

1 **IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

2 **PATENT TRIAL AND APPEAL BOARD**

3 **CERTIFIED COPY**

4 **In re:**)
5 **MICROSOFT CORPORATION,**)
6 **PETITIONER,**)
7 **V.**)
8 **PROXENSE LLC,**)
9 **PATENT OWNER.**)
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U.S. PATENT NO.
10,073,960
PROCEEDING NO.
IPR2024-00405

U.S. PATENT NO.
8,646,042
PROCEEDING NO.
IPR2024-00573

U.S. PATENT NO.
9,679,289
PROCEEDING NO.
IPR2024-00407

13 **ORAL DEPOSITION OF MARKUS JAKOBSSON, PH.D.**

15 **Friday, December 20, 2024**

23 **Reported by:**

24 **SUSAN ASHE, CER**
25 **Ref. 42342-0133IP1, 42342-0134IP1 and 42342-0135IP1**
 Job No.: 24-145823

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Oral deposition of MARKUS JAKOBSSON,
PH.D., taken on behalf of the Petitioner, beginning
at 10 a.m., on Friday, December 20, 2024, via Zoom,
before Susan Ashe, Certified Electronic Reporter and
an eNotary of the State of Delaware.

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CONTENTS

THE WITNESS

Markus Jakobsson, Ph.D.

BY MR. KHAN

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PREVIOUSLY MARKED EXHIBITS

PATENT OWNER

Exhibit No.		Introduced
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Exhibit 1001	U.S. Patent 8,646,042	5
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Exhibit 1001	U.S. Patent 9,679,289	5
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Exhibit 1001	U.S. Patent 10,073,960	5
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Exhibit 2014	Declaration of	
	Markus Jakobsson, Ph.D.	5

Exhibit 2016	Declaration of	
	Markus "Jakobsson," Ph.D.	5

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FRIDAY, DECEMBER 20, 2024;

10 A.M. EASTERN STANDARD TIME

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(Whereupon, Patent Owner Exhibits 1001 in the '042 Proceeding; 1001 in the '289 Proceeding; 1001 in the '960 Proceeding; 2014; 2016, previously marked, were prepared to present to the witness.)

Whereupon,

MARKUS JAKOBSSON, PH.D.

having been first duly sworn, was examined

and testified as follows:

EXAMINATION

BY MR. KHAN:

Q. All right. Good morning.

A. Good morning.

Q. I don't want to make any assumptions. If you don't mind, could you please state your name and your pronunciation, your preferred pronunciation.

A. Markus, M-a-r-k-u-s; Jakobsson, J-a-k-o-b-s-s-o-n.

Q. Thank you very much, Dr. Jakobsson, and thanks for joining today.

I will start off with some general questions before getting to some specifics and, in between, be happy to provide any breaks.

1 If you feel the need to take any break,
2 please, I just request let me know a few minutes
3 ahead so I can finish my line of questioning.

4 Does that work for you?

5 A. Yes.

6 Q. Great. And during the breaks today, do
7 you understand that you're not allowed to discuss
8 the substance of your testimony until your
9 cross-examination has concluded?

10 A. Yes.

11 Q. And will you agree to let me know if at
12 any point anyone communicates with you in any manner
13 during the course of your deposition today?

14 A. Yes.

15 Q. Do you agree that today we are here to
16 discuss your declarations that were submitted in the
17 following three IPR proceedings -- that is:
18 IPR2024-00573, which relates to the validity
19 challenge to U.S. Patent No. 8,646,042; and
20 IPR2024-00407, which relates to the validity
21 challenge to U.S. Patent No. 9,679,289; and
22 IPR2024-00405, which relates to the validity
23 challenge to U.S. Patent No. 10,073,960?

24 A. I have not memorized the numbers.

25 But if you represent to me that these are

1 the correct numbers, then, yes, I agree.

2 Q. I do.

3 And for purposes of brevity, I'll refer to
4 the patents in question as the '042, '289, and '960
5 patents. Is that okay?

6 A. Yes.

7 Q. And respectively, for the proceedings,
8 I'll refer to them as the '042, '289, '960
9 proceedings. Is that okay?

10 A. Yes.

11 Q. And for our purposes today, do agree that
12 your declarations in the '042 proceedings is
13 Exhibit 2016; in the '289 proceeding it's
14 Exhibit 2014; and in the '960 proceeding, it's
15 Exhibit 2014?

16 A. I don't know anything about that.

17 But if you represent to me that that's --
18 those are the numbers, then, yes.

19 Q. Just so you can follow, when I refer to
20 your declarations, respectively, it will be: For
21 Exhibit 2016, the '042 proceedings; Exhibit 2014, in
22 the '289 and '960 proceedings.

23 And you submitted one joint declaration
24 for the '289 and '960 proceedings.

25 Is that right?

1 A. That's my recollection, yes.

2 Q. So your statements in that declaration
3 apply to both equally?

4 MR. NORRIS: Objection; vague.

5 A. I don't know what you mean by "equally."

6 But they apply to both, as described
7 therein -- yeah.

8 Q. And because this is a consolidated
9 deposition, my questions will generally apply to all
10 three of your declarations unless I specify it's for
11 a particular declaration.

12 Is that okay?

13 A. Yes.

14 Now, I don't have printouts of the
15 declarations. So if there are particulars, would
16 you please share with me.

17 Q. Okay. Thank you. I can do that.

18 In front of you, do you have any documents
19 from the case?

20 A. I can see the realtime. That's all.

21 Q. Okay. Do you understand that your
22 testimony today is sworn testimony taken under oath?

23 A. Yes.

24 Q. Do you understand that the oath you've
25 taken in the deposition today is as solemn as the

1 oath you would take as if you were testifying at
2 trial?

3 A. Yes, I do.

4 Q. Do you understand that your testimony
5 today can be used at trial and subsequent briefs in
6 these proceedings?

7 A. Yes.

8 Q. Are you taking any medications that would
9 prevent you from answering the questions completely
10 and truthfully to the best of your ability?

11 A. No, I don't.

12 Q. Is there anything else that would prevent
13 you from answering the questions completely and
14 truthfully to the best of your ability?

15 A. Not that I know of.

16 Q. Did you write the declarations yourself?

17 A. All the opinions are mine.

18 But all the words are not necessarily
19 written by me.

20 Q. Who wrote those words?

21 A. Counsel.

22 I -- under -- I believe. I don't know.

23 Q. How many hours did you work on your
24 declarations?

25 A rough estimate is okay.

1 A. It's very hard without my billing sheet.

2 I would have to give you a rather large
3 range in order to not be wrong.

4 Q. That's okay.

5 A. I would say 20 to 50.

6 Q. And in preparing for the declarations, did
7 you speak --

8 A. Sorry.

9 Q. -- did you speak to anyone other than
10 patent owner's counsel?

11 A. No, I did not.

12 Q. Have you been deposed before?

13 A. Yes, I have.

14 Q. How many times?

15 A. On the order of 50.

16 Q. Of these depositions, how many were in IPR
17 proceedings?

18 A. About half.

19 Q. And in preparing for your deposition
20 today, did you review your declarations?

21 A. I did.

22 Q. Did you review the Board's institution
23 decisions?

24 A. Portions of it. I don't remember exactly
25 what portions or how large portions I reviewed.

1 Q. Thank you.

2 And so, before we get into some of the
3 technical details, I just want to ask a few
4 questions about your background from the CV that was
5 attached to your declarations.

6 In your CV -- they were provided as an
7 appendix in the declarations -- is it correct that
8 you held professorship positions at various
9 universities between the years 2002 and 2016?

10 A. Associate professor and adjunct associate
11 professor, yes.

12 Q. Did that continue after 2016?

13 A. No.

14 Q. Was there a reason?

15 A. I had left Indiana University, physically
16 speaking, years before. And I saw a couple of
17 students through and helped advise a few students.
18 But at that time, there were no additional students
19 from Indiana University that I took on.

20 I had students from other universities,
21 but it did not have any impact on my relationship
22 with Indiana University.

23 Q. And after 2016, you continued working, but
24 in the nonacademic space?

25 A. I remained in the academic space to some

1 extent, as I had students at New York University at
2 that time until, I think, 2018, when the last
3 student graduated.

4 So I did academic work, advising those
5 students. And I still have committee involvement,
6 where I sit on program committees, for example.

7 Q. What's the function of the program
8 committees?

9 A. To review submissions of White Papers and
10 help identify those that are particularly
11 interesting for publication.

12 Q. In your years as adjunct associate
13 professor, were you doing research work?

14 A. Yes, I was.

15 Q. What type of research were you doing?

16 A. Over the years, many kinds.

17 One kind is research related to
18 authentication.

19 Q. Did you do any research involving Personal
20 Digital Key?

21 A. "Personal Digital Key" is not a term that
22 is known in the art. So I can't say that I did
23 that.

24 I did some things that were related, in
25 nature, to what is described in these patents.

1 Q. Can you expand on that.

2 A. For example, I studied various forms of
3 authentication, such as computer-to-computer
4 authentication, and identified vulnerabilities in
5 protocols and differences in terms of other
6 features, like speed or usability or general costs
7 to maintain the protocol.

8 That's in terms of authentication, for
9 example.

10 Q. In your research, did you come across a
11 Proxense device?

12 A. I was not aware of it. If I did, I don't
13 know.

14 Q. Were you aware of Proxense?

15 A. I was not aware of the name "Proxense."
16 If they have products that I used, I did
17 not pay attention to the label on the product.

18 Q. So to the best of your knowledge, your
19 research never involved any technology from
20 Proxense?

21 MR. NORRIS: Objection; vague.

22 A. So reviewing the patents in this -- in
23 these two declarations, I did work that related to
24 the same goals and using related techniques.

25 But I did not use any Proxense products,

1 as far as I was aware of, during my research or as a
2 consumer.

3 But I might be wrong there. I simply do
4 not often pay attention to the corporate origin of
5 products that I use.

6 Q. You mentioned earlier that, in your
7 opinion, "Personal Digital Key" is not a term in the
8 art.

9 Following up on that, I wanted to ask you:
10 Is it your position that a Personal Digital Key is a
11 term that is only used by the patent owner?

12 MR. NORRIS: Objection; calls
13 for speculation.

14 A. I don't know if others use it, but I
15 haven't seen it before.

16 And if a student of mine were to ask what
17 it means, I would say I don't really know. What --
18 would you tell me about the context in which you
19 understand this to be used.

20 Q. Now, is it correct that you're a named
21 inventor in more than 300 patents?

22 A. That is correct.

23 Q. And you have served as an expert witness
24 in more than 75 patent litigation cases?

25 A. That is also correct.

1 Q. Have you been involved in the prosecution
2 of the patents that you are a named inventor in?

3 MR. NORRIS: Objection;
4 speculation -- sorry -- objection; vague.

5 A. When you say "involved in," what do you
6 mean?

7 Q. Thank you. I should say: Did you offer
8 any opinions or evidence to help obtain a patent for
9 any of your patent applications?

10 MR. NORRIS: Objection; vague.

11 A. I'm not sure what you mean by "evidence."
12 Sometimes I've helped the prosecuting
13 attorney to answer office action by reviewing prior
14 art identified by an examiner and explained my view
15 on what it does relative to the patent that is being
16 prosecuted, for example.

17 Q. In offering your opinions to the counsel
18 that you were working with for your patents, did you
19 offer opinions on the definiteness of claims?

20 MR. NORRIS: Objection; vague,
21 calls for a legal conclusion.

22 A. That's often not the kind of questions
23 that I would be asked.

24 It might be that the person I work with
25 have "definitive" of claims in mind. But it would

1 be -- the question would not be phrased as such.

2 The person -- counsel would then -- would
3 work -- ask me a question that helped them
4 understand the "definitiveness," if that were their
5 concern.

6 I am not an attorney. So I don't -- I
7 cannot answer legal questions from them.

8 Q. In your answer, you mentioned that you
9 would help counsel understand the definiteness.

10 How did you do that?

11 MR. NORRIS: Objection; vague.

12 Q. Let me restate for clarity.

13 In your answer, you mentioned that you
14 would help counsel understand the definiteness of
15 certain claim terms.

16 My question is: How would you help
17 counsel understand the definiteness of claim terms?

18 A. I was not very precise.

19 I tried to explain that nobody would come
20 and tell me a question like, would you explain the
21 "definitiveness" of this?

22 But if they were interested in that -- and
23 I -- nothing partic- -- no particular instance comes
24 to mind -- but, I would like a question to be asked
25 instead, "Would you explain this to me." "Would you

1 explain this step" -- is what the examiner -- what
2 the counsel would say to me. Or, "What do you mean
3 when you say this in the specs?"

4 And then I would explain. And by
5 explaining, I may answer that question.

6 And if their question is about
7 "definitiveness," they would know how to proceed.

8 But I'm never asked a question that, in
9 word -- that involves the word "definitiveness,"
10 because, as a nonattorney, that is not a meaningful
11 thing to ask me.

12 I don't know the boundaries of the terms,
13 and I don't know patent law in depth. I know it as
14 a technologist that en- -- that engages with patent
15 attorneys.

16 Q. Are you familiar with the concept of
17 obviousness and anticipation in patent law?

18 A. Yes.

19 Q. Are you familiar with the concepts of
20 patent eligibility in patent law?

21 MR. NORRIS: Objection; vague.

22 A. When you say "patent eligibility," what do
23 you mean?

24 Q. Are you familiar with the concept of
25 patentable subject matter in patent law?

1 MR. NORRIS: Objection; calls
2 for a legal conclusion.

3 A. I know some things -- like, you cannot
4 patent what a person does. But you could patent
5 something that a device does.

6 But I don't necessarily know the
7 boundaries or all the details.

8 So I have familiarity with some aspects of
9 it, if that is what you mean.

10 Q. How did you determine the boundaries of
11 what is obvious and what is not obvious?

12 A. Are you speaking in general?

13 Q. Yes.

14 MR. NORRIS: Objection; vague.

15 A. I've never been asked to, in general, do
16 that, as far as I remember.

17 There has been a context where I have been
18 asked to consider whether something is obvious, for
19 example, or not.

20 Q. In the context of the three patents at
21 issue here, how did you determine what is obvious?

22 MR. NORRIS: Objection; it goes
23 beyond the scope of his declaration.

24 A. So that was not one of the things that I
25 was asked to opine on.

1 I would be capable of opining on it, but I
2 haven't rendered an opinion at this point.

3 Q. You mentioned that you've been involved in
4 a number of IPR proceedings.

5 In any of the past IPR proceedings, did
6 you deal with issues related to written description
7 and enablement?

8 A. That is often part of it.

9 But I would -- in many of these cases, I
10 would have to go back to the specifications to
11 understand what a term would mean.

12 I have been involved in claim
13 construction, for example.

14 Is that what you're asking about?

15 Q. Maybe let me rephrase.

16 Did you offer opinions addressing 112 --
17 35 U.S.C. 112 grounds in IPR proceedings?

18 A. I am not an attorney, so I don't really
19 know all the numbers.

20 Sometimes I render opinions that become
21 the foundation for counsel's arguments, without me
22 referring to the individual numbers of the grounds.

23 Q. So, my apologies, I should maybe be a
24 little clearer. I'll restate that question.

25 Have you in the past, in the IPR

1 proceedings that you were involved in, offered
2 opinions addressing indefiniteness grounds in IPR
3 proceedings?

4 MR. NORRIS: Objection; vague.

5 A. I would have to review the cases to see.

6 But I have been involved in
7 "definitiveness" and "indefinitiveness" analysis.
8 And I have been involved in IPRs.

9 But I don't remember now whether the
10 "definitive-" and "indefinitiveness" was in the
11 context of IPRs.

12 Q. Are you aware that there is a parallel
13 district court proceeding going on with respect to
14 these three patents?

15 A. I don't know about the details of it. But
16 that seems often to be the case in an IPR, that
17 there is that.

18 So I suspected that there would be.

19 Q. Are you familiar with any claim
20 construction positions taken in those district court
21 proceedings?

22 A. I cannot remember being asked about that.

23 And if I do mention it in my declarations,
24 I would have to ask you to draw my attention to
25 where.

1 Q. In preparing for your declarations, did
2 you review any papers from the district court
3 proceedings?

4 MR. NORRIS: Objection; vague.

5 A. When you're saying "in preparing for my
6 declarations," what do you mean?

7 Q. In generating the opinions that you
8 offered in your declaration, did you review any
9 documents from the district court proceedings?

