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# Transcript of Karthikeyan Sundaresan, Ph.D.

**Date:** December 13, 2024

**Case:** AT&T Mobility, LLC, et al. -v- Daingean Technologies, Ltd. (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2  
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4  
5 AT&T MOBILITY LLC, AT&T SERVICES INC., ERICSSON  
6 INC., NOKIA OF AMERICA CORPORATION, AND T-MOBILE  
7 USA, INC.,

8 Petitioners

9 v.

10 DAINGEAN TECHNOLOGIES LTD.,

11 Patent Owner

12 Case IPR2024-00402

13 Patent No. 10,841,958

14  
15 REMOTE DEPOSITION OF

16 KARTHIKEYAN SUNDARESAN, Ph.D.

17 Suwanee, Georgia

18 December 13, 2024 - 9:02 a.m.

19  
20  
21 Reported by:  
22 Micheal A. Johnson, RDR, CRR  
Job No. 564338

1                    REMOTE DEPOSITION OF KARTHIKEYAN  
2                    SUNDARESAN, Ph.D., produced at the instance of the  
3                    Petitioners, in the above-styled and numbered  
4                    cause on the 13th day of December, 2024, at  
5                    9:02 a.m., before Micheal A. Johnson, RDR, CRR,  
6                    Notary Public in and for the State of Texas,  
7                    reported by realtime stenographic means, at the  
8                    location of the witness in Suwanee, Georgia,  
9                    pursuant to Notice of Oral Deposition, and in  
10                    accordance to 37 C.F.R. Section 42.53(d).

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DEPOSITION EXHIBITS  
KARTHIKEYAN SUNDARESAN, Ph.D.  
December 13, 2024

| NUMBER    | DESCRIPTION                                      | MARKED |
|-----------|--------------------------------------------------|--------|
| Exhibit 1 | Second Declaration of Dr. Karthikeyan Sundaresan | 10     |
| Exhibit 2 | Patent Owner's Non-Contingent Motion to Amend    | 18     |
| Exhibit 3 | US Patent 10,841,958                             | 34     |

1 PROCEEDINGS

2 MR. SHERIDAN: Thank you to everyone for  
3 attending this proceeding remotely, which we  
4 anticipate will run smoothly. Please remember to  
5 speak slowly and do your best not to talk over one  
6 another. Please be aware that we are recording  
7 this proceeding for backup purposes. Any  
8 off-the-record discussions should be had away from  
9 the computer. Please remember to mute your mic  
10 for those conversations.

11 Please have your video enabled to help the  
12 reporter identify who is speaking. If you are  
13 unable to connect with video and are connecting  
14 via phone, please identify yourself each time  
15 before speaking. We will provide a complimentary  
16 unedited recording of this deposition with the  
17 purchase of a transcript. I apologize in advance  
18 for any technical-related interruptions. Thank  
19 you.

20 MR. HANSEN: Just for the record, this is  
21 Eric Hansen for petitioners, from McKool Smith.  
22 And Joshua, do you want to identify yourself for

1 the record as well?

2 MR. WYDE: Sure. My name is Joshua Wyde.  
3 I'm with Alavi & Anaipakos, and I represent the  
4 patent owner, Daingean Technologies.

5 MR. HANSEN: Thank you.

6 KARTHIKEYAN SUNDARESAN, Ph.D.,  
7 called as a witness, having been duly sworn, was  
8 examined and testified as follows:

9 EXAMINATION

10 BY MR. HANSEN:

11 Q. Good morning, Dr. Sundaresan.

12 A. Good morning, Eric.

13 Q. Could you please provide your full name  
14 for the record.

15 A. My full name is Karthikeyan Sundaresan.

16 Q. Sundaresan. Okay. Now, you are appearing  
17 here on behalf of patent owner in this proceeding,  
18 correct?

19 A. Correct.

20 Q. And the patent owner in this proceeding is  
21 Daingean Technologies, correct?

22 A. Correct.

1 Q. And you have offered opinions in  
2 connection with the '958 patent in this  
3 proceeding, correct?

4 A. Correct.

5 Q. And the full number for the '958 patent is  
6 patent number 10,841,958, correct?

7 A. I believe so.

8 Q. Okay. If we call it the '958 patent, will  
9 you understand that I'm talking about the patent  
10 that's at issue in this proceeding?

11 A. Yes.

12 Q. Okay. And this proceeding is IPR number  
13 IPR2024-00402, correct?

14 A. Yes, I believe so, yeah.

15 Q. Now, you've offered two declarations in  
16 connection with the current proceeding, correct?

17 A. Correct.

18 Q. You offered a declaration in support of  
19 patent owners' preliminary response, correct?

20 A. Correct.

21 Q. And in that initial declaration, you  
22 offered opinions that the invalidity theories

1 advanced in the petition did not invalidate the  
2 original claims of the '958 patent, correct?

3 A. Yes, I've analyzed with respect to a few  
4 points that I've articulated in that declaration,  
5 the first declaration.

6 Q. Now, you understand that the board  
7 subsequently instituted this inter parte review,  
8 correct?

9 A. Yes.

10 Q. And you understand that Daingean has now  
11 filed a noncontingent motion to amend in the  
12 proceeding?

13 A. Yes.

14 Q. And you understand that in a noncontingent  
15 motion to amend, Daingean is no longer arguing  
16 that its original claims are not invalid and is  
17 instead arguing that its substitute claims are  
18 valid?

