

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

GEOSCOPE TECHNOLOGIES PTE. LTD.,
Patent Owner.

IPR2004-00031 (Patent 8,400,358 B2)
IPR2024-00032 (Patent 8,786,494 B2)
IPR2024-00255 (Patent 7,561,104 B2)
IPR2024-00259 (Patent 8,406,753 B2)1

Record of Oral Hearing
Held: February 7, 2025

Before: ANNETTE R. REIMERS, SHEILA F. McSHANE, and
BRIAN D. RANGE, *Administrative Patent Judges*.

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The above-entitled matter came on for hearing on February 7, 2025,
commencing at 10:00 a.m., via video teleconference.

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P R O C E E D I N G S

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JUDGE RANGE: Good morning. I'm Judge Brian Range, and with me today are Judge Annette Reimers and Judge Sheila McShane. This is a hearing for four inter partes reviews. The first inter partes review is numbered IPR2024-00031 and concerns US Patent Number 8,400,358 B2. The second is IPR2024-00032 and concerns US Patent Number 8,786,494 B2. The third is IPR2024-00255 and concerns US Patent Number 7,561,104 B2. The fourth is IPR2024-005 -- excuse me -- IPR2024-00259 and concerns US Patent Number 8,406,753 B2. Each of these four matters is captioned Apple, Inc., Petitioner, versus Geoscope Technologies PTE. LTD., Patent Owner.

The -- we'd like to notify the parties that the panel has now changed in these four proceedings pursuant to PTAB Standard Operating Procedure 1, Rev. 16. Due to unavailability, Administrative Patent Judge Annette Reimers replaces Administrative Patent Judge Patrick Scanlon, on this panel. Thus, Administrative Patent Judge, Annette Reimers, Sheila McShane, and Brian D. Range now constitute the panel for consideration of all matters in this proceeding. All prior decisions and orders remain in effect and the parties may contact the Board at trials@USPTO.gov if they have any questions. We expect a change -- a written change order to be entered into these proceedings soon.

Let's start the proceedings by having Counsel make appearances.

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1 Who will be appearing for Petitioner today?

2 MR. DEVOTO: Thank you, Your Honors. On behalf of
3 Petitioner, we have myself, Roberto Devoto, along with my colleagues,
4 Ryan Chowdhury, and David Holt, both of whom will be presenting, as well
5 as, of course, myself. We also have Karl Renner of Fish & Richardson
6 participating here in the Zoom call, as well as Apple's in-house Counsel,
7 Diek Van Nort, and Apple's litigation Counsel, Jaysen Chung, who will also
8 be on the Zoom call. That's it.

9 JUDGE RANGE: Thank you. And who do we have appearing for
10 Patent Owner? Oh, you're on mute.

11 MR. MCBRIDE: Thank you for that, Your Honor. This is Steve
12 McBride for Patent Owner, Geoscope. Joining me today is Jim Carmichael,
13 and also on the public line is Brad Close, Director of Licensing and
14 Intellectual Property for Geoscope.

15 JUDGE RANGE: Thank you. Before we begin with arguments,
16 just a couple of logistical administrative matters. First, we have your
17 demonstratives. I have them printed out. We also have them available on
18 our computers. For clarity of record and so that we can follow your
19 argument, we ask that you identify what page of your demonstratives you're
20 talking about as you argue, especially if you're not sharing them on the
21 screen. Also, please state your name before speaking, for clarity of record,
22 and to help the Court Reporter.

23 Second, I want to talk about timing. For this hearing, each side
24 will have 90 minutes to present argument concerning all four inter partes

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1 review matters. Although there's four matters at hand, we note that there's a
2 great deal of overlapping issues, and we thus encourage Counsel be efficient.
3 It's perfectly fine if you do not use the entire 90 minutes.

4 We will begin with Petitioner's arguments regarding
5 unpatentability and Patent Owner may respond. We'll try and keep track of
6 time, and we'll try to indicate if you're running short on time, but please also
7 try to keep rough track of time by yourselves. Petitioner, you may reserve
8 some of your time for rebuttal. How much time would you like to reserve?

9 MR. DEVOTO: Yes. Thank you, Your Honor. We would like to
10 reserve 30 minutes for rebuttal.

11 JUDGE RANGE: Okay. And Patent Owner, how much time
12 would you like to reserve for surrebuttal?

13 MR. MCBRIDE: Thirty minutes, Your Honor. Thank you.

14 JUDGE RANGE: Okay. Does either party have questions before
15 we begin?

16 MR. DEVOTO: No questions from Petitioner.

17 MR. MCBRIDE: No questions from Patent Owner, Your Honor.

18 JUDGE RANGE: Okay. Thank you, everyone. Petitioner, you
19 may begin with your argument when you're ready.

20 MR. DEVOTO: Thank you very much, Your Honor. If we could
21 please turn to Slide 1 of the Petitioner's demonstratives. My name is
22 Roberto Devoto. As I had indicated, I, along with my colleagues Ryan
23 Chowdhury and David Holt, will be presenting topics related to these four
24 distinct IPR proceedings and patents today. Ryan Chowdhury and I will be

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1 presenting the topics related to the '358, '494, and '104 patents, which I'm
2 going to refer for simplicity as simply the trio of patents. These patents
3 share a common specification. David Holt will be presenting the '753
4 patent.

5 If we could please turn to Slide 2, Your Honors. Could I have a
6 glass of my water? Thank you. Excuse me, Your Honors. So as I already
7 noted, Ryan and I will be presenting the trio of patents, which you can see
8 here on this slide, the '358 patent, the '494 patent, and the '104 patent. As
9 noted also on this slide, the supporting slides that we've prepared in
10 reference to the trio of patents, they're all, for simplicity, going to be
11 referring to the '358 patent specification, but as I noted earlier, all three
12 patents share a common specification, so identical language can be found in
13 the specification of the other two patents.

14 If we could please turn to Slide 3, Your Honors. This slide shows
15 topics that we intend to present related to the trio of patents. I'm going to
16 begin by first providing a brief overview of the IPR grounds, and then I'm
17 going to spend the remaining portion of my time to discuss the central
18 dispute in these proceedings, which is the claim construction dispute related
19 to the term non-uniform grid points, or what we'll call NUGs. In doing so,
20 Your Honors, it's important to note that I am going to give full credit to the
21 '379 provisional application contents that Geoscope so heavily relies on in
22 support of what we believe is an unjustifiably narrow construction of these
23 terms and show that even if those contents are given full credit, Geoscope's
24 construction still remains on justifiably narrow.

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1 In other words, Your Honors, I'm going to speak to topics 2A and
2 2B. Now, Your Honors, as you know from our briefs, we believe that the
3 case law shows that the contents of the provisional application cannot be
4 used in the manner that Geoscope has advanced on too specifically narrow
5 or redefine a claim term. However, due to time constraints, we intend to
6 leave that legal dispute to the papers. We would also like to leave the legal
7 dispute related to the level of ordinary skill in the art, as well as the weight
8 that should be afforded to our expert's declaration to the papers, as well.

9 Now, with that being said, if Your Honors have any questions
10 about those legal disputes, my colleague, Ryan Chowdhury, stands ready to
11 address them with supporting slides under topics 2C and 5, respectfully.
12 Now, I also stand ready to address Topic 3, which goes over how the
13 challenge claims are satisfied by the Bhattacharya-Spain grounds that we
14 advanced in our petitions. I should note, however, that Geoscope's only
15 prior art-based argument against the '358 and '494 patent claims are
16 premised on acceptance of their claim construction proposal. As such, if the
17 proposal is rejected, there's no prior art base dispute remaining with respect
18 to the '358 and '494 patents.

19 Geoscope, however, did raise an additional prior art-based
20 argument that is untethered to claim construction against our '104 patent
21 grounds. Specifically, they argued that a person of ordinary skill in the art
22 would not have been led to combine the Bhattacharya and Zeng references
23 in the manner that we advanced in our petition. Ryan Chowdhury, my
24 colleague, will be addressing that dispute as topic 4. Now, unless Your

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1 Honors have any questions, I would like to now turn to Slide 6.

2 So Slide 6 shows the challenged claims in each of the IPRs related
3 to the trio of patents. It also shows the grounds, and as you can see from
4 Slide 6, we -- our grounds rely on Bhattacharya as our primary reference,
5 either standing alone or in combination with one or more secondary
6 references, Zeng, Spain, and Meunier.

7 If we could please turn to Slide 8, Your Honors. Now, this slide
8 shows how Geoscope has narrowed the issues in dispute in these IPRs by
9 disclaiming various of the challenged claims as shown in this slide. Now, if
10 we could please turn, Your Honors, to Slide 10. Geoscope's briefs have
11 further narrowed the issues in dispute in this proceeding by focusing only on
12 the claims that recite non-uniform grid points or, as we'll call it -- as we can
13 call them -- NUGs. These claims require that the calibration data recited in
14 the independent claims be, quote, "for one or more non-uniform grid points".

15 If we could please turn to Slide 11, Your Honors. So this slide
16 shows a representative claim, specifically Claim 18 of the '358 patent, which
17 incorporates through its dependency the features of independent Claim 15.
18 Now, as shown here, Claim 15 recites a database of previously gathered
19 calibration data, and Claim 18 further requires that the database further
20 includes previously gathered calibration data for one or more non-uniform
21 grid points. Now, Geoscope argues that the petition's grounds, specifically,
22 the Bhattacharya-Spain grounds, failed to satisfy Claim 8 and the other
23 similarly worded NUG claims when the non-uniform grid points is
24 construed according to their proposal.

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1 If you could please turn to Slide 14. Now, Your Honors, as you
2 well know, in the related litigation, the District Court issued a claim
3 construction order that provided various constructions, including these
4 constructions shown on this slide. Now, in attacking the petition's grounds,
5 Geoscope focuses on the construction of grid point, which as you can see
6 here, that this report construed to mean a point associated with
7 representative calibration data for an area.

8 If we could please turn to Slide 15, Your Honors. Now, Your
9 Honors, in the petition, we adopted this construction of grid point asserted
10 by the District Court, and in your institution decisions, as I'm sure you'll
11 recollect, you preliminarily adopted this same construction, and you further
12 preliminarily concluded that the term non-uniform grid points requires grid
13 points that are not uniformly spaced throughout a geographic region.

14 Now if we could please turn to Slide 16, Your Honors. Now,
15 importantly, the District Court's and Your Honors' constructions are
16 consistent with the specification of the trio of patents, and we have identified
17 or shown in this slide a particularly relevant portion of the specification of
18 the trio of patents. And as you can see here, as stated in this particular
19 section, a non-uniform grid point may represent signal characteristics and/or
20 calibration data, and, quote, "may represent an area of collected calibration
21 data".

22 A grid point, therefore, Your Honors, can be thought of as being
23 composed of three distinct attributes. First, it is a point, which in this
24 context means that it has a particular location, such as a latitude or longitude.

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1 As such, a grid point has a location attribute because it's a point. Moreover,
2 it is further a grid point, which in this context indicates that it is a point of a
3 larger grid positioned over a geographic region (R) with a point representing
4 an area, such as perhaps a grid cell -- the cell of the grid, that is, within the
5 geographic region (R), and I could refer to this as being the area of an
6 attribute of a grid point.

7 Third, the point represents signal characteristics and/or calibration
8 data and specifically represents the signal characteristics or calibration data
9 for that area to be used for mobile device location estimation. I can refer to
10 this as the calibration data or signal characteristic attribute of the grid point,
11 with the grid point having all three of these attributes: location attribute, an
12 area attribute, and a signal characteristic or calibration data attribute. Now,
13 notably, Your Honors, these attributes indicate what a grid point is, not how
14 it, such as its location or area, are determined or generated.

15 And these attributes, Your Honors, as we submit to you, are
16 consistent with what the District Court's construction of grid point as being a
17 point associated with representative calibration data for an area means.
18 They're consistent with that construction because that construction, of
19 course, captures the notion that -- of the grid point being a point at a
20 particular location in a geographic region that is representing an area located
21 at that point within the geographic region, and further, is associated with
22 calibration data that represents the expected signal characteristics for a
23 mobile device located anywhere in that area that will be used for mobile
24 device location estimation.

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1 And it's important to recognize, Your Honors, that the calibration
2 data for the grid point is representative for the area of the grid point because
3 it represents the expected signal characteristics of mobile devices located
4 anywhere within the area of the grid point. So for example, Your Honors, in
5 the systems of both -- the trio of patents, as described in the specification, as
6 well as in the prior art Bhattacharya system, the location estimation system
7 concludes that a mobile device is within the area of a grid point when its
8 measured signal characteristics, that is the signal characteristics that are
9 provided to the location system by, for example, a network measurement
10 report from a mobile device whose location you're trying to determine,
11 compare favorably to the calibration data of that grid point.

12 So in other words, that grid -- that calibration data attribute of the
13 grid point acts as a bridge, in that for these location systems -- in that when
14 these location systems receive the network measurement report that provides
15 signal characteristics related to a device whose location these systems are
16 trying to determined -- these systems -- these particular systems in
17 Bhattacharya, as well as in the spec of the trio of patents would compare
18 those received network measurement characteristics to the calibration data,
19 attribute of the grid point, and if the comparison is favorable, they would
20 conclude that the -- that mobile device is located within the area of that grid
21 point. And in this sense, the calibration data represents that area and
22 therefore, is consistent with the District Court's construction of the point
23 being associated with representative calibration data for an area.

24 Now, importantly, Your Honors, I do want to make this

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1 observation. Nothing in the District Court's constructions speaks to a
2 particular way that the calibration data attribute or a grid point must be
3 generated. And moreover, there's nothing in these attributes of a grid point
4 that require a specific way that you determine any of the attributes, whether
5 it's the location attribute, the area attribute, such as determining the
6 boundaries of it, or the calibration data attribute.