10 A. If I did, it would be listed in the list
11 of materials. I don't remember, sitting here right
12 now, whether I did or not.

13 Q. So if it is not listed in your
14 declaration, is it a fair assumption that you did
15 not review those documents from the district court
16 proceedings?

17 A. It's a fair assumption I did not review it
18 in preparation to opine as I did in the declaration.

19 If I were provided those afterwards, of
20 course, I would not list it in the materials. And I
21 can't recall at this point whether I have seen it.

22 I was given a bunch of material to review
23 prior to the declaration, and it might have been
24 part of that. I don't recall, one way or the other.

25 (Pause.)

1 THE WITNESS: I'm sorry. I did
2 not say, I think, "prior to the
3 declaration" but "prior to the
4 deposition" -- and if I said
5 "declaration," I meant "deposition."

6 Q. Thank you for the clarification.

7 In your declaration, you offered opinions
8 regarding what a person of ordinary skill in the art
9 would know.

10 Is that right?

11 MR. NORRIS: Objection; vague.

12 A. I don't know exactly if I used that
13 phrase. But I would -- I remember offering opinions
14 about how a person of ordinary skill in the art
15 would have understood these terms, which is that
16 they would not have unless they reviewed the context
17 of the specification.

18 Q. Who is a person of ordinary skill in the
19 art?

20 A. I don't recall now what I wrote in the
21 declaration.

22 If you could bring that up to refresh my
23 recollection, that would be helpful.

24 (Pause.)

25 MR. KHAN: So for the court

1 reporter, we are looking at Exhibit 2014.

2 This was submitted for the '960
3 and '289 patents in IPR2024-00405 and
4 IPR2024-00407.

5 Q. Dr. Jakobsson, can you see this?

6 A. Yes, I can.

7 Q. Do you recall if there's any particular
8 section that I should turn to?

9 A. There's typically a section that speaks of
10 the definition of the POSITA. I will look out for
11 it.

12 Q. Okay. So I'll scroll down, and please let
13 me know when I should stop.

14 (Counsel scrolling.)

15 A. I think you're looking at it here -- oh,
16 no. That's from the legal explanation.

17 That's not what you're asking me about,
18 right?

19 Q. No. My question was: Who is a person of
20 ordinary skill in the art?

21 A. Right. Then we'd have to continue
22 scrolling.

23 (Counsel scrolling.)

24 A. So here it says:

25 A bachelor of science,

1 with a degree in computer
2 science, computer engineering
3 or a related discipline, and
4 two years of experience in
5 designing, developing,
6 implementing, and/or deploying
7 systems or applications on
8 portable computing devices such
9 as mobile phones and laptops,
10 including programming of
11 software and/or firmware for
12 such devices.

13 Q. Now, how did you come up with this
14 definition?

15 A. I don't recall. I don't remember.
16 I might have been asked if I agree with
17 this, and I do.

18 Q. So why do you think two years of
19 experience is sufficient and not three years?

20 A. I can't really say what the boundaries
21 would be.

22 I take two years as sufficient time to get
23 warm in the job.

24 This is really an estimate of what a
25 POSITA would be.

1 Some people might need less, and some
2 people might need more.

3 This is an estimate saying what,
4 approximately, would be a meaningful description of
5 a POSITA.

6 So I think when it says "and two years of
7 experience," it means sufficient exposure to know
8 the basics.

9 Q. And what would that exposure look like?

10 A. So they give examp- -- there are examples
11 given here:

12 ...to design, develop,
13 implement, or deploying
14 systems....

15 And this -- the text here describes that
16 it could involve programming of software and/or
17 firmware.

18 So in other words, it's something that
19 exposes the person to how these devices work and the
20 problems that consumers might face in the context of
21 these devices.

22 Q. All right. So, Dr. Jakobsson, you have a
23 Ph.D. and you have several decades of experience.

24 How would you understand what a POSITA,
25 with only two years of experience -- how would you

1 understand the thinking of a POSITA who only has
2 two years of experience?

3 MR. NORRIS: Objection; vague.

4 A. So, for example, I have supervised many
5 students who have a similar background to what a
6 POSITA is described as.

7 I've also supervised junior colleagues in
8 industry with a similar educational background and
9 exposure.

10 So I'm basing it on interacting with
11 people who have a background like this.

12 When I describe what a POSITA would do or
13 understand, I look at people I have known and
14 interacted with who might have read the
15 specifications here and what they would have
16 understood.

17 (Simultaneous speaking.)

18 Q. Sorry. Go ahead.

19 A. I have also taught a lot of classes.

20 So I know, for example, how much would an
21 undergraduate student know of general terms, how
22 much would a doctoral student know, and what does
23 somebody know who does not have any exposure to
24 industry versus somebody who has been there for a
25 few years.

1 So this is based on my understanding of
2 what people of various backgrounds would understand.

3 Q. And as of what time frame would this
4 POSITA have to have had these two years of
5 experience and a bachelor's degree?

6 MR. NORRIS: Objection; vague.

7 A. The time frame here is the approximate
8 dates of the priority dates. So I don't recall that
9 right now, what those are. But we could scroll
10 further and look at that.

11 So it's in the context of the history of
12 the patents, yes.

13 So December 6, 2007 -- it's the effective
14 filing date. So at that time, I had worked at
15 Indiana University for either two or three years.
16 And prior to that, I had worked at New York
17 University for, I think, two years.

18 And I had also -- and in doing so, I had
19 taught classes. And I had also supervised
20 students -- some of whom were bachelor students,
21 some of whom were master students, and some of whom
22 were doctoral students.

23 I had also worked with junior colleagues
24 in industry -- for example, at my work at RSA Labs,
25 where I was prior to Indiana University, where I

1 would have seen what the typical understanding of
2 people of various extents of education and
3 industrial exposure would know.

4 Q. All right. You included a "Claim
5 Construction" section in your declaration.

6 Is that right?

7 A. Yes. We're looking at it right now.

8 Q. This is -- for purposes of record keeping,
9 this is -- we're looking at, again, Exhibit 2014.

10 And from the -- it's the '960 and '289
11 proceedings. And we are looking at Paragraph 20
12 with the heading "Claim Construction" right above
13 it.

14 So over here in Paragraph 20, you said
15 that:

16 I understand that claim
17 terms should be accorded the
18 plain and ordinary meaning....

19 Did I read that correctly?

20 A. That's a part of what it says in that
21 paragraph, yes.

22 Q. Do you know if this is the same standard
23 that is used when you are obtaining a patent?

24 MR. NORRIS: Objection; calls
25 for a legal conclusion.

1 A. These are things that I always ask, if
2 necessary.

3 I don't have a legal degree. So I don't
4 know.

5 Q. I'm sorry. The question was: Do you know
6 if this is the same claim construction -- sorry.

7 Do you know if the plain and ordinary
8 meaning "claim construction standard" that you have
9 noted here is the same when you are obtaining a
10 patent or what we call in patent prosecution?

11 MR. NORRIS: Objection; asked
12 and answered.

13 A. I think you're asking --

14 Q. Just to be clear, I wasn't sure -- I
15 didn't understand your answer, which is why I'm
16 asking you again.

17 MR. NORRIS: Same objection.

18 A. I'm not sure I understand your question.

19 The way I understand your question, you're
20 asking me about the law. And I cannot answer
21 questions about the law. I mean, I'm not a lawyer.

22 I could answer what my impression is.

23 But here, in this context, I think if I
24 had a question about this I would ask counsel in
25 order to understand it.

1 Q. Turning to the patents -- the '042, '289,
2 '960 patents -- do you agree that the three patents
3 have the same figures and the same specification?

4 A. That's my recollection.

5 Q. So for the purposes of efficiency, if I
6 ask you questions about one of the figures or
7 specification, would you agree that it applies to
8 all three patents?

9 A. If I don't think so or I'm not sure, I
10 would ask you to please clarify.

11 Q. Okay. The title of the three patents
12 begins with the word "hybrid device."

13 What is a "hybrid device"?

14 MR. NORRIS: Objection; vague.

15 A. I think you're asking me to define a
16 boundary. So -- is that correct?

17 Q. I'm not sure what you mean by "defining a
18 boundary."

19 I just asked you about the title of the
20 patents. It includes the word "hybrid device."

21 A. So I haven't been asked to opine about
22 that. But as far as I know, it's not a term of the
23 art.

24 But I would have to look at the context of
25 the specification in order to determine what the

1 inventors intend by that.

2 I understand the individual words, of
3 course. But it doesn't -- as far as I know, it's
4 not something you find in a dictionary.

5 But then, again, I haven't checked this
6 and I haven't been asked to opine about it. So I
7 may be mistaken.

8 Q. In the context of the '042, '289, and '960
9 patents, what is a "hybrid device"?

10 MR. NORRIS: Objection; calls
11 for speculation. It goes beyond the scope
12 of his declaration.

13 A. I would have to look at the specifications
14 and analyze it to be able to render an opinion about
15 that.

16 Q. Dr. Jakobsson, you used the words "hybrid
17 device" in your declaration.

18 Is that correct?

19 A. I do. I believe that.

20 Q. So I'm asking you to explain the words
21 that you use in your declaration.

22 So when you refer to the "hybrid device"
23 in your declaration, what do you mean by "hybrid
24 device"?

25 A. I have no --

1 MR. NORRIS: Objection;
2 misstates his declaration.

3 A. I would have to look again at my
4 declaration to refresh my recollection based on the
5 context there.

6 I don't think I ever define what a "hybrid
7 device" is, but I use it in the same context as in
8 the underlying patents.

9 Q. So if you had defined it or maybe state it
10 clearly, I wouldn't have to ask this question.

11 Part of the reason I'm asking this
12 question is because you used those words, and I'd
13 like to understand how you used it and what you mean
14 by it.

15 So if you'd like, I can go through the
16 various recitations of "hybrid device" in your
17 patent. You've used them numerous -- sorry, in your
18 declarations -- you've used them numerous times.

19 And so, my question really is: These two
20 words that you have used throughout your
21 declarations, what do you mean by them?

22 A. We can go through this --

23 MR. NORRIS: Hold on. Let me
24 get this objection in.

25 Objection; misstates his

1 declaration.

2 A. We can go through this. But what I
3 believe you're asking me is to define the boundaries
4 of the term, which is not something I have done.
5 And that would require me to think carefully before
6 I render an opinion.

7 If you're asking me how I used it in the
8 context, we could look at the specification and we
9 could look at my declaration, and I could attempt to
10 answer your question what exactly is meant.

11 But this is not something that I have
12 specifically tried to clarify what it is, other than
13 as in the context of the patent.

14 Q. Well, I am asking you, within the context
15 of the patent. And that was what I -- you know,
16 part of my question was: Within the context of
17 these three patents, what is a "hybrid device"?

18 So if it's easier for you, I can point to
19 one of the instances in your declarations where you
20 use the words "hybrid device."

21 And would that -- would it be okay, then,
22 if you explain to me what you mean by "hybrid
23 device" when I do that? Would that be okay?

24 A. We could try and see if that is helpful.

25 Q. Okay. So this is again Exhibit 2014 from

1 the '289 and '960 proceedings. We are looking at
2 Paragraph 61.

3 In Paragraph 61, you state:

4 A similar description is
5 provided with respect to the
6 cell phone 1202 including the
7 hybrid device 1102, depicted in
8 Figure 12 (reproduced below).

9 And I'll turn to -- there's -- so there's
10 no Figure 12 that's reproduced below. It just says
11 that it is, but I don't see one here.

12 A. My apologies.

13 Q. That's okay.

14 Would it help if I turn to Figure 12?

15 A. Yeah -- yes, that would very much help.

16 (Pause.)

17 Q. Can you see Figure 12 now?

18 A. Yes, I can.

19 Q. Okay. So again, in Exhibit 2014,
20 Paragraph 61, you mention:

21 A similar description is
22 provided with respect to the
23 cell phone 1202 including the
24 hybrid device 1102, depicted in
25 Figure 12....

1 Now we're turning to Figure 12.

2 Do you see Figure 12 on your screen?

3 A. I do.

4 Q. Can you tell me what the "hybrid device"
5 is?

6 A. I would have to look at the other figures
7 too.

8 I know they -- several of the figures
9 relate to each other. And I saw that there was a
10 brief snippet from the specification in the
11 paragraph you referred to.

12 I would have to review those in order to
13 answer.

14 Q. So what do you mean by "hybrid device"
15 when you use it here in Paragraph 61?

16 A. What I'd like to ask you to do is to show
17 me the other figures and to give me a moment to
18 review my declaration that relates to this.

19 Q. Okay. You'll have to guide me --

20 A. Okay.

21 Q. -- because I don't know what you want to
22 look at.

23 So if it's easier for you, if you have a
24 clean copy of these patents and declarations, you
25 can use them. I wouldn't object to that.

1 But if you'd like me to, you know, go
2 through, then I can also do that.

3 A. I don't just think that I have a clean
4 copy of it, because I've annotated it. So it's
5 better if we go through yours.

6 Q. Okay. So where would you like me to....

7 A. I don't know, but we could start at
8 Figure 1.

9 (Counsel scrolling.)

10 A. Okay. Would you scroll to Figure 2,
11 please.

12 (Counsel scrolling.)

13 A. Okay. We'll take 3.

14 (Counsel scrolling.)

15 A. 4.

16 (Counsel scrolling.)

17 A. 5, please.

18 (Counsel scrolling.)

19 A. Would you show me 6.

20 (Counsel scrolling.)

21 A. And 7, please.

22 (Counsel scrolling.)

23 A. I think I'm ready for 8.

24 (Counsel scrolling.)

25 A. And 9, please -- oh, 9 is here too -- 10

1 is -- I'm sorry, they were both there.

2 (Counsel scrolling.)

3 A. Okay. I'm ready for the next one.

4 (Counsel scrolling.)

5 A. So this identifies the "hybrid device."

6 I would have to see how it's used in the
7 other figures as well.

8 So let me look.

9 We've looked at 12 already. So how about
10 if you skip to 13.

11 (Counsel scrolling.)

12 A. So this shows another hybrid device --
13 actually, the same hybrid device, but with different
14 connections.

15 So let's look at 14.

16 (Counsel scrolling.)

17 A. Yet another.

18 And is there a 15? I don't remember where
19 it ends.

20 (Counsel scrolling.)

21 A. So this isn't -- yet another instance with
22 the same hybrid device 1102.

23 And here's another one.

24 So I refer to the hybrid devices in these
25 figures and to this specification where these

1 figures are cited.

2 Would you show me -- is there Figure 17?

3 (Counsel scrolling.)

4 A. No. So this is 16.

5 So these are clearly labeled as examples
6 of "hybrid devices."

7 These are examples only, of course. And
8 there might be more hybrid devices.

9 But the specification also clarifies what
10 these would do and give example of how.

11 Q. So what is a "hybrid device"?

12 A. Well, I mean, a roundabout way of
13 answering it is: It's a device such as depicted
14 here in Figure 16.

15 So this one shows various components, like
16 a PDK and an RDC, which....

17 You know, it also shows the -- it's called
18 a "service inheritance 1612" box that describes
19 information.

20 So this information may be present in
21 some, but not in others. So this is just an
22 example.

23 Many of the components described in the
24 specification would be understood by the -- by
25 reading the specification and see how they would

1 operate.

2 And so, the hybrid device is one of those.

3 MR. KHAN: We just hit the
4 one-hour mark. So if it's okay, could we
5 take a 10-minute break and come back at
6 11:10?

7 MR. NORRIS: That works.

8 (Whereupon, a recess was taken
9 from 10:59 a.m. until 11:11 a.m.)

10 BY MR. KHAN:

11 Q. So, Dr. Jakobsson, before the break we
12 were discussing what a "hybrid device" is and we
13 were looking at Figure 16 of the patents.

14 Would you like me to put that back up for
15 your reference, because I have a few questions.

16 A. Okay.

17 (Counsel scrolling.)

18 Q. So before we left for the break, you had
19 mentioned that this Figure 16 shows one example of a
20 "hybrid device."

21 Is that correct?

22 MR. NORRIS: Objection;
23 misstates prior testimony.

24 A. Well, I'm not saying anything about the
25 claim construction in the case -- I don't think I

1 know what the claim construction is.

2 So I don't know whether this is the claim
3 construction hybrid device we're looking at now.

4 But this is something that is identified
5 in the patent as a "hybrid device."

6 So to the extent that that corresponds
7 with the claim construction, I cannot tell.

8 Q. Well, just to be clear, we started off
9 with Paragraph 61 of your declaration and your
10 recitation of "hybrid device."

