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Transcript of David Hilliard Williams

Date: April 23, 2024
Case: Google LLC -v- Geoscope Technologies Pte. Ltd.

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD
3
4 GOOGLE LLC,
5 Petitioner,
6 v.
7 GEOSCOPE TECHNOLOGIES PTE. LTD.,
8 Patent Owner.
9
10 Case No. IPR2023-01209
11 U.S. Patent No. 7,561,104
12 Case No. IPR2023-01210
13 U.S. Patent No. 8,400,358
14 Case No. IPR2023-01211
15 U.S. Patent No. 8,786,494
16 DEPOSITION OF DAVID HILLIARD WILLIAMS
17 Alexandria, Virginia
18 Tuesday, April 23, 2024
19 9:03 a.m. EDT
20 Job No.: 533807
21 Pages 1 - 118
22 Reported By: Joan V. Cain

1 Deposition of DAVID HILLIARD WILLIAMS, held
2 at the law offices of:
3
4 BUCHANAN INGERSOLL & ROONEY PC
5 1737 King Street
6 Suite 500
7 Alexandria, Virginia 22314
8 (703) 836-6620
9
10 Pursuant to Notice, before Joan V. Cain,
11 Court Reporter and Notary Public in and for the
12 Commonwealth of Virginia.
13
14
15
16
17
18
19
20
21
22

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1 A P P E A R A N C E S
2
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14 -AND-
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2
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1 C O N T E N T S

2 EXAMINATION OF DAVID HILLIARD WILLIAMS PAGE
3 By Mr. Desai 8

4

5 E X H I B I T S

6 (Retained by Counsel.)

7 Case No. IPR2023-01209

8 PREVIOUSLY MARKED EXHIBITS REFERENCED
9 EXHIBIT 1001 U.S. Patent No. 7,561,104 20
10 EXHIBIT 1008 U.S. Patent No. 8,406,753 80
11 EXHIBIT 1012 Declaration of David H. 10
12 Williams in Support of
13 Petition for Inter Partes
14 Review of U.S. Patent
15 7,561,104, 8/10/23
16 EXHIBIT 1028 Claim Construction 46
17 Memorandum Opinion & Order,
18 7/19/23

19

20

21

22

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1 E X H I B I T S C O N T I N U E D
2 (Retained by Counsel.)
3 Case No. IPR2023-01210

PREVIOUSLY MARKED EXHIBITS		REFERENCED
EXHIBIT 1001	U.S. Patent No. 8,400,358	21
EXHIBIT 1007	U.S. Patent No. 9,097,784	107
EXHIBIT 1008	U.S. Patent No. 8,406,753	80
EXHIBIT 1012	Declaration of David H. Williams in Support of Petition for Inter Partes Review of U.S. Patent 8,400,358, 8/10/23	10
EXHIBIT 1028	Claim Construction Memorandum Opinion & Order, 7/19/23	46

1 E X H I B I T S C O N T I N U E D
2 (Retained by Counsel.)
3 Case No. IPR2023-01211

PREVIOUSLY MARKED EXHIBITS		REFERENCED
EXHIBIT 1001	U.S. Patent No. 8,786,494	21
EXHIBIT 1007	U.S. Patent No. 9,097,784	107
EXHIBIT 1008	U.S. Patent No. 8,406,753	80
EXHIBIT 1012	Declaration of David H. Williams in Support of Petition for Inter Partes Review of U.S. Patent 8,786,494, 8/10/23	11
EXHIBIT 1028	Claim Construction Memorandum Opinion & Order, 7/19/23	46

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1 P R O C E E D I N G S
2 - - -
3 9:03 a.m. EDT
4 April 23, 2024
5 - - -
6 Whereupon,
7 DAVID HILLIARD WILLIAMS,
8 having been duly sworn under penalties of perjury by
9 the Notary Public, was examined and did testify as
10 follows:
11 EXAMINATION BY COUNSEL FOR PATENT OWNER
12 BY MR. DESAI:
13 Q Can you please state your name for the
14 record.
15 A David Hilliard Williams.
16 Q And where do you reside, Mr. Williams?
17 A Colorado.
18 Q Have you been deposed before?
19 A Yeah.
20 Q About how many times have you been deposed?
21 A 36, 37.
22 Q Have you ever been deposed in connection on

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1 behalf -- while you were a consultant on behalf of
2 Google?
3 A Yes.
4 Q About how many times?
5 A Four.
6 Q All right. So I know you've done this
7 before, but it'll probably be helpful to just make
8 sure that we understand some ground rules, to make
9 sure that things go smoothly today.
10 So you understand that we have a
11 stenographer here taking down a transcript, so I
12 need verbal answers to my questions; no nodding your
13 head or shaking or anything like that.
14 You understand that?
15 A Yes.
16 Q If you need a break, feel free to ask me
17 for one, but I just ask that you answer any pending
18 question of mine before you take a break; is that
19 fair?
20 A Yes. Generally, I like to take a break
21 every hour or so, roughly.
22 Q Same.

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1 If you don't hear or understand one of my
2 questions, will you let me know?
3 A Yes.
4 Q And so if you hear -- if you answer my
5 question, is it fair to -- fair to assume that
6 you've understood and heard my question?
7 A Correct.
8 Q Do you understand that your testimony today
9 is under oath?
10 A Yes.
11 Q Is there any reason at all today that you
12 can't give completely true and accurate testimony?
13 A No.
14 Q And your counsel may object to questions,
15 but you understand that unless your counsel
16 instructs you not to answer the question, you -- you
17 have to answer?
18 A I understand.
19 Q I'm going to hand you three different
20 documents. These are exhibits that were previously
21 marked as Google Exhibit 1012 in three separate
22 proceedings: That's IPR2023-01209, IPR2023-01210,

1 and IPR2023-01211.
2 MR. LEE: Thank you.
3 And do you have copies for the counsel as
4 well?
5 MR. DESAI: That is the --
6 MR. CHESLOCK: He's got three of them.
7 MR. LEE: Oh, gotcha. Okay.
8 MR. DESAI: I've got one copy for counsel.
9 MR. LEE: Thank you.
10 BY MR. DESAI:
11 Q Okay. Do you recognize --
12 MR. FEDOWITZ: Do you have all the exhibits
13 that go with these?
14 MR. DESAI: I don't.
15 MR. FEDOWITZ: We're going to have to
16 object to these as being incomplete.
17 MR. DESAI: Okay. Then you can lay your
18 objection.
19 BY MR. DESAI:
20 Q Okay. Do you recognize these,
21 Mr. Williams? And feel free to take time to look at
22 them.

1 A Yes. Yes.
2 Q And what are these?
3 A These are my declarations for,
4 respectively, the 756,104 [sic] patent, the
5 8,786,494 patent, and the 8,400,358 patent.
6 Q Okay. So I'd just like to start by
7 establishing some terminology to help make things a
8 little bit easier today.
9 A Mm-hmm.
10 Q So you mentioned that one of these is your
11 declaration from -- for the U.S. Patent No.
12 7,561,104, right?
13 A Correct.
14 Q If you look at that, the case number for
15 that is IPR2023-01209.
16 Do you see that?
17 A Yes.
18 Q All right. If I refer to the '104 patent
19 today, we understand that I'm referring to U.S.
20 Patent No. 7,561,104, which is the subject matter of
21 Case No. IPR2023-01209?
22 A Yes.

1 Q And if you understand -- if I use the
2 term "1209 proceeding," you understand that I'm
3 referring to Case No. IPR2023-01209?
4 A Yes.
5 Q And if I refer to the '104 -- if I refer to
6 your '104 declaration, you understand that I'm
7 referring to what's in front of you as Exhibit 1012,
8 your declaration from case number -- from the 1209
9 proceeding?
10 A Correct.
11 Q Can you turn in your '104 declaration to
12 the last page before the appendix? I believe that's
13 page 70.
14 A Okay.
15 Q That's your signature in this exhibit?
16 A Yes, it is.
17 Q And you signed this on August 10th, 2023;
18 is that right?
19 A Yes.
20 Q How did you prepare this declaration?
21 A I would say months ago -- or more than
22 that. Can you be a little bit more specific?

1 Q So I'm just asking for sort of the general
2 process of -- you know, and without going into the
3 substance of any communications you had with
4 counsel, sort of the general process you used to put
5 together this document, what that involved.
6 MR. LEE: Objection. Form.
7 THE WITNESS: I mean, this is actually
8 probably started 10 months ago, so I don't really
9 remember exactly the process, frankly.
10 BY MR. DESAI:
11 Q Sure. I can ask you some more specific
12 questions, and if you recall you can answer.
13 A Sure.
14 Q Did you type this document yourself?
15 A Type? I would say I -- I wrote a fair
16 amount of it. I don't remember -- so I guess that's
17 typing.
18 Q Okay. And, presumably, during the process
19 of putting together this declaration, you had
20 communications with counsel for Google; is that
21 correct?
22 MR. LEE: Objection. Relevance.

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1 THE WITNESS: I -- I think it's fair to say
2 I worked interactively with counsel.
3 BY MR. DESAI:
4 Q All right. Can you turn to -- I believe
5 the page is just marked "Roman numeral I." It's
6 about, like, the fifth page.
7 Yeah. And you see here and on the next
8 page there's a list of exhibits, right?
9 A Yes.
10 Q And are these exhibits that you considered
11 in forming your opinions in this declaration?
12 MR. FEDOWITZ: I think we're going to have
13 to object to this because this is completely
14 incomplete. You gave him the declaration. All
15 these exhibits are missing.
16 Do you have the exhibits?
17 MR. DESAI: We have some of the exhibits,
18 but we disagree. You can make your objection --
19 MR. FEDOWITZ: This is incomplete.
20 MR. DESAI: Okay.
21 MR. FEDOWITZ: You're referring to exhibits
22 now, and you haven't given him exhibits.

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1 MR. DESAI: We're not referring to
2 exhibits. We're referring to an exhibit list.
3 MR. FEDOWITZ: Exactly, and it's
4 emphasizing the fact that this is an incomplete
5 exhibit that you --
6 MR. DESAI: Okay. Listen, you can make
7 your objection. You know IPR, counsel. You know
8 the procedure here.
9 MR. FEDOWITZ: You heard me. This is not a
10 guessing game.
11 MR. DESAI: That's completely
12 inappropriate, Counsel.
13 BY MR. DESAI:
14 Q So the question again was: Are these
15 exhibits that you looked at in forming your opinions
16 in your declaration?
17 A They generally look familiar, you know, but
18 I don't have them in front of me, so I maybe can't
19 be absolutely certain without those.
20 Q Okay. So I'm asking about the -- what
21 you've just cited here.
22 But let's look at -- can you turn to page

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1 4, and it's paragraph 12 of this exhibit.
2 A Okay.
3 Q Okay. And you refer to -- you say here, in
4 paragraph 12: "In preparation for this declaration,
5 I...considered the materials discussed in this
6 declaration, including, for example, the '104
7 Patent, the references cited by the '104 Patent, the
8 prosecution histories of the '104 Patent and
9 applications from which it derives (including the
10 references cited therein), various background
11 articles and materials referenced in this
12 declaration, and the prior art references in this
13 declaration."
14 Do you see that?
15 A Yes.
16 Q And you say: "In addition, my opinions are
17 further based on my education, training, experience,
18 and knowledge in the relevant field."
19 Do you see that?
20 A Yes.
21 Q Is there anything you're aware of that --
22 other than what's listed in paragraph 12 to this

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1 declaration and the exhibit list that we looked at,
2 that you relied on in forming your opinions in this
3 case?
4 MR. LEE: Objection. Form.
5 THE WITNESS: Not that I can think of.
6 BY MR. DESAI:
7 Q All right. I'd like to turn you to another
8 one of the declarations, and so this time we'll look
9 at what's marked as Exhibit 1012 from the 1210
10 proceeding regarding U.S. Patent No. 8,400,358.
11 A Okay.
12 Q And, again, just to establish some
13 shorthand, to make things easier, you understand if
14 I refer to the '358 patent, I'm referring to U.S.
15 Patent 8,400,358; is that fair?
16 A Fair.
17 Q You understand if I refer to the 1210
18 proceeding, I'm referring to Case No. IPR2023-01210?
19 A Correct.
20 Q And if I refer to your '358 declaration,
21 I'm referring to your expert declaration submitted
22 as Exhibit 1012 in the 1210 proceeding, right?

