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Transcript of R. Jacob Baker, P.E., Ph.D.

Date: January 10, 2024
Case: Lenovo (United States) Inc., et al. -v- Theta IP, LLC (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

IPR2023-00698
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO (UNITED STATES), INC.
AND MOTOROLA MOBILITY, LLC.,
Petitioners,
V.
THETA IP, LLC,
Patent Owner.

IPR2023-00697
U.S. Patent No. 10, 129, 825
IPR2023-00698
U.S. Patent No. 10, 524, 202

VIDEOTAPED ZOOM DEPOSITION OF
R. JACOB BAKER, P.E., PH.D.
DATE: Wednesday, January 10, 2024
TIME: 1:01 p.m to 5:00 p.m

REPORTED BY: TAMIKA M. BURNETTE, RPR, CSR-14502

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APPEARANCE PAGE

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EXHIBITS

(Exhibits were attached hereto.)

WITNESS	DESCRIPTION	PAGE
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Wednesday, January 10, 2024
1:01 p.m.
* * *
P R O C E E D I N G S
THE TECH: Please stand by for technician read-on and backup recording. Zoom will now prompt you for your permission to video-record this proceeding for backup purposes.
Thank you to everyone for attending this proceeding remotely, which we anticipate will run smoothly. Please remember to speak slowly and do your best to not talk over one another. Please be aware that we are recording this proceeding for backup purposes.
Any off-the-record discussions should be had away from the computer. Please remember to mute your mic for those conversations. Please have your video enabled to help the reporter identify who's speaking. If you're unable to connect with video and are connecting via phone, please identify yourself each time

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1 before speaking.
2 I apologize in advance for any
3 technical-related interruptions. Thank you.
4 THE VIDEOGRAPHER: All right.
5 Everybody stand by for video, please.
6 This is the beginning of Media Number
7 One in the videotaped deposition of Dr. Jacob
8 Baker in the matter of Lenovo (United States),
9 Inc., and Motorola Mobility, LLC v. Theta IP,
10 LLC in the United States Patent and Trademark
11 Office before the Patent Trial and Appeal Board
12 under the case number IPR2023-00697.
13 Today's date is January 10, 2024, and
14 the time on the video monitor is 1303 Eastern
15 Standard Time. I'm Leyhbert Sharp, and I'm the
16 videographer this morning -- in this case this
17 afternoon on behalf of Planet Depos.
18 All parties for this proceeding are
19 attending remotely. And I will ask for the
20 attorneys to please voice-identify themselves
21 and state whom they represent. Thank you.
22 MR. JOHANNINGMEIER: Yeah. This is

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1 Corey Johanningmeier of Bunsow De Mory for
2 patent owner, Theta IP.
3 MR. MELWANI: This is Dinesh Melwani of
4 the law firm Bookoff McAndrews. I'm counsel for
5 the petitioners, Lenovo, Inc., and Motorola
6 Mobility, LLC.
7 MR. UHR: This is William Uhr from
8 Bookoff McAndrew, counsel for petitioners.
9 MR. AHN: This is Sangwoo Ahn of
10 Bookoff McAndrews. I'm counsel for petitioners.
11 MR. MA: This is Jameson Ma, also of
12 Bookoff McAndrews.
13 THE VIDEOGRAPHER: Thank you. Our
14 court reporter today is Tamika Burnette,
15 representing Planet Depos.
16 Madam Court Reporter, would you mind
17 proceeding? Thank you.
18 THE COURT REPORTER: Please raise your
19 right hand, Dr. Baker.
20 MR. MELWANI: One second.
21 Counsel, before we get started, do you
22 want to clarify that it covers two proceedings?