11 And I'm trying to ask you what you mean by
12 "hybrid device" so I can better understand the scope
13 of your statement.

14 So now with the benefit of having looked
15 at Figure 16 of the "hybrid device" that was
16 referenced -- or actually I think in your
17 declaration you had referenced Figure 12, right?

18 So let's go to Figure 12.

19 (Counsel scrolling.)

20 Q. Now, having looked at Figure 12, can you
21 tell me what you mean by -- when you say a "hybrid
22 device"?

23 MR. NORRIS: Objection; vague.

24 A. So I know that if you look, for example,
25 for a moment at Figure 13, it identifies "hybrid

1 device 1102."

2 And now if you scroll back, you could see
3 that 1102 here is the rounded corner square inside
4 the cell phone 1202 entity.

5 So in this particular example, that is
6 what the "hybrid device" corresponds to.

7 Q. But does a hybrid device include a PDK?

8 MR. NORRIS: Objection; calls
9 for speculation.

10 A. Are you talking in general?

11 Q. I'm talking about what your understanding
12 of a "hybrid device" is. So that's what I'm trying
13 to understand.

14 I don't know. So I'm trying to
15 understand, when you use "hybrid device" in your
16 declaration, does a hybrid device include a PDK?

17 MR. NORRIS: Same objection.

18 A. So I don't have the benefit of having seen
19 the claimed construction, if there is one. I
20 haven't seen claim construction proposals either, I
21 think.

22 So I don't know what the considered hybrid
23 devices are.

24 When I recite the "hybrid device" in my
25 declaration, it's as an example based on the

1 specification and figures that -- for example, as
2 we're looking at.

3 But without opining about what is a
4 necessary component of this or not, which I wasn't
5 asked to do -- I believe myself to be competent to
6 opine on it, but I haven't done so at this point.

7 Q. I'd like to get an answer -- because I'm
8 not asking about the claim construction. I'm asking
9 about your understanding of a "hybrid device" when
10 you use it in Paragraph 61 of your declaration,
11 whether, when you say "hybrid device," in that
12 instance, that that hybrid device includes a PDK.

13 So my question is: Does that "hybrid
14 device" that you recite in Paragraph 61 include a
15 PDK?

16 MR. NORRIS: Objection; asked
17 and answered.

18 A. Would you please bring up Paragraph 61 for
19 me.

20 Q. Yes.

21 (Witness reading.)

22 A. I'd like to read Paragraph 60 as well,
23 since 61 refers to a similar description.

24 Would you go down a little, please.

25 (Witness reading.)

1 A. So it's my understanding that the context
2 here is the discussion of the enable signal.

3 I don't think I opine about the necessary
4 components in this hybrid device, and I don't think
5 that is necessary in order to render the opinion
6 about the enable signal -- or at least I haven't
7 been asked to opine about whether it is or not.

8 Q. So, Dr. Jakobsson, that didn't answer my
9 question.

10 My answer wasn't related to the enablement
11 signal. It was related to the hybrid device.

12 And again, I'll repeat: When you mention
13 "hybrid device" in your declaration, does the hybrid
14 device include a PDK?

15 MR. NORRIS: Objection; it goes
16 beyond the scope of his declaration, and
17 asked and answered.

18 A. So I wasn't asked to opine about what
19 exactly a "hybrid device" is.

20 If instead of "hybrid device" it said
21 "Device ABC," if that's what they chose to call it,
22 I would have to say here only when the "Device ABC"
23 1102 has multiple links, because I'm describing here
24 the generation of the enable signal and it just
25 happens to be performed or described in the context

1 of the hybrid device in the specification.

2 So it wasn't necessary for me to determine
3 exactly what is the necessary components of a hybrid
4 device in order to speak about the enable signal.

5 And I haven't opined on it.

6 Unless there's another paragraph that you
7 want to talk about, I don't have much else to say
8 about what the "hybrid device" does, limited to this
9 two paragraphs here.

10 Q. So in our -- in this deposition today, you
11 cannot tell me what a "hybrid device" is.

12 Is that correct?

13 MR. NORRIS: Objection;
14 misstates the witness's testimony.

15 A. That's not what I'm saying.

16 I'm saying: In this particular paragraph
17 here, a "hybrid device" is something that has --
18 given this example, it has multiple links, 1402 and
19 1404.

20 So that's one of the features of the
21 hybrid device.

22 And it will generate an authorization or
23 enable signal -- so that's another feature of the
24 hybrid device.

25 So I am describing the "hybrid device" by

1 what it has and what it does, but not in an
2 exhaustive way.

3 I don't describe anything regarding, in
4 this sentence, what the necessary components are,
5 because that was not necessary for me to consider in
6 my -- in order to render the opinion about the
7 enablement signal.

8 Q. So Dr. Jakobsson, do you understand that
9 during the deposition I can ask you questions to get
10 clarity on the statements in your declaration?

11 A. Yes.

12 Q. And do you understand that you have an
13 obligation to answer the questions truthfully and
14 honestly and completely?

15 A. To the extent that I'm able to do so, yes.

16 Q. Do you agree that the term "hybrid device"
17 is recited in the title of each one of the patents?

18 A. Yes.

19 Q. Do you agree that the three patents are
20 directed to a hybrid device?

21 MR. NORRIS: Objection; vague.

22 A. So when I read the specification, then....

23 Since "hybrid device" is not a term of the
24 art, I -- a question I had when I read it was, "What
25 is a 'hybrid device'?"

1 But then when I considered the questions I
2 was asked to opine on, I realized that I don't need
3 to know exactly what a "hybrid device" is.

4 So I was not asked to do it, and it wasn't
5 appearing to be important for me to do in order to
6 do my job well. And therefore, I didn't carefully
7 consider what a "hybrid device" must be or must
8 have -- or even all the possible examples of a
9 hybrid device, exactly what they are.

10 It was sufficient for me to say it's a
11 construction that is used to describe the
12 functionality disclosed in this invention.

13 And that was enough in order for me to
14 render opinions on the few questions that I was
15 asked to do so on.

16 I could render an opinion about what a
17 "hybrid device" is. But I haven't, to this point.

18 Q. So as of the time that you submitted your
19 declarations, you did not determine what a "hybrid
20 device" is.

21 Is that correct?

22 A. I did not need to determine exactly what a
23 "hybrid device" was, because it was not necessary in
24 order for me to understand the specification as far
25 as being able to answer the questions that I was

1 asked to render opinions about.

2 So, of course, I -- in reading the
3 specification, I have exposure to the term and I've
4 seen examples of what it could be. But I have not
5 spent time analyzing what the boundaries are.

6 So I could say an example provided here is
7 what, described in this figure.

8 But I don't know if that is a necessary
9 component that we're looking at or it's just an
10 example component. I haven't considered that.

11 Q. Based on your analysis, does a hybrid
12 device have to include a PDK and an RDC?

13 MR. NORRIS: Objection; calls --

14 Q. "PDK" being a -- sorry, if I may just
15 complete -- "PDK" being a Personal Digital Key, and
16 a "RDC" being a Receiver Decoder Circuit.

17 MR. NORRIS: Objection; calls
18 for speculation, calls for a legal
19 conclusion.

20 A. I don't remember opining on this.

21 If there's a particular paragraph or
22 section of my declaration where you think I am
23 opining about it, I'd like to ask you to please
24 refresh my recollection by showing it to me.

25 Q. So the title of the patents is "HYBRID

1 **DEVICE HAVING A PERSONAL DIGITAL KEY AND RECEIVER**
2 **DECODER CIRCUIT...."**

3 My question is: Does a hybrid device
4 include a Personal Digital Key and Receiver Decoder
5 Circuit, as described in the three patents?

6 MR. NORRIS: Objection; calls
7 for speculation and a legal conclusion.

8 A. I have not opined on that.

9 I understand that titles of patents don't
10 have to correspond to the claim language.

11 You could claim something different than
12 what the titles -- specifies. And a title is an
13 effort to describe all of the specifications, not
14 necessarily the claimed invention.

15 I would not be able to answer your
16 question without analyzing this.

17 Q. Okay. Let's turn to the claims, then.

18 I'll put on the '042 patent. And can you
19 see the -- this is the '042 patent.

20 Can you see Claim 1?

21 A. Yes, I can.

22 Q. So this is Exhibit 1001 in the '042
23 proceedings. It's a copy of the '042 patent.

24 On the screen, you see Claim 1.

25 So Dr. Jakobsson, does a hybrid device,

1 according to Claim 1 of the '042 patent, include an
2 integrated PDK and an integrated RDC?

3 MR. NORRIS: Objection; vague.

4 A. You know, I see the terms that you're
5 referring to. But I haven't spent any time
6 analyzing the claim.

7 I feel hesitant to opine about something I
8 haven't really considered.

9 Q. So you're saying that you did not consider
10 Claim 1 of the '042 patent and are therefore
11 hesitant to opine on it? -- my question.

12 MR. NORRIS: Objection;
13 misstates the witness's testimony.

14 A. That's not what I was saying.

15 I'm referring to your question here.

16 You're asking me if -- according to
17 Claim 1 of the '042 patent, does a hybrid device
18 include an integrated PDK and an integrated RDC?

19 I don't know, because I don't know what
20 the claim construction is and I haven't spent any
21 time analyzing it.

22 All I could say is that I see the words
23 that you're referring to.

24 But that's probably not what you're asking
25 me about, if I see the words. You're asking me

1 about my understanding of this.

2 I have not been asked to opine about the
3 question you're asking me --

4 Q. So --

5 A. -- and I haven't yet.

6 Q. Sorry.

7 So based off of what you see on the
8 screen, which is Claim 1 of the '042 patent, you
9 cannot answer the question -- can you not answer the
10 question that a hybrid device in the '042 patent
11 includes an integrated PDK and an integrated RDC?

12 MR. NORRIS: Objection; vague.

13 A. So I don't know about the -- you're not
14 using the word "comprising." You're saying
15 "including."

16 I don't know whether that is a legal
17 distinction between those two words, and I don't
18 know about the claim construction that has been
19 performed in this context.

20 So when it says that it comprises it, I
21 don't know what the court has decided that that
22 means.

23 I could simply read the claim, as anybody
24 could, and say that I see the words you're seeing.

25 But I do not have the benefit of a claim

1 construction to understand what the court means by
2 this.

3 Q. So in offering your opinions in this
4 declaration, you did not see any claim construction
5 positions taken by any of the parties involved in
6 this dispute?

7 A. I don't remember seeing that, and I
8 wasn't -- I don't think I ever asked for it, because
9 it was simply not pertinent to -- in order for me to
10 answer the questions that I was asked to opine
11 about.

12 So the question you're asking me now, it
13 seems like a perfectly good question -- and I would
14 be able to opine about it, but I haven't.

15 Q. Dr. Jakobsson, did you review Claim 1 of
16 the '042 patent when preparing your declaration?

17 A. I did read the specification and the
18 claims. But, you know, certain portions I spent
19 much more time on than others -- namely, those that
20 were appearing to be relevant for me to answer the
21 questions that I was asked.

22 I don't remember spending significant time
23 analyzing Claim 1, at least not in the context of
24 what you're asking.

25 Q. And if I understood -- please correct me

1 if I'm wrong here -- if I understood your statements
2 earlier, you said that -- and maybe I can go back
3 and read the....

4 (Pause.)

5 Scratch that, please.

6 (Pause.)

7 A. I'm sorry. I don't think I understood.

8 Is there a pending question?

9 Q. No. I was going to ask a question, and I
10 said scratch that. So --

11 A. Oh.

12 Q. -- no outstanding question right now.

13 (Pause.)

14 Q. So Dr. Jakobsson, I asked you about the
15 "hybrid device." And you mentioned that you did not
16 consider the construction of a "hybrid device."

17 Is that correct?

18 A. I don't think I've seen a claim
19 construction related to it.

20 I have read the specifications and
21 considered the "hybrid device" in the context of the
22 questions I was asked to opine on.

23 But I did not need to know the boundaries
24 of the meaning of a "hybrid device" in order to do
25 so.

1 Q. Did you consider the claim construction
2 for any term in Claim 1 of either of the patents --
3 of any of the patents?

4 MR. NORRIS: Objection; vague.

5 A. I don't recall --

6 Q. Let me clarify. Sorry if that was vague.

7 Did you consider the construction of any
8 of the terms in Claim 1 of the '042 patent, the '960
9 patent, and the '289 patent?

10 MR. NORRIS: Objection; vague.

11 A. I know many of the things that I've been
12 asked to opine about is of relevance to the claim
13 construction.

14 So, for example, whether something would
15 be understood by a person of skill in the art, or
16 not, to have a particular meaning, that seems of
17 high relevance to the claim construction.

18 But I have not seen an opinion based -- by
19 the court -- sorry, I didn't mean to use the word
20 "opinion."

21 I haven't seen a decision, what it means.
22 And I don't think I've seen all the proposals of
23 what it mean -- could mean.

24 But I have been asked to do things that
25 relate to matters of claim construction, I believe.

1 Q. Can you give me an example?

2 A. Well, I believe that the reason I was
3 asked what a POSITA would understand the terms to
4 mean is one of claim construction.

5 But I don't know that for a fact. There
6 might be other reasons I'm asked to opine about
7 this.

8 And so, I know that I have opined, for
9 example, that the PDK is not a term that has a
10 particular meaning among POSITAs. But they would
11 have to review the specification for the context in
12 order to know what the claim language intends.

13 That would be one example.

14 Q. When you say "they would have to review,"
15 who is the "they" you're referring to.

16 A. "They" the POSITA.

17 The POSITA wishing to understand what a
18 PDK is would, in my view, have to read the
19 specification and look at the examples there.

20 Because a PDK -- it's not something that
21 they would have learned about in their classes, or
22 it's not an industry term that I've seen or I
23 believe they have seen.

24 And therefore, they would say, okay, in
25 order to understand this better, I would have to

1 read the specs.

2 Q. So I would like to turn to...back to the
3 figures.

4 (Pause.)

5 Q. So I'm turning back to Figure 12, which
6 was the figure that you referenced in Paragraph 61
7 of your '289 declaration.

8 Just using this -- but if you would like
9 to turn to any other figure, I'm happy to do that.

10 Looking again at the -- Claim 1 of the
11 '042 patent, Claim 1 of the '042 patent claims:

12 A hybrid device

13 comprising:

14 an integrated personal

15 digital key and...

16 an integrated RDC....

17 Can you show me, either in this figure or
18 any other figure of the '042, where the integrated
19 Personal Digital Key is?

20 MR. NORRIS: Objection;

21 misstates what a Personal Digital Key and
22 an RDC is in Claim 1.

23 A. So I'm not a lawyer, and I don't know how
24 to interpret the word "integrated" unless I know a
25 construction for it.

1 "Integrated" has a meaning outside the
2 patent. But I haven't considered what the meaning
3 is in the context of the specifications.

4 I don't know if there's been a claim
5 construction about it.

6 But -- so when the Claim 1 speaks of an
7 "integrated PDK," I don't know what that really
8 refers to, since I don't know whether there has been
9 any agreement about what various terms, including
10 "integrated," would be.

11 (Simultaneous speaking.)

12 Q. I'm asking for your -- sorry. Go ahead.

13 A. I think you're asking for my knee-jerk
14 opinion about this.

15 All I could say is that the claim does
16 refer to an "integrated PDK." This image shows a
17 PDK 102a. And the hybrid device, which is the 1102,
18 is shown inside the borders of Cell Phone 1202.

19 I haven't analyzed what this really means
20 in terms of the meaning of what it means to
21 "comprise," as described in Claim 1.

22 I haven't analyzed it in terms of what it
23 means -- what it means to be "integrated," if
24 anything, other than what a POSITA would have
25 understood outside the claims and the specification.

1 And the reason for that is that I haven't
2 read the specifications with the question of whether
3 "integrated" is used in the way it's used outside
4 the patent or not.

5 It's simply something I have not opined
6 about and I haven't been asked to opine about. So I
7 don't have any answer to your question.

8 Q. Well, you used the word "integrated" in
9 your declaration, did you not?

10 | A. I used it when I cited the specifications.

11 I don't think I ever defined the word.
12 But I cited paragraphs of the specification in which
13 it occurs, I believe.