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1 A Yes.
2 Q Again, if you could turn to the last page
3 before the appendix, which is page 81, that's your
4 signature on this?
5 A Correct.
6 Q And you signed this on August 10th, 2023?
7 A Correct.
8 Q And this will be the last exhibit that I've
9 put in front of you. So this is, again,
10 Exhibit 1012 from Case No. IPR2023-01211 regarding
11 U.S. Patent No. 8,786,494.
12 You understand that if I refer to the '494
13 patent, I'm referring to U.S. Patent No. 8,786,494?
14 A Yes.
15 Q Will you understand that if I'm referring
16 to the 1211 proceeding, I'm talking about the
17 proceeding identified with Case No. IPR2023-01211?
18 A Yes.
19 Q And you understand that if I refer to your
20 '494 declaration, I'm referring to the declaration
21 you submitted, which is marked as Exhibit 1012, in
22 the 1211 proceeding, right?

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1 A Correct.
2 Q If you'd turn to the last page before the
3 appendix, that's page 76.
4 A Okay.
5 Q And that's your signature on -- in -- on
6 this declaration?
7 A Yes.
8 Q And you signed this on August 10th, 2023;
9 is that right?
10 A Yes.
11 Q In preparing these declarations, you
12 reviewed the '104, '358, and '494 patents; is that
13 right?
14 A That's correct.
15 Q The -- the '104, '358, and '495 -- '494
16 patents have a common specification, right?
17 MR. LEE: Objection. Form.
18 THE WITNESS: I believe that is true.
19 BY MR. DESAI:
20 Q I can actually -- so I'm going to hand you
21 what's been marked as Exhibit 1001 in the 1209
22 proceeding, which is the '104 patent, Exhibit 1001

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1 in the 1210 proceeding, which is the '358 patent,
2 and Exhibit 1001, in the '494 -- sorry -- the 1211
3 proceeding.
4 THE COURT REPORTER: I'm sorry. What was
5 the last exhibit number you said?
6 MR. DESAI: Exhibit 1001 -- they're all
7 1001 -- in the 1211 proceeding, which is the '494
8 patent.
9 BY MR. DESAI:
10 Q Do you recognize the exhibits that I've put
11 in front of you?
12 A In general, yes.
13 Q What are they?
14 A The printouts for the patents 756,104
15 [sic], 8,400,358 and 8,786,494.
16 Q So taking a look at these, and feel free to
17 take the time that you need, but I previously asked
18 you if it's your understanding that these patents
19 have a common specification. So if you'd just take
20 some time to look through them and see if that
21 refreshes your recollection and if you're able to
22 confirm for me that these three patents have a

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1 common specification.
2 MR. LEE: Objection. Form. Scope.
3 THE WITNESS: They look to be the same with
4 the -- the cross-references sections are different,
5 but the -- the balance of the specification appears
6 to be the same.
7 BY MR. DESAI:
8 Q You're aware that you're here for two
9 depositions today?
10 A Correct.
11 Q And you're aware that the first one, the
12 current deposition, is for the 1209, 1210, and 1211
13 proceedings, right?
14 A Correct.
15 Q And then we'll be doing a second deposition
16 today that's for another case with Case No.
17 IPR2023-01212.
18 Do you understand that?
19 A I know there's another deposition, yes.
20 Q And are you aware that the second
21 deposition is for -- related to U.S. Patent No.
22 8,406,753?

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1 MR. LEE: Objection. Form. Relevance.
2 THE WITNESS: I remember it as the '753
3 patent. I don't remember the first four digits.
4 BY MR. DESAI:
5 Q Did you do anything to prepare for this
6 current deposition?
7 A I reviewed various documents, and I met
8 with counsel.
9 Q About how long did you spend reviewing
10 documents to prepare for today's deposition?
11 A Several hours. A lot of hours.
12 Q Was it more than ten hours?
13 A Probably.
14 Q Was it more than 50 hours?
15 A No.
16 Q Without going into the substance of any
17 conversations that you had with counsel, who did you
18 meet with to prepare for today's deposition?
19 A At various points, the parties here, as
20 well as Patrick Keane.
21 Q And about how long did you spend meeting
22 with -- with counsel to prepare for today's

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1 deposition?
2 A Several hours.
3 Q More than ten hours?
4 A Around there probably.
5 Q When did you meet with counsel for
6 petitioner to prepare for today's deposition?
7 A A couple weeks ago.
8 Q That was the last time that you met with
9 them to prepare for today's deposition?
10 A We had a brief call also this past Friday.
11 Q About how long was that call?
12 A An hour max.
13 Q All right. So you have your '104, '358,
14 and '494 declarations in front of you. Are you --
15 are there any corrections that you're currently
16 aware of to make to your '104 declaration?
17 MR. LEE: Objection. Form.
18 THE WITNESS: There might be a typo, and
19 I -- on page 45, and where is -- B says: "Claim 2
20 Would Have Been Obvious Over Shkedi in View of Spain
21 (Ground 2)."
22 And then Section 1 is: "Claim 2 is

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1 Disclosed in Zhu and Spain."
2 I think that's supposed to be: "Claim 2 is
3 Disclosed in Shkedi and Spain," but I'm -- I noticed
4 this last night, so I'm not a hundred percent sure
5 that it's a typo or not, frankly.
6 BY MR. DESAI:
7 Q Okay. Understood.
8 Putting aside typos, are there any
9 corrections that you're currently aware of to make
10 to your '104 declaration?
11 MR. LEE: Objection. Form.
12 THE WITNESS: Not that I'm aware of.
13 BY MR. DESAI:
14 Q Putting aside typos, are there any
15 corrections that you're currently aware of to make
16 to your '358 declaration?
17 MR. LEE: Objection. Form.
18 THE WITNESS: Repeat the question.
19 BY MR. DESAI:
20 Q Putting aside typos, are there any
21 corrections that you're currently aware of to make
22 to your '358 declaration?

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1 MR. LEE: Objection. Form.
2 THE WITNESS: No.
3 BY MR. DESAI:
4 Q Putting aside typos, are there any
5 corrections that you're currently aware of to make
6 to your '494 declaration?
7 MR. LEE: Objection. Form.
8 THE WITNESS: No.
9 BY MR. DESAI:
10 Q I'm going to direct you to a couple places
11 in your '104, '358, and '494 declarations.
12 A Okay.
13 Q Can you turn, in the '104 declaration, to
14 paragraphs 43 and 44, and in the '358 and '494
15 declarations, will be paragraphs 41 and 42.
16 A Okay.
17 Q In each of these declarations, these
18 paragraphs address the construction of the
19 term "grid point" as it's used in the '104, '358,
20 and '494 patents; is that right?
21 A Correct.
22 Q You understand that grid point is a claim

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1 term used in certain challenged claims of the '104,
2 '358, and '494 patents, correct?
3 A Yes.
4 Q You have a background in location
5 determination; is that fair?
6 A That's fair.
7 Q About how many years have you been in the
8 field of location determination?
9 A Over 30.
10 Q Prior to your work on the 1209, 1210, and
11 1211 proceedings, had you heard the term "grid
12 point" used in the context of location determination
13 before?
14 MR. LEE: Objection. Form. Relevance.
15 Scope.
16 THE WITNESS: Probably, but I can't recall
17 specifically where.
18 BY MR. DESAI:
19 Q Okay. So you don't have any specific
20 recollection of -- of hearing the term "grid point"
21 used in the context of location determination prior
22 to your work on the 1209, 1210, and 1211

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1 proceedings?
2 MR. LEE: Objection. Form. Relevance.
3 Scope.
4 THE WITNESS: Like I said, I don't have --
5 I've heard it before. I can't recall where.
6 BY MR. DESAI:
7 Q Prior to your work on the 1209, 1210, and
8 1211 proceedings, did you have an understanding of
9 what the term "grid point" means in the context of
10 location determination?
11 MR. LEE: Objection. Form. Relevance.
12 Scope.
13 THE WITNESS: It's a term that the
14 definition depends on the context within which it is
15 used.
16 BY MR. DESAI:
17 Q Okay. And so in each of your declarations,
18 in the paragraphs that I've pointed you to, the
19 first paragraph says: "I have construed the phrase
20 'grid point' as a point associated with
21 representative calibration data for an area."
22 Do you see that?

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1 A Yes.
2 Q So how did you arrive at that construction
3 for the claim term "grid point" in the '104, '358,
4 and '494 patents?
5 MR. LEE: Objection. Form. Relevance.
6 Scope.
7 THE WITNESS: That's the construction that
8 was decided by the court in its Markman decision.
9 BY MR. DESAI:
10 Q Okay. So when you say: "I have construed
11 the phrase 'grid point' as a point associated with
12 representative calibration data for an area," you're
13 referring to how the District Court, in a related
14 litigation, had construed the term "grid point" in
15 these patents?
16 MR. LEE: Objection. Form. Relevance.
17 Scope.
18 THE WITNESS: The Markman, more
19 specifically.
20 BY MR. DESAI:
21 Q Was there -- did you do any independent
22 analysis of how the term "grid point" should be

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1 construed, beyond looking at the court's -- the
2 District Court in a related litigation, its Markman
3 order?
4 MR. LEE: Objection. Form. Relevance.
5 Scope.
6 THE WITNESS: I cannot recall the -- the --
7 kind of the -- where I came in to this whole
8 process, particularly since this was eight, ten
9 months ago at least. So --
10 BY MR. DESAI:
11 Q Other than the court's Markman order, is
12 there anything that you recall specifically looking
13 at in forming your opinion on how the term "grid
14 point" in the '104, '358, and '494 patents should be
15 construed?
16 MR. LEE: Objection. Form. Relevance.
17 Scope.
18 THE WITNESS: Well, I looked at the patent
19 specification and claims, the prosecution history.
20 BY MR. DESAI:
21 Q So in this declaration, you've stated that
22 you've construed: "...'grid point' as a point

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1 associated with representative calibration data for
2 an area."
3 So what do you mean by "representative
4 calibration data for an area"?
5 MR. LEE: Objection. Form.
6 THE WITNESS: I mean, it's what it says. I
7 mean, I don't know how to say it any better in a
8 paraphrasing. It's -- it is what it is, a:
9 "...'grid point' as a point associated with a
10 representative calibration for an area."
11 BY MR. DESAI:
12 Q Maybe -- so what does "representative
13 calibration data" mean?
14 MR. LEE: Objection. Form.
15 THE WITNESS: Well, calibration data is --
16 in itself is construed. So calibration data, as the
17 court construed it, is: "modified or unmodified
18 network measurement data associated with" -- a
19 geographical region -- "a geographic region [sic]."
20 Excuse me.
21 And then -- so the representative
22 calibration data would be that construction of

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1 calibration data representative of an area.
2 BY MR. DESAI:
3 Q I understand that.
4 So what I'm asking you is: What does it
5 mean for calibration to be representative of an
6 area?
7 MR. LEE: Objection. Form. Asked and
8 answered.
9 THE WITNESS: Again, I would repeat the
10 calibration data is: "modified or unmodified
11 network" -- measured -- "measurement data associated
12 with a geographical [sic] location," and then in the
13 context of the grid point use of that, it would be
14 representative modified or unmodified network
15 measurement data associated with a geographical
16 location for an area.
17 BY MR. DESAI:
18 Q So in your construction of grid point, it
19 doesn't say: "A point associated with calibration
20 data for an area," right?
21 MR. LEE: Objection. Form. Asked and
22 answered.