19 MR. WYDE: Objection.

20 A. I think so.

21 BY MR. HANSEN:

22 Q. And you offered a second declaration in

1 this proceeding, correct?

2 A. Correct.

3 MR. HANSEN: So can we please mark as  
4 Exhibit 1 to the deposition tab 1.

5 MR. SHERIDAN: Stand by. Counsel, would  
6 you like me to mark this as last name 1?

7 MR. HANSEN: Sure.

8 MR. SHERIDAN: Okay. Stand by.

9 (Deposition Exhibit 1 marked for  
10 identification.)

11 MR. HANSEN: Do we have a link for  
12 Dr. Sundaresan to download a copy of this?

13 MR. SHERIDAN: I can have one up as soon  
14 as I'm done screen sharing.

15 MR. HANSEN: Okay. I think I would prefer  
16 to allow him to have his own copy rather than have  
17 you share.

18 MR. SHERIDAN: Okay. Sounds good. One  
19 moment. Just getting the file together. One  
20 moment. While the folder is getting prepared, I  
21 just put tab 1 in the Zoom chat for him to be able  
22 to download it and bring it up, and then once it's

1 done, I'll put it in the Zoom chat for him to use  
2 officially.

3 MR. HANSEN: Okay.

4 BY MR. HANSEN:

5 Q. Dr. Sundaresan, can you click on tab 1 in  
6 the Zoom chat so you have a copy of Exhibit 1 for  
7 your deposition.

8 A. Yes, I'm doing that.

9 Q. Thank you.

10 A. I have it, Eric.

11 Q. So Exhibit 1 to your deposition is your  
12 second declaration in this matter marked as  
13 Exhibit No. 2006 in the IPR record, correct?

14 A. Correct.

15 Q. Do you have a paper copy of your second  
16 declaration in front of you?

17 A. No.

18 Q. Do you have any papers with you?

19 A. No.

20 Q. Do you have anything open on your computer  
21 other than the -- you know, the window for this  
22 proceeding and then the exhibit that we just

1 looked at?

2 A. No.

3 Q. Okay. So Exhibit 1 to your deposition is  
4 your second declaration in this proceeding,  
5 correct?

6 A. Correct.

7 Q. And in your second declaration in this  
8 proceeding, you address the proposed substitute  
9 claims from patent owner, correct?

10 A. Correct.

11 Q. Okay. Now, can you please turn to page 3  
12 in the PDF of Exhibit 1 to your deposition.

13 A. Page 3?

14 Q. Page 3. At the top of the page it says  
15 Current Exhibit List.

16 A. Yes.

17 Q. Do you understand that one of the prior  
18 art references in the petition is a prior art  
19 reference called Lee which was Exhibit 1004?

20 A. Yes.

21 Q. And do you understand that the other prior  
22 art reference in the petition is the prior art

1 reference named Brismar which is Exhibit No. 1005?

2 A. Yes.

3 Q. Okay. In your second declaration do you  
4 reference Lee anywhere other than in the Current  
5 Exhibit List?

6 A. I'm not sure I've -- I would need to  
7 check. I'm not sure if it is used for any of the  
8 arguments in my declaration. I think it is to the  
9 extent of the group-based IDs, I might have used  
10 or referred to them in showcasing. Let me just  
11 see if I can pull it up where I could have  
12 referred to it. So these are exhibits 10 --

13 Q. Lee is 1004.

14 A. -- 04 and 1005. I can just do a quick  
15 search to see. I'm not sure if I referred it.

16 Q. So I looked at your second declaration and  
17 I didn't see any reference to either Lee or  
18 Brismar in the opinions that you've offered in  
19 your second declaration. Is that fair?

20 A. Yes. I don't think I've explicitly  
21 referred to them.

22 Q. Do you think you implicitly referred to

1       them anywhere?

2           A.   Let me just do a quick check if there were  
3       any arguments where there's an implicit reference.

4                   (Witness reviews document.)

5           A.   I don't think so.

6       BY MR. HANSEN:

7           Q.   Now, here on page 3 of Exhibit 1, the  
8       current exhibit list listing, it goes through  
9       Exhibit 2008.

10                  Do you see that?

11          A.   Yes.

12          Q.   At the time that you submitted your  
13       declaration in this case, was the current exhibit  
14       list in your second declaration the full current  
15       exhibit list?

16          A.   Sorry, I --

17                  MR. WYDE:  Objection, form.

18       BY MR. HANSEN:

19          Q.   Yeah.  So on page 3 of your declaration --  
20       your second declaration, sorry, the exhibit list  
21       goes through 2008, correct?

22          A.   Correct.

1           Q. And was that exhibit list complete at the  
2 time that you offered your opinions in your second  
3 declaration?

4           MR. WYDE: Again, objection, form.

5           A. I'm not sure of the question, Eric. I  
6 think these were all the exhibits that are listed.  
7 Some of them, just based on my background and  
8 having looked at them in the past, that inform the  
9 opinions in this declaration, like even the Lee  
10 and the Brismar, they could have been part of my  
11 first declaration, and so they were part of my  
12 background and knowledge that informed my second  
13 declaration, although I have not explicitly  
14 addressed them in this declaration. But beyond  
15 the ones listed here, I'm not sure I've used  
16 anything explicitly.

