

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

-----X
TESLA, INC.,

Petitioner,

v.

AUTONOMOUS DEVICES, LLC,

Patent Owner.

-----X

Case no. IPR2023-01172
Case no. IPR2023-01173
U.S. Patent No. 11,055,583

DEPOSITION

OF

JASON ANDRE JANET, PH.D.

FRIDAY, MARCH 22, 2024

HELD REMOTELY

Reported by:
CANDIDA BORRIELLO
JOB NO. 6555579-001

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DATE: March 22, 2024
TIME: 10:01 a.m. (Eastern Time)

Deposition of JASON ANDRE JANET, held
REMOTELY, before Candida Borriello, Court
Reporter and Notary Public of the State of
New York.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A P P E A R A N C E S:

Appearing on Behalf of the Petitioner:

FISH & RICHARDSON P.C.
1717 Main Street
Suite 5000
Dallas, Texas 75201
(214) 292-4013
BY: MATTHEW COLVIN, ESQ.
NICHOLAS W. STEPHENS, ESQ.
EMAIL: colvin@fr.com
nstephens@fr.com

Appearing on Behalf of the Patent Owner:

MCKOOL SMITH
1999 K Street, NW
Washington, DC 20006
(202) 370-8324
BY: STUART McCOMMAS, ESQ.
ARVIND JAIRAM, ESQ.
EMAIL: smccommas@mckoolsmith.com
ajairam@mckoolsmith.com

1 J. Janet

2 THE COURT REPORTER: We're on the
3 record.

4 J A S O N J A N E T,
5 called as a witness, having been
6 duly sworn by a Notary Public,
7 was examined and testified as
8 follows:

9 EXAMINATION BY
10 MR. McCOMMAS:

11 Q. Good morning, sir.

12 A. Good morning.

13 Q. Will you please state and spell
14 your full name for the record?

15 A. My name is Jason Andre Janet,
16 J-A-S-O-N, A-N-D-R-E, J-A-N-E-T.

17 Q. And before we begin, I just want to
18 remind you of some basic ground rules. I
19 know we've had some depositions before
20 together, so you already may know some of
21 this, but I'll repeat this for the sake of
22 completeness; is that okay?

23 A. Yes, sir.

24 Q. You understand that you've been
25 placed under oath today just as though you

1 J. Janet

2 are in a court of law?

3 A. Yes, sir.

4 Q. And you understand that you're
5 bound to answer my questions truthfully
6 today?

7 A. Yes, sir.

8 Q. If you don't understand a question
9 or if it's unclear, please let me know and so
10 that I'm happy to rephrase as necessary,
11 otherwise I will assume that you understand
12 my question; is that okay?

13 A. Yes, sir.

14 Q. As we were just discussing, because
15 your testimony is being transcribed by the
16 court reporter, do you understand that you
17 need to answer my questions verbally instead
18 of with gestures?

19 A. Yes, sir.

20 Q. Okay. I'm going to do my best and
21 I would ask that you do your best that we
22 each speak one at a time. I know we're on a
23 video feed, but this will make the reporter's
24 life easier.

25 Does that sound good?

1 J. Janet

2 A. Yes, sir.

3 Q. Okay. And in breaks, just as we've
4 done in the past, we'll be taking breaks
5 during the deposition. If you need one, let
6 me know. If a question is pending though, I
7 will request that you answer the question
8 before taking a break; is that okay?

9 A. Yes, sir.

10 Q. Any questions before we begin?

11 A. No, I don't have any questions.

12 Q. Are you aware of any reason that
13 you are unable to answer my questions
14 truthfully today?

15 A. No, sir.

16 Q. And Dr. Janet, are you taking any
17 medications that would prevent you from
18 providing honest, accurate and complete
19 answers?

20 A. No, sir.

21 Q. Any health conditions that would
22 prevent you from doing so?

23 A. No, sir.

24 Q. And do you understand that you have
25 to answer my questions even if your counsel

1 J. Janet

2 objects unless he directly instructs you not
3 to answer?

4 A. Yes, sir.

5 Q. I would also like to caution you at
6 this time not to discuss the substance of
7 your testimony during any breaks.

8 You understand that, sir?

9 A. Yes, sir.

10 Q. Dr. Janet, is there anyone in the
11 room with you today?

12 A. No, sir.

13 Q. And do you have any documents with
14 you in the room today, either electronic or
15 hard copy?

16 A. Not related to this case.

17 Q. Now, I will be asking you questions
18 about IPR2023-01172 and IPR2023-01173 which
19 involve US Patent Number 11,055,583.

20 Do you understand that, sir?

21 A. Yes, that's my understanding.

22 Q. And for convenience, I will refer
23 to the patent involved in this deposition as
24 the '583 patent; is that okay?

25 A. Yes, sir.

1 J. Janet

2 Q. And I will refer to the first '583
3 IPR, IPR2023-01172 as the first '583 patent
4 IPR; is that acceptable?

5 A. Yes, sir.

6 Q. Okay. And for the second '583 IPR
7 IPR2023-01173, I will refer to that IPR as
8 the second '583 patent IPR; is that okay with
9 you?

10 A. Yes, sir.

11 Q. You submitted a declaration for the
12 first '583 patent IPR and the second '583
13 patent IPR, correct?

14 A. Yes, sir.

15 Q. And you submitted one declaration
16 in both IPRs; is that right?

17 A. That's my recollection, yes, sir.

18 Q. Now, I'm going to load a few
19 exhibits into the chat for you, so if you'll
20 just give me a second. If you let me know
21 when you see those, Dr. Janet, then we can
22 proceed.

23 A. I see them in the chat.

24 Q. Okay. Do you have a physical copy
25 of your declaration with you right now,

1 J. Janet

2 Dr. Janet?

3 A. I do not.

4 (Exhibit 1003, Declaration of
5 Jason Janet, was marked for
6 identification.)

7 Q. Okay. Now, I placed a copy of your
8 declaration in the chat and you see that's
9 Exhibit 1003.

10 Do you see that document,
11 Dr. Janet?

12 A. Well, the way that the files are
13 displayed, I actually don't see the last
14 several digits of the file names. And for
15 each one of the files, I simply see
16 IPR2023-0117 and then a series of dots.

17 Q. Okay. Why don't you go and
18 download each of those PDFs to your hard
19 drive, sir, and then go ahead and open up the
20 file where you downloaded them. And when
21 you're done with that, please let us know.

22 A. It appears that I've downloaded
23 them.

24 Q. Do you now see Exhibit 1003?

25 A. I see the name of that, do you want

1 J. Janet

2 me to open it?

3 Q. Yeah. Could you go ahead and open
4 that file? Let me know when you have it
5 open.

6 A. I believe I have it open.

7 Q. Was this Exhibit 1003 that you have
8 look to be a complete copy of your
9 declaration that you submitted both of the
10 same '583 patent IPRs?

11 A. It appears to be.

12 Q. And you submitted the same
13 declaration in both IPRs, right?

14 A. That's my recollection, yes, sir.

15 Q. Now, without telling me the
16 substance of any communications you may have
17 had with counsel, what did you do to prepare
18 for your deposition today?

19 A. I reviewed my written -- I
20 apologize, Adobe is giving me some problems
21 here.

22 I reviewed my declaration, the
23 references and of course the patent at issue,
24 '583.

25 Q. Did you have any meetings with

1 J. Janet

2 counsel?

3 A. We did have a few discussions, yes,
4 sir.

5 Q. And who was in attendance for
6 those?

7 A. That would be counsel that's
8 present today.

9 Q. And about how long were your
10 meetings with counsel?

11 A. I don't know the actual total
12 amount, you know, couple hours here, couple
13 hours there.

14 Q. So, up until today, about how many
15 hours have you spent on this matter relating
16 to the '583 patent?

17 A. You mean preparation or do you mean
18 just in general?

19 Q. Just generally.

20 A. Oh, I really don't know, to be
21 honest with you.

22 Q. Who wrote the declaration you
23 submitted in this case?

24 A. Me.

25 Q. And are there any errors that

1 J. Janet

2 you're aware of in your declaration?

3 A. There are a few clerical errors,
4 nothing substantive that I can recall, may
5 come up when we're reviewing. But to my
6 recollection, it's just, you know, there's a
7 numbering issue when I'm referring to a
8 patent in a table -- I'm sorry, when I'm
9 referring to a claim in the table, I think
10 it's maybe 33 or 34, so it's just a numbering
11 issue.

12 Q. And do you know what page of your
13 declaration that error is on?

14 A. Approximately -- give me a second.
15 I think page 249 at the end of Paragraph 337
16 there's a table, and the heading of the table
17 says Claim 33, when it should say Claim 34.
18 And the second, third and fourth rows say
19 33.2, 33.3 and 33.4, when it should say 34.2,
20 34.3 and 34.4.

21 Q. Okay. Are there any other errors
22 that you're aware of in your declaration,
23 sir?

24 A. Paragraph -- this is just a
25 grammatical thing. Paragraph 220 "When the

1 J. Janet

2 threshold is breach," when it should be past
3 tense "breached." Again, I don't think
4 anything substantive. It's entirely possible
5 I made an incorrect reference, for example,
6 when I did the Claim 33 versus 34.

7 And as we review it today, I'll
8 obviously call attention to anything that
9 jumps out at me.

10 Q. Okay. So, sitting here today,
11 those are the only two errors you're aware of
12 in your declaration?

13 A. That I can recall at this point,
14 sir.

15 Q. Okay. And your declaration
16 contains all of your opinions for the '583
17 patent IPRs; is that right?

18 A. It -- yes, from a -- from an
19 opinion standpoint, the opinions are
20 accurate. You know, obviously in my review,
21 additional information has come to light I
22 think that further reinforces these opinions,
23 but, again, we'll get to that.

24 Q. Are you familiar with the Grotmol
25 reference you mention in your declaration, US

1 J. Janet

2 patent number 9,604,359?

3 A. Yes, sir.

4 (Exhibit 1005, Grotmol Reference,
5 was marked for identification.)

6 Q. Okay. Could you describe the
7 Grotmol reference at a high level?

8 A. Well, I'm gonna bring it up, okay.

9 Q. Sure.

10 A. So, the Grotmol reference is
11 entitled Apparatus and Methods for Training
12 Path Navigation by Robots, and it provides,
13 as the title indicates, or discloses ways in
14 which the robots can be trained to learn how
15 to correlate what they perceive to
16 instructions from a trainer, if you will, and
17 that information gets stored. It can get
18 propagated out to multiple robots and there
19 are ways to evolve what is learned, including
20 revert to what was a previous instruction set
21 or to modify the instruction sets, modify
22 what's perceived and the like. And it's --
23 the patent is for a system and method or
24 systems and methods, and it was borne out of
25 the Rethink Robotics, if I'm remembering --

1 J. Janet

2 I'm sorry, it's not. It's BrainOS, I'm
3 mixing things up here, it's BrainOS, which is
4 a company that provides basically the same
5 thing that's in here, just a way for robots
6 to be able to perceive the environment and
7 obtain knowledge, share that knowledge, tweak
8 that knowledge and use that to provide
9 autonomy from robots.

10 Q. And could you just briefly describe
11 Grotmol's training sets?

12 A. (Document review.)

13 So, as I mentioned in my
14 declaration where I just generally describe
15 the Grotmol prior reference, prior art
16 reference, I mention that as Grotmol notes in
17 Paragraph 47:

18 A, quote/unquote, typical approach
19 to autonomous navigation training entailed
20 the recording of user controlled movements
21 along a desired path and then simply
22 replaying the same navigation autonomously.

23 So, that was what laid the
24 foundation or motivated Grotmol's work. The
25 training approach described in Grotmol is

1 J. Janet

2 more dynamic. Grotmol utilizes associations
3 between user commands and camera images
4 captured during training, such that during
5 subsequent autonomous operation, a newly
6 acquired image "may be compared with one or
7 more images from the training buffer" to
8 determine how to control the robot and that's
9 from the abstract of Grotmol.

10 Q. Let's turn in your declaration to
11 Claim 15. Could you turn to Paragraph 261 in
12 your declaration and let me know when you get
13 there.

14 A. You said Paragraph 261, is that
15 correct?

16 Q. 261, yes.

17 A. Okay, I'm there.

18 Q. Do you see Claim Limitation 15.2?

19 A. Yes.

20 Q. So, Claim Limitation 15.2 requires
21 modifying the first instruction set; is that
22 right?

23 A. The first one or more instruction
24 sets for operating the first device, yes,
25 sir.

1 J. Janet

2 Q. And Claim 15 depends from Claim 4;
3 is that right?

4 A. Yes.

5 Q. And Claim 4 depends from Claim 1,
6 is that right? And if you need to, feel free
7 to look at the '583 patent to confirm that.

8 A. Yeah, appreciate that.

9 Yes.

10 Q. Claim 1?

11 A. I forgot where I was.

12 Q. Yep.

13 A. Let me get back to where I was
14 here. Scrolling up and down makes it a
15 little challenging.

16 We were at Paragraph 261; is that
17 correct?

18 Q. That's right?

19 A. All right, I have returned.

20 Q. Okay. And so, just to confirm
21 again, Claim 4 depends from Claim 1; is that
22 right?

23 A. Yes, sir.

24 Q. And Claim 1 says that the first
25 digital picture is correlated with the first

1 J. Janet

2 instruction set; is that right?

3 A. I'm sorry, you're asking me about
4 Claim 1?

5 Q. Yeah. And if you want to go back
6 to Claim 1 in the '583 patent, that's fine,
7 and I can reask the question when you're
8 there.

9 A. Putting it on a different screen so
10 I can make it easier for shifting back and
11 forth.

12 I'm sorry, your question was?

13 Q. So, Claim 1 says that the first
14 digital picture is correlated with the first
15 instruction set; is that right?

16 A. Referring to the last limitation
17 where it says:

18 Learning the first one or more
19 digital pictures correlated with the first
20 one or more instruction sets for operating
21 the first device?

22 Q. Yeah. So, that says that the first
23 digital picture is correlated with the first
24 instruction set; is that right?

25 A. Essentially.

1 J. Janet

2 Q. So, the modified instruction set is
3 correlated with the first digital picture; is
4 that right?

5 A. In Claim 15, is that what you're
6 asking me?

7 Q. Yes.

8 A. (Document review.)

9 And I'm sorry, I'm bouncing back
10 and forth here.

11 So, you're asking me the modified
12 first one or more instruction sets are
13 modifying the first one or more instruction
14 sets for operating first device, is that what
15 you're asking me about?

16 Q. Yeah. So, that modified first
17 instruction set, it's correlated with the
18 first digital picture, right?

19 A. (Document review.)

20 Q. Dr. Janet, do you not understand
21 the question?

22 A. Well, you're asking about 15 which
23 depends from 4 and 4 mentions, obviously,
24 obtaining a new image and then 4 depends from
25 1. So, I'm trying to figure out which

1 J. Janet

2 picture you're asking about. Perhaps you can
3 clarify, in the meantime I'll --

4 Q. Sure. So, let's start with
5 Claim 1. Claim 1 states that:

6 A first one or more digital
7 pictures is correlated with the first one or
8 more instruction sets.

9 Is that right?

10 A. Right.

11 Q. So, the modified first instruction
12 set in Claim 15 is correlated with a first
13 digital picture; is that right?

14 A. Well, we're skipping Claim 4 here,
15 so what I'm trying to do is make sure that
16 we're talking about the correct picture.

17 Q. Do you see in Claim 1 where it
18 says:

19 Learning the first one or more
20 digital pictures correlated with the first
21 one or more instruction sets for operating
22 the first device.

23 A. Yes.

24 Q. Now, if you look over at Claim 15,
25 15.2, do you see where it says modifying the

1 J. Janet

2 first one or more instruction sets for
3 operating the first device.

4 Do you see that, sir? Do you see
5 that, sir? It's a simple question, this
6 should not be taking this long.

7 MR. COLVIN: Counsel, I don't
8 think you need to be argumentative.
9 Just ask your questions and he'll
10 answer them. Badgering the witness
11 isn't going to help anyone here.