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1 THE WITNESS: I'm sorry. Repeat that
2 question.
3 BY MR. DESAI:
4 Q So the construction of grid point that you
5 provide in your declaration, it doesn't say: "A
6 point associated with calibration data for an area,"
7 right?
8 MR. LEE: Objection. Form. Asked and
9 answered.
10 THE WITNESS: It has those words.
11 BY MR. DESAI:
12 Q What I'm asking you is: Your construction
13 of grid point that you've provided here in your
14 declaration, it isn't only saying: "A point
15 associated with calibration data for an area."
16 It's: "...as a point associated with representative
17 calibration data for an area," correct?
18 MR. LEE: Objection. Form. Asked and
19 answered.
20 THE WITNESS: Yes, it has the
21 word "representative" in it.
22 BY MR. DESAI:

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1 Q Is it your understanding that there's a
2 distinction between calibration data and
3 representative calibration data?
4 MR. LEE: Objection. Form. Scope.
5 THE WITNESS: Well, calibration data,
6 again, is: "modified or unmodified network
7 measurement data associated with...geographical
8 [sic] location." Representative calibration data
9 means it would be referring to calibration data that
10 is representative for an area.
11 I don't know how else to phrase it than
12 what's the words on the page.
13 BY MR. DESAI:
14 Q So the representative calibration data for
15 an area would be a subset of the total calibration
16 data that might be collected, right?
17 MR. LEE: Objection. Form. Asked and
18 answered.
19 THE WITNESS: I'm not sure. I have to
20 think about that. It probably depends on the
21 specific context. It's possible, I suppose.
22 BY MR. DESAI:

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1 Q So let me ask you: If you collect
2 calibration data in a number of different areas so
3 you have a full set of calibration data -- do you
4 understand what I'm -- the hypothetical I'm posing
5 right now?
6 MR. LEE: Objection. Form. Scope.
7 Relevance.
8 THE WITNESS: Well, I'm not sure about the
9 term "full set."
10 BY MR. DESAI:
11 Q Sure. So let's say you have a set of
12 calibration data that's been collected in different
13 areas.
14 Do you understand that?
15 MR. LEE: Objection. Form. Scope.
16 Relevance.
17 THE WITNESS: Yes.
18 BY MR. DESAI:
19 Q Some subset of that data may be
20 representative of one particular area; is that fair?
21 MR. LEE: Objection. Form. Scope.
22 Relevance.

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1 THE WITNESS: It might be, depending on the
2 particulars and the context.
3 BY MR. DESAI:
4 Q What factors would it depend on for -- for
5 data to be representative of an area?
6 MR. LEE: Objection. Form. Scope.
7 Relevance.
8 THE WITNESS: I'm not sure how to answer
9 that question.
10 BY MR. DESAI:
11 Q Well, you said that it would depend on the
12 particulars and the context to say whether data --
13 calibration data is representative of an area.
14 So I'm asking you: What are the
15 particulars and the context that you're referring to
16 that would impact that determination?
17 MR. LEE: Objection. Form. Scope.
18 Relevance.
19 THE WITNESS: I'd have to think about that.
20 BY MR. DESAI:
21 Q In going back to the hypothetical I had
22 asked you, if you collect calibration data in a

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1 number of different areas so that you have a set of
2 calibration data, is it possible that some subset of
3 that calibration data would be representative of one
4 of those areas where you collected calibration data,
5 but not another?
6 MR. LEE: Objection. Form. Asked and
7 answered.
8 THE WITNESS: It's possible.
9 BY MR. DESAI:
10 Q To determine which of that calibration data
11 is representative of an area would require analyzing
12 that set of collected calibration data, right?
13 MR. LEE: Objection. Form. Scope.
14 Relevance.
15 THE WITNESS: It would not require
16 analysis. It could be just the actual measurements,
17 and I believe that is an issue as part of the
18 calibration data construction, it being as:
19 "modified or unmodified network measurement data
20 associated with a geographical [sic] location."
21 So analysis could be part of it, but it
22 doesn't have to be.

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1 BY MR. DESAI:
2 Q So I think we may be talking about two
3 separate things, so I just want to make sure that
4 we're on the same page. I'm not talking about
5 modifying or not modifying the calibration data.
6 Do you understand that?
7 MR. LEE: Objection. Form.
8 THE WITNESS: Okay. But you -- you used
9 the word "analysis." So --
10 BY MR. DESAI:
11 Q Right. So I'm not talking about modifying
12 the data.
13 I'm saying let's say you collect a set of
14 data -- calibration data at various areas. Let's
15 say it's completely unmodified. If I want to group
16 it so that some set of it is associated with a
17 particular area, would I need to do some analysis to
18 determine that grouping?
19 MR. LEE: Objection. Asked and answered.
20 THE WITNESS: I'm not sure how to answer
21 that question. The word "analysis" is kind of
22 what's throwing me there because I know it's a

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1 particular issue here.
2 BY MR. DESAI:
3 Q Can you explain your issue with the
4 word "analysis"? I guess I'm confused as to what
5 your concern is about that word.
6 MR. LEE: Objection. Asked and answered.
7 THE WITNESS: To me, analysis, in the
8 context of calibration data, means modifying that
9 data, and the construction of calibration data does
10 not require analysis; e.g., modification. It also
11 can be unmodified.
12 BY MR. DESAI:
13 Q So perhaps I'll use the word "evaluation."
14 Is it your understanding that you can evaluate a set
15 of data without modifying it?
16 MR. LEE: Objection. Form. Asked and
17 answered.
18 THE WITNESS: I mean, now we're bringing in
19 another term. So, I mean, I don't want to kind of
20 step on a land mine on -- on the scope and metes and
21 bounds of -- what was the word you used? I forget.
22 BY MR. DESAI:

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1 Q Evaluate.
2 A Evaluating. Yes. Excuse me -- evaluating
3 in how that is or isn't different than analysis.
4 Q Is it your understanding that doing a
5 statistical analysis of data is modifying that data?
6 MR. LEE: Objection. Form. Scope.
7 THE WITNESS: I haven't assessed or
8 evaluated that question as part of this -- this
9 scope, and statistics, obviously, is a huge field,
10 so I don't think I can answer that.
11 BY MR. DESAI:
12 Q Under the construction of grid point that
13 you'd proposed, which is a point associated with
14 representative calibration data for an area, how
15 would one determine whether certain calibration data
16 is representative of an area or not?
17 MR. LEE: Objection. Form.
18 THE WITNESS: I mean, that's the -- that's
19 the construction that was used and is a significant
20 part of the claims. If you want to go to a specific
21 area of the declaration and claim limitation to talk
22 about that, that's the best way I could provide an

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1 answer to what you're asking.
2 BY MR. DESAI:
3 Q Well, I've pointed you to this part of your
4 declaration because, if you look back one page
5 before, on page 14 of the '104 declaration and
6 similar other pages, this is your section on claim
7 construction in your declaration, right?
8 MR. LEE: Objection. Form.
9 THE WITNESS: This is the section, the
10 claim construction, and it's -- the claim
11 construction is utilizing what the court decided in
12 the Markman hearing.
13 BY MR. DESAI:
14 Q Okay. So you've adopted the constructions
15 that the District Court, in the related litigation,
16 adopted for the term "grid point"; is that right?
17 MR. LEE: Objection. Form.
18 THE WITNESS: I've stated how I've
19 construed each one of these terms, and I state that
20 I believe in each one of them the construction is
21 consistent with the Markman order.
22 BY MR. DESAI:

1 Q Okay. When you say that, "the construction
2 is consistent with the Markman order," you mean that
3 it is -- it is in fact the construction that was
4 adopted by the District Court in the related
5 litigation in its Markman order, right?
6 A It's consistent with that Markman order. I
7 don't -- I don't recall the -- the overall specifics
8 and process to know that every single dotted I and
9 crossed T is the same.
10 Q Sure.
11 So going back to the construction of grid
12 point: "...as a point associated with
13 representative calibration data for an area,"
14 calibration data could be collected that is
15 representative of an area; is that right?
16 MR. LEE: Objection. Asked and answered.
17 THE WITNESS: Well, the calibration data --
18 again, instead of paraphrasing, I would turn to the
19 actual construction as described on paragraph 37:
20 "...as modified or unmodified network measurement
21 data associated with a geographical [sic] location."
22 BY MR. DESAI:

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1 Q Right.
2 And what I'm asking you is: That data --
3 so we can use that definition of calibration data --
4 that can be representative of an area, correct?
5 MR. LEE: Objection. Asked and answered.
6 THE WITNESS: It could be.
7 BY MR. DESAI:
8 Q And that calibration data that is
9 collected, and using the same definition that you
10 referred to before for calibration data, may also
11 not be representative of an -- of an area, correct?
12 MR. LEE: Objection. Form. Asked and
13 answered.
14 THE WITNESS: If I've got calibration data
15 collected in Africa, it's probably not
16 representative for Washington, D.C. So --
17 BY MR. DESAI:
18 Q Right.
19 So there's -- in calibration data that's
20 been collected, it may not be representative of an
21 area; is that fair?
22 MR. LEE: Objection. Form. Scope. Asked

1 and answered.
2 THE WITNESS: It's possible.
3 BY MR. DESAI:
4 Q I'm just trying to understand your answer.
5 You agree with me that it's possible that
6 calibration data that's been collected may not be
7 representative of a given area; is that right?
8 MR. LEE: Objection. Form. Scope. Asked
9 and answered.
10 THE WITNESS: Calibration data is:
11 "modified or unmodified network measurement data
12 associated with a geographical [sic[location."
13 To use my example, if you're collecting
14 modified or unmodified network measurement data in
15 Africa and you're interested in Washington, D.C.,
16 it's probably -- most people wouldn't call that
17 representative.
18 BY MR. DESAI:
19 Q Okay. So that's one example where
20 collected calibration data may not be representative
21 of some area; is that -- is that right?
22 MR. LEE: Objection. Form. Scope. Asked

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1 and answered.
2 THE WITNESS: Again, the construction of
3 calibration data is associated with a geographical
4 location. So if you're talking the other side of
5 the planet, then, you know, a reasonable person
6 probably wouldn't view those as being -- being the
7 same. It may coincidently have the -- be very
8 similar, but the geographical location in that
9 particular context would be vastly different.
10 BY MR. DESAI:
11 Q All right. So in each of your
12 declarations, in the second paragraph that I've
13 pointed you to, it says: "This construction is
14 consistent with the Markman Order," and we're still
15 under the heading of grid point here.
16 Do you see that in your '104, '358, and
17 '494 declarations?
18 A Yeah.
19 Q And so I think we've been through this, but
20 in here, in your declarations, you're referring to
21 the Markman order from a related District Court case
22 involving these patents, correct?

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1 A To be precise, it says: "See EX1028..."
2 and in my exhibit list, Exhibit 1028 -- I don't know
3 if you want me to read that, but it's the: "Claim
4 Construction Memorandum Opinion & Order dated
5 July 19th, 2023."
6 Q Okay. So I'm going to hand you what's been
7 marked as Exhibit 1028 from the 1209 proceeding.
8 It's the same document -- you can look at your
9 exhibit list -- that has been marked as Exhibit 1028
10 in the 1210 and 1211 proceedings as well.
11 MR. FEDOWITZ: I'll just note, Dave, if you
12 need any more exhibits, we have all your exhibits on
13 the cart behind you, since these are complete
14 exhibits for his declaration.
15 THE WITNESS: Small forest.
16 BY MR. DESAI:
17 Q All right. After you've had a moment to
18 take a look at that, just let me know if you
19 recognize what's been previously marked as
20 Exhibit 1028 in proceedings 1209, 1210, and 1211.
21 A It looks familiar.
22 Q Do you recall reviewing this exhibit in

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1 forming the opinions in your declaration?
2 A Yes.
3 Q Can you turn to page 18 of Exhibit 1028,
4 and you see, at the bottom, there's a subheading
5 that says: "grid point," correct?
6 A Yes.
7 Q And if you look just a few pages forward,
8 you see that this is the section of Exhibit 1028
9 addressing the District Court's construction of the
10 term "grid point," right?
11 A Yes.
12 Q If you'd look back at page -- the bottom of
13 page 18, it says: "The fifth disputed term, 'grid
14 point,' appears in several claims of the '104
15 Patent, '358 Patent, '494 Patent, and '753 Patent."
16 Do you see that?
17 A Yes.
18 Q That's consistent with your understanding
19 of where the claim term "grid point" is found in
20 these patents?
21 A Yes.
22 Q And if you look at page 20, about the

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1 middle, you see that there's a box that says:
2 "Final Construction"?
3 A Yes.
4 Q And the court's final construction of grid
5 point is: "a point associated with representative
6 calibration data for an area."
7 Do you see that?
8 A Yes.
9 Q And you see that the court adopted this
10 construction for grid point as that term is used
11 across the '104, '358, '494, and '753 patents,
12 right?
13 MR. LEE: Objection. Form.
14 THE WITNESS: Repeat the question. I'm
15 sorry.
16 BY MR. DESAI:
17 Q Sure.
18 You see that the court adopted this
19 construction for grid point as that term is used in
20 the '104, '358, '494, and '753 patents, right?
21 MR. LEE: Objection. Form.
22 THE WITNESS: It uses the word -- '358 is

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1 mentioned in the first sentence, but it's -- for
2 some reason, it's not in the next-to-last sentence,
3 but I think that's a typo.
4 BY MR. DESAI:
5 Q So I guess what I'm trying to understand,
6 so the court adopted a single construction for grid
7 point; is that fair? There's just --
8 A I think that's fair.
9 Q Okay. And so the term "grid point" is
10 used -- if you look back at page 18 and see what the
11 court said, the term "grid point" appears in several
12 claims of the '104 patent, '358 patent, '494 patent,
13 and '753 patent, right?
14 A Correct.
15 Q And you agree with that statement?
16 A I think -- I'd have to go back to be
17 absolutely certain, but I think that's fair.
18 Q Okay. And so for that single term "grid
19 point" that is in each of those four patents, the
20 court adopted a single construction of grid point,
21 right?
22 MR. LEE: Objection. Form.