14 Q. So when you used it, what did you -- what
15 was your understanding of the word "integrated"?

16 A. Can we look at a particular paragraph
17 where I use it, and I will try to answer your
18 question.

19 | **(Pause.)**

20 Q. Sorry. I have to go to the '042. Just
21 give me one minute, please.

22 A. Actually, would you show me 36 again,
23 because I think that might help me understand your
24 question.

25	Q. Sure.
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1 (Witness reading.)

2 A. So I do remember speaking about the --
3 what these -- the integrated RDC and the integrated
4 PDK are, as summarized here.

5 So this is elaborated on elsewhere.

6 But based on the absence of a meaning
7 among POSITAs of the terms outside the patent, the
8 POSITA would have to look at what the claimed
9 components supposedly do here.

10 So they -- I think I used the terms -- the
11 language, correctly. But please correct me if I'm
12 not. I believe this is a means and function
13 argument, where the means and function would be
14 determined from the specs.

15 Q. Well, Dr. Jakobsson, you state here in
16 Paragraph 36 that the integrated RDC recited in
17 Claim 1 of the '042 patent is nothing more than....

18 And then you offer some more comments
19 there.

20 So my question is: What did you mean by
21 "integrated"?

22 You use the term, and I'm trying to
23 understand how you use it.

24 So what did you mean by "integrated"?

25 A. I simply refer to what the language of the

1 patent is.

2 So the claim refers to the integrated RDC.

3 Without picking that apart -- instead
4 saying, what is the general -- what is the meaning
5 of that? -- well, the conclusion on my report, among
6 other things, is that it's really a general purpose
7 computer. And it describes here what it could do.

8 And then, the question will be: So what
9 does this general purpose computer do?

10 Well, there are examples in the
11 specification for what it would do.

12 And I describe in some of my -- in some of
13 the portions of the declaration, I give examples of
14 what these general purpose computers in the context
15 of the specifications are programmed to do.

16 Q. Dr. Jakobsson, I just -- respectfully, I'd
17 ask you to answer the question.

18 My question was not what general purpose
19 computers are. It was: What is the meaning of
20 "integrated," as you used it in your own
21 declaration?

22 You noted -- again, in Paragraph 36 --
23 what an "RDC" is. Right?

24 You noted that it's -- an integrated RDC
25 is -- you noted that it is nothing more than the

1 general ability of general purpose computers, etc.

2 So I'm asking you: When you used the term
3 "integrated" and "integrated RDC," what was your
4 understanding of the word "integrated"?

5 MR. NORRIS: Objection; vague.

6 Objection; asked and answered. Objection;
7 misstates the witness's declaration.

8 A. So I don't remember exactly what an --
9 what the acronym "RDC" stands for now.

10 Would you refresh my recollection.

11 Q. Receiver Decoder Circuit?

12 A. Receiver Decoder Circuit.

13 So just like I haven't been asked for the
14 specific word "receiver" -- I've been asked about
15 the Receiver Decoder Circuit -- I have not taken
16 apart the integrated RDC into its full constituent's
17 word [verbatim].

18 I've been looking at when it says a
19 certain thing in the claim, what is the meaning of
20 that?

21 So an integrated RDC, my analysis says
22 that that's a general purpose computer that can
23 decode encrypted data.

24 And it gives examples of how.

25 It's not necessary for me to look at it

1 word by word. I'm looking at the whole segment and
2 say, what would be the meaning of this as a blob? --
3 where the constituents' words aren't necessarily
4 important to analyze in isolation.

5 Q. So is it your position that, to understand
6 what an integrated RDC is, you did not need to
7 understand what the word "integrated" means?

8 MR. NORRIS: Objection;
9 misstates the witness's testimony.

10 A. I was not asked to consider what it was.

11 And I saw that, in order to understand
12 the -- what -- the meaning of the claim, whether it
13 would have a particular meaning, for example, "to
14 proceed" or -- so, what that meaning would be -- I
15 did not see the meaning of picking apart.

16 I did not have to isolate word by word,
17 but I only had to see: What is an integrated RDC in
18 this context?

19 Without, as I mentioned before, breaking
20 out "integrated," breaking out "receiver," breaking
21 out "decoder," or breaking out "circuit," it's the
22 compound that I'm saying corresponds to general
23 purpose computer.

24 That would be programmed in the manner
25 described in the specifications, for example.

1 Q. So your opinion that you offered in the
2 declaration regarding what an "integrated RDC" is
3 did not consider what the words "integrated,"
4 "receiver," "decoder," or "circuit" mean.

5 Is that correct?

6 MR. NORRIS: Objection --
7 objection; misstates the witness's
8 declaration.

9 A. Right. I don't....

10 Let me back up a little bit.

11 I was not asked to opine about individual
12 words, and I didn't opine about it.

13 I haven't rendered an opinion. Instead, I
14 looked at what is the meaning of an "integrated
15 RDC," as described in Claim 1, without considering
16 individual words.

17 It's just -- as I mentioned to you before,
18 we could have renamed it "Device ABC," and I would
19 not have to take it apart and say: What is "Device"
20 and what is "A" and what is "B" and what is "C"?

21 They call it "Device ABC." What is that?

22 In the same sense here, an "integrated
23 RDC," I was asked: What is that?

24 Well, it's a general purpose computer, and
25 it has the capability of decoding, such as what is

1 done by Wi-Fi.

2 Q. How do you know it's a "general purpose
3 computer" when you did not give the words any
4 meaning?

5 MR. NORRIS: Objection;
6 misstates the witness's testimony.

7 A. So first of all, as I understand it,
8 "general purpose computer" in the context of law is
9 a slightly different thing than "general purpose
10 computer" as in textbooks.

11 And that's something I've been informed
12 about, what it corresponds to.

13 The description in the specification of
14 what it is does describe what I've been informed the
15 law says a "general purpose computer" is.

16 And further, looking at the specs and what
17 an RDC requires, I understand that it needs to be
18 able to decode the encrypted data that it receives.

19 So if I understand your question
20 correctly, you're asking me to break out individual
21 words and opine on those -- and I would be able to
22 do that, if given enough time, but I haven't done it
23 at this point.

24 Q. So what is your understanding of a
25 "general purpose computer"?

1 A. Are you asking in the context of law or in
2 the context of what a computer science textbook
3 would say?

4 Q. In the context of your declaration.

5 A. In the context of my declaration, I have
6 been informed that "general purpose computer," for
7 example, corresponds to a computer that has not yet
8 been programmed. Its functionality has not been
9 locked in by the provision of an algorithm yet.

10 But as soon as you specify the algorithm,
11 it will execute. You have determined what it does,
12 uniquely.

13 And now, in my understanding of the legal
14 interpretation of "general purpose computer," it has
15 ceased to be a general purpose computer. It is a
16 computer -- a general purpose computer that now has
17 been given a particular functionality by the
18 algorithm it's been programmed with.

19 Now, this is my recitation of things that
20 I've been told about the law.

21 So I apologize if I mangle things here.
22 But that is, in general, how I have used the term
23 herein.

24 Q. So you didn't do any independent analysis
25 as to what a "general purpose computer" is. You

1 just took the word of your -- of the counsel you
2 were working with?

3 MR. NORRIS: Objection;
4 misstates the witness's testimony.
5 Objection; vague.

6 A. So that's not what I was saying.
7 When counsel mentioned the "general
8 purpose computer" term to me --

9 MR. NORRIS: Objection.
10 Hold up. I want to caution the
11 witness not to reveal any specific
12 communications with counsel that are
13 privileged.

14 THE WITNESS: Okay.

15 A. It was explained to me what the law says a
16 "general purpose computer" is when I discussed the
17 specifications with counsel.

18 Q. And to be clear, I wasn't asking about the
19 conversations you had with counsel.

20 My question to you was: Did you do any
21 independent investigation as to what a "general
22 purpose computer" is?

23 A. In the context of the specification, in
24 the context of law, or in the context of
25 textbooks -- I need to know which one you're asking

1 me about.

2 Q. Well, in drafting your declaration, did
3 you do any investigation to determine what a
4 "general purpose computer" is?

5 A. It was represented to me what the law says
6 about that.

7 I don't question counsel when it comes to
8 law. I specify when I have a technical view that
9 diverges from theirs. But when it comes to the law,
10 I just accept it as a fact that this is how it is.

11 There is no reason for me to doubt it. I
12 am not a lawyer. And my role here is not to
13 interpret the law; it's just to apply what I'm told
14 the meaning is in the law.

15 But that said, I was sent material. They
16 were legal briefs -- but I don't remember what
17 kind -- that described things that helped me
18 understand, based on case law, how to understand
19 this.

20 But I don't recall what particular
21 material that was.

22 Q. So I have turned to Paragraph 18 of your
23 '042 declaration, just a few paragraphs above.

24 You can see Paragraph 18 -- oh, can you
25 see it?

1 A. Yes, I can.

2 Q. Okay. And you agree the first sentence
3 says:

4 As discussed in detail
5 below, I do not believe the
6 terms "integrated RDC,"
7 (receiver decoder circuit),
8 "integrated PDK (personal
9 digital key), and "enablement
10 signal" are understood by
11 persons of ordinary skill in
12 the art to have a sufficiently
13 definite meaning....

14 Did I read that correct?

15 A. Yes.

16 Q. And a few lines down, you also use the
17 terms:

18 The terms --

19 You state:

20 The terms, rather, connote
21 the general and generic
22 abilities of general-purpose
23 computers....

24 Is that correct?

25 A. You read it correctly.

1 Q. A few minutes ago, you said:

2 A general purpose computer
3 may be one that has not yet
4 been programmed, its
5 functionality has not been
6 locked in by the provision of
7 an algorithm.

8 Do you recall saying that? Did I state
9 that correctly?

10 A. Yes -- when I tried to explain what my
11 understanding is of the term from the legal
12 perspective.

13 So as you know, when I'm talking about the
14 law, I am not as precise as when I'm talking about
15 technology. So I might have said this in a slightly
16 vague or in an inaccurate manner.

17 But that is an estimate of what I
18 understand it to mean.

19 Q. I just want to better understand that a
20 little bit.

21 How does a computer operate without being
22 programmed?

23 A. To my understanding, what the law has
24 defined a "general purpose computer" to have and do
25 is the ability to store and access storage, and to

1 communicate.

2 So that would give it some functionality.

3 There would probably have to be firmware,
4 maybe an operating system -- depending on the
5 context -- that provides some instructions that
6 enables this.

7 But, for example, if you're thinking
8 about -- we're using a browser right now. The
9 browser is -- you could think of as an added
10 specification that sits on top of what the general
11 purpose computer does, that allows it to, for
12 example, render HTML.

13 So that's an example of the instructions
14 that could be given to a general purpose computer.

15 Now, I know that this is not a complete
16 description and it doesn't identify the boundaries.
17 But this is an example of how I understand the term
18 to be used in the law.

19 Q. What's the threshold that you have to
20 cross from becoming -- from going -- from being a
21 general purpose computer to a nongeneral purpose
22 computer?

23 MR. NORRIS: Objection; vague.

24 A. That's a really interesting question, and
25 I am curious of that.

1 But I have not rendered an opinion about
2 it, and I don't know if such a determination has
3 been made in the law.

4 I would be very interested in reading it,
5 if it has. But I don't have any readymade opinions
6 as far as it goes.

7 As I said, I have not spent any time
8 identifying the boundaries of the terms, because it
9 wasn't necessary for me to render these opinions.

10 Q. So without knowing the boundaries of what
11 a general purpose computer is, how could you tell me
12 that the integrated RDC or integrated "PDC" are
13 general purpose computers?

14 A. So you could tell, in instances, whether
15 something is or is not without knowing the exact
16 boundaries.

17 And in this case, I can tell from the
18 description that it does belong to the class of
19 general purpose computers.

20 But you're asking me now about the
21 boundaries. So you're saying, what would you have
22 to add or subtract for it to change that status?

23 I have not considered that.

24 I've only considered, is this a general
25 purpose computer? Yes, it is.

1 Q. Though there is functionality that was in
2 an RDC that you didn't consider, you wouldn't be
3 able to tell me whether, because of the lack of
4 considering that functionality, that the integrated
5 RDC is now no longer a general purpose computer.

6 MR. NORRIS: Objection; vague.

7 A. I think I actually don't understand your
8 question.

9 Q. Okay. You -- so....

10 Let me rephrase a little better.

11 In the term "general purpose computer,"
12 what is the general purpose of that computer?

13 MR. NORRIS: Objection; vague.

14 A. So the way I understand it -- and we're
15 speaking now of a general purpose computer as
16 understood in the law -- it's a computer that has
17 the capability of accessing storage and some form of
18 communication.

19 So "communication" here could mean that a
20 keyboard is connected, that a radio is connected,
21 that a monitor is connected. Those are examples.

22 So it's an I/O, in other words.

23 I don't know the details of what must,
24 according to the law, be incorporated and what must
25 not. So I don't know the boundaries.

1 Q. But doesn't every computer have an
2 operating system?

3 A. No. But an operating system, I don't know
4 whether -- and I haven't considered yet whether that
5 would be part of the general purpose computer.

6 I would have to think about that. It
7 really would depend.

8 And so....

9 For example, you could say that a computer
10 needs drivers in order to handle the I/O. Maybe the
11 drivers and a minimum operating system would be part
12 of the general purpose computer -- I have not
13 considered.

14 Some general purpose computers might not.

15 It does not -- it is not necessary for me
16 to consider exactly what is and what is not part of
17 it in order to render the opinion here.

18 I can tell that this is a general purpose
19 computer. And if you're saying, what would you add
20 to make it not so? I don't know, I'd have to think
21 about that.

22 Q. Well, what you said is that a general
23 purpose computer would have a memory and
24 communication like a radio.

25 Is that correct?

1 A. I don't know exactly what the law says.

2 For example, I don't know if it has to
3 have a memory or it could be, for example....

4 For example, a hard drive -- is that
5 considered a memory? I don't know. It -- I don't
6 know.

7 They would have to have -- in my
8 understanding of what I've been told about the law
9 as it relates to general purpose computer, it would
10 have to have some storage facility, which could be a
11 memory, and it would have to have some communication
12 facility -- which could be a radio. I don't know if
13 it has to be a radio.

14 Q. So is it your opinion that a device that
15 has storage and some form of communication is a
16 "general purpose computer"?

17 A. If this device is programmed to do a very
18 specific thing, then it is my understanding that the
19 law says that this is not a general purpose
20 computer.

21 So this device, with storage and
22 communication -- for example, take your -- take a
23 particular device that has that, but which has other
24 things too -- maybe it is, maybe it isn't.

25 Now we're -- again, we're talking about

1 the boundaries.

2 (Simultaneous speaking.)

3 Q. And that's my confusion, right? -- because
4 and you make a statement, but you haven't explained
5 that you -- for instance, the statement you just
6 made is:

7 If a device is programmed
8 to do a very specific thing,
9 then it might not -- then it is
10 not a "general purpose
11 computer."

12 What is that very -- what is that very
13 specific thing?

14 MR. NORRIS: Objection; vague.

15 A. I think I would have to consider it case
16 by case, and maybe I would need to learn more about
17 what the law says about the boundary conditions.

18 All I've really been told is about pretty
19 much what I recited to you now, that this is the
20 understanding in the law about a "general purpose
21 computer." And I applied that understanding to this
22 context.

23 What I think you're asking me, time after
24 time, is about the boundaries. And I do not know
25 the boundaries. I would have to think about it and

1 read more about it.

2 There may be court decisions about the
3 boundaries. I am not aware of those.

4 In my view, this is not a technical
5 question. This is applying a legal definition to a
6 technical matter.

7 Q. Well, I would like to understand --
8 because in your first sentence in Paragraph 18, you
9 state, and I repeat:

10 As discussed in detail
11 below, I do not believe the
12 terms "integrated RDC"
13 (receiver decoder circuit),
14 "integrated PDK" (personal
15 digital key), and "enablement
16 signal" are understood by
17 persons of ordinary skill in
18 the art to have a sufficiently
19 definite meaning....

20 Aren't you offering a legal conclusion by
21 saying "a sufficiently definite meaning"?

22 MR. NORRIS: Objection;
23 misstates the witness's declaration and
24 calls for a legal conclusion.

25 A. So I was given these terms -- for example,

1 take "integrated RDC" -- and I was asked, does this
2 have a meaning? No, it doesn't -- no, it does not
3 have a meaning outside the specs.

4 You would have to consider the specs in
5 order to know what this meaning is -- because the
6 POSITA would not know it, having gone to class and
7 having worked for, say, two years in a company --
8 except if they work at Proxense, maybe.