12 THE COURT REPORTER: Mr. Colvin,
13 you broke up in the beginning.

14 MR. COLVIN: I was just advising
15 counsel to not badger the witness and
16 be argumentative. Just to answer --
17 just to ask the questions and the
18 expert will answer them.

19 A. So what was your question again,
20 Counsel?

21 Q. So, do you see in Claim
22 Limitation 15.2 where it states:

23 Modifying the first one or more
24 instruction sets for operating the first
25 device.

1 J. Janet

2 A. Yes, I do.

3 Q. Okay. So, in Claim 1, as we just
4 discussed, specifically states:

5 Learning the first one or more
6 digital pictures correlated with the first
7 one or more instruction sets for operating
8 the first device.

9 Correct?

10 A. Well, look, I'll be honest with
11 you, this is getting a little confusing
12 because we're referring to 15 which depends
13 from 4 which depends from 1. So, I just want
14 to make sure we're referring to the exact --
15 that I can get, per your question, at least
16 how I understand your question, the picture
17 that you are asking about, so that's what I'm
18 trying to do here.

19 (Cross-talk.)

20 A. I see the passages that you're
21 bringing up, yeah.

22 Q. Is there anything in Claim 4 that
23 you think affects this analysis?

24 A. That's what I'm trying to be sure
25 of.

1 J. Janet

2 Q. Okay. Let's look at Claim 4 then.

3 Do you have Claim 4 in front of
4 you?

5 A. Yes.

6 Q. So, is there anything in Claim 4
7 that would impact your analysis for my
8 question?

9 A. Well, that's what I'm trying to
10 figure out. Give me a second.

11 Q. Okay. Well, do you need a minute?
12 Go ahead and read Claim 4 and then let me
13 know if there's anything that impacts your
14 analysis.

15 A. Thank you.

16 (Document review.)

17 Okay, I think I'm tracking here.
18 So, your original question, your overriding
19 question is what again?

20 Q. Does Claim 4 impact your analysis,
21 sir, at all?

22 A. It does not appear to on the
23 surface. Assuming that I'm reading 15.2
24 right.

25 Q. Okay. So, the modified instruction

1 J. Janet

2 set in Claim 15 is correlated with a first
3 one or more digital pictures; is that right?

4 A. The modified instruction set from
5 15 is correlated to the first one or more
6 digital pictures from Claim 1, is that what
7 you're asking?

8 Q. Yes.

9 A. That appears to be the case, yes,
10 sir.

11 Q. Okay. Thank you.

12 So, then if we -- let's look at
13 Limitation 15.3. Do you see that Claim
14 Limitation, sir? We can turn back to your
15 declaration that is in Paragraph 264, it's
16 right above paragraph 264.

17 Do you see that, sir?

18 A. I do.

19 Q. So, Claim Limitation 15.3 requires
20 determining the modified instruction set; is
21 that right?

22 A. Determining the at least partial
23 match between the new one or more digital
24 pictures and the first one or more digital
25 pictures.

1 J. Janet

2 Q. And that requires determining the
3 modified instruction set, right sir?

4 A. It includes determining the
5 modified first one or more instruction sets
6 for operating the first device based on the
7 at least partial match between the new one
8 and the one or more digital pictures and the
9 digital pictures, yes.

10 Q. And you relied on Grotmol as
11 anticipating Claim 15; is that right, sir?

12 A. Yes, sir.

13 Q. So, where does Grotmol disclose
14 that a correlated instruction set is
15 modified?

16 A. Well, as I mentioned in my
17 declaration here in starting at
18 Paragraph 262, Grotmol teaches that the
19 robot may include modifying training sets to,
20 for example, compensate for position mismatch
21 or orientation mismatch and responding to
22 that mismatch with a modified instruction
23 set and, you know, this is mentioned in
24 Paragraph 262 and the excerpts include that
25 the robot may need to adjust its heading, for

1 J. Janet

2 example, write words if it's shifted in that
3 direction. And furthermore, if the new image
4 is shifted left, right turn command may be
5 issued as the new image is shifted right,
6 then the left turn command may be issued.

7 I go on to say that in execution
8 adjusting for position mismatch, orientation
9 mismatch would require modifying instruction
10 sets.

11 Now, the -- if you notice in
12 Grotmol there are several things that -- that
13 add substance to this, if you will, or I
14 should say bolster this, the -- there's
15 a correct mode in Grotmol, somewhere
16 Columns 21-ish, 22-ish, and, you know,
17 Grotmol modifies the instruction set,
18 including in the K-nearest neighbors where
19 the X would be the -- like the digital
20 picture and the Y would be the output. And
21 you may notice in the K-nearest neighbors or
22 the RkNN that there's a modification to -- to
23 the neighborhood, if you will, and then
24 there's a subsequent modification to the, you
25 know, to the -- the sum or product of those

1 J. Janet

2 neighborhood results.

3 Also, Grotmol offers other ways of
4 changing the instruction sets through, for
5 example, override mode, correct mode, undo
6 mode. And, you know, I don't know that I'm
7 quoting this exactly, but Grotmol mentions
8 showing the robots how to perform different
9 tasks in different ways, I think on different
10 occasions.

11 Q. Okay. So, Claim 15 has an
12 instruction set or requires an instruction
13 set; is that right?

14 A. Claim 15 mentions modifying the
15 first one or more instruction sets.

16 Q. And that first instruction set,
17 Claim 1 says that first that instruction set
18 is correlated with a first one or more
19 digital pictures, right?

20 A. Yes, sir.

21 Q. Okay. So, that correlated
22 instruction set is then modified in Claim 15;
23 is that right?

24 A. Yes.

25 Q. But Grotmol never discloses that an

1 J. Janet

2 instruction set is correlated to the digital
3 picture is actually modified, right?

4 A. Well, I believe I just answered
5 that, but I'm happy to repeat it. Grotmol
6 does show that in several different ways.
7 First of all, Grotmol refers to learning from
8 the -- what it perceives, correlating that
9 to what the trainer instructs it to do.
10 That's -- I can go back through Grotmol and
11 bring out different points, if you'd like to
12 reinforce that, but the instruction sets get
13 changed in several different ways. One of
14 them is, for example, if there's a position
15 or orientation mismatch between what it
16 perceives, which is to say that the new image
17 relative to the first image or the new
18 picture relative to the first picture and the
19 shifting or the adjustments, there's the
20 override mode where a trainer can cause the
21 instruction set to evolve or change. There's
22 the correct mode, where it's very, you know,
23 end up with similar results, few different
24 steps to it. And then undo mode, where you
25 can revert back to a previous instruction

1 J. Janet

2 set. But you know, may or may not be
3 relevant to this particular one, but override
4 mode, correct mode.

5 And then if you look at the RKNN
6 table, and I can -- I can go back and find it
7 here in my declaration, but if you look at
8 it, you may notice that the results of the X,
9 which are the pictures, first pictures that
10 you're referring to correlated to the
11 instruction sets Y, first pictures X,
12 instruction set Y. They go through a
13 modification as well at two different stages.

14 So, there are multiple ways in
15 which Grotmol modifies the instruction set
16 that was correlated with the first one or
17 more digital pictures.

18 Q. Could you show me where in your
19 declaration for Claim Limitation 15.2 you
20 describe the opinion you just rendered?

21 A. Where I described what?

22 Q. The opinion you just gave regarding
23 modifying.

24 A. Well, an example is given in 15.2
25 where I talk about being mismatched the

1 J. Janet
2 orientation and the position and then
3 the subsequent compensation. I mention
4 a PID controller as well at the bottom
5 of Paragraph 262 where, and I quote:

6 Those motor commands may be
7 combined with the output from the PID
8 controller in order to stabilize operations.

9 So, there's an adaptation, if you
10 will, specifically in this particular
11 section. I mention override mode and -- and
12 I believe undo mode in other parts of my
13 declaration. And then the RKNN of course is
14 at a minimum included by reference, but also
15 talk about the RKNN, the use of the RKNN in
16 my declaration.

17 Q. Okay. But you never mention the
18 RKNN table in Paragraphs 262, 263 of your
19 declaration; is that right, sir?

20 A. Well, they're not written here.
21 That being said, you asked me the question
22 and kind of opened the door. You know, I
23 consider this to be sufficiently clear, but
24 if you want additional information, now you
25 have it.

1 J. Janet

2 Q. Okay. But again, that table is not
3 mentioned in 262, 263 of your declaration,
4 right, sir?

5 A. I don't see where I actually cited
6 that particular table in this particular
7 section in these particular paragraphs, but
8 it is in the document, in my declaration.

9 By the way, it looks like we
10 might've lost Matt. Okay. There he is.

11 THE COURT REPORTER: I think
12 that's the second time it happened.
13 Do we want to wait for him to come
14 back on and ask him if he needs to
15 reset?

16 MR. COLVIN: I think I need to
17 take a break. Yeah, let's go off the
18 record, my Zoom keeps dropping and
19 coming back.

20 THE COURT REPORTER: We're off the
21 record.

22 (Recess from 10:44 a.m. to
23 10:58 a.m.)

24 THE COURT REPORTER: We're back on
25 the record.

1 J. Janet

2 BY MR. McCOMMAS:

3 Q. So, Dr. Janet, can we look at
4 Claim 16 in your declaration, can you
5 turn please to the bottom of page 202
6 onto page 203 in your declaration?

7 A. Yes, I am there, I believe.

8 Q. Okay. So, Claim 16 requires
9 modifying the first one or more digital
10 pictures; is that right?

11 A. Yes, sir.

12 Q. If we can look at Claim 1 again of
13 the '583 patent and let me know when you're
14 there?

15 A. I'm there.

16 Q. Okay. And so, again, as we
17 discussed previously, Claim 1 requires that:

18 The first one or more digital
19 pictures is correlated with the first one or
20 more instruction sets.

21 Is that right?

22 A. The first one or more digital
23 pictures correlated with the first one or
24 more instruction sets for operating the first
25 device, yes, that's the last limitation of

1 J. Janet

2 Claim 1.

3 Q. Okay. So, now -- so, that first
4 digital picture is correlated with the first
5 instruction set, right?

6 A. From Claim 1, is that what you're
7 asking?

8 Q. Yes, sir.

9 A. Yes.

10 Q. Okay. And then if we turn back to
11 Claim 15, 202. So, if that first digital
12 picture is correlated --

13 A. I'm sorry, Counselor. I don't mean
14 to interrupt, but did you say turn back to 15
15 or 16?

16 Q. I'm sorry, turn back to Claim 16,
17 please, in your declaration.

18 A. I'm there.

19 Q. Okay. So, the first digital
20 picture in Claim 1 is correlated with the
21 first instruction set; is that right, sir?

22 A. (Document review.)

23 Q. Maybe I can reask.

24 So, sir, the first digital picture
25 in Claim 1 is correlated with the first

1 J. Janet

2 instruction set in Claim 1; is that right,
3 sir?

4 A. That's correct, yes.

5 Q. Okay. And then in Claim 15, that
6 first digital picture, it's correlated with
7 the first instruction set is modified; is
8 that right?

9 A. I'm just looking for where the term
10 "correlated" is in Claim 16. To my knowledge
11 it's correlated in Claim 1.

12 Q. So, it's correlated in Claim 1 and
13 then the correlated first digital picture is
14 modified per Claim 16; is that right, sir?

15 A. Well, so, the term "correlated"
16 isn't in, as far as I can tell, Claim 16.
17 This might be a legal issue, I'm not really
18 sure, but I know that tying back to Claim 1
19 in Claim 1 it was correlated.

20 Q. Okay. And is the first one or more
21 digital pictures of Claim 1 the same as
22 the first one or more digital pictures of
23 Claim 15?

24 A. Well, again, there appears to be a
25 degree of freedom between 15 and 1, which is

1 J. Janet

2 Claim 4. And I'll take you at your word, but
3 I guess leave open the possibility that since
4 correlated isn't in Claim 16, it just
5 mentions the first one or more digital
6 pictures. So, if there's a drag along, then,
7 you know, I'll take it at face value.

8 Q. So, then this modified first
9 digital picture in Claim 16 is used in the
10 matching process; is that right?

11 A. Yes, where there's at least a
12 partial match between the second digital
13 picture and the first modified or the
14 modified first digital picture.

15 Q. So, Claim 16 requires matching
16 using the modified digital picture; is that
17 right?

18 A. If I understand your question
19 correctly, yes, the modified first --
20 modified first digital picture.

21 Q. And you relied on Grotmol's
22 anticipating Claim 16, right?

23 A. Yes, sir.

24 Q. So, could you show me where Grotmol
25 discloses that a correlated digital picture

1 J. Janet

2 is modified?

3 A. Well, just taking your statement
4 again of the first digital picture being
5 correlated to the first instruction set in
6 Grotmol, as I have mentioned before, Grotmol
7 discloses robots learning to correlate the
8 digital pictures to the instruction sets,
9 stores them in memory and may propagate that
10 information out to multiple robots and, you
11 know, a variety of other aspects of that.

12 And in reference to the first
13 digital picture, Grotmol mentions
14 preprocessing operations, including, as I
15 mention in Paragraph 268, preprocessing such
16 as resampling, cropping, light balancing
17 and/or feature extraction. And furthermore,
18 applying transforms to, for example, produce
19 a scaled input they may normalize, there may
20 be some, what are oftentimes referred to as
21 moments placed, but all of this information
22 is disclosed in Grotmol. And I cite to it
23 here in Paragraphs 268 and 269.

24 Q. So, let's look at Paragraph 269 in
25 your report.

1 J. Janet

2 A. Okay.

3 Q. Let me know when you're there.

4 A. I'm there.

5 Q. Okay. Here you're quoting Grotmol,
6 do you see that?

7 A. Yes.

8 Q. And Grotmol is disclosing applying
9 a transformation to an instance of the
10 sensory input.

11 Do you see that?

12 A. Yes.

13 Q. What is the instance of a sensory
14 input?

15 A. Well, Grotmol mentions using images
16 or instances of -- and I'm note quoting
17 verbatim here, but of say, a video capture or
18 a sequence. And so, that's, you know, that
19 would be an example of an instance of sensory
20 input.

21 Q. So, a picture captured by a camera,
22 for example?

23 A. Yes, that should qualify, yes.

24 Q. And just to go back to Claim -- the
25 language -- Claim 16 again.

1 J. Janet

2 In Claim 16 a first digital picture
3 is correlated with a first instruction set
4 and then that first digital picture is
5 modified, right, sir?

6 A. Correct.

7 Q. Okay. Let's go to Claim 17.

8 A. If I can elaborate on that.

9 Q. I think you answered my question.

10 A. Well, I was about to follow on to
11 my yes, sir, if I could.

12 Q. Sure. If you'd like to explain,
13 that's fine.

14 A. Thank you.

15 So, the way that a person of
16 ordinary skill would know this, the way
17 that you assess a partial match relies
18 heavily on preprocessing and the
19 preprocessing can happen on both ends. It
20 can happen on the newly captured image or it
21 can happen on the man that you previously had
22 stored. And -- and these different methods
23 that are described here where equalization
24 would be how do you get what might be an odd
25 distribution of let's just say colors or

1 J. Janet

2 shades and make them a bit more uniform or
3 you normalize so that you can stretch the
4 pixel values out from, you know, to be a, you
5 know, maybe a wider max and min. The, you
6 know, the scaling the cropping, those happen
7 on both, whether it's the reference image or
8 the newly acquired image. So, that's, you
9 know, hence the reference to Grotmol and that
10 this applies to the first -- the modified
11 first digital picture.

12 Q. Okay. Could you show me where in
13 Paragraphs 268 and 269 you discuss what you
14 just talked about in terms of the reference
15 image being cropped or modified?