17 BY MR. HANSEN:

18           Q. Okay. Can you turn to the last page of  
19 Exhibit 1, please. On the last page of Exhibit 1  
20 it says that -- well, your signature's at the  
21 bottom of the last page of Exhibit 1, correct?

22           A. Yes.

1 Q. At the bottom of Exhibit 1 it says that  
2 Exhibit 1 was executed on September 27th, 2024,  
3 correct?

4 A. Yes.

5 Q. Okay. And so your second declaration in  
6 this matter was complete and executed as of  
7 September 27th, 2024, correct?

8 A. Correct.

9 Q. Now, your second declaration does not  
10 include the language for the substitute claims  
11 that you opined on, correct?

12 A. It refers to them I would say in the  
13 appendix -- or the motion to -- the amend  
14 document. It refers to them in that context.

15 Q. So on -- in paragraph 11 of Exhibit 1 you  
16 identify your materials considered, correct?  
17 That's on page 6 of the PDF.

18 A. Yes.

19 Q. And you say that you considered the  
20 current exhibit list which was on page little  
21 Roman numeral ii, correct?

22 A. Uh-huh.

1           Q. As well as the merits papers including the  
2           petition, the preliminary response, the  
3           institution decision, and the concurrently filed  
4           motion to amend, correct?

5           A. Correct.

6           Q. Okay. So at the time that you provided  
7           your second declaration in this case, had you  
8           already seen the motion to amend?

9           A. As I have said in paragraph 12, I reviewed  
10          the proposed substitute claims found in the  
11          Appendix A of patent owner's motion to amend. So  
12          I did see the proposed substitute claims.

13          Q. Now, what are the numbers of the  
14          substitute claims?

15          A. I don't remember the exact number. I'll  
16          have to look at Appendix A. If you can share it  
17          with me, I think might be easier, Eric.

18          Q. So what I'm trying to figure out is  
19          whether the Exhibit A to the motion to amend is  
20          the same as the Exhibit A that you looked at.  
21          Because you don't refer to any of the claim or  
22          claim elements in your declaration. And so -- so

1     how would I know reading your declaration which  
2     parts of which claim you're referring to?

3         A.   I think it's the claim that was updated  
4     with the blue color-coded -- with the group  
5     indication being brought into the claim elements.

6         Q.   Okay.

7             MR. HANSEN:   So can we mark as Exhibit 2  
8     Tab 2.

9             MR. SHERIDAN:   Yes, sir.   Stand by.

10            MR. HANSEN:   Okay.   And please put that in  
11   the chat for Dr. Sundaresan.

12            MR. SHERIDAN:   Yes, sir, I will.

13            (Deposition Exhibit 2 marked for  
14   identification.)

15            MR. SHERIDAN:   I will also upload it to  
16   the screen share -- not the screen share.   The  
17   document link in the chat as well.

18            MR. HANSEN:   Okay.

19   BY MR. HANSEN:

20         Q.   Dr. Sundaresan, can you please let me know  
21   once you have Exhibit 2.

22         A.   Yeah, I'm getting there.   Yeah, I have it,

1 Eric.

2 Q. So Exhibit 2 is paper No. 20 in this  
3 proceeding. It's Patent Owner's Non-Contingent  
4 Motion to Amend.

5 Have you seen this document before?

6 A. I've seen the motion to amend document,  
7 yes.

8 Q. And you saw this document before you  
9 offered your second declaration in this case?

10 A. I'm not sure when I referred to this  
11 document. You mean very specifically this  
12 document or probably a version of this document?

13 Q. Well -- so let's back up. Have you seen  
14 Exhibit 2 before?

15 A. Yes.

16 Q. Did you see -- is Exhibit 2 the motion to  
17 amend that you relied upon in forming your  
18 opinions?

19 A. I did see especially the amended claims  
20 that were being proposed which informed my expert  
21 declaration for the second one.

22 Q. So in -- in your declaration you identify

1 as among your materials considered the  
2 concurrently filed motion to amend?

3 A. Yes.

4 Q. And Exhibit 2 is the motion to amend that  
5 was filed in this case?

6 A. Yes.

7 Q. And so did you see Exhibit 2 prior to  
8 executing your declaration?

9 A. Yeah, I did see it.

10 Q. Now, Exhibit 2 was filed on October 8th,  
11 2024, correct?

12 A. I'm not sure when it was filed.

13 Q. So do you see in the upper right-hand  
14 corner the first page of Exhibit 2?

15 A. Yes.

16 Q. Okay. It says filed October 8th, 2024,  
17 correct?

18 A. Correct.

19 Q. And can you please turn to page 21 of the  
20 PDF for Exhibit 2.

21 A. Twenty-one, yes.

22 Q. And on page 21 of the PDF for Exhibit 2,

1 it says the document is dated October 8th, 2024,  
2 correct?

3 A. Yes.

4 Q. And patent owner's attorney, Mr. Wyde,  
5 signed that document, correct?

6 A. Correct.

7 Q. So would you agree with me that Exhibit 2  
8 was filed on October 8th, 2024?

9 A. Yes, it appears to be so.

10 Q. So did you see Exhibit 2 prior to  
11 executing your declaration on September 27, 2024?

12 A. As I said, I've seen a version of this.  
13 They could have filed it on October 8th, but they  
14 had a copy that was ready before and I had access  
15 to their amended claims.