9 They would not know what the term means.
10 It's not a common term. So it does not have a
11 sufficiently definitive meaning.

12 People might be able to guess what it is,
13 but they would not know enough. They would need to
14 know more, and they would learn that by reading the
15 specs.

16 Q. And is it your opinion that, in light of
17 the specification -- because I believe in other
18 parts of your declaration you noted that you have to
19 interpret claims in light of the specification.

20 So is it your opinion that, in light of
21 the specification, these terms are understood by a
22 POSITA to have a sufficiently definite meaning --
23 or, sorry, do not have a -- do not have a
24 sufficiently definite meaning?

25 MR. NORRIS: Objection; vague.

1 A. So if I understand your question
2 correctly, I think I'm answering this in the Summary
3 of Opinions when I say that the POSITA would not
4 have understood these terms outside of the specs but
5 would have understood that they correspond to what
6 the legal description of a general purpose computer
7 is, as we discussed it before. And they would look
8 into the specs about what this general purpose
9 computer would be programmed to do in order to
10 provide the functionality that is described in the
11 specifications.

12 The specification provide algorithms. So
13 they would look at the description of those
14 algorithms in order to understand what is added to
15 the general purpose computer in order for it to
16 perform something that corresponds to the claim
17 language.

18 THE WITNESS: Can we go off the
19 record for just a moment to have a
20 question to ask?

21 MR. KHAN: Sure.

22 (Whereupon, a discussion was had
23 off the record.)

24 BY MR. KHAN:

25 Q. So in Paragraph 18, we were discussing the

1 first sentence of that paragraph. And I noted that
2 you stated here -- you used the term "sufficiently
3 definite meaning." All right.

4 A. Yes.

5 Q. Do you see that?

6 A. Yes.

7 Q. What do you mean by "sufficiently
8 definite"?

9 MR. NORRIS: Objection; asked
10 and answered.

11 A. So, for them to understand what it means
12 to the extent that they would be able to implement
13 it.

14 For example, when you were speaking about
15 the "integrated RDC" -- if I spell out what an RDC
16 is to a POSITA, this person might say, well, that
17 sounds like a computer of some kind.

18 But they might not have any idea of what
19 kind of computer. They would have to learn more
20 about it.

21 So what opinions they might have about
22 what it is would not be sufficiently definite in
23 order to know what it is, to make it definite.

24 They would have to look at what they do,
25 if they want to know exactly what they would have to

1 produce.

2 They would agree that it's some kind of,
3 as I said, a general purpose computer, based on the
4 law and the definition of that term in the law.

5 But then, what does this general purpose
6 computer do? Well, what would they program it to
7 do? That's the algorithm that is described in the
8 specification.

9 So they would need to know both what it is
10 and what it does. That is, what that -- should this
11 general purpose computer be programmed to do?

12 And that's what the algorithms speak of.

13 Q. I'm a little confused. Don't all
14 computers have algorithms that they execute?

15 A. So if you talk about barebones computers,
16 when you're kind of running it on the steel, they
17 have a processor that has micro instructions. But
18 they would not have Microsoft Word, for example.

19 If you wanted to have the capability of
20 editing documents, you would need the algorithm --
21 that is, Microsoft Word or similar thing -- add to
22 this general purpose computer in order to have that.

23 The barebones computer would not have it.

24 Q. I'm a little confused. You've given one
25 example of Microsoft Word and editing -- so you're

1 saying a computer that has no editing capabilities
2 is a general purpose computer?

3 A. No.

4 MR. NORRIS: Objection; that
5 misstates the witness testimony.

6 A. That's not what I'm saying.

7 I am giving you an example of two
8 different sides of this boundary. But I'm not
9 telling you where the boundary is, because I don't
10 know.

11 Q. How can you say which side it is, then, if
12 you don't know where the boundary is?

13 A. Because my understanding of the law, as it
14 relates to "general purpose computer," gives
15 examples of situations. And I don't know if a
16 boundary has been drawn, and I have not spent any
17 time analyzing it.

18 So for example, the computer I am using
19 right now that is doing all the things that allows
20 us to speak, I believe, according to the law, is not
21 a "general purpose computer"; whereas if I reformat
22 the drive, wipe it, then, I believe, according to
23 the law, that is a "general purpose computer."

24 So I don't know exactly where the
25 boundaries are drawn. I don't know what the law

1 says about whether I add the operating system, and
2 that's it -- whether that is a "general purpose
3 computer."

4 A "general purpose computer" -- my
5 understanding is that the law says it has the
6 capability of accessing storage and communicate with
7 something on the outside of the computer itself.

8 Q. So isn't the computer that you're using
9 right now -- that's all right. Sorry, scratch that.

10 Doesn't the computer that you're using
11 right now have storage and the ability to
12 communicate with something outside of itself?

13 So why is that not a general purpose
14 computer?

15 A. You're asking me about the law now.

16 I am just applying what I've been told the
17 definition is of a "general purpose computer."

18 A "general purpose computer" is a device
19 that has those capabilities.

20 It might have other capabilities too, but
21 it's not constrained in terms of what it can do by
22 having been programmed accordingly.

23 For example, let me give you an example on
24 the other spectrum.

25 A crypto mining rig that you buy in order

1 to mine Bitcoin -- and it can only mine Bitcoin --
2 you can't run Microsoft Word on it -- even if you
3 wanted to, because it does not have the kind of --
4 it doesn't allow you to load an operating system and
5 load Microsoft Word.

6 That, in my view, is an example of
7 something that the law says is not a "general
8 purpose computer."

9 It has been defined.

10 Now, it could be defined in terms of the
11 hardware it has. It could be defined in terms of
12 the firmware it has. I don't know if there are
13 boundaries drawn here.

14 The other end is a computer that comes out
15 of the box. It hasn't -- you know, sometimes when
16 you buy computers, they have Microsoft Word on them.

17 But think, now, the computer that has been
18 wiped. It has nothing -- no factory preloaded
19 things for you. That seems to me to match the legal
20 description of a "general purpose computer."

21 Now, again, I have not been asked to opine
22 about either one of these examples. I'm providing
23 you an explanation to give you light on my
24 understanding of the legal term.

25 (Simultaneous speaking.)

1 A. And that's what I've applied in this
2 context.

3 Q. And I appreciate you providing clarity.
4 I'm still not too clear, which is why I'm
5 asking the questions, because I'm not sure,
6 according to your understanding -- or your
7 understanding of the purported law here.

8 When, you know, you mentioned that the
9 computer you're using right now is not a "general
10 purpose computer," but if you format it then it's a
11 "general purpose computer." Right?

12 So what does your computer that you're
13 using right now have that makes it not a "general
14 purpose computer"?

15 MR. NORRIS: Objection; vague,
16 speculation. It goes beyond the scope of
17 his declaration.

18 A. So maybe my computer was not a great
19 example, because I haven't really been asked to
20 consider whether my computer is a "general purpose
21 computer" or not.

22 I could see the two special cases that I
23 mentioned to you, which is a computer with
24 absolutely nothing on it, except maybe the minimum
25 amount of firmware that is needed to boot up or

1 something like that, versus a crypto mining rig,
2 which, you know, you cannot do anything except mine
3 Bitcoin -- and that's it.

4 Those are kind of example endpoints of
5 this.

6 My computer, I -- honestly, I would have
7 to consider carefully -- that might not be a good
8 example.

9 I tried at first to find a good example.
10 And I think the crypto rig is much better than my
11 computer, because I haven't spent time analyzing
12 anything in the middle.

13 I understand what the law says, as I've
14 been told to apply it. And that was all I needed in
15 order to make progress on my declarations and opine.

16 And I don't know about the things in the
17 middle, where they fall.

18 (Pause.)

19 Q. I'd like to, again, focus on Paragraph 18.

20 In Paragraph 18, you also mention that --
21 I'll just read the statement. It says:

22 Absent a control logic or
23 some other type of algorithm
24 executed by a controller or
25 another type of processor,

1 there would be no structure for
2 the foregoing to perform the
3 function of "enabling one or
4 more of an application, a
5 function and a service."

6 Did I read that correctly?

7 A. Yes.

8 Q. So what's an "application"?

9 A. What is an application?

10 Q. Yeah.

11 MR. NORRIS: Objection; vague.

12 A. I can give you an example of an
13 application. Is that good?

14 Q. Sure.

15 A. So for example, on your phone there might
16 be a mail application that allows you to receive and
17 send email. You might have one or more applications
18 that allow you to shop online or order food.

19 Those are example of applications.

20 So it's software running on the device
21 that, in many contexts, have been produced by a
22 third party and either downloaded on the device by
23 you or somebody else.

24 Q. What's the difference between just code
25 that's on a device and an application?

1 MR. NORRIS: Objection; vague.

2 A. Well, it's a little bit of a...it's a
3 little bit -- just a different terminology in the
4 eyes of the consumer.

5 An application is code running on the
6 device.

7 Now, not all code running on the device,
8 of course, is an application. The operating system
9 is code running on the device.

10 But a POSITA, at least, would not call the
11 operating system an "application."

12 But if you're asking about what the law
13 says about the distinction, I do not know.

14 Q. I'm asking about your opinion. I
15 understand we're here to speak to your opinions. So
16 whatever your opinions are, I'd like to hear them.

17 A. So, this is just to give examples of
18 things that could be done to a general purpose
19 computer that would make it not a general purpose
20 computer.

21 We're downloading an app, for example.
22 It....

23 At least some apps, but maybe all -- and I
24 haven't determined the boundaries -- would cause it
25 not to be a general purpose computer anymore in the

1 interpretation -- using the interpretation of the
2 term "general purpose computer," as I've been given.

3 Q. I'm trying to again understand what --
4 when you say "enabling one or more of an
5 application," what is it that's been enabled there?

6 Is that like -- what is -- what's -- what
7 is the application that's being enabled?

8 A. I think this is -- this snippet here,
9 it's...I think, a citation from the patent.

10 And I don't remember the exact location of
11 it. I apologize that it's not -- I don't have a
12 citation right here.

13 If you know where it comes from, that
14 would help me understand how to answer your
15 question.

16 Q. Yeah, this is the -- this is taken from
17 the claim language. It's "enabling one or more of
18 an application, function, and service."

19 A. So I haven't had to give the boundaries of
20 this. But they describe a number of functionality
21 that could be described as "applications," could be
22 described as "function," or it could be described as
23 "service."

24 So for example, there's one example in
25 which there are two parties with which a user and

1 his or her device communicates.

2 And one of the parties facilitates an
3 authentication process and a key exchange process.
4 And the other party enables what the user of the
5 device might wish to have achieved -- whether that
6 is, you know, online banking or access to a building
7 or whatever external functionality you might search.

8 So that might be called an "application."
9 That might be part of an application.

10 It might be called a service, and it's a
11 function.

12 So I'm just using it to say: If you have
13 this general purpose computer, that is not enough to
14 provide this enabling of the application, function,
15 or service -- because you need to know the algorithm
16 or an algorithm that would do so.

17 And the specs give a couple of examples of
18 those.

19 Q. So you gave an example of online banking
20 or access to a building or other external
21 functionality.

22 Why is online banking or access to a
23 building considered an application, function, or
24 service?

25 A. So this is based on -- maybe I should have

1 stayed with the examples given in the specification.

2 I don't recall exactly what examples they gave.

3 But those would -- the examples given
4 therein would be understood to be an application,
5 function, or service.

6 That is what I believe is intended as an
7 example of this.

8 A POSITA looking at this would say, what
9 can you use it for? Might turn to the specification
10 and say, oh, here's one example of what you could
11 use it for -- and oh, here's another example.

12 That would correspond to this
13 "application, function, and service."

14 Q. Yeah, I'm trying -- that's exactly -- I'm
15 trying to better understand that.

16 All right. I think -- is there something
17 you could point me to and the specification or
18 something that would help me understand what the
19 application, function, services -- actually, I'd
20 like to take it like one word, right, each.

21 So let's focus maybe on the application.

22 And what's --

23 A. I think I haven't memorized the different
24 parts of the specification enough to refer you to a
25 particular portion.

1 And also, I haven't spent any time
2 breaking down this application, function, and
3 service.

4 This -- you could think of this as what it
5 does, what it achieves.

6 And the specs give examples of what it
7 achieves.

8 Whether that's an application, function,
9 or a service, it does not matter to me to understand
10 the claims, this particular classification.

11 But in terms of understanding the examples
12 of it, it's better to use those in the specs than
13 the examples I gave you, which are, you know, just
14 my recollection of the general kinds of situation
15 the patent addresses.

16 Q. Yeah. So you noted again here in
17 Paragraph 18 that, you know, the integrated PDK and
18 the RDC enabled signal don't have a sufficiently
19 definite meaning as a name of structures for
20 enabling one or more of an application, function,
21 and a service.

22 Can you give me an example of what you
23 mean by "function" when you say "enabling a
24 function."

25 What do you mean by "function"?

1 A. So I'm using this as the patent --

2 MR. NORRIS: Let me get a quick
3 objection in. I'm sorry.

4 Objection. It's vague and
5 misstates the witness's declaration.

6 A. So I'm using the terms as the patent does,
7 which is the application, function, and service.
8 It's described as what it achieves, pretty much.

9 I haven't broken it down: What is an
10 application? What is a function? What is a
11 service?

12 It was not necessary for me to render an
13 opinion.

14 I can point, with access to the specs and
15 the capability of searching, to something that would
16 be an application, function, or service.

17 But I have not rendered an opinion whether
18 it's an application or a function or a service, or
19 maybe more than one of them.

20 Q. Yeah, and -- I mean, I'm asking what your
21 understanding of these words is.

22 So I'm not asking you to give me a
23 specific example. I mean, if that helps you, that's
24 fine.

25 But I'm asking: What do you mean when you

1 say "function"?

2 You put this word in your declaration.

3 So, presumably, you know what it means.

4 And I'm asking for -- you know: What do
5 you mean by the word "function"?

6 A. So I used it as the trio of words --
7 application, function, and service -- as is done in
8 the patent.

9 Looking at the specs, what this
10 corresponds to is the -- one way of explaining it is
11 the perceived benefit of the use of the technology.
12 So in other words, what the consumer -- what the
13 reason for the consumer to use this.

14 Now, this might sound terribly vague,
15 but -- so it gives examples of what the situation in
16 which a "hybrid device" could be used.

17 And the consumer would have one of these
18 hybrid devices, for example, and would be able to
19 achieve the goal described in the specs by doing
20 that.

21 So this goal corresponds to the
22 application, function, and service.

23 We don't have to care whether it
24 corresponds to an application or to a function or a
25 service in order to analyze --

1 At least from the perspective that I have
2 and the question I was asked -- doesn't have to be
3 understood what the distinction is, if anything, in
4 the context of the specification.

5 THE WITNESS: Now, would you
6 please give me one minute? I just want to
7 check about the timing, and I'll be back
8 very soon.

9 MR. KHAN: We can go off record.
10 (Whereupon, the deposition recessed for
11 lunch at 12:48 p.m.)

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1 A F T E R N O O N S E S S I O N

2 (1:47 p.m.)

3 BY MR. KHAN:

4 Q. Welcome back, Dr. Jakobsson. I hope that
5 was enough time.

6 A. That was sufficient. Thank you for being
7 flexible.

8 Q. Yeah. No problem.

9 All right. So we started at 10:00. We
10 went to about 2:45. So that's about two hours, 45
11 minutes -- sorry -- 12:45 -- so we're about two
12 hours, 45 minutes through.

13 So I'll proceed. Hopefully, we won't need
14 all the time. But -- and like I said earlier, if
15 you need a break, please let me know. We can take a
16 break.

17 All right. So before we left, we were at
18 Paragraph 18. I have that on the display.

19 Can you see it?

20 A. Yes, I can.

21 Q. And this is Paragraph 18 of the '042
22 declaration.

23 We talked earlier -- we were talking about
24 the statement "enabling one or more of an
25 application, a function, and a service."

1 What are some structures that enable one
2 or more of an application, a function, and a
3 service?

4 MR. NORRIS: Objection;
5 speculation.

6 A. I haven't opined on that.

7 I've opined on that these terms do not
8 have that.

9 Q. So how do you know, if they don't have
10 that, if you don't know what the structures are?

11 MR. NORRIS: Objection; vague.

12 A. What I mean is: In order to enable this
13 collective, you need to say what they do.

14 So if the terms were known in the art,
15 then people would have known what these things do.

16 So for example -- you know, let me take a
17 slightly far-fetched example.

18 If one of the terms was an "umbrella," the
19 POSITA would have known what the umbrella looks
20 like, what it -- how it works, and why you use it.