16 A. Well, I'm happy to repeat it.

17 Q. I'm asking, could you identify in
18 those paragraphs?

19 A. Sure. Paragraph 269 quoting
20 Grotmol I mention that:

21 The method may comprise applying a
22 transform to an instance of the sensory
23 input.

24 The sensory input would be this
25 first digital picture that the transformation

1 J. Janet

2 may be configured to produce a scaled input

3 where you change, you know, you zoom in on

4 certain aspects or you zoom out. And also

5 mention the determining distance metrics

6 between features in a metric space, so

7 Euclidean distance. Again, a person of

8 ordinary skill would know this. If I have a

9 blob of similar pictures -- similarly colored

10 pixels, let's just say, I can find the mean,

11 which would be -- or a synthroid of that

12 blob, I can find the major axes and I can

13 calculate the distance from blob to blob or

14 line to line.

15 There are so many different

16 features that are involved with computer

17 vision. These are very high level summaries

18 of them. I'm trying to go in depth just to

19 give some clarity. They may be normalized,

20 which as I mentioned before, is where you

21 stretch the max and min ranges from your,

22 let's just say your first digital picture, to

23 different boundaries. So, if I have a pixel

24 value that is, let's say the smallest pixel

25 value I have is maybe 25 and the highest

1 J. Janet

2 pixel value I have is 220 and I want that to
3 be eight bits, then I'd stretch it from zero
4 to 255. And that means that everything in
5 between there would scale, it would be
6 normalized, if you will. And equalization
7 is, again, as a person of ordinary skill
8 would know, you take what would be a
9 multi-modal distribution of -- of colors or
10 shades and I even them out to be closer to a
11 normal -- I'm sorry, to a uniformed
12 distribution.

13 So, all of those are mentioned
14 here, scaling, which I had mentioned before,
15 all of those apply.

16 Q. But you never identify where
17 Grotmol discloses applying those processes to
18 the reference image in these paragraphs,
19 right?

20 A. Well, I didn't have to -- the
21 reference image is your first digital
22 picture, that's my conclusion here.

23 Q. Isn't the reference image stored in
24 and correlated within an instruction set in
25 Grotmol?

1 J. Janet

2 A. Referencing to Claim 1, yes, sir
3 that would be the case.

4 Q. And this never -- these paragraphs
5 here never discuss modifying that reference
6 image; is that right?

7 A. They discuss modifying the first
8 digital picture which is just to give you a
9 different term, if you want to use it,
10 reference image, because reference just means
11 that that's what's being used for comparison
12 to the newly acquired or second digital
13 picture.

14 So that there's no confusion, I'm
15 equating reference image with the first
16 digital picture.

17 Q. And you never explain where that
18 image is captured, stored, correlated and
19 then modified in these paragraphs, right?

20 A. Well, you're referring to aspects
21 from previous claims, so they would not
22 normally be in these paragraphs. I'm simply
23 explaining how because it's building on
24 Claims 1 and 4. And, excuse me, the major
25 point of this Claim 16 is, as I summarize in

1 J. Janet

2 my table just above Paragraph 268, modifying
3 the first digital picture and obtaining a
4 partial match between the second digital
5 picture and the modified first digital
6 picture.

7 So, I believe that all of the
8 information is contained here or by
9 reference.

10 Q. Could you point me to the paragraph
11 where you describe where a correlated digital
12 picture is modified?

13 MR. COLVIN: Objection. Asked and
14 answered.

15 A. Yeah, I mentioned here that the
16 first digital picture is modified and that
17 first digital picture being correlated to the
18 instruction set.

19 Q. And which paragraph is that, sir?

20 A. Paragraph 270, for example:

21 POSITA would've understood that
22 Grotmol discloses determining whether there's
23 a partial match between the new digital
24 picture, which would be your second digital
25 picture, and the modified first digital

1 J. Janet

2 picture.

3 Q. Okay, let's move on to Claim 17.

4 Can you turn to Paragraph 272 of
5 your report?

6 A. I am here.

7 Q. Claim 17?

8 A. Yes.

9 Q. Paragraph 272 and just let me know
10 when you're there.

11 A. I'm here.

12 Q. Okay. So, Claim Limitation 17.2
13 requires a modifying the first one or more
14 digital pictures; is that right, sir?

15 A. Yes, sir.

16 Q. And as we previously discussed,
17 Claim 1 requires that the first one or more
18 digital pictures is correlated with the first
19 one or more instruction sets; is that right?

20 A. Yes, the final limitation, Claim 1,
21 reads:

22 Learning the first one or more
23 digital pictures correlated with the first
24 one or more instruction sets for operating a
25 first device.

1 J. Janet

2 Q. So, the first one or more digital
3 pictures is correlated with the first
4 instruction sets -- instruction set in
5 Claim 1, correct?

6 A. Correct.

7 Q. And then in Claim 17, that first
8 one or more digital pictures is modified,
9 right?

10 A. Yes, modifying the first one or
11 more digital pictures.

12 Q. Okay. And then that modified
13 digital picture is used in the matching
14 process, if we look at Claim Limitation
15 17.3 -- 17.4?

16 A. I'm sorry, you said something when
17 I was acknowledging, but I didn't get it.

18 Q. Oh, okay.

19 And that modified digital picture
20 is then used in the matching process of
21 Claim 17, correct?

22 A. Yes, in 17.4:

23 Wherein the determining includes
24 determining the first one or more instruction
25 sets for operating the first device based on

1 J. Janet

2 at least partial match between one or more
3 digital pictures and the modified first one
4 or more digital pictures.

5 Q. All right. Let's look at
6 Paragraph 279 of your report. Please take
7 a look at that paragraph.

8 A. 279 you said?

9 Q. Yes.

10 A. Okay.

11 Q. Could you read that paragraph into
12 the record?

13 A. Sure. Paragraph 269 reads:

14 A POSITA would have understood that
15 where the first one or more digital pictures
16 stored during the learning process had been
17 modified, the partial match would be
18 determined using the current image (i.e. new
19 one or more digital pictures) and the
20 modified stored image (i.e. modified first
21 one or more digital pictures). Accordingly
22 in my opinion the instruction set is
23 determined based on a partial match between a
24 modified first digital picture and a new
25 digital picture.

1 J. Janet

2 Q. Are you making an obvious this
3 argument here?

4 A. No, sir.

5 Q. Okay. And it's your opinion that
6 Grotmol anticipates Claim 17; is that right?

7 A. Yes, sir.

8 Q. Okay. Are you making an inherency
9 argument here?

10 A. No.

11 Q. So, must the modified first digital
12 picture be used in that matching process?

13 A. If it's modified and correlated to
14 the instruction set, then yes, it must be
15 used.

16 Q. There's no other way to do the
17 matching; is that right?

18 A. No other way to do what matching?

19 Q. The matching that's claimed in
20 Claim 17.

21 A. I don't believe so, maybe I'm not
22 following your question. But the way that
23 this is laid out is that limitation by
24 limitation, learning the modified first one
25 or more digital pictures correlated with a

1 J. Janet

2 first one or more instruction sets. So, the
3 modified first digital picture is paired and
4 correlated to the first instruction set.

5 Q. And you don't point to anywhere in
6 Grotmol in this paragraph that explicitly
7 discloses that the modified image is used in
8 the matching process; is that right?

9 A. I don't think I agree with that.
10 So, as I mentioned -- so, first of all, by
11 the way, when you say you're referring to
12 Paragraphs 278 through 280 or --

13 (Cross-talk.)

14 A. -- different range.

15 Q. No, just Paragraph 279.

16 A. 279? What was your question again?

17 Q. You don't point to anywhere in
18 Grotmol in this paragraph that explicitly
19 discloses that the modified image is used in
20 the matching process; is that right?

21 A. This paragraph is part of -- it
22 addresses a buildup, if you will, including
23 the claim language, where the claim language
24 is talking about the digital picture being
25 the first digital picture being modified and

1 J. Janet

2 then correlated to the first instruction set.

3 So, reiterating that here really didn't seem
4 necessary.

5 I'm happy to exclaim that that does
6 refer to what Grotmol also discloses.

7 Q. But you don't cite Grotmol in this
8 paragraph, right?

9 A. I cite Grotmol above where I make
10 mention of the use of image processing that
11 would be used, a person of ordinary skill
12 would know this that would be used for the
13 matching, if you will, between two different
14 digital pictures, one of which would be
15 correlated to an instruction set, that one of
16 which is correlated to the instruction set
17 would be modified.

18 Q. Okay. Let's move on to Claim 18
19 that was in Paragraph 282 in your report.
20 Let me know when you get there and then I'll
21 ask the question.

22 A. I'm here.

23 Q. Okay. Do you see Claim
24 Limitation 18.2?

25 A. Yes, I do.

1 J. Janet

2 Q. And that requires modifying the
3 first instruction set; is that right?

4 A. So, 18.2 reads:

5 Modifying the first one or more
6 instruction sets for operating first device.

7 Q. And that requires modifying the
8 first instruction set, right?

9 A. Yes.

10 Q. Okay. And Claim 18 depends from
11 Claim 4; is that right?

12 A. Yes.

13 Q. And Claim 4 depends from Claim 1;
14 is that right?

15 A. Yes, sir.

16 Q. And as we discussed before, Claim 1
17 says that:

18 The first instruction set is
19 correlated with the first digital picture.

20 Is that right?

21 A. The last limitation of Claim 1
22 reads:

23 The first one or more digital
24 pictures correlated with the first one or
25 more instruction sets for operating first

1 J. Janet

2 device.

3 Q. And Claim 18 then provides that
4 that -- that that instruction set is
5 modified; is that right?

6 A. Yes, sir.

7 MR. McCOMMAS: I think we've been
8 going for, I know, about an hour and a
9 half, maybe we can take -- can we go
10 off the record?

11 THE COURT REPORTER: Sure. We're
12 off the record.

13 (Recess from 11:27 a.m. to 11:38
14 a.m.)

15 THE COURT REPORTER: Back on the
16 record.

17 BY MR. McCOMMAS:

18 Q. Dr. Janet, could you please turn to
19 page 249 of your declaration?

20 A. Page 249 or Paragraph 249?

21 Q. Page 249.

22 A. Okay.

23 Q. And what is the Ground 2 that
24 you're describing here?

25 A. Ground 2, as written, is that

1 J. Janet

2 Claims 10 and 11 are obvious based on the --
3 sorry, based on the combination of Grotmol
4 and view of the knowledge of a person of
5 ordinary skill in the art.

6 Q. So, in your opinion, Claim 10 is
7 obvious over Grotmol in view of the knowledge
8 of a POSITA; is that right?

9 A. Yes, sir.

10 Q. Okay. Could you show me where in
11 your declaration you have identified what
12 claim element of Claim 10 is missing in
13 Grotmol?

14 A. Claim 10 mentions in the bottom
15 end -- find a good starting point:

16 Wherein the portion of the second
17 or more digital pictures or at least a
18 portion of the second one or more instruction
19 sets for operating first device is learned in
20 a second learning process that includes
21 operating the first device, at least
22 partially by a second user.

23 Now, Grotmol does not disavow a
24 second user. In fact, to be honest with you,
25 I believe a person of ordinary skill would

1 J. Janet
2 believe that Grotmol discloses that, would
3 understand that Grotmol discloses that in a
4 variety of different ways. First of all,
5 through just standard implementation knowing
6 that the robots will be interacting with the
7 environment and to avoid what's oftentimes
8 referred to as "a Frankenstein moment," there
9 would be multiple users so that you help the
10 robot adapt to the diverse nature of what it
11 will encounter and doesn't cause harm to
12 itself to anybody or anything else.

13 There's also the issue of the
14 single user really creating a bottleneck in
15 the process knowing that the title again
16 talks about by robots, robots plural, and
17 recognizing that these robots could be
18 anywhere in the state, in the country, in the
19 world that's understandably prohibited.

20 But more specific, I think Grotmol
21 actually does, again a person of ordinary
22 skill in the art would understand this,
23 disclose this, and I'm trying to quote it
24 exactly, but it's -- he mentions a
25 heterogenous multi-modal system, if you will.

1 J. Janet

2 I think feature vector, something to that
3 effect, which would basically be the
4 experiences, these correlated instruction
5 sets to the digital pictures.

6 And that further shows that to a
7 person of ordinary skill that Grotmol
8 discloses the need for diversity in the
9 training and what have you.

10 I think another thing Grotmol
11 mentions, you know, a user, "a" could be one
12 or more.

13 So, I think that Grotmol actually
14 does disclose this stuff. However, Grotmol
15 could be a bit more explicit perhaps through
16 the lens of, you know, somebody else. And
17 so, while I won't go so far as to say Grotmol
18 doesn't disclose it, I acknowledge that the
19 audience or reader might feel that it could
20 be a bit more explicit. And so that's why I
21 put Claim 10 into this category, Ground 2.

22 Q. So, in your opinion, Grotmol
23 discloses all the limitations of Claim 10?

24 A. I believe that a person of ordinary
25 skill would understand what Grotmol is

1 J. Janet

2 disclosing and that would be the limitations
3 of Claim 10. I -- again, I acknowledge that
4 on the whole that Grotmol maybe doesn't
5 explicitly mention word for word a second
6 user. So, to me, this -- you know, where the
7 difference is very minor still probably best
8 fit into Ground 2.

9 Q. Okay, got it. Paragraphs 339
10 through 341, are the entirety of your
11 analyzing for Claim 10 in Ground 2; is that
12 correct?

13 A. I think they provide compelling
14 evidence. I mentioned to you a couple of
15 things that, again, the single user concept
16 would create bottlenecks that a person of
17 ordinary skill would understand would be
18 prohibitive if you're trying to scale. And
19 since Grotmol is a reference that relates to
20 robots, plural, and since what its learning,
21 even if it's disclosed in the images and the
22 figures, you can see that's rather
23 voluminous. So, the idea of a single user
24 would be prohibitive. And a person of
25 ordinary skill would know that, you know,

1 J. Janet

2 more than one user would be employed.

3 And again, Grotmol discloses the
4 heterogenous -- let me get the wording for
5 you exactly.

6 For example, okay, Column 30 in
7 Grotmol around Line 29:

8 With heterogenous multi-modal
9 feature vectors adjusting processing
10 parameters and the like.

11 This is where Grotmol, among other
12 places, discloses the diversity of the
13 training space, if you will, where if not
14 explicitly cited here in these paragraphs, I
15 would certainly include as part of the, you
16 know, analysis.

17 And also in Grotmol, excuse me,
18 Column 12:

19 When a user shows a robot how to
20 perform the task, he may do it in different
21 ways on different occasions. This also
22 points to diversity and, you know, the value
23 of that.

24 Q. But you never cited those columns
25 in Paragraphs 339 to 341, did you, Dr. Janet?

1 J. Janet

2 A. Well, I certainly cited Grotmol. I
3 believe that what I cited here was
4 sufficient, you know, and had its own merits.
5 And if it's not clear to you or the audience,
6 then, you know, I believe that it is or
7 should be, but -- but I think that, you know,
8 the additional information that I mention
9 here, the -- again, the heterogenous
10 multi-modal and the fact that these are going
11 to be trained in multiple circumstances,
12 those at a minimum by reference are included.

13 Q. But you never cited to those
14 disclosures in those paragraphs, did you,
15 sir?

16 A. I may not have given the exact
17 columns and lines, but, again, Grotmol by
18 reference includes that information.

19 Q. Now, just one more question on this
20 claim.

21 Where in these paragraphs do you
22 identify what is missing from Grotmol in
23 Claim 10?

24 A. Well, so, let's revisit that for a
25 second. I'm really not saying anything is

1 J. Janet

2 missing. I'm saying that where there might
3 be a delta between what a person of ordinary
4 skill would understand from reading Grotmol
5 and, you know, a reasonable person reviewing
6 this that might seek something a bit more
7 explicit, that's the reason why I put this in
8 the obviousness category.