7 In the notion that the calibration data attribute is representative for
8 the area simply speaks to the way that attribute is used within the context of
9 these location estimation systems. It is used as a vehicle by which to
10 compare measured signal characteristics of a mobile device whose location
11 you're trying to discern, to conclude that if there's a favorable comparison
12 between those measured signal characteristics and the calibration data
13 attribute of the grid points, that that device would be located within the area,
14 i.e., the area attribute of the grid points. And in that sense, that calibration
15 data represents that area consistent with the District Court's construction.

16 And again, the District Court's construction is really speaking to
17 what the calibration data is. Not how you generate it, not how you come up
18 with it. It is simply data representative for the area of that grid point as used
19 in mobile device location systems.

20 Now, I want to have -- I want to make a quick comment about the
21 term calibration point, because it certainly has been raised in reference to
22 concept of grid points. The calibration point, simply put as a point, it's a
23 location, such as a latitude/ longitude. But it's a point where calibration data
24 is measured. That's what makes it a calibration point. I think that's -- I don't

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1 think Geoscope disputes that as being what a calibration point would be
2 understood to be, and that is consistent with some of the disclosure in some
3 of the provisional application of the trio of patents, though oddly, the actual
4 written description does not mention it. The written description portion of
5 the specification does not actually use it, and yet it's used in the dependent
6 claims -- in some of the dependent claims.

7 I should note that it should be apparent to Your Honors that
8 calibration points certainly could be used to determine the calibration data
9 attribute of grid points, but nothing in the construction of grid point itself
10 and its calibration data attribute requires a particular way of using,
11 evaluating, or combining calibration points to determine that calibration data
12 attribute.

13 I would like to then turn to the adjective non-uniform, Your
14 Honors. As Your Honors had asserted in the institution decision, this word
15 is an adjective modifying grid point. In plainly read, as Your Honors
16 concluded, it does indicate that the spacing of the grid points throughout the
17 geographic region (R) is non-uniform, which we agree with. Unless you
18 have any questions on that, I would like to turn to Slide 18.

19 JUDGE RANGE: Could you perhaps -- this is Judge Range
20 speaking.

21 MR. DEVOTO: Mm-hum.

22 JUDGE RANGE: Could you perhaps provide an example of how
23 a grid point could be representative of the calibration data for an area, but
24 not be derived from the calibration data?

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1 MR. DEVOTO: How the grid points -- so I guess it's -- that's
2 entirely dependent on how you interpret the word derived. So the key for a
3 calibration data to be representative for the area simply means that when it's
4 used in the location estimation system, it is used in a way where you
5 conclude that it is similar enough to measure signal characteristics and that
6 when it compares favorably to measured signal characteristics, for example,
7 as shown in some systems, you would deem that mobile device to be within
8 that area.

9 Now, how you determine the calibration data attribute, how it's
10 done, whether you simply select one calibration point and that is your
11 calibration attribute, sure, that could be one way to determine it. Where
12 alternatively, since grid points are even described more broadly as being
13 directed to signal characteristics and/or calibration data, you could also have
14 that calibration data attribute, which would now be more broadly called the
15 signal characteristics/calibration data attribute, be determined from
16 simulation without any type of capturing or of calibration data. So in a
17 sense, yes, there is a form of using it, but it could be as simple as simply
18 taking one calibration point and that becomes your calibration data attribute.

19 The key here is not how you generated it. You can generate it in a
20 myriad of different ways, including just using one grid point, or you could
21 generate it by combining a bunch of grid points. The key is how it's used in
22 the location estimation system. Is it used to represent that area for purposes
23 of device location estimation. And in that case, it is used in that way, both in
24 our prior art and in the specification of the trio of patents. And this goes to

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1 the crux of one of the disputes that are at issue between the parties in that --
2 and really it's a dispute that the District Court itself in its Markman's orders,
3 as I'll talk about briefly, dispensed with by saying, look, I'm looking for what
4 it is, not how you generate it -- how Geoscope believes you must arrive at it.

5 And these attributes speak to what it is and as far as how you get to
6 that attribute, whether it's just using a single calibration point, there's the
7 attribute, or whether it's combining calibration points, that's how you get to
8 that attribute. It's not really -- that's not speaking to what it is. What it is, is
9 more how it's used. Is it representing the area? Is it calibration data that
10 represents the area of that grid point in the context of how it's used within
11 these systems? And the answer is yes.

12 And as a corollary to that, Your Honors, it's also -- you don't have
13 to discern that it has to represent it well. You know, the notion that, well,
14 you have to generate it in this way so it represents that area really well and
15 accurately, well, that's not what it is. The very fact that these systems use it
16 in a way where it does represent the area is sufficient, because obviously,
17 they think it's representing it well enough to use it for location estimation.

18 So this notion that it's so, I don't know, fundamental or essential to
19 generate it a certain way, otherwise it's not representing that area well or the
20 area itself wasn't generated well, well, that is not part of what it means to be
21 a grid point. That's more speaking to how you would generate certain grid
22 points to be better and more accurate than other grid points. Does that help,
23 Your Honors?

24 JUDGE RANGE: It -- that -- this is Judge Range. That was

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1 helpful. Thank you.

2 MR. DEVOTO: If you could please turn to Slide 18, Your
3 Honors. So as shown in this slide, Geoscope proposed a construction of
4 non-uniform grid point. It specifically defines the terms as requiring that the
5 boundaries of the area represented by the grid point be determined from
6 evaluation of calibration data. I should note, however, and I'm sure Your
7 Honors were in tune to this, in their POPR, Geoscope advanced a broader
8 construction really of grid points. They had indicated the grid points require
9 analysis of calibration data or evaluation of calibration data, and now, they
10 have kind of pivoted to a narrower construction.

11 Now they're actually asserting that, well, it's not just any analysis
12 of calibration that's needed to determine the grid point. It's a very specific
13 analysis. It's an analysis of the calibration data to determine the boundaries
14 of the area of the grid point. So in the sense they're speaking to the area
15 attribute of the grid point, they're saying, well, when you generate that area,
16 you have to analyze calibration data to generate that area.

17 Now, if we could please turn to Slide 19, Your Honors. So I'd like
18 to make a few observations about this construction. The first observation is
19 that frankly, Geoscope's construction is incomplete, as it fails to address the
20 adjective non-uniform, which modifies the term grid point. And yet, as we
21 see in this slide and in the portion of the specs set forth in this slide, it's quite
22 clear that the specification does distinguish between uniform and non-
23 uniform. Geoscope's construction just fails to reflect this distinction and so
24 in that sense it already, off the bat, it seems incomplete.

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1 Now, if we could please turn to Slide 20, Your Honors. As a
2 second observation, Geoscope's construction really -- it's clearly a departure
3 from the construction of the District Court's. I mean, you can see here, it
4 adds a whole bunch of words. It adds the underlined words shown in this
5 slide. And if the District Court wanted to limit the term area in its
6 construction to only the specific areas that have their boundaries determined
7 from evaluation of calibration data, certainly would've done so. If it did not,
8 in the Markman order when you review it and it reveals why, the District
9 Court would not have so limited its construction.

10 If we could please turn to Slide 21, Your Honors. Specifically on
11 page 19 of the Markman order shown here, the District Court took issue with
12 Geoscope's proposed narrow construction in that proceeding because its
13 construction was -- I quote here -- "directed more toward what Geoscope
14 believes must be done to arrive at a grid point or a set of grid points, rather
15 than what a grid point is". Here, again, just like in the proposed construction
16 advanced in the District Court, Geoscope is again focused on what it
17 believes must be done to arrive at a grid point, rather than what a grid point
18 is. And specifically, of course, it's focusing on how you arrive or how you
19 determine the area attribute of the grid point, rather than what simply the
20 area attribute is.

21 In the District Court's -- and the District Court, as I'm sure, Your
22 Honors, if you look at the District Court's reasoning, this rejection that they
23 advanced in this report of these types of claim construction proposals that
24 are attempting to import ways to arrive at a grid point within the

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1 construction of a grid point, that that same reasoning would apply to this
2 construction now advanced in this form by Geoscope, in that it's -- you can
3 confidently believe that the District Court would itself reject Geoscope's new
4 construction, narrower construction, for the exact same reasons it rejected its
5 broader construction in the District Court, because it's not speaking to what a
6 grid point is, but rather to how you would arrive at a grid point.

7 If we could please turn to Slide 22, Your Honors. Geoscope's
8 construction is also flawed, Your Honors, because it limits all grid points
9 and enhances non-uniform grid points to having their boundaries determined
10 from an evaluation of calibration data. But as you can see here, from what
11 we believe to be far and away the most relevant portion of the specification
12 of the trio of patents, the specification does not impose such limitations on
13 the way the boundaries of grid points would be so determined.

14 As noted in our reply, Your Honors, the detailed description here
15 identifies two different examples. So not only does it begin with a very
16 broad statement, Your Honors, it says, look, these non-uniform grid points
17 may be separately defined by a variety of parameters. This is a broad
18 statement, and that broad statement then is followed by a couple sentences
19 that are very specific to the way that the boundaries of the area of grid points
20 can be determined.

21 And these specific ways that the boundaries can be determined
22 include things like determining the boundaries from geographical
23 boundaries, such as from the boundaries of mountains or roads or buildings.
24 And also, determine the boundaries from the concentration of mobile

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1 stations, such as, for example, the boundaries of an urban area that would be
2 understood to have higher concentration of mobile stations than a rural area.
3 That can be used to determine the boundaries.

4 And as the record evidence shows in our expert's testimony, when
5 you look at this paragraph -- again, a paragraph that really is focused on
6 telling you how you define a grid point -- you don't see anything that tells
7 you, oh, and by the way, it's absolutely necessary to arrive at a grid point for
8 evaluation of calibration data, and specifically to do those boundaries that
9 we mentioned where we didn't talk about calibration data through evaluation
10 of calibration data. That's nowhere here. And yet, you would think that that
11 would be important to say right here. If that was such an essential or
12 fundamental characteristic of the very definition of grid point or non-
13 uniform grid, that you'd see this.

14 Herein as our expert opined, there's nothing there that reveals this
15 type of necessary requirement to what a grid point is. And as I indicated,
16 what you see here -- from the very first sentence of this specification, the
17 disclosure is wrong. It states generally, NUGs may be separately defined by
18 a variety of parameters.

19 If we could please turn to Slide 25, Your Honors. Now, Your
20 Honors, with no help being found in the detail description portion of the
21 specification of the trio of patents, Geoscope now has to dig deep and dig
22 deep into the specification, and to -- and in doing so, they find this
23 provisional application. And specifically, the '379 provisional application
24 where they try to discern or identify disclosure that they think would be

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1 helpful to their proposal.

2 Now as shown in this slide, Your Honors, which is from the Patent
3 Owner response, it's a clip from the Patent Owner response, and what we
4 would argue to be a thinly veiled attempt to rebut the Markman order's
5 reasoning for rejecting their construction in the District Court, Geoscope
6 now claims that the provisional indicates that the way the grid points are
7 generated is an essential characteristic of what they are.

8 And because it's such an essential characteristic of what they are,
9 well, then you can justify incorporating this way of generating them or way
10 of arriving at the grid point as part of what a grid point is. And yet, of
11 course, this really is a thinly veiled attempt to try to argue they're not being
12 inconsistent with the District Court -- with the District Court's position that
13 you shouldn't define grid points by how you arrive at them, but rather on
14 what they are.

15 To support this conclusion, as you can also see in the slide, Your
16 Honors, Geoscope cites to this particular statement -- repeatedly cites to this
17 statement in the '379 provisional that, quote, "evaluation of data vectors is of
18 great importance since it is fundamental to the method". Now as I noted
19 previously, we're going to give this statement and the rest of the contents of
20 the provisional application equal footing with a written description. We
21 don't believe it should be given equal footing based on the case law, but for
22 the sake of our discussion today and for simplicity, let's give it equal footing.

23 If you could please turn to Slide 26. Now, of course, to make sure
24 we understand the meaning of that sentence that we cited, we need to look at

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1 its context. And as shown in this slide, we see the very paragraph where that
2 sentence is found, but that sentence, "The evaluation of data vectors is of
3 great importance since it is fundamental to the method," found in this
4 paragraph shown on this slide. Now, of course, we need to understand
5 where this paragraph is located, i.e. the paragraph's context.

6 If you could please turn to Slide 27, Your Honors. So I want to
7 make a comment. This is a lengthy, almost 40-page provisional, that
8 describes 15 distinct alleged inventions, and it does so in distinct sections.
9 This particular statement, as shown on this slide, is found in the section that
10 describes the alleged first invention. It's titled, 'A Method for Generating
11 Non-Uniform Grid Points from Calibration Data'. Thus, the statement that
12 they referenced is really speaking -- is really talking about evaluation of data
13 vectors being fundamental to this method of this section, and specifically, to
14 this method.

15 And yet when we look at this method and really, its title, we see
16 that Geoscope's interpretation of non-uniform grid points really can't be
17 right. I mean, the title does not say that this is the only method for
18 generating non-uniform grid points. It simply says that it is a method, not
19 the only method. Moreover, the title says, 'A Method for Generating Non-
20 Uniform Grid Points from Calibration Data', and yet, if non-uniform grid
21 points, as Geoscope would have you believe, would already involve
22 evaluation of calibration data for determining the boundaries of the area
23 attribute of a grid point, then it's redundant to say, generating non-uniform
24 grid points from calibration data, because you'd already know of course it's

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1 from calibration data, because after all, non-uniform would mean that you're
2 doing it, you evaluate the boundaries of the area from calibration data.