21 And so, that would be sufficient, then, in
22 order to understand what it does.

23 But in this case, the fact that this --
24 the integrated RDC and the integrated PDK both
25 correspond to general purpose computers with the

1 ability of then storing, accessing storage, and
2 communicating with outside entities, that doesn't
3 tell you, like the umbrella does, what exactly that
4 means.

5 So you need to look at the specification
6 to see: What would these devices be configured to
7 do?

8 So in other words, what is the algorithm,
9 of which there are a couple of examples, that they
10 would need in order for them to perform the tasks
11 needed to do this enabling?

12 Q. So my question to you was about the word
13 "structures," which you used here in Paragraph 18.

14 And the question was: What are the
15 structures for enabling one or more of an
16 application, function, and service?

17 You didn't answer that question. So I'm
18 going to ask again.

19 A. So there could be many such structures.

20 So for example, if the claims had
21 described what exactly the RDC would do and what
22 kind of components it would comprise and use terms
23 that are known in the art, then a POSITA reading the
24 claim would know what the structure would be and
25 would be able to do that.

1 So -- I mean, in the example of the
2 umbrella, something that is well understood, you
3 could just plug it in and you know that, oh, that's
4 the umbrella, that you use it like this and it has
5 this functionality and this is how it works.

6 By describing the invention using terms
7 that aren't well understood in the art, you need to
8 look at the specification to see if that -- if the
9 specifications give any guidance.

10 And in this case, they do by providing a
11 few example algorithms of how they would be
12 configured, these general purpose computers, in
13 order to achieve the intended goals.

14 Q. And is it your opinion that the integrated
15 PDK and the integrated RDC have...don't have a
16 structure, but are general purpose computers with
17 some type of algorithm?

18 A. The integrated RDC, for example, is a
19 general purpose computer. And by itself, it doesn't
20 have the algorithm. It's just "general purpose
21 computer."

22 So then, in order for us to understand the
23 claims, we would need to look at the specifications
24 to see what is the algorithm that has to be added to
25 this? -- how do they need to be configured, in other

1 words?

2 But by themselves, as described in the
3 claim, they don't have that algorithm. The claim
4 doesn't specify the algorithm.

5 Q. Does the specification --

6 A. Yes; it gives examples.

7 Q. -- provide --

8 So my question was: Does the
9 specification provide -- is it your position that
10 the specification does not provide an indication of
11 the structure of the RDC and the integrated PDK?

12 MR. NORRIS: Objection;
13 misstates the witness's testimony.

14 A. So what I'm saying is that it gives some
15 examples of possible implementations.

16 But the term "integrated RDC," as used in
17 the claim, is not a known term.

18 And so, then when we look at what would be
19 required for something to be an integrated RDC, the
20 analysis gives us that it has to be a general
21 purpose computer.

22 And then, a general purpose computer
23 doesn't have the algorithm that defines the enabling
24 that we have described here.

25 So in order for us to understand the claim

1 and understand how to deal with this, we would have
2 to look -- it's a means plus functions argument --
3 we'd have to look at what is described in the
4 specification.

5 And that would be the example algorithms.

6 Q. Does the '042 patent or any of these
7 patents use the term "general purpose computer"?

8 A. I don't know. I haven't seen it. If it
9 does, we could look at it together.

10 Q. Well, I'm asking you if it does.

11 A. I'm not aware of it, one way or the other.

12 But I am not relying on it saying that
13 it's a "general purpose computer." I'm relying on
14 these terms not having a defined meaning in the art
15 to a POSITA and, therefore, based on that, looking
16 towards what is an integrated RDC.

17 And so, the analysis that I describe in
18 here says that it's a "general purpose computer."

19 For example, we know that it needs to have
20 a processor and...to perform these tasks.

21 The processor is something that the
22 general purpose computer has.

23 (Pause.)

24 Q. Does a processor execute a function?

25 MR. NORRIS: Objection; vague.

1 A. I don't know, one way or the other.

2 "Executed function" is not a phrase that
3 I've seen in the claim language. But if I'm
4 mistaken, please draw my attention to it.

5 Q. You said that a processor is something
6 that the general purpose computer has. So I'm
7 asking you what the processor does.

8 Does the processor execute a function?

9 A. I like to stay away from the word -- from
10 the word "function," since that is in the claims.

11 I'd say it executes some form of computer
12 instructions.

13 Those might be micro instructions. It
14 might be a regular machine code instructions.

15 But they will cause the processor, for
16 example, to access storage when it has a program
17 that makes it request software -- makes it request
18 access to the storage.

19 So it has the capability of accessing
20 storage. And similarly, it has the capability of
21 transferring information in and out from the entity
22 itself.

23 Q. I asked you -- my question was: Does a
24 processor execute a function?

25 MR. NORRIS: Objection --

1 Q. Are you -- let me -- yeah, so I asked you
2 that question, but you did not answer it.

3 So I'm going to ask again: Does a
4 processor execute a function?

5 MR. NORRIS: Objection; asked
6 and answered.

7 A. So the word "function" exists in the
8 claim, and I don't know about whether there has been
9 or will be a claim construction related to
10 "function."

11 So in order to not confuse matters, I
12 should not say anything about a claim term that has
13 not been construed or which I don't know the
14 construction of.

15 I haven't opined on what the construction
16 is of "function," and I can't on the fly do that
17 right now.

18 So I need to stay away from using the
19 term, since I don't have it defined in this context.

20 Q. Did you use the word "function" in your
21 declaration?

22 A. I know I did when I cited the patent.

23 I don't know whether I used it for other
24 purposes.

25 (Simultaneous speaking.)

1 Q. Sorry, sorry. Go ahead.

2 A. If I did, I would like to ask you to draw
3 my attention to it and I could look at the context.

4 Q. Yeah, I think we're looking at it
5 together. It's in Paragraph 18:

6 ...structures for
7 "enabling one or more of an
8 application, a function and a
9 service."

10 So I will -- and I think you repeated it
11 several times. So I'm going to ask you again: Did
12 you use the word "function" in your declaration?

13 A. I used the word "function" in the
14 declaration when I cited the patent, which has the
15 phrase "enabling 'one more' of an application, a
16 function, and a service."

17 Q. Did you use the word "function" in your
18 declaration without knowing what it means?

19 MR. NORRIS: Objection; vague.

20 A. I did not have to opine on whether a
21 function is something that is executed.

22 A function could be something you achieve.

23 In the context of this patent, I don't
24 know. And it wasn't necessary for me to determine
25 that in order to properly answer the questions I was

1 asked to opine on.

2 So, maybe a function is executed.

3 But I did not opine on that. And I have
4 no opinion about that at this time.

5 Q. So Dr. Jakobsson, that was not my
6 question. And this has happened many times, and I
7 don't want to go down this route. But it defeats
8 the purpose of a declaration [sic] if the questions
9 are not going to be answered.

10 And I'm happy to pull the transcript and
11 show it to the Board. I would rather not do that.

12 So I'm going to repeat the question again,
13 and I hope I can get that answer.

14 The question was: Did you use the word
15 "function" in your declaration without knowing what
16 it means?

17 MR. NORRIS: Objection; asked
18 and answered.

19 A. So let me clarify.

20 I cited the patent in my declaration, and
21 the patent uses the phrase "enabling 'one more' of
22 an application, a function, and a service."

23 A POSITA looking at this would know that
24 this corresponds to achieving the goal of the
25 invention. So -- it gives examples of what the

1 goals could be.

2 We don't have to know whether a function
3 is something that you achieve or which you execute.
4 That is not important.

5 It enables the function. We know that.
6 It enables, in fact, one or more of an application,
7 a function, and a service.

8 So it -- maybe it doesn't even enable a
9 function. We don't know.

10 But it has the capability of enabling at
11 least one of these.

12 I don't have to know what each one of them
13 means, specifically, in order to say that it enables
14 one of them, at least one of them.

15 And in particular, it's irrelevant for me,
16 in order to render the opinions I was asked to
17 consider -- to answer the questions that I was asked
18 to consider -- whether a function is something you
19 execute or that you achieve, for example.

20 It wasn't necessary for me, and I did not
21 render an opinion about that.

22 Q. Dr. Jakobsson, I did not ask you for your
23 opinion on whether a function is something you
24 execute or you achieve.

25 My question to you was: Did you use the

1 word "function" in your declaration without knowing
2 what it means?

3 MR. NORRIS: Objection; asked
4 and answered.

5 A. So I think you asked me if the processor
6 we spoke about executes a function.

7 Q. That's not what I asked.

8 I can repeat the question: Did you use
9 the word "function" in your declaration without
10 knowing what it means?

11 MR. NORRIS: Objection; asked
12 and answered.

13 A. So as I tried to explain before, I'm
14 looking here at what a POSITA would understand "one
15 or more of an application, a function, and a
16 service" to mean.

17 I understand that this maps to what we
18 might call the "functionality" -- I'm not using the
19 word "functional," but "functionality" -- of what
20 the device is achieving. Right?

21 So it might be that it logs you in to a
22 first place, that then connects you to second place,
23 that allows to -- you to see data or access data
24 that you otherwise would not have been able to.

25 That -- whether you want to call it an

1 application, a function, or a service, it does not
2 matter to me. It's one or more of an application,
3 function, or service in the context of the patent.

4 And that is being enabled by the
5 integrated RDC, integrated PDK, and the enable
6 signal together.

7 Q. My question to you was: Did you use the
8 word "function" in your declaration without knowing
9 what it means?

10 MR. NORRIS: Counsel, you've
11 asked the question multiple times. He
12 gives you the same answer.

13 It doesn't seem like his answer
14 is going to change. What do you expect
15 him to do?

16 MR. KHAN: Counsel, if you have
17 an objection, that's fine -- please, you
18 can raise your objection. But he's not
19 answering the question.

20 And this transcript will be
21 produced to the Board. And they can
22 decide if that's the case.

23 I don't want to do that. Right?

24 The point is -- of a deposition
25 is not to not answer questions. Right?

1 And so, I am looking for an
2 answer based off of the statements that he
3 made. And he's not answering the
4 question.

5 THE WITNESS: Let me explain
6 why.

7 A "function" -- there are
8 several contextual interpretations of it.

9 It could be similar to what
10 programmers call a "procedure." Right?

11 "Function" is also used as, what
12 is the outcome? in common language.

13 It does not matter here whether
14 we say one or the other, because the
15 function in a programming sense can be
16 used to perform the function in a layman's
17 term.

18 In that sense, they're
19 overlapping.

20 And for the sake of my rendering
21 an opinion, I don't have to know whether
22 it's one or the other. Because for both
23 of them, whichever "function" means, it's
24 clear to me that the statement I make here
25 is correct.

1 And that is especially so since
2 you only need one or more of an
3 application, a function, and a service.

4 I understand what each one of
5 them correspond to in the patent, and
6 there are examples of it.

7 So all of them correspond to the
8 examples, individually and collectively.

9 You can call the example an
10 "application." You can call it a
11 "function." And you can call it a
12 "service."

13 There might be differences of
14 relevance, even in the context of the
15 litigation.

16 But there are no differences of
17 importance for me to render an opinion.

18 If one is greater than the
19 other, and entirely encompassing a third,
20 it does not matter to me. I can still
21 render an opinion about it because I
22 understand what it corresponds to.

23 (Reporter request for clarity.)

24 THE WITNESS: "A third," yes.

25 So what I'm saying is that you

1 could draw a Venn diagram of these three,
2 and there might be a overlap in terms of
3 what it mean -- and I believe there is.

4 But it's not important to me
5 whether there is or not, because it's
6 enough that one of them is enabled -- at
7 least one of them.

8 And each one of them
9 corresponds -- as does the collection of
10 them -- to the examples that are given.

11 So to me, it's not a relevant
12 question to say exactly what is the
13 definition and what are the boundaries?

14 I understand what it refers to.

15 BY MR. KHAN:

16 Q. How do you understand what it refers to
17 without knowing what the individual words mean?

18 A. In the context of the specification and
19 based on what the claim language says.

20 Q. But even for that, you would need to
21 understand what each word means.

22 A. I understand what it maps to. But I don't
23 need to understand the exact boundaries.

24 I don't need to understand if one is a
25 subset of the other. It's not important.

1 I understand that the collection of them
2 correspond to the examples given.

3 It's just like you could have a composite
4 term.

5 "RDC" is a collection of words
6 abbreviated.

7 This is a collection of words that
8 describe the goal of the invention, what is being
9 achieved by the enablement signal.

10 Q. So how do you know what's being achieved
11 if you don't know what the words mean?

12 A. So in order to know what is achieved by
13 the enablement signal, you look at the
14 specification. And you see that that corresponds
15 to, what is the stated -- you could think of it as
16 the stated consumer goal of having this apparatus or
17 this, you know, whatever it is.

18 I don't want to use legal words like
19 "apparatus," actually.

20 So having this device in your pocket or in
21 your possession, why would you do that? Oh, because
22 I need it to be used to authenticate so I get access
23 to this.

24 That is the service. That is the
25 function. That is the...what's the third word?

1 I'm blanking now, we've been through this
2 so many times -- "application."

3 That's the application.

4 It doesn't mean that we need to determine
5 the boundaries of these three terms. We know what
6 it corresponds to.

7 Q. At the end of this page, there is a
8 statement you make:

9 Absent a control logic or
10 some other type of algorithm
11 executed by a controller or
12 another type of processor,
13 there would be no structure for
14 the foregoing to perform the
15 function of "enabling one or
16 more of an application, a
17 function, and a service."

18 Did I read that correctly?

19 A. Yes.

20 And before you ask the question, I must
21 say that it's a little bit unfortunate when I say it
22 perform the function.

23 I wish I did not use the word that also
24 included in the cited thing.

25 Because when I use the word "perform the

1 function," I'm not saying that I use it exactly the
2 same way as the patent owner did when they said
3 "enabling one or more of an application, a function,
4 and a service."

5 My use of it here is in a general sense.

6 I could have said "perform the actions
7 corresponding to."

8 Q. How do you know it's different than the
9 way the patent owner uses it?

10 A. I don't know. I --

11 (Simultaneous speaking.)

12 Q. Then how are you saying it's different?

13 A. No, I'm not saying it -- it is different.
14 I'm saying it could be.

15 It does not -- I'm using it as one would
16 in a general technical explanation. And the use of
17 it in the patent is in the context of the patent.

18 So that's what I'm saying.

19 I'm not using their terminology in my
20 sentence.

21 Q. That could be different or could not be
22 different.

23 A. Exactly.

24 Q. Okay. So in this statement that I had
25 read, "Absent a control logic" -- that sentence -- I

1 was trying to understand that a little better.

2 Are you saying that there's structure if
3 there's control logic or some other type of
4 algorithm executed by a controller or processor?

5 A. That's not what I'm saying.

6 Q. Okay. Could you explain --

7 A. There might be --

8 Q. Sorry.

9 A. -- there might be some control logic and
10 some algorithms that are meaningful to achieve this.

11 So remember, the general...there would be
12 no way of -- perform this "enabling one or more of
13 an application, a function and a service" if the
14 algorithm that sits on this device is doing
15 something unrelated. Right?

16 So for example, if this is an algorithm
17 that tells you the distance from Chicago --
18 right? -- it's not going to help you, at least as I
19 see it, "enabling one or more of the application, a
20 function, and a service."

21 It's something that is an algorithm, but
22 it's not an algorithm of relevance to do this.

23 So to say that the existence of an
24 algorithms means that you satisfy the other one
25 would be wrong.

1 However, you could say that if you want to
2 achieve the goal of enabling, and so on, you need
3 the control logic or the algorithm -- because,
4 otherwise, you have just a general purpose computer,
5 doesn't do anything in particular.

6 Q. Going back to your days in academia, would
7 it be a safe assumption to make that, when you
8 taught your courses, you used electrical engineering
9 textbooks?

10 A. I wouldn't -- I actually taught no
11 electrical engineering classes.

12 But I have taken electrical engineering
13 classes, and I often use electrical engineering
14 textbook in my research.

15 But as far as teaching goes, I would
16 actually use -- well, it's difficult, because what I
17 was teaching on, when I was, was an area for which
18 there did not exist many textbooks. So sometimes I
19 just used handouts.