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1 THE WITNESS: I think that's the intent of
2 this section in the Markman order. Like I said,
3 the -- for some reason, they left out '358 in the
4 next-to-last sentence, but I -- I think that's a
5 fair statement.
6 BY MR. DESAI:
7 Q Okay. So what's in the box marked "Final
8 Construction" on page 20 is the District Court's
9 adopted construction for the term "grid point,"
10 right?
11 A I -- for those four patents, I think that's
12 fair.
13 Q And that is the same construction that
14 you've adopted for the term "grid point" in the
15 1209, 1210, and 1211 proceedings, right?
16 A Correct.
17 Q Do you agree with the District Court's
18 construction of the term "grid point"?
19 MR. LEE: Objection. Form. Relevance.
20 Scope.
21 THE WITNESS: That's what I used.
22 BY MR. DESAI:

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1 Q Okay. So fair to say that you agree with
2 the District Court's construction of grid point?
3 MR. LEE: Objection. Form. Relevance.
4 Scope.
5 THE WITNESS: The court construed what they
6 construed, so that's what I used. There's not a
7 question of agreeing or not agreeing. It's just
8 what I -- what is.
9 BY MR. DESAI:
10 Q Okay. So you adopted this construction --
11 you've proposed this construction because the court
12 adopted this construction in the related litigation?
13 MR. LEE: Objection. Asked and answered.
14 THE WITNESS: I construed the grid point
15 as -- as consistent with the Markman order, and I
16 think the phrasing is actually exactly the same.
17 BY MR. DESAI:
18 Q So what I'm trying to understand is you
19 said it's not a question of agreeing or not
20 agreeing, so did you look at what the court -- how
21 the court arrived at its construction of grid point
22 in forming your proposal for the construction of

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1 grid point in the 1209, 1210, and 1211 proceedings?
2 A I --
3 MR. LEE: Objection. Scope.
4 THE WITNESS: Sorry.
5 I reviewed it at some point. I don't
6 remember the particulars, but I -- that's -- you
7 know, they construed what they construed, and that's
8 what I've used.
9 BY MR. DESAI:
10 Q Do you understand that there's no
11 requirement to adopt the District Court's
12 construction in these IPR proceedings?
13 MR. LEE: Objection. Form. Relevance.
14 Scope.
15 THE WITNESS: That sounds like a legal
16 issue that I'm -- I can't -- I'm not a lawyer, so in
17 terms of requirement or not, legal requirement --
18 BY MR. DESAI:
19 Q I'm trying -- sorry. Go ahead.
20 A It sounds like you're asking about a legal
21 requirement, and I can't -- I'm not a lawyer.
22 Q Fair enough.

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1 Did you -- actually, strike that.
2 I'd like you to take a moment to read the
3 District Court's section on the term "grid point" in
4 Exhibit 1028. It's about a page-and-a-half total.
5 Take a moment to look at that.
6 A Okay.
7 Q In reviewing that part of the District
8 Court's Markman analysis, is there anything that you
9 disagreed with --
10 MR. LEE: Objection.
11 BY MR. DESAI:
12 Q -- regarding the construction of grid
13 point?
14 MR. LEE: Objection. Relevance. Scope.
15 THE WITNESS: It seems a logical
16 progression of analysis, but I -- I don't -- I
17 didn't read it with an eye of agreeing or
18 disagreeing, just to understand what the ultimate
19 construction was.
20 BY MR. DESAI:
21 Q Okay. So you -- when you prepared your
22 declarations and you've stated that: "I have

1 construed the phrase 'grid point' as a point
2 associated with representative calibration data for
3 an area," you weren't concerned with what the
4 court's analysis of -- of the construction of that
5 term actually says; is that right?
6 MR. LEE: Objection. Form. Asked and
7 answered.
8 THE WITNESS: No. I read what they had to
9 make sure I understood the -- what -- that I
10 understood what they meant in their final
11 construction.
12 BY MR. DESAI:
13 Q Okay. So you looked at the District
14 Court's analysis to understand how it arrived at its
15 final claim construction; is that right?
16 MR. LEE: Objection. Form. Asked and
17 answered.
18 THE WITNESS: I looked at this Markman
19 order.
20 BY MR. DESAI:
21 Q Okay. And you agreed with what the court
22 stated in its Markman order in proposing your own

1 construction of grid point in the IPR proceedings;
2 is that right?
3 MR. LEE: Objection. Form. Asked and
4 answered.
5 THE WITNESS: I -- as I state in my
6 declaration: "I have construed...'grid point' as a
7 point associated with a [sic] representative
8 calibration data for an area.
9 "This construction is consistent with the
10 Markman Order."
11 In this particular case, I think it's
12 exactly the same, so it is consistent. Again, it
13 wasn't a question of agreeing or disagreeing. It's
14 what the court decided, and that's what I used.
15 BY MR. DESAI:
16 Q So earlier you said -- when I asked you if
17 you -- about your consideration of what the court's
18 analysis was for this term, you said that you read
19 what they had to make sure that you understood what
20 they meant in their final construction. Now you're
21 saying, "It wasn't a question of agreeing or
22 disagreeing. It's what the court decided, and

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1 that's what I used."
2 So I'm trying to understand, did you
3 consider the court's analysis, or did you simply
4 take the construction that it adopted and use it for
5 the IPR proceedings?
6 MR. LEE: Objection. Form. Asked and
7 answered.
8 THE WITNESS: I reviewed the discussion of
9 how they arrived at a grid point -- a construction
10 of grid point, and then utilized that -- excuse
11 me -- final construction in my analysis.
12 BY MR. DESAI:
13 Q So if you used that final construction in
14 your analysis, that means you agreed with the
15 court's discussion of how it arrived at the
16 construction of grid point; is that fair?
17 MR. LEE: Objection. Form. Asked and
18 answered.
19 THE WITNESS: It's -- again, it's not a
20 question of agreeing or disagreeing. It's just an
21 understanding and using.
22 BY MR. DESAI:

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1 Q So if you had disagreed with the District
2 Court's analysis, would you have still adopted the
3 same construction of grid point in the IPR
4 proceedings?
5 MR. LEE: Objection. Scope. Asked and
6 answered.
7 THE WITNESS: I can't say that I did
8 disagree. I just -- so I don't know the answer to
9 that question, and I don't -- I don't know exactly
10 what the legal process is associated with
11 disagreeing with a court construction or not. It's
12 irrelevant because that's the construction I used.
13 BY MR. DESAI:
14 Q Right.
15 And you understand -- and what I'm trying
16 to understand is the basis for why you used that
17 construction, and that's what these questions are
18 asking about. So I'm trying to ask you: What was
19 the basis for you using -- adopting the construction
20 of grid point: "...as a point associated with
21 representative calibration data for an area"?
22 Was it the fact that that was the final

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1 construction that the District Court adopted, or was
2 it that you agreed with the District Court's
3 analysis of that term?
4 MR. LEE: Objection. Form. Scope. Asked
5 and answered.
6 THE WITNESS: It's what the court
7 construed, and I -- there was nothing about it that
8 I disagreed with, if that helps to answer your
9 question.
10 MR. LEE: Counsel, we've been going for
11 over an hour, is this a good time to take a break.
12 MR. DESAI: Yeah.
13 BY MR. DESAI:
14 Q Is this a good time for you?
15 A Yeah.
16 (Recessed at 10:04 a.m.)
17 (Reconvened at 10:16 a.m.)
18 BY MR. DESAI:
19 Q All right. Mr. Williams, can you -- do you
20 still have Exhibit 1028 in front of you?
21 A Yes.
22 Q And if you look at about the middle of page

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1 19, do you see that there's a block quote here, some
2 text from the abstract of the '753 patent?
3 A With the header -- or the -- whatever the
4 right word is -- "Plaintiff argues that its proposed
5 construction is 'near-definitional' language taken
6 from the Abstract of the '753 Patent, which states,
7 in relevant part..." and then that block that you're
8 talking about.
9 Q Right.
10 So that block is -- is -- the court is
11 indicating that that is text from the abstract of
12 the '753 patent, right?
13 MR. LEE: Objection. Form. Scope.
14 THE WITNESS: That block is taken from the
15 '753 patent.
16 BY MR. DESAI:
17 Q And you see the court has italicized a
18 certain part of that quote, and the italicized
19 portion reads: "The calibration data for these
20 locations is gathered and analyzed so that
21 particular grid points within the geographic region
22 can be determined and associated with a particular

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1 set or sets of calibration data from, for example,
2 one or more NMRs"?
3 You see that?
4 A Yes, I do.
5 Q So this language is indicating that the
6 grid point is something that is determined from the
7 calibration data; is that right?
8 MR. LEE: Objection. Form. Scope. Asked
9 and answered.
10 THE WITNESS: You're -- you're
11 paraphrasing, so I -- I mean, I -- like I said, it's
12 been a while since I've reviewed this. But specific
13 to your italicized question, the court says: "But
14 the italicized language from which Plaintiff's
15 construction is drawn is directed more towards what
16 must be done to arrive at a grid point or set of
17 grid points rather than what is a grid point is."
18 BY MR. DESAI:
19 Q Right.
20 So the court is saying that this language
21 is indicating what must be done to arrive at a grid
22 point; is that right?

