briefs. I don't think that what the Board or what courts are

1 looking for is to just submit something by an expert just, you know, as just
2 for the sake of it to say, look, here we go. We checked the box. Now we
3 have submitted expert evidence. Now, therefore, you know, we're somehow
4 on some higher playing field.

5 I think that these claims stand for themselves. Respectfully, Your
6 Honors were able to figure it out on the basis of just the Claim 1 limitations.
7 And if you go look at all the limitations regarding the data structures, the
8 correlations, I think that takes the claim quite clearly out of the ambit of an
9 abstract idea.

10 The last thing I'll just say about that regarding the abstract idea is
11 that Petitioner's counsel made note, both in its MTA reply as well as in its
12 oral argument, regarding some 2024 Patent Office guidelines. But whatever
13 the guidelines may be certainly does not disrupt the Alice test, and we have
14 applied the Alice test. We only need to win, by the way, on step one
15 because if it's not an abstract idea we don't even need to get to Step 2. And
16 we have carefully and diligently analyzed Petitioner's arguments from its
17 MTA reply, I'm sorry, from its MTA opposition and we think that a lot of
18 the arguments that it presented in the MTA sur-reply improperly expand
19 upon it.

20 Why given that their claims, for substitute claims, why would they
21 have needed to wait until the MTA sur-reply to make all the additional
22 arguments regarding 101 that they did? That is sandbagging.

23 I will sit down, Your Honors and so that I'll have some rebuttal time
24 left over.

25 JUDGE CASS: Yeah, Counsel, I have a couple things and I think
26 both of these you can address in your rebuttal, if you want. First, I'd like to

1 ask you to identify which portions, you know, specifically which portions of
2 Petitioner's sur-reply on the motion to amend you think are improper, you
3 know, just give us page numbers and/or section numbers. And again, you
4 could do that during the break if you want or, you know, before you come
5 back for your rebuttal.

6 And second, just to let you know, we are interested in hearing your
7 response to these portions of the sur-reply even if you think that they're new.
8 And again, you can address it now or you can address them in your rebuttal,
9 you know, whatever you prefer.

10 MR. JAIRAM: Thank you. I will do so in the rebuttal. Thank you.

11 JUDGE CASS: Thank you.

12 JUDGE PARVIS: Patent Owner has 14 minutes for rebuttal.

13 Petitioner, you may begin.

14 MR. RENNER: Thank you, Your Honor. Patent Owner contends
15 that no rational basis was offered to inform the combination. We hear the
16 continued refrain on along these lines, but Hickman was referenced with
17 express purpose in the briefing at the outset and again in the motion -- the
18 opposition briefing to enable cloud-based storage of training data. This is
19 clearly articulated. Resolved based on Grotmol's teachings to enable sharing
20 of the data by robots that are practicing Grotmol's technology.

21 Patent Owner contends that the claims distinguish Hickman through
22 reference to the first and second data structures, just a few words on this.
23 Judge Cass referenced that the disclosure provided by the '974 patent of data
24 structures that it's very broad. We talked about that in our opening. You
25 asked for whether that was operative as like photography to define the data
26 structure term.

1 Without even needing to reach that question, what we know is that,
2 as Dr. Khan had offered, the Patent Owner must apply the claims in a
3 manner that is inconsistent with this breadth that's found in the '974 in
4 seeking to distinguish the knowledge base as disclosed by Hickman in
5 Figure 3. And this, of course, is improper.

6 Beyond this, the Patent Owner's position would have the Board look
7 to the references in isolation rather than the combination within which they
8 are advanced.

9 JUDGE PARVIS: I'm going to ask you to just stop for just a
10 minute.

11 MR. RENNER: Certainly.

12 JUDGE PARVIS: Okay. You may continue.

13 MR. RENNER: Should I back up for a moment and -- I'm not sure
14 it was all heard or --

15 JUDGE CASS: This is Judge Cass. Something is going on with my
16 video but I'm still here so I heard what you -- I heard your arguments, you
17 know, during the time.

18 MR. RENNER: Terrific, thank you. I'll continue then and comment
19 that the position would have us look to the Board's references in isolation
20 rather than as they're combined and the combinations advance. We saw this
21 in the Patent Owner's preliminary response as highlighted in the institution
22 decision.

23 Petitioner has set forth an obviousness contention. And in doing so,
24 Petitioner has contended that the data structures of Hickman they operate
25 together to reveal a combined data structure. Petitioner has looked to
26 express disclosure within Hickman on this point. Patent Owner seeks to

1 discount this express disclosure by characterizing it as boilerplate, but it's
2 not boilerplate. It's an express and targeted disclosure. That is Hickman in
3 its column 10 disclosures that we discussed with respect to this slide 14. It's
4 not at all generic to the disclosure of Hickman generally, but specific to the
5 data structures that are disclosed at Figure 3.

6 The specific data structures described in that particular paragraph
7 are what's at issue. And here, Hickman disclose this combining the content
8 and therefore the data structure shown in that Figure 3. This is what
9 Petitioner has consistently advanced despite contentions otherwise and this
10 is certainly within the scope of what would be obvious to those of ordinary
11 skill when they're looking upon a data structure like Hickman where they
12 said it's exemplary generally what's in Figure 3, much less these specific
13 details that are there.

14 Now, as noted, Dr. Janet looked at this and other disclosures within
15 Hickman to resolve the Hickman would show a POSITA that this disclosure
16 was intentionally flexible. And this informed his conclusion that the
17 illustration in the Figure 3 example is not binding, as did the competing
18 disclosure in column 10 that we've been talking about.

19 Finally, if giving credit to the word knowledge base in Figure 3,
20 which is what's going on here, they're looking at 307, 308, and 309 that have
21 the legal knowledge base on them. It seems, kind of, incredible that we're
22 going to discount the same use of that same word on 306, which shows a
23 single knowledge base that is the dashed line knowledge base, as having the
24 fields all enclosed.

1 There's nothing in the claim that actually defines that these can't be
2 logical relationships. But much more than that, Hickman tells you you can
3 combine the data, the content as well as therefore the structure.

4 Your Honor, Patent Owner contends that the Petitioner advanced a
5 new theory of patentability. We just talked about this for a few moments at
6 the end there and you asked for specific examples. It would have been
7 helpful to have received specific examples from them. We've seen broad
8 contentions of wrongdoing throughout the briefing, but there aren't specific
9 contentions that we've had an opportunity to rebut. I appreciate the Board's
10 always willingness to try to make sure it's hearing the parties and it's
11 intrigued that they provide specific examples now.

12 If you see them we would appreciate an opportunity to respond to
13 them, to be able to speak to the fact that we think we've done nothing wrong.
14 We think we've stayed true to our combination narratives and our theories.
15 That was certainly our intent and we believe we've done that.

16 As for the burdens in the case, you hear a lot about the burdens
17 being difficult on a Patent Owner. Well, the Petitioner has its own
18 considerations as it relates to the difficulty of a motion to amend and the
19 burdens there, the limited time, limited briefing. I'm not here to concern you
20 with those. Instead, I'm here to say that I'm not sure where those arguments
21 go. Is it an APA violation? What is that? I'm not really sure.

22 What I do know is that Patent Owner did not ask for any additional
23 briefing and the jurisprudence before the Board is filled with instances
24 where parties who need to be heard and have legitimate reasons to be heard
25 seek that, get that, and get briefed on whatever it is that's on their mind.

1 Here there was not even a request. There's just today these kinds of broad
2 allegations.

3 Your Honor, if there are further questions I'll be happy to take them,
4 otherwise I will have my colleague speak for just a moment on Claim 7.

5 JUDGE WEINSCHENK: Yeah, Mr. Renner, I was actually going
6 to ask about Claim 7 so if that's better directed to your colleague I'll wait.

7 MR. RENNER: Thank you, Your Honor. Any other questions
8 before?

9 JUDGE PARVIS: You're somewhat close to time. It's just a minute
10 or two.

11 MR. RENNER: Thank you, Your Honor.

12 JUDGE WEINSCHENK: And so since we only have a minute or
13 two, Mr. Khan, I'll tee you up what my question is. Maybe you could touch
14 on this connection issue? And that we understand your argument to be that
15 storing things sequentially creates a connection, and I'm curious when you
16 can explain why that satisfies the connection? It seems to me that storing
17 things in sequence may be even more coincidence than connection, but
18 maybe you can speak to that?

19 MR. KHAN: Absolutely, Your Honor. If you can turn to slide 35?
20 Slide 35 includes two dictionary definitions. These are provided by Patent
21 Owner. And in those dictionary definitions you'll see there's highlighted
22 green text which actually indicates that a connection can be a logical
23 sequence. It's right there. It's one of the definitions.

24 And Petitioner's position is not that, well, you know, the term
25 connection is only limited to logical sequences but it's a sequence, but it is
26 that it certainly encompasses it. Patent Owner's position is, as you can see in

1 the highlighted yellow text, there's the word link. They pick that and they
2 ignore everything.

3 And so our position --

4 JUDGE WEINSCHENK: Mr. Khan, is there anything in the
5 intrinsic evidence that supports, you know, this dictionary definition, logical
6 sequence being consistent with, you know, you know, the written description
7 of the claims?

8 MR. KHAN: Yes, Your Honor. So, we would look to the Thorner
9 factors for guidance here. So the Thorner factors indicate that when you're
10 trying to narrow the scope of a claim term you have to have either express
11 disavow or express definition, but neither of those are present here. Patent
12 Owner is trying to limit, narrow the interpretation of connection. Why is
13 that unreasonable? You can turn to slide 36, Your Honors.

14 At slide 36 you will see just one example, down on the right side,
15 bottom right, it says, "A connection may include or be associated with at
16 least one of: an occurrence count, a weight, a parameter or a data," right?
17 It's very broad, right? I don't know how one can mesh that description of
18 connection with the term link. It's just they're not really compatible.

19 Yet, Patent Owner would have you disavow all of this disclosure in
20 the '974 patent to include their narrow interpretation of the term connection.
21 More so, it's not really based on anything. The examples they give are
22 permissive in nature. The description is may, can, example, embodiments.
23 That's not limiting.

24 And so when you turn to the Thorner factors, we know that in the
25 intrinsic evidence you must have disavow or you must have a definition.
26 Neither of those are present. And, therefore, then you look to the plain and

1 ordinary meaning for guidance, and when you look at the plain and ordinary
2 meaning as Patent Owner's dictionary definitions indicate, sequence is part
3 of them. And so if you are -- if you have data in sequence in a memory
4 that's a connection. They're connected.

5 JUDGE WEINSCHENK: Thank you, Mr. Khan.

6 MR. KHAN: Thank you very much, Your Honors. That's no
7 further questions for us for now.

8 JUDGE PARVIS: Do you have any questions right now?

9 MR. KHAN: Thank you.

10 JUDGE CASS: All right. Sorry, I was on mute. Counsel, I think we
11 had previously asked a couple of questions that you would address them on
12 your rebuttal and one was to identify the specific portions of Petitioner's
13 MTA sur-reply that you thought that was improper, specifically by page or
14 section number and second for your responses to those.

15 MR. JAIRAM: I'll just note, Your Honor, that there might be a bit
16 of confusion here.

17 JUDGE CASS: Oh, I'm sorry. I'm sorry.

18 MR. JAIRAM: It was still Petitioner's counsel still speaking.

19 JUDGE CASS: I'm sorry. Disregard what I said. I'll say it again.

20 MR. JAIRAM: Thank you, Your Honor.

21 JUDGE PARVIS: And to the extent, I think you asked for the
22 opportunity to respond and maybe this is what Judge Cass is getting to, if
23 you want more time to respond you can ask for it and we'll take that into
24 consideration.

25 MR. RENNER: Thank you, Your Honor.

1 MR. JAIRAM: This Arvind Jairam again. I believe, Judge Parvis,
2 did you say I have 8 minutes or how much time do I have remaining?

3 JUDGE PARVIS: Patent Owner has 14 minutes.

4 MR. JAIRAM: Oh, thank you. Okay. I will start right away with
5 basically what Judge Cass just now referred to. Some examples of new
6 arguments in the MTA sur-reply submitted by Petitioner include Page 2 at
7 the very bottom, a discussion in bold and italics about Grotmol itself
8 disclosing knowledge base, having multiple data structures, that each include
9 images representing the same set of multiple objects.

10 And I'll note that in Petitioner's opposition Paper Number 6 at 18
11 and 19, I guess, Page 19, that's where the data structures are even mentioned
12 in the claim for the first time. They did not rely on Grotmol for that. Going
13 into Page 19 into Page 20 is where Petitioner very clearly mapped Hickman
14 alone for disclosure regarding the first data structure.

15 And so in the MTA sur-reply where Petitioner is saying that
16 Grotmol itself discloses this, you know, multiple data structures each having
17 certain limitations, you just trace back in the opposition and you see, well,
18 what did they cite Grotmol for in the opposition? It was actually a different
19 part of claim language and not anything about the data structures.

20 Another instance is at the bottom of Page 4 of the MTA sur-reply,
21 the last sentence, which is about six lines long. "In this context it would
22 have been obvious that the first data structure in the GHC would predictably
23 store information." And the sentence continues, "All of that is new
24 conclusory attorney argument, statements about, well, what would have been
25 obvious." All of that is, you know, basically the thrust of the sentence is that

1 it's trying to address the very specific hole that both the Board, as well as us
2 in our MTA reply identified. That it has to be the same, you know, objects.