20 Q. So in the course of your research and your
21 work, you have used electrical engineering
22 textbooks?

23 A. Yes.

24 Q. Did you ever see the word "decoder" in the
25 textbooks?

1 MR. NORRIS: Objection; it goes
2 beyond the scope of the witness's
3 declaration.

4 A. I have, and it's used in a variety of
5 ways.

6 Q. Please just answer the question -- please
7 just answer the question.

8 Did you ever see the word "receiver" used
9 in the electrical engineering textbooks?

10 A. I would imagine that I did.

11 I can't remember individual instances, of
12 course. But "receiver" is a common word.

13 Q. Did you ever see the word "circuit" used
14 in an electrical engineering textbook?

15 A. "Circuit"?

16 Q. Yes, "circuit" -- "circuit."

17 A. "Circuit," yes, I have.

18 Q. Did you ever see the word "digital" used
19 in an electrical engineering textbook?

20 A. I would presume that I did. I certainly
21 saw it in other textbooks.

22 Q. Did you ever see the word "key" used in a
23 electrical engineering textbook?

24 A. That I cannot tell you.

25 Q. Did you see it in an

1 authentication-related textbook?

2 A. What is an "authenticated-related
3 textbook"?

4 Q. A textbook that describes authentication
5 techniques.

6 A. So like a cryptography?

7 MR. NORRIS: Objection; vague.

8 Q. That's one possibility, yes.

9 A. The word "key" is used in the context of
10 cryptography.

11 Of course, depending on the context, it
12 means different things.

13 It's also used in database theory, where
14 it means another thing. And you'd have to know what
15 you're talking about in order to know what "key" is.

16 But "key" is a common term.

17 Q. In your declaration, you walk through a
18 number of figures. You have Figure 6.

19 I'm scrolling through -- for the purpose
20 of the transcript, I'm scrolling through the '042
21 declaration.

22 And I see a Figure 6 here.

23 Do you see Figure 6, Dr. Jakobsson?

24 A. Yes.

25 Q. And we see a Figure 2.

1 Do you see that, Dr. Jakobsson?

2 A. Yes, I do.

3 Q. A Figure 1?

4 A. Yes, I do.

5 Q. A Figure 4?

6 A. Yes.

7 Q. A Figure 5?

8 A. Yes.

9 Q. A Figure 6 again?

10 A. I do.

11 Q. And Figure 14?

12 A. I see that.

13 Q. 15, Figure 15?

14 A. I see that as well.

15 Q. Figure 12?

16 A. I also see that.

17 Q. And does that capture all the figures that
18 were presented in your declaration?

19 A. I don't know if you started at the very
20 top, so I can't say.

21 Q. This is the very top.

22 A. Yes.

23 Q. That was Figure 6.

24 A. I believe you did. You showed me all the
25 figures in my declaration.

1 Q. Okay. Now, in your declaration, you point
2 to Figure 2.

3 Could you describe to me what's happening
4 in Figure 2.

5 A. So Figure 2, as it appears in the patent,
6 I think, is exactly what you're seeing here, without
7 the markups below.

8 Q. Um-hum.

9 A. So I would need to refer to the
10 specification where this figure is described in
11 order to do it justice.

12 I can just, from here, read what I see and
13 not describe what is happening, because this is a
14 figure that is about an example PDK as opposed to
15 what the example PDK does as it's shown here.

16 And then, in the specs, it describes, with
17 reference to this, what it does.

18 Q. Could you tell me what the service blocks
19 do in the memory, what's their role.

20 A. To be certain, I should look it up.

21 But just approximately speaking, it is
22 corresponding to different types of access.

23 There's an access control described by --
24 in the specification. And the service block
25 corresponds to the one or more zones of access that

1 a party proving a given key would have.

2 Q. And these are stored in memory. So
3 "these," I mean the service blocks, are stored in
4 the memory 210.

5 Is that right?

6 A. The service blocks are stored in memory
7 210.

8 Q. Yes. Is that right?

9 A. That seems to be what this figure shows.
10 Now, I haven't considered if there are
11 options. And I would have to review the specs to
12 see if this is the only approach of doing it.

13 Q. The service blocks in Figure 2A -- that's
14 Block 112A, 112B, 112C, all the way down to 112N --
15 they have a line that's going from them,
16 respectively, to a selector block 252.

17 A. Yes.

18 Q. Do you see that?

19 A. Yes.

20 Q. What's the role of that selector block?

21 A. At least one role is to select one of the
22 service blocks and provide access to that.

23 Q. And the selector is connected to an
24 encrypt/decrypt block 254.

25 Do you see that?

1 A. Yes, I do.

2 Q. So what's the function of the
3 encrypt/decrypt 254 block?

4 A. The name suggests that it's to encrypt and
5 decrypt, which...sometimes it's referred to as
6 "encode" and "decode."

7 So that is one possible functionality of
8 it.

9 Q. And -- so, what happens here?

10 Receives the data 228. And it
11 encrypts/decrypts the data, sends it to the
12 selector.

13 Is that what's going on?

14 A. I would have to look at the specs or the
15 details of this, to the text describing it. I have
16 not memorized this.

17 Q. And the selector 252 and encrypt/decrypt
18 block 254 are part of this block 250.

19 Is that right?

20 A. In this example, it seems like it is.

21 I haven't given any thought to this, if
22 that is the necessary way of doing it.

23 I think this is illustrative.

24 Q. And the PDK has a transceiver connected to
25 a wireless application, connected to the -- a

1 control logic 250, which is connected to the memory
2 210.

3 Is that right?

4 A. So I don't see 250 being labeled as
5 control logic. I would have to look at the
6 specifications for that.

7 I can read what the boxes say, but I --

8 (Simultaneous speaking.)

9 Q. Let me see if I can find it here.
10 In Paragraph 39, right above that figure,
11 it says:

12 After summarizing the
13 operation of the algorithm of
14 control logic 250....

15 Did I read that correct?

16 A. That's what it says, yes.

17 Q. Okay. So, yeah....

18 (Pause.)

19 A. Is there a question pending?

20 Q. Not right now. I'm just...

21 A. Okay.

22 Q. ...looking at my notes.

23 (Pause.)

24 Q. So I'd like to just turn to the claims
25 again -- this time, the '960 claims.

1 I'll share my screen.

2 And this is a copy of the '960 patent
3 that's displayed on the screen.

4 Dr. Jakobsson, do you see it?

5 A. Yes.

6 Q. Okay. And just to confirm, for your
7 benefit, this is a cover page. You see that it says
8 "Patent '960" on the cover page?

9 A. Yes.

10 Q. Okay. And I'm going down to the end....

11 (Pause.)

12 Q. The claim recites three elements. So the
13 claim is a device comprising -- I'm sorry, let me
14 rephrase that.

15 The claim device comprises:

16 ...a battery;

17 an integrated, secure

18 memory...; and

19 an integrated, wireless

20 communication interface....

21 Do you agree?

22 A. That's what it says, yes.

23 Q. Could you point me to what the
24 "integrated, secure memory" is in the '960 patent.

25 A. I would have to review it carefully before

1 I do that.

2 I remember reading it and thinking about
3 things. This one, if I determined which one it was,
4 I did not memorize it.

5 Q. Could you point me to what the
6 "integrated, wireless communication interface" is in
7 the '960 patent.

8 A. Again, this is something that I didn't
9 opine on. I could review everything again and point
10 it to you.

11 But I would need to think about it
12 carefully, especially since this is something that
13 may have bearing on the claim construction.

14 Q. So sitting here today, you don't recall
15 what the "integrated, secure memory" and the
16 "integrated, wireless communication interface" in
17 the '960 patent are.

18 MR. NORRIS: Objection; it goes
19 beyond the scope of his declaration.

20 A. I have read the specifications. And I
21 understood them, at least to the extent that I
22 could, without uncertainty, address the questions I
23 was asked.

24 I don't recall what I decided on this.

25 In my preparation for today, I reviewed my

1 declaration. But I don't think my declaration
2 touches on this, and I don't recall what I thought
3 of these as I reviewed the specifications before.

4 Q. Do you agree that this claim, Claim 1,
5 recites...the last sentence:

6 ...the local, secured
7 information stored by the
8 integrated, secure memory
9 enables one or more of an
10 application, a function, and a
11 service.

12 A. Do I agree that it recites that text?

13 Q. Yes.

14 A. That's what it says.

15 Q. All right. Do you agree that the
16 "integrated, secure memory" that's recited in that
17 sentence that I just read you is the same as the
18 "integrated, secure memory" listed on Line 3 of
19 Claim 1?

20 A. I am not a lawyer. So, I would answer you
21 as a layman.

22 This seems to correspond to the same item.
23 That's how I understand the use, versus the
24 in-patent language.

25 I don't know if there are exceptions to

1 that rule.

2 Q. And do you agree that the term, "the
3 integrated, wireless communication interface," which
4 I've highlighted here -- I should say it's part of
5 the limitation of the wherein clause, for purposes
6 of note-keeping. It says:

7 wherein one or more of (a)
8 the integrated, wireless
9 communication interface....

10 That recitation of the "integrated,
11 wireless communication interface" refers to the
12 "integrated, wireless communication interface" on
13 Line 5 of Claim 1.

14 A. That's how I understand that the syntax of
15 claims work, but I'm not a specialist on this.

16 So if somebody tells me otherwise, I would
17 pay attention to that and listen to why.

18 Q. Now, turning to the '289 patent -- if you
19 confirm, you see the '289 patent?

20 A. I do.

21 Q. This is Exhibit 1001, the '289 proceeding.
22 And I'm turning to Claim 1.

23 Do you see the term "integrated, secure
24 memory" in Line 2 of --

25 A. I do.

1 Q. -- the '289 patent?

2 A. On line -- on the second line of the
3 Claim 1, yes.

4 Q. And in the last clause of the claim,
5 Claim 1 -- it's where it says:

6 ...the local, secured
7 information stored by the
8 integrated, secure memory
9 enables one or more of an
10 application, a function, and a
11 service.

12 Do you agree that that recitation of "the
13 local, secured in-" -- sorry, of....

14 Do you agree that the recitation of "the
15 integrated secure memory" in that phrase refers back
16 to the same "integrated, secure memory" on Line 2 of
17 Claim 1.

18 MR. NORRIS: Objection.

19 (Simultaneous speaking.)

20 A. That is my understanding of things, based
21 on my layman's understanding of patent law, that it
22 refers to the same concept as is shown in the second
23 line there.

24 Q. And in the wherein clause, it says:

25 ...wherein one or more of

1 (a) the integrated RDC....

2 Do you agree that that recitation refers
3 back to the integrated RDC on Line 4 of Claim 1?

4 A. Now, this is actually a legal question,
5 and I don't know the answer to this. I don't know
6 how it works when there is an acronym introduced and
7 then used.

8 I don't know if there is case law related
9 to this. All I could say is that I see the intent
10 of whoever wrote it. And the intent, to me, seems
11 to be to refer to the same concept here.

12 MR. KHAN: We hit the one-hour
13 mark now. So maybe it's a good time for a
14 break.

15 We could go off the record and
16 take a 10- -- let's say, 15-minute break.

17 We can come back at 2:55.

18 Does that work?

19 All right. Thank you.

20 (Whereupon, a recess was taken
21 from 2:41 p.m. until 2:56 p.m.)

22 BY MR. KHAN:

23 Q. Dr. Jakobsson during the breaks that we've
24 taken today, have you spoken with anyone?

25 A. Yes.

1 Q. Did that include opposing -- did that
2 include patent owner's counsel?

3 A. Yes. I spoke with him and asked him --

4 MR. NORRIS: I want to caution
5 the witness to not disclose the
6 communications that we had, as they are
7 privileged.

8 A. We did not speak about anything related to
9 the content. And I spoke to things that do not
10 relate to our conversations at all, with my parents,
11 during the previous break.

12 Q. Did you discuss any of the patents at
13 issue today with patent owner's counsel?

14 A. No.

15 Q. Dr. Jakobsson, what makes a PDK digital?

16 MR. NORRIS: Objection; it goes
17 beyond the scope of his declaration.

18 A. I haven't really opined about that.

19 Q. You've opined on what an "integrated PDK"
20 is.

21 Isn't that right?

22 A. To make it easier for me, would you please
23 bring up the portion of my declaration that speaks
24 about this, and I will look at it in context.

25 (Pause.)

1 Q. We can try a few different places, as you
2 use this term throughout your declaration. But
3 let's start here with -- this is Exhibit 2014 of the
4 '960 and '289 proceedings. And we're looking at
5 Paragraph 61.

6 Paragraph 61, Dr. Jakobsson -- I'll just
7 give you a moment to read it. And then, you can let
8 me know when you're done.

9 A. Please remind me of the question first,
10 and then I will read that with the question in mind.

11 Q. The question was: What makes a PDK
12 digital?

13 (Witness reading.)

14 MR. NORRIS: Note, I have the
15 same objection, that that question goes
16 beyond the scope of his declaration.

17 A. I don't see "digital" in this one.
18 Would you search for "digital."

19 Q. So would you agree that "PDK" means
20 Personal Digital Key?

21 A. I know that's the name that the acronym
22 corresponds to, but I don't know if that means that
23 it has to be digital.

24 It's -- as far as the patent goes, it's a
25 description of a general purpose computer.

1 And there are general purpose computers
2 that are analog, even though it's rare.

3 Q. So are you saying that the Personal
4 Digital Key is not digital?

5 A. That's not what I'm saying.

6 I'm saying I haven't opined about it, and
7 I don't know that the patent specifies it.

8 So I would have to look at the
9 specification to see if there are any place where
10 they clearly spell out that a PDK must be digital.

11 It's clear that it could be.

12 Q. So when you see the term "digital key," to
13 you that means it's not clear whether it's digital?

14 MR. NORRIS: Objection; vague.

15 A. I'm not looking at it as a digital key
16 that is personal.

17 I'm looking at PDK as an element, and they
18 call it "Personal Digital Key."

19 But that doesn't mean anything in the art.
20 And therefore, I look at how they use it.

21 There's nothing about how they use it that
22 means that it needs to be digital. And it could
23 just be shorthand for one of the embodiments.

24 I know examples where a description is
25 not, verbatim, accurate, but it refers to an item

1 that then branches out.

2 Q. I'm sorry, I don't understand.

3 Are you saying that even though the
4 patents, all three of them, describe PDK as a
5 "Personal Digital Key" -- for you, you don't think
6 that "digital" describes "digital key"?

7 MR. NORRIS: Objection; vague.

8 A. So I haven't opined about this.

9 And I know of cases where -- I might use
10 the wrong legal term now, but I think it's
11 "equivalence," where -- I've been in cases where
12 it's been argued that two things are equivalent to
13 each other, and therefore one can be substituted in
14 for the other.

15 I don't know, one way or the other,
16 whether that applies here. And I don't know the --
17 whether there's any claim construction regarding
18 "digital."

19 But to me, PDK -- I'm not aware of any
20 instance where it says a PDK must be digital.

21 Now, it's clear that a possible
22 implementation would be a digital implementation.
23 That's a very common way of implementing a general
24 purpose computer.

25 But I don't know whether that's the only

1 way without --

2 Q. So --

3 A. -- specifically looking at this, with this
4 question in mind.

5 Q. So in your opinion, Personal Digital Key
6 may not be digital.

7 A. I would -- I cannot opine about that
8 without reviewing the specs with this in mind.

9 Q. Well, you reviewed the spec. So please
10 tell me what you found when you reviewed the spec.

11 A. So I said I can't opine about that without
12 reviewing the specs with this in mind.

13 When I reviewed the specs, it was with
14 other questions in mind.

15 I would have to read the specs again,
16 thinking: Does this have to be digital?

17 And I did not do that last time.

18 So --

19 Q. I see.

20 A. -- I understand that it could be digital.

21 And I understand that the name includes a
22 "D," which is -- in the acronym, is for "Digital."

23 But I know that that does not mean that it
24 must only be digital.

25 It could be that their favorite embodiment

1 is digital. I don't know.

2 Q. You mention in Paragraph 61 an example,
3 the cell phone has a "conventional SIM card."

4 Does a SIM card have structure?

5 MR. NORRIS: Objection; vague.

6 A. I'd have to think about this. These are
7 not things that I've opined on.

8 Q. You can think about it.

9 A. No; it's not something I think about for
10 two minutes. I would have to think about, what does
11 it mean to have structure?

12 I am a technologist. So I need to look
13 at, what does a "structure" mean in legal sense and
14 think about it. And then I have to read the specs
15 and think about that.