7

1 I think only one case number was read.
2 MR. JOHANNINGMEIER: Oh, yeah. I mean,
3 the -- it's our sort of agreement and
4 understanding that this deposition is going to
5 cover both IPR2023-00697 and -00698, both of
6 which Dr. Baker is declared in with similar
7 declarations. So for efficiency's sake, we're
8 just doing one deposition.
9 MR. MELWANI: Thank you.
10 (Witness sworn.)
11 RUSSEL JACOB BAKER,
12 The witness herein, after having been
13 first duly sworn to tell the truth, was
14 examined and testified as follows:
15 THE VIDEOGRAPHER: You may proceed.
16 Thank you.
17 EXAMINATION
18 BY MR. JOHANNINGMEIER:
19 Q. All right. Well, good morning on the
20 record, Dr. Baker. I guess we'll start the easy
21 way in case we ever need to use this video.
22 Can you state your full name for the

8

1 record?
2 **A. Good morning. My name is Russel,**
3 **R-U-S-S-E-L, Jacob, J-A-C-O-B, Baker, B-A-K-E-R.**
4 Q. Okay. And so, normally, I start with
5 the questions about being deposed before. I
6 know you've been deposed before because I've
7 been involved in at least one now.
8 So how many times -- your CV has 92
9 depositions. Do you know about how many times
10 you've been deposed before?
11 MR. MELWANI: Objection. Relevance.
12 THE WITNESS: About 100.
13 BY MR. JOHANNINGMEIER:
14 Q. Okay. So I won't go through the rules
15 and waste of time with that.
16 The one thing that I always say, even for
17 experienced people, is to remind you that if
18 your counsel has any privilege objections, we
19 should all take them seriously. You know, feel
20 free to stop and talk to them about that. Or if
21 you have any questions about whether something
22 might be privileged, same instruction. I don't

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1 want to intrude on any privileged matters.
2 The flip side of that, though, is any
3 other objection other than privilege is not an
4 excuse to not answer, as you know. So that's
5 the only preliminaries that I think are
6 basically essential.
7 Now, I have -- I have access to a
8 database of IPRs, and I went on there and
9 counted them. I think that you've declared in
10 about 79 IPRs.
11 Does that sound about right?
12 MR. MELWANI: Objection. Relevance.
13 THE WITNESS: No.
14 BY MR. JOHANNINGMEIER:
15 Q. How many IPRs do you think you've
16 declared in?
17 MR. MELWANI: Same objection.
18 THE WITNESS: That have been filed, if
19 I had to guess, I would say about 200.
20 BY MR. JOHANNINGMEIER:
21 Q. Okay. Now, the vast majority of those
22 have been for petitioner, right?

10

1 MR. MELWANI: Objection. Relevance.
2 THE WITNESS: I would think so, yes.
3 (Exhibits 1, 2, 3 and 4 marked for
4 identification.)
5 BY MR. JOHANNINGMEIER:
6 Q. Now, in -- oh, I forgot one other
7 preliminary matter, just for -- just to mention
8 exhibits.
9 So I'm going to -- I have premarked as
10 Exhibit 1 the Patent Number 825, and as
11 Exhibit 2, your declaration for the IPR related
12 to that patent. And as Exhibit 3, Patent Number
13 202, and Exhibit 4, your declaration with
14 respect to that.
15 So those should be available for you to
16 download in the chat. When we come to those and
17 talk to them, please go ahead and do that.
18 Do you have any other materials with you
19 or in your view right now?
20 **A. I have a list of minor, non-substantive**
21 **typos that I found in reviewing my two**
22 **declarations.**

11

1 Q. Okay. Good. Let's just go ahead and
2 get that out of the way. Do you want to read
3 those into the record in order to correct them?
4 **A. Yes.**
5 Q. Okay.
6 **A. So for the 202 patent proceeding ending**
7 **in 698, in paragraph 11, on line 3, it says "as**
8 **a processor," and it should say "as a**
9 **professor."**
10 Q. Okay.
11 **A. On paragraph -- or in paragraph 12,**
12 **line 4, it currently says "I have authorized,"**
13 **and it should say "I have authored."**
14 Q. Okay.
15 **A. Paragraph 73, line 1, it currently says**
16 **"neither best case nor worse base," and it**
17 **should say "neither best case nor worst case."**
18 Q. Okay.
19 **A. And the last one in that declaration**
20 **for the 202 patent proceeding -- for the 202**
21 **patent IPR is paragraph 73, line 11. It**
22 **currently says "on the neighboring channels**