3 And we're not just saying that the same objects exist in some general
4 sense. Why are we talking about the same objects? Because they have to be
5 in something. The data structures have to have something about the same
6 objects. And for them to now just say that and say, well, it would have been
7 obvious, I mean, clearly there's no expert support for that. And clearly that
8 sentence is conclusory and very aspirational. It's just trying to solve the
9 exact problem that their analysis has.

10 Another instance is on Page 5. You see all the color-mapped,
11 annotated diagrams trying to come up with something for the first data
12 structure. All of this is new. None of it was in the opposition and it's we're
13 not just saying that the annotated diagram itself was not present in the
14 opposition. That's true. But we're actually saying, you know, the reason that
15 they put it in here and their theory that they are clearly trying to propound
16 and support with it, that is not in the opposition.

17 And that's the reason that they had to go make this new annotated
18 diagram all with attorney argument and which Your Honors, probably Judge
19 Cass I believe, correctly noted leads to some problems. Things like, well,
20 you know, how do you arrive at this and is this, you know, how do you do
21 it? What is the basis for it? I would just put it under the rubric of was there
22 mapping identified with sufficient clarity or is this a new argument? I would
23 respectfully note that basically the only way that they could have gotten it
24 right on this is if both Your Honors, as well as us, were somehow wrong in
25 the first instance, which seems pretty unlikely because everybody has
26 obviously carefully parsed their opposition.

1 There's not much. You just go look at the limitation. Each
2 limitation less than a page. There's only a few lines and in many instances a
3 single paragraph, and we did our best to try and figure out what the mapping
4 is based on that. And it seems rather unfair to now elaborate in some, you
5 know, very pretty way, lots of colors and lots of attorney argument that is
6 new.

7 Page 6 I'll note two instances. Page 6 of the MTA sur-reply, the first
8 full sentence, "Grotmol's training sets themselves correlate." Okay. Now,
9 they are trying to say, well, for the correlating which is a specific claim
10 limitation in the substitute claims where they did not invoke Grotmol, they
11 didn't say a word about Grotmol, I'll say two points about this.

12 One, well, this was not in the opposition and so now to say, well,
13 actually Grotmol had it all along we would probably disagree with it but it's
14 a new argument. It's improper.

15 Secondly, we'll note that okay if you're going to correlate X with Y,
16 all right, and what did you map Y to? Y is here as the instruction sets. X is
17 the circumstance representation. Go look in the petition and we made this
18 argument in our MTA reply. If you go look in the petition to what they
19 actually mapped to Y, the letter Y being code for, you know, the instruction
20 sets, well, they mapped it to motor control indications of Grotmol.
21 Now, how could their analysis say, well, it's obvious to correlate X to Y if
22 you only talk about a reference of Hickman, which they are not relying on
23 for their mapping of Y at all. So these limitations all have relationships
24 amongst each other which Petitioner has glossed over. How can it be that
25 their MTA proposition, if we just start with that, if it doesn't even mention
26 Grotmol at all then how can it be right that to correlate, you know, X to Y

1 and they mapped Grotmol's motor control indications to Y, how can that
2 possibly be taught in the combination?

3 At least you would expect a few sentences saying, well, in the
4 context of, you know, these disclosures which are found in Hickman, it
5 would now have been obvious to apply that to Grotmol in some way. But to
6 completely gloss over and not mention at all Grotmol clearly shows that
7 there's some error there.

8 Another thing on Page 6 about halfway down the page, the sentence,
9 "Even when Hickman's data structures are applied to Grotmol's training sets
10 the correlations remain and therefore meet the limitations of the substitute
11 claims. Well again, nothing about Grotmol was mentioned in the opposition
12 for the correlations.

13 So what has happened here is Petitioner has now realized, oh, well,
14 they didn't do enough in their opposition and they didn't even touch on
15 Grotmol at all and now they're trying to bring Grotmol back into it and, kind
16 of, weave this theory that somehow has, kind of, ambiguously expanded to
17 include something of Grotmol.

18 Another one, Page 7, the tables, the annotated tables, again, these
19 were mentioned in the discussion earlier today. All of that is new. Yes, the
20 very broad statement from Hickman about you can combine knowledge
21 bases was discussed but not in the specific way here and certainly not setting
22 forth a theory with any precision or particularity or rationale.

23 A couple more and then -- I'm just trying to answer your question.
24 Page 8 of the MTA sur-reply at the end of Section C there, there's a sentence
25 that says, "A POSITA would have understood." Well, all of that is pure
26 attorney argument. There's no expert support. And yet it is professing to

1 say what a person of ordinary skill would have understood. Clearly, if that
2 was not backed up by expert support the attorney argument alone cannot say
3 what a POSITA would have understood.

4 Additionally, the preceding sentence that begins with, "Returning to
5 Grotmol's images," that point also. Okay. So, just saying that the images
6 themselves can be seen, I'm sorry, the tree and rectangle and ball can be
7 seen, yes, that's a true statement about Grotmol. But that point was not
8 raised in the opposition to support their argument. Clearly, if they had
9 thought about this issue about same objects having to be present this would
10 have been a good sentence for them to have put in their opposition and to
11 then expand upon it.

12 It's not enough to just say, well, you know, guess what? Grotmol
13 has some figure and it just happens to have the same objects in it and to say,
14 well, that was our theory all along. Clearly, the opposition does not set
15 forth, as Your Honors picked up on, this notion of the same objects.

16 Page 9 of the MTA sur-reply, the entire last sentence or I'm sorry,
17 the second to last sentence and the last sentence of Section D accordingly all
18 the way to the end of the paragraph is all new attorney argument. It actually
19 starts by saying, "It would have been obvious to a POSITA." Again, no
20 citation to expert support and this is attorney argument trying to fill in
21 basically a hole that's been pointed out to them

22 Those are the most salient examples of that. There are probably are
23 others, and I would basically invite Your Honors that to the extent Your
24 Honors disagree with us, with Patent Owner, and essentially are inclined to
25 deviate from the preliminary guidance, I would invite Your Honors to probe
26 deeply whatever argument or evidence that Your Honors might be inclined

1 to rely upon to check. And it most likely is not in the opposition because the
2 opposition has been carefully scrutinized by both Your Honors as well as us.
3 And we simply think that there are just a lot of new things that have been
4 improperly added.

5 Does that answer your question, Judge Cass?

6 JUDGE CASS: Yes, I think so. And I just want to make sure too
7 that you have enough that you've addressed sufficiently the arguments in
8 Petitioner's sur-reply.

9 MR. JAIRAM: Thank you. It looks like I have about three minutes
10 of remaining, and I would just note one thing regarding we heard some
11 discussion of about, I believe, in the most recent rebuttal, I suppose, about
12 the AI -- or about 101. And I'll note that the even the examples that
13 Petitioner has --

14 JUDGE CASS: Yeah, Counsel, just so I'm clear, did you say you
15 feel like you've addressed the sur-reply sufficiently?

16 MR. JAIRAM: Yes, Your Honors.

17 JUDGE CASS: Before you move on to 101. Okay. I just wanted to
18 make sure that you had enough opportunity.

19 MR. JAIRAM: Well, again, the 101 is actually part of the sur-reply
20 so I'm still talking --

21 JUDGE CASS: I thought so.

22 MR. JAIRAM: So, I'm just talking about, you know, these two
23 examples, which arguably that is itself a new argument to -- I mean, the
24 examples might exist certainly in the USPTO's libraries but to invoke those
25 examples and to present it as a basis for patent eligibility appears to be a new

1 argument. It was certainly not presented in the opposition and they could
2 have. And if they did we certainly would have addressed it.

3 But I'll give you a very short synopsis of the deficiency. Both of the
4 examples that are listed, which are very high level, "collecting information
5 on movements and recording the data," and the second example,
6 "monitoring the location of the thing and notifying a party" are rather far
7 removed from the claims. Certainly, the claims as proposed to be amended
8 but even the existing -- even Claim 1.

9 The examples, if these are the examples that they have reached for
10 in the vein of so-called organizing a human activity, I think Your Honors are
11 well aware that organizing a human activity is, kind of, this entire body of
12 things that people are -- that are that the legal community or I suppose the
13 Supreme Court or Federal Circuit have basically tried to say, well, you can't
14 just take things like organizing human activity and just say, oh, and just do it
15 on a computer.

16 But these claims and that notion are quite different from our claims.
17 All the details regarding data structures, certainly, correlation, instruction
18 sets, autonomous execution, it's really hard to even see, like, how these are
19 at all remotely comparable. And in any event it's belatedly presented
20 because that is a new argument and it was not presented earlier.

21 I think I have about half a minute left and I'll just see if Your Honors
22 have any additional questions you want me to answer?

23 JUDGE PARVIS: I have a question. So, Petitioner presents
24 additional explanation in its sur-reply that it's entitled to a sur-reply so that
25 additional explanations can provide additional explanation and argument. Is
26 Patent Owners' position seems to be that Petitioner has gone beyond what it

1 was allowed to do. Does Patent Owner -- to the extent that we are
2 determined that Petitioner did not, is Patent Owner's -- has Patent Owner
3 explained from a substantive standpoint why Petitioner's additional
4 explanation does not resolve concerns that we raised in (inaudible 0:08:34)?

5 MR. JAIRAM: Well, I haven't had enough minutes here to possibly
6 address all of the substantive issues. As Your Honors are well aware, all
7 these are complicated issues that, you know, I've done my best to at least
8 touch on which ones they are. I guess I will note that we aren't the only ones
9 and the Board has, in fact, addressed this specific issue in the case -- in the
10 IPR of Snap v. Palo Alto Research Center, IPR2021-00987, Paper 54 at 146.

11 In the context of a motion to amend, the Board specifically noted
12 that Petitioner's, quote, "Sur-reply arguments...constitute new arguments
13 that proceed in a new direction with a new approach from that presented in
14 the opposition." There's some listing of Board Rule and Trial Practice
15 Guide.

16 Also Apple IPR2015-00412, Paper 50 at 44 noting that, "Respond
17 does not mean embark in a new direction with a new approach as compared
18 to the position originally taken...accepting such belatedly presented new
19 arguments would be unjust to the Patent Owner and we decline to do so."

20 And I'll give you one more cite and I won't belabor this point.
21 FedEx, IPR2022-00934, Paper 41 at 9 basically noting that, "The orderly
22 presentation of arguments in a certain way minimize the possibility of unjust
23 undue prejudice to a party without adequate opportunity to respond to the
24 new evidence in briefing." Specifically, I will note that "in briefing."

25 And I have certainly done my best under the constraints that the
26 entire system has here to point out various issues. And I think -- I suppose

1 I'll leave it that if Your Honors would permit additional time I could
2 certainly get into it, although --

3 JUDGE PARVIS: Counsel, I have a question. Has Patent Owner
4 requested any additional briefing on this point, either to identify those
5 portions or to respond to them?

6 MR. JAIRAM: No, Your Honor. And I'll note that, first of all,
7 when they have violated the rules by going outside what they're supposed to
8 that itself is a violation. I'll secondly note that there have already been four
9 briefs regarding the MTA. That's including reply and sur-reply. I'll thirdly
10 note that the briefing ended relatively recently and, in fact, clearly, as Your
11 Honors would be aware, very proximate to finalization of everything in
12 preparation for this oral hearing itself.

13 And I'll just, kind of, put that all under the umbrella of we have
14 played by the rules. We have not expanded our theories at any point. And
15 when confronted with a clear violation of the rules, which I think Your
16 Honors will be able to perceive and discern, we have noted cases in which
17 the Board has simply declined to entertain the new arguments. And I think it
18 would be an unfair burden to say that we had to, in addition to everything
19 else, also somehow assume the burden of, kind of, fixing someone else's
20 breaking of rules.

21 JUDGE PARVIS: I understand Patent Owner's position. Thank
22 you.

23 MR. JAIRAM: Thank you.

24 JUDGE PARVIS: You have used your minutes.

25 Did Petitioner want to very briefly --

1 MR. RENNER: Yeah. Your Honor, just a word if it would be
2 okay? Minutes probably.

3 JUDGE PARVIS: We'll ask then Patent Owner if they want to
4 (inaudible 0:04:16).

5 MR. JAIRAM: Sure.

6 MR. RENNER: Your Honor, I think the last point that you asked,
7 the last question is probably the most pointed one, that there has been no
8 request for briefing, no motion to strike, no relief sought here. The theories
9 we hear here are heard by us for the first time in the kind of detail we're
10 hearing them. And we think there are procedures and appropriately
11 available procedures that govern these proceedings. They were not availed.

12 Your Honors, it's, kind of, hard to just respond in real time to the 10
13 minutes or so of communication there. If doing so, I guess I would note that
14 the papers we believe did have a common thread of us looking at what was
15 disclosed by Grotmol. It's 2010, Figure 20A and then pushing it through the
16 combination which was with Hickman and its disclosure.

17 So what I heard was complaints that Grotmol was mentioned. What
18 we were doing is pushing that data through as if it was. So, Your Honors,
19 we think that this is maybe it's waiver. It's foregone on the motions, if
20 nothing else. There's not a process issue here to be complained of and we
21 would have welcomed the conversation with opposing counsel had they
22 come to us and asked us to approach the Board for relief. But they've let
23 that moment pass and we don't think that the oral argument is a time to
24 receive a new brief, at least not for us, to have to try to contend with one.

1 But I appreciate the audience you've given us and the hearing today.
2 If there's anything you could ask me I'm happy to, of course, respond to it
3 but I wanted to offer those comments.