3 So that becomes redundant, again, revealing -- not revealing some
4 notion of an essential or necessary characteristic of non-uniform grid points.
5 On the contrary, simply noting or providing some ways to determine the
6 calibration data attribute of a non-uniform grid point. And nor is there
7 anything else in this provisional application that it would also indicate a
8 clear intent to limit all non-uniform grid points being generated using the
9 purportedly inventive methods set forth in this provisional.

10 So Your Honors, we submit to you that when you juxtapose the
11 broad language that specifically talks about the finding non-uniform grid
12 points from the written description specification as being defined -- may be
13 defined -- by a variety of different parameters, and moreover, speak to the
14 very specific way boundaries can be defined. And yet when you see that,
15 nothing there says, oh, there's an essential or necessary way to do this. It's
16 essential. It's necessary. And yet it's silent there in that paragraph. The very
17 paragraph that you would expect to find that. Instead, it's buried in a
18 provisional application, and yet that provisional, we think, doesn't -- does
19 not indicate that it's speaking to all non-uniform grid points.

20 And even if you disagree and say, well, it's a little ambiguous,
21 maybe it's ambiguous -- I don't know -- it's a little ambiguous, that clearly
22 does not rise to the level of some type of a clear intent to disavow the scope
23 of this term because they learned disavowing the scope of the term. They
24 are saying, look, it's not all areas.

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1 You know, when you take the District Court's construction of a
2 point representative of calibration data -- a point associated with
3 representative calibration data for an area, well, you're disclaiming some
4 areas, aren't you? You're saying, well, now not all areas. Only the areas
5 whose boundaries are determined through evaluation of calibration data.
6 That's a reduction in claim scope. That's a disavowal of claim scope. That
7 is a -- and yet we see no -- the type of clarity and language that the Fed
8 Circuit demands for that type of reduction. It's just not here.

9 We -- not only do we think it's not here in an overt sense for the
10 reasons that I just mentioned, it's also not here because even if you want to --
11 okay, it's ambiguous -- even if you want to commend ambiguity, they still
12 lose on this. That's not the type of clarity needed to reduce the claim scope
13 in the manner they have attempted to do.

14 And therefore, Your Honors, we assert to you that Geoscope's
15 proposal should be rejected as it really is not supported by the intrinsic
16 evidence, nor does it reflect the scope of this term, as that would be
17 understood, in view of the intrinsic evidence. Now, unless Your Honors
18 have any questions, I would like to hand off the discussion to my colleague,
19 Ryan Chowdhury, to talk about the remaining topics. No questions? Thank
20 you, Your Honors. Appreciate it.

21 MR. CHOWDHURY: Good morning, Your Honors, and may it
22 please the Board. As my colleague, Mr. Devoto mentioned, I will now
23 address the Bhattacharya and Zeng combination, which is only at issue in the
24 IPR proceeding involving the '104 patent.

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1 Slide 51, please. This case presents a straightforward obviousness
2 challenge. As noted in our papers, the independent claim of the '104 patent
3 is rendered obvious over Bhattacharya and Zeng. When combined, the
4 teachings of these references enable use of handoff functionality to improve
5 Bhattacharya's geolocation accuracy. For example, when a mobile device is
6 close to a -- close to crossing a cell boundary where it may experience signal
7 variations while transitioning between base stations.

8 Slide 54, please. The combination, as advanced in the petition, is
9 visually depicted on this slide. Our papers explain that this combination is
10 rooted in complimentary teachings. Those teachings being those that focus
11 on handoff functionality in mobile devices. Specifically, Bhattacharya
12 discloses a system that estimates the location of a mobile device by
13 analyzing signal strength measurements. And in paragraph 54, Bhattacharya
14 references use of handoff related messages to improve location estimation in
15 certain embodiments. This is express disclosure of handoff functionality as
16 part of the Bhattacharya system.

17 Similarly in paragraph 95, Bhattacharya indicates, again, handoff
18 functionality through reference to, quote, "the mobile assisted handoff
19 process" or MAHO. Again, this is expressed disclosure.

20 Zeng is similarly focused on handoff functionality, and in doing so,
21 teaches examples of MAHO techniques that optimize signal strength
22 monitoring and mobile device tracking near a cell boundary. Just to
23 summarize, based on the prior art disclosures and with supporting testimony
24 from Apple's expert, Dr. Sundaresan, the petition explained that a person of

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1 ordinary skill would have recognized that applying Zeng's teachings to the
2 Bhattacharya system would have improved location estimation accuracy
3 when a mobile device is near a cell boundary.

4 I now plan to address Patent Owner's positions against the
5 combination, but before I do that, I wanted to see if Your Honors had any
6 questions before moving on. Hearing none, let's proceed. The Patent
7 Owner's positions against the combination rely on two premises. First, a
8 misunderstanding of a POSITA's knowledge, which according to the Patent
9 Owner, excludes fundamental cellular network concepts, and second, an
10 overly narrow reading of Bhattacharya, as it relates to the ordinary -- level of
11 ordinary skill.

12 Each of these points are addressed by testimony from Dr.
13 Sundaresan, shown on Slide 56. On the left, we see Dr. Sundaresan's
14 original declaration. Here, he opined that a POSITA would've been
15 motivated to seek well-known handoff functionality based on Bhattacharya's
16 teaching in paragraph 54 in referencing boundary conditions. On the right,
17 we see additional responsive testimony from Dr. Sunderesan addressing
18 points raised by Patent Owner's expert, Mr. Allen Sturza.

19 Near the top, Dr. Sunderesan opined that the combination was
20 predictable in light of the handoff functionality described in Zeng. And near
21 the bottom, he further explained that the predictability is further supported
22 by cellular standards, providing clear guidelines and specifications for
23 geolocation systems. This isn't surprising since paragraph 95 of
24 Bhattacharya identifies the GSM standard, which is just one example of the

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1 cellular standards referenced by Dr. Sunderesan.

2 Paragraph 95 further links GSM to the MAHO process and notes
3 that, quote, "this can be accomplished in a well-known fashion". Again, this
4 confirms that those skilled in the art would've had -- would have been
5 expected to have sufficient knowledge to implement MAHO processes
6 through use of GSM. Indeed, the specification of the '104 patent also
7 references GSM in paragraph 4, lines 19 through 31, but otherwise, omits
8 detail regarding how such cellular standards are implemented in the context
9 of a geolocation system.

10 The record evidence therefore confirms that the combination is
11 itself motivated by the prior art disclosures. For instance, in Bhattacharya's
12 paragraph 54 and 95, and that a person of ordinary skill in the art would've
13 had a reasonable expectation of success in arriving at the combination
14 because of the availability of applicable cellular standards, such as GSM,
15 which provide sufficient guidance.

16 Finally, the Patent Owner's narrowing definition of a POSITA, we
17 believe, is not credible in light of the prior art disclosures. This is because as
18 we've just discussed, Bhattacharya's written description in paragraph 95
19 indicates that a POSITA would've had sufficient knowledge. This
20 understanding of the level of ordinary skill also aligns with the Federal
21 Circuit precedent, rejecting artificial skill level limitations as a basis for
22 avoiding obviousness. The same is true here.

23 Now, as a final point, Patent Owner has advanced no contention
24 that any of the prior art in this proceeding is non-analogous to the patents at

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1 issue. Again, this isn't surprising. Bhattacharya, like the patents at issue, is
2 primarily directed to a geolocation system that estimates the location of a
3 mobile device. With that, Your Honors, I'd ask -- I'd check to see if you had
4 any questions regarding this topic. Hearing --

5 JUDGE RANGE: I have no questions.

6 MR. CHOWDHURY: Hearing none, I'll now hand over the
7 podium to my colleague, David Holt, who will now address topics relevant
8 to IPR2024-00259.

9 MR. HOLT: All right, Your Honors. Good morning. May it
10 please the Board. I'd like to take maybe about 10 minutes to talk about
11 issues specific to the '753 patent and answer any questions that Your Honors
12 may have. I'll note that these particular issues that were raised in Petitioner's
13 reply in response to Geoscope's POR appear, from our understanding, to be
14 distinct from those raised by Google in their prior proceeding, for which
15 Your Honors have already heard oral arguments. And therefore, we just
16 want to note that this provides a distinct rationale for why Geoscope's
17 arguments are, in fact, wrong.

18 As you see on Slide 68, the primary issue that Geoscope has
19 raised -- similar to what we were just talking about -- is that -- the
20 construction of the term grid points. As we see on Slide 70, the term grid
21 points is recited in limitation 1B. Limitation 1B does not recite non-uniform
22 grid points. In fact, none of the challenged claims in the '753 patent recite
23 non-uniform grid points.

24 Much of what you heard my colleague, Mr. Devoto, just speak to

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1 with respect to the term non-uniform grid point, would be equally applicable
2 here with respect to the broader term, grid point. And yet we believe there is
3 an even more fundamental issue at play with respect to the term grid point in
4 the context of the '753 patent. That is Geoscope's proposed construction
5 blatantly and improperly reads an entire embodiment of grid points
6 described in the '753 patent out of the claims without any rational
7 justification for doing so.

8 JUDGE MCSHANE: Counsel, just a quick one on this. This is
9 Judge McShane. When it reads -- when the claim recites, grid points for
10 said calibration data, what's your position on what for means in the context
11 of the language?

12 MR. HOLT: Yes, thank you, Your Honor. When the claim says
13 that it is for said calibration data, it means that the grid point includes the
14 calibration data that was collected in the previous step. If you'll recall, the
15 District Court construed the claims in the '753 patent to have an order, and
16 the calibration data was collected before the grid points were generated.
17 And so the grid point that is generated is for the collective calibration data.
18 That is it includes the calibration data that was collected, or otherwise is
19 based on it.

20 And when you look at the District Court's construction, which you
21 can see on Slide -- one second, sorry -- I believe it is Slide 73 -- sorry about
22 that -- the District Court said that a grid point is a point associated with
23 representative calibration data for an area. So the calibration points -- the
24 one or more sets of them that are being generated in this limitation 1B -- are

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1 for said calibration data because the grid point itself has an association with
2 calibration data for an area and therefore, is for the calibration data that was
3 collected in the previous step. Does that make sense to Your Honor? Does
4 that answer your question?

5 JUDGE MCSHANE: Yeah. Yeah. Thank you.

6 MR. HOLT: Okay. Excellent. Okay. If you go to Slide 73, we're
7 going to walk through what the construction that Geoscope has set forth is,
8 and then we're going to talk about why it improperly excludes a described
9 embodiment. This slide, as we were just looking at, includes the District
10 Court's construction, and you heard that earlier. A point associated with
11 representative calibration data for an area.

12 If you turn to Slide 74, we see that Geoscope has attempted in the
13 District Court and at each stage of this IPR to limit the scope of the term grid
14 point to a specific embodiment of grid points. Even where it says it is
15 adopting the District Court's claim construction it is actually seeking to add
16 language to that construction in a way that substantially narrows its
17 meaning. At each instance, Geoscope has attempted to use ever shifting
18 language to try to capture the same thing, details of one disclosed process for
19 determining non-uniform grid points.

20 And as we see on Slide 75 in its surreply, Geoscope finally became
21 crystal clear about its true intentions. While in the POR it tried to feign a
22 distinction between grid points and specific embodiments of non-uniform
23 grid points, it realized that its attempt to import specific limitations into the
24 claims only truly stands if you read grid points as non-uniform grid points.

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1 There are several unambiguous reasons why Geoscope's position that the
2 term grid points is the same as the term non-uniform grid points is
3 inconsistent with the claims and their own specification. But before we
4 move on, do Your Honors have any questions so far? Okay.

5 Turning to Slide 79, we start where *Phillips* tell us to start, which
6 is with the claim language itself. As Geoscope rightly acknowledged in their
7 POR, quote, "The '753 patent claims recite generation of grid points, not
8 only non-uniform grid points or N-U-Gs or NUGS " -- you'll hear me say
9 NUGs. "This is reinforced by dependent Claim 4, which notes that one of
10 said grid points is located on a pre-determined fixed uniform grid."

11 Turning to Slide 80, we can see that where Geoscope wanted to
12 focus its claims on non-uniform grid points, it knew how to do that, and
13 recognized that to do so, it needed to include specific claim language.
14 Employing the longstanding claim construction canon that claims are to be
15 given their full breadth, particularly where it is clear that Patent Owner itself
16 appreciated that breadth based on claim language recited and other claims of
17 the patent family, our inquiry could rightly stop here. Geoscope's arguments
18 required both, reading the term non-uniform into the claim, where they
19 chose not to include it during original prosecution, and reading in details of
20 embodiments about how non-uniform grid points may be generated.

21 The courts have been loath to narrow claim terms in this manner
22 where it has not been crystal clear from the specification that the Patent
23 Owner defined the term or disavowed scope. Geoscope does not and cannot
24 argue that either of these narrowing principles are met. Indeed, if we turn to

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1 the specification, we actually see clear evidence of the opposite. As we see
2 on Slide 82, directly contrary to defining a grid point as a non-uniform grid
3 point or NUG or disavowing any scope, the specification of the '753 patent
4 says that the term grid point means NUGs or UGs -- U-Gs.

5 I want to pause for a moment. Not once, in any of its filings, has
6 Geoscope addressed these portions of the specification. And these portions
7 state that a grid point is not just a non-uniform grid point or NUG, but also a
8 UG. This alone undermines Geoscope's linchpin argument that grid points
9 are -- NUGs are non-uniform grid points. So here, the '753 patent says grid
10 points are NUGs or UGs, but what's a UG?

11 As we see on Slide 83, Geoscope's own evidence that they cited in
12 their POR -- the provisional application to which the '753 patent claims
13 priority -- defines NUG as non-uniform grid point, as we've already heard
14 and seen, and it defines UG as a uniform grid point. This is consistent with
15 how those acronyms are used in the specification of the '753 patent.