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1 MR. LEE: Objection. Form. Scope. Asked
2 and answered.
3 THE WITNESS: I'm just -- I read -- I can't
4 get into the -- the specific head of the court. I
5 haven't looked at this in particular. All I can go
6 is off of what it says on the page, in terms of them
7 characterizing that italicized part as it being:
8 "...directed more towards what must be done to
9 arrive at a grid point or set of grid points rather
10 than what a grid point is."
11 So, you know, the term "directed towards"
12 is kind of a pretty wide-open phrase. So that's --
13 all I can do is read what's here. Sorry.
14 BY MR. DESAI:
15 Q So based on your analysis of the '104,
16 '358, and '494 patents, as part of these IPR
17 proceedings, is it your understanding that a grid
18 point is something that is determined?
19 MR. LEE: Objection. Form. Relevance.
20 Scope.
21 THE WITNESS: I would have to refer you to
22 the construction: The grid point being: "...a

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1 point associated with representative calibration
2 data for an area," and then the construction of
3 calibration data, which is: "...modified or
4 unmodified network measurement data associated with"
5 -- a geographical region -- or, "a geographical
6 [sic] location." Excuse me.
7 BY MR. DESAI:
8 Q So do you have a view on whether a grid
9 point is something that has to be determined or
10 generated from the calibration data?
11 MR. LEE: Objection. Relevance. Scope.
12 Asked and answered.
13 THE WITNESS: The word "determined" is not
14 in either of those constructions, so -- excuse me --
15 the -- I can't answer that question just based on
16 the construction. If you want to go to a particular
17 claim limitation that has that term, then I could
18 see if my declaration has that word or not. I do
19 not recall.
20 BY MR. DESAI:
21 Q Right now I still just want to stick with
22 Exhibit 1028 because, as the sentence you read, the

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1 court said that this italicized language is directed
2 more towards what must be done to arrive at a grid
3 point.
4 So focusing on those words, is it your
5 understanding that something must be done to arrive
6 at a grid point? Do you agree with the court in
7 that regard?
8 MR. LEE: Objection. Relevance. Scope.
9 Asked and answered.
10 THE WITNESS: That's how they interpreted
11 that phrase, and, again, I didn't look at it as
12 opposed to agree or disagree, just whether I
13 understood it, and I understood their logic in
14 making that statement.
15 BY MR. DESAI:
16 Q So you think it's a logical statement?
17 MR. LEE: Objection. Relevance. Scope.
18 Asked and answered.
19 THE WITNESS: Seems like it's reasonably
20 logical.
21 BY MR. DESAI:
22 Q Do you have any reason to disagree with

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1 that statement right now?
2 MR. LEE: Objection. Relevance. Scope.
3 Asked and answered.
4 THE WITNESS: Like I said, it's been a long
5 time since I really sat down and studied this. So
6 I'm reluctant to make any kind of an instant
7 reassessment after ten months or whatever.
8 BY MR. DESAI:
9 Q So sitting here today, you can't let me
10 know right now whether you have any reason to
11 disagree with the court's statement here as to
12 whether something must be done to arrive at a grid
13 point; is that right?
14 MR. LEE: Objection. Relevance. Scope.
15 Asked and answered.
16 THE WITNESS: It seems like a logical
17 characterization. That's -- there's nothing that
18 is -- I would say I disagree with just sitting here
19 looking at it again for the first time in several
20 months.
21 BY MR. DESAI:
22 Q Did you look at this Markman order in

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1 preparing for your deposition today?
2 A Yes. I didn't memorize it, though.
3 Q I understand.
4 So you've looked at this Markman order
5 within the past few weeks; is that correct?
6 A Looked at it, yes, and, in particular,
7 making sure I was -- the final construction, making
8 sure I was consistent and understood what that was
9 about.
10 Q Based on your understanding of the
11 term "grid point," as it's used in the '104, '358,
12 and '494 patents, is it different from a point where
13 measurements were taken or calibration data was
14 collected?
15 MR. LEE: Objection. Relevance. Scope.
16 Form.
17 THE WITNESS: I would just have to go back
18 to the grid points: "...a point associated with a
19 [sic] representative calibration data for an area:
20 And then calibration data is: "...modified or
21 unmodified network measurement data associated with
22 a geographical [sic] location."

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1 It's just what those terms are.
2 BY MR. DESAI:
3 Q All right. So let's focus on the meaning
4 of the phrase "representative calibration data,"
5 which is a part of that construction that you just
6 read for grid point.
7 Would you turn to page 20 of Exhibit 28
8 [sic]. You see, about halfway down in the text, the
9 court says: "But Defendants' use of 'representative
10 calibration data' is intended to reflect that the
11 defining characteristic of a NUG region -- as
12 explained in the specifications of the '753 Patent,
13 '104 Patent, and '748 Patent -- is that the data
14 points within an area are all 'statistically very
15 similar' such that each of the grid points within
16 the NUG region can represent the overall NUG."
17 Do you see that?
18 A Yes.
19 Q So is it your understanding that this
20 language is the court explaining what the
21 phrase "representative calibration data," in its
22 construction of grid point, means?

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1 MR. LEE: Objection. Form. Scope. Asked
2 and answered.
3 THE WITNESS: It's part of their
4 discussion.
5 BY MR. DESAI:
6 Q Is there something else that you want to
7 point me to where the court is explaining what the
8 phrase "representative calibration data," in its
9 adopted construction of grid point, means?
10 MR. LEE: Objection. Scope.
11 THE WITNESS: Well, the -- the court, in
12 its explanation in this order, in coming to a final
13 construction, states: "...there are two core
14 disagreements: ...whether the term can refer to a
15 location, and (2) whether a grid point is
16 'representative' of or 'associated with' calibration
17 data."
18 And then the balance of page 19, I think,
19 is on the first part of that, and then the top of
20 page 20 is about the representative part of it.
21 BY MR. DESAI:
22 Q Looking back at page 19 for a minute, you

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1 see below that block quote that we were looking at
2 before, there's a sentence that starts: "The
3 specification of the '104 Patent, sibling to the
4 '753 Patent, does provide a clear indication of the
5 meaning of 'grid point' -- or a Non-uniform grid
6 point ('NUG')"?
7 Do you see that?
8 A And, specifically: "NUGs represent an area
9 of collected calibration data."
10 Q So you're aware that the '104, '358 and
11 '494 patents use the acronym N-U-G, or "NUG," to
12 refer to non-uniform grid points; is that correct?
13 MR. LEE: Objection. Relevance. Scope.
14 THE WITNESS: Yes, I'm aware of that.
15 BY MR. DESAI:
16 Q So going forward, if I use the term "NUG,"
17 you understand that I'm referring to non-uniform
18 grid points?
19 MR. LEE: Objection. Relevance. Scope.
20 THE WITNESS: Yes.
21 BY MR. DESAI:
22 Q All right. So turning back to page 20 --

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1 and feel free to confirm, but you previously
2 mentioned that you believe this page is where the
3 court is explaining the dispute regarding whether
4 the grid point is representative of --
5 representative of calibration data, right?
6 MR. LEE: Objection. Form. Scope.
7 THE WITNESS: It's about representative
8 calibration data, not representative of calibration
9 data.
10 BY MR. DESAI:
11 Q Yeah. And let me -- let me reask the
12 question.
13 So on page 20, you agree that the court
14 here is discussing what the phrase "representative
15 calibration data," in its construction of grid
16 point, means, right?
17 A It's -- it broke down the issues associated
18 with construction of grid point into two parts, the
19 second of which is: "...whether a grid point is
20 'representative' of or 'associated with' calibration
21 data," and then that top half of the page 20 appears
22 to be directed to that second part of that breakdown

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1 of the issues.
2 Q And turning back to the sentence we looked
3 at before: "But Defendants' use of 'representative
4 calibration data' is intended to reflect..." do you
5 see the sentence that starts like that?
6 A Yeah.
7 Q Take a look at that sentence. Do you agree
8 that that sentence is the court explaining what the
9 phrase "representative calibration data," as used in
10 the construction of grid point, means?
11 MR. LEE: Objection. Form. Relevance.
12 Scope.
13 THE WITNESS: That's the court's
14 characterization in this order, referring to several
15 exhibits, B, E, and F, specifically. But, I mean,
16 that's what it says in the order.
17 BY MR. DESAI:
18 Q All right. And the court says: "...that
19 the defining characteristic of a NUG region...is
20 that the data points within an area are all
21 'statistically very similar' such that each of the
22 grid points within the NUG region can represent the

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1 overall NUG."
2 Do you see that?
3 A Yes. That's the last part of the
4 next-to-last sentence in that section.
5 Q Do you agree with that statement?
6 MR. LEE: Objection. Relevance. Scope.
7 Asked and answered.
8 THE WITNESS: It is their characterization
9 that -- of that -- of those passages. I -- it's
10 been a long time since I've looked at what -- those
11 underlying exhibits, so I accepted what they said in
12 their order relative to its final construction. So
13 it's --
14 BY MR. DESAI:
15 Q In the 1209, 1210, and 1211 proceedings,
16 you've opined on what the construction of grid
17 point, as used in the '104, '358, and '494 patents,
18 should be, right?
19 MR. LEE: Objection. Scope.
20 THE WITNESS: And specifically I state, in
21 my declaration -- each of those declarations: "I
22 have construed the phrase 'grid point' as a point

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1 associated with representative calibration data for
2 an area," and that: "This construction is
3 consistent with the Markman Order," which is what
4 we're discussing.
5 BY MR. DESAI:
6 Q Right.
7 So both your construction and the court's
8 construction of grid point use the
9 phrase "representative calibration data," right?
10 MR. LEE: Objection. Form.
11 THE WITNESS: These three words are in each
12 one of those. I mean, it's -- I -- what the court
13 construed is what I used.
14 BY MR. DESAI:
15 Q Do you have a different understanding of
16 what representative calibration data means, in your
17 construction of grid point, than what the court is
18 saying representative calibration data means in the
19 construction of grid point?
20 MR. LEE: Objection. Form. Relevance.
21 Scope.
22 THE WITNESS: Sitting here today, I can't

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1 say I have a different articulation of that.
2 It's -- like I said, it's been a long time since I
3 looked at the underlying exhibits from which they
4 derived that statement.
5 BY MR. DESAI:
6 Q Does -- the court's statement here about:
7 "Defendants' use of 'representative calibration
8 data...'" does it seem logical to you?
9 MR. LEE: Objection. Relevance. Scope.
10 Asked and answered.
11 THE WITNESS: It's -- there's nothing that
12 jumps out as being unreasonable about it, but with
13 the caveat, again, it's basing it on three passages
14 of Exhibits -- in Exhibits B, E, and F, whatever
15 those are relative to this Markman order.
16 So I haven't looked at those underlying
17 passages recently to see if -- you know, if -- how
18 they characterize those passages here is a
19 reasonable characterization or not. I just accepted
20 it for what it was.
21 BY MR. DESAI:
22 Q Is -- the calibration data that's

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1 associated with the grid point, as that term is used
2 in the '104, '358, and '494 patents, does that mean
3 statistically very similar?
4 MR. LEE: Objection. Form. Relevance.
5 Scope.
6 THE WITNESS: Calibration data has its own
7 construction. Specifically: "...modified or
8 unmodified network measurement data associated with
9 a geographical [sic] location."
10 That does not have the word "statistics" or
11 "statistically similar" or anything like that in
12 that construction, so I can't answer that question.
13 BY MR. DESAI:
14 Q Well, I'm asking about the construction of
15 grid point, which does use the phrase
16 "representative calibration data," right?
17 MR. LEE: Objection. Form. Relevance.
18 Scope.
19 THE WITNESS: It -- grid point does have
20 the term "representative calibration data," yeah.
21 BY MR. DESAI:
22 Q So you were previously reading the

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1 construction of the term "calibration data," right?
2 MR. LEE: Objection. Form.
3 THE WITNESS: A sentence or two ago, yes.
4 BY MR. DESAI:
5 Q You weren't -- the construction of the
6 term -- strike that.
7 So if you look at -- say, in your '104
8 declaration at paragraph 37 --
9 A Okay.
10 Q -- and so here you say: "I have construed
11 the phrase 'calibration data' as modified or
12 unmodified network measurement data associated with
13 a geographic location," right?
14 A Yes.
15 Q The phrase you've construed is just
16 "calibration data," not, "representative calibration
17 data," right?
18 MR. LEE: Objection. Form.
19 THE WITNESS: It's just calibration data.
20 BY MR. DESAI:
21 Q Is representative calibration data
22 something different from calibration data?

1 MR. LEE: Objection. Scope.
2 THE WITNESS: Well, it's not -- it's
3 additional -- adjective? Adverb? I don't get those
4 right.
5 BY MR. DESAI:
6 Q Does that complete your answer?
7 MR. LEE: Objection. Scope.
8 THE WITNESS: As far as I understand your
9 question, yes.
10 BY MR. DESAI:
11 Q I'm asking: What is the difference between
12 representative calibration data and calibration
13 data?
14 Because you've used those terms here in
15 your declaration. So I'm trying to understand what
16 distinction you're drawing between those.
17 MR. LEE: Objection. Relevance. Scope.
18 THE WITNESS: Well, the -- the full context
19 or the full phrasing of that representative
20 calibration data is: "...a point associated" --
21 with a -- "with representative calibration data for
22 an area."