9 Q. Okay. Let's move on to Claim 11.
10 If you'll turn to page 252.

11 A. Counsel, did I fully answer your
12 question? I thought there was another part
13 to your question.

14 Q. No, I think you did. Yeah, we can
15 move on.

16 So, we're on page 252. Just let me
17 know, Dr. Janet, and we can proceed.

18 A. 252 you said?

19 Q. Uh-huh.

20 A. I'm here. I'm here, I don't know
21 if you heard me.

22 Q. Okay, great.

23 So, in your opinion, under
24 Ground 2, Claim 11 is obvious over Grotmol in
25 view of a knowledge of a POSITA; is that

1 J. Janet

2 right?

3 A. Under Ground 2, yes. There's an
4 obviousness analysis for Claim 11 under
5 Ground 2 and then there's an anticipation
6 analysis for Claim 11 under Ground 1.

7 Q. Could you show me where in your
8 declaration you have identified what element
9 of Claim 11 is missing in Grotmol?

10 A. This is going to be the same
11 situation where -- where my opinion, a person
12 of ordinary skill, does not believe that
13 Grotmol is deficient, that everything is
14 disclosed, but where there might be a
15 difference, you know, maybe not a word for
16 word explicit disclosure, then looking at
17 this on the whole. And in the -- in light of
18 what a person of ordinary skill would know
19 through implementation and experience, then
20 the obviousness analysis just serves to
21 reinforce the invalidity of this patent --
22 I'm sorry, the invalidity of this claim.

23 Q. So, in your opinion, Grotmol
24 discloses all the limitations of Claim 11?

25 A. Well, per my analysis under

1 J. Janet

2 Ground 1, yes. But I acknowledge that where
3 there might be a small delta, you know, that
4 helping to fill in for the audience, for the
5 reader, under the obviousness analysis was
6 probably useful.

7 Q. But you haven't identified in your
8 declaration any elements of Claim 11 that
9 Grotmol does not disclose, correct?

10 A. (Document review.)

11 Under my Ground 2 analysis,
12 Paragraph 343, I state that:

13 Based on Grotmol's disclosure that
14 a robot could be loaded with a trained
15 configuration, it would've been obvious to a
16 POSITA that Grotmol's robot can be loaded
17 with a second, third or more configurations
18 trained on other robots.

19 For example, a POSITA would've
20 recognized that it would've been desirable to
21 replace a robot's training with a second,
22 third or more configuration to customize a
23 robot to a particular task.

24 First -- for example, first trained
25 configuration may be appropriate for certain

1 J. Janet
2 tasks while a second or third configuration
3 is more suited for another task. Moreover,
4 POSITA would've recognized the advantages of
5 training across multiple robots to enable
6 continued training while a robot was
7 undergoing maintenance and increase the
8 amount of training.

9 I go on to conclude in
10 Paragraph 344, would've been obvious in
11 Grotmol.

12 Now, I mentioned previously that,
13 first of all, the title of Grotmol is
14 Training by Robots, plural. Let me just
15 repeat. The title of Grotmol is Apparatus
16 and Methods for Training Path Navigation by
17 Robots, plural.

18 I also mention that Grotmol
19 mentions, and I cited this just a couple
20 minutes ago, I believe from Column 12 that
21 robots are trained in different circumstances
22 and under different, you know, on different
23 occasions.

24 And I also mentioned the disclosure
25 by Grotmol for the heterogenous multi-modal

1 J. Janet

2 system. And so, while Grotmol in the eyes
3 of, again, somebody reasonable, but I believe
4 a person of ordinary skill in the art would
5 have understood this, somebody else may
6 interpret this as a, you know, slightly less
7 than explicit disclosure than, you know, the
8 obviousness analysis was provided.

9 But when you asked me, do I point
10 to anything in particular where I feel that
11 Grotmol is deficient, I think I explained the
12 several reasons why a person of ordinary
13 skill would've understood that Grotmol
14 discloses Claim 11, the limitations of
15 Claim 11, and all I'm trying to do is if
16 there is a small delta, to fill that in.

17 Q. You didn't cite the title of
18 Grotmol or Column 12 of Grotmol or any
19 other -- Column 30 of Grotmol in your
20 analysis here in Paragraphs 342 to 344, did
21 you, sir?

22 A. Well, at a minimum, those are cited
23 by reference. And, you know, was it
24 necessary? I believe that these paragraphs
25 suffice on their own. But you're asking me

1 J. Janet

2 for clarification and I'm trying to give you
3 a couple bits of different information that
4 further support what's in these paragraphs.
5 They're all valid.

6 We can go to Grotmol, I can point
7 out column by column, line by line what I'm
8 referring to.

9 Q. So, you have not identified any
10 elements of Claim 11 that are missing from
11 Grotmol; is that right?

12 A. I think that -- just to repeat what
13 I've said. Person of ordinary skill in the
14 art would've understood that Grotmol
15 discloses this and hence the analysis under
16 Ground 1.

17 Person of ordinary skill would have
18 also understood that there's a possibility
19 that a layperson or, you know, somebody super
20 brilliant can still say, well, I'm looking
21 for a bit of a more explicit disclosure. I
22 don't feel that a person of ordinary skill
23 would be seeking disclosure, I believe that
24 they would've understood it's all there.

25 But what I am doing is

1 J. Janet

2 acknowledging the possibility that the
3 audience, again, perfectly reasonable person
4 may still seek some additional clarification,
5 and that's the point of this Ground 2.

6 Q. Let's move on to Ground 3 in
7 Claim 25. If you can turn to page 255 in
8 your declaration.

9 A. Okay, I am here.

10 Q. If you can take a look at the
11 language of Claim 25 in the '583 patent.

12 Sir, just to orient ourselves, what
13 is Ground 3 in your declaration?

14 A. Ground 3 as written bottom of page
15 244 is Claims 25 and 27 are obvious based on
16 Grotmol in view of Hickman.

17 Q. And Hickman is United States patent
18 number 8,639,644; is that right, sir?

19 A. Yes, sir.

20 Q. So, let's turn to page 255 and now
21 looking at Claim 25.

22 What elements or what claim
23 elements here are disclosed by Grotmol? We
24 can just start after the system of Claim 4,
25 can you identify which claim elements are

1 J. Janet

2 disclosed by Grotmol, sir?

3 A. Well, I will say the same thing
4 that I've said in reference to the previous
5 grounds and that is that I do not, as a
6 person of ordinary skill in the art, believe
7 that Grotmol does not disclose the
8 limitations of Claim 25. If you look even a
9 figure that I have in my declaration, and it
10 might take me a little while to find it.

11 It's easier to find in Grotmol. Figure 7 in
12 Grotmol demonstrates that -- where am I?
13 Figure 7 shows a server, for example, and
14 Grotmol even mentions server.

15 Q. Okay. Sir, do you --

16 (Cross-talk.)

17 A. I'm sorry, I'm not finished
18 answering my question.

19 Q. Okay, go ahead. Sorry.

20 A. Thank you.

21 Grotmol mentions the use of a
22 server, Column 46 around Line 31, Grotmol
23 also mentions communication components or
24 communication devices in around Line 20,
25 mentions WiFi, mentions, you know, a variety

1 J. Janet

2 of network interface and network related
3 communication systems.

4 So, to your question, that's not a
5 question I can really answer because as a
6 person of ordinary skill, my belief is that
7 Grotmol does disclose this. But similar to
8 what I had stated before and I acknowledge
9 that -- that the reader may seek perhaps more
10 explicit disclosure.

11 Give me a second while I read
12 where -- where were we, page 250?

13 Q. 255.

14 A. 255, okay.

15 So, I look at this on the whole,
16 and Hickman adds more clarity to the use of
17 servers and, you know, multi -- multiple
18 robots using those servers and the
19 instruction sets correlated to, say, digital
20 pictures residing on those servers. And so,
21 all this is really meant to do is add clarity
22 so that the reader would, you know, where
23 there might be, again, a small delta or
24 deficiency in understanding what's actually
25 disclosed by Grotmol, then this would fill

1 J. Janet

2 in.

3 Q. Okay. Now, sir, do you cite
4 Figure 7 in Column 46 in your analysis of
5 Claim 25 under Ground 3?

6 A. Well, at a minimum by reference I
7 do and I would not really change what I've
8 written here. I believe that what's written
9 here also is convincing, excuse me, that a
10 person of ordinary skill would understand its
11 disclosure. But, you know, you asked me the
12 question, and I added some additional
13 clarity.

14 Q. Yeah, but those portions aren't
15 cited here in this portion of your
16 declaration, right?

17 A. I acknowledge the possibility that
18 those particular excerpts may not be in this
19 particular section. But, again, the
20 reference is Grotmol and, you know, the
21 sending information to multiple robots. And
22 what I do cite here I believe provides
23 sufficient foundation and, you know, if it's
24 not explicitly in here, then again by
25 reference and in response to your question.

1 J. Janet

2 Q. So, is Grotmol missing any of the
3 claim limitations for Claim 25?

4 A. Well, as I mentioned before, from
5 the perspective of a person of ordinary
6 skill, Grotmol discloses all of the
7 limitations. I acknowledge the possibility
8 that the reader audience might not consider
9 everything fully explicit and hence the
10 reason for adding Hickman.

11 Q. Where in your declaration do you
12 identify the missing elements of Grotmol for
13 Claim 25?

14 A. Well, I'm not sure where or why I
15 would if I feel that Grotmol doesn't provide
16 disclosure. I just point to where Hickman
17 adds more clarity on, for example, the use of
18 servers.

19 (Exhibit 1007, Hickman Reference,
20 was marked for identification.)

21 Q. Let's look at the Hickman reference
22 briefly. If you could turn to that, it's
23 Exhibit 1007 in the IPR.

24 Do you have that reference, sir?

25 A. Yes.

1 J. Janet

2 Q. Let look at Figure 3 of Hickman.

3 A. Okay.

4 Q. Okay. You see at the bottom of
5 Exhibit 3 there's Unique Object Knowledge
6 Base 307.

7 Do you see that, sir?

8 A. Yes, I do.

9 Q. What does this knowledge base
10 represent?

11 A. So, we kind of went through this in
12 the first deposition.

13 Q. Sure. What is it showing here that
14 is stored in this unique knowledge base 307?

15 A. 307 is labeled the unique or a
16 unique object knowledge base for the
17 reference. Column 11, Hickman elaborates
18 that some embodiments of the shared robot
19 knowledge base may include a unique object
20 knowledge base, it's configured to store data
21 about unique objects that a robot may
22 encounter or interact with in its
23 environment. A unique object is an object
24 that can be identified with specificity as
25 being a specific individual object. For

1 J. Janet

2 example, a unique object might be a specific
3 refrigerator that belongs to a specific
4 person. A unique object can also be
5 classified as a particular type of object,
6 such as a particular make and model of a
7 refrigerator and so forth.

8 Q. What does IMG stand for? And
9 that's right directly underneath the unique
10 object knowledge base 307.

11 A. If you notice on Column 12, IMG
12 stands for image data.

13 Q. And what line is that?

14 A. That is Line 8, 8, 9.

15 Q. And now, do you see Task Knowledge
16 Base 309 in Figure 3, sir?

17 A. Yes.

18 Q. Okay. And what's contained in that
19 knowledge base?

20 A. (Document review.)

21 Q. Do you need me to reask the
22 question, sir?

23 A. No. What I'm trying to do is make
24 sure I start at the top where the Task
25 Knowledge Base is described and so I'm just

1 J. Janet

2 trying to find the right spot here in 644.

3 So, the Task Knowledge Base

4 Column 20 says that some embodiments of the

5 shared robot knowledge base may include a

6 task knowledge base. The task knowledge base

7 may be configured to store data and task

8 instruction code associated with different

9 tasks that a robot may perform to interact

10 with objects in its environment.

11 Q. Could you read the next five or six

12 lines regarding what's actually stored in a

13 knowledge base in that Task Knowledge Base?

14 A. In the conceptual data structure

15 315, for the Task Knowledge Base shown in

16 Figure 3, an individual task identifier for

17 TID may have the following corresponding

18 data:

19 Language data, equipment data and

20 instruction data. In some embodiments the

21 conceptual data structure of the Task

22 Knowledge Base may contain more or less

23 information that the example shown down the

24 shown example in Figure 3.

25 Q. So, the Task Knowledge Base

1 J. Janet

2 contains that information; is that right,
3 sir?

4 A. What I read, yes, sir.

5 Q. Let's move to Claim 27 in Ground 3.
6 And if you turn back to your declaration, if
7 you could turn to page 264.

8 A. 264, you said?

9 Q. Yes.

10 A. Okay. I'm there.

11 Q. Okay. So, is it your opinion that
12 Claim 27 is obvious over Grotmol in view of
13 Hickman; is that correct?

14 A. Yes, sir.

15 Q. Okay. And do you believe that
16 Grotmol discloses all of the elements of
17 Claim 27?

18 A. (Document review.)

19 As I mention in Paragraph 358:

20 Grotmol discloses training a robot
21 wherein digital pictures detected by a camera
22 during operation of robot are correlated with
23 motor commands or instructions. Multiple
24 training or learning processes can be done to
25 train multiple behaviors. A robot can be

1 J. Janet

2 loaded with a first trained configuration
3 learned during a training process involving
4 operation of that robot by a user, and can
5 be -- can also be loaded with another trained
6 configuration from a training process
7 involving operation of a different robot.

8 And I cite to a variety of examples
9 and I also mention here in our deposition
10 today and previous depositions that Grotmol
11 has in it in its title that the training is
12 by robots, robots plural, and then the
13 diversity of training the heterogenous
14 multi-modal and what have you.

15 I go on to say that:

16 Thus, in my opinion, the knowledge
17 base described in Grotmol can store
18 additional correlations, including a second
19 correlation (second digital pictures
20 correlated to second instruction set for
21 operating another device).

22 So, the RKNN for example, you can
23 argue is device agnostic, person of ordinary
24 skill would understand that, or at least it
25 would've been obvious to a person of ordinary

1 J. Janet

2 skill, and that those are further adapted,
3 they could be adapted to a difference in the
4 picture, they could be adapted to a
5 difference in the platform. They're
6 operating on, for example, a different robot,
7 like a third device.

8 I also go on:

9 A POSITA would, therefore,
10 understand that a robot can be loaded with a
11 first trained configuration learned during a
12 training process involving operation of that
13 robot by a user, and the robot can also be
14 loaded subsequently with another trained
15 configuration learned during the training
16 process involving operation of a different
17 robot by a user.

18 Grotmol very clearly says that the
19 training sets or what it has learned can be
20 propagated to multiple robots. There's no
21 reason to believe that that is always just in
22 one direction that another robot that learned
23 something can propagate that to the broader
24 community of robots, again, fitting the
25 title, and hence the second instructions or

1 J. Janet

2 third device, it can be end devices.

3 Q. Sir, what claim limitation are you
4 invoking obviousness in Claim 27?

5 A. I look at this claim on the whole,
6 I'm not really dissecting any particular
7 aspect, any particular limitation.

8 As I mentioned before from the
9 perspective of person of ordinary skill in
10 the art understand what Grotmol is disclosing
11 and believe strongly that any actual person
12 of ordinary skill in the art would understand
13 all of this stuff as being disclosed. But I
14 also acknowledge that where the audience
15 might perceive a slight delta, slight
16 difference in what is expressly stated or
17 explicitly stated in Grotmol, perhaps not
18 word for word, would seek additional
19 disclosure and hence the invoking this second
20 reference from Hickman.

21 Q. What is the -- you mentioned a
22 slight delta. What is the slight delta?

23 A. I think that's really gonna be left
24 to the interpretation of the reader. It's
25 hard to say exactly. As I mentioned before,

1 J. Janet

2 Grotmol makes these disclosures, so it's --
3 it's just maybe not word for word.

4 Q. Can you identify any words in the
5 claim that correspond to the slight delta you
6 mentioned?

7 A. Well, second instructions for
8 operating a third device, Grotmol did not try
9 to reinvent the way of describing all of the
10 robots by giving them a first, second or
11 third device name. Instead, Grotmol referred
12 to the group of robots by again pluralizing
13 the name saying that the training was by
14 those robots mentioning that, again, you've
15 got multiple robots that would receive
16 instructions. And obviously, in order to
17 receive instructions, one of the robots had
18 to send them out, that could've been any
19 robot, that would have been any robot and
20 there's no reason to believe that that
21 would've been anything other than
22 omnidirectional.