4 JUDGE PARVIS: Thank you, Counsel.

5 MR. RENNER: Of course, thank you.

6 JUDGE PARVIS: Does Patent Owner want an opportunity to
7 respond to that?

8 MR. JAIRAM: I will. Thank you, Your Honor. I will appreciate
9 some time to respond to it. As you heard me say, there are numerous new
10 arguments and, of course, we have, you know, seen that they have these new
11 arguments and I have some thoughts regarding them. I'm afraid that any
12 discussion that I give here is going to be essentially limited by my own
13 ability to extemporaneously try and do what, of course, you know, takes a
14 long amount of time to put together legal arguments and present them.

15 But if Your Honors would indulge, I will address all of their
16 arguments that are belatedly presented.

17 JUDGE PARVIS: They haven't been presented in the briefing so --

18 MR. JAIRAM: They have not been presented in the briefing.

19 JUDGE PARVIS: We can take it under consideration. I just didn't
20 want to give Petitioner additional time and not offer it to Patent Owner. But
21 we don't -- we can take it under consideration on the arguments today. I
22 think we can make some decisions based on what's here.

23 MR. JAIRAM: Okay. Thank you, Your Honor.

24 JUDGE PARVIS: Thank you, Counsel.

25 Anything else?

1 Thank you to both parties for appearing today and for answering our
2 questions. We'll take this case under advisement and issue our decision in
3 due course.

4 We will take a lunch break and then conduct the hearing in
5 IPR2023-01055. We will start the second hearing, I have 12:20. That's 45
6 minutes for lunch so 40 minutes. Will 1 o'clock, about 1 o'clock start for
7 everybody? Okay. So we'll start the second hearing at 1:00 p.m. Eastern
8 Time. We are adjourned.

9 (Whereupon, the proceedings at 12:18 p.m. were in recess.)

10 JUDGE PARVIS: Good afternoon everyone. We are convened for
11 oral arguments in IPR2023-01055 which pertains to patentability challenges
12 of claims in U.S. patent number 11,238,344 B1. I'm Administrative Patent
13 Judge Parvis. Judges Weinschenk and Cass are appearing remotely. We
14 now turn to appearances for both parties for those who will be arguing
15 today. If anyone else is attending in person or remotely but will not be
16 speaking, please identify them as well.

17 We will start with appearances for Petitioners.

18 MR. RENNER: Thank you, Your Honors, Karl Renner on behalf of
19 Petitioner Tesla. I am joined by co-counsel and backup counsel. This is
20 Nick Stephens, Usman Khan, as well as from Tesla Ashra Fawzy is present.
21 (Inaudible 2:12:56.)

22 JUDGE PARVIS: Thank you.

23 And Patent Owner?

24 MR. JAIRAM: Good afternoon, Your Honors. My name is Arvind
25 Jairam on behalf of Patent Owner Autonomous Devices. I am joined at
26 counsel table by Stuart McCommas. Also in the room is Brandon Merrill

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1 also from our firm McKool Smith. And joining remotely are Scott Hejny,
2 counsel of record, as well as Jay Cosic, client representative with Patent
3 Owner Autonomous Devices.

4 JUDGE PARVIS: Thank you, Counsel. I have a question for
5 Patent Owner's counsel, The Patent Owner's counsel also filed a form
6 requesting participation in the Legal Experience and Advancement Program.
7 Are you -- is that attorney going to be presenting today?

8 MR. JAIRAM: No, Your Honor. We will not be invoking the
9 LEAP provisions for the additional time. I will present the entire argument
10 today for Patent Owner.

11 JUDGE PARVIS: Thank you, Counsel.

12 The hearing today will be conducted in accordance with the
13 schedule and guidance provided in the oral hearing order, which was entered
14 August 12th, 2024 as Paper 37 in this proceeding. We will assume that
15 you're familiar with that hearing order and we will not repeat information
16 you already have unless we think it could be helpful to the parties.

17 The court reporter will provide a transcript of this hearing that will
18 become part of the public record in this proceeding and in the IPR2023-
19 01054 proceedings. Also as we discussed this morning during the IPR2023-
20 01054 hearing, we will be making of record the transcript of the hearing in
21 IPR2023-01054 in this proceeding. So, counsel may structure arguments
22 accordingly to avoid repetition this afternoon.

23 The hearing order stated that each party will have 60 minutes to
24 present arguments in this case. We will start with Petitioner. Do you wish
25 to reserve any rebuttal time?

26 MR. RENNER: Yes, Your Honor, 25 minutes, please.

1 JUDGE PARVIS: You may proceed any time you're ready.

2 MR. RENNER: May it please the Board, Karl Renner on behalf of
3 Tesla, good afternoon. If we could turn to slide 2 you'll find the table of
4 contents for this proceeding, the 01055 proceeding in which we attempt to
5 lay out the issues that are covered in the slide demonstratives with page
6 numbers and consistent with the ordering we saw them in the record
7 briefing.

8 At the end in the bottom of that, we've referenced the motion to
9 amend much like in the last preceding. We give a separate table of contents
10 to the issue there for references at slide 43.

11 Your Honor, if I could turn us to slide 5, and much like the last slide
12 deck you can see here a listing of the grounds that were advanced with
13 respect to the original claims in the petition. With respect to these claims,
14 that is -- that are not displaying that remain in the case, and as we had talked
15 last time, I would have planned to have discussed the Grotmol-Hickman
16 combination in detail since the records are consolidated in the transcript that
17 is going to be filed in each of the cases.

18 I'm not inclined to walk through that in the same level of detail that
19 we did last time. I am, however, happy to take any questions that you might
20 have had having emerged from our conversation earlier or about the
21 combination that might persist. We would be happy to answer any of those
22 that came up in the first proceeding, but it's certainly we're wanting to come
23 back and offer you an opportunity to get clarification on anything that might
24 linger on your minds.

25 If you don't have such questions at this point about the
26 combinations, that is the combination that is in general before in the original

1 petition which was to Hickman for cloud-based sharing of training data or a
2 structure by which it could share training data that would be useful to robots
3 the world's, operations and autonomous robotic activities that are outlined in
4 Grotmol or the motion to amend version of the same combination where we
5 get more specific about integration of some of the examples that Hickman
6 provide with respect to the (inaudible 2:07:41), for instance, as claimed as
7 Figure 3.

8 I'm happy to, like I said, answer any of those questions, but if there
9 aren't questions on that I would leave that to the conversations that we had
10 earlier and see if there are any questions after our counterpart speaks on the
11 issue and ask my colleague to come in and talk about how the combination
12 applies to the motion to the claims, as well as the originals and we'll add
13 (inaudible 2:07:16) and Grotmol to the petition.

14 JUDGE PARVIS: I have a question on claim 16. Patent Owner has
15 proposed a construction of connections and there's an argument as to
16 whether link is a subset connection, as I understand it by Petitioner. Has
17 Petitioner proposed an express construction for the term connections?

18 MR. RENNER: I'm not into this. I'm happy to (inaudible 2:06:37.)
19 The answer is no. We haven't put forward a specific construction that Patent
20 Owner before construction.

21 Our position is the plain meaning does the trick here. And our
22 position, I can ask co-counsel to come up and you can see in greater detail to
23 the style offered that our position is that if you look at slide 27, for instance,
24 in our deck, you'll see the definition there. And we (inaudible 2:06:12)
25 perhaps to Exhibit 2015 and also Exhibit 2012. Our position is the

1 definitions that are here collectively inform the plain meaning that people of
2 skilled attribute to the word that is in question, connection.

3 We see that evidence coming from the Patent Owner. And absent
4 there being some reason for departure from that plain meaning that is on the
5 corner, it's about our lexicography in the patent specification, we think that
6 the entirety of this definition is what people still think of the word in terms
7 of its meaning. We, therefore, are simply trying to convey to you that part
8 of that definition is quite expressly met by the disclosures of the references
9 in (inaudible 2:05:29.)

10 And it is the case that Patent Owner seeks to exclude all but one of
11 the definitions that are here. That would require, we believe, a Thorner-
12 based basis and we think it's not appropriate and not set forth and not
13 justified and reaching under Thorner to depart from the common meaning
14 that this is here in front of us.

15 So, it's not that we're trying to construe it. It's a great question. I
16 appreciate the question. It's instead that we're trying to say the plain
17 meaning is broad and this definition tells you that the claim is broad. And
18 we don't have evidence in this record or even a legal basis to depart from
19 that claim language in order to arrive at the argument that's being advanced.

20 JUDGE PARVIS: The slide 27, it includes copies of Exhibit 2013
21 and Exhibit 2012. And these were exhibits submitted by the Patent Owner
22 that include extrinsic evidence of dictionary definitions. Is the Petitioner of
23 the view that any, is any -- well, let me start with Petitioner then does not
24 object to this extrinsic evidence and does not find fault with the extrinsic
25 evidence; is that correct?

1 MR. RENNER: That is correct. There's a definition or definitions.
2 Many of them we believe to be attributed to connections. There's two here.
3 They're not the same you can see, but we would expect there to be others.
4 What our position is is they're short. These are in the extrinsic evidence and
5 they would suggest that people of skill attribute a variety of meanings to the
6 word connection.

7 And if you're going to as a Patent Owner want one of those
8 meanings to apply to the case you need to express that definition as a
9 lexicographer or you'd have to see some, sort of, disclaimer in the record.
10 That's what Thorner tells us in this.

11 But to your question specifically, the answer is no. We don't oppose
12 these as examples of what might be numerous other, who knows, definitions.
13 But it's as to the question of construction do they demand that construction, I
14 guess, is what I keep on thinking they want to hear that question. And our
15 answer is no, we don't (inaudible 2:03:11).

16 JUDGE PARVIS: And --

17 JUDGE CASS: So, Counsel, if we -- I'm sorry, Judge Parvis.

18 JUDGE PARVIS: No, go ahead, Judge Cass.

19 JUDGE CASS: Counsel, if we felt compelled to put forth a
20 construction for connection, I mean, even if that's just the plain meaning, you
21 know, what would you suggest that that construction be?

22 MR. RENNER: I should defer to my colleagues and I'll actually
23 have my colleague up and speak to the claim itself which one of these if we
24 were going to. I wanted to make sure you heard from me that we don't think
25 there is a construction that should be advanced here, but I hear your
26 question. And I want to make sure we answer it.

1 JUDGE CASS: Okay, that's fine.

2 MR. RENNER: Yeah. Before I yield, you know, I'm happy to
3 answer further questions.

4 JUDGE PARVIS: My question was along the same lines.

5 MR. RENNER: Okay, fair enough. Other questions on claims that
6 aren't numbered 16 or issues that aren't being (inaudible 2:02:20) for a
7 minute?

8 Okay. Then I will ask my colleague to come up and complete that
9 answer, which is really a bit more of (inaudible 2:02:09). Thank you.

10 MR. STEPHENS: May it please the Board, Nick Stephens on
11 behalf of Petitioner Tesla. And I think I'll pick up where Mr. Renner left off
12 in the discussion with Your Honors on Claim 16. I believe the question was
13 posed as to what meaning we might attribute to connection if the Board were
14 inclined to construe. In our papers as shown on slide 29, we've explained
15 that a connection would encompass or is the point meaning is consistent
16 with an association or a relationship.

17 That is one of the definitions that's provided in the dictionary on
18 Exhibit 2013 and submitted by the Patent Owner under 3A, a relationship or
19 association. So, I think that's one way in which we could do this. You
20 know, another acceptable interpretation is mutual dependence or
21 involvement. Those are all things that I think are consistent with the thread
22 of determining connection as we see in the specification.

23 And the other thing I would note is as to our mapping on Claim 16,
24 we think that under even the Patent Owner's construction, and this is laid out
25 in our reply, that regardless of how this term is understood, that the training
26 set that Grotmol provides finds the object representation, the digital picture

1 to first one or more instruction sets. That's what the claim requires. And
2 that training set ensures that those two things are connected. They're
3 associated. They are linked, however you want to characterize it so that in
4 Grotmol's memory when the robot autonomously operating that training set
5 provided the correlation and provides the connection that allows an
6 appropriate motor stand to be surfaced when there's a match to the
7 corresponding object representations.

8 So I think the training set itself is the connection and that's what we
9 laid out in our petition and also in the reply. Are there any further questions
10 in regards to Claim 16, Your Honor?

11 With that then, I'll turn back to Claim 7 in slide 16, please. Your
12 Honors in claim, I'm sorry, slide 16, Claim 7 is a dependent claim that
13 depends from Claims 1 and 3. It adds additional limitations to those claims,
14 amongst them being a modifying step, an anticipating step, and executing,
15 and performing. Starting with the modification, Claim 7 recites that, "The
16 first one or more instruction sets are modified," which are the first one or
17 more instruction sets being those that are stored in the knowledge base
18 according to the limitation at the base of Claim 1.

19 If you modify the first one or more instruction sets and then Claim 7
20 also requires anticipating and modifying instruction sets where there is a
21 match to it. Then you execute and perform the modified instruction sets.

22 Slide 19, please? You'll see we've got several snips of disclosure
23 from Grotmol at slide 19. On the top left snip there's disclosure that was
24 cited in the petition pertaining to the capability that Grotmol refers to as the
25 correct mode. And Grotmol there states, "In some implementations of
26 supervised training of robots, control instructions, also referred to as

1 corrections produced by the trainer into a human, may be combined with
2 control instructions produced by the robot controller instructions." This is
3 described in further detail at column 22 to 23 of Grotmol.

4 In particular, Table 3 provides a summary of the correct mode and a
5 related override mode function set. As shown on slide 20, Grotmol refers to
6 this, again, this correct mode. It provides a way for a trainer to modify or
7 adjust the robot's response to a given circumstance the next time that
8 circumstance is detected. So, according to Grotmol at column 22, lines 20
9 through 29, in the correct mode the teacher's correction may operate as,
10 quote, "A deviation from the predicted command determined by the robot."