16 Q. So you've said you've seen a version of  
17 Exhibit 2 before?

18 A. I can't comment one way or another. All I  
19 can say is it could be the exact same version, but  
20 the claim -- amended claims are exactly the same  
21 that I used for my declaration. So I'm assuming  
22 the rest of it remained the same.

1 THE REPORTER: Repeat that last sentence,  
2 please.

3 A. So I'm assuming the rest of the document  
4 remained the same as well.

5 BY MR. HANSEN:

6 Q. Can you turn to page 13 of the PDF?

7 A. Thirteen is it?

8 Q. Yes.

9 A. Yes.

10 Q. And so the paragraph at the bottom of  
11 page 13 of the PDF Exhibit 1 [sic] and concluding  
12 on the top of page 14 of the PDF of -- sorry, of  
13 exhibit -- scratch that.

14 So the paragraph at the bottom of page 13  
15 of the PDF of Exhibit 2 and concluding at the top  
16 of page 14 of the PDF of Exhibit 2 refers to  
17 Exhibit 2006, correct?

18 A. Can you repeat that question, Eric? It's  
19 referring to --

20 Q. Yeah. Exhibit 2006.

21 A. You mean under Section V, Substitute  
22 Claims Are Patentable, the first few lines of

1 Exhibit 2006?

2 Q. Yes.

3 A. Yes.

4 Q. And Exhibit 2006 is your declaration,  
5 correct?

6 A. I would need to check.

7 (Witness reviews document.)

8 A. 2006. Yes.

9 BY MR. HANSEN:

10 Q. And so this document, which refers to and  
11 cites your declaration, was something that you  
12 considered in forming the opinions that are in  
13 your declaration, correct?

14 A. As I said, I considered a version of this.  
15 And as far as what I used for my declaration are  
16 the amended claims and that hasn't changed.

17 Q. So Appendix A to patent owner's motion to  
18 amend has the amended claims, correct?

19 A. Appendix A has the amended claims, yes.

20 Q. So in Exhibit 2 that starts at page 22.

21 A. Starts at page -- give me a second. Yes.

22 Q. Now, claim 7 -- or Proposed Substitute

1 claim 7 is more than 270 words.

2 Does that sound about right?

3 A. Claim 7, the entirety of claim 7?

4 Q. Yes.

5 A. I would have to check. It could be. It  
6 may be, maybe not.

7 Q. So you testified earlier that you know  
8 that the version of the amended claims -- or the  
9 substitute claims that you looked at is the same  
10 as the substitute claims that are attached to  
11 Exhibit 2, correct?

12 A. Yes. So these claim elements were used in  
13 my second declaration.

14 Q. So how do you know that the substitute  
15 claims in Appendix A of Exhibit 2 are the same as  
16 the ones that you considered 11 days before, when  
17 you signed your declaration?

18 A. Because these amended claims were shared  
19 with me.

20 Q. And when were these amended claims shared  
21 with you?

22 A. When I was preparing my report.

1 MR. HANSEN: Mr. Wyde, can we get a copy  
2 of the Appendix A proposed substitute claim  
3 listing that was provided to Dr. Sundaresan in  
4 advance of his execution of his declaration?

5 MR. WYDE: I can take it under advisement,  
6 but patent owner -- or we'll stipulate that the  
7 version in Appendix A is the same version that was  
8 shared for his consideration.

9 MR. HANSEN: I just want to make sure we  
10 have a clear record of it, because he doesn't  
11 actually refer to any of the claim elements in his  
12 declaration. And so we don't have any way of  
13 knowing whether -- we don't have any way of  
14 verifying that there were no changes. And it  
15 appears that Exhibit 2 is a later-dated document  
16 from his declaration and I -- we want to be able  
17 to verify that there are no differences in the  
18 claims that he opined on and the claims that are  
19 actually in the motion to amend.

20 MR. WYDE: I understand. And I -- I  
21 repeat that we'll certainly -- I'm not going to  
22 dig now, but I may be able to identify the e-mail

1 where it was shared, but I will stipulate that the  
2 claims are exactly the same as are in Appendix A  
3 of Exhibit 2, which is the motion to amend as  
4 filed.

5 BY MR. HANSEN:

6 Q. So, Dr. Sundaresan, did you do a  
7 word-by-word comparison of the claims that you  
8 looked at prior to the execution of your  
9 declaration and compare them to the actually filed  
10 substitute claims in Exhibit 2?

11 A. I did a review of both, like what I used,  
12 and then once what was filed was shared, I just  
13 did a quick review and the claims are very  
14 similar. They are exactly the same. And you can  
15 see the blue parts that are highlighted, it's not  
16 complicated to check it because we're introducing  
17 a notion of grouping a set of second system  
18 information blocks that's less than the total of  
19 all the second information blocks. And so it's  
20 easy to follow the thread in all the claim  
21 elements and see where that group notion is being  
22 introduced and it's easy to verify.

1           You don't need to do a literal  
2     letter-by-letter review. Any reasonable person  
3     would be able to -- if you understand what's  
4     happening in these claim elements in terms of  
5     grouping the -- a subset of the second type system  
6     information blocks, it's easy to follow the thread  
7     in each of the claim elements to see if that group  
8     notion is being introduced at appropriate places.  
9     So it is easier to just check and make sure  
10    nothing has changed.