23 So, it's just that Grotmol didn't
24 use these terms, second instructions, third
25 device, second instructions, third device.

1 J. Janet

2 And I feel that just the way that those are
3 written, they can be confusing just in and of
4 themselves.

5 So, I'm trying to put on my lens
6 for the layperson who would be reading this
7 and if it's just not clear because Grotmol
8 doesn't use those particular words that
9 Grotmol discloses these limitations, then
10 adding Hickman was a way on the whole to help
11 reinforce that.

12 Q. And do you ever identify in your
13 declaration those missing elements of Grotmol
14 that you just mentioned?

15 A. Well, to be clear, don't put words
16 in my mouth, I'm not saying they're missing
17 elements. I'm saying that the layperson who
18 could be super brilliant, extremely
19 reasonable, there's still a possibility that
20 they might be looking for the words that were
21 created for purposes of the '583 patent claim
22 limitations and those words aren't
23 necessarily A) used in the broader community,
24 and B) used in exactly that way in Grotmol.
25 That doesn't mean that Grotmol doesn't

1 J. Janet

2 disclose it. So, it's a bit of a loaded
3 question.

4 Q. Okay. But -- so, it's your opinion
5 that Grotmol discloses all the limitations of
6 Claim 27; is that right?

7 A. It's my opinion that Grotmol
8 discloses the limitations of Claim 27.
9 However, I acknowledge that the reader may be
10 seeking more express or explicit disclosure
11 in Grotmol. And just to help add clarity,
12 perhaps give a slightly different
13 perspective, a slightly -- to add, I guess,
14 to the clarity, that's why I brought in
15 Hickman.

16 There's no one particular thing
17 that I would point to in 27 where I would say
18 Grotmol doesn't make that disclosure, that at
19 least would be understood to a person of
20 ordinary skill.

21 Q. And where on your declaration do
22 you identify any deficiencies in Grotmol?

23 A. Well, as I mentioned before I --
24 I -- I don't believe that I -- that a person
25 of ordinary skill would understand that

1 J. Janet

2 Grotmol has deficiencies when it comes to
3 this. What I believe is that Grotmol maybe
4 isn't using exact -- the language that
5 exactly mimics the language that you would
6 find in the '583 word for word. So, a reader
7 may be a little confused by both the volume
8 and the very broad inclusion of terms,
9 synonyms most of them, and not fully
10 understand. That's a possibility. I
11 acknowledge that possibility.

12 So, I would not really say that
13 there are deficiencies.

14 Q. Sir, let's move on.

15 Are you familiar with the Hoffman
16 reference?

17 A. Yes, sir.

18 Q. Could you just describe that at a
19 high level without looking at the reference
20 in your declaration?

21 A. I prefer to not.

22 Q. So, you're not able to describe the
23 Hoffman reference at a high level without
24 looking at your declaration or the reference?

25 A. Well, you can call it what you

1 J. Janet

2 like. It's just better, I believe, to, for
3 precision purposes, if nothing else, be able
4 to look at one or both of them.

5 Q. Well, you said you're familiar with
6 it, right?

7 A. Sure.

8 Q. So, could you just give us a couple
9 sentences on, you know, without looking at
10 it, what's your understanding of the
11 invention of Hoffman is?

12 A. I will not.

13 Q. Okay. So, you're refusing -- okay.

14 Well, if you could turn to
15 Exhibit 1009 and this is the Hoffman
16 reference, could you describe at a high level
17 the Hoffman reference?

18 A. Sure.

19 (Exhibit 1009, Hoffman Reference,
20 was introduced.)

21 A. So, as I mention on page 269 in my
22 declaration starting with Paragraph 369,
23 which is actually on page 270, Hoffman also
24 teaches controlling a robot remotely using a
25 handheld device or controller unit that can

1 J. Janet

2 receive and display images from the robot
3 including augmented images that overlay a
4 representation of the robot on the images.

5 Going on:

6 Another aspect of the disclosure
7 provides an operator controller unit, or OCU,
8 for controlling a robot. The operator
9 controller unit includes a screen and a
10 processor and communication with the screen.
11 The processor is configured electronically --
12 to electronically receive images and augment
13 images by overlaying a representation. "The
14 robot representation includes user-selectable
15 portions corresponding to movable portions of
16 the robot," which allows the user to remotely
17 manipulate the robot from the controller.
18 The augmented images can include processed
19 dataset of images from the robot used to
20 generate a map layout of the area surrounding
21 the robot. Moreover, the remote user may
22 access the received data for review analysis
23 and control of the robot 200. In some
24 examples the cloud service executes an
25 application outputting data that may be

1 J. Janet

2 communicated to the robot. For example, the
3 cloud service may process received image data
4 captured by the robot and return a processed
5 dataset, for example, a layout map of the
6 environment to the robot, for example, to a
7 controller.

8 Q. Could you summarize in your own
9 words what the Hoffman's invention is?

10 A. I will repeat what I just read to
11 you. Those are my words.

12 Q. Okay. Could you summarize what you
13 just read?

14 A. Well, what I read is not very much.
15 So, I would rather not, I would rather stick
16 to what's written here.

17 Q. Okay. Does the user control the
18 robot in Hoffman?

19 A. The user is, like with these other
20 robots, a human in the loop, if only for part
21 of the process.

22 Q. Let's look at Claim 30, page 272 of
23 your declaration.

24 So, your opinion is that Claim 30
25 is obvious over Grotmol in view of Hoffman;

1 J. Janet

2 is that correct?

3 A. Yes, sir.

4 Q. Now, what limitations of Claim 30,
5 in your opinion, is Grotmol missing?

6 A. I'm not sure I would go so far as
7 to say Grotmol is missing it, because where
8 there would be a user in the loop, there
9 would be some sort of an OCU and a means to
10 understand or what it's perceiving and how
11 it's functioning. I acknowledge that it is
12 less clear from Grotmol that there would be
13 an augmented map of the robot's surroundings,
14 particularly like a topdown view, that would
15 have features that would be important to
16 know, such as obstacles and objects, the
17 surroundings and what have you.

18 So, page 273, I make reference to
19 from Hoffman, for example, the cloud service
20 may process received image data captured by
21 the robot and return a process dataset 23,
22 for example, a layout map of the environment
23 to the robot 200, for example, to a
24 controller.

25 Then you can see Figure 6F shows

1 J. Janet
2 this topdown perspective with different
3 features of the environment, including the
4 annotated rooms and then the walls that
5 define them, or the hallway or the access
6 points.

7 Q. So, do you ever identify in your
8 declaration what Grotmol fails to disclose in
9 Claim 30?

10 A. Well, just looking at the last part
11 of Claim 373, I believe that the answer is in
12 there. Again, I'm not gonna go so far as to
13 say Grotmol doesn't disclose something, just
14 having actually been in this space as a
15 person of ordinary skill where you have to
16 implement these things and you know the
17 elements that you would use.

18 But at the bottom of Paragraph 373,
19 in my opinion, a person of ordinary skill in
20 the art reviewing Grotmol would be inclined
21 to look to Hickman to augment Grotmol's
22 disclosed object protection features,
23 specifically, it would be advantageous to
24 have a fuller view of the object in relation
25 to the robot in space in order for the robot

1 J. Janet

2 to optimize its next task.

3 MR. McCOMMAS: We have been going
4 for almost another hour. Why don't we
5 take a ten-minute break. I think I
6 just want to collect my notes, I think
7 I'm getting close to being finished
8 up. And so instead of taking a lunch
9 break, why don't we take a ten-minute
10 break and come back and then see where
11 we are, but let's off the record.

12 THE COURT REPORTER: We're off the
13 record.

14 (Recess from 12:36 p.m. to
15 12:45 p.m.)

16 THE COURT REPORTER: We're back on
17 the record.

18 MR. McCOMMAS: I have no further
19 questions and I pass the witness.

20 MR. COLVIN: Let's go off the
21 record.

22 THE COURT REPORTER: We're off the
23 record.

24 (Recess from 12:45 p.m. to
25 12:48 p.m.)

1 J. Janet

2 THE COURT REPORTER: We're back on
3 the record.

4 MR. COLVIN: No questions from us.
5 That'll end it. We can go off the
6 record.

7 THE COURT REPORTER: We're off the
8 record.

9 (Time noted: 12:49 p.m. Eastern Time)

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 J. Janet

2

3 J U R A T

4

5

6 I, JASON JANET, do hereby certify

7 under penalty of perjury that I have

8 read the foregoing transcript of my

9 deposition taken on MARCH 22, 2024;

10 that I have made such corrections as

11 appear noted herein in ink, initialed

12 by me; that my testimony as contained

13 herein, as corrected, is true and

14 correct.

15

16

17 _____
JASON JANET

18

19 Subscribed and sworn to before me

20 This _____ day of _____, 20__.

21

22 _____
NOTARY PUBLIC

23

24

25

1 J. Janet

2 -----I N D E X-----

3 WITNESS: JASON JANET

4 EXAMINATION BY: PAGE

5 MR. McCOMMAS 4

6

7

8 -----E X H I B I T S-----
(Exhibits Referenced)

9 NUMBER DESCRIPTION PAGE

10 Exhibit 1003 Declaration of Jason 9
11 Janet

12 Exhibit 1005 Grotmol Reference 14

13 Exhibit 1007 Hickman Reference 68

14 Exhibit 1009 Hoffman Reference 80

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

J. Janet

C E R T I F I C A T E

STATE OF NEW YORK)
 : SS.:
COUNTY OF RICHMOND)

I, CANDIDA BORRIELLO, a Notary
Public for and within the State of New York,
do hereby certify:

That the witness, JASON JANET, whose
examination is hereinbefore set forth was
duly sworn and that such examination is a
true record of the testimony given by that
witness.

I further certify that I am not
related to any of the parties to this action
by blood or by marriage and that I am in no
way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto
set my hand this 26th day of March, 2024.

Candida Borriello

CANDIDA BORRIELLO

1	J. Janet				
2	ERRATA SHEET FOR THE TRANSCRIPT OF:				
3	Case Name:	TESLA v. AUTONOMOUS			
	Dep. Date:	MARCH 22, 2024			
4	Deponent:	JASON JANET			
5	Pg. Ln.	Now Reads	Should Read	Reason	
6	_____	_____	_____	_____	
7	_____	_____	_____	_____	
8	_____	_____	_____	_____	
9	_____	_____	_____	_____	
10	_____	_____	_____	_____	
11	_____	_____	_____	_____	
12	_____	_____	_____	_____	
13	_____	_____	_____	_____	
14	_____	_____	_____	_____	
15	_____	_____	_____	_____	
16	_____	_____	_____	_____	
17	_____	_____	_____	_____	
18	_____	_____	_____	_____	
19	_____	_____	_____	_____	
20	_____				
	JASON JANET				
21	SUBSCRIBED AND SWORN BEFORE ME,				
22	This____ day of_____, 20__.				
23	_____				
24	Notary Public				
25	My Commission Expires:_____				

1	11:38 51:13	18 49:18 50:10 51:3	261 16:11,14,16 17:16
1 17:5,10,21, 24 18:4,6,13 19:25 20:5, 17 22:3,13 24:6 27:17 32:12,17 33:2,6,20,25 34:2,11,12, 18,19,21,25 42:2,24 44:17,20 45:5 50:13, 16,21 59:6 60:2 63:16	12 56:18 61:20 62:18 70:11	18.2 49:24 50:4	262 25:18,24 30:5,18 31:3
10 52:2,6,12,14 54:21,23 55:3,11 57:23	12:36 85:14	2	263 30:18 31:3
1003 9:4,9,24 10:7	12:45 85:15,24	2 51:23,25 54:21 55:8, 11 58:24 59:3,5 60:11 64:5	264 24:15,16 72:7,8
1005 14:4	12:48 85:25	20 65:24 71:4	268 36:15,23 39:13 43:2
1007 68:19,23	12:49 86:9	200 81:23 83:23	269 36:23,24 39:13,19 46:13 80:21
1009 80:15,19	15 16:11 17:2 19:5,22 20:12,24 22:12 24:2,5 25:11 27:11, 14,22 33:11, 14 34:5,23, 25	202 32:5 33:11	27 64:15 72:5, 12,17 75:4 78:6,8,17
10:44 31:22	15.2 16:18,20 20:25 21:22 23:23 29:19, 24	203 32:6	270 43:20 80:23
10:58 31:23	15.3 24:13,19	21-ish 26:16	272 44:4,9 82:22
11 52:2 58:9,24 59:4,6,9,24 60:8 62:14, 15 63:10 69:17	16 32:4,8 33:15,16 34:10,14,16 35:4,9,15,22 37:25 38:2 42:25	22-ish 26:16	273 83:18
11,055,583 7:19	17 38:7 44:3,7 45:7,21 47:6,20	220 12:25 41:2	278 48:12
11:27 51:13	17.2 44:12	23 83:21	279 46:6,8 48:15,16
	17.3 45:15	244 64:15	280 48:12
	17.4 45:15,22	249 12:15 51:19, 20,21	282 49:19
		25 40:25 64:7, 11,15,21 65:8 67:5 68:3,13	29 56:7
		250 66:12	3
		252 58:10,16,18	3 64:6,13,14 67:5 69:2,5 70:16 71:16, 24 72:5
		255 41:4 64:7,20 66:13,14	

30 56:6 62:19 82:22, 24 83:4 84:9	373 84:11, 18	8,639,644 64:18	adapt 53:10
307 69:6, 14, 15 70:10	4	9	adaptation 30:9
309 70:16	4 17:2, 5, 21 19:23, 24 20:14 22:13, 22 23:2, 3, 6, 12, 20 35:2 42:24 50:11, 13 64:24	9 70:14 9,604,359 14:2	adapted 74:2, 3, 4
31 65:22	46 65:22 67:4	A	add 26:13 66:21 78:11, 13
315 71:15	47 15:17		added 67:12
33 12:10, 17 13:6	5	A-N-D-R-E 4:16	adding 68:10 77:10
33.2 12:19	583 7:24 8:2, 3, 6, 8, 12 10:10, 24 11:16 13:16 17:7 18:6 32:13 64:11 77:21 79:6	a.m. 31:22, 23 51:13, 14	additional 13:21 30:24 57:8 64:4 67:12 73:18 75:18
33.3 12:19	6	able 15:6 79:22 80:3	addresses 48:22
33.4 12:19	644 71:2	above 24:16 43:2 49:9	adds 66:16 68:17
337 12:15	6F 83:25	abstract 16:9	adjust 25:25
339 55:9 56:25	7	acceptable 8:4	adjusting 26:8 56:9
34 12:10, 17 13:6	7 65:11, 13 67:4	access 81:22 84:5	adjustments 28:19
34.2 12:19	8	accurate 6:18 13:20	Adobe 10:20
34.3 12:20	8 70:14	acknowledge 54:18 55:3 60:2 66:8 67:17 68:7 75:14 78:9 79:11 83:11	advantageous 84:23
34.4 12:20		acknowledging 45:17 64:2	advantages 61:4
341 55:10 56:25		acquired 16:6 39:8 42:12	advising 21:14
342 62:20		across 61:5	affects 22:23
343 60:12		actual 11:11 75:11	agnostic 73:23
344 61:10 62:20			ago 61:20
358 72:19			agree 48:9
369 80:22			ahead 9:19 10:3 23:12 65:19

allows 81:16	appears 9:22 10:11 24:9 34:24	aspect 75:7 81:6	10 19:9 24:14 28:10,
amount 11:12 61:8	application 81:25	aspects 36:11 40:4 42:20	25 29:6 31:14,19,24 33:10,14,16 34:18 37:24 51:15 72:6 85:10,16 86:2
analysis 22:23 23:7, 14,20 56:16 59:4,6,20,25 60:5,11 62:8,20 63:15 67:4 81:22	applies 39:10	assess 38:17	badger 21:15
apply 41:15	applying 36:18 37:8 39:21 41:17	associated 71:8	Badgering 21:10
analyzing 55:11	appreciate 17:8	associations 16:2	balancing 36:16
and/or 36:17	approach 15:18,25	assume 5:11	base 69:6,9,14, 16,19,20 70:10,16,19, 25 71:3,5,6, 13,15,22,25 73:17
Andre 4:15	appropriate 60:25	Assuming 23:23	based 25:6 45:25 46:23 52:2,3 60:13 64:15
annotated 84:4	Approximately 12:14	attendance 11:5	basic 4:18
answer 5:5,17 6:7, 13,25 7:3 21:10,16,18 58:11 66:5 84:11	area 81:20	attention 13:8	basically 15:4 54:3
answered 28:4 38:9 43:14	argue 73:23	audience 54:19 57:5 60:4 64:3 68:8 75:14	begin 4:17 6:10
answering 65:18	argument 47:3,9	augment 81:12 84:21	beginning 21:13
answers 6:19	argumentative 21:8,16	augmented 81:3,18 83:13	behaviors 72:25
anticipates 47:6	around 56:7 65:22, 24	autonomous 15:19 16:5	belief 66:6
anticipating 25:11 35:22	art 15:15 52:5 53:22 62:4 63:14 65:6 75:10,12 84:20	autonomously 15:22	believe 10:6 28:4 30:12 32:7 43:7 47:21 52:25 53:2 54:24 57:3,6 59:12 61:20 62:3,24 63:23 65:6
anticipation 59:5	asked 30:21 43:13 62:9 67:11	avoid 53:7	
anybody 53:12	asking 7:17 18:3 19:6,11,15, 22 20:2 22:17 24:7 33:7 39:17 62:25	aware 6:12 12:2,22 13:11	
anyone 7:10 21:11		axes 40:12	
apologize 10:20			
Apparatus 14:11 61:15			
		back 17:13 18:5,	
		B	