11 Grotmol illustrates that the correct mode gives an example where the
12 robot is moving too quickly toward an object so it's operating autonomously.
13 It's moving toward an object at a fast velocity. The user can react by using
14 his controller, issue an instruction for the robot to in reverse. He actually
15 pulls back on the joystick or the controller is what Grotmol says. And then
16 the robot reacts by combining the user's instruction, that correction input,
17 with the input that was predicted based on the stored commands in the
18 knowledge base.

19 And the result is not to actually cause the robot to go in reverse as
20 the user provided instruction, but that instruction actually modifies the
21 predictive command thereby causing the robot to slow down. It still
22 approaches the object but at a slower clip. So the correct mode is just one of
23 the several learning modes in Grotmol that allows you to train the robot and
24 correct instructions, modify the instructions that have previously been
25 learned.

1 Notably on slide 20, Table 3 shows that in the correct mode the
2 instructions, the modified instructions are learned. That's when they are
3 learned they are stored in a knowledge base so that they can further be
4 anticipated and executed with its correlated images matched against a new
5 image. And the petition described these steps in detail with respect to
6 elements 1.6 and 1.7 and then further as it applies to Claim 7 and the
7 analysis of that claim.

8 Slide 17, please?

9 JUDGE PARVIS: Isn't Petitioner's position that what's in the
10 petition is sufficient? Patent Owner argued that Petitioner pointed to new
11 portions of Grotmol in its reply.

12 MR. STEPHENS: Yes, Your Honor, but what was in the petition is
13 laid out here and that's the clip that I showed you on slide 19 was cited in the
14 petition as just one example of how Grotmol provides the correct mode. The
15 reply in response to the arguments of the Patent Owner's response we
16 explain in a little bit more detail about that correct mode, but all consistent
17 with that same theory about when the user inputs are corrected instruction,
18 that modifies the instruction that's stored in the knowledge base and instruct
19 them, the modified instructions are later used for autonomous operation.

20 JUDGE PARVIS: So, Petitioner's position is, as I understand it, that
21 it was fine for Petitioner to cite additional portions of Grotmol because it
22 was not a new theory; is that correct? Because it relates to, maybe it relates
23 to the citations, the same correct mode that was -- disclosure that was cited
24 in the petition; is that correct?

25 MR. STEPHENS: That's correct, Your Honor. I have to say we
26 haven't changed our mapping. The Petitioner cited the corrected instructions

1 in correct mode and in response to Patent Owner's arguments they contended
2 that in the correct mode the instruction aren't modified. They aren't learned.
3 They aren't anticipated and executed.

4 We had to go through and explain why that's not the case, so we're
5 still sticking with correct mode as one way in which these instructions are
6 modified, but we did highlight additional disclosure from Grotmol that
7 would be the answer to some of your questions that were raised in the Patent
8 Owner response.

9 JUDGE PARVIS: Is Petitioner -- is there any argument that there's
10 a claim construction involved and that on that basis the -- and I'm mindful
11 that Petitioner stated that that Grotmol, I think on Page 3 of the reply, that
12 "modifying encompasses operations including additions, deletions or other
13 alterations," and cited the challenged patent. And then Petitioner said that
14 Grotmol discloses modifying even under Patent Owner's understanding of
15 modifying. Is there a claim construction issue relating to modifying?

16 MR. STEPHENS: Well, Patent Owner, if you -- you're correct
17 you're, Your Honor. Patent Owner has contended that combining in some
18 abstract sense might not be modifying. I don't think that we need to reach a
19 claim construction issue because Grotmol tells us that in this case in correct
20 mode when the trainer issues corrective instructions it is modifying the
21 original instruction. And that's given to us in column 23, the Grotmol one,
22 lines 23 to 29, the quote I read earlier.

23 The teacher's correction may operate as a deviation from the
24 predictive command determined by the robot. The deviation is a
25 modification of the predictive command, not something new and entirely

1 unexpected. So to deviate from the predictive command it must be changed.

2 It must be modified.

3 I think that, you know, in that context Patent Owner's argument
4 doesn't apply.

5 JUDGE PARVIS: So, Petitioner's position is that we do not need to
6 construe modifying --

7 MR. STEPHENS: That's correct.

8 JUDGE PARVIS: -- for a larger phrase in Claim 7.

9 MR. STEPHENS: That's correct, Your Honor.

10 JUDGE PARVIS: Thank you.

11 JUDGE WEINSCHENK: Mr. Stephens? Couldn't you deviate from
12 an original instruction by replacing the original instruction with a new
13 instruction rather than modifying it?

14 MR. STEPHENS: That's a possibility, Your Honor, but I would
15 note that there are two different learning modes disclosed in Grotmol. So I
16 think what you've described is what Grotmol refers to as an override
17 learning mode in which instructions that were originally learned are replaced
18 by instructions that the trainer provides in the correct mode. And we
19 actually do believe that that is one way in which Grotmol leads this claim
20 limitation, that that would provide a modification to the instructions.

21 But what we just focused on is the correct mode, which is the second
22 learning mode in Grotmol, as shown in Table 3. In correct mode you are not
23 replacing or overriding the original instructions. You're actually combining
24 them in a way that provides the deviation so that in that example that I gave
25 with the robots moving quickly toward an object, you are changing it so that
26 the user's corrective instruction causes the robot to change how it reacts. It's

1 going to move forward towards the object still, but it's not replacing the
2 original instruction with the user's instruction to go in reverse that's
3 modifying the original instruction to continue moving forward but at a
4 slower pace.

5 JUDGE WEINSCHENK: Is there a specific description of that
6 example where it moves slower instead of in reverse? Or is that something
7 you are giving as an example?

8 MR. STEPHENS: It is, Your Honor. That's described as -- this is
9 given to us by Grotmol and I can paraphrase it. It's at column 23, lines 30 to
10 45.

11 JUDGE WEINSCHENK: Thank you.

12 JUDGE PARVIS: This is a 3-minute warning before you go into
13 your rebuttal time.

14 MR. STEPHENS: All right. With respect to Claim 8, I'd just
15 quickly note this claim --

16 JUDGE PARVIS: I'm sorry, wait. No. It's 35 minutes so that
17 would add another 10 minutes.

18 MR. STEPHENS: Another 10 minutes? Okay, great. With respect
19 to Claim 8, Your Honors, we've contended that Grotmol anticipated this
20 claim. It simply requires modifying the first or second circumstance
21 representation or combinations thereof and then using the modified
22 circumstance representation in the matching process.

23 Slide 22, Your Honors, shows what was disclosed in the petition,
24 where cited in the petition, Grotmol applies a transformation to an instance
25 of the sensory input prior to matching. That's Grotmol at column 4, line 18

1 through 22. Transforming that sensory input is an example of modifying the
2 new or the second circumstance representation.

3 But Slide 23 also gives another example where both the first
4 circumstance representation that is the digital picture that's stored and a new
5 circumstance representation are modified, and this is precisely done
6 immediately before matching. So, as was highlighted in the '974
7 presentation, before matching Grotmol actually trims the sides of the images
8 in order to resolve the common area between them. And then it applies the
9 pixel lights difference to determine the matching. So, Patent Owners argued
10 that there is no matching. And we believe this is addressed in our papers as
11 to where that matching occurs.

12 I'd like to turn to Claim 10 on slide 15, thank you. Claim 10 adds a
13 requirement for another learning process that includes operating the first
14 device at least partially by another user. So in other words, in addition to the
15 correlated data that's learned in the first learning process, as provided by
16 Claim 1 by a first user, Claim 10 adds a requirement for another correlation
17 in the knowledge base, which is learned in another learning process by
18 another user.

19 Notably in Claim 10, both learning processes occur in the same
20 device. So, as to another learning process aspect of Claim 10, slide 32, Your
21 Honors, I think highlights how Grotmol provides multiple learning
22 processes. So, what's shown on slide 32 in Figure 10B are a collection of
23 adaptive controllers. These adaptive controllers reside on Grotmol's system.
24 Each adaptive controller is trained separately and they implement a different
25 corresponding behavior on the robot.

1 Grotmol is quite explicit that each of these controllers and
2 corresponding behaviors are learned separately. For example, at column 26,
3 lines 1 through 4 of Grotmol provides that after the user is done training a
4 particular behavior he may create another module and activate it.

5 Elsewhere at column 26, lines 5 through column 27, line 1, Grotmol
6 says that after the user is done training a single complex behavior, he may
7 train another switcher to switch between different modules and therefore
8 obtain a second complex behavior. So, these are different behaviors learned
9 at different times in different processes on the same robot. Multiple learning
10 processes on the same robot as required by Claim 10.

11 As to the requirement for another user, it's hard to see that this
12 limitation is even entitled to weight given that it does nothing to further limit
13 the claimed system. But nonetheless, the record here shows that it would
14 have been obvious to train Grotmol's robot and multiple users. And this is
15 because Grotmol's system allows any number of users to train the robot.

16 In Grotmol, the trainer simply uses a game pad or some handheld
17 controller to control the robot and common experience tells us that, of
18 course, different users could hold the game pad at different times and train
19 the robot for any number of reasons. More than that --

20 JUDGE PARVIS: Petitioner, do you -- sorry, counselor. Has
21 Petitioner argued that the user limitation should not be given patentable
22 weight in the petition?

23 MR. STEPHENS: We didn't think that was -- we didn't include that
24 in our papers, Your Honor. Regardless, we think that the claim is rendered
25 by Grotmol.

1 Dr. Janet in his declaration that was submitted in the petition at
2 paragraph 233 also provided a reason that that would be obvious and
3 beneficial for multiple users to be involved in Grotmol's training process and
4 that multiple trainers could be used beneficially to leverage their different
5 skill sets when training tasks of different complexity on Grotmol's robot.

6 We also asked Dr. Saber, Patent Owner's expert, about this at his
7 deposition, and this is on the left-hand side of slide 32. Specifically, we
8 asked if Grotmol's adaptive controllers can receive commands from different
9 users, plural. His response, "That's correct. I mean, you receive commands
10 from different users plural to change a certain behavior or control a certain
11 behavior or adjust it." So, we think the evidence --

12 JUDGE PARVIS: But if a system can receive comments from
13 different users is that the same as modifying the system and providing a
14 reason why a person of ordinary skill would change the disclosure of
15 Grotmol to show expressly multiple users?

16 MR. STEPHENS: Thank you, Your Honor. So, his testimony at a
17 bare minimum, I think this is what they contended in their sur-reply, is that
18 Dr. Saber confirmed that Grotmol's disclosure tells us that you can do -- that
19 there's nothing that precludes multiple users from operating the robot.

20 The record goes a step further. So, however you interpret Dr.
21 Saber's testimony we have presents (phonetic sp. 1:41:49) to remind in the
22 petition reasons to modify, I'm sorry, Grotmol to employ multiple users.
23 That's discussed in the petition and with Dr. Janet's testimony.

24 With that, Your Honors, I'd like to turn to the amended claims and
25 offer a few points there. And this would be on slide 46. Just to recap, the
26 substitute claims that were offered in this proceeding clarify that the first

1 circumstance representation includes two object representations. Each
2 object representation includes a respective data structure that stores a label
3 indicating a detected type of an object, the coordinate indicating a detected
4 location, and a computer model indicating a detected size of the object.

5 JUDGE PARVIS: This is a five-minute warning. In five minutes
6 you will be going into your rebuttal time.

7 MR. STEPHENS: Thank you, Your Honor. I appreciate that. With
8 respect to this, with respect to these substitute claim limitations, we applied
9 the Grotmol-Hickman combination to it. The mappings are described in our
10 opposition, but I think the dispute is really centered on two issues.

11 And the first is whether the combination's data structure contains
12 location and size data for objects that are detected by processing digital
13 pictures, and second, whether the data structures and the combinations are
14 correlated with the first one or more instruction sets. We believe the record
15 answers both questions in the affirmative, but I'll address each in turn.

16 As to --

17 JUDGE PARVIS: Question. Isn't -- is the claim limitation, you said
18 is it -- it detects based on digital images. And a question, it detects the size
19 based on digital images? The substitute claims, substitute Claim 21, the
20 detecting is of a size of the first and second objects, so it's detecting a size of
21 the first and second objects. Is that the same as what you said the claim
22 requires?

23 MR. STEPHENS: We read the claim to have the limitation, I think,
24 which Your Honor pointed out. It involves processing digital pictures to
25 detect the size and the location with regard to it.

1 JUDGE PARVIS: Because the claim recites the added limitation.
2 It's true that it recites processing one or more digital pictures to detect a type
3 of a first object, a location of the first object, and a size of the first object.
4 So, it's -- and there's a detection of the type, but is it fair to say that once the
5 type of object is detected then the size is pulled from a knowledge base,
6 whether it's a combined knowledge base or individual knowledge bases?
7 It's the size is not detected. The size is simply retrieved based on a type
8 identification.

9 MR. STEPHENS: Yes, Your Honor. We do think the claim is
10 broad enough to encompass that scenario that you described.

11 JUDGE PARVIS: The scenario I described is the prior art; is that
12 correct?

13 MR. STEPHENS: The prior art as provided in that scenario, yes,
14 Your Honor. So, Hickman very much uses a cloud processing element to
15 extract features, identify the type of an object that is indicated, that it can
16 then, amongst other things, apply the capabilities as to identify the size and
17 location and other attributes of the objects by pulling that information from
18 sources, you know, stored data that might otherwise be stored in its
19 database.