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1 So the representative term is referring to
2 both a point, as well as an area.
3 BY MR. DESAI:
4 Q What do you mean that "the representative
5 term is referring to both a point, as well as an
6 area"?
7 MR. LEE: Objection. Scope. Asked and
8 answered.
9 THE WITNESS: The context in the
10 construction of representative calibration data is:
11 "...a point associated with representative
12 calibration data for an area."
13 That's all I meant by that.
14 BY MR. DESAI:
15 Q When you used the phrase "representative
16 calibration data" in your proposal for what grid
17 point should mean in these IPR proceedings, did you
18 consider what the District Court said about the
19 phrase "representative calibration data" in its
20 adopted construction of grid point?
21 MR. LEE: Objection. Form. Asked and
22 answered.

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1 THE WITNESS: I do not remember the timing
2 or sequence of kind of what came first, what came
3 second. I just don't remember. It's several months
4 ago, ten months ago, whatever. So I don't know the
5 answer.
6 BY MR. DESAI:
7 Q I guess I'm trying to understand.
8 When you refer to the sequence, are you
9 suggesting that you came to the construction at:
10 "...point associated with representative calibration
11 data for an area," before ever seeing the court or
12 hearing the court's Markman order?
13 MR. LEE: Objection. Form.
14 THE WITNESS: All I -- I don't remember the
15 logical timing and sequence of everything.
16 BY MR. DESAI:
17 Q You didn't come to your construction of
18 grid point independently of the court's correction
19 of grid point, did you?
20 MR. LEE: Objection. Form.
21 THE WITNESS: I don't remember the timing.
22 I don't think so, though.

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1 BY MR. DESAI:
2 Q Can you turn to paragraph 121 in your '104
3 declaration? And it's also paragraph 124 in your
4 '358 declaration and 105 in your '494 declaration.
5 And let me know when you're there.
6 A I'm at 121 in my '104 declaration.
7 Q Okay. And you see that it says:
8 "'Non-uniform grid points' of the '104 Patent, as
9 described more fully in the '753 Patent, (EX1008)
10 which claims priority to a common provisional
11 application (EX1005), are grid points non-uniformly
12 spaced through a geographic region"?
13 Do you see that language?
14 A Yes.
15 Q And, subsequently, the same language is in
16 your '358 and '494 declarations, right? And there's
17 a different reference to the patent. But --
18 A Probably. Would you like me to confirm
19 that?
20 Q Yes.
21 So you can look at paragraph 124 in your
22 '358 declaration and 105 in your '494 declaration.

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1 A I'm sorry. Which one is the '494?
2 Q In the '494, it should be 105.
3 A The phrasing in the '104 is different than
4 the '358 and '494, in terms of the overall
5 paragraph.
6 Q Okay. But in each of these declarations,
7 you state that the non-uniform grid points of these
8 patents are described more fully in the '753 patent,
9 right?
10 A Correct.
11 Q And the '753 patent you cite here is
12 Exhibit 1008 in these proceedings?
13 A Correct.
14 Q So I'm going to hand you what's been marked
15 as Exhibit 1008 from the 1209 proceeding. You can
16 check your exhibit list, but it's the same Exhibit
17 1008 from the 1210 and 1211 proceedings, and it is
18 U.S. Patent No. 8,406,753, which we've been
19 discussing as the '753 patent.
20 A Okay.
21 Q Does Exhibit 1008 look familiar to you?
22 A Yes.

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1 Q What is it?
2 A Yes.
3 I'm sorry. Was there a question?
4 Q No. Sorry.
5 And so when you said, in the declaration --
6 in your declarations in the paragraph we were just
7 looking at, that the non-uniform grid points of the
8 '104, '358, '494 patents: "...as described more
9 fully in the '753 Patent..." you're referring to
10 this patent here in Exhibit 1008, right?
11 A That's correct.
12 Q So if you'd turn in Exhibit 1008 to column
13 2, and look at approximately line 26, and let me
14 know when you're there.
15 A In column 2?
16 Q Yes.
17 A Okay.
18 Q Okay. And you see that it says: "In this
19 regard, the present subject matter overcomes the
20 limitations of the prior art by estimating the
21 location of a wireless mobile device using, at least
22 in part, one or more pre-existing Network

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1 Measurement Reports ('NMRs') which include
2 calibration data for a number of locations within a
3 region. The calibration data for these locations
4 must be gathered and analyzed so that particular
5 points (e.g., 'grid points') within the geographic
6 region can be determined and associated with a
7 particular set or sets of calibration data from, for
8 example, one or more NMRs"?
9 Do you see that language?
10 A Yes.
11 Q So this is similar to language we looked at
12 in Exhibit 1028, the court's Markman order? It was
13 block quoted.
14 Obviously, you can refer back to that. I
15 believe you still have Exhibit 1028 in front of you.
16 MR. LEE: Objection. Form.
17 BY MR. DESAI:
18 Q And look at page 19 of Exhibit 1028.
19 A I'm sorry. Was there a question there?
20 Q So the portion that I read that says: "The
21 calibration data for these locations must be
22 gathered and analyzed so that particular points,

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1 (e.g., 'grid points') within the geographic region
2 can be determined and associated with a particular
3 set or sets of calibration data from, for example,
4 one or more NMRs," so when you were stating, in your
5 '104, '358, and '494 declarations, that the:
6 "'non-uniform grid points'...as described more fully
7 in the '753 Patent..." does that relate to this
8 language that I've read here about calibration data
9 for these locations being gathered and analyzed so
10 that particular grid points can be determined?
11 MR. LEE: Objection. Form. Relevance.
12 Scope.
13 THE WITNESS: That -- let's see.
14 Well, the reference is not to column 2,
15 whatever. It is to column 9, 41 to 42, and it's
16 specifically to the phrasing of non-uniform --
17 non-uniform grid points: "...are grid points
18 'non-uniformly spaced through out a geographical
19 [sic] region.'"
20 BY MR. DESAI:
21 Q So is it your position that the only
22 relevance of the '753 patent to the meaning of the

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1 term "grid points," is that what's in column 9,
2 lines 41 to 42 of the '753 patent?
3 MR. LEE: Objection. Form. Scope.
4 THE WITNESS: No. That's just a -- a quote
5 extraction from the patent specifically on that.
6 That doesn't describe everything about non-uniform
7 grid points. Non-uniform grid points is used very
8 frequently in a variety of contexts throughout the
9 patent and patent claims.
10 BY MR. DESAI:
11 Q Do you agree that the '753 patent
12 describes -- provides further explanation of the
13 non-uniform grid points, as that term is used in
14 claims of the '104, '358, and '494 patent? Right?
15 MR. LEE: Objection. Form. Scope.
16 THE WITNESS: Repeat the question, please.
17 BY MR. DESAI:
18 Q You agree that the '753 patent provides
19 further description of the non-uniform grid points,
20 as that term is used in the claims of the '104,
21 '358, and '494 patent, right?
22 MR. LEE: Objection. Form. Scope.

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1 THE WITNESS: Non-uniform grid points, or
2 NUGs, is used in a variety of places throughout the
3 '753 patent.
4 BY MR. DESAI:
5 Q And what I'm saying -- and you can look
6 back at your declaration, the paragraph that I
7 pointed you to, for example, paragraph 121 in the
8 '104 declaration, you say that the: "'Non-uniform
9 grid points' of the '104 Patent, as described more
10 fully in the '753 Patent..." correct?
11 MR. LEE: Objection. Form.
12 THE WITNESS: Well, that -- that particular
13 passage is -- recites to paragraph -- or excuse
14 me -- column 9, 41-42, specifically providing a --
15 more of a definition about what non-uniform grid
16 points are, non-uniformly spaced -- "...grid points
17 'non-uniformly spaced throughout a geographical
18 region.'"
19 So it's elaborating.
20 BY MR. DESAI:
21 Q So you're agreeing that the '753 patent
22 describes non-uniform grid points, as that term is

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1 used in the '104, '358, and '494 patents?
2 A That passage is from the '753 patent, and I
3 refer to it in each one of the '104, '358, and '494
4 patents.
5 Q So I'm not asking you just about that
6 passage. You have the '753 patent in front of you
7 as well, and I believe you've already testified that
8 it uses the term "non-uniform grid point," or "NUG,"
9 throughout it a number of times.
10 So what I'm asking you is: You agree that
11 the '753 patent describes non-uniform grid points,
12 as that term is used in the '104, '358, and '494
13 patents, right?
14 MR. LEE: Objection. Form. Asked and
15 answered.
16 THE WITNESS: The '753 patent refers to
17 non-uniform grid points, or NUGs, in a variety of
18 places.
19 BY MR. DESAI:
20 Q Do you think that the description of
21 non-uniform grid points, or NUGs, in the '753 patent
22 is different from how that term is used in the '104,

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1 '358, and '494 patents?
2 MR. LEE: Objection. Form. Asked and
3 answered.
4 THE WITNESS: The '753 patent describes
5 non-uniform grid points in a variety of contexts.
6 So I'm not sure I understand exactly your question.
7 I mean, there's -- and it's used in the --
8 particularly claim 2.
9 So if you want to go to claim 2 in the
10 declaration, we could talk more about specific
11 utilization of that term relative to the prior art
12 and, thus -- and various usages of that term as
13 appropriate.
14 BY MR. DESAI:
15 Q Okay. So you can turn -- you have the '104
16 patent in front of you. You can turn to claim 2.
17 A Okay.
18 Q Okay. Do you see that claim 2 of the '104
19 patent reads: "The method of claim 1 wherein said
20 database comprises previously-gathered calibration
21 data for one or more non-uniform grid points within
22 said region"?

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1 You see that?
2 A Yes.
3 Q So as the term "non-uniform grid points" is
4 used in this claim, do you agree that the '753
5 patent provides an explanation of what that term
6 means as used in the claim?
7 MR. LEE: Objection. Form. Asked and
8 answered.
9 THE WITNESS: Well, how -- how the '104, in
10 this particular case, is met by the prior art,
11 particularly claim 2, I describe in my declaration,
12 and I specifically cite various references to
13 non-uniform grid point in that explanation, if you
14 want to go there.
15 BY MR. DESAI:
16 Q So I'm not asking about the prior art. You
17 understand that before we talk about the prior art,
18 there has to be an understanding of what the patent
19 covers, right? And that's part of what you've done
20 with claim construction, is to define what certain
21 claim terms mean, right?
22 MR. LEE: Objection. Form. Scope. Asked

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1 and answered.
2 THE WITNESS: There was a lot in that
3 question.
4 BY MR. DESAI:
5 Q Okay. So what I'm trying to focus you on
6 is: Apart from the prior art right now, what do
7 terms in the patents that are challenged mean? Do
8 you understand that? So that's what I want you to
9 focus on. I'm not focused on the prior art right
10 now.
11 And claim 2 of the '104 patent, as I just
12 read, uses the term "non-uniform grid points,"
13 right?
14 A Correct.
15 Q We looked at, in your declaration in
16 paragraph 121 of the '104 patent, that you referred
17 to the non-uniform grid points of the '104 patent as
18 being described more fully in the '753 patent.
19 So I'm simply trying to understand, as used
20 in claim 2, the term "non-uniform grid points," do
21 you agree that it is described more fully in the
22 '753 patent?