67:8,22 72:15 74:21 75:11 76:20 78:24 79:3 80:2 84:11 belongs 70:3 best 5:20,21 55:7 better 80:2 bit 39:2 54:15, 20 58:6 63:21 78:2 bits 41:3 63:3 blob 40:9,12,13 bolster 26:14 borne 14:24 bottleneck 53:14 bottlenecks 55:16 bottom 30:4 32:5 52:14 64:14 69:4 84:18 bouncing 19:9 bound 5:5 boundaries 40:23 Brainos 15:2,3 breach 13:2 breached 13:3 break 6:8 31:17 85:5,9,10	breaks 6:3,4 7:7 briefly 15:10 68:22 brilliant 63:20 77:18 bring 14:8 28:11 bringing 22:21 broad 79:8 broader 74:23 77:23 broke 21:13 brought 78:14 buffer 16:7 building 42:23 buildup 48:22 C calculate 40:13 call 13:8 79:25 called 4:5 camera 16:3 37:21 72:21 capture 37:17 captured 16:4 37:21 38:20 42:18 82:4 83:20 case 7:16 11:23 24:9 42:3	category 54:21 58:8 caution 7:5 certain 40:4 60:25 certainly 56:15 57:2 challenging 17:15 change 28:21 40:3 67:7 changed 28:13 changing 27:4 chat 8:19,23 9:8 circumstances 57:11 61:21 cite 36:22 49:7,9 62:17 67:3, 22 73:8 cited 31:5 56:14, 24 57:2,3,13 61:19 62:22 67:15 claim 12:9,17 13:6 16:11,18,20 17:2,5,10, 21,24 18:4, 6,13 19:5 20:5,12,14, 17,24 21:21 22:3,22 23:2,3,6,12, 20 24:2,6, 13,19 25:11 27:11,14,17, 22 29:19 32:4,8,12,17 33:2,6,11, 16,20,25	34:2,5,10, 11,12,14,16, 18,19,21,23 35:2,4,9,15, 22 37:24,25 38:2,7 42:2, 25 44:3,7, 12,17,20 45:5,7,14,21 47:6,20 48:23 49:18, 23 50:10,11, 13,16,21 51:3 52:6, 12,14 54:21, 23 55:3,11 57:20,23 58:9,24 59:4,6,9,22, 24 60:8 62:14,15 63:10 64:7, 11,21,22,24, 25 65:8 67:5 68:3,13 72:5,12,17 75:3,4,5 76:5 77:21 78:6,8 82:22,24 83:4 84:9,11 claimed 47:19 claims 42:21,24 52:2 64:15 clarification 63:2 64:4 clarify 20:3 clarity 40:19 66:16, 21 67:13 68:17 78:11, 14 classified 70:5
--	---	--	---

clear 30:23 57:5 77:7,15 83:12	command 26:4,6	6:21	17:17 20:16
clearly 74:18	commands 16:3 30:6 72:23	configuration 60:15,22,25 61:2 73:2,6 74:11,15	22:9 26:15 27:5 28:22 29:4 34:4 38:6 45:5,6, 21 55:12 60:9 72:13 83:2
clerical 12:3	communicated 82:2	configuration s 60:17	correctly 35:19
close 85:7	communication 65:23,24 66:3 81:10	configured 40:2 69:20 71:7 81:11	correlate 14:15 36:7
closer 41:10	communication s 10:16	confirm 17:7,20	correlated 17:25 18:14, 19,23 19:3, 17 20:7,12, 20 22:6 24:2,5 25:14 27:18,21 28:2 29:10, 16 32:19,23 33:4,12,20, 25 34:6,10, 11,12,13,15, 19 35:4,25 36:5 38:3 41:24 42:18 43:11,17 44:18,23 45:3 47:13, 25 48:4 49:2,15,16 50:19,24 54:4 66:19 72:22 73:20
cloud 81:24 82:3 83:19	community 74:24 77:23	confused 79:7	correlating 28:8
code 71:8	company 15:4	confusing 22:11 77:3	correlation 73:19
collect 85:6	compared 16:6	confusion 42:14	correlations 73:18
colored 40:9	comparison 42:11	consider 30:23 68:8	correspond 76:5
colors 38:25 41:9	compelling 55:13	contained 43:8 70:18	corresponding 71:17 81:15
column 56:6,18 61:20 62:18, 19 63:7 65:22 67:4 69:17 70:11 71:4	compensate 25:20	contains 13:16 72:2	could've 76:18
columns 26:16 56:24 57:17	compensation 30:3	continued 61:6	
Colvin 21:7,12,14 31:16 43:13 85:20 86:4	complete 6:18 10:8	control 16:8 81:23 82:17	
combination 52:3	completeness 4:22	controlled 15:20	
combined 30:7	components 65:23	controller 30:4,8 80:25 81:7,9,17 82:7 83:24	
come 12:5 13:21 31:13 85:10	comprise 39:21	controlling 80:24 81:8	
comes 79:2	computer 40:16	convenience 7:22	
	concept 55:15	convincing 67:9	
	conceptual 71:14,21	copy 7:15 8:24 9:7 10:8	
	conclude 61:9	correct 8:13 16:15	
	conclusion 41:22		
	conditions		

counsel 6:25 10:17 11:2,7,10 21:7,15,20 58:11 Counselor 33:13 country 53:18 couple 11:12 55:14 61:19 63:3 80:8 course 10:23 30:13 court 4:2 5:2,16 21:12 31:11, 20,24 51:11, 15 85:12,16, 22 86:2,7 create 55:16 created 77:21 creating 53:14 cropped 39:15 cropping 36:16 39:6 Cross-talk 22:19 48:13 65:16 current 46:18 customize 60:22	dataset 81:19 82:5 83:21 declaration 8:11,15,25 9:4,8 10:9, 13,22 11:22 12:2,13,22 13:12,15,25 15:14 16:10, 12 24:15 25:17 29:7, 19 30:13,16, 19 31:3,8 32:4,6 33:17 51:19 52:11 59:8 60:8 64:8,13 65:9 67:16 68:11 72:6 77:13 78:21 79:20, 24 80:22 82:23 84:8 deficiencies 78:22 79:2, 13 deficiency 66:24 deficient 59:13 62:11 define 84:5 degree 34:25 delta 58:3 60:3 62:16 66:23 75:15,22 76:5 demonstrates 65:12 depends 17:2,5,21 19:23,24 22:12,13 50:10,13 deposition 6:5 7:23	10:18 69:12 73:9 depositions 4:19 73:10 depth 40:18 describe 14:6 15:10, 14 29:20 43:11 79:18, 22 80:16 described 15:25 29:21 38:23 70:25 73:17 describing 51:24 76:9 desirable 60:20 desired 15:21 detected 72:21 determine 16:8 determined 46:18,23 determining 24:20,22 25:2,4 40:5 43:22 45:23, 24 device 16:24 18:21 19:14 20:22 21:3,25 22:8 25:6 32:25 44:25 45:25 50:6 51:2 52:19,21 73:21,23 74:7 75:2 76:8,11,25 80:25 devices 65:24 75:2	difference 55:7 59:15 74:3,5 75:16 different 18:9 27:8,9 28:6,11,13, 23 29:13 38:22 40:15, 23 42:9 48:14 49:13 53:4 56:20, 21 61:21,22 63:3 71:8 73:7 74:6,16 78:12 84:2 digital 17:25 18:14, 19,23 19:3, 18 20:6,13, 20 22:6 24:3,6,23,24 25:8,9 26:19 27:19 28:2 29:17 32:9, 18,22 33:4, 11,19,24 34:6,13,21, 22 35:5,9, 12,14,16,20, 25 36:4,8,13 38:2,4 39:11,25 40:22 41:21 42:8,12,16 43:3,4,5,11, 16,17,23,24, 25 44:14,18, 23 45:2,8, 11,13,19 46:3,4,15, 19,21,24,25 47:11,25 48:3,24,25 49:14 50:19, 23 52:17 54:5 66:19 72:21 73:19
D			
data 69:20 70:12 71:7,14,18, 19,20,21 81:22,25 82:3 83:20			

digits 9:14	22:4 32:17 44:16 50:16	duly 4:6	86:5
direction 26:3 74:22	discussing 5:14	dynamic 16:2	ends 38:19
directly 7:2 70:9	discussions 11:3	E	entailed 15:19
disavow 52:23	display 81:2		entirely 13:4
disclose 25:13 53:23 54:14,18 60:9 65:7 66:7 78:2 84:8,13	displayed 9:13	easier 5:24 18:10 65:11	entirety 55:10
disclosed 36:22 55:21 59:14 64:23 65:2 66:25 75:13 84:22	dissecting 75:6	Eastern 86:9	entitled 14:11
discloses 14:13 27:25 35:25 36:7 41:17 43:22 48:7,19 49:6 53:2,3 54:8, 23 56:3,12 59:24 62:14 63:15 68:6 72:16,20 77:9 78:5,8	distance 40:5,7,13	effect 54:3	environment 15:6 53:7 69:23 71:10 82:6 83:22 84:3
disclosing 37:8 55:2 75:10	distribution 38:25 41:9, 12	eight 41:3	equalization 38:23 41:6
disclosure 59:16 60:13 61:24 62:7 63:21,23 66:10 67:11 68:16 75:19 78:10,18 81:6	diverse 53:10	either 7:14	equating 42:15
disclosures 57:14 76:2	diversity 54:8 56:12, 22 73:13	elaborate 38:8	equipment 71:19
discuss 7:6 39:13 42:5,7	document 9:10 15:12 19:8,19 23:16 31:8 33:22 60:10 70:20 72:18	elaborates 69:17	error 12:13
discussed	documents 7:13	electronic 7:14	errors 11:25 12:3, 21 13:11
	doing 6:22 63:25	electronically 81:11,12	Essentially 18:25
	door 30:22	element 52:12 59:8	Euclidean 40:7
	dots 9:16	elements 60:8 63:10 64:22,23,25 68:12 72:16 77:13,17 84:17	evidence 55:14
	download 9:18	embodiments 69:18 71:4, 20	evolve 14:19 28:21
	downloaded 9:20,22	employed 56:2	exact 22:14 57:16 79:4
	drag 35:6	enable 61:5	exactly 27:7 53:24 56:5 75:25 77:24 79:5
	drive 9:19	encounter 53:11 69:22	EXAMINATION 4:9
	dropping 31:18	end 12:15 28:23 52:15 75:2	examined 4:7

examples 73:8 81:24	extraction 36:17	fill 60:4 62:16	46:3,15,20,
excerpts 25:24 67:18	extremely 77:18	66:25	24 47:11,24
exclaim 49:5	eyes 62:2	final 44:20	48:2,3,4,10,
excuse 42:24 56:17 67:9		find 29:6 40:10,	25 49:2
executes 81:24		12 52:15	50:3,5,6,8,
execution 26:7	face 35:7	65:10,11	18,19,23,24,
exhibit 9:4,9,24 10:7 14:4 68:19,23 69:5 80:15, 19	fact 52:24 57:10	71:2 79:6	25 52:19,21
exhibits 8:19	fails 84:8	fine 18:6 38:13	53:4 60:24
experience 59:19	familiar 13:24 79:15 80:5	finished 65:17 85:7	61:13 69:12
experiences 54:4	far 34:16 54:17 83:6 84:12	first 8:2,3,12 16:21,23,24 17:24,25 18:13,14,18, 19,21,22,23 19:3,12,13, 14,16,18 20:6,7,11, 12,19,20,22 21:2,3,23,24 22:5,6,8 24:2,5,24 25:5,6 27:15,16,17, 18 28:7,17, 18 29:9,11, 16 32:9,18, 19,22,23,24 33:3,4,11, 19,21,24,25 34:6,7,13, 20,22 35:5, 8,13,14,19, 20 36:4,5,12 38:2,3,4 39:10,11,25 40:22 41:21 42:7,15 43:3,5,16, 17,25 44:13, 17,18,22,23, 25 45:2,3,7, 10,24,25	73:2 74:11 76:10
expert 21:18	feature 36:17 54:2 56:9		fit 55:8
explain 38:12 42:17	features 40:6,16 83:15 84:3, 22		fitting 74:24
explained 62:11	feed 5:23		five 71:11
explaining 42:23	feel 17:6 54:19 62:10 63:22 68:15 77:2		follow 38:10
explicit 54:15,20 58:7 59:16 62:7 63:21 66:10 68:9 78:10	figure 19:25 23:10 65:9,11,13 67:4 69:2 70:16 71:16, 24 83:25		following 47:22 71:17
explicitly 48:6,18 55:5 56:14 67:24 75:17	figures 55:22		follows 4:8
express 78:10	file 9:14,20 10:4		forgot 17:11
expressly 75:16	files 9:12,15		forth 18:11 19:10 70:7
			foundation 15:24 67:23
			fourth 12:18
			Frankenstein 53:8
			free 17:6
			freedom 34:25
			front 23:3
			full 4:14
			fuller 84:24
			fully 58:11 68:9 79:9