12

1 **normal or relative low." The "relative" should**
2 **be "relatively."**
3 Q. Okay. And is there a list for the
4 other declaration as well, or are they the same?
5 **A. Yes. There's a list for the other one.**
6 Q. Okay.
7 **A. For the 825 patent, paragraph 12,**
8 **line 4.**
9 Q. Okay.
10 **A. "I have authorized" should be "I have**
11 **authored."**
12 **Paragraph 35, line 3.**
13 Q. Okay.
14 **A. It should say "a relatively large**
15 **continuous supply" instead of "a relative large**
16 **continuous supply."**
17 Q. Okay.
18 **A. Paragraph 49, line 13.**
19 Q. All right.
20 **A. It currently says "desired an**
21 **interfering." It should say "desired and**
22 **interfering."**

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1 Q. Okay.
2 **A. Paragraph 59, line 11, currently says**
3 **"strength if satisfactory," and it should say**
4 **"strength is satisfactory."**
5 **Paragraph 65, line 1, "base" should be**
6 **"case." It should say "worst case," not "worst**
7 **base."**
8 **Same paragraph, line 11, where it says**
9 **"relative low," it should say "relatively low."**
10 Q. Okay.
11 **A. And then for paragraphs 88, 113, and**
12 **129, it currently says "worst-case power**
13 **dissipation," and it should say "best-case power**
14 **dissipation." And that was for paragraphs 88,**
15 **113, and 129.**
16 **And that's it.**
17 Q. Okay. Great. Well, thank you for
18 that. That -- that's helpful. I mean, we -- I
19 would have given you all of those, I'm sure.
20 But -- it's clear from context. But it's good
21 to get it right and perfect.
22 All right. Now I want to go back to

14

1 declarations and just ask you some questions
2 that go to the subject matter. I'm going to go
3 ahead and put in an exhibit in the chat. This
4 will be Exhibit 5, and I'll put it up there.
5 (Exhibit 5 marked for identification.)
6 BY MR. JOHANNINGMEIER:
7 Q. Let me know if you see that. And then
8 we can either have it pulled up on the screen,
9 or if you -- if it's easier for you, you can
10 just download it and review it there.
11 **A. I have --**
12 MR. MELWANI: Objection. Objection. I
13 just want to lodge the objections to the
14 exhibit. Relevance. Authentication.
15 THE WITNESS: I see it, and I have
16 downloaded it.
17 BY MR. JOHANNINGMEIER:
18 Q. Okay. Very well. So -- (Internet
19 connection failure.)
20 -- because I searched in the database for
21 a -- a line that seems unique from your CV --
22 which presumably is attached to declarations

15

1 that you file in IPRs, as it was in this one --
2 and then looked for a time period.
3 And I came up with 31 instances of
4 declarations including "was born in Ogden, Utah
5 on October 5th, 1964" filed since the -- the
6 IPRs in this case were filed, so in the last ten
7 months.
8 Does that seem about right, that you
9 might have declared in 31 PTAB trials since you
10 filed the declarations in this case?
11 MR. MELWANI: Objection. Relevance.
12 THE WITNESS: That seems right. I did
13 a case -- or I did some work for a case
14 involving Samsung and Mojo Mobility, which had,
15 like, 16 IPRs. So I don't have any -- I don't
16 know if that's right or wrong, but it doesn't
17 seem like it -- it's unreasonable.
18 BY MR. JOHANNINGMEIER:
19 Q. Okay. Well, I wanted to ask you just
20 about a couple of them. And they are listed
21 here in this exhibit, but -- so the first one
22 I'll just ask about is -- and I just want to

16

1 know about the subject matter.
2 IPR2024-00167, that was for petitioner
3 Freescale and NXP. Now, in my understanding,
4 that is about integrated circuit packaging at a
5 high level; is that -- is that correct?
6 MR. MELWANI: Objection. Relevance.
7 Outside of the scope.
8 THE WITNESS: I think so. That sounds
9 right. I don't remember specifically.
10 BY MR. JOHANNINGMEIER:
11 Q. And another one I wanted to ask about
12 that's on here is the -- the -- there's several
13 in here for BiTMICRO v. Kioxia. Now, those,
14 broadly, are about memory controllers, right?
15 MR. MELWANI: Objection. Relevance.
16 Scope.
17 THE WITNESS: I think they were about
18 flash memory.
19 BY MR. JOHANNINGMEIER:
20 Q. Mm-hmm.
21 **A. I don't --**
22 Q. Flash memory controllers?