16 On Slide 84, we see that the '753 patent describes, quote, "a fixed
17 uniform grid, UG, defined over the region (R) with the calibration data being
18 assigned to the fixed grid point by some rule, e.g. allocated by closest fixed
19 grid point". Now, the placement of the acronym UG in this clause is a little
20 confusing, admittedly. Geoscope has argued that this placement defines UG
21 as simply uniform grid, and therefore, it doesn't implicate the scope of the
22 term grid point. But this is inconsistent with all other evidence of its usage,
23 both, in the remainder of the '753 specification and in the provisional to
24 which it cites. As we saw in the previous two slides, the '753 patent

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1 elsewhere says that a UG is a type of grid point.

2 When we read the full clause here on Slide 84, we see that the key
3 point, as underlined in red, is that calibration point data is assigned to fixed
4 grid points of the fixed uniform grid by some rule. That is what a uniform
5 grid point is. A fixed grid point located on a fixed uniform grid to which
6 calibration data has been assigned. There is no other alternative explanation
7 for the term UG anywhere else in the intrinsic record that is consistent with
8 the '753 patent's usage of UG as a type of grid point. And while Geoscope
9 itself has used the phrase, uniform grid point, in its own briefs, it is never
10 offered a competing definition or explanation.

11 The additional limitations Geoscope seeks to insert into the term
12 grid point with its construction are incompatible with the '753 patent's
13 description of the UG. The boundaries of a UG are not determined from
14 evaluation of calibration data. Rather, they are defined by a pre-determined
15 fixed uniform grid. Any questions, Your Honor?

16 The specification is also clear that the term grid point is not simply
17 a location alone. As we see on Slide 85, the '753 patent uses the term
18 location separate from the term grid point and describes assigning locations
19 to grid points. In other words, a grid point is an association between at least
20 two things, a location and data. Without one or the other, a grid point has
21 not been generated. Thus, even if the locations themselves are known in
22 advance, for example, through the use of a pre-determined fixed uniform
23 grid, the grid points are only generated when those locations are associated
24 with calibration data.

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1 And this is perfectly consistent with and representative of the
2 District Court's claim construction on Slide 73, a point associated with
3 representative calibration data for an area. As we've seen, both non-uniform
4 grid points and uniform grid points fall within the scope of this construction.
5 For at least these reasons, Geoscope's construction cannot stand as they
6 acknowledge in their surreply. Geoscope's construction relies upon the
7 assumption that the term grid point can be read only as non-uniform grid
8 point, and that is simply not the case. As a result, their construction is
9 incorrect. Are there any -- Yes, Your Honor?

10 JUDGE MCSHANE: Sorry. I do have a question. Yeah, and I'm
11 going to jump -- I understood -- you know, I followed your argument all
12 along on the specification of the intrinsic evidence, but in the surreply,
13 Patent Owner makes the argument that -- and this goes -- and I'm going to
14 talk only to the District Court order, okay? They say there and they may say
15 it -- actually, they may say it in the response, but I don't recall exactly where
16 they say it in the response, but certainly, in the surreply, they refer to the
17 District Court decision and they quote a portion of the District Court
18 decision, which I don't have in front of me. But in the '253 case, it's Exhibit
19 1020, I think it's at page 19. I believe that's the cite. I may have that wrong.

20 But in any event, they say that the District Court defined grid point
21 as a non-uniform grid point, okay? Based on -- so they're just saying it's the
22 language of the District Court decision, okay? Do you have any comment
23 on that?

24 MR. HOLT: I would say, Your Honor, that that is not what that

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1 passage of the claim construction order is saying. I do think that that portion
2 of the claim construction order is somewhat imprecise and that it does
3 suggest that it says grid point and NUG. But when we look at the actual
4 construction itself, that construction does not include anything about the
5 non-uniformity of the grid point. It doesn't suggest, for instance, that the
6 area itself is non-uniform, and therefore, Apple's position is that the District
7 Court was not, in this language, explaining that construction, suggesting that
8 a grid point must be a non-uniform grid point.

9 And Apple's position is also, Your Honors, that when you look at
10 the portions of the specification that we just looked through and particularly,
11 I believe it was Slide 82. Just trying to confirm that for you. Yes, Slide 82.
12 This is the '753 patent specification and it is saying that the grid points for
13 which the estimate -- the location is estimated can be either NUGs or UGs.
14 So this is the patent itself explaining its use of the term grid points, and
15 therefore, that reading of the District Court's order as limiting grid point to
16 non-uniform grid points would be in specific conflict with this language
17 from the '753 patent specification.

18 JUDGE MCSHANE: Yeah. Well, you know, I read this. It says
19 that, you know -- I'm reading language in the District Court decision. It says
20 that the specification -- and referring to the '104 patent -- does provide a
21 clear indication of the meaning of "grid point", in quotes, and then there's a
22 dash, --"or a non-uniform grid point." So, you know, so you indicated that
23 this language could be imprecise. Is that --

24 MR. HOLT: In the sense, Your Honor, that the dash and 'or' might

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1 be potentially read by somebody reading this quickly as Geoscope has read
2 it. However, when you actually look at what is written here and you read it
3 in light of the '753 patent specification, I would submit, Your Honor, that the
4 'or' here is to indicate that this part of the specification is, in fact, in the '104
5 patent, using the term NUG, specifically. It's the quote here that says,
6 "NUGs represent an area of collected calibration data." And an NUG is, in
7 fact, as we've talked about saw in the '753 patent specification, a type of grid
8 point, and therefore, makes sense that you might look to some discussion of
9 an NUG when you're considering what a grid point is, and yet, there does
10 not appear to be anything in this sentence itself that says explicitly that the
11 District Court was, in fact, equating grid points and non-uniform grid points.
12 The 'or' here could simply be what you might use in a parenthetical as an e.g.
13 as opposed to an i.e. Does that make sense, Your Honor?

14 JUDGE MCSHANE: Well, I -- yeah, I take -- you know, I
15 understand what you're saying. And so -- and then also in the next page in
16 the decision, Patent Owner in the surreply does make the argument -- again,
17 we're just talking about the District Court decision. They make the
18 argument that in the Court's discussion of representative, that the Court is
19 talking about the non-uniform grid points. And do you have any comment
20 on that position by Patent Owner?

21 MR. HOLT: Again, Your Honor, that would be language in the
22 District Court's claim construction order that is discussing specific parts of
23 the specification as providing examples of how the calibration data in the
24 non-uniform grid point is representative. And yet again, as my colleague

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1 Mr. Devoto noted, there's nothing in any of this language that would suggest
2 that the District Court is necessarily suggesting that is what they mean as the
3 outer boundaries of representative of. And if they did, it would have made
4 more sense for the District Court in its actual construction to have included
5 that type of language as indicative of what an area is, and they did not.

6 JUDGE MCSHANE: Right. Do you know -- Exhibit E that they
7 cite to, is that the specification -- I'll have to check the record myself -- but
8 that is the '753 patent there? The --

9 MR. HOLT: You said Exhibit E --

10 JUDGE MCSHANE: Yeah. It's on --

11 MR. HOLT: -- Your Honor?

12 JUDGE MCSHANE: -- page 20 of the District Court order.

13 MR. HOLT: One moment. I can search it very quickly and see.

14 JUDGE MCSHANE: Well, I'll tell you what, why don't you --
15 why don't you just tell me the answer to that when you're in your reply time.

16 MR. HOLT: Yes, Your Honor. Happy to do so.

17 JUDGE MCSHANE: Thank you.

18 JUDGE RANGE: And this is Judge Range. I'd note that you're --
19 it's going to start eating into your reply time shortly.

20 MR. HOLT: Understood. Thank you, Your Honor. At this point,
21 if Your Honors don't have any more questions about the construction issue,
22 I'll simply note that neither the POR nor its surreply meaningfully contest
23 that the combination of Bhattacharya and Yost describe and render obvious
24 the generation of uniform grid points to estimate location. And so the

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1 inquiry can end here with a proper construction of the term grid points as
2 encompassing uniform grid points. However, if Your Honors have
3 questions or would like to hear more about how the combination of
4 Bhattacharya and Yost works and meets the claim language, I'm happy to
5 walk through that. If not, I would like to reserve the remainder of the time
6 for rebuttal.

7 JUDGE RANGE: Thank you, Counsel. So I timed that at exactly
8 an hour, so you -- Petitioner would have half an hour left for rebuttal. Does
9 anyone need a break before Patent Owner argues?

10 MR. DEVOTO: No, I think we're okay, Your Honor.

11 JUDGE RANGE: All right. So with that, Patent Owner may
12 begin its presentation.

13 MR. MCBRIDE: Thank you, Your Honor. Bear with me for just
14 one second.

15 JUDGE RANGE: Sure.

16 MR. MCBRIDE: Thank you, Your Honor. May it please the
17 Board. This is Steve McBride for Patent Owner, Geoscope. The prior art
18 here is doing the opposite of what the claims require. That is, in the prior
19 art, calibration data is generated and assigned to pre-existing grids. In the
20 Geoscope patents, NUGs are generated based on the pre-existing calibration
21 data. So the prior art starts with grids and generates calibration data for the
22 grids. The Geoscope patents start with calibration data and generate NUGs
23 for the calibration data. Again, this is the opposite of how the prior art
24 works.

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1 If we could start at Slide 12, this slide shows the family
2 relationship for the various Geoscope patents. The '379 provision was the
3 foundational document here. It coins the term "NUGs." NUGs isn't a term
4 that's used anywhere else, and discloses 15 different inventions related to
5 using cellular networks to determine location. This is not a complicated
6 family. This '379 provisional is the foundational parent to each challenged
7 claim -- each challenged patent -- and is incorporated by reference into each
8 patent. Thus, the '379 provisional is the starting point to understand what
9 NUGs is. That's where the concept is introduced and that's why each of the
10 patents incorporates the '379 provisional by reference.

11 And I do want to, again, point out and go back to the fact that
12 NUGs are not a term of art. They were coined for these Geoscope patents as
13 far as we can tell, and as far as anybody -- any of the evidence in the record
14 shows. There's no ordinary meaning here for the term NUG. They represent
15 a new way of organizing calibration data. So we have to start with the
16 intrinsic record -- the entire intrinsic record -- and look at what it says about
17 NUGs in order to figure out what a NUG is.

18 Moving to Slide 13, this is the background of the invention. It's
19 described in some of the problems -- described in '753 patent. One of those
20 problems is how to handle the vast amounts of data being sent over wireless
21 networks, and it wants to handle it efficiently and effectively. That's the first
22 highlighted section on Slide 13. And that is there are vast amounts of
23 calibration data being generated for every mobile phone in a specific region.

24 The second highlighted portion states calibration data must be

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1 gathered and analyzed so that particular points, e.g. grid points, within the
2 geographic region can be determined and associated with a particular set or
3 sets of calibration data. So once again, we see that the calibration data is
4 created and then the grid points are determined and associated with the
5 particular set or sets of calibration data.

6 In the third highlighted portion on Slide 13, it explains that these
7 grid points usually will not be uniformly distributed, and therefore, are
8 referred to as NUGs. So what this passage is talking about is grid points that
9 are referred to as NUGs because they are generated based on calibration
10 data. So the prospect --

11 JUDGE MCSHANE: If --

12 MR. MCBRIDE: Yes, Your Honor?

13 JUDGE MCSHANE: I'm sorry. Finish your thought. I'm sorry,
14 go ahead.

15 MR. MCBRIDE: Thank you, Your Honor. So the process here,
16 what this passage is talking about is a way to take millions or billions of
17 calibration points and organize them into a smaller subset of hundreds or
18 maybe thousands of NUGs that can searched more quickly when the system
19 goes to attempt to determine a location of the mobile phone. That's what
20 NUGs are doing. They're streamlining the huge amounts of calibration
21 points and calibration data that's present in the geographical region.

22 This passage illustrates the difference between the prior art and the
23 Geoscope patents. The prior art is just generating calibration data. It's
24 generating what the Geoscope patents call calibration data, and it's assigning

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1 that calibration data to calibration points, that is there is a geographic region
2 that is partitioned into some sort of pre-existing grid. The calibration data,
3 for example, signal strengths, are generated and assigned to that pre-existing
4 grid. That's the prior art. NUGs are different. They're the opposite. They
5 generate a grid based on existing calibration points with existing calibration
6 data. So in some sense, the process discussed in the prior art serves as an
7 input into creating NUGs. NUGs take the calibration points and aggregate
8 similar pieces of calibration data into new NUGs.

9 JUDGE MCSHANE: Mr. McBride, on this one, this is the '753
10 patent, which Petitioner finished their opening with.

11 MR. MCBRIDE: Correct, Your Honor.

12 JUDGE MCSHANE: And -- yeah, and so they pointed out several
13 places, including Column 10, the discussion about uniform grid points. And
14 so is there anywhere in this patent that says that grid points, you know, can't
15 be uniform?

16 MR. MCBRIDE: No, Your Honor. And I think even at the bottom
17 of this page, we see this. When it's was talking about NUGs, it says these
18 grid points do not necessarily have to be part of a uniform grid --

19 JUDGE MCSHANE: All right.

20 MR. MCBRIDE: -- and usually will not be uniformly distributed.
21 So even for -- when it's defining NUGs, it's saying that the NUGs may be
22 organized uniformly.

23 JUDGE MCSHANE: Right.

24 MR. MCBRIDE: You wouldn't expect that to happen, but it's a

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1 possibility. They're not ruling that out, if that makes sense. The critical
2 thing with the NUGs is the organization of the calibration data -- the
3 aggregation into areas of similar calibration data.