20 JUDGE PARVIS: So, if in Hickman, if the processing the digital
21 picture identifies a type of vehicle and specifically a very specific model,
22 you know, a model car and then stored in the database is the dimensions of
23 that vehicle, which would be fairly consistent from one vehicle to the next.
24 Then that is -- that's what Hickman describes; is that correct?

25 MR. STEPHENS: That is correct that Hickman does describe that
26 scenario. And I think that is a scenario that would meet the limitations of

1 the claim as written. I would note, Your Honor, that it's our belief that
2 Hickman actually goes a step further. So, I think we've seen in Patent
3 Owners' reply that they seem to be taking a narrower view of this detect
4 limitation that suggests you might have to directly, you know, that word is
5 not used in the claim, derive the location and the size of the object by
6 processing the digital picture maybe without reference to any data sources.

7 So the scenario you described is in Hickman, but also I think even
8 under Patent Owner's narrower, kind of, view of the limitation, you see from
9 Hickman an ability for the cloud processing engine and the shared
10 knowledge base in the cloud to be updated based on new data that it received
11 from robots.

12 So when the cloud system receives a new image of an object that it's
13 not seen before or maybe it's some characteristics of the object of change,
14 the cloud system recognizes the change or recognizes the newness of that
15 data based on what it's gleaned from processing the digital picture and
16 populates the field in its database based on what is the result of that image
17 processing. This is --

18 JUDGE PARVIS: Is that set forth in Petitioner's opposition?

19 MR. STEPHENS: We identify the location, the fields, Your Honor,
20 which contain the detected -- contain the detected as it is. We identify the
21 location fields and the SPC and modules for size. We didn't think it was
22 necessary to go that far until our sur-reply because we were responding,
23 again, to this narrower interpretation of the tag that was set forth in the
24 Petitioner's reply. In our sur-reply we did provide additional disclosures,
25 both in Grotmol and Hickman that teach processing a digital picture and

1 directly deriving the attributes that are coming in, such as the size and
2 location of an object.

3 JUDGE PARVIS: And Petitioner's position is that those additional -
4 - Petitioner had -- it was not too late in identifying those disclosures in its
5 sur-reply because of a new claim construction that Petitioner could not have
6 foreseen; is that correct?

7 MR. STEPHENS: That's correct, Your Honor. Yes. We believe
8 the mappings were sufficient in the opposition but, of course, the sur-reply is
9 meant to provide an opportunity for us to respond to the arguments that are
10 advanced in the reply. And so that's what we needed to do.

11 JUDGE PARVIS: And the construction that we're construing
12 detect, we're saying that it detects a type of the first object, a location of the
13 first object, and the size of the first object. And does Petitioner have a
14 construction or if there's it's two recitations does Petitioner have a
15 construction for that that's responsive to Patent Owner's construction that
16 maybe was used by Petitioner in preparing its opposition?

17 MR. STEPHENS: I'm not sure I can stand here right now and
18 provide a formal articulation of the construction. I think the way that you
19 read it though, I think it was very natural to the plain meaning of the claim in
20 describing how the claim says detecting the type of the object, but then list
21 additional attributes, detecting through processing a digital picture.

22 And so we didn't see a construction being necessary when we
23 prepared the opposition. Our opposition didn't -- our sur-reply also didn't
24 put forward a construction because I think we took the approach of the
25 opposition -- Hickman provides it under the plain meaning our view of the
26 substitute limitations.

1 And then but even under the narrower view that was offered by
2 Patent Owner in its reply Hickman also -- Hickman and Grotmol also
3 disclosed that type of digital processing.

4 JUDGE PARVIS: And Petitioner's articulation of Patent Owner's
5 construction is the Patent Owner interjects the word direct; is that correct?
6 Or is there a different --

7 MR. STEPHENS: Yes. I think that's a way of capturing it is there,
8 the best we can understand it, as we can glean from the paper they're
9 arguing, I think, that each of the attributes has to be known from processing
10 the pixels of the images themselves rather than as he described the situation.
11 You might identify the type of the object through digital -- through a direct,
12 kind of, image object recognition algorithm and then being able to reference
13 other sources of data to detect the location and the size, all of, again, which
14 stems from the original processing of a digital picture.

15 JUDGE PARVIS: So there's a bit of a parallel, perhaps. The word
16 detect is this processing one or more digital pictures to detect and then
17 there's a colon and then there's a list of three things. And Petitioner does not
18 dispute that the type has to be detected; is that correct?

19 MR. STEPHENS: I think that's correct. We don't dispute that.

20 JUDGE PARVIS: So would it follow then that all three things, the
21 type, the location, and the size have to be detected?

22 MR. STEPHENS: They're all detected, Your Honor, I think under
23 both our meaning that we applied in the opposition and as our we offered
24 further in the sur-reply. The question was, kind of, led us to the scope of
25 that detection. So for each of these attributes does the claim encompass the
26 ability to use the digital image as a data source to pull, to identify those

1 objects in the image and then reference other data sources, for example, to
2 detect the location and the size. I think that's a fair reading of what the text
3 means for each of the attributes.

4 JUDGE PARVIS: Because of the language "processing one or more
5 digital pictures?"

6 MR. STEPHENS: That's correct.

7 JUDGE PARVIS: Okay, thank you.

8 JUDGE WEINSCHENK: Mr. Stephens, do we have anything in the
9 specification that sheds light on this, whether all three characteristics in this
10 claim have to be detected from processing the picture?

11 MR. STEPHENS: We couldn't find any particular disclosure in the
12 specification, Your Honor. We did look. There appears to be, at least as
13 much disclosure in the prior art, as to the limitations as we saw in the
14 specification.

15 JUDGE WEINSCHENK: So, is it that there's nothing one way or
16 the other that's in the specification?

17 MR. STEPHENS: That was our view, Your Honor.

18 As to -- I'd just like to -- I may be into our rebuttal time, I imagine.
19 I'd just like to note column 25 in Hickman provides an example where they
20 actually do directly detect the size of an object through processing the
21 image. At lines 28 to 34 it talks about the cloud processing engine performs,
22 may include extracting meaningful information from the image by digital
23 image processing techniques.

24 And then going down to lines 57 to 59, Hickman tells us that the
25 object 405 is determined to be a cup of coffee and that determination may be
26 based on the size and shape of the cup. So what it's saying is that the image

1 analysis informed a detection or a determination of what that size of the cup
2 was. It then compared the size of the cup provided through the image
3 processing analysis to a size of a cup that was known in the knowledge
4 database. So this is just one example.

5 Also at column 10, lines 31 to 32 in Grotmol it refers to features of
6 objects, including object size and location. And Grotmol tells us that these
7 features are learned or extracted through image processing, so both of these
8 references I think a POSITA reads them and sees that this was just a known
9 option. That may be why you don't see a lot of detail in the spec is that you
10 can -- it's obvious that design detail as to how you detect these types of
11 attributes.

12 If there are no further questions, Your Honor, I'll reserve the balance
13 of our time for rebuttal.

14 JUDGE PARVIS: No further questions.

15 MR. STEPHENS: Thank you.

16 JUDGE PARVIS: You have 16 minutes for rebuttal.

17 Patent Owner, you can let me know how much time you want for
18 rebuttal.

19 MR. JAIRAM: Thank you, Your Honor. This is Arvind Jairam for
20 Patent Owner. We would reserve 20 minutes for surrebuttal, please.

21 JUDGE PARVIS: You may proceed anytime you're ready.

22 MR. JAIRAM: Thank you, Your Honor. Okay, thank you, Your
23 Honor. I will jump off of one point that was raised in Petitioner's oral
24 argument regarding the detection of the various three attributes in the
25 proposed substitute claims, detecting them by processing one or more
26 images. Judge Parvis, you are correct that there is absolutely, kind of, a

1 parallel nature. Processing one or more images, one or more digital pictures
2 to detect colon A, B and C. I think the claim language clearly speaks to
3 process the digital pictures to detect each of those three things.

4 And I don't think that it is a claim construction issue, and I don't
5 believe that we advanced any new claim construction or any claim
6 construction in our MTA reply, but rather we simply noted as the Board in
7 its preliminary guidance noted, that the Petitioner's opposition glossed over
8 that aspect that one or more digital pictures have to be processed to detect
9 each of those attributes, including the size and the location and the type.

10 JUDGE WEINSCHENK: Mr. Jairam?

11 MR. JAIRAM: Yes, Your Honor.

12 JUDGE WEINSCHENK: My question for you is on that limitation.
13 Why wouldn't that limitation include something where you process the
14 digital picture and get some information that allows you to then look up the
15 type, location, and size of the object? Why wouldn't that be detecting those
16 things by processing the pictures?

17 Is there anything in the spec or the claims that requires you to
18 actually get that information from the pixels of the picture as opposed to
19 from, you know, some other information of the picture and then going to
20 look it up in a database somewhere?

21 MR. JAIRAM: I think the last thing that you said, Your Honor, is
22 exactly on point, namely, going and looking at the picture rather than going
23 to some other external thing like a database or something else. The claim
24 language does say, and I think the answer to your question is yes. It's right
25 there in the claim language. It's processing the digital pictures to detect the
26 size, for example.

1 It's not saying processing a digital picture to detect a type and then
2 perform another unclaimed process, some other intermediate something else
3 to go retrieve from a database. That's not processing the digital picture to
4 get it, but rather using a database or something else to obtain. To detect if
5 you have to actually detect by processing the digital pictures.

6 So, I think the claim language, a fair plain reading of the claim
7 language can do claim construction here. It says that you have to actually
8 get each of those three things. You have to detect each of those three things
9 by processing the digital picture. And if you're processing only a digital
10 picture to obtain only one of those three things and then somehow doing
11 something else to get the others, well, that's not by processing the digital
12 picture.

13 You're -- well, in any event, you're not detecting that third thing, the
14 size, for example, through processing the digital picture. You might be
15 obtaining it through retrieval from a database, but it's just not what the claim
16 language is that we tried to direct the claim language to be exactly what we
17 intend to claim. And we believe applying this, a fair reading of just the
18 words in the claim.

19 JUDGE WEINSCHENK: Is there anything in the specification that
20 sheds light on this or that may support your position?

21 MR. JAIRAM: I'm not sure standing right here. I actually started to
22 look right when you raised that question in Petitioner's argument, but I have
23 not had a chance to resolve that yet. I can check, but I'm not certain.

24 JUDGE WEINSCHENK: Okay, thank you.

25 JUDGE PARVIS: But if the recitations that processing one or more
26 digital pictures to identify a type, or maybe better processing, processing one

1 or more digital pictures to obtain a type, a location, and a size, would that be
2 different and broader than the recitation processing one or more digital
3 pictures to detect?

4 MR. JAIRAM: I don't think it's actually about the specific word
5 detect. I think it's about that you have to actually process the digital picture
6 to do it. So, it almost feels like proximate cause from law school, something
7 like, well, you did something and then you do a whole bunch of other stuff
8 and you get some end result. Well, did you get the end result by doing the
9 first thing?

10 I suppose the claim language is as close to a proximate cause.
11 Maybe that's a wrong analogy, but basically saying how do you detect or
12 perhaps get or obtain. Haven't given full consideration to that, but I do know
13 that the thing that you had to do to get it, to detect it, has to be processing
14 one more digital pictures.

15 JUDGE PARVIS: And Hickman does describe processing digital
16 pictures; is that correct?

17 MR. JAIRAM: Yes. It processes digital pictures.

18 JUDGE PARVIS: That processes digital pictures, like, for example
19 an automobile. It'll process a digital picture to detect the type of the
20 automobile. Is there processing of the digital picture to obtain -- to populate
21 the database with the general identification in the -- Hickman describes the
22 database with the general identifier that includes the size and location, and it
23 includes the size of (inaudible 1:18:07), the same model vehicle. It detects
24 that. It just doesn't detect it every time it sees that same model car; is that
25 correct?

1 MR. JAIRAM: If I'm understanding your question correctly, I think
2 so. I think what you're getting at is that you do something using the digital
3 picture and then you do something else using some other linked database.
4 You access a database and you obtain some other information certainly, but
5 that's not by processing the digital picture. That's not how you got the
6 additional information.

7 JUDGE PARVIS: So it's, kind of, the combination of the terms.

8 MR. JAIRAM: I think so.

9 JUDGE PARVIS: There is a processing of one or more digital
10 pictures in Hickman and there is a processing of detecting in Hickman. But
11 in Hickman, Patent Owner's position is there's no processing digital pictures
12 to detect. It's the whole combination of the phrase and then it must be each
13 of the three, each of the three, the type, the location, and size that follows. Is
14 that Patent Owners' position?

15 MR. JAIRAM: I believe that's correct. We certainly gave
16 consideration to any additional limitation. Any word added to a claim, of
17 course, you know, everything in a claim matters. And if we're adding
18 anything to a claim, of course, that has great import and so we carefully
19 chose this to get over all prior art known to us, which included Hickman,
20 and we believe we did get around it.

21 And we believe the Board correctly noted that we did get around it.
22 And I don't believe that anything in our arguments has diverted from that
23 basically straightforward line of analysis.

24 JUDGE PARVIS: Thank you.

25 MR. JAIRAM: I'll note one other point relating to Petitioner's
26 argument. There was a question or perhaps a mention of Exhibit 2013, and I

1 believe it's a dictionary definition regarding relationship or association. But
2 if you look at the following words, and perhaps let me just pull it up here on
3 the screen. It's a little hard so I'll zoom in.