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A. But I'm not sure it was exactly the controller in all instances. It probably had something to do with the memory. Again, I don't remember clearly. But Kioxia, which is who hired me, makes memory chips. So the memory controller may have been involved, but -- and again, I don't remember. It's been quite some time since I worked on those. I would guess it's more related to how the memory is stored in the flash memory.

Q. Well, we'll just --

A. But, again, off the top, I don't remember clearly.

Q. Okay. But -- so something related to flash memory for sure, though, right?

MR. MELWANI: Objection. Scope. Mischaracterizes. Relevance.

THE WITNESS: I think, in a general sense, all of these are going to be related to electronics or electro-optics. That's my field of expertise. So flash memories and electronics. So, yes, I would say that, since

18

Kioxia makes flash memory, that that's likely the area that I did work in.

BY MR. JOHANNINGMEIER:

Q. Now, these ones you -- you mentioned the ones for Samsung. An example would be IPR2023-01124, and that was against Mojo Mobility. Now, my understanding from looking at it, at least that one, is that was about wireless charging. Is that your understanding as well or your memory as well?

MR. MELWANI: Objection. Scope. Relevance.

THE WITNESS: Yes. I think those were about the electronics for charging phones or tablets or something. It's about power delivery.

BY MR. JOHANNINGMEIER:

Q. And, now, there's some on here for a company, Lennox Industries or Heatcraft, an example number being 2023-00715. Now, those were about, basically, connected thermostats, right?

19

MR. MELWANI: Objection. Scope. Relevance.

THE WITNESS: Again, yes, all of my IPRs and work are going to be electronics or electro-optics and associated fields, like packaging. That's my field of expertise.

BY MR. JOHANNINGMEIER:

Q. So just to do one more. There's one on here, IPR2023-00778. That was for Nintendo, and my understanding is that one was about LED displays for video game controllers; is that right?

MR. MELWANI: Objection. Scope. Relevance.

THE WITNESS: I think that one is about using a photodiode to detect ambient light temperature or light intensity to adjust the brightness of a display so the electronics associated is measuring the ambient light and then providing signals to the display to indicate how bright the ambient light is.

I -- again, it's been a -- a little bit

20

of time since I looked at -- into detail on that.

BY MR. JOHANNINGMEIER:

Q. Now, including the IPRs we have here today, we're talking about today, you have declared within the last year in IPRs covering thermostats, display optics, wireless charging, flash memory, IC packaging, and RF wireless circuits, right?

MR. MELWANI: Objection. Scope. Relevance.

THE WITNESS: Again, all of the area I work in is electronics and electro-optics related. That's my field of expertise.

BY MR. JOHANNINGMEIER:

Q. So that's the -- that, then, is the common thread for all those different sort of subject matters?

MR. MELWANI: Objection. Scope. Relevance.

THE WITNESS: I don't know if I would agree it's a common thread. I would say the

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1 areas electrical engineering or electrical
2 engineering related, yes, that's -- I'm a
3 professor of electrical and computer
4 engineering. So that's my field of expertise.
5 BY MR. JOHANNINGMEIER:
6 Q. Right. But, I mean, does that -- that
7 doesn't automatically make you an expert in
8 every aspect of electrical engineering, though,
9 right? It's a very wide -- wide field, right?
10 MR. MELWANI: Objection. Scope.
11 Relevance.
12 THE WITNESS: I only will accept work
13 in areas that I feel I am an expert in. So any
14 of the areas that I wrote a declaration for was
15 an area that I felt I was an expert in.
16 BY MR. JOHANNINGMEIER:
17 Q. Well, let's go, then, to -- to this
18 case. Let's go into Exhibit 2, which is your
19 declaration, if you want to pull that up. I'll
20 do the same.
21 (Exhibit 2 marked for identification.)
22 BY MR. JOHANNINGMEIER:

22

1 Q. And I want to ask you about -- let's
2 just go to the person of ordinary skill
3 paragraph. So starting at paragraph 27.
4 MR. MELWANI: Counsel, which
5 declaration are we looking at?
6 MR. JOHANNINGMEIER: Oh, it's the --
7 what's -- Exhibit 2 is the declaration for the
8 825 patent, so I was going to kind of start with
9 that one and use that one and then go to the
10 other one as necessary.
11 MR. MELWANI: All right. And you mean
12 Dr. Baker's declaration, right?
13 MR. JOHANNINGMEIER: Yes.
14 MR. MELWANI: Terrific.
15 BY MR. JOHANNINGMEIER:
16 Q. Okay. So on page 13, starting at
17 paragraph 27, there's a section about the level
18 of ordinary skill in the art, right?
19 **A. Yes.**
20 Q. Okay. And so -- and in paragraph 31
21 here, you state the relevant time frame for the
22 person of ordinary skill in the art is

23

1 March 2003, right?
2 **A. (Witness examining document.)**
3 **Yes.**
4 Q. So what we're analyzing with respect to
5 these issues that you're opining about is what a
6 person of ordinary skill in the art in March of
7 2003 would understand, right?
8 **A. What they would have understood in**
9 **March of 2003, yes.**
10 Q. Mm-hmm. Okay. Now, in March of 2003,
11 you were working at Micron, right?
12 **A. I was actually -- oh, wait. I was**
13 **thinking of 1993. March of 2003, I was a**
14 **professor at Boise State. And I did consulting,**
15 **and I think Micron was one of the companies I**
16 **was doing consulting for.**
17 Q. So you had already switched to
18 professor. But before that, you were at Micron
19 as an engineer, and, I'll say, a very
20 distinguished engineer, right?
21 **A. No. I only worked at Micron -- I did**
22 **work as a full-time employee, but my main job**

24

1 **from '93 to present is as a professor.**
2 Q. Well, I understand. I'm just -- I'm
3 trying to go back to the "you" that was in 2003.
4 And the "you" of -- in March of 2003, right,
5 was -- had started as a professor and had -- was
6 coming off of a stint working with Micron,
7 right?
8 I mean, I -- I've got your CV here, if we
9 need to -- if I'm wrong.
10 MR. MELWANI: Objection. Asked and
11 answered. Relevance.
12 THE WITNESS: I worked at Micron
13 starting in '94 until about 2008 --
14 BY MR. JOHANNINGMEIER:
15 Q. Mm-hmm.
16 **A. -- in various capacities. So, for**
17 **example, in the 94', 95' time frame, I worked**
18 **for Micron Display and Micron RF Communications,**
19 **working on displays and RFID tags.**
20 **I don't remember exactly what I was**
21 **working on in 2003. If I had to guess, I would**
22 **say it was probably DRAM related or computer**

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1 **memory related.**
2 Q. Now, in paragraph 30, that's where you
3 state your opinion about the knowledge of a
4 person of ordinary skill. And you say that they
5 would have had a bachelor's degree in electrical
6 engineering, electronics engineering, or the
7 equivalent, and two or more years of experience
8 in wireless communication devices, including
9 transceivers and circuitry thereon, right?
10 **A. Yes.**
11 Q. Okay. So as of March '23, you
12 obviously had a bachelor's degree in electrical
13 engineering, right?
14 **A. Yes.**
15 MR. MELWANI: Objection. Relevance.
16 BY MR. JOHANNINGMEIER:
17 Q. As of March 2003, do you believe you
18 had two or more years' experience in wireless
19 communication devices, including transceivers
20 and circuitry thereon?
21 MR. MELWANI: Objection. Relevance.
22 THE WITNESS: Yes.