11       Q. So I heard three different answers there.  
12    First you said they're very similar --

13       A. I corrected that.

14       Q. -- then you said they are exactly the  
15    same, and then you said you don't need to check it  
16    because the changes are in blue. So my  
17    question --

18       A. My categorization --

19       Q. My question was -- my question was, did  
20    you do a word-by-word comparison of the claims  
21    that you looked at prior to the execution of your  
22    declaration and compare them to the actually filed

1 substitute claims in Exhibit 2?

2 A. I did.

3 Q. Okay. And you verified that they're  
4 exactly the same?

5 A. Yes.

6 Q. Are the changes to substitute claim 7 the  
7 same as the changes to substitute claim 9?

8 A. I'll have to check.

9 Q. Please do so now.

10 (Witness reviews document.)

11 A. Yes, one is with respect to the access  
12 node, the other is with respect to a method for  
13 it.

14 THE REPORTER: I didn't catch that last  
15 part.

16 A. The other -- I was referring to 9, is with  
17 respect to a method for it.

18 BY MR. HANSEN:

19 Q. When you say "for it," you mean for an  
20 access node?

21 A. Yes, I believe so. Yes.

22 Q. And the changes to claim 7 from the

1 original claim 1 are the same as the changes to  
2 claim 9 from the original claim 3, correct?

3 A. Yes.

4 Q. So I'm going to plan to focus on claim 7  
5 with the understanding that because the changes to  
6 the claims are the same, that your answer's to be  
7 the same.

8 But if there's a case where you think  
9 claim 9 is different from claim 7, can you please  
10 say that in your answer so I know to ask about it?

11 A. We can stick to 7 since 9 is similar.

12 Q. Okay. Thanks.

13 Can you please turn to paragraph 3 of your  
14 second declaration. That's Exhibit 1. Sorry,  
15 paragraph 13.

16 A. Which paragraph, Eric?

17 Q. Paragraph 13. It's on page 6 of the PDF  
18 for Exhibit 1.

19 A. Give me a second. Yes.

20 Q. And in paragraph 13 of your second  
21 declaration you're describing the original claim  
22 in connection with Figure 27, correct?

1           A. I will have to check what figure it is.

2           You mean the figure that immediately follows?

3           Yes, you're right.

4           Q. And your opinions in paragraph 13 are

5           about the claim limitations prior to the

6           amendments, correct?

7           A. Yes.

8           Q. And in the original claim there was a

9           correspondence between the valueTag recited in the

10          claim and the -- a single second type SIB,

11          correct?

12          A. Could you repeat that, Eric?

13          Q. Yeah. So the claims are about first type

14          system information block and second type system

15          information block, correct?

16          A. They relate to first and second type

17          system information blocks.

18          Q. Can we call a system information block a

19          SIB?

20          A. Sure.

21          Q. Is that how you -- how you say that or do

22          you say SIB?

1 A. No, SIB is fine. Simpler.

2 Q. SIB is fine?

3 A. Yeah.

4 Q. So in the original claim before the  
5 amendments there was a correspondence between the  
6 valueTag recited in the claim and the single  
7 second type SIB, correct?

8 A. I think so. Yes.

9 Q. And in the original claim with the  
10 valueTag for that second type SIB changed, the  
11 second type SIB would then be broadcast, correct?

12 A. Yes, changing it from on-demand to  
13 broadcast.

14 Q. And whether that second type SIB had  
15 changed was determined by whether the valueTag  
16 changed, correct?

17 A. Will you repeat that, Eric?

18 Q. Yeah. In the original claim whether the  
19 second type SIB had changed was determined by  
20 whether the valueTag changed, correct?

21 A. The valueTag change was used to indicate  
22 the change in the SIB.

1       Q.   Okay.   So probably makes sense to flip  
2       back to the listing of the substitute claims for  
3       this question.   At element 7g, and I'm on  
4       page 22 -- PDF page 22 of Exhibit 2 here.   So 7g,  
5       looking at 7g, the text that was in the original  
6       claim is black on Exhibit 2, correct?

7       A.   Sorry, I missed that.   It's black?

8       Q.   Yeah.   The text for the original claim  
9       language is black, correct?

10      A.   Sorry, I'm missing -- I'm missing your  
11      question.

12      Q.   Sorry.   I'm on page -- I'm on the listing  
13      of substitute claims in Exhibit 2.

14      A.   Exhibit 2?   Okay.

15      Q.   Yeah.   And I'm on page 22 of the PDF for  
16      Exhibit 2.

17      A.   Yes.   Okay.

18      Q.   And in particular I want to ask about  
19      element 7g.

20      A.   7g.   Okay.

21      Q.   Yeah.   Now, the original claim language is  
22      in black, correct?

1 A. Yes.

2 Q. And then the claim language that would be  
3 added by amendment in the substitute claim is in  
4 blue and underlined, correct?

5 A. Yes.

6 Q. So 7g, the original claim says that  
7 whether or not the second type SIB is changed is  
8 determined based on a valueTag, correct?

9 A. Yes.

10 Q. So in the original claim what is doing  
11 that determining?

12 A. Well, if the SIB has changed, the valueTag  
13 would be changed to represent that.

14 Q. So is it the base station that's  
15 determining whether the second type SIB has  
16 changed or is it the wireless terminal?

17 MR. WYDE: Objection, form.

18 A. I would think it's the base station,  
19 because that's the one disseminating the system  
20 information blocks.

21 BY MR. HANSEN:

22 Q. Okay. And do the amendments change that

1 it's the base station that's performing the  
2 determination in element 7g?