4 JUDGE MCSHANE: Right, but why can't -- why can't grid points
5 be associated with calibration data, even if they're uniform grid points?

6 MR. MCBRIDE: Well, Your Honor, I think -- I understand the
7 Petitioner's argument that grid points are, you know, grid points and NUGs
8 are different, and can have -- be uniform grids and there can be non-uniform
9 grids. And I think the real problem there is the claim construction that the
10 Petitioner has adopted of a point associated with representative calibration
11 data for an area. Because that claim construction decision relies on the idea
12 that the grid points and NUGs are the same.

13 Now it's a construction that the Patent Owner lost, but the parties
14 in the District Court were treating grid point and NUGs the same in their
15 briefing, and the District Court treats it the same in its briefing. So we're
16 starting from a position where we see that grid points and NUGs are
17 essentially the same thing in the District Court construction, if that makes
18 sense.

19 JUDGE MCSHANE: Yeah. I think on that one -- it seems the
20 Petitioner is disagreeing with you on that one, but anyway, I see -- I get your
21 argument. Thank you.

22 MR. MCBRIDE: Yeah. And I do want to note that the briefing in
23 that matter -- and for Google, as well, Petitioner was defining grid point as
24 i.e. NUG in their briefing. So that's where we're starting, and that's where

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1 Patent Owner is starting, and then Patent Owner really only wants to say,
2 okay, if we're starting with the District Court claim construction, then we
3 need to, you know, we need to provide force with rationale and adopt the
4 rationale it provides. Does that make sense, Your Honor?

5 JUDGE MCSHANE: Well, I understand the argument. I'll say
6 that, Mr. McBride. Thank you.

7 MR. MCBRIDE: Okay. All right. You know, and we discuss
8 this, Your Honor, at Slide 18, and you discussed it in the Petitioner's time, as
9 well. The construction is a point associated with representative calibration
10 data for an area. Now, Patent Owner's position is that prior art doesn't teach
11 grid points under this construction, to be clear, or the alternate construction
12 Patent Owner has provided.

13 But the District Court here at Slide 18 stated, Defendant's use of
14 representative calibration data is intended to reflect that the defining
15 characteristic of a NUG region is that the data points within an area are all
16 statistically very similar, such that each of the grid points within the NUG
17 region can represent the overall NUG. And that was what Defendant was
18 arguing. That was its argument. That encapsulates the argument.
19 Defendant was pointing to Figure 6 of the '784 patent.

20 JUDGE RANGE: Counsel, this is Judge Range. I believe Patent
21 Owner isn't taking the position that this statistical, very similar test, is
22 required for a NUG.

23 MR. MCBRIDE: No, Your Honor. We don't think we need to go
24 that far. I mean, that certainly is what the District Court seems to have held

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1 in the claim construction order, but all we're saying is the grid points are
2 determined based on an evaluation of calibration data. You're aggregating
3 the calibration data into larger regions, so we do agree that similar is
4 required, where you're making some sort of similarity of interpretation, and
5 the Petitioner, in their opening, also agreed that there's some sort of
6 similarity determination that goes on when you're generating NUGs or grid
7 points.

8 And moving back to Judge McShane's point, I do want to point
9 out, Your Honor, with the claims of the '753 patent, they discuss only grid
10 points. That is correct. But the claim language there is claiming a NUG,
11 and if you look at Slide 24 of our presentation, limitation A of Claim 1 --
12 this is the representative limitation -- provides calibration data for each of
13 one or more calibration points in a geographic region. So that's the sign in
14 calibration data to a calibration point, and that can be any kind of grid you
15 want, uniform or non-uniform, whatever it is. And in step B, it requires
16 generating one or more sets of grid points for said calibration data. That's
17 where the NUG is being created, Your Honor. The generating one or more
18 set of grid points for said calibration data. So the grid points are being
19 generated by evaluating them against the calibration data and generating a
20 grid point.

21 And that is very similar -- if we move back to Slide 13 -- to how
22 the '753 patent is describing this process in the background of the invention,
23 is having calibration data for locations to be gathered and analyzed so that
24 particular points, e.g. grid points, within the geographic regions, can be

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1 determined and associated with a particular set or sets of calibration data.

2 So the grid points are associated with one or more pieces of calibration data

3 and these grid points do not necessarily have to be part of a uniform grid.

4 And usually, will not be uniformly distributed throughout the geographic
5 region. Therefore, these non-uniform grid points are referred to as NUGs.

6 That's what the '753 patent background states.

7 JUDGE MCSHANE: Mr. McBride, if you go to Slide 17, okay,
8 that's your proposed construction, and, you know, I noticed that, you know,
9 you have non-uniform in there as the --

10 MR. MCBRIDE: Yes, Your Honor. I -- go ahead, Your Honor.

11 JUDGE MCSHANE: Yeah. So anyway, I'm just trying to figure
12 out your position, okay? Is your position that the claim construction for the
13 term grid point and non-uniform grid point -- is your position that the
14 construction should be the same? Is that what you're saying?

15 MR. MCBRIDE: Well, Your Honor, let me explain. Our position
16 is the District Court construction. We think the District Court construction
17 applies to both grid points and non-uniform grid points. That's the
18 construction the Petitioner adopted and that's the construction the Board
19 adopted in the decision on institution.

20 JUDGE MCSHANE: Okay.

21 MR. MCBRIDE: So we think that applies, but --

22 JUDGE MCSHANE: Okay. So that's your basis, right? That's
23 your only basis that this is what the District Court says and you're alleging
24 that that's Petitioner's position, right?

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1 MR. MCBRIDE: That's correct.

2 JUDGE MCSHANE: Okay, thank you.

3 MR. MCBRIDE: That's correct. And Petitioner's expert was
4 relying on that explicitly in his declaration. Our papers talked to that;
5 however, if the Board decides to construe non-uniform grid point and grid
6 point differently, then we think the non-uniform grid point construction
7 should be a point associated with representative calibration data for an area
8 whose boundaries are determined from evaluation of the calibration data. So
9 if the Board determines that there should be a different construction, we
10 think that would encapsulate better what non-uniform grid points are. But
11 based on the District Court claim construction and the claim construction
12 order, the rationale behind it, we believe that none of the prior art teaches
13 NUGs or grid points as used in the '753 patent. Does that make sense, Your
14 Honor?

15 JUDGE MCSHANE: Yeah, I mean, I -- again, I understand the
16 argument. Thank you.

17 MR. MCBRIDE: All right. And their argument, again, is based on
18 the idea that representative calibration data means calibration data that is
19 similar across different calibration points, and everyone agrees with that.

20 So at Slide 19, I want to address the quotation in the District Court
21 order. And again, this quotation is quoting the '753 patent. They state the
22 calibration data for these locations is gathered and analyzed so that particular
23 grid points within the geographic region can be determined and associated
24 with a particular set or sets of calibration data from, for example, one or

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1 more NMRs, and that's very similar to the language we just talked about in
2 the background of the '753 patent. It's talking about creating NUGs, grid
3 points that are referred to as NUGs in that passage.

4 What the District Court said was this passage describes what must
5 be done to arrive at a grid point, that its calibration data must be evaluated to
6 determine NUGs. Now, Petitioner was arguing here that the District Court
7 was more interested in what a grid point is rather than what must be done to
8 arrive at one, and that's because the two constructions that were proposed at
9 the time were essentially directed to what a NUG is, whether it's a location
10 or area, as argued by Patent Owner, or whether it's a point, as argued by
11 Petitioner.

12 The issue here is different. The issue here is how NUGs are
13 different from calibration points and calibration data, so we have a very
14 different issue that is being discussed in these IPRs. And to illustrate that
15 issue, I want to go to Slides 30 and 34. So we see the differences in the prior
16 art and the Geoscope patents in these slides. This is the Spain, one of the
17 references used as allegedly disclosing NUGs. Actually, the only reference.
18 In Figure 5 of Spain, as shown on Slide 30, we show how Spain essentially
19 creates what the Geoscope patents would refer to as calibration points.

20 First, in step 501, it partitions the geographic region into a plurality
21 of locations. At this point, a pre-existing grid of some sort is formed, but
22 there is no calibration data. Second, step 502, ascertains location-specific
23 traits for each location, and this step is where Spain generates and assigns
24 things like signal strengths, what the Geoscope patents call calibration data,

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1 and other sorts of calibration data. This is after the grid has been created.

2 So this is, again, the opposite of NUGs. NUGs are generated for pre-

3 existing calibration data.

4 Slide 34 is from Bhattacharya, which is used for the '753 patent.

5 This is Bhattacharya Figure 5, very similar to Spain. The first step, 501,

6 partitions a geographic region into a plurality of locations. There's no

7 calibration data at this point. Not signal strengths, nothing like that. Step

8 502 generates expected signal strengths for each location. At this point,

9 Bhattacharya is estimating signal strength and assigning them to the pre-

10 existing grids. Again, this is the opposite of NUGs. NUGs are generated for

11 pre-existing calibration data.

12 If we move to Slide 35, this demonstrates the difference in the

13 approaches of NUGs and the prior art. We see Bhattacharya Figure 6. This

14 shows the pre-existing uniform grid of Bhattacharya over a region. Now,

15 estimated signal strengths -- once this grid is created -- estimated signal

16 strengths are generated and assigned to each location in Bhattacharya.

17 To the right is '784 patent Figure 6, and this shows NUGs over

18 region "R". So we start with calibration data from mobile stations 2, 4, 6, 8,

19 10, 12, and 14, and that data is used to generate NUGs of different shapes

20 and sizes. Again, that's '784 patent at Column 6, lines 16 through 34

21 describing that process. And again, we see that the process for generating

22 NUGs is the opposite of the process used in Bhattacharya, or Bhattacharya

23 starts with the grid and creates calibration data. The '784 patent in NUGs

24 and then the other challenge patents start with calibration data and use that

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1 calibration data to generate the NUG.

2 And again, the '753 patent discusses that uniform grids with
3 calibration point data being assigned to the fixed grid points such as those in
4 Bhattacharya are the starting point for generating NUGs. So the process
5 that's described in Bhattacharya and Spain can serve as the input into
6 generating NUGs. NUGs are our layer above the grids disclosed in
7 references like Bhattacharya and Spain.

8 I'd like to move to Slide 20 to address Patent Owner's alternate
9 construction for non-uniform grid points, and again, to the extent the Board
10 disagrees that the claims are patentable under the District Court's
11 construction, which was adopted by Petitioner. The term non-uniform grid
12 point should be construed as a point associated with representative
13 calibration data for an area whose boundaries are determined from
14 evaluation of the calibration data.

15 The claim language, as shown on Slide 20, requires this
16 construction. The use of the claim term non-uniform means that the area
17 associated with the grid point is usually not uniform. That is the shape,
18 sizes, and boundaries of the non-uniform grid points are going to be
19 different. The intrinsic record also requires Patent Owner's proposed
20 construction --

21 JUDGE RANGE: Counsel, this is Judge Range. I believe
22 there's --

23 MR. MCBRIDE: Yes, Your Honor.

24 JUDGE RANGE: I believe there's an embodiment, at least in one

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1 of the patents, where there could just be -- the non-uniform grid point could
2 be a single point, and I was wondering how that works with the way you're
3 explaining this. Like it seems like a non-uniform grid point doesn't have to
4 always be an area.

5 MR. MCBRIDE: Well, yes, I think that's correct, Your Honor.

6 We can pull up -- the '379 provisional discusses this, as does the '753 patent,
7 at page -- bear with me one second.

8 JUDGE RANGE: I apologize. I don't have the cite at the top of
9 my head either.

10 MR. MCBRIDE: Well, let's turn to -- Slide 23 would probably
11 work to answer your question, Your Honor, and this is a slide that says the
12 evaluation of the calibration data vectors is of great importance since it is
13 fundamental to the method, and then it explains how the method works. So
14 we're talking about using data vectors from several different calibration
15 points here, and the vectors are examined using increasingly extrinsic tests
16 of statistical sufficiency.

17 So we're comparing the different calibration points together. If the
18 data exhibits tight clustering -- and that means if they're similar, basically --
19 the data for the next candidate calibration point is aggregated for the former.
20 So if two points that are next to each other are similar, they're aggregated
21 together; however, if the second data point also has a cluster, but this cluster
22 is sufficiently different, we deem that the data for the two considered
23 calibration points should be allocated to the root of separate NUGs.

24 So in this case, you're looking at another data point considering

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1 whether to aggregate it and it says, no, this is not similar, this is different, so
2 we're going to make a new NUG for that point. Now, if you have a data
3 point that is just not similar to anything around it, that could be the root of a
4 NUG, of one single point, but you're still evaluating all of the calibration
5 points in the geographic region. So you're going to evaluate a lot of them
6 and a lot of them are going to form NUGs with multiple calibration points.
7 Does that make sense?

8 JUDGE RANGE: I think I understand. Thank you.

9 MR. MCBRIDE: Yeah. But conversely, I mean, you could have a
10 single calibration point that just isn't like anything around it and that one
11 could be its own -- by itself could form a NUG.

12 JUDGE RANGE: But in that instance, the NUG wouldn't be an
13 area at all?

14 MR. MCBRIDE: Well, the claim construction for NUG is a point
15 associated with an area.

16 JUDGE RANGE: Okay.

17 MR. MCBRIDE: So it would -- I mean, the NUGs are going to be
18 one point in whatever area the calibration points in the NUG cover. Does
19 that make sense?

20 JUDGE RANGE: That makes sense. Thank you.

21 MR. MCBRIDE: Yeah. Then again, we think this is embodied in
22 the District Court's construction, point associated with representative
23 calibration for an area because when this happens, the data points within an
24 area represent a -- you know, that the NUG represents are all statistically

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1 very similar, especially the use of the grid points within the NUG region can
2 represent the overall NUG.