4 I think when we talked about whether Exhibit 2013 has a
5 relationship or association it's, I guess, definition 3A here. I mean, I think
6 that's referring to a relationship or association in thought, so I think that's not
7 quite germane to the present discussion. We tried to provide something that
8 addresses the Board's inquiry and the institution decision and that is
9 appropriately tailored to the technical context in which we find ourselves
10 with the link.

11 And I don't think that this is some, kind of, human-related concept
12 such as a relationship or association in thought is what's meant by
13 connection in the context of the claim language. I would --

14 JUDGE PARVIS: Well, Patent Owner relies on column 103, a
15 portion of column 103 and the specific statement is that the -- it says the
16 connections are similar to that of the brain, and then I don't see the word link
17 in column 103.

18 MR. JAIRAM: It might not be in that exact quote, but I believe the
19 link was in at least one other place and I have it on a slide so let me pull it
20 for you. If we can go to slide 30? Slide 30 mentions knowledge cells that
21 are interlinked. And additionally, the figures actually do show a link and
22 we've tried to use, obviously, something different than the word connection
23 in the construction.

24 And links are known in various computing-related contexts. I
25 believe even in Petitioner's oral argument Petitioner's counsel mentioned

1 things like linked lists, linking different computing modes was basically
2 what is depicted in this figure shown on slide 30.

3 And it's also on slide 29, linking nodes together to have a neural
4 network, for example. And so we tried to provide a little bit more clarity.
5 That, kind of, takes it more into the technical context rather than just saying,
6 you know, I'm not (inaudible 1:11:25) a human connection.

7 JUDGE PARVIS: The patent at column 61 talks about a network
8 interface that can be utilized for interfacing with a computing device, and
9 this is hardware connections, including telephone lines, LAN or WIN links,
10 broadband connections. Is Patent Owner suggesting that connection must be
11 a hardware connection of some sort?

12 MR. JAIRAM; No. We're not suggesting that it be a hardware
13 connection. I think when we look at the claim language and you see what
14 exactly is connections recited in the context of, and specifically, has this
15 notion of knowledge cells being connected in the context of learning,
16 basically, computer-related learning. That's what the connections are
17 referring to.

18 And we mentioned this in our claim construction section of our
19 Patent Owner response. Connections between correlations because we look
20 at what's actually claimed. I guess Claim 16 refers to the circumstance
21 representation correlated with the instruction sets include object
22 representations connected using connections with a portion of instruction
23 sets.

24 So, the claim language makes clear that when you're talking about
25 connections between object representations and instruction sets, referring to
26 connections, well, basically between those things that I just mentioned and

1 not, for example, connect a connection between the hardware examples that
2 Your Honor mentioned at a different portion of this specification, or at least
3 that it's not limited to, sort of, a hardware sense.

4 These are things that are implemented and typically and perhaps in
5 software or in hardware but when you're talking about knowledge cells
6 being connected there may not be a, you know, physical wire or some, sort
7 of, a physical thing that's connecting these. These are things that are stored
8 in memory and could have a connection through something like a pointer
9 that refers to the address of something else, a different node to which a given
10 node is connected.

11 JUDGE PARVIS: Thank you. I understand Patent Owner's
12 position.

13 MR. JAIRAM: Thank you. I'd like to discuss the substitute claims.
14 I'm going to go to claim -- to slide 93. A lot of the discussion about Section
15 101, this is common to the claims in the other patent that we discussed in the
16 earlier hearing today. I understand that the record will be consolidated so I
17 will skip over much of the discussion where common, and I'll just note a few
18 points.

19 In particular, I will note that the guidance on eligibility issued by the
20 PTO in 2024 hasn't meaningfully changed the Alice test. And as shown on
21 our slide 97, the case law has clearly noted that when you have a solution
22 that's necessarily rooted in computer technology to overcome a problem
23 specifically arising in the realm of computer networks, that's where you've
24 got patent eligible subject matter. And that stands in contrast to something
25 that's performed entirely in the human mind through mental operations.

1 And the opposition that Petitioner presented basically set forth a 101
2 challenge and the Board correctly noted in the preliminary guidance that
3 here we have an instance where the claims are clearly not arising in some,
4 sort of, human-only context and that the solution here, basically autonomous
5 execution of a device based on a specific approach involving instruction sets
6 and, you know, everything that's in Claim 1.

7 I'm trying to not get lost in the weeds, but basically there is clearly a
8 specific computer-related approach that is claimed. And on the basis of that
9 alone, the Board was able to give the preliminary guidance that both steps
10 one and two of the Alice inquiry are met. And then if we also consider all
11 the additional limitations that are added by amendment, that certainly moves
12 the claims out of the realm of possibly being in the abstract.

13 The examples given by the MTA sur-reply filed by Petitioner about
14 methods of organizing human activity are pretty far afield from what is
15 claimed here. The claims themselves recite practical technical features and
16 basically through a particular arrangement of data structures and the
17 correlation limitations, the claimed performance is obtained. And the fact
18 that there is a benefit for an improvement here is visible just in the claim
19 itself, that the device is autonomously executed through the claimed
20 approach.

21 Now, perhaps Petitioner doesn't like the specific technical details
22 that we put into the added limitations about why certain pieces of
23 information are detected or are arranged in data structures and that sort of
24 thing, but clearly, these are all computer-related and it's a computer-oriented
25 solution to a problem of causing a device to be executed autonomously.

1 In terms of patentability over the Grotmol-Hickman combination,
2 we already discussed a little bit the limitation about detecting the size of the
3 first object. I'm going to skip past that in the interest of time, but I'll note
4 that the claim, specifically the substitute claim, includes the limitation 21.11
5 that generating the data structure includes these various attributes, including
6 a computer model, that has to indicate the detected size of the first object.

7 And so if there was no detection by the claimed mechanism, namely
8 by processing the digital image, then by antecedent basis there cannot be
9 generating the data structure that includes a model indicating that detected
10 size.

11 With respect to Petitioner's arguments regarding Hickman for
12 limitation 21.15, their argument is shown -- from the opposition is shown on
13 slide 108. But what Hickman discloses is various embodiments or
14 techniques that involve a robot's manipulation of a single object. The robot
15 is moving around and encounters an object, and it's this entity through some
16 sort of mechanism. But it's not a robot's operation in a multi-object
17 circumstance.

18 And additionally, each of Hickman's rows in its tables shown in
19 Figure 3 has its own TASKS field. I believe that the TASKS field is
20 something that was raised by Petitioner only in its Petitioner reply and not
21 argued in the petition. But the issue is that because each of the rows have
22 their own TASKS field, they can have different TASKS. So if we're going
23 to map the TASKS field to the instruction sets there is not a correlation in
24 Hickman to the same first one or more instruction sets as required by the
25 substitute claims.

1 Additionally, and I'm turning to the slide 109, the opposition that
2 Petitioner presented does not clearly identify what in Hickman is being
3 mapped to the first and second data structures. We've attempted in our MTA
4 reply to parse that out as best as we could, but if the first data structure is
5 data structure 314 that contains the TASKS field, then Petitioner's analysis is
6 deficient regarding the second data structure, which must also be present
7 according to the claim. And that also would need to be correlated with the
8 same first one or more instruction sets.

9 Additionally, as we noted in our MTA reply and as we mentioned
10 also in the earlier hearing today, the first one or more instruction sets are
11 mapped in the petition to something from Grotmol, specifically the motor
12 control indications from Grotmol.

13 Therefore, when you consider limitation 21.15, which recites that
14 multiple data structures, first and second data structure, are correlated with
15 instruction sets, well, how can it be correlated with something in Grotmol's
16 disclosure if the opposition does not even mention Grotmol's disclosure for
17 this correlation limitation? I think that in the MTA sur-reply they have
18 attempted to fix that problem by making some arguments based on Grotmol,
19 but that is an improper new argument.

20 If I turn to their sur-reply, and I'll put portions of the sur-reply on the
21 screen --

22 JUDGE PARVIS: Does Patent Owner -- are some of these
23 arguments somewhat similar to what Patent Owner argued in the 01054?

24 MR. JAIRAM: Some of them are, particularly regarding Section
25 101 but because the claim amendments are different here, the precise
26 limitations that are added -- sought to be added differ somewhat. I will

1 basically walk through and identify some of the new arguments which we
2 believe are impermissibly new in Petitioner's MTA sur-reply. And I will
3 also substantively address them as time permits.

4 JUDGE PARVIS: I have a question on the detect. I do have
5 another question on that. Looking at Patent Owner, I believe, argued that --
6 it's arguing it's construction based on the language of the claim. The Patent
7 Owner pointed to the application, the '972 application and the '991
8 application as providing support for the added limitations.

9 If we look to the portions of those applications that Patent Owner
10 referred to in its motion to amend with respect to processing one or more
11 digital pictures to detect, there is disclosure relating to that limitation,
12 correct?

13 MR. JAIRAM; I believe so.

14 JUDGE PARVIS: And so that, looking at, for example, the --
15 looking at Page 64, looking at those portions it talks about detecting objects
16 and/or their properties. And there's discussion about object representations,
17 on talking about detecting the object. And "object may include an object or
18 a part thereof that can be detected. Examples of object properties include a
19 type and a distance, a location, a size."

20 So if we detect the object in this disclosure do we also have -- we're
21 saying we detect -- the claim language says detect the object. Do we have to
22 detect the object properties? And if so, is that disclosure in these
23 applications?

24 MR. JAIRAM: I don't know the answer to the second question
25 because I haven't -- it hasn't been raised by the Petitioner in opposition. But
26 I think that you have to do exactly what the claim language says. So, if the

1 claim language says you have to detect A, B, and C then that's what has to
2 be detected. And that has to be done by the processing of the digital image.

3 JUDGE PARVIS: So I'll leave this question and Patent Owner you
4 can decide if you want to discuss it during the rebuttal. But to the extent that
5 these portions of the applications that were identified in the motion to
6 amend, to the extent that they support a narrow reading of this
7 communication it would be helpful perhaps for Patent Owner to set forth
8 why Patent Owner thinks that that's helpful. That those portions of the
9 specification are helpful and all -- it's not just the language of the claim but
10 the other intrinsic evidence also supports Patent Owner's position.

11 MR. JAIRAM: Understood, Your Honor.

12 In the about six or seven minutes that I have remaining, I do want to
13 take a look at Petitioner's and Patent Owner's sur-reply. And I've got it on
14 the screen just to facilitate this discussion. On Page 2, you can see that there
15 is an annotated figure and there's a lot of discussion about that. There's an
16 argument presented about this.

17 I am aware that Hickman contains the broad statement about
18 combining multiple databases, or sorry, knowledge bases, but the specific
19 way in which they are combining basically different rows as annotated here
20 is unsupported and has not been explained properly in the Petitioner's
21 opposition or anywhere in the prior art reference statement. Basically,
22 there's no concept in Hickman of a multi-object circumstance. So at best,
23 Hickman could teach or suggest a single object row but that would not get
24 the second object representation.

25 It's unclear exactly how this combination operates, but as we best
26 understand it, Hickman could potentially have something about a first object

1 representation, as Petitioner is attempting, but it still will not have provided
2 to a POSITA enough motivation to get the second object representation.

3 And as the Petitioner opposition was pretty confusing in its mapping of data
4 structures to claim limitations, that it was hard to identify any more specific
5 problems other than it just doesn't really make sense, the combination.

6 At the bottom of Page 3 of the MTA sur-reply, Petitioner says that
7 Grotmol expressly teaches that image features would include locations and
8 sizes of objects detected in images. But we checked all of the cites that were
9 provided and they do not appear to say anything about processing images to
10 detect size or location, but rather, only image features such as edges and
11 corners.

12 On Page 7, in the first sentence and this is, again, in the MTA sur-
13 reply, the Petitioner faults Patent Owner for allegedly failing to explain why
14 even different test data in, I guess, different instantiations of Hickman's
15 tables would not collectively also provide the first one or more instruction
16 sets. But Petitioner appears to be missing that the claim language requires
17 that the first and second data structures are both correlated with the first one
18 or more instruction sets and, thus, with the same one or more -- first one or
19 more instructions sets by the principle of antecedent basis.

20 It's not saying what the first instructions -- the first data structure is
21 correlated with a first instruction and the second data structure is correlated
22 with a second instruction but rather they both are correlated with the first
23 one or more instruction sets.

24 With respect to the Grotmol-Tolstedt combination for the substitute
25 claims on Page 8, Petitioner makes arguments again about a thematic map
26 but the claim, the substitute claim, recites not just some general existence of

1 the data structure but rather a specific data structure with a label, coordinate,
2 and model that indicates size and Tolstedt's thematic map doesn't have that.
3 At best what Petitioner is seeming to do is to say, well, there's a thematic
4 map and therefore you can somehow form this required data structure, but
5 even then that would only teach or suggest one data structure and fails to
6 account for the recited second data structure.

7 Finally, with regard to the correlating, and I just realized I'm up
8 against my time here, on Page 9 the MTA sur-reply makes a very brief one
9 sentence statement about the Grotmol-Tolstedt combination for the
10 correlating limitation, but so Grotmol is based on images correlated or
11 allegedly correlated with instruction sets, but Tolstedt has a calculated path.
12 It's just very different from the correlation approach that's claimed, and
13 Petitioner is trying to somehow weave in something from Tolstedt that is
14 about a thematic map that's conceptually very different than Grotmol's
15 approach.