26

1 BY MR. JOHANNINGMEIER:
2 Q. Okay. And what is the basis for that
3 belief? Is there something on your CV that you
4 can point to, or just what -- what is the basis
5 for that belief?
6 MR. MELWANI: Objection. Relevance.
7 THE WITNESS: For example, when I
8 worked at Lawrence Livermore National Lab in
9 1993, I worked on impulse radar designs, which
10 are wireless designs for transmitting and
11 sending out pulses and looking at the
12 reflections.
13 I worked on low-noise amplifier designs
14 and associated electronics used in RF
15 transmitter lines and transmitters and
16 receivers. I even teach this in my classes.
17 I also worked -- though it may have
18 been a year or two after that -- on the
19 digitization of the IQ channels in RF
20 communications. I did that for a few years
21 after the normal heterodyne type receivers.
22 That kind of technology kind of get -- got

27

1 mature, and so people were looking at ways of
2 digitizing the -- the transmission path for RF
3 communications.
4 In '94, I helped out -- and I don't
5 even know if I put it on my resume -- with the
6 CMOS aspect of the RF communications paths for
7 the RF communications with Micron Communications
8 for trying to implement RFID tags, for example.
9 And I worked on and off with that for --
10 probably until that company folded. And the
11 company Micron reinvested in just the memory
12 technology aspect of the CMOS business.
13 BY MR. JOHANNINGMEIER:
14 Q. Well, and so -- just so you understand,
15 I'm not attempting to -- a lot of what you just
16 said wasn't -- wasn't reflected, or I could not
17 find, in your CV. So I wanted to just get your
18 understanding of the basis. You don't state in
19 your declaration that you are or were a person
20 of ordinary skill.
21 So I guess the question is: Do you
22 believe that you would have been a person of

28

1 ordinary skill at the time?
2 MR. MELWANI: Objection. Relevance.
3 THE WITNESS: I would say I was not a
4 person of ordinary skill. I would be a person
5 of extraordinary skill at the time of these
6 patents.
7 BY MR. JOHANNINGMEIER:
8 Q. Okay.
9 **A. Because I had significant experience in**
10 **the electronics associated with RF communication**
11 **channels.**
12 Q. And when you say that, you mean, like,
13 for instance, op-amps and circuits like that?
14 MR. MELWANI: Objection. Relevance.
15 THE WITNESS: I mean, the chips I
16 worked on, there were power supplies because
17 they were battery powered. But more along the
18 lines of the interface with the antenna, the
19 low-noise amplifiers, impedence matching, the
20 mixing, and trying to lower the power
21 dissipation for receiving signals and then
22 retransmitting them out on the loop antennas.

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1 For -- for example, the RFID tags.
2 The impulse radar work I worked on was
3 not really hetero- -- heterodyne like, you know,
4 normal mixer. It was more of a time-domain
5 application where you had a broadband
6 amplifier -- but it was still low noise -- that
7 would amplify and look at particular positions
8 of return pulse -- pulses and amplitudes.
9 Yeah. I can talk about this at length
10 because I -- I have a dozen or so student theses
11 I've had related to this work that -- I've had
12 students try to find simple but useful ways of
13 decoding things in time rather than just simply
14 in frequency.
15 BY MR. JOHANNINGMEIER:
16 Q. That -- that student work that you
17 supervise, does that go all the way back into
18 2003? Or what time frame would that have been
19 in?
20 MR. MELWANI: Objection. Relevance.
21 THE WITNESS: I think that it -- maybe
22 some of it would go back before 2003. But one I

30

1 was just thinking of or the technology I was
2 just thinking of was more recent, maybe ten
3 years ago. They kind of blend together after a
4 while.
5 BY MR. JOHANNINGMEIER:
6 Q. All right. Let me go back and ask just
7 some more general questions just about the
8 declaration just to sort of close a couple of
9 things off. The -- well, let's start with this
10 deposition, actually. Let's go all the way back
11 and do that.
12 Did you meet with anyone to prepare prior
13 to this deposition? And -- and when?
14 **A. In that list, Lenovo's attorneys, which**
15 **are present on this call. And I met with them**
16 **yesterday and the day before yesterday.**
17 Q. Okay. Now, did you talk to anyone
18 other than Lenovo's outside counsel in
19 preparation for this deposition?
20 MR. MELWANI: Objection. Form.
21 THE WITNESS: If I understand what
22 you're asking, no. The only people I talked to