3 And I'll take a minute to talk about Slide 22. This is, again, Figure
4 6 from the '784 patent. NUGs are depicted here as showing a geographical
5 region (R), having NUGs represented by NUG 1, NUG 2, and NUG 3. As
6 shown in the figure, each NUG corresponds to an area that is part of a
7 broader region (R) and calibration data is gathered at different locations in
8 this broader region, and then analyzed to define NUGs that defy the region
9 into different areas represented by each grid point.

10 And then going back to Slide 23 for a second. This slide just
11 stands for the proposition that NUGs must evaluate calibration data because
12 a '379 provisional does state the evaluation of calibration data vectors is of
13 great importance since it is fundamental to the method of generating the
14 claim grid points. And then it goes on to describe how NUGs are generated.

15 I want to touch on Petitioner's argument that this is just an
16 embodiment of how NUGs are created, but there's no place else that
17 describes how NUGs are created. This is it. This is the portion of the
18 provisional that introduces the concept of NUGs. This is the first time
19 NUGs have ever been introduced. So this is where NUGs are described and
20 NUG generation is discussed, and most of this is actually reproduced within
21 the '753 patent. In the other patents, NUGs are dependent claims, so there's
22 less discussion in those, but in the '753 patent, it talks at length about how
23 NUG is created, in a very similar matter to how the '379 provisional
24 discusses.

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1 I do want to run over Slide 24 just one more time. Again,
2 emphasizing the point that even though the claims here don't use the term
3 NUG, they're requiring grid generating one or more sets of grid points for
4 said calibration data. So they require that grid points are generated for the
5 calibration data, by evaluating the calibration data. Similar to how NUGs
6 are created, so what they're really talking about is a NUG here, and that's,
7 again, the '753 patent in the bottom box.

8 On Slide 24, the '753 patent discusses something very similar,
9 stating that the grid points may be non-uniformly spaced throughout the
10 geographic region, and hence, may be referred to as non-uniform grid points.
11 Moving on to Slide 27, Spain does not teach or suggest NUGs. Spain is the
12 reference used in the '104 patent, '358 patent, and '494 patent as allegedly
13 disclosing NUGs, but the partition locations of Spain are fundamentally
14 different from the claimed NUGs because they are not based on analysis of
15 calibration data.

16 At Slide 27, we see that Spain discloses a number of factors in
17 determining boundaries, but none of these involve evaluation of calibration
18 data. We see natural manmade physical attributes, legal laws, predictions of
19 movement of individuals, accuracy, patterns of movement of individuals,
20 time, and environmental conditions. None of those are network
21 measurement data. Thus, the formation of the locations in Spain does not
22 involve evaluation of calibration data.

23 In Spain's -- on Slide 28 -- Spain's figures confirm that the
24 partitioning is a pre-existing overlay on the geographic region that is

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1 independent of any calibration data. Figure 6A is showing different regions:
2 601 through 604 that are respectively, a fountain, a park, and two buildings,
3 Spain is partitioning these regions based on these geographical attributes, not
4 on calibration data.

5 JUDGE RANGE: Counsel, can you look at -- can we go back to
6 Slide 27?

7 MR. MCBRIDE: Yes, Your Honor.

8 JUDGE RANGE: Yeah. So this is Spain saying one way you
9 could base -- one thing the boundary of each location could be based upon is
10 in paragraph 91, patterns of the location, movement of people and vehicles
11 within the geographic region.

12 MR. MCBRIDE: Yes, Your Honor.

13 JUDGE RANGE: What could those patterns be, if not determined
14 from calibration data? Like determined from data collected?

15 MR. MCBRIDE: It's just patterns of where people and traffic
16 move, so there could be any number of ways. You could determine that
17 information. You could determine it from traffic counters or anything.

18 JUDGE RANGE: I see.

19 MR. MCBRIDE: It's not -- yeah, it's not -- this is not related to
20 calibration data. It's just where do people tend to move and what's the traffic
21 pattern, if that makes sense.

22 JUDGE RANGE: That makes sense. Thank you.

23 MR. MCBRIDE: So if we move to Slide 29, this is breaking down
24 the figure from Slide 28, Figure 6A, into Figure 6D -- 6C, 6D, and 6E.

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1 Spain explains that these figures show that eight road intersections are
2 partitioned into locations 1 through 8. That's Figure 6C on the upper left-
3 hand side. The street sections and their adjacent sidewalks up to the edge of
4 the buildings are partitioned into locations 9 through 19. That's Figure 6D.
5 And various other parts of the region, such as the water fountain park and
6 each floor of a building are partitioned into additional location, and that's
7 Figure 6E at the bottom.

8 So Spain is assigning these locations based on physical attributes.
9 This just reinforces it as it is not calibration data. Calibration data is added.
10 If we, again, move to Slide 30, we see calibration data is added as to '502,
11 not '501. '501 is the partitioning and '502 is where the calibration data is
12 added. Again, this is the opposite way to how the Geoscope patents discuss
13 NUGs.

14 Slide 32, talking about the Bhattacharya reference. This is used for
15 allegedly teaching grid points in the '753 patent. Bhattacharya does not
16 teach generating one or more sets of grid points for said calibration data
17 under any construction, because what we see in Bhattacharya is the grid in
18 Bhattacharya is a rectangular grid of X by Y tessellated squares that is
19 overlaid onto geographic region 200. So it's a pre-existing grid that's an
20 overlay on the region. So Bhattacharya is, again, describing the opposite of
21 what is claimed in the '753 patent.

22 Petitioners are pointing to Bhattacharya's disclosure of a step of
23 populating unexpected signal strength database as satisfying the limitation,
24 but the complete claim limitation requires generating grid points for said

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1 calibration data and thus requires more than just a geographic overlay.

2 And on Slide 33, we see the exemplary Figure 6 of Bhattacharya,
3 which shows the rectangular grid of X by Y tessellated squares overlaid onto
4 geographic region 200. Again, there's no calibration data, no signal
5 strengths yet added to this grid. And again, we discussed earlier Slide 34,
6 Figure 5 of Bhattacharya further reinforces the difference here. And that the
7 grid of Bhattacharya first partitions the geographic regions into a plurality of
8 locations, and next, generates expected signal strengths for each location.

9 And again, as we discussed at Slide 35, we see the difference
10 between Bhattacharya and NUGs, as described in the Geoscope patents.
11 Again, in Bhattacharya, the grid is a pre-determined uniform grid that is
12 overlaid on the geographic region without calibration data. In the '784
13 patent, the NUGs are generated through use of calibration data from the
14 mobiles 2 through 14. So you start with calibration data for NUGs and
15 create the NUGs based on that calibration data. This is the opposite, again,
16 of Bhattacharya.

17 On Slide 36, we see Yost. Petitioner appears to rely on Yost
18 alternately for grid points in the '753 patent, but Petitioner's reliance does not
19 remedy the deficiencies in Bhattacharya. Petitioner is only pointing to
20 Yost's discussion of using testing devices to collect empirical measurements
21 at various locations and alleges that a POSITA would've known from Yost
22 to average the multiple empirical measurements, but none of this changes
23 that the overlaid grid in Bhattacharya is entirely pre-defined based on
24 considerations of the desire to accuracy and complexity of the system.

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1 It is not generated for existing calibration data. Petitioner doesn't
2 identify anything in Yost that independently teaches or renders obvious
3 generating one or more sets of grid points for said calibration data, as
4 required by the claims.

5 And moreover, Petitioner fails to show how the combination of
6 Bhattacharya and Yost satisfies the District Court's construction of grid
7 point, requiring it to be associated with representative calibration data for an
8 area. And the Petitioner does not address the representative calibration data
9 part of the grid point construction in its papers.

10 I'll move on to the level of ordinary skill issues here very quickly
11 and then reserve the remainder of my time for rebuttal. So the Petitioners
12 for the 00031, 00032 and 00255 IPRs do not include a level of ordinary skill.
13 For the Petitioner to meet its burden, petition must resolve the level of
14 ordinary skill. And resolving level of ordinary skill is necessary to
15 understand and apply the claims as discussed in Phillips and cases like that.

16 Further, level of ordinary skill is a pre-requisite for obviousness.
17 The petition must resolve the level of ordinary skill as part of the
18 obviousness analysis under *Graham* and *KSR*. The Petitioner doesn't
19 address the level of ordinary skill. Instead, it references Dr. Sunderesan's
20 expert declaration, but incorporating expert testimony by reference does not
21 meet the statutory requirement for the petition to identify in writing and with
22 particularity the grounds on which the challenge to each claim is based, and
23 that is 35 USC § 312(A)(3).

24 As explained in *Graham* and *KSR*, an analysis of the level of

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1 ordinary skill in the pertinent art is required for determining obviousness.
2 Without such an analysis, the petition cannot carry its burden. As we
3 discussed in our papers, nor do the petition or Dr. Sunderesan's declaration
4 identify the alleged field of pertinent art as required by *Graham* and *KSR*.
5 For this additional reason, the Petitioner fails. Again, the Petitioner cannot
6 meet this burden because it does not resolve the level of ordinary skill in the
7 art, or even what the field of pertinent art is. These defects require the Board
8 to reject the petition and find all challenged claims patentable.

9 I want to move down to Slide 42. Again, discussing level of
10 ordinary skill, but this is more the weight to attribute to Dr. Sunderesan's
11 declaration. Dr. Sunderesan's testimony regarding level of ordinary skill is
12 not his own. He was informed of the level of ordinary skill. He does not
13 actually provide his opinion in his declaration, let alone facts and data
14 supporting his opinion on the level of ordinary skill. Thus, Dr. Sunderesan's
15 opinions in his opening declaration with respect to level of ordinary skill on
16 POSITAs are entitled to no weight.

17 On Slide 43, we move on to Dr. Sunderesan's claim construction
18 opinions. They should also be given no weight, as they are unsupported by
19 any evidence or analysis. That is Dr. Sunderesan simply adopted the claim
20 construction order from the District Court Markman order as his own. He
21 didn't provide any analysis as to whether those constructions were correct.
22 And actually, when asked at deposition, he was unable to discuss the claim
23 construction order itself, outside of the claim constructions themselves. In
24 other words, he was unable to talk about the contents of the claim

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1 construction order because he had not reviewed it in order to form an
2 opinion. And that's shown on Slide 43 and 44 where he states, "I'm not
3 opining either way on the claim construction order because I haven't
4 analyzed the Court's rationale deeply."

5 Moreover, on Slide 45, Dr. Sunderesan adopted the District Court's
6 construction without even reviewing and considering the entire intrinsic
7 record. And not only did he not provide analysis or evidence to support the
8 constructions, he didn't review the entire intrinsic record. Dr. Sunderesan
9 did not consider the '379 provisional, which is expressly incorporated by
10 reference into every challenge patent, the '784 or '753 patents, or again, the
11 District Court claim construction order in arriving at his opinions. He also
12 admitted he did not do a deep dive reviewing the prosecution history.

13 So based on Dr. Sunderesan's failure to provide a level of ordinary
14 skill or support the level of ordinary skill, and as failure to explain his claim
15 constructions or even review the entire intrinsic record, we believe Dr.
16 Sunderesan's opening declaration is entitled to no weight.

17 JUDGE MCSHANE: Mr. McBride?

18 MR. MCBRIDE: Yes, Your Honor.

19 JUDGE MCSHANE: Just for the sake of argument, if we were to
20 accept that Petitioner had validly presented a -- the level of skill in the art or
21 their view of this -- of the level of skill in the art, and you had presented an
22 alternative level of skill in the art, have you briefed anywhere how the
23 differences in the qualifications of a person of skill would affect how we
24 should assess the merits?

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1 MR. MCBRIDE: Yes, Your Honor. We have in our papers
2 identified places where Dr. Sunderesan relies on his understanding of a
3 POSITA to create obviousness and claim interpretation issues where we
4 don't think that's entitled to any weight. One place we have --

5 JUDGE MCSHANE: Okay, let me stop you on that. So you're
6 basically saying it's a, if you will, a broad brush. So anywhere where this
7 expert relies on the skill of a person in the, you know, a person in the skill of
8 the art, is that right?

9 MR. MCBRIDE: That's correct, yes, as a starter. Yeah, that's --
10 that's the first issue. We think anywhere he's relying on knowledge of a
11 POSITA -- if he's not applying a POSITA -- because he hasn't actually
12 provided opinions on a POSITA and also, because his opening level of
13 ordinary skill in the art is deficient, and then it doesn't talk about somebody
14 with knowledge of cellular or wireless systems. He's not approaching the
15 analysis correctly under *KSR* and *Graham* and *Phillips*, if that makes sense.

16 JUDGE MCSHANE: Yeah, thank you.

17 MR. MCBRIDE: And in general, again, just to reiterate, their
18 POSITA, as defined in the petition, would not make the combination at Slide
19 46 between Bhattacharya and Zeng, certainly, because Zeng is entirely
20 directed to cellular technology. So somebody that doesn't have a
21 background in cellular technology would not understand to incorporate Zeng
22 into Bhattacharya.

23 Bhattacharya is a location determination reference, and it basically
24 determines location based on an existing cellular network. It's not interested

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1 in improving the cellular network, improving handoff and things like that.

2 It's interested in improving location determination. So it's not going to look

3 at references like Zeng that are talking about cellular concepts like handoff

4 in order to improve handoff, because Bhattacharya just doesn't care about

5 handoff.