functioning 83:11	29:15 35:24 36:6,13,22 37:5,8,15 39:9,20 41:17,25 43:22 47:6 48:6,18 49:6,7,9 52:3,7,13,23 53:2,3,20 54:7,10,13, 14,17,22,25 55:4,19 56:3,7,11,17 57:2,17,22 58:4,24 59:9,13,23 60:9 61:11, 13,15,18,25 62:2,11,13, 18,19 63:6, 11,14 64:16, 23 65:2,7, 11,12,14,21, 22 66:7,25 67:20 68:2, 6,12,15 72:12,16,20 73:10,17 74:18 75:10, 17 76:2,8, 11,23 77:7, 9,13,24,25 78:5,7,11, 18,22 79:2,3 82:25 83:5, 7,12 84:8, 13,20	63:16 64:5, 6,13,14 67:5 72:5 grounds 65:5 group 76:12 guess 35:3 78:13	hence 39:9 63:15 68:9 74:25 75:19 heterogenous 53:25 56:4,8 57:9 61:25 73:13 Hickman 64:16,17 66:16 68:10, 16,19,21 69:2,17 72:13 75:20 77:10 78:15 84:21 high 14:7 40:17 79:19,23 80:16 highest 40:25 Hoffman 79:15,23 80:11,15,17, 19,23 82:18, 25 83:19 Hoffman's 82:9 honest 6:18 11:21 22:10 52:24 hour 51:8 85:4 hours 11:12,13,15 human 82:20
G		H	
gave 29:22 general 11:18 generally 11:19 15:14 generate 81:20 gestures 5:18 getting 22:11 85:7 give 8:20 12:14 23:10 40:19 42:8 63:2 66:11 78:12 80:8 given 29:24 57:16 giving 10:20 76:10 going 5:20 8:18 21:11 51:8 57:10 59:10 81:5 85:3 good 4:11,12 5:25 52:15 grammatical 12:25 great 58:22 Grotmol 13:24 14:4, 7,10 15:15, 16,25 16:2,9 25:10,13,18 26:12,15,17 27:3,7,25 28:5,7,10	Grotmol's 15:11,24 35:21 60:13, 16 84:21 ground 4:18 51:23, 25 54:21 55:8,11 58:24 59:3, 5,6 60:2,11	half 51:9 hallway 84:5 handheld 80:25 happen 38:19,20,21 39:6 happened 31:12 happy 5:10 28:5 39:16 49:5 hard 7:15 9:18 75:25 harm 53:11 he'll 21:9 heading 12:16 25:25 health 6:21 heard 58:21 heavily 38:18 help 21:11 53:9 77:10 78:11 helping 60:4	i.e 46:18,20 idea 55:23
			I

identification 9:6 14:5 68:20 identified 52:11 59:8 60:7 63:9 69:24 identifier 71:16 identify 39:17 41:16 57:22 64:25 68:12 76:4 77:12 78:22 84:7 image 16:6 19:24 26:3,5 28:16,17 38:20 39:7, 8,15 41:18, 21,23 42:6, 10,15,18 46:18,20 48:7,19 49:10 70:12 82:3 83:20 images 16:3,7 37:15 55:21 81:2, 3,4,12,13, 18,19 IMG 70:8,11 impact 23:7,20 impacts 23:13 implement 84:16 implementatio n 53:5 59:19 important 83:15	inclined 84:20 include 25:19,24 56:15 69:19 71:5 81:18 included 30:14 57:12 includes 25:4 45:23 52:20 57:18 81:9,14 including 14:19 26:18 36:14 48:22 73:18 81:3 84:3 inclusion 79:8 incorrect 13:5 increase 61:7 indicates 14:13 individual 69:25 71:16 information 13:21 14:17 30:24 36:10, 21 43:8 57:8,18 63:3 67:21 71:23 72:2 inherency 47:8 input 36:19 37:10, 14,20 39:23, 24 40:2 instance 37:9,13,19 39:22 instances 37:16 instruction 14:20,21	16:21,23 18:2,15,20, 24 19:2,12, 13,17 20:8, 11,21 21:2, 24 22:7 23:25 24:4, 20 25:3,5, 14,22 26:9, 17 27:4,12, 15,16,17,22 28:2,12,21, 25 29:11,12, 15 32:20,24 33:5,21 34:2,7 36:5, 8 38:3 41:24 43:18 44:19, 24 45:4,24 46:22 47:14 48:2,4 49:2, 15,16 50:3, 6,8,18,25 51:4 52:18 54:4 66:19 71:8,20 73:20 instructions 14:16 72:23 74:25 76:7, 16,17,24,25 instructs 7:2 28:9 interact 69:22 71:9 interacting 53:6 interface 66:2 interpret 62:6 interpretatio n 75:24 interrupt 33:14 introduced 80:20	invalidity 59:21,22 invention 80:11 82:9 invoking 75:4,19 involve 7:19 involved 7:23 40:16 involving 73:3,7 74:12,16 IPR 8:3,4,6,7,8, 12,13 68:23 IPR2023-0117 9:16 IPR2023-01172 7:18 8:3 IPR2023-01173 7:18 8:7 IPRS 8:16 10:10, 13 13:17 issue 10:23 12:7, 11 34:17 53:13 issued 26:5,6 J J-A-N-E-T 4:16 J-A-S-O-N 4:16 Janet 4:1,15 5:1 6:1,16 7:1, 10 8:1,21 9:1,2,5,11 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1
---	---	--	--

18:1 19:1,20 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1,3 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1,18 52:1 53:1 54:1 55:1 56:1,25 57:1 58:1,17 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 85:1 86:1 Jason 4:15 9:5 jumps 13:9	22 6:6 8:20 9:21 10:4 11:11,12,20 12:6,12 13:20 16:12 23:13 25:23 26:16,25 27:6 28:22 29:2 30:22 32:13 34:18 35:7 36:11 37:3,18 38:16 39:4, 5,6,9 40:3,8 41:8 44:9 49:12,20 51:8 54:11, 16 55:6,25 56:16,22 57:4,6,7 58:5,17,20 59:15,18 60:3 61:22 62:6,7,23 63:19 65:25 66:17,22 67:11,20,23 80:9 83:16 84:16 knowing 53:5,15 knowledge 15:7,8 34:10 52:4,7 58:25 69:5,9,14, 16,19,20 70:10,15,19, 25 71:3,5,6, 13,15,22,25 73:16	language 37:25 48:23 64:11 71:19 79:4,5 law 5:2 layout 81:20 82:5 83:22 layperson 63:19 77:6, 17 learn 14:14 learned 14:19 52:19 73:3 74:11, 15,19,22 learning 18:18 20:19 22:5 28:7 36:7 44:22 46:16 47:24 52:20 55:20 72:24 leave 35:3 left 26:4,6 75:23 legal 34:17 lens 54:16 77:5 level 14:7 40:17 79:19,23 80:16 life 5:24 light 13:21 36:16 59:17 limitation 16:18,20 18:16 21:22 24:13,14,19 29:19 32:25	44:12,20 45:14 47:23, 24 49:24 50:21 75:3,7 limitations 54:23 55:2 59:24 62:14 65:8 68:3,7 77:9,22 78:5,8 83:4 line 40:14 56:7 63:7 65:22, 24 70:13,14 lines 57:17 71:12 little 17:15 22:11 65:10 79:7 load 8:18 loaded 60:14,16 73:2,5 74:10,14 78:2 long 11:9 21:6 look 10:8 17:7 20:24 22:10 23:2 24:12 29:5,7 32:3, 12 36:24 45:14 46:5,7 64:10 65:8 66:15 68:21 69:2 75:5 80:4 82:22 84:21 looking 34:9 59:16 63:20 64:21 77:20 79:19, 24 80:9 84:10 looks 31:9
K	L		
K-NEAREST 26:18,21 kind 30:22 69:11 know 4:19,20 5:9,	labeled 69:15 laid 15:23 47:23		

loop 82:20 83:8	Matt 31:10	mentions 19:23 27:7, 14 35:5 36:13 37:15 52:14 53:24 54:11 61:19 65:14,21,23, 25	mode 26:15 27:5,6 28:20,22,24 29:4 30:11, 12
lost 31:10	matter 11:15		
lunch 85:8	max 39:5 40:21		model 70:6
M	Mccommas 4:10 32:2 51:7,17 85:3,18	merits 57:4	modification 26:22,24 29:13
made 13:5	mean 11:17 33:13 40:10 77:25	method 14:23 39:21	modified 19:2,11,16 20:11 23:25 24:4,20 25:3,5,15,22 27:22 28:3 34:7,14 35:8,13,14, 16,19,20 36:2 38:5 39:10,15 42:19 43:5, 12,16,25 45:8,12,19 46:3,17,20, 24 47:11,13, 24 48:3,7, 19,25 49:17 51:5
maintenance 61:7	means 41:4 42:10 83:9	methods 14:11,24 38:22 61:16	modifies 26:17 29:15
major 40:12 42:24	meant 66:21	metric 40:6	modify 14:21
make 5:23 18:10 20:15 22:14 39:2 49:9 70:6,23 78:18 83:18	meantime 20:3	metrics 40:5	modifying 16:21 19:13 20:25 21:23 25:19 26:9 27:14 29:23 32:9 42:5,7 43:2 44:13 45:10 50:2, 5,7
makes 17:14 76:2	medications 6:17	might've 31:10	moment 53:8
making 47:2,8	meetings 10:25 11:10	mimics 79:5	moments 36:21
man 38:21	memory 36:9	min 39:5 40:21	morning 4:11,12
manipulate 81:17	mention 13:25 15:16 30:3,11,17 36:15 39:20 40:5 49:10 55:5 57:8 61:18 72:19 73:9 80:21	minimum 30:14 57:12 62:22 67:6	
map 81:20 82:5 83:13,22	mentioned 15:13 25:16, 23 31:3 36:6 40:20 41:13, 14 43:15 48:10 55:14 61:12,24 68:4 75:8, 21,25 76:6 77:14 78:23	minor 55:7	
marked 9:5 14:5 68:20		minute 23:11	
match 24:23 25:7 35:12 38:17 43:4,23 46:2,17,23		minutes 61:20	
matching 35:10,15 45:13,20 47:12,17,18, 19 48:8,20 49:13	mentioning 76:14	mismatch 25:20,21,22 26:8,9 28:15	
		mismatched 29:25	
		missing 52:12 57:22 58:2 59:9 63:10 68:2, 12 77:13,16 83:5,7	
		mixing 15:3	

motivated	17:6 21:8	object	17:20 22:3
15:24	23:11 25:25	69:5,16,19,	23:2,11,17,
motor	31:16 54:8	23,25 70:2,	25 24:11
30:6 72:23	70:21	4,5,10	27:11,21
mouth	needs	84:22,24	30:17 31:2,
77:16	31:14	Objection	10 32:8,16
movable	neighborhood	43:13	33:3,10,19
81:15	26:23 27:2	objects	34:5,20
move	neighbors	7:2 69:21	37:2,5 38:7
44:3 49:18	26:18,21	71:10 83:16	39:12 44:3,
58:9,15 64:6	network	obstacles	12 45:12,18
72:5 79:14	66:2	83:16	46:10 47:5,8
movements	never	obtain	49:18,23
15:20	27:25 30:17	15:7	50:10 51:22
multi	41:16 42:4,	obtaining	52:10 55:9
66:17	5,17 56:24	19:24 43:3	56:6 58:9,22
multi-modal	57:13	obvious	64:9 65:15,
41:9 53:25	newly	47:2 52:2,7	19 66:14
56:8 57:10	16:5 38:20	58:24 60:15	67:3 69:3,4
61:25 73:14	39:8 42:12	61:10 64:15	70:18 72:10,
multiple	normal	72:12 73:25	11,15 78:4
14:18 29:14	41:11	82:25	80:13 82:12,
36:10 53:9	normalize	obviously	17
57:11 61:5	36:19 39:3	13:8,20	omnidirectional
66:17 67:21	normalized	19:23 76:16	al
72:23,25	40:19 41:6	obviousness	76:22
74:20 76:15	Notary	58:8 59:4,20	one
	4:6	60:5 62:8	5:22 6:5
N	note	75:4	8:15 9:15
	37:16	occasions	16:6,23
name	noted	27:10 56:21	18:18,20
4:14,15 9:25	86:9	61:23	19:12,13
76:11,13	notes	OCU	20:6,7,19,21
names	15:16 85:6	81:7 83:9	21:2,23
9:14	notice	odd	22:5,7 24:3,
nature	26:11,21	38:24	5,23,24
53:10	29:8 70:11	offers	25:5,7,8
navigation	number	27:3	27:15,18
14:12 15:19,	7:19 14:2	oftentimes	28:13 29:3,
22 61:16	64:18	36:20 53:7	16 32:9,18,
necessarily	numbering	okay	19,22,23
77:23	12:7,10	4:22 5:12,20	34:20,22
necessary	O	6:3,8 7:24	35:5 44:13,
5:10 49:4		8:6,8,24	17,19,22,24
62:24		9:7,17 12:21	45:2,8,10,24
need	oath	13:10,15	46:2,3,15,
5:17 6:5	4:25	14:6,8 16:17	19,21 47:24
			48:2 49:14,

15 50:5,23, 24 52:18 54:11 56:2 57:19 74:22 76:17 78:16 80:4 open 9:19 10:2,3, 5,6 35:3 opened 30:22 operating 16:24 18:20 19:14 20:21 21:3,24 22:7 25:6 32:24 44:24 45:25 50:6,25 52:19,21 73:21 74:6 76:8 operation 16:5 72:22 73:4,7 74:12,16 operations 30:8 36:14 operator 81:7,8 opinion 13:19 29:20, 22 46:22 47:5 52:6 54:22 58:23 59:11,23 72:11 73:16 78:4,7 82:24 83:5 84:19 opinions 13:16,19,22 optimize 85:2 order 30:8 76:16 84:25 ordinary 38:16 40:8	41:7 49:11 52:5,25 53:21 54:7, 24 55:17,25 58:3 59:12, 18 62:4,12 63:13,17,22 65:6 66:6 67:10 68:5 73:23,25 75:9,12 78:20,25 84:15,19 orient 64:12 orientation 25:21 26:8 28:15 30:2 original 23:18 output 26:20 30:7 outputting 81:25 overlay 81:3 overlying 81:13 override 27:5 28:20 29:3 30:11 overriding 23:18 P p.m. 85:14,15,24, 25 86:9 page 12:12,15 32:5,6 51:19,20,21 58:10,16 64:7,14,20 66:12 72:7 80:21,23	82:22 83:18 paired 48:3 paragraph 12:15,24,25 15:17 16:11, 14 17:16 24:15,16 25:18,24 30:5 36:15, 24 39:19 43:2,10,19, 20 44:4,9 46:6,7,11,13 48:6,15,18, 21 49:8,19 51:20 60:12 61:10 72:19 80:22 84:18 paragraphs 30:18 31:7 36:23 39:13, 18 41:18 42:4,19,22 48:12 55:9 56:14,25 57:14,21 62:20,24 63:4 parameters 56:10 part 48:21 56:15 58:12 82:20 84:10 partial 24:22 25:7 35:12 38:17 43:4,23 46:2,17,23 partially 52:22 particular 29:3 30:10 31:6,7 60:23 62:10 67:18, 19 70:5,6 75:6,7 77:8	78:16 parts 30:12 pass 85:19 passages 22:20 past 6:4 13:2 patent 7:19,23,24 8:3,8,12,13 10:10,23 11:16 12:8 13:17 14:2, 23 17:7 18:6 32:13 59:21 64:11,17 77:21 path 14:12 15:21 61:16 PDFS 9:18 pending 6:6 perceive 14:15 15:6 75:15 perceived 14:22 perceives 28:8,16 perceiving 83:10 perfectly 64:3 perform 27:8 56:20 71:9 person 38:15 40:7 41:7 49:11 52:4,25 53:21 54:7, 24 55:16,24 58:3,5
--	--	---	---