16 With that, I am going to reserve the remainder of my time for
17 rebuttal. Thank you.

18 JUDGE PARVIS: Thank you, Counsel. And Patent Owner has 20
19 minutes for rebuttal.

20 MR. JAIRAM: Thank you, Your Honors.

21 JUDGE PARVIS: And Petitioner may start when you're ready.

22 MR. STEPHENS: Yes, Your Honor. So, I'd like to pick up on the
23 discussion that you had with Patent Owner's counsel with regard to the
24 detecting and the substitute claims. Regarding detecting, all three recited
25 attributes, processing to detect (inaudible 0:43:49) and whether processing
26 leads directly or indirectly to the attributes.

1 To this point the claim does not include any language precluding
2 indirect detection. It does not say process individual pictures without doing
3 more to them, nor does it say processing the digital pictures to directly detect
4 them. Rather, it was left for Patent Owner broadly be open to the alternative
5 of processing the digital pictures indirectly.

6 For this reason, it's appropriate to interpret the claim as implicating
7 what it says. If detecting is performed as part of processing the digital
8 pictures, then the processing of those pictures is part of detecting and, thus,
9 sufficient to satisfy the claims' call for processing by detecting.

10 And I earlier indicated that the specification wasn't illuminating, but
11 considering your question further during our counterpart's presentation, we
12 were able to surface looking again at this aspect of the '344 patent, a few
13 informing disclosures that speak to the breadth of determining the detecting.

14 JUDGE PARVIS: And these disclosures have parallel -- are also
15 found in parallel portions of the applications; is that correct?

16 MR. STEPHENS: I'm sorry, Your Honor, if I didn't understand the
17 question. I'm referring to '344 specification.

18 JUDGE PARVIS: The 972 application and the 991 application?

19 MR. STEPHENS: Yes. As far as I know those applications would
20 contain the same disclosure --

21 JUDGE PARVIS: As the specification?

22 MR. STEPHENS: Yeah. The '344 patent at column 69, between
23 lines 11 and 51 describes using radar and sonar sensors in conjunction with a
24 camera to detect an object and then determine its location. The camera can
25 be used to detect the object in the first instance and then additional sensors
26 use the second step to detect the location of the object. This appeals to

1 interact -- this appeals to the indirect interpretation of the claim and the
2 threats of (inaudible 0:41:25). It offers an example where detecting is
3 applied within the intrinsic record broadly enough to include indirect
4 detection with the type (inaudible 0:41:18) in combination.

5 And specifically, at --

6 JUDGE WEINSCHENK: And was this discussed anywhere in the
7 papers prior to hearing or is this, sort of, something you're raising for the
8 first time now?

9 MR. STEPHENS: This is -- we didn't -- I raise this in response to
10 the question earlier about where we saw specification support for detection.
11 So this is --

12 JUDGE WEINSCHENK: But you didn't put this in any of your
13 papers prior to the hearing, right?

14 MR. STEPHENS: Correct. That's to my colleague addressed also
15 the last limitation of the substitute claims, which requires the first data
16 structure and the second data structure to be correlated with the first one or
17 more instruction sets for operating the first device.

18 A couple points on these items, Your Honor. First, the mapping in
19 the opposition started with Grotmol. So, if you look at how we mapped the
20 (inaudible 0:40:07) representations in this combination, we represented that
21 Grotmol's digital pictures, the sensory input that it stores in its training sets
22 provide representations of multiple objects. Each of those objects being an
23 object representation and then the next limitation we explain that the object
24 representations are entitled to its own data structure in Hickman.

25 JUDGE PARVIS: Can I step back for a minute on the detecting
26 issue? I am wondering if -- both parties seem to state that their positions are

1 based on the plain meaning, plain and ordinary meaning, but the positions
2 are, obviously, different. Just is Petitioner's position that Patent Owner is
3 rephrasing? The Petitioner's position is that the word detect, directing is
4 being interjected, as I understand it.

5 But Patent Owner is saying, no, that because of these terms
6 processing one or more digital pictures to detect that that is -- that's what
7 Patent Owner -- that supports Patent Owner's position, the actual language
8 that is in the substitute claim. I'm wondering if could Patent Owner have
9 written it better if they had said by processing one or more pictures, one or
10 more digital pictures, detecting -- or is it they have to interject the word
11 directly detect? Is that Petitioner's position?

12 MR. STEPHENS: No. We think that the Patent Owner is the
13 master of the claims. They submitted this claim language and they could
14 have, if they had desired for this, kind of, direct interpretation to apply, that
15 in order, you know, the language was available for them to do that.

16 As we're reading it, especially in light of that example I just gave
17 you from the specification, we think that our interpretation of the language
18 that was given in the substitute claims is consistent with what's disclosed in
19 the specification when it talks about detection. Doing a two-step process.

20 JUDGE PARVIS: So, Petitioner's position is that you process the
21 one or more digital pictures and then you are able to detect the three
22 characteristics, but what about the word "to?" If you're processing one or
23 more digital pictures to detect, does that change Petitioner's position?

24 MR. STEPHENS: I don't think so. I think you start by processing
25 the digital pictures and where that process, you're starting with the digital
26 pictures. Then you can identify the object. You detect the type of the object

1 and it is that initial processing the digital picture that allows you to detect all
2 three attributes. The claim doesn't say that you can't do that initial image
3 processing step is all that's (inaudible 0:36:09) detection is only limited to
4 the image processing. You just, it says start by processing your digital
5 pictures and then you can obtain, detect each of those attributes.

6 And again, this is consistent with the specification where they've
7 given us this two-step process to first identify the object, detect the object,
8 and then use other sensors and other sources to, you know, from that initial
9 detection to then discern the attributes that we have there.

10 JUDGE PARVIS: Should we construe the word detect?

11 MR. STEPHENS: I don't think that construction is necessary, but I
12 think that in applying the art that it is important to consider if we're just
13 taking the plain meaning of detect, that we're reading the plain meaning in
14 light of the specification, in light of the intrinsic record.

15 JUDGE PARVIS: Would additional briefing be helpful here for
16 what is Petitioner's position?

17 MR. STEPHENS: We would be amenable to additional briefing
18 would be helpful to Your Honor.

19 JUDGE PARVIS: But you don't think it's necessary?

20 MR. STEPHENS: We don't think it's necessary.

21 JUDGE PARVIS: Thank you.

22 MR. STEPHENS: I'm sorry, Judge Parvis, how much time do we
23 have left?

24 JUDGE PARVIS: You're coming up to time.

25 MR. STEPHENS: Okay.

1 JUDGE PARVIS: We've asked a few questions here so you can
2 take a little bit more.

3 MR. STEPHENS: Just very briefly, Your Honor, as to the
4 correlation limitations of the claims, this is 2.78. One is Hickman expresses
5 and discloses the ability for two or more data structures to be correlated with
6 the same instruction sets, the same TASKS field. This would occur, for
7 example, when you have two objects that are of the same general type.

8 But beyond that, again, it goes back to the combination. And you're
9 starting with Grotmol. All the other representations are part of the same
10 digital picture, the same circumstance representation. They are correlated
11 with the same instruction sets.

12 And then just lastly, Your Honors, as to 101, I would echo the same
13 similar points to what we made earlier in '974, which is that in this record in
14 '344 the record -- excuse me. The factual record is not cited. They have not
15 supported any of their arguments with respect to alleged technological
16 improvements, how they framed or contested the abstract idea. It's all
17 attorney argument. They've only got two or three pages in their reply to that
18 point.

19 And again, the test is not how long the claim is, whether there are
20 data structures recited in the claim. We have to look beyond that and look at
21 do those additional limitations actually provide a technical improvement to
22 the subject matter, to the technology? There's no evidence of record that it
23 does. In fact, the only evidence on that point is (inaudible 0:32:39.)

24 Thank you, Your Honors.

25 JUDGE PARVIS: Question, and I'm sorry, you have until 2:45 if
26 you want to use the extra time. But on 101 is the -- are the claims, the

1 proposed substitute claims -- bless you -- are those evidence? Or is
2 Petitioner's position that the evidence is not sufficient and that Patent Owner
3 had to have an expert?

4 MR. STEPHENS: Patent Owner didn't have to have an expert, per
5 se, but I think we have evidence in the record that we put in our opposition
6 that's raised the 101 rejection. They had the opportunity to submit to counter
7 the evidence that we put in and supports these claims are directed to the --
8 I'm sorry, (inaudible 0:31:39) eligible.

9 So there are factual underpinnings to each step of the Alice
10 framework and they raise arguments in their reply that are simply attorney
11 argument. They're saying that there are improvements to the technology but
12 that's not -- I don't even believe there are cites in their reply to where there is
13 any proof of that, not even a depo.

14 Just one other point, that apart for not even, you know, submitting a
15 reply declaration, we submitted -- our expert's declaration as part of the
16 opposition to the motion to amend, that they would (inaudible 0:31:01) and
17 they would collect them after the (inaudible 0:31:00).

18 I'm happy to take any further questions, Your Honor. Otherwise, I
19 think --

20 JUDGE PARVIS: Any further questions? No other questions.

21 MR. STEPHENS: Okay.

22 JUDGE PARVIS: Thank you, Counsel.

23 MR. STEPHENS: Thank you very much, Your Honor.

24 MR. JAIRAM: I will touch, I guess, first on the 101 issue that was
25 most recently raised by Petitioner's counsel, and then I'll try and touch on
26 some of the other issues working backwards in time. Petitioner's counsel is

1 right that there is no requirement that we present expert testimony on the
2 101.

3 And the claims contain various limitations that the Board has
4 analyzed. We have certainly used the -- got preliminary guidance, hopefully
5 for its intended purpose in the context of the overall MTA program in the
6 sense of providing guidance. Hopefully, the preliminary guidance actually
7 serves its role, not just in this case but in motions to amend.

8 There are not that many motions to amend. There are certainly not
9 that many successful motions to amend. But we certainly have used every
10 ounce of available guidance and endeavored to craft our substitute claims, as
11 well as every aspect of this IPR proceeding, fully availing ourselves of the
12 preliminary guidance, as well as everything else in the Board's rules. So, I
13 don't think it would be approved period to fault us for not having an expert
14 also opine on 101 when the claims certainly to some extent provide a
15 considerable amount of insight.

16 I think there was a point raised by Petitioner's counsel about whether
17 our expert presented deposition testimony on this. Well, in the context of
18 the declaration that our expert put forward, which contains opinions
19 regarding various topics, we have included opinions that we think are
20 appropriate and that the expert thinks is appropriate, that we think are
21 appropriate to include.

22 But that doesn't mean that everything under the sun has to be blessed
23 by expert. And it's not like the expert is some, sort of, a check box that has
24 to be ticked off in every instance.

25 Going back to the MTA sur-reply, for the sake of brevity, I'm not
26 going to reiterate the various case cites that I mentioned in the earlier

1 hearing, but I would just refer to it very briefly. I note that any new
2 arguments presented for the first time in the MTA sur-reply are improper
3 and belated. And the various case cites that I presented in the earlier
4 hearing, whose transcript is going to be applicable here as well, those case
5 cites are relevant. Particularly, if you just had to pick one, look at the Snap
6 IPR.

7 And the Board has itself looked at the MTA opposition in
8 considerable detail and has offered guidance. Of course, that is preliminary
9 guidance but it is a good yardstick for where the proceeding was at that point
10 in time. And we have crafted our subsequent course of the proceeding in
11 accordance with that. It would be quite unfair to basically allow Petitioner
12 to radically change course subsequent to that, knowing that the Petitioner
13 gets the last word in the briefing papers.

14 And I know that this topic has been discussed at considerable length
15 in the previous hearing, so I'm not going to belabor that here, but I did want
16 to encourage the Board to go look at the limitations for which we presented
17 argument in our MTA reply. And many of those instances where the
18 Petitioner presented only a very short, cursory argument that we explained
19 was deficient, including for some reasons that are not found in the
20 preliminary guidance in response to that, the MTA sur-reply often expands.

21 One example is trying to use something about Grotmol for
22 correlations. It's just not possible when Grotmol was the basis for their
23 mapping of instruction sets. It's not possible for the combined teachings of
24 the reference to teach or suggest correlations in the manner required in even
25 the existing claims.

1 And then with respect to the additional limitations, when the Board
2 carefully considers what exactly Petitioner's MTA sur-reply is saying and
3 sees if that is present in the MTA opposition, in many instances that's not.
4 And that's why we crafted our MTA reply carefully to dissect and dismantle
5 everything that they put forward in their MTA opposition.

6 So, we believe that the rules have a purpose. The Board's rules are
7 exactly what we have followed. This MTA procedure has a certain way to
8 be conducted and we have done it to the absolute letter of the law.

9 JUDGE PARVIS: A question I have is I understand Patent Owner's
10 argument in the instant proceeding, that Petitioner relied on only Hickman
11 for certain added limitations. The Petitioner didn't explain its reliance on
12 Grotmol. Okay.

13 And with respect to that, Petitioner argued that certain claims,
14 including the independent claim, are anticipated by Grotmol in the
15 independent claims just claimed. But, you know, for example, the first one
16 or more object representations Petitioner argued that that's anticipated and
17 disclosed in Grotmol.

18 And the substitute claims say that those objects representations
19 comprise a first and second object representation that include the first -- the
20 first object representation includes a first data structure. Well, if Petitioner
21 is relying on Grotmol, then doesn't it follow that Petitioner has shown a
22 reliance on Grotmol for those added limitations?