6 JUDGE REIMERS: Yes, but Mr. McBride --

7 MR. MCBRIDE: Yes, Your Honor?

8 JUDGE REIMERS: -- doesn't in paragraph 54 of Bhattacharya,

9 isn't there a discussion of the handoff as an alternative method? I mean, I

10 know what you're saying the -- what the teachings of what Bhattacharya is

11 really looking at, but he does say that -- for example, I'm looking directly at

12 your Slide 46. He says, when two or more systems are used to obtain

13 strength signal measurements, one wireless switching method -- switching

14 center can use the protocol message as handoff.

15 So, they do mention handoff as a possibility to elicit signal strength

16 measurements from another, and my understanding, or I think our

17 understanding is that this is a well-known method and that Zeng was cited

18 as -- even though Bhattacharya does not go in depth into what a handoff

19 measurement request is, that is why Zeng was cited to give you examples of

20 what well-known methods of handoff measurement requests are, because

21 Zeng goes in depth in discussing that.

22 MR. MCBRIDE: Well, Your Honor, I think -- a couple points.

23 Thank you. I understand what you're saying. The first point is what this

24 paragraph is talking about is using a signal called handoff measurement

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1 request. It's not actually talking about doing a handoff. It's saying, okay,
2 we've gotten to the edge of our cellular system and we may need to -- we're
3 at the border and there's another cellular system next to us. It's going to send
4 us signals like handoff measurement requests. We can look at those signals
5 and use signal strength from that. It's not saying we want to do a handoff or
6 that we need to do a handoff for the system of Bhattacharya.

7 JUDGE REIMERS: Right, but it does say that it is an alternate
8 method that can be used, correct?

9 MR. MCBRIDE: It's saying --

10 JUDGE REIMERS; I mean, even though it's maybe looking to
11 something else in particular, it is saying that this -- because it's part of the
12 background -- so it is saying that in Bhattacharya, that this handoff method
13 can be used as a different method than maybe what's really focused on in
14 Bhattacharya; is that correct?

15 MR. MCBRIDE: Well, Your Honor, no, I don't think so. It's not a
16 handoff method. It's just looking at a signal that's routinely sent from a
17 neighboring station as an alternate to -- because what it's saying is here is --

18 JUDGE REIMERS: But that's what I'm saying. It is an alternate
19 method of doing something, correct?

20 MR. MCBRIDE: It's an alternate method of measuring signal
21 strength.

22 JUDGE REIMERS: Yes, okay, okay.

23 MR. MCBRIDE: The alternate --

24 JUDGE REIMERS: That's the point that I was getting at. Okay.

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1 MR. MCBRIDE: Yeah.

2 JUDGE REIMERS: Thank you.

3 MR. MCBRIDE: But the additional point here is, under
4 Petitioner's level of ordinary skill, the POSITA wouldn't understand how to
5 look to Zeng because POSITAs know nothing about cellular technology
6 under that definition. Therefore, they wouldn't know to look to Zeng in the
7 first place; does that make sense?

8 JUDGE REIMERS: Yes, I see your point. Thank you.

9 MR. MCBRIDE: The -- yeah, the POSITA under Petitioner's
10 definition needs no cellular knowledge or to calibrate handoffs. Yeah, the
11 point is the POSITA, under Petitioner's construction, doesn't need any
12 cellular knowledge to calibrate the handoff signal itself. It's just receiving
13 the handoff signal. It doesn't need to do anything with it, and it certainly
14 doesn't want to do anything with respect to implementing handoffs because
15 that's part of the cellular system. That's not part of what Bhattacharya is
16 trying to do.

17 Again, the point is -- remains that Petitioner's POSITA would not
18 look to Zeng because a POSITA knows nothing of cellular technology. And
19 unless there are any further questions, I will reserve the remainder of my
20 time.

21 JUDGE RANGE: Thank you, Counsel. You'll have about 35
22 minutes left for rebuttal, by my calculation. Would anyone like a break
23 before we do the rebuttals or should we move into that?

24 MR. DEVOTO: Yes, absolutely. Thank you so much. We're

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1 thinking along the same lines. If we could take a break, that would be
2 fantastic before --

3 JUDGE RANGE: Okay, great.

4 MR. DEVOTO: -- we start the rebuttal.

5 JUDGE RANGE: Let's take like a -- would five minutes be
6 sufficient and we could come back at, let's see, 12:05 Eastern Time?

7 MR. DEVOTO: Thank you, Your Honor.

8 JUDGE RANGE: 12:06 roughly, thereabouts. Thank you.

9 MR. DEVOTO: Thanks.

10 (Whereupon, the above-entitled matter went off the record at 12:00
11 p.m. and resumed at 12:07 p.m.)

12 JUDGE RANGE: Okay, we'll go back on the record. Let's resume
13 with Petitioner's rebuttal arguments. And if you could in your rebuttal,
14 touch on the -- this person of ordinary skill in the art issue. I would
15 appreciate that.

16 MR. DEVOTO: Sounds good, Your Honors. So I would like to
17 just touch upon a few concepts and then I'm going to hand the discussion off
18 to my colleague. First, David, and then Ryan. As I indicated during our --
19 during the case-in-chief portion of the oral hearing, I had advanced that it's --
20 that a good framework to think about a grid point is that it's composed of
21 three distinct attributes. There's this location attribute, which really speaks
22 to it being a point. It has a location, say, a geographic region.

23 Then there's this second attribute, which I'm going to call an area
24 attribute, and that means that that point is part of the grid that is associated

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1 with an area or a cell of the grid. That's the area attribute. Then there's this
2 third attribute called what I would call the signal characteristics for
3 calibration data attribute, and that specifically represents the signal
4 characteristics or calibration data for that area to be used for mobile device
5 location information.

6 So you've got these three distinct attributes of a grid point and one
7 thing that's worth commenting on is really something that the Patent Owner
8 said at the very beginning of their presentation, where they specifically said
9 that, hey, our invention is really doing something different than the prior art.
10 They're saying that, look, the prior art of Bhattacharya, it begins with the
11 grid and thus, it begins with the location attribute and the area attribute
12 because it begins with the grid. Then it kind of generates the calibration data
13 attribute, and then of course, that would mean that at that point, now it
14 would have a grid point in accordance with, I think, what we would believe
15 properly to be what a grid point means.

16 And then they assert, well, that's different because our invention is
17 really that we begin with the calibration data. We've taken that -- we get that
18 calibration data, we look at that first, and then from there, we jump to
19 determining the location attribute and the area attribute, and then we get to
20 the non-uniform grid point.

21 So really, in essence, their argument is really the way you arrive at
22 the grid point. They're saying, I'm going to begin this way. I'm going to
23 kind of get this attribute and then it's going to feed into the location attribute
24 and feed into the area attribute. So in a sense, their argument, quite simply,

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1 is imposing in quite a clear way, a very specific way at arriving at the grid
2 point. And Your Honors, you know, they were the master of the claim
3 language. There are such things as product by process claims. It did not
4 impose any specific limitations that would demand this particular way of
5 arriving at the grid point into the claim language.

6 And therefore, that narrowing of the claim language to limit the
7 District Court's construction, for example, to being only points associated
8 with representative calibration data for areas that are specifically determined
9 in this way. Well, no. That is not justified. That's speaking more towards
10 the way you get to it. It's a product by process type claim, where you look at
11 the product itself, and certainly, they could've added that claim language, at
12 that demanding of how you get to the area attribute of the grid point into the
13 claim, and yet they chose not to do that.

14 Now, I want to note one more thing, Your Honors, and then I'm
15 going to hand off the discussion to my colleagues here. There's a lot of
16 effort being placed by the Patent Owner in a really strenuous attempt to say,
17 hey guys, we're really not totally doing something that's entirely against why
18 we lost in front of the District Court. We're doing something a little
19 different. So they -- and you'll find this in their briefs. So they sit there and
20 they say, look, the District Court -- and they focus on two sentences in the
21 District Court's Markman order.

22 They focus on a sentence that says, but the italicized language
23 from which Plaintiffs -- so this is the statement where the District Court is
24 expressly rejecting their proposed construction in the District Court, and that

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1 construction in the District Court was actually pretty broad construction. It
2 was simply saying that look, the grid point requires that you determine the,
3 you know, the area or the -- it must be determined from evaluation or from
4 the calibration data, meaning that you have to evaluate the calibration data to
5 determine the grid point, or now they're saying the area of the grid point.

6 And they're saying that that means that the -- that the sentence that
7 I'm going to read now to you from the Markman order, "But the italicized
8 language from which Plaintiff's construction is drawn is directed more
9 towards what must be done to arrive at a grid point or set of grid points,
10 rather than what a grid point is." And they are interpreting that as somehow
11 the District Court embracing that they agree with you. Yes, of course we
12 agree, Geoscope, that maybe that must be -- that is how you must -- you
13 know, you must follow that pattern of manipulating clustering calibration
14 points to arrive at the grid point, but that's clearly not what the District Court
15 was doing.

16 This is the District Court characterizing Geoscope's position and
17 dismissing it as wrong. So what they're really saying, properly understood,
18 is that Plaintiff's construction is directed more towards what Geoscope
19 believes must be done to arrive at a grid point or set of grid points, rather
20 than what a grid point is. And we know this, Your Honors.

21 Why do we know this? Because the ultimate construction that was
22 adopted by the District Court was a point associated with representative
23 calibration data for an area, but if they felt that there must be -- that you
24 must arrive at that area in a certain way, that that was really essential. You

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1 had to arrive at a certain way, then that wouldn't have had to have been
2 added because the construction doesn't get to that. It has broader areas. It's
3 actually only a subset of the areas that would properly reflect what a grid
4 point is, and the very fact that the District Court didn't qualify the area
5 indicates that this interpretation of them somehow acquiescing to what
6 Geoscope says must be done to arrive at the grid points, somehow they
7 agree, yeah, that must be done. It's not. It's belied by the whole ultimate
8 construction adopted by the District Court.

9 And the only other -- and I want to be sensitive to time -- the only
10 other statement that they do repeatedly use to argue that their construction
11 doesn't utterly fly in the face of the reasoning that was used by the District
12 Court to reject their proposed construction in that form is the following
13 sentence. But Defendants -- so this sentence is specifically referencing the
14 District Court talking about the term representative calibration data. And in
15 referencing that term, they said, "But Defendants use of representative
16 calibration data is intended to reflect that the defining characteristic of the
17 NUG region, as explained in the specifications of the patents, says the data
18 points within an area are all statistically very similar, such that each of the
19 grid points within the NUG region can represent the overall NUG."

20 Now, first of all, contrary to Geoscope's assertion, this statement is
21 identifying the defining characteristics of an NUG region. Not an individual
22 NUG. It's an NUG region, which of course would be composed of a bunch
23 of NUGs. Secondly, the reference to data points in this statement -- and I
24 encourage Your Honors to look at that statement carefully afterwards -- that

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1 reference to data point is referring to observed network measurement data
2 points for mobile device whose locations you are trying to determine, not to
3 calibration data points which is what Geoscope is trying to convince you of,
4 and then point in saying, well, this is calibration data points and then when
5 they argue, yes, these are calibration data points.

6 They're saying, well look, the District Court still says that they
7 have to be statistically similar, so of course, that means that you have to use
8 statistics to kind of determine these calibration points to be statistically
9 similar, and the District Court is embracing that idea. They are not.

10 What they're referring in these data points is simply the
11 observation that observed network measurement data points of mobile
12 devices whose locations you are trying to determine, that are located within
13 an area of an NUG would be understood to be all statistically very similar to
14 each other, such that the calibration data attribute of each of the grid points
15 within the NUG region can be set to properly represent the overall area of
16 the NUG for purposes of mobile device location estimation. So this -- and
17 of course that makes sense, because the way these systems work -- certainly
18 a lot of these example systems work -- is they take measured data points of
19 different mobile devices located in an area -- located anywhere in a given
20 area. They compare them to the calibration data attribute for that area of that
21 grid point.

22 So that calibration data attribute of the grid point compares -- you
23 compare these different measured signal characteristic data points for a
24 bunch of different mobile devices located anywhere in that area -- to be

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1 compared to the calibration data attribute. And if the comparison is
2 favorable, you conclude that those mobile devices are within that area. And
3 that indicates, of course, that that calibration data, in the context of how it's
4 used in these systems, represents that area. Now, does it represent it well?
5 You have to combine it in a certain way so that it really does a great job at
6 representing that area.

7 Well, it's like, do you have to have one calibration point, do you
8 have to have multiple ones that you combine, do you have to cluster them,
9 do you have to use statistical analysis? No. That's how you might -- that
10 would be a way to make the calibration data maybe be a better data attribute
11 for that area. It is not at all relevant to what a grid point enhances its
12 calibration data attribute is.

13 Now, I have run out of time here. I want to make sure I give
14 enough time to my colleagues here. So unless you have any quick questions
15 on that point, I'd like to hand off the discussion to my colleague, David Holt.
16 Thank you, Your Honors.

17 MR. HOLT: Thank you, Your Honors. I have a couple hopefully
18 quick points. First and foremost, to address Judge McShane's earlier
19 question to be addressed in rebuttal, Exhibit E of the claim construction
20 order is the '753 patent, as you suspected it was.

21 And with respect to that order, I wanted to make a couple of
22 points. I think we heard today Patent Owner's Counsel attempt to suggest
23 that -- not only the construction order, but the party's briefings, all accept the
24 fact that a grid point and a non-uniform grid point are interchangeable. And

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1 in doing so, I believe we heard Patent Owner's Counsel even attempt to
2 quote from one of those briefings from the parties, Google, who's not even
3 in this proceeding. And those briefings don't form part of this record. That's
4 an entirely new argument. At no point in any of this briefing have we seen
5 Patent Owner attempt to suggest that the parties have all simply accepted
6 that grid point is non-uniform grid point.