3 A. I don't think it articulates who does  
4 that. It's not getting into the specifics of who  
5 does the determination. All it's saying is the  
6 change is represented by the valueTag. And so if  
7 the valueTag changes, that would capture that  
8 the -- a SIB, at least in the amended one, it's  
9 the group containing the SIB has changed as well.

10 Q. Okay.

11 MR. HANSEN: Can we mark tab 3 as  
12 Exhibit 3, please.

13 MR. SHERIDAN: Yes, sir. Stand by.

14 (Deposition Exhibit 3 marked for  
15 identification.)

16 MR. SHERIDAN: It's uploaded everywhere.

17 MR. HANSEN: Okay.

18 A. Okay.

19 BY MR. HANSEN:

20 Q. So marked as Exhibit 3 to your deposition  
21 is the '958 patent, which is also Exhibit 1001 to  
22 the proceeding.

1           Are you familiar with Exhibit 3 to your  
2 deposition?

3           A. Yes. It's the '958 patent.

4           Q. Okay. Can you please turn to Figure 7 of  
5 the '958 patent, which should be on page 7 of the  
6 PDF.

7           A. Figure 7?

8           Q. Figure 7, yes.

9           A. Yes.

10          Q. Okay. So Figure 7 uses the term  
11 nonessentialSIBinfo, correct?

12          A. Uh-huh.

13          Q. Okay.

14          A. Yes.

15          Q. And as I understand your interpretation of  
16 the '958 patent, those -- that  
17 nonessentialSIBinfo, those are the second type  
18 SIBs, correct?

19          A. Correct.

20          Q. And in Figure 7 there's a valueTag for  
21 each second type SIB, correct?

22          A. Yes, in this particular figure.

1 Q. And so whether a second type SIB has  
2 changed can be determined based on a change in the  
3 valueTag, correct?

4 A. In this case each SIB has a valueTag, so,  
5 yes, you can represent a change in that SIB with  
6 the valueTag change.

7 Q. Now, Figure 7 doesn't have groups of SIBs,  
8 correct -- of second type SIBs, excuse me?

9 A. Yes, Figure 7 does not represent groups.

10 Q. Okay. So would Figure 7 be practiced by  
11 the substitute claim 7?

12 MR. WYDE: I'm going to put an objection  
13 on the record for that one.

14 I should just say "objection."

15 A. Can you repeat that question?

16 BY MR. HANSEN:

17 Q. Yeah, I'll repeat it. Does the  
18 organization of system information depicted in  
19 Figure 7 practice substitute claim 7?

20 MR. WYDE: Same objection.

21 A. So the amended -- are we talking about the  
22 amended claim 7?

1 BY MR. HANSEN:

2 Q. Yes.

3 A. So it could include one sibID.

4 THE REPORTER: What was that last word?

5 A. It could include one SIB. Claim 7, it  
6 could cover this case.

7 BY MR. HANSEN:

8 Q. So I'm going to go back and look at the  
9 substitute claims in Exhibit 2, and in particular  
10 7b. Can you please let me know when you're there.

11 A. Okay. Give me a second. Yeah, I'm here.

12 Q. Okay. Do you see the blue text added in  
13 7b?

14 A. Yes.

15 Q. Okay. And the first chunk of blue text  
16 there, would you agree with me that that requires  
17 the valueTag of the claims -- of the substitute  
18 claims to be associated with a group of plural  
19 second type system information blocks fewer than  
20 the total number of second type information  
21 blocks?

22 A. Yes. It says it should be associated with

1 a group of plural second type SIBs fewer than the  
2 total number of second type SIBs.

3 Q. And a group of plural second type SIBs  
4 means two or more of these second type SIBs,  
5 correct?

6 A. So it depends on the interpretation.  
7 Plural second type SIBs, it says it should be  
8 fewer than the total number, but can one  
9 be -- satisfy the plural? Maybe it could. But it  
10 gives you the ability to have multiple or subsets  
11 of the total number of second type SIBs.

12 Q. Okay. So it's your interpretation of this  
13 claim, then, that you don't need to have more than  
14 one second type SIB in the group for the claim to  
15 be satisfied?

16 MR. WYDE: Objection.

17 A. Well, here it says that it should be  
18 associated with a group of second type SIBs -- or  
19 a plural of multiple of those, but they shouldn't  
20 be the entire number of second type SIBs.

21 So is your question, Eric, that, can just  
22 one of them be the group?

1 BY MR. HANSEN:

2 Q. Right. So when I was looking at this  
3 language, I thought it meant that you were  
4 injecting -- or the patent owner was injecting  
5 this concept of a group of multiple second type  
6 SIBs as opposed to a single SIB.

7 A. Sorry, as opposed to?

8 Q. A single second type SIB.

9 A. Yes, that was the intention.

10 Q. And so the language in 7b that was added,  
11 does that require the valueTag to be associated  
12 with a group of two or more second type SIBs?

13 A. Yes, I would think so. And that's why  
14 Figure 27 came into play where the group ID was  
15 used.

16 Q. So turning to Exhibit 1, your declaration,  
17 for Figure 27, in this example there's -- there's  
18 no group ID, correct?

19 A. Sorry. I misspoke when I said Figure 27.  
20 Probably it's Figure 50.

21 Q. Figure 50. Okay. So in Figure 27 there  
22 is a SIB number N and it has a corresponding

1 valueTag, correct?