23 MR. JAIRAM: It depends on the specific claim language, Your
24 Honor. So, in particular, I'm showing on the screen our reply in support of
25 our MTA, our MTA reply. And in the context of the added limitation that
26 says that the first and second data structures are correlated with the first one

1 or more instruction sets, the fact that Grotmol alone allegedly has teachings
2 of instruction sets through what Petitioner mapped, I believe, is the motor
3 control indications, that still doesn't address the instruction sets in the
4 context of limitation 21.15, namely, both of the data structures have to be
5 correlated with the instruction sets.

6 And so the argument, which I believe is what Your Honor is, again,
7 the question by asking about is what we have addressed as of Page 7 of our
8 MTA reply. And we're saying that the thing that the petition mapped, if it's
9 something that comes from the primary reference then for this limitation that
10 involves correlation how can it be that the only discussion is about the
11 secondary reference? And, in fact, let me pull up the opposition. I believe
12 it's on Pages 20 to 24, but let's see. I guess it'll be the correlation feature.

13 Okay. It's element 21.15 as shown on the screen here. Here's the
14 limitation. The data structures are correlated with the instruction sets. You
15 will see that the entirety of this section has to do with Hickman and then in a
16 following -- so first there's a letter A, Hickman as a heading. Then the next
17 page letter B Tolstedt again as a heading.

18 And everything that is discussed for the rest of that claim before we
19 move on to the next substitute claim, it's only disclosures about the
20 secondary reference. There is nothing saying, okay and when you take what
21 Grotmol has, motor control indications that, okay, now it would have been
22 obvious and why. Some rationale here. This is the reason why someone
23 would have thought that in light of the disclosures in the secondary
24 reference.

25 What is the relationship or interaction with the primary reference's
26 disclosure because otherwise all they have done is basically said, well,

1 reference A teaches limitation X and reference B teaches limitation Y, and
2 therefore we're done. But not so because the limitation refers to a
3 correlation with something from the primary reference. They had to have
4 explained, at least in some way, why this still would have made sense to
5 modify Grotmol's system and to apply that to Grotmol's motor control
6 indications.

7 I'm trying to answer Your Honor's question. I'm not sure if that is
8 responsive to your question?

9 JUDGE PARVIS: Well, I'm looking at, I think this is Petitioner's
10 opposition to the motion to amend. I see that Petitioner for element 21.15,
11 I'm looking at Page 24, Petitioner refers to the GHC system and then it
12 includes cites to Exhibit 1004, which is Grotmol.

13 MR. JAIRAM: But it's unexplained. It's just saying, well, what we
14 need would have been understood to occur. That's entirely aspirational.
15 And I believe that the paragraph of the expert declaration that's cited says
16 exactly the same thing. It's just verbatim copy, and I think that it's not
17 sufficient for Petitioner to just say, well, this claim limitation that we need,
18 well, in the proposed system a POSITA would have understood that that is
19 present. Go on to the next limitation.

20 There's no analysis. There are some citations which are unexplained
21 and therefore essentially impossible for us as Patent Owner to even
22 meaningfully respond to because they are simply unexplained citations
23 listing parts of the reference but with no analysis. So, there is no meaningful
24 explanation of how their argument relates to the primary reference other
25 than, as Your Honor just mentioned, a conclusory, or rather, cursory mention
26 of the GHC system.

1 But, of course, even if they hadn't mentioned the GHC system we
2 are aware that this is in the context of a Grotmol-Hickman combination. So,
3 I don't think them saying that it's in the GHC system is any meaningful
4 analysis. And I mean, Your Honors can look at it. It's essentially two
5 sentences for their entire analysis and one of the sentences, the second one,
6 appears to be completely conclusory because it's aspirational. It's what they
7 need, and I don't see how they got there.

8 JUDGE PARVIS: In the instant proceeding this case is much
9 different than the 01054 case because in the instant proceeding, the 01055,
10 the preliminary guidance did not refer to 21.15 as the limitation that was not
11 met; is that correct?

12 MR. JAIRAM: That's correct, Your Honors. We presented all of
13 the deficiencies that we are aware of and that we could identify. And those,
14 I believe, did include some of the deficiencies that Your Honors also noted, I
15 believe, regarding something about detecting and processing the image to
16 detect but also this limitation. And we basically took their opposition at face
17 value. Here is their set of arguments and what's wrong with all of those
18 arguments. And I think that our MTA reply carefully lays out those points.

19 I only mentioned, I believe, one of them just now but there's several
20 others even for that limitation.

21 JUDGE PARVIS: So, Patent Owners' position is that there are new
22 arguments in Petitioner's sur-reply in the instant proceeding?

23 MR. JAIRAM: Yes, Your Honor.

24 JUDGE PARVIS: The Petitioner (inaudible 0:12:55) or Patent
25 Owner --

1 MR. JAIRAM: Yes. Yes, Your Honor. I would say that anything
2 that goes outside of -- I mean, when there's only two sentences on Hickman
3 and there's no discussion of anything about Grotmol, anything that now their
4 attempt to by tie in Grotmol in some way it's just too late. They had their
5 chance. They had their chance to do it with expert support and to use all the
6 references in the world that they might want.

7 And I guess it's notable also that here Hickman, this is -- they didn't
8 even go outside to find some closer reference. This is the same --

9 JUDGE PARVIS: Yet, Petitioner argues that the claims are
10 anticipated by Grotmol and the original claims. Many of these limitations
11 and the added limitations include recitations that derive antecedent basis
12 from those original claims. Is it fair to say that Petitioner doesn't have to
13 repeat its petition?

14 MR. JAIRAM: I'm not sure that I fully understand the question, but
15 I don't believe that Petitioner has to repeat the petition. But where a certain
16 limitation only makes sense by considering the mapping to prior art of the
17 constituent elements, in particular as an example 21.15, it doesn't make
18 sense from the point of view of consistency across the whole claim for
19 Petitioner to think in the context of Claim 1, I'm not sure what happened to
20 the vide.

21 But to say for Claim 1 that's something in Grotmol is what is
22 mapped and then later in the context of the added limitation, which is
23 referring to the same feature through the notion of antecedent basis to then
24 say, well, you know, I don't need to consider the primary reference anymore
25 because now we're not talking about Claim 1. It's the same feature. In the
26 new substitute claim the only way that the mapping makes any sense is if,

1 you know, whatever references are applied have to be carried through in a
2 coherent manner.

3 I guess whatever is now present in the amended claim that was
4 formerly in Claim 1, they don't have to represent their mapping but they
5 certainly should stay consistent to it. Otherwise, it makes no sense. Why
6 would it even be the Grotmol-Hickman combination if -- I mean, might as
7 well be the Smith-Hickman combination if they, kind of, are free to ignore
8 how they treated Grotmol as applied to the base claim.

9 I'm not sure that I can give a better answer than that because this is -
10 -

11 JUDGE PARVIS: Well, I think I understand Patent Owner's
12 position. Thank you.

13 MR. JAIRAM: Thank you, Your Honors. I believe my rebuttal
14 time is up, so if there are no other questions --

15 JUDGE PARVIS: You have another minute or two if you want to
16 make another point.

17 MR. JAIRAM: I'll just ask if any of the other of Your Honors have
18 any other questions that I'm happy to answer them to the best of my ability?

19 JUDGE CASS: Nothing from me. Thank you.

20 MR. JAIRAM: Thank you, Your Honors.

21 JUDGE PARVIS: Thank you to both -- oh, is there something else
22 that --

23 MR. STEPHENS: May I ask for a few moments to respond just to
24 some new arguments that were raised in the Patent Owner's presentation.

25 JUDGE PARVIS: Patent Owner, do you have any objections to
26 this? How much time do you want?

1 MR. STEPHENS: Three minutes, Your Honor.

2 MR. JAIRAM: I would request, Your Honor, that we then be
3 allowed to similarly respond to Petitioner because that seems to be the only
4 thing that would be fair.

5 MR. STEPHENS: No objection to that.

6 JUDGE PARVIS: Okay.

7 MR. STEPHENS: Thank you, Your Honor. Patent Owner's counsel
8 during his presentation made a walk in detail through the sur-reply. He
9 made numerous allegations about the sur-reply, responded to substantive
10 contentions made in the sur-reply, and, you know, those were the first time
11 that we've heard this today. Those are all arguments that have not been
12 presented before today.

13 Again, there are many cases where parties have requested additional
14 briefing following a sur-reply to respond to arguments. There was no such
15 briefing there or even a request for it.

16 There has also been a point made that, you know, we had the last
17 word and so Petitioner somehow didn't have an opportunity to reply. Apart
18 from that, that he didn't request briefing, the motion to amend pilot program
19 gives the Patent Owner a number of procedural options and so they left it to
20 go down this path. The other thing that could have happened after the
21 preliminary guidance was for, and this was Patent Owner's decision. They
22 could have had us, the Petitioner, first reply to the preliminary guidance
23 thereby giving the Patent Owner the last word. They didn't choose to
24 proceed in that route. They wanted to just move the reply first instead of the
25 sur-reply.

1 And then as to the number of points that are allegedly new, kind of,
2 uses of Grotmol in the combination and highlighting Grotmol's disclosure in
3 the sur-reply, just keep in mind, Your Honors, that the opposition starts with
4 a detailed description of Grotmol in the Grotmol-Hickman combination.

5 And, in fact, on the first paragraph of our combination in the description of
6 the combination in the opposition, we cite back to the petition referencing
7 back to the earlier discussion of how Grotmol and Hickman come together
8 because it's not necessary for us to repeat everything that was said in the
9 petition in the opposition.

10 We then cited Grotmol in the Grotmol and (inaudible 0:06:15)
11 limitations, and certain limitations and I think it's clear that turning a blind
12 eye to Grotmol is not what was intended and could have been foreseen when
13 Patent Owner submitted its reply.

14 Nothing further, Your Honor.

15 JUDGE PARVIS: Thank you, Counsel.

16 MR. JAIRAM: I will note that as we noted in our MTA reply,
17 notwithstanding the existence of a rather large section of the MTA
18 opposition being directed to the combination Grotmol-Hickman, that entire
19 section is written at a very high level of generality and is not tied to the plain
20 language. Of course, the name of the game is the claim. The language of
21 the claims is what is at issue.

22 By having a section of the MTA opposition that is essentially
23 divorced from the claim language, that should not enable the Petitioner to
24 now avail itself of, kind of, getting out of the need to do a proper
25 obviousness analysis for each claim. And when I say for each claim or for

1 each claim element and for each claim, I guess, that means actually
2 considering the claim language.

3 I don't believe that having a very general section that does not even
4 mention specific claim languages, nor could it have because it was generic,
5 it was not specific to any claim limitation, it was presented as a standalone
6 section that cannot be used as a crutch to then say, well, for limitation 21.15
7 there's no mention of the primary reference but let's go look at the generic
8 section. In fact, there's not even any citation to that generic section.

9 The analysis for each limitation needs to properly set forth a basis
10 why one would have -- why a person of ordinary skill in the art would have
11 taken the teachings of the primary reference and in light of the teachings of
12 one or more secondary references and then considering the teachings of the
13 references as a whole, arrived at the claim language, or in other words, at the
14 claimed invention. That simply has not been done here in either the MTA
15 opposition or the MTA sur-reply.

16 That is most evident by looking at the MTA opposition where for
17 each limitation there's probably on average less than one page. And I
18 understand that they have -- Petitioner has supplemented its analysis through
19 the MTA sur-reply, but it's as a result rather easy to see what has changed.
20 And I would leave Your Honors with the question, well, how is it that the
21 preliminary guidance which Your Honors have carefully crafted and which
22 we have assiduously absorbed and availed ourselves of in an appropriate
23 manner consistent with the rules, how is it that they could have been so far
24 adrift that as Petitioner's counsel would have it that somehow we all missed
25 the boat on 101? We all missed the boat on 103, the specific limitation that's
26 listed, and anything else.

1 I don't believe that that is appropriate.

2 JUDGE PARVIS: The preliminary, to be clear though, the
3 preliminary guidance referred to only one limitation, no other. This is a
4 much different preliminary guidance discussion because of the differences in
5 the claims as compared to the 01054. So there was only one limitation, the
6 limitation that we discussed processing one or more digital pictures to detect
7 is the only limitation that the preliminary guidance raised with respect to
8 obviousness. So, there was no other limitation.

9 We read Patent Owner's motion to amend. We read the Petitioner's
10 opposition, and we did not find any other concerns with -- that we explained
11 in the preliminary guidance with respect to the obviousness case in the
12 opposition; is that correct?

13 MR. JAIRAM: Well, I certainly cannot speak to what occurred on
14 Your Honors' side, you know --

15 JUDGE PARVIS: Well, when we go through, there was nothing --
16 what I'm asking is there was nothing in the preliminary guidance that we
17 identified as a problem with the obviousness case, other than the one
18 limitation, processing one or more digital pictures to detect; is that correct?

19 MR. JAIRAM: That sounds correct.

20 JUDGE PARVIS: Okay, thank you.

21 MR. JAIRAM: Thank you, Your Honors. I would just note that at
22 least as to the 101 discussion there were several points raised in the
23 preliminary guidance which appeared to be at odds with what Petitioner is
24 espousing today. And so at least in that respect I would say that that's
25 different than the than the 103.

26 But thank you, Your Honors.

IPR2023-01054 (Patent 10,452,974 B1)

IPR2023-01055 (Patent 11,238,344 B1)

1 JUDGE PARVIS: Thank you to both parties for appearing today
2 and for answering our questions. We will be taking this case under
3 advisement and we'll issue our decision in due course. We are adjourned.
4 (Whereupon, the proceedings at 3:14 p.m. were concluded.)

IPR2023-01054 (Patent 10,452,974 B1)

IPR2023-01055 (Patent 11,238,344 B1)

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