7 It's inappropriate for us now at the hearing to try to parse the
8 party's discussions from the District Court and we should not be doing that.
9 And that brings a broader point up, which is when you step back from this,
10 we've spent a lot of time trying to talk about the District Court's claim
11 construction order and what it means, but that's not really the inquiry before
12 us. The inquiry before us is what do the claim terms mean, and the case law
13 tells us that we look to the intrinsic record, and potentially, contemporaneous
14 intrinsic evidence, as support of what that term means. But the District
15 Court's claim construction order is not in and of itself part of that process.

16 Now, we understand that it is considered persuasive potentially to
17 the extent that it can be informative to Your Honor's own process, but the
18 mere fact that we're having to spend a significant amount of our argument
19 time talking about what it even means, suggests that we should go back to
20 the base evidence and consider it on its face, and not give great credence to
21 potential interpretations of what the District Court was saying in its order.

22 I think the final point I'll make is you heard from Patent Owner's
23 Counsel that with respect to the '753 patent, we have not addressed how the
24 combination of Bhattacharya and Yost actually meet the District Court's

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1 claim construction, and that's blatantly incorrect. There's an entire Section 3
2 of Petitioner's reply that deals with this argument that was raised in the POR.
3 And in doing so, it explains how the petition itself set forth an explanation of
4 the Bhattacharya and Yost combination that directly addressed the District
5 Court's claim construction on the term grid point.

6 If Your Honors have specific questions about that combination and
7 how it works, I'm happy to answer those now, but otherwise, I will pass this
8 off to my colleague, Mr. Chowdhury. Okay.

9 MR. CHOWDHURY: Hearing none. Good afternoon, Your
10 Honors. I just had a couple of points on the level of ordinary skill, per your
11 request. Patent Owner points out what it believes are defects in Dr.
12 Sunderesan's original declaration, but these points just primarily focus on
13 form over substance. In any event, Dr. Sunderesan offered a supplemental
14 declaration specifically addressing the points raised in the Patent Owner's
15 briefing, and this supplemental declaration offered additional testimony
16 clarifying Dr. Sunderesan's understanding of the relevant principles
17 regarding the level of ordinary skill in relation to his opinion testimony and
18 his original declaration. He reiterated there that he agreed with the
19 definition of the level of ordinary skill identified in his original declaration.
20 So we submit there's clear testimonial evidence within this record that's
21 abundantly clear on what is required for the appropriate level of ordinary
22 skill.

23 I'd also note that Patent Owner had the opportunity to cross-
24 examine Dr. Sunderesan in relation to this supplemental declaration

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1 testimony and failed to do so. So Patent Owner's request now to disregard
2 the entirety of Dr. Sunderesan's declaration testimony seems overbroad.
3 There's also something peculiar about Patent Owner --

4 JUDGE MCSHANE: Counsel, can I just throw in a quick question
5 here? Is your expert, a person of ordinary skill in the art, under Patent
6 Owner's proposed definition?

7 MR. CHOWDHURY: Yes. Thank you for the question, and yes,
8 absolutely, he is. He falls under the book -- the original definition, as well
9 as the alternative definition that was offered by Patent Owner.

10 JUDGE RANGE: Could -- this is Judge Range. Could you speak
11 to Patent Owner's argument that the original petition doesn't meet the
12 statutory burden of setting out the grounds with particularity because of this
13 person of ordinary skill in the art issue?

14 MR. CHOWDHURY: Sure, yes, and we absolutely disagree. We
15 do believe that the original declaration provided testimony regarding the
16 definition for the appropriate level of ordinary skill in the art, but regardless,
17 there -- the level of ordinary skill, as Your Honors indicated in the institution
18 decision, may also be indicated by the prior art disclosures, as well as the
19 disclosures within the patent itself. And we submit that the disclosures of
20 Bhattacharya also indicate the level of ordinary skill, as relevant to the
21 obviousness analysis.

22 So there's something peculiar about Patent Owner complaining that
23 there's no evidence of sufficient level of ordinary skill in the art, and it's
24 because it offers its own alternative definition. Judge McShane, you had

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1 asked whether there's any briefing on Patent Owner's alternative definition,
2 and to this, we note that the Petition in replies did specifically address this
3 topic. For example, in pages 18 to 19 of the reply in the '255 proceeding
4 involving the '104 patent. Again, this briefing was supported by unrebutted
5 testimony from Dr. Sunderesan on how the prior art involved -- implicated
6 in these proceedings satisfy the claims under Patent Owner's alternative
7 POSITA definition.

8 As mentioned earlier, Patent Owner also fails to address clear
9 Federal Circuit case law, stating that the level of ordinary skill may be
10 indicated by prior art disclosures. This was noted in pages 15 to 17 of the
11 reply in the '255 proceeding. And Patent Owner -- finally, Patent Owner
12 suffers no prejudice from what it believes is a lack of sufficient skill --
13 sufficient level of ordinary skill in the art, like we've been talking about.
14 Patent Owner identifies an alternative definition and that alternative
15 definition was addressed in the reply, supported by declaration testimony
16 from Dr. Sunderesan. And I'll reiterate, again, Patent Owner had the
17 opportunity to cross-examine Dr. Sunderesan after his supplemental
18 declaration and chose not to do so.

19 We also agree with your observations, Judge Reimers, that Patent
20 Owner seems to misinterpret paragraph 54 of Bhattacharya. The fact that
21 Bhattacharya describes multiple system implementations does not negate its
22 broader teaching that mobile assisted handoff, or MAHO functionality, are
23 part of the geolocation process. We know that from the description in
24 paragraph 95.

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1 Paragraph 54 also states that this multi-system is an illustrative
2 embodiment, but it also indicates that there is contemplation of a single
3 system embodiment. And when Bhattacharya references handoff
4 functionality, it suggests that kind of handoff functionality is applicable to
5 either of these contemplated embodiments. So Bhattacharya simply
6 contemplates MAHO functionality as a tool of improving location
7 estimation, whether in a single or a multi-system environment.

8 One last point. Patent Owner also seems to misread Bhattacharya
9 is not teaching specific types of handoff functionality implicated in the
10 combination. Even if Bhattacharya does not teach requesting a literal
11 handoff, I think paragraphs 54 and 95 make clear that it leverages mobile
12 assisted handoff, or MAHO techniques in obtaining real-time signal strength
13 measurements. Paragraph 55 is pretty clear in its disclosure that MAHO can
14 be implemented in, quote, "a well-known fashion". And as noted in our
15 papers, Zeng improves the efficiency of this reference to MAHO through
16 disclosure of how mobile stations transition between base stations while
17 maintaining accurate signal data for location tracking. With that, I'd ask if
18 Your Honors had any other questions.

19 JUDGE RANGE: I have no further questions.

20 MR. CHOWDHURY: Thank you, Your Honors, and with that,
21 Petitioner rests its case.

22 JUDGE RANGE: All right. You may begin when you're ready,
23 Patent Owner.

24 MR. MCBRIDE: Thank you, Your Honor. I want to go back to

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1 Slide 18 in the District Court's construction for grid point, the point
2 associated with representative calibration data for an area. Now, everybody
3 agrees representative calibration data is part of this construction -- the
4 District Court, Petitioner, Patent Owner, and representative calibration data
5 means something. I think -- we can check the record here -- but I think at
6 the beginning of the hearing, Petitioner said that it meant the data must be
7 similar.

8 With any respect, it means something, and the District Court order
9 tell us exactly what it means, Defendant's use of representative calibration
10 data is intended to reflect that the defining characteristic of a NUG region is
11 that the data points within an are all statistically very similar, such that each
12 of the grid points within the NUG reason can represent the overall NUG.
13 That's how Patent Owner is interpreting that phrase. That's the phrase that
14 the Defendant briefed and fought and won at the District Court, and now
15 Patent Owner just wants to give some force to that phrase, as it has been
16 adopted here by Petitioner.

17 Petitioner's arguments otherwise are directly contrary to the
18 District Court construction, as well as its own use of representative
19 calibration data in the District Court claim construction process. So again,
20 the defining characteristic here of the NUG region is that the data points are
21 all statistically very similar, and this is, again, Slide 18, directly from the
22 Markman order. This is the construction that Petitioner won, and the issue
23 being addressed here was a different claim construction issue.

24 Now, the issue is what is the difference between calibration points

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1 and NUGs and grid points, and that representative calibration data portion of
2 the construction represent -- is meant to address that difference. In that,
3 these NUGs are defined based on an analysis of the calibration data, whereas
4 the prior art is defined based on a pre-existing grid that has calibration data
5 generated and added to it. With respect to Petitioner's arguments regarding
6 level of -- yes, Your Honor?

7 JUDGE RANGE: Counsel, could we turn to the provisional
8 application at -- I'm looking at your briefing. You said page 7. I'm not sure
9 if that's page --

10 MR. MCBRIDE: I think that's page --

11 JUDGE RANGE: It might be page 7 of the actual provisional.

12 MR. MCBRIDE: I think it's probably page 7 of the PDF.

13 JUDGE RANGE: Okay.

14 MR. MCBRIDE: Page 3 of the numerated document. Yes, Your
15 Honor. I think I'm there.

16 JUDGE RANGE: Okay. Okay, I apologize. I actually wanted to
17 go to page 8 of the PDF. Well, it's pages 7 and 8. But at the top of page 8, it
18 says, we also consider the method of generating NUGs based not on
19 statistically consistency, but based on other considerations. So it seemed
20 like the NUGs could be based on something other than statistical similarity.

21 MR. MCBRIDE: Right. I see where you're at, Your Honor. I
22 think with respect to this, there's a couple points. First of all, statistical
23 consistency is the primary method used. Second of all, I think the District
24 Court and the parties in the District Court were all considered statistical

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1 similarity to be the method -- defining the method of generating NUGs.

2 What this is saying, though, I think when it says statistical consistency, it's
3 talking about the statistical analyses that were talked about beforehand back
4 at page -- we'll call it 6. This is page 2 of the '379 provisional, where it talks
5 about -- the second to last paragraph talks about a variety of clustering tests,
6 such as the K-means algorithm, the mean and variance of the data
7 parameters, et cetera. So it's talking about a statistical analysis.

8 What I think it's saying here is you can have other ways of looking
9 at calibration data that don't necessarily have a statistical analysis. So for
10 example, pointing a specific set of NCs, those are neighboring cells. In that,
11 it's just going to say, okay, the mobile phone that we're trying to find the
12 location for has -- shows a specific set of neighboring cells that it's receiving
13 signals from. We're going to look at our NUGs to see if any NUGs have the
14 same set of calibration data, or we're going to organize our NUGs around
15 calibration points that have the same set of neighboring cells. A similar set.

16 So it's another -- again, it's another similarity analysis. Does that
17 make sense? And that's -- that's one of the reasons -- I mean, we think the
18 statistical similarity is perfectly -- when the District Court said that the
19 statistical similarity analysis is the defining characteristic of NUGs, we think
20 that's fine, but our construction allows for other kinds of similarities -- other
21 kinds of evaluations that don't require that statistical analysis; does that
22 make sense?

23 JUDGE RANGE: That makes sense. I understand your position.

24 Thanks.

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1 MR. MCBRIDE: And again, all three parties in the District
2 Court -- the District Court, Petitioner, and Patent Owner -- agree that
3 representative -- that the grid points have to have representative calibration
4 data. And even today, again, we believe a first person speaking for
5 Petitioner admitted it must be similar. It must be that the calibration data
6 that was in there must be similar.

7 Now, moving on to the level of ordinary skill. Under 35 USC §
8 312(A)(3), the petition must identify in writing, with particularity, each
9 claim challenged, the grounds on which the challenge to each claim is based,
10 and the evidence that supports the ground for the challenge to each claim.
11 Now, level of ordinary skill is a fundamental underlying part of challenging
12 patentability of claims, under *KSR*, under *Graham*, under *Phillips*. Whether
13 you're talking about claim construction or obviousness, that's a fundamental
14 part of establishing a case of unpatentability. That is not present in the
15 petition.

16 Therefore, we think the petition is deficient under 35 USC §
17 312(A)(3), as well as 37 CFR 42 § 104 (B)(4), which states the petition must
18 identify how the construed claim is unpatentable under the statutory claims
19 identified in paragraph B2 of this section. Without a level of ordinary skill
20 in the art, we don't believe the petition can meet that standard.

21 With respect to the combination of Bhattacharya and Zeng, at
22 paragraph 95, this is more of the same issue where Bhattacharya is teaching
23 another way to determine signal strengths. It's looking for another data point
24 here. It's not talking about actually performing a handoff or changing

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1 functionality in the underlying cellular system. And again, Petitioner's a
2 person of ordinary skill in the art would have no basis to combine a
3 reference like Zeng that is devoted entirely to cellular technology because
4 that person of ordinary skill in the art doesn't necessarily have any
5 background in cellular or wireless technology.

6 And again, with respect to the construction for grid point from the
7 District Court, we would urge the Board to check the transcript. We believe
8 Petitioner's first presenter explicitly used the word "similar" in describing
9 the calibration data required to form a grid point. All right. So the fact that
10 this representative calibration data reflects that the NUG has data points
11 within an area, they're all similar at least. Such that these are the grid points
12 within the NUG reason to represent the overall NUG, means that the NUG is
13 necessarily generated based on evaluation of the underlying calibration data.

14 Again, this is opposite to how the prior art Bhattacharya, Spain and
15 Zeng, Spain and Yost work, because they generate a grid and then assign
16 calibration data to that grid. And with that, if there are no further questions
17 from the Board, this concludes our presentation.

18 JUDGE RANGE: Thank you, Counsel. I believe we don't have
19 any -- we do not have any further questions. Thank you for your
20 presentations today. With that, we can go off the record.

21 (Whereupon, the above-entitled matter went off the record at 12:44
22 p.m.)

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