2 A. Correct.

3 Q. And when that SIB's valueTag changes, that  
4 SIB gets broadcast, correct?

5 A. Correct.

6 Q. And so can we turn back to Exhibit 3 and  
7 Figure 7. Exhibit 3 being the '958 patent.

8 A. Okay.

9 Q. So Figure 7, then, there's a one-to-one  
10 correspondence between the sibIDs and the  
11 valueTags for the second type SIBs, correct?

12 A. Yes.

13 Q. And so there are no groups of plural  
14 second type SIBs that correspond to a single  
15 valueTag, correct?

16 A. Figure 7 doesn't seem to capture that.

17 Q. So Figure 7 -- or the system information  
18 scheme of Figure 7 would not practice substitute  
19 claim 7, correct?

20 A. I would think so. If it does not do the  
21 group ID and group multiple SIBs or plurality of  
22 SIBs, it wouldn't practice the amended ones.

1 Q. Okay. Can you turn to Figure 21, please,  
2 which is page 19 of the PDF.

3 A. Same exhibit?

4 Q. Same exhibit, yes.

5 A. Figure 19 is it, Eric?

6 Q. It's Figure 21. It's on page 19 of the  
7 PDF.

8 A. Figure 21?

9 Q. Yes.

10 A. Okay.

11 Q. Now, Figure 21 is like Figure 7, correct?

12 A. I'm not sure. I'll have to check. It  
13 just lists one sibID. So I'm not sure. I have to  
14 look at the context of this Figure 21.

15 Q. Okay. So does Figure 21 show a group ID?

16 A. It does not seem to show a group ID.

17 Q. Does Figure 1 show two or more SIBs  
18 covered by a single valueTag?

19 A. Are the figure -- the same Figure 21?

20 Q. Figure 21.

21 A. Yeah, it does not depict a grouping.

22 Q. Okay. So based on just what's

1 on -- what's shown in Figure 21, Figure 21 -- the  
2 system of Figure 21 would not practice the  
3 substitute claims, correct?

4 A. Unlike Figure 7, I'm not able to  
5 categorically say about Figure 21 because it does  
6 not reveal a lot of information. If there were  
7 multiple individual SIBs with sibIDs it would have  
8 been easier to say. But Figure 21 is not  
9 explicit. It does not show a group ID, but  
10 whether it is advocating for an individual  
11 valueTag for each SIB is also unclear because it  
12 depicts only one SIB right there. So it's hard to  
13 say that it does not practice. Yeah, I can't  
14 confirm or deny in this particular case.

15 Q. So turning back to your  
16 declaration -- your second declaration, Exhibit 1,  
17 I would like to ask you now about paragraph 14 and  
18 your illustration of Figure 15.

19 Can you let me know when you're there?

20 A. Yeah, give me a second. Yes, I'm here.

21 Q. Okay. Now, in Figure 15, it's part of  
22 paragraph 14 of your declaration, you've

1 highlighted the sibIDs, the valueTag and then the  
2 groupidx in the figure, correct?

3 A. Yes.

4 Q. Okay. In the substitute claims, the  
5 valueTags are associated with the group IDs,  
6 correct?

7 A. Yeah. In this particular case they're  
8 associated with the group.

9 Q. And then the group identifier would then  
10 identify two or more second type SIBs by their  
11 sibIDs, correct?

12 A. Yeah, the group IDs would capture, like,  
13 what specific SIBs went into that group.

14 Q. And in the substitute claims when any of  
15 the second type SIB in the group changes, the  
16 valueTag for the whole group changes and then the  
17 whole group would switch from on-demand to  
18 broadcast, correct?

19 A. Correct.

20 Q. And in the substitute claims the valueTag  
21 is used to determine whether a group containing a  
22 second type SIB has changed, correct?

1           A.   Yes.

2           Q.   And because the valueTag is now associated  
3 with the group and not any specific second type  
4 SIB, you can no longer determine whether a  
5 particular second type SIB has changed based on  
6 the valueTag, correct?

7           A.   Well, I think there might be -- yes. In  
8 this particular case there is a valueTag that says  
9 that the SIB has -- some SIB in that group has  
10 changed.

11          Q.   So in groupidx=1 in Figure 15, there are  
12 three second type SIBs identified by their sibID,  
13 correct?

14          A.   Correct.

15          Q.   And if the first one changes, the valueTag  
16 changes, correct?

17          A.   Yes.

18          Q.   Okay. And so the second type SIB and the  
19 third second type SIB in groupidx=1 in Figure 15,  
20 they could not change even though the valueTag  
21 changed, correct?

22          A.   They may or may not have changed, yes.

1       Q. Right. So you can't determine whether  
2 those SIBs have changed based on the valueTag,  
3 correct?

4       A. I can't categorically say you can't  
5 because it depends on how valueTags are written.  
6 If you think of it as a bit mask, you can be  
7 intelligent about how those bits are laid out that  
8 gives additional information on which SIBs in the  
9 group have potentially changed. So maybe there  
10 are smarter ways to constructing your valueTag  
11 that gives a whole value, but also the way it is  
12 represented gives you additional information on  
13 which SIBs in that group have potentially  
14 contributed to the change.

15               So it's hard to say that you cannot  
16 absolutely identify which ones were the only ones  
17 that changed and which did not.