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1 MR. LEE: Objection. Form. Asked and
2 answered.
3 THE WITNESS: There is more description in
4 the '753 patent about what -- and the various usages
5 of the term "non-uniform grid point." So that's --
6 another way of saying that is it's described more
7 fully.
8 BY MR. DESAI:
9 Q Are you contending there's any difference
10 between the non-uniform grid point of the '104,
11 '358, and '494 patents and the non-uniform grid
12 points described in the '753 patent?
13 MR. LEE: Objection. Form. Scope.
14 THE WITNESS: I'm not saying that. I think
15 what I'm saying is the '753 patent, and I think even
16 the court recognized this -- did a more full job of
17 describing non-uniform grid points in the '753 than
18 it did perhaps in some of the other ones.
19 BY MR. DESAI:
20 Q Okay. So, then, you agree that -- that the
21 '753 patent provides a description of the
22 non-uniform grid points that are recited in the

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1 claims of the '104, '358, and '494 patents, right?
2 MR. LEE: Objection. Form. Asked and
3 answered.
4 THE WITNESS: I think it provides
5 additional information that is not necessarily in
6 the '104, '358, and '494 specifications.
7 BY MR. DESAI:
8 Q And here, looking back at the language we
9 saw in column 2, so going back to line 31, it says
10 that: "The calibration data for these locations
11 must be gathered and analyzed so that particular
12 points (e.g., 'grid points') within the geographic
13 region can be determined and associated with a
14 particular set or sets of calibration data from, for
15 example, one or more NMRs."
16 A I'm sorry.
17 Q Sorry. That's column 2 of the '753 patent,
18 and it's line 31.
19 A That's -- you've recited that correctly, I
20 guess.
21 Q So that language provides further
22 description of the grid points that are used in the

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1 '104, '358, and '494 patents, correct?
2 MR. LEE: Objection. Form. Scope. Asked
3 and answered.
4 THE WITNESS: I'm sorry. Repeat -- I'm not
5 sure I see the point of your question. What is the
6 question?
7 BY MR. DESAI:
8 Q So the question was: The language that I
9 recited earlier from -- in column 2, starting at
10 line 31 of the '753 patent --
11 A Mm-hmm.
12 Q -- that language provides further
13 description of the grid points that are claimed in
14 certain claims of the '104, '358, and '494 patents,
15 correct?
16 MR. LEE: Objection. Form. Scope. Asked
17 and answered.
18 THE WITNESS: I'm sure you don't want me to
19 repeat what's there. It's -- it's providing
20 additional verbiage about -- and it uses the
21 term "grid points."
22 So I'm not sure I cite to this passage

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1 anywhere in my declaration.
2 BY MR. DESAI:
3 Q You say that that language uses the
4 term "grid points." Is there any reason that you
5 believe that usage of the term "grid points" is
6 different from how the term "grid point" is used in
7 the '104, '358, and '494 patents?
8 MR. LEE: Objection. Form. Scope. Asked
9 and answered.
10 THE WITNESS: Sitting here right now, I
11 can't cite anything different or not different. I
12 haven't done a kind of a cross-comparison, if you
13 will, of every reference to grid points in the '753
14 to what's in those other patents. The general
15 statement is that the '753 has more description
16 about non-uniform grid points than the other three
17 patents, but that -- I can't do an inventory of the
18 differences.
19 What was the hour break point? Ten after?
20 THE COURT REPORTER: I'm sorry?
21 THE WITNESS: What was the hour break
22 point? Ten after?

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1 MR. LEE: 10:16.
2 BY MR. DESAI:
3 Q If you need a break, feel free to ask for
4 one.
5 A I'm just kind of teeing up, whatever's
6 logical for you.
7 Q Sure. We can probably take a break in a
8 few minutes.
9 A Okay.
10 Q And can you turn to column 10 of the '753
11 patent, and I'll point you to a specific spot in a
12 moment.
13 Do you see, starting at line 39, there's a
14 paragraph that starts: "In any of these cases, the
15 NUG generator may evaluate the data vectors at a
16 particular (candidate) calibration point, or at a
17 fixed grid point to which the data vector(s) is/are
18 assigned"?
19 Do you see that?
20 A Yes.
21 Q So this is referring to a NUG, or
22 non-uniform grid point, generator; is that right?

1 MR. LEE: Objection. Relevance. Scope.
2 THE WITNESS: It's referring to a NUG
3 generator that starts, in its description, at least
4 as early as column 10, line 29.
5 BY MR. DESAI:
6 Q If you look down at line 55, there's a
7 sentence that reads: "If the aggregate cluster
8 (i.e., a cluster including data from both the first
9 and second calibration points) is statistically very
10 similar to either the first or second clusters
11 (taken independently), then the data for the two
12 calibration points may be allocated to the same
13 NUG."
14 Do you see that?
15 A Yes.
16 Q And you recall that this statistically very
17 similar language is language that is quoted in the
18 District Court's Markman order, right? And you can
19 look at Exhibit 1028 on page 20 to confirm.
20 MR. LEE: Objection. Form. Scope.
21 THE WITNESS: The Markman order has the
22 phrase "statistically very similar," as does this

1 passage.
2 BY MR. DESAI:
3 Q And the Markman order actually has the
4 phrase "statistically very similar" in quotation
5 marks, right?
6 A Correct.
7 Q If you look at page 19 --
8 A Of?
9 Q Of the Markman order.
10 So I don't believe that the District Court
11 indicated what each exhibit is, but if you look at
12 the context of the first full paragraph on page 19,
13 you see that it says: "Plaintiff argues..." in that
14 sentence, and then talks about language taken from
15 the abstract of the '753 patent and then quotes from
16 the '753 patent abstract?
17 Do you see that?
18 MR. LEE: Objection. Form.
19 THE WITNESS: I mean, it starts off:
20 "Plaintiff argues that the Abstract of the '753
21 Patent..." so that seems fairly clear as to what the
22 rest of this sentence is referring to.

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1 BY MR. DESAI:
2 Q Right.
3 And you see right after that block quote,
4 it's citing to Exhibit E, that abstract? So this
5 would be right below that block quote.
6 A Oh, I see it, yes.
7 Q All right. Does that inform you that
8 Exhibit E that's referred to in this document is the
9 '753 patent?
10 MR. LEE: Objection. Scope.
11 THE WITNESS: That seems to be -- that
12 block quote seems to be part of the '753 abstract.
13 BY MR. DESAI:
14 Q And then the court cites to Exhibit E in
15 reference to that abstract, right?
16 MR. LEE: Objection. Scope.
17 THE WITNESS: It -- yes, it says:
18 "Exhibit E at Abstract (emphasis added)."
19 BY MR. DESAI:
20 Q So if you'd go back to page 20, and you see
21 that towards the -- a little bit above the box that
22 says: "Final Construction," there's a sentence that

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1 we've talked about that starts: "But Defendants'
2 use of 'representative calibration data'..." and
3 then at the end of that sentence, there are some
4 citations, including one to Exhibit E at 10:29 to
5 11:7?
6 Do you see that?
7 A Yes.
8 Q So you can look in the '753 patent that you
9 have, and we were looking at the term -- sorry --
10 the phrase "statistically very similar" in column
11 10, around line 57, right?
12 A That phrase or that term -- those words --
13 Q Right.
14 A -- is on line 57 of column 10 of the '753.
15 Q And, again, this paragraph that starts at
16 column 10, line 39, is discussing a NUG, or
17 non-uniform grid point, generator, right?
18 MR. LEE: Objection. Scope. Relevance.
19 THE WITNESS: I'm not sure I cite to this
20 passage in my declaration. The words on the page,
21 starting on line 59 [sic], says: "In any of these
22 cases, the NUG generator may evaluate..." and it

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1 goes on. There's a full paragraph prior to that,
2 that provides information about a NUG generator.
3 BY MR. DESAI:
4 Q All right. Take a moment to read ten -- in
5 the '753 patent, column 10, lines 66 to 11:7, and
6 let me know when you've read that.
7 A Starting with: "The primary test..."?
8 Q Yes.
9 A Okay.
10 Q Okay. And you see, at the top of column
11 11, it states that: "Statistical similarity may be
12 determined by, for example, the probability density
13 function ('pdf') of the data parameters (e.g.,
14 neighboring cell signal levels, timing information,
15 etc.), the mean and variance of the data parameters,
16 the serving cell/sector or other functions of the
17 calibration data"?
18 You see that?
19 A Yes.
20 Q Are you familiar with any of these forms of
21 analyzing statistical similarity across data?
22 MR. LEE: Objection. Relevance. Scope.

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1 THE WITNESS: Well, statistics is a wide
2 field, of course, and I think, in a number of
3 places, we discuss the serving cell as part of
4 demonstrating the prior art relevance to particular
5 claims, but I don't know if it cites specifically to
6 this passage or not.
7 So the answer is generally, yes, and in
8 some cases, just depending on the claim limitation,
9 there might be an additional discussion on it.
10 BY MR. DESAI:
11 Q So earlier we were talking about analysis
12 or evaluation of data in connection -- as opposed to
13 modifying it.
14 Do you remember discussing that?
15 MR. LEE: Objection. Form.
16 THE WITNESS: I remember an analysis
17 discussion and then that, at some point, segued or
18 transitioned into a modified versus unmodified
19 discussion in the calibration data construction.
20 BY MR. DESAI:
21 Q So taking this example of the probability
22 density function, is that something that you're

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1 familiar with?
2 MR. LEE: Objection. Relevance. Scope.
3 THE WITNESS: Somewhat. It covers, I
4 think, a lot of ground, and the specifics probably
5 vary greatly, depending on what particular
6 statistical area and/or context you're talking
7 about. Probability densities, those are two very
8 widely scoped terms, potentially.
9 BY MR. DESAI:
10 Q How about clustering tests? Are you
11 familiar with that term?
12 MR. LEE: Objection. Relevance. Scope.
13 THE WITNESS: Generally, yes, but I
14 couldn't cite some formulas or anything like that.
15 BY MR. DESAI:
16 Q Sure. Sure.
17 So just at a high level, do you think --
18 are you able to -- strike that.
19 At a high level, could -- a clustering
20 test, would that be a form of analyzing data?
21 MR. LEE: Objection. Relevance. Scope.
22 THE WITNESS: I -- I'd have to think about

1 that. It's possible. Is it required? Not
2 necessarily. I mean, if you know, cell phones are
3 all connected to a same serving cell, for example.
4 That's -- that's just an observed data. You know,
5 what cell tower are you connected to, as opposed to
6 having to do any sort of subsequent analysis, but
7 I'm not sure I could answer that question.
8 BY MR. DESAI:
9 Q Well, just going by that example, you
10 agree, then, that the observed data has to be
11 considered. So some data about what cell tower a
12 phone is connected to would have to be considered to
13 be able to cluster it based on that information,
14 right?
15 MR. LEE: Objection. Relevance. Scope.
16 Asked and answered.
17 THE WITNESS: I'm not sure what you mean by
18 the word "considered," and I'm not sure I could
19 answer that question more specifically. It sounds
20 like it's a pretty wide-open question.
21 BY MR. DESAI:
22 Q Okay. So you say if you know cell phones

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1 connect to the same serving cell and then you know
2 what cell tower that each one is connected to, and
3 I'm asking you: Wouldn't some consideration of some
4 information that's been collected be required to
5 know what cell phone is connected to what serving
6 cell?
7 MR. LEE: Objection. Relevance. Scope.
8 Asked and answered.
9 THE WITNESS: Well, consideration is a
10 wide-open term. In a signal, for example, that you
11 get from a cell tower, you can have -- it could say,
12 "This is cell tower 123," and that's right there for
13 you to see. You don't have to do any sort of
14 analysis to say, oh, that's -- you know, "that
15 somehow derived to get to 123." It's just right
16 there. So, you know, considering is a pretty
17 wide-open term.
18 BY MR. DESAI:
19 Q But it sounds like you're agreeing you
20 would have to have that information to be able to
21 cluster based on that differentiation, right?
22 MR. LEE: Objection. Relevance. Scope.

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1 Asked and answered.
2 THE WITNESS: Well, you could -- it's --
3 could you tell what serving tower you are without --
4 you can certainly tell it if the ID is provided to
5 you, but could you also determine it if the ID
6 wasn't provided to you? Yes. So it just depends on
7 the specific context.
8 BY MR. DESAI:
9 Q In either situation, there would have to be
10 a determination of what the serving tower is, right?
11 MR. LEE: Objection. Relevance. Scope.
12 Asked and answered.
13 THE WITNESS: I'm not sure about the
14 word "determining." You know, if it's just the --
15 if you're saying some sort of analysis that is
16 required to get to that, that's not necessarily
17 required if the information is right there. You're
18 connected to serving cell 123. It's right there.
19 You don't have to determine it. It's just there.
20 BY MR. DESAI:
21 Q And the information about what the serving
22 cell is would have to be taken into account to be

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able to cluster certain data to each of those serving cells, right?