16 It's not something I do during a
17 declaration or during a deposition.

18 Q. So what does a "structure" mean to you?

19 A. I see it as a legal term that I ask
20 counsel about when I have to.

21 In layman's terms, a "structure" could be
22 like a house or, you know, a skeleton.

23 But, of course, that is not what it means
24 in patent language.

25 Q. How do you know that?

1 A. I mean, it doesn't -- in patent language,
2 it doesn't mean a house.

3 I've seen the word used, and I understand
4 as it has been used. And when I didn't, I would ask
5 for clarifications and make sure that I don't abuse
6 the terminology when I answer a question.

7 You're asking if a SIM card has structure.
8 I would have to ask what "structure" would mean in
9 this context and think about whether a SIM card has
10 such a structure.

11 It's...I have no readymade opinions about
12 either one of these.

13 Q. You provided an example of Figure 12 in
14 your declaration.

15 Is that right?

16 A. I believe so, yes.

17 Q. In that example of Figure 12, you wrote in
18 your declaration that the cell phone has a
19 "conventional SIM card."

20 Is that right?

21 A. Would you show me the exact text, so that
22 I get the context too.

23 (Witness reading.)

24 A. You're referring to Paragraph 61?

25 Q. Yes, Paragraph 61 here. The sentence I

1 was referring to, the second sentence of
2 Paragraph 61:

3 As shown in Figure 12,
4 cell phone 1202 has the
5 "conventional SIM
6 card...replaced with the hybrid
7 device"....

8 Do you see that?

9 A. Yes, I do.

10 Q. So you agree that you wrote that the cell
11 phone has a "conventional SIM card"?

12 A. The "cell phone 1202" is described in the
13 patent as having a "conventional SIM card."

14 This cites the 15:6-8.

15 We could look at the exact content of
16 15:6-8. I'm just citing it.

17 Q. Yeah, let's do that.

18 And I'll turn to Figure 12 too so you can
19 see what figure it is.

20 (Pause.)

21 Q. So this is Figure 12 of the '289.

22 Do you see that, Dr. Jakobsson?

23 A. Yes.

24 Q. Do you see that it has a "cell phone
25 1202"?

1 A. I do.

2 Q. And do you see that there's a "SIM card
3 1206"?

4 A. Yes, I do see that.

5 Q. All right. How does that SIM card work
6 with a PDK?

7 A. So I need to look at the context to see
8 whether this is before or after this described
9 replacement.

10 I don't remember that.

11 Q. Well, I'm just asking you a general
12 question here: How does this SIM card work with the
13 PDK?

14 MR. NORRIS: Objection; it goes
15 beyond the scope of this declaration.

16 A. I don't think I opined about that. I
17 would have to consider that to answer it.

18 Q. All right. You quoted this figure, and
19 you gave an example of the SIM card. And I'm asking
20 you how that figure works.

21 And you're saying that you didn't opine on
22 it, but you relied upon it in your declaration.

23 So I'm going to ask you again: This "SIM
24 card" that you referred to in your declaration, how
25 does that work in the system?

1 A. So first of all, I --

2 MR. NORRIS: Objection; vague.

3 And again, objection, it goes beyond the
4 scope of his declaration.

5 A. So first of all, I'd like to ask that you
6 take me to 15:6-8, where there was the
7 corresponding....

8 Q. All right.

9 (Scrolling.)

10 Q. Can you see 15 --

11 A. I can see that.

12 Q. -- 6 to...yeah.

13 And please take your time to read.

14 If you need me to scroll up and down
15 further, I can do that. Just let you know, please.

16 (Witness reading.)

17 A. And now, would you please turn to my
18 declaration that cites this.

19 (Witness reading.)

20 A. So I think this gives the context that may
21 be the answer to your question.

22 So the first sentence I would like to hone
23 in on is that -- is the one you read me before, that
24 it has the conventional SIM card replaced with a
25 hybrid device.

1 So that means that instead of the SIM card
2 you have the hybrid device, and the SIM content that
3 is normally stored on the cell phone is now stored
4 in the PDK.

5 So the PDK is the one we saw before. And
6 now, the PDK -- the next sentence there, starting
7 with, "The cell phone 1202...", is not -- it can't
8 be used, other than for 911, if this PDK, the same
9 one we talked about, is out of range of the RDC of
10 the hybrid device. And the hybrid device 1102, that
11 is the thing that replaced the SIM card.

12 So what we have done is: Before this
13 replacement, you have a conventional SIM card in
14 your cell phone. After the replacement, you have
15 the cell phone now with a PDK -- no, I'm sorry --
16 now with a hybrid device instead of the SIM card,
17 and the hybrid device communicates with a PDK if
18 it's within range.

19 So if it is within range, it communicates
20 with it and receives information that allows it to
21 proceed, which is, in this example, to use the
22 phone.

23 Whether -- whereas, if it's not within
24 range -- so the hybrid device does not get a
25 response from the PDK -- then the hybrid device will

1 not allow regular use of the phone, only 911 call.
2 That's what it says.

3 So it determines what to do based on the
4 presence or nonpresence, in terms of a given range
5 of the PDK.

6 Q. And my question to you is: What is the
7 structure of a "conventional SIM card"?

8 A. What is the structure --

9 MR. NORRIS: Objection; vague.

10 A. Would you say your question again, I'm
11 sorry.

12 Q. Yeah. What is the structure of a
13 "conventional SIM card"?

14 MR. NORRIS: Same objection.

15 A. I have not opined on that. I would have
16 to think about that.

17 Q. So does a "conventional SIM card" have a
18 memory?

19 A. I understand that some SIM cards have
20 memory.

21 But I don't know if this one has to have a
22 memory. I would have to consider it.

23 Q. Okay.

24 A. So I -- most SIM cards have some form of
25 memory, but I don't know that all of them -- all SIM

1 cards do.

2 It's unclear to me what the structure is.
3 I would have to consider this.

4 Q. In this example that you gave, what's the
5 purpose of a SIM card?

6 A. You mean, before being replaced?

7 Q. Yes.

8 A. So SIM cards typically have some
9 information that is specific to the account of the
10 user -- meaning, for billing purposes, the proper
11 account would be billed when you place a call.

12 I don't know, in detail, what the
13 requirements are on SIM cards.

14 It's a common implementation to have a
15 processor on a memory.

16 Sometimes there's a crypto processor, I
17 believe.

18 But I don't know if the -- if we're
19 constrained to the common devices, in terms of SIM
20 cards. And I don't know the full scope of what SIM
21 cards can have and do.

22 I could try to determine that, and then I
23 would be able to answer your question without
24 speculating.

25 Q. Now, you mentioned that some SIM cards

1 might have a crypto processor.

2 What would the crypto processor be used
3 for?

4 A. In this context, or in general?

5 Q. I'm just getting clarification of what you
6 said. It could be in whatever you meant. I'm
7 trying to understand.

8 A. Oh, I meant SIM cards, in general, not
9 constrained to the specifications.

10 I have not studied if there are particular
11 constraints on the SIM cards in the scope of the
12 specification. And I haven't determined exactly
13 what functionality SIM cards had in 2007, which is
14 probably what a SIM card should be understood to
15 mean in this context.

16 Q. In the context of these patents -- '960,
17 '289, '042 -- what would a POSITA have understood
18 that the structure of a "conventional SIM card"
19 would be?

20 MR. NORRIS: Objection; vague.

21 A. I have not determined this.

22 This is another one of those things that I
23 could opine about, but I haven't. I would have to
24 consider that.

25 (Pause.)

1 Q. So I wanted to turn your attention to
2 Paragraph 37 of the '042.

3 That's Exhibit 2016, Paragraph 37.

4 In this paragraph, you mention -- from the
5 third last line of the paragraph:

6 Instead, an algorithm or
7 control logic defining how the
8 information is to be accessed
9 and made usable to the
10 application, function, or
11 service would be required.

12 Do you see that?

13 A. Yes.

14 Q. Who said that an algorithm or control
15 logic is required?

16 A. That is to -- a general purpose computer
17 doesn't do things. It -- at least, it doesn't do
18 any other things required by the claim.

19 In order to achieve the enabling we have
20 discussed before, there has to be something that is
21 added to the general purpose computer in order for
22 that to happen.

23 And that something needs to be clear
24 enough to a POSITA in order for the POSITA to
25 actually be able to do it. Otherwise, just throwing

1 in "general purpose computer," you haven't solved
2 the problem.

3 So the POSITA would look at anything that
4 defines what the general purpose computer would be
5 configured to do.

6 And two ways of dealing with that would be
7 to have either control logic added to it or the
8 software version of that, which is, you know, some
9 executable code.

10 Q. But what's the basis for you to say that
11 these two things are required: An algorithm or
12 control logic?

13 A. Because that is what enables -- let me not
14 use the word "enable" either.

15 That is what turns a general purpose
16 computer into one that has a specified purpose,
17 where the specified purpose, if it does address the
18 enabling thing, corresponds to the claim.

19 Now, if it is just control logic or an
20 algorithm that does not achieve the stated goal,
21 then I don't know whether, you know, it's worth
22 talking about.

23 But at the very least, one needs this
24 logic or algorithm in order to do it.

25 Q. I understand that's what you said.

1 I'm asking to see, what's the basis on why
2 these two things -- what's your basis for saying
3 it's these two things that are required?

4 A. My years in the field and my research and
5 my knowledge about computers.

6 A computer that is a blank state, like a
7 general purpose computer is -- it doesn't do things.
8 You have to somehow configure them to do things.

9 And as far as I could think of, there are
10 only two ways of doing that: A control logic or an
11 algorithm.

12 A control logic is really just another way
13 of saying an algorithm, but it's one that typically
14 has a hardware component.

15 Q. What's the difference between "hardware"
16 and "control logic"?

17 A. "Hardware" can implement an algorithm.

18 And the hardware with the algorithm
19 sometimes is referred to as "control logic."

20 Q. So a processor that executes an algorithm
21 would be "control logic"?

22 A. I would have to think about that, but it
23 sounds reasonable. That's one example.

24 "Control logic," as it's typically used --
25 commonly, it's a special purpose component.

1 But it doesn't have to be.

2 To answer your question, I really would
3 have to consider what the boundaries are.

4 Q. And what's an "algorithm"?

5 A. You could think of an "algorithm" as a
6 recipe that is executed by a computer, for example,
7 in order to take some input and produce some output.

8 Algorithms are sometimes explained as a
9 mathematical concept.

10 The executable code would be one
11 embodiment of an algorithm, and the -- there could
12 be other ways of embodying the algorithm.

13 A human can think of an algorithm.

14 But that's not the kind of algorithm that
15 we speak of here. An algorithm here is something
16 that the computer can execute on.

17 Q. I'm sorry, could you repeat that. I'm not
18 sure I fully understood what you were saying.

19 A. So the last part I said was that
20 algorithms could be what you teach a child, how to
21 add with carry.

22 That is an algorithm.

23 That is not what we're talking about here,
24 the method of adding the carry that a child would
25 learn.

1 Instead, "algorithm" in this context would
2 mean, for example, a set of computer instructions
3 that, when executed, would perform some computation
4 or some task.

5 That would be an algorithm.

6 So for example, something that adds up a
7 number of inputs and computes the mean of them by
8 dividing of the number of inputs that they were --
9 that is an algorithm.

10 And a child could do it if given the
11 instructions of how to do it. That's the algorithm.

12 And a computer could do it, if given the
13 instructions -- typically, machine code instructions
14 or -- or expressed in, for example, a language
15 that's C++, which is then compiled into machine
16 code. And then it could execute it.

17 Q. And according to you, you need an
18 algorithm or a control logic to be applied by a
19 general purpose computer in order to have some type
20 of meaningful structure here.

21 Is that correct?

22 MR. NORRIS: Objection;
23 misstates the witness's testimony.

24 A. I think I no longer see what I say in this
25 paragraph. So it's hard for me to answer your

1 question.

2 Q. So I'm focusing on the same -- I
3 highlighted it for you so you can take a look at it.

4 It says:

5 Instead, an algorithm or
6 control logic defining how the
7 information is to be accessed
8 and made usable to the
9 application, function, or
10 service would be required.

11 A. Yes. Would you show it to me. I think
12 you stopped screen sharing.

13 Q. I'm sorry, what was that?

14 A. Are you currently screen sharing?

15 Q. Yes.

16 A. I cannot see it.

17 Q. You cannot? Okay.

18 A. Oh, somehow -- now my window is larger,
19 but I still don't see it here.

20 Q. Here, I'm resharing --

21 (Simultaneous speaking.)

22 A. Now, I can see. Yes.

23 Q. Okay.

24 A. So when you have a general purpose
25 computer, that by itself is not going to do the

1 "enabling one or more of an application, function,
2 or service," you need something that tells it what
3 that entails.

4 So that is what I refer to as the
5 "algorithm" or "control logic" here. That is pretty
6 much the steps that the specification gives examples
7 of.

8 It has a couple of examples where it says,
9 you know, this is what this unit would perform.
10 These are the steps that it would perform.

11 And so, that would correspond to the
12 algorithm.

13 It doesn't give it in machine code, of
14 course. But a person of skill in the art who reads
15 the specification and reads what these units would
16 do would understand how to implement that, because
17 it says what it would do.

18 And that's the "algorithm" or "control
19 logic."

20 (Pause.)

21 Q. So in that -- in this limitation that
22 we've been talking about, "enabling one or more of
23 an application, a function, and a service," what
24 does it mean to you to "enable" something?

25 A. In the context of the patent and in the

1 context of the claim language here, the "enablement"
2 is the conveyance of a signal, where this signal
3 means something like, "Yes, go ahead," or this
4 option or -- you know, it conveys information that
5 allows the processing to proceed -- whether it means
6 to allow or not allow access to something, for
7 example.

8 MR. KHAN: Can we take a
9 five-minute break?

10 MR. NORRIS: That works.

11 MR. KHAN: Okay. So we'll go
12 off the record. We'll come back around
13 3:50.

14 (Whereupon, a recess was taken
15 from 3:44 p.m. until 3:51 p.m.)

16 MR. KHAN: So I have no further
17 questions.

18 THE WITNESS: Okay.

19 MR. KHAN: So, the witness is
20 yours, Mr. Norris.

21 MR. NORRIS: I have no
22 questions.

23 MR. KHAN: No objections from
24 me.

25 MR. NORRIS: Yeah, to answer

1 your question: I have no questions.

2 MR. KHAN: Great. So I think
3 we're done, then.

4 THE WITNESS: Thank you all.

5 (Whereupon the deposition concluded at
6 3:52 p.m.)

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DEPONENT'S SIGNATURE

Please be advised I have read the foregoing deposition, pages 1 through 150, inclusive. I hereby state there are:

(Check one)

_____ No corrections

_____ Corrections per attached

MARKUS JAKOBSSON, PH.D.

- () Reading and signing was requested.
() Reading and signing was waived.
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ERRATA SHEET

NAME OF CASE: Microsoft Corporation v.

Proxense LLP

DATE OF DEPOSITION: December 20, 2024

NAME OF WITNESS: MARKUS JAKOBSSON, PH.D.

Reason Codes:

1: To clarify the record.

2: To conform to the facts.

3: To correct transcription error.

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DECLARATION UNDER PENALTY OF PERJURY

I am the witness in the foregoing deposition.

I have read the foregoing deposition or have had read to me the foregoing deposition, and having made such changes and corrections as I desired, I certify that the same is true in my own knowledge.

I hereby declare under penalty of perjury that the foregoing is true and correct.

In witness whereof, I hereby subscribe my name this _____ day of _____, 202__.

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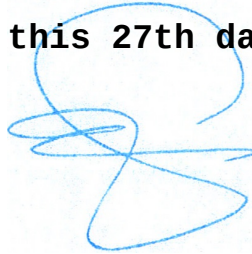
CERTIFICATE

I, SUSAN ASHE, a Certified Electronic Reporter and eNotary Public, hereby certify that the foregoing is a true and accurate transcript of the deposition of said witness, who was first duly sworn by me on the date and place hereinbefore set forth.

I FURTHER CERTIFY that I am neither attorney nor counsel, nor related to or employed by any of the parties to the action in which this deposition was taken, and further that I am not a relative or employee of any attorney or counsel employed in this action, nor am I financially interested in this case.

I FURTHER CERTIFY that I was situated in Hockessin, Delaware while performing eNotary services remotely.

Dated this 27th day of December 2024.



Susan Dolores Ashe

Notary Public for the State of Delaware

My commission expires: December 4, 2026.

Notary Registration Number: 20241204000009.

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