18       Q. Okay. Is there any disclosure in the  
19 patents for a valueTag that specifically  
20 identifies which SIBs within a group have changed?

21       A. Can you repeat that, Eric?

22       Q. Yeah. Is there any disclosure in the

1 patents for a valueTag that specifically  
2 identifies which SIBs within a group have changed?

3 A. I'm not sure. I can't confirm or deny. I  
4 don't know if it talks about it or not, but bit  
5 masks are fairly common, like how you represent  
6 value information. So yeah, there are standard  
7 ways of representing information. So I'm not sure  
8 if it talks explicitly about it or not, but it's a  
9 possibility for sure. That's very -- who uses  
10 these IDs or how they represent IDs might think  
11 about depicting them.

12 Q. Can I direct you to Exhibit 2 and the  
13 listing of changed claim language for the  
14 substitute claims, and in particular element 7b.

15 A. 7b?

16 Q. Yeah.

17 A. Yeah, I'm here.

18 Q. Okay. So the amended language in 7b is in  
19 blue. And the first amendment reads: Associated  
20 with a group of plural second type system  
21 information blocks fewer than the total number of  
22 second type information blocks, wherein each of

1 the second type information blocks in the group  
2 has different sibIDs and the group has a group  
3 identifier, correct?

4 A. Correct.

5 Q. So this means that if all of the second  
6 type SIBs are in the same group, that element 7b  
7 is not practiced, correct?

8 A. Correct.

9 Q. So for 7b to be practiced, you need two  
10 second type SIBs in the group but less than all of  
11 the second type SIBs in the group, correct?

12 A. Correct.

13 Q. Claim 7 is a comprising claim, correct?

14 A. Could you repeat that, Eric?

15 Q. Yeah. So element 7pre ends with the word  
16 "comprising," correct?

17 A. Comprise?

18 Q. Comprising.

19 A. Okay. Yes.

20 Q. Do you understand what "comprising" means  
21 in a claim?

22 A. My general understanding is it comprises

1 or it includes or incorporates.

2 Q. So you understand that comprising  
3 signifies that the claim is open?

4 MR. WYDE: Objection, form.

5 A. You'll have to clarify that for me a bit,  
6 Eric.

7 BY MR. HANSEN:

8 Q. Yeah. So when you use comprising as the  
9 transition between the preamble and the body of a  
10 claim, it means that the claim can include  
11 additional unrecited elements.

12 A. Got it.

13 Q. Is that your understanding?

14 A. It comprises this element. It teaches  
15 this particular element about the group. That's  
16 my understanding.

17 Q. Okay. So does anything in the claim  
18 prevent the existence of a third type of system  
19 information block?

20 A. Well, the claim element here teaches about  
21 the second type system information block, the  
22 first and the second. So it does not talk about a

1 third type system information block.

2 Q. Okay. So there could be additional types  
3 of system information block in addition to the  
4 ones that the claim recites, correct?

5 A. The system could have a different, yeah,  
6 third type system information block, sure.

7 Q. Now, what is required of a system  
8 information block for it to be a second type of  
9 system information block?

10 A. I think '958 gives examples. So the first  
11 type are the essential SIBs and the second type  
12 are the ones that are carrying the nonessential  
13 SIB information.

14 MR. HANSEN: That's all I have.

15 MR. WYDE: Do you mean you're done?  
16 You're passing the witness?

17 MR. HANSEN: I'm passing the witness.

18 MR. WYDE: Okay. I don't have any  
19 redirect.

20 MR. HANSEN: Good deal.

21 THE REPORTER: Are we off the record?

22 MR. HANSEN: Yeah, we can be off the

1 record.

2 (Deposition concluded at 10:07 a.m.)

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1 CERTIFICATE OF SHORTHAND REPORTER

2

3 I, Micheal A. Johnson, Certified Reporter  
4 and Notary Public within and for the State of  
5 Texas do hereby certify:

6 That KARTHIKEYAN SUNDARESAN, Ph.D., with  
7 witness whose deposition is hereinbefore set  
8 forth, was duly sworn by me before the  
9 commencement of such deposition and that such  
10 deposition was taken before me and is a true  
11 record of the testimony given by such witness.

12 I further certify that the adverse party,  
13 Daingean Technologies Ltd., was represented by  
14 counsel at the deposition.

15 I further certify that the deposition of  
16 KARTHIKEYAN SUNDARESAN, Ph.D. occurred remotely at  
17 the location of the witness on Friday,  
18 December 13, 2024, commencing at 9:02 a.m. to  
19 10:07 a.m..

20 I further certify the inspection, reading  
21 and signing of said deposition was not waived on  
22 the record by agreement of all parties.

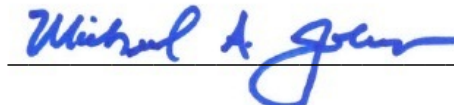
1 I further certify that I am not related to  
2 any of the parties to this action by blood or  
3 marriage, I am not employed by or an attorney to  
4 any of the parties to this action, and that I am  
5 in no way interested, financially or otherwise, in  
6 the outcome of this matter.

7 IN WITNESS WHEREOF, I have hereunto set my  
8 hand this 17th day of December, 2024.

9

10

11



12

MICHEAL A. JOHNSON, RDR, CRR

13

NOTARY PUBLIC IN AND FOR

14

THE STATE OF TEXAS

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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Conducted on December 13, 2024

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