MR. LEE: Objection. Relevance. Scope. Asked and answered.

THE WITNESS: It really just depends on the specific context. I know there's claims where you utilize clustering as -- actually, I think that's part of the '753 patent, which we can discuss when we get to that. But I don't know how to -- I can't answer it any more specifically than what I have. Just it would depend on the particulars.

MR. LEE: Counsel, we've been going for over an hour.

MR. DESAI: Yeah, now's a good time. We can take a break.

(Recessed at 11:22 a.m.)

(Reconvened at 11:32 a.m.)

BY MR. DESAI:

Q All right. Mr. Williams, can you turn, in your '358 declaration, and this is also in the '494 declaration -- it's the paragraph 231 in your '358 and 214 in your '494.

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1 A Okay. '358 and '494. What was the --
2 Q 231 in the '358.
3 A And?
4 Q And it'll be 214 in the '494.
5 A Gotcha. Okay.
6 Q All right. Do you see that -- let's just
7 look at paragraph 231 in the '358 declaration, and
8 it says: "This is also consistent with Fig. 6 of
9 the Related '784 Patent depicting base stations
10 (transmitters) 21, 22, 23 which are not members of
11 the same wireless network," and on the next page,
12 there's a clip of the -- the figure 6 of the '784
13 patent.
14 You see that?
15 A Yes.
16 Q And you have a footnote here, at the end of
17 this paragraph, that says: "It is my understanding
18 that, in Related Litigation, Owner construed the
19 '358 Patent in light of Fig. 6 of US Patent No.
20 9,097,784...which belongs to the same family as the
21 '358 Patent."
22 Do you see that?

1 A Yes.
2 Q So you understand that the '784 patent, if
3 I refer to that, I'm referring to U.S. Patent No.
4 9,097,784?
5 A I understand.
6 Q And you understand that the '784 patent is
7 part of the same family as the '358 patent, correct?
8 A That's what it states here, yes.
9 Q And that's the same family as the '104 and
10 '494 patents as well, correct?
11 A I think that's accurate.
12 Q So I'm going to hand you what has been
13 marked as Exhibit 1007 in the 1210 and 1211
14 proceedings. Take a moment to look at that and tell
15 me if you recognize it.
16 A I recognize it. It's been a while since
17 I've looked at it.
18 Q Sure.
19 All right. And if you turn to figure 6 of
20 Exhibit 1007, that's the same image that you have
21 put a copy of in your '358 and '494 declarations,
22 right?

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1 A Correct.
2 Q Okay. So it may be helpful to look at this
3 image along with some text in the patent. You can
4 look at the image in your declaration, or maybe
5 there might be a different way to try and look at
6 both, but I'd like you to look at both the image and
7 some text in column 6 at the same time.
8 And you'll be looking at a paragraph that
9 starts at column 6, line 16. Let me know when
10 you're there.
11 A Column 6, line 16? Is that what you said?
12 Q Yes.
13 A That's a typo in the declaration. Anyway,
14 I'm on column 6, line 16.
15 Q Okay. And you see here that this starts by
16 saying: "A NUG is described in detail in co-pending
17 U.S. patent application..." and then it refers to
18 another patent, right?
19 A Yes.
20 Q And you see the preceding sentence, which
21 is in the preceding paragraph, says: "Grid points
22 (e.g., NUGs) are another way to organize and/or

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1 realize information related to a wireless networking
2 environment"?
3 Do you see that?
4 A Yes.
5 Q And you understand that this patent, when
6 it's referring to NUG, it's, again, referring to a
7 non-uniform grid point?
8 A Correct.
9 Q Okay. A little bit farther down in the
10 paragraph that we were looking at, it says that:
11 "Figure 6 illustrates a geographical region (R)
12 having NUGs represented by NUG1, NUG2 and NUG3."
13 Do you see that?
14 A "FIG. 6 illustrates a geographical region
15 (R) having NUGs represented by NUG1, NUG2 and NUG3."
16 Q Okay. And so when you look at figure 6,
17 are you able to see what's been marked as NUG1,
18 NUG2, and NUG3?
19 A In that figure, yes.
20 Q And these are three regions with different
21 shapes; is that fair?
22 MR. LEE: Objection. Scope.

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1 THE WITNESS: In this specific figure, it's
2 a -- the overall figure is -- it's not quite oval;
3 it's not quite square. And the three NUGs are of
4 different outlines piecing up that overall oval
5 shape.
6 BY MR. DESAI:
7 Q And each of the NUGs, that's breaking up
8 that overall shape, is a different shape, right?
9 MR. LEE: Objection. Scope.
10 THE WITNESS: In this particular figure,
11 the geometrical shapes represented by NUG1, NUG2,
12 NUG3 are geographic -- or geometrically different.
13 BY MR. DESAI:
14 Q You referenced the '784 patent in the
15 paragraphs that we're looking at in your '358 and
16 '494 declarations, including figure 6 of the '784
17 patent.
18 Do you -- did you consider figure 6 of the
19 '784 patent in connection with your construction of
20 the term "grid point," as used in the '104, '358,
21 and 494 patents?
22 MR. LEE: Objection. Scope.

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1 THE WITNESS: Well, the construction of the
2 term "grid point" is what -- I used what was in the
3 Markman order.
4 BY MR. DESAI:
5 Q So does that mean you had no -- did you
6 have any consideration or separate analysis of
7 figure 6 in coming up with your construction of the
8 term "grid point" that you used in the '104, '358,
9 and '494 IPRs?
10 MR. LEE: Objection. Form. Scope.
11 THE WITNESS: Well, the grid point --
12 construction of grid point is from -- I used what
13 was in the Markman order, and then the non-uniform
14 grid point was informed by the usage and context of
15 the rest of the patents, including the description
16 on page 121 about being -- or in paragraph -- I can
17 only remember it as 121 in the '104, that grid
18 points non-uniformly spaced throughout a
19 geographical region; and then there's other
20 description of, like in 122, the '104 patent
21 suggests: "...'a non-uniform grid point...may
22 represent the signal characteristics and/or

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1 calibration data over a given region.'"
2 BY MR. DESAI:
3 Q Okay. So looking at that language in the
4 '104 patent that you just read, that: "...'a
5 non-uniform grid point...may represent the signal
6 characteristics and/or calibration data over a given
7 region,'" what was your interpretation of what it
8 means for the non-uniform grid point to represent
9 the signal characteristics or calibration data over
10 a given region?
11 MR. LEE: Objection. Form. Scope.
12 THE WITNESS: I don't know how to describe
13 it other than what it's -- it's just repeating what
14 I state here: "...'may represent the signal
15 characteristics and/or calibration data over a given
16 region.'"
17 BY MR. DESAI:
18 Q So I'm asking: Do you have any -- what is
19 your understanding of what it means to represent
20 signal characteristics -- for a grid point to
21 represent signal characteristics?
22 MR. LEE: Objection. Asked and answered.

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1 THE WITNESS: Just what it means. It
2 represents the signal characteristics and
3 calibration data over a given region.
4 BY MR. DESAI:
5 Q So I'm asking you to help me out as to
6 understanding -- there's no other explanation you
7 can provide for what it means for a grid point to
8 represent signal characteristics and calibration
9 data over a given region?
10 MR. LEE: Objection. Asked and answered.
11 THE WITNESS: Well, I don't -- I suppose I
12 could come up with synonyms for the term
13 "represent," but represent is the best -- is the
14 best word. So --
15 BY MR. DESAI:
16 Q So if a colleague asked you, What does it
17 mean for a grid point to represent signal
18 characteristics and calibration data over a region?"
19 and they didn't understand what it means to
20 represent the signal characteristics, would there be
21 any explanation you'd be able to provide?
22 MR. LEE: Objection. Asked and answered.

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1 THE WITNESS: I'd just say, "It
2 represents." I mean, there's not a better word to
3 use.
4 BY MR. DESAI:
5 Q Is it your opinion that the -- when it says
6 that the non-uniform grid point represents signal
7 characteristics, that that -- or sorry -- represents
8 signal characteristics or calibration data over a
9 region, that that has any relation to the
10 statistical similarity of the characteristics or
11 data in that region?
12 MR. LEE: Objection. Scope. Asked and
13 answered.
14 THE WITNESS: It could. I have to think
15 about that more. But --
16 BY MR. DESAI:
17 Q So sitting here today, you're not sure, one
18 way or the other?
19 MR. LEE: Objection. Scope. Asked and
20 answered.
21 THE WITNESS: I'd repeat the same answer.
22 It could. I just have -- I would have to think

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1 about it more.
2 BY MR. DESAI:
3 Q Did you speak with your counsel about the
4 substance of your testimony at any of the breaks
5 that we've had today?
6 A No. Just talked about Monster Energy
7 drinks, where to get the white kind.
8 MR. DESAI: All right. Pass the witness
9 for this deposition.
10 MR. LEE: Counsel, are you done with
11 questioning for these three proceedings?
12 MR. DESAI: Yeah. What I'm saying is we
13 pass the witness. Presumably, if you have some
14 redirect, this will be your opportunity, but we're
15 not closing this proceeding yet, but we're moving
16 to --
17 MR. LEE: To the second deposition?
18 MR. DESAI: Well, I guess maybe we go off
19 the record here for a moment.
20 MR. FEDOWITZ: Yeah, let's go off the
21 record.
22 (Recessed at 11:49 a.m.)

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(Reconvened at 11:52 a.m.)

MR. LEE: We do not have any questions. So I think we're done here. We reserve the right to read, review, and sign.

THE COURT REPORTER: And, Counsel, may I just confirm your orders?

Mr. Desai, you would like three business day rush on the final and no rough draft?

MR. DESAI: That's correct.

THE COURT REPORTER: And for you, Mr. Lee, you would like three business day rush on the final and a rough draft?

MR. LEE: Correct.

(Signature having not been waived, the deposition of David Hilliard Williams was concluded at 11:53 a.m. EDT.)

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1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC
2 I, JOAN V. CAIN, court reporter and Notary
3 Public within and for the Commonwealth of Virginia a
4 do hereby certify:
5 That David Hilliard Williams, the witness
6 whose deposition is hereinbefore set forth, was duly
7 sworn by me before the commencement of such
8 deposition and that such deposition was taken before
9 me and is a true record of the testimony given by
10 such witness.
11 I further certify that the adverse party,
12 GOOGLE LLC, was represented by counsel at the
13 deposition.
14 I further certify that the deposition of
15 David Hilliard Williams, occurred at the offices of
16 BUCHANAN INGERSOLL & ROONEY PC, 1737 King Street,
17 Suite 500, Alexandria, Virginia 22314, on TUESDAY,
18 April 23, 2024, commencing at 9:03 a.m. to 11:53
19 a.m. EDT.
20 I further certify that I am not related to
21 any of the parties to this action by blood or
22 marriage, I am not employed by or an attorney to any

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of the parties to this action, and that I am in no way interested, financially or otherwise, in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this 24th day of April 2024.

My Commission Expires: May 31, 2025

Joan V. Cain

_____

NOTARY PUBLIC IN AND FOR
COMMONWEALTH OF VIRGINIA
VIRGINIA NOTARY REGISTRATION NO. 107144

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Re: Deposition of **David Hilliard Williams**
Date: 4/23/2024
Case: Google LLC -v- Geoscope Technologies Pte. Ltd.

Dear Sir/Madam,

Attached please find the above-referenced deposition transcript. If applicable, signature is required within 30 days from the date of receipt of this letter.

In accordance with the disposition of signature at the deposition or the pertinent jurisdictional rules, the deponent should follow these instructions to complete the Errata Sheet:

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Re: Deposition of **David Hilliard Williams**
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Page	Line	Correction/Change and Reason
21	14	Change "756,104" to "7,561,104" - Typographical error

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ACKNOWLEDGMENT OF DEPONENT

I, David Hilliard Williams, do hereby acknowledge that I have read and examined the foregoing testimony, and the same is a true, correct and complete transcription of the testimony given by me and any corrections appear on the attached Errata sheet signed by me.

___May 2, 2024_____ _____

(Date) (Signature)