59:11,18 62:4,12 63:13,17,22 64:3 65:6 66:6 67:10 68:5 70:4 73:23,25 75:9,11 78:19,24 84:15,19 perspective 68:5 75:9 78:13 84:2 physical 8:24 picture 17:25 18:14, 23 19:3,18 20:2,13,16 22:16 26:20 28:3,18 33:4,12,20, 24 34:6,13 35:9,13,14, 16,20,25 36:4,13 37:21 38:2,4 39:11,25 40:22 41:22 42:8,13,16 43:3,5,6,12, 16,17,24,25 44:2 45:13, 19 46:24,25 47:12 48:3, 24,25 50:19 74:4 pictures 18:19 20:7, 20 22:6 24:3,6,24,25 25:8,9 27:19 29:9,11,17 32:10,19,23 34:21,22 35:6 36:8 40:9 44:14, 18,23 45:3,	8,11 46:3,4, 15,19,21 47:25 49:14 50:24 52:17 54:5 66:20 72:21 73:19 PID 30:4,7 pixel 39:4 40:23, 24 41:2 pixels 40:10 places 56:12 platform 74:5 please 4:13 5:9 9:21 32:5 33:17 46:6 51:18 plural 53:16 55:20 61:14,17 73:12 pluralizing 76:12 point 13:13 42:25 43:10 48:5, 17 52:15 62:9 63:6 64:5 68:16 78:17 points 28:11 56:22 84:6 portion 52:16,18 67:15 portions 67:14 81:15 POSITA 43:21 46:14 52:8 58:25 60:16,19	61:4 74:9 position 25:20 26:8 28:14 30:2 possibility 35:3 63:18 64:2 67:17 68:7 77:19 79:10,11 possible 13:4 precision 80:3 prefer 79:21 preparation 11:17 prepare 10:17 preprocessing 36:14,15 38:18,19 present 11:8 prevent 6:17,22 previous 14:20 28:25 42:21 65:4 73:10 previously 32:17 38:21 44:16 61:12 prior 15:15 probably 55:7 60:6 problems 10:20 proceed 8:22 58:17 process 35:10 45:14, 20 46:16 47:12 48:8, 20 52:20 53:15 73:3,6	74:12,16 82:3,21 83:20,21 processed 81:18 82:4 processes 41:17 72:24 processing 49:10 56:9 processor 81:10,11 produce 36:18 40:2 product 26:25 prohibited 53:19 prohibitive 55:18,24 propagate 36:9 74:23 propagated 14:18 74:20 protection 84:22 provide 15:8 55:13 68:15 provided 62:8 provides 14:12 15:4 51:3 67:22 81:7 providing 6:18 Public 4:6 purposes 77:21 80:3 put 54:21 58:7 77:5,15 Putting 18:9
---	--	--	---

Q	79:6 reading 23:23 58:4 77:6	refer 7:22 8:2,7 49:6	reiterating 49:3
qualify 37:23	reads 44:21 46:13 50:4,22	reference 13:5,25 14:4,7,10 15:15,16 30:14 36:12 39:7,9,14 41:18,21,23 42:5,10,15 43:9 55:19 57:12,18 62:23 65:4 67:6,20,25 68:19,21,24 69:17 75:20 79:16,19,23, 24 80:16,17, 19 83:18	related 7:16 66:2
question 5:8,12 6:6,7 18:7,12 19:21 21:5, 19 22:15,16 23:8,18,19 30:21 35:18 38:9 47:22 48:16 49:21 57:19 58:12, 13 65:18 66:4,5 67:12,25 70:22 78:3	reask 18:7 33:23 70:21	references 10:23	relates 55:19
questions 5:5,17 6:10, 11,13,25 7:17 21:9,17 85:19 86:4	reason 6:12 58:7 68:10 74:21 76:20	Referencing 42:2	relating 11:15
quote 30:5 53:23	reasonable 58:5 62:3 64:3 77:19	referred 36:20 53:8 76:11	relation 84:24
quote/unquote 15:18	reasons 62:12	referring 12:7,9 18:16 22:12,14 29:10 42:20 48:11 63:8	relative 28:17,18
quoting 27:7 37:5,16 39:19	recall 12:4 13:13	refers 28:7	relevant 29:3
R	receive 76:15,17 81:2,12	refrigerator 70:3,7	relied 25:10 35:21
range 48:14	received 81:22 82:3 83:20	refusing 80:13	relies 38:17
ranges 40:21	recess 31:22 51:13 85:14,24	regarding 29:22 71:12	remembering 14:25
read 23:12 46:11 66:11 71:11 72:4 82:10, 13,14	recognized 60:20 61:4	reinforce 28:12 59:21 77:11	remind 4:18
reader 54:19 60:5 66:9,22 68:8 75:24 78:9	recognizing 53:17	refusing 80:13	remote 81:21
	recollection 8:17 10:14 12:6	regarding 29:22 71:12	remotely 80:24 81:16
	record 4:3,14 31:18,21,25 46:12 51:10, 12,16 85:11, 13,17,21,23 86:3,6,8	reinforces 13:22	rendered 29:20
	recording 15:20	reinvent 76:9	repeat 4:21 28:5 39:16 61:15 63:12 82:10
			rephrase 5:10
			replace 60:21
			replaying 15:22
			report 36:25 44:5 46:6 49:19
			reporter 4:2 5:16 21:12 31:11, 20,24 51:11, 15 85:12,16, 22 86:2,7

reporter's 5:23	reviewing 12:5 58:5	10,13,17,22	scale 41:5 55:18
represent 69:10	84:20	76:19 80:24	scaled 36:19 40:2
representatio n 81:4,13,14	revisit 57:24	81:2,4,8,14, 16,17,19,21, 23 82:2,4,6, 18 83:21,23 84:25	scaling 39:6 41:14
request 6:7	right 8:16,25	robot's 60:21 83:13	screen 18:9 81:9,10
require 26:9	10:13 13:17	Robotics 14:25	Scrolling 17:14
requires 16:20 24:19 25:2 27:12 32:8,17 35:15 44:13, 17 50:2,7	16:22 17:3, 6,18,19,22 18:2,15,24 19:4,18 20:9,10,13 23:24 24:3, 16,21 25:3, 11 26:4,5 27:13,19,23 28:3 30:19 31:4 32:10, 21 33:5,21 34:2,8,14 35:10,17,22 38:5 41:19 42:6,19 44:14,19 45:9 46:5 47:6,17 48:8,20 49:8 50:3,8,11, 14,20 51:5 52:8 59:2 63:11 64:18 67:16 70:9 71:2 72:2 78:6 80:6	robots 14:12,14,18 15:5,9 27:8 36:7,10 53:6,16,17 55:20 60:18 61:5,14,17, 21 66:18 67:21 73:12 74:20,24 76:10,12,14, 15,17 82:20	second 8:6,8,12,20 12:14,18 23:10 31:12 35:12 42:12 43:4,24 52:16,18,20, 22,24 55:5 57:25 60:17, 21 61:2 66:11 73:18, 19,20 74:25 75:19 76:7, 10,24,25
resampling 36:16		room 7:11,14	section 30:11 31:7 67:19
reset 31:15		rooms 84:4	see 8:21,23 9:8, 10,13,15,24, 25 16:18 20:17,25 21:4,21 22:20 24:13, 17 31:5 37:6,11 49:23 55:22 69:4,7 70:15 83:25 85:10
residing 66:20		rows 12:18	seek 58:6 64:4 66:9 75:18
responding 25:21		rules 4:18	seeking 63:23 78:10
response 67:25			send 76:18
results 27:2 28:23 29:8			sending
Rethink 14:25			
return 82:4 83:21			
returned 17:19	Rknn 26:22 29:5 30:13,15,18 73:22	sake 4:21	
revert 14:20 28:25	robot 16:8 25:19, 25 53:10 56:19 60:14, 16,23 61:6 69:18,21 71:5,9 72:20,22,25 73:4,7 74:6,	saying 57:25 58:2 76:13 77:16, 17	
review 13:7,20 15:12 19:8, 19 23:16 33:22 60:10 70:20 72:18 81:22		says 12:17 17:24 18:13,17,22 20:18,25 27:17 50:17 71:4 74:18	
reviewed 10:19,22			

67:21 sensory 37:10,13,19 39:22,24 sentences 80:9 sequence 37:18 series 9:16 server 65:13,14,22 servers 66:17,18,20 68:18 serves 59:20 service 81:24 82:3 83:19 set 14:20 16:21 18:2,15,24 19:2,17 20:12 24:2, 4,20 25:3, 14,23 26:17 27:12,13,16, 17,22 28:2, 21 29:2,12, 15 33:5,21 34:2,7 36:5 38:3 41:24 43:18 45:4 46:22 47:14 48:4 49:2, 15,16 50:3, 8,18 51:4 73:20 sets 14:21 15:11 16:24 18:20 19:12,14 20:8,21 21:2,24 22:7 25:5,19 26:10 27:4, 15 28:12	29:11 32:20, 24 36:8 44:19,24 45:4,25 48:2 50:6,25 52:19 54:5 66:19 74:19 several 9:14 26:12 28:6,13 62:12 shades 39:2 41:10 share 15:7 shared 69:18 71:5 shifted 26:2,4,5 shifting 18:10 28:19 show 28:6 29:18 35:24 39:12 52:10 59:7 showing 27:8 69:13 shown 71:15,23,24 shows 54:6 56:19 65:13 83:25 similar 28:23 40:9 66:7 similarly 40:9 simple 21:5 simply 9:15 15:21 42:22 single 53:14 55:15, 23 sir 4:11,23 5:3,	7,13,19 6:2, 9,15,20,23 7:4,8,9,12, 20,25 8:5, 10,14,17 9:19 10:14 11:4 12:23 13:14 14:3 16:25 17:23 21:4,5 23:21 24:10,14,17 25:3,11,12 27:20 30:19 31:4 32:11 33:8,21,24 34:3,14 35:23 38:5, 11 42:2 43:19 44:14, 15 47:4,7 50:15 51:6 52:9 57:15 62:21 64:12, 18,19 65:2, 15 67:3 68:24 69:7 70:16,22 72:3,4,14 75:3 79:14, 17 83:3 sitting 13:10 situation 59:11 skill 38:16 40:8 41:7 49:11 52:5,25 53:22 54:7, 25 55:17,25 58:4 59:12, 18 62:4,13 63:13,17,22 65:6 66:6 67:10 68:6 73:24 74:2 75:9,12 78:20,25	84:15,19 skipping 20:14 slight 75:15,22 76:5 slightly 62:6 78:12, 13 small 60:3 62:16 66:23 smallest 40:24 sort 83:9 sound 5:25 space 40:6 56:13 84:14,25 speak 5:22 specific 53:20 69:25 70:2,3 specifically 22:4 30:10 84:23 specificity 69:24 spell 4:13 spent 11:15 spot 71:2 stabilize 30:8 stages 29:13 stand 70:8 standard 53:5 standpoint 13:19
---	---	--	---

stands 70:12	subsequent 16:5 26:24 30:3	synthroid 40:11	ten-minute 85:5,9
start 20:4 64:24 70:24	subsequently 74:14	system 14:23 53:25 62:2 64:24	tense 13:3
starting 25:17 52:15 80:22	substance 7:6 10:16 26:13	systems 14:24 66:3	term 34:9,15 42:9
state 4:13 53:18 60:12	substantive 12:4 13:4	T	terms 39:14 76:24 79:8
stated 66:8 75:16, 17	suffice 62:25	table 12:8,9,16 29:6 30:18 31:2,6 43:2	testified 4:7
statement 36:3	sufficient 57:4 67:23	take 31:17 35:2,7 41:8 46:6 51:9 64:10 65:10 85:5,9	testimony 5:15 7:7
states 20:5 21:22 22:4 64:17	sufficiently 30:23	taking 6:4,8,16 21:6 36:3 85:8	Thank 23:15 24:11 38:14 65:20
steps 28:24	suited 61:3	talk 29:25 30:15	That'll 86:5
stick 82:15	sum 26:25	talked 39:14	thing 12:25 15:5 54:10 65:3 78:16
store 69:20 71:7 73:17	summaries 40:17	talks 53:16	things 15:3 26:12 55:15 84:16
stored 14:17 38:22 41:23 42:18 46:16,20 69:14 71:12	summarize 42:25 82:8, 12	task 56:20 60:23 61:3 70:15, 24 71:3,6,7, 13,15,16,21, 25 85:2	think 12:9,15 13:3,22 21:8 22:23 23:17 27:9 31:11, 16 38:9 48:9 51:7 53:20 54:2,10,13 55:13 57:7 58:14 62:11 63:12 75:23 85:5,6
stores 36:9	super 63:19 77:18	tasks 27:9 61:2 71:9	third 12:18 60:17, 22 61:2 74:7 75:2 76:8, 11,24,25
stretch 39:3 40:21 41:3	support 63:4	teaches 25:18 80:24	thought 58:12
strongly 75:11	sure 14:9 20:4,15 22:14,24 34:18 38:12 39:19 46:13 51:11 68:14 69:13 70:24 80:7,18 83:6	telling 10:15	threshold 13:2
structure 71:14,21	surface 23:23		
stuff 54:14 75:13	surrounding 81:20		
submitted 8:11,15 10:9,12 11:23	surroundings 83:13,17		
	sworn 4:6		
	synonyms 79:9		

TID 71:17	transform 39:22	unclear 5:9	53:14 54:11
time 5:22 7:6 31:12 86:9	transformatio n 37:9 39:25	undergoing 61:7	55:6,15,23 56:2,19 73:4 74:13,17 81:16,21 82:17,19 83:8
title 14:13 53:15 61:13,15 62:17 73:11 74:25	transforms 36:18	underneath 70:9	user- selectable 81:14
today 4:25 5:6 6:14 7:11,14 10:18 11:8, 14 13:7,10 73:10	truthfully 5:5 6:14	understand 4:24 5:4,8, 11,16 6:24 7:8,20 19:20 22:16 35:18 53:3,22 54:25 55:17 58:4 67:10 73:24 74:10 75:10,12 78:25 79:10 83:10	users 53:9
top 70:24	try 76:8	understandabl y 53:19	utilizes 16:2
topdown 83:14 84:2	trying 19:25 20:15 22:18,24 23:9 40:18 53:23 55:18 62:15 63:2 70:23 71:2 77:5	understanding 7:21 66:24 80:10	v
total 11:11	turn 16:10,11 24:14 26:4,6 32:5 33:10, 14,16 44:4 51:18 58:10 64:7,20 68:22 72:6,7 80:14	understood 43:21 46:14 62:5,13 63:14,18,24 78:19	valid 63:5
tracking 23:17	tweak 15:7	undo 27:5 28:24 30:12	value 35:7 40:24, 25 41:2 56:22
train 72:25	two 13:11 29:13 49:13	uniform 39:2	values 39:4
trained 14:14 57:11 60:14,18,24 61:21 73:2,5 74:11,14	tying 34:18	uniformed 41:11	variety 36:11 53:4 65:25 73:8
trainer 14:16 28:9, 20	type 70:5	unique 69:5,14,15, 16,19,21,23 70:2,4,9	vector 54:2
training 14:11 15:11, 19,25 16:4,7 25:19 54:9 56:13 60:21 61:5,6,8,14, 16 72:20,24 73:3,6,11,13 74:12,15,19 76:13	typical 15:18	unit 80:25 81:7,9	vectors 56:9
transcribed 5:15	U	United 64:17	verbally 5:17
	Uh-huh 58:19	user 15:20 16:3 52:22,24	verbatim 37:17
	unable 6:13		versus 13:6
			video 5:23 37:17
			view 52:4,7 58:25 64:16 72:12 82:25 83:14 84:24
			vision 40:17

volume 79:7	77:8,15,20, 22 82:9,11	
voluminous 55:23	work 15:24	
	world 53:19	
W	would've 43:21 60:15, 19,20 61:4, 10 62:13 63:14,24 73:25 76:21	
wait 31:13	write 26:2	
walls 84:4	written 10:19 30:20 51:25 64:14 67:8 77:3 82:16	
want 4:17 9:25 18:5 22:13 30:24 31:13 41:2 42:9 85:6	wrote 11:22	
way 9:12 15:5 31:9 38:15, 16 47:16,18, 22 48:11 76:9 77:2, 10,24		
ways 14:13,19 27:3,9 28:6, 13 29:14 53:4 56:21	Y	
went 69:11	yeah 10:3 17:8 18:5,22 19:16 22:21 31:17 43:15 58:14 67:14	
wider 39:5		
Wifi 65:25	Z	
witness 4:5 21:10,15 85:19	zero 41:3	
word 35:2 55:5 59:15,16 75:18 76:3 79:6	zoom 31:18 40:3,4	
wording 56:4		
words 26:2 76:4		