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1 in preparation for this deposition was Lenovo's
2 counsel.
3 BY MR. JOHANNINGMEIER:
4 Q. Right. So, like, you didn't talk to
5 anybody -- any Lenovo engineers, for instance,
6 right? You wouldn't have any reason to do that?
7 **A. Not in preparation for this deposition,**
8 **no.**
9 Q. Right. And you haven't talked to any
10 of the prior art authors of any of the papers
11 you've cited, or have you? Have you talked to
12 any of the prior art authors or inventors in
13 preparation --
14 MR. MELWANI: Objection --
15 BY MR. JOHANNINGMEIER:
16 Q. -- for this deposition?
17 MR. MELWANI: Objection. Form.
18 THE WITNESS: Not that I can recall,
19 no.
20 BY MR. JOHANNINGMEIER:
21 Q. Now, do -- I mean, do you have any
22 staff or assistants that help you with your

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1 expert work, or are you still doing it just all
2 on your own?
3 MR. MELWANI: Objection. Relevance.
4 Form.
5 THE WITNESS: I just do it on my own.
6 I have no help.
7 BY MR. JOHANNINGMEIER:
8 Q. All right. And did you review
9 documents to prepare for the deposition?
10 **A. Yes.**
11 Q. Presumably your declarations, right?
12 **A. Yes.**
13 Q. What -- any other documents that you
14 reviewed? What other documents did you review
15 to prepare for this declaration?
16 **A. The documents cited in my declaration.**
17 Q. Oh, sorry. And I think I might have
18 misspoke.
19 What other documents did you review in
20 preparing for this deposition? Sorry.
21 **A. The documents cited in my declarations.**
22 Q. In preparing, did you review any

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1 documents that you did not consider when you
2 were drafting the declaration? Anything new?
3 **A. No, I don't think so.**
4 Q. And so I take it none of your opinions
5 in the declaration have changed, right?
6 **A. My opinions are the same. Correct.**
7 Q. About how many hours have you worked on
8 these cases for Motorola and Lenovo?
9 MR. MELWANI: Objection. Relevance.
10 THE WITNESS: I -- I could guess, but I
11 don't know.
12 BY MR. JOHANNINGMEIER:
13 Q. What's your best guess? I won't hold
14 you to it.
15 MR. MELWANI: Objection. Relevance.
16 Speculation.
17 THE WITNESS: If I had to guess, I
18 would say around 100.
19 BY MR. JOHANNINGMEIER:
20 Q. Okay. Now, that -- so you filed
21 declarations in three IPRs, right, for Motorola
22 and Lenovo, right? And we're here today to talk

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1 about two of them?
2 **A. Yes.**
3 Q. Are you currently doing work on this
4 case other than IPR work for Motorola and
5 Lenovo?
6 MR. MELWANI: Objection. Relevance.
7 THE WITNESS: No.
8 BY MR. JOHANNINGMEIER:
9 Q. And so that 100 hours -- of that
10 100 hours, how many hours would you say you
11 spent working on actually reviewing the
12 declaration before it was signed?
13 MR. MELWANI: Objection. Relevance.
14 THE WITNESS: Well, to begin with, I
15 don't know it was 100 hours. It could have been
16 70 -- (Internet connection failure.)
17 I didn't just review and sign them. I
18 actually worked on them. And the majority of
19 that time -- let's say it was 100 hours -- would
20 have been working on the declarations. And if I
21 had to guess, I would say 10 to 20 hours was
22 looking at prior art and looking at the patents.

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1 And that's a guess, because it could have been
2 longer.
3 BY MR. JOHANNINGMEIER:
4 Q. Do you know -- do you remember when you
5 began working on the declarations, which were
6 then filed in -- I think it was March 7th of
7 2023?
8 MR. MELWANI: Objection. Relevance.
9 THE WITNESS: I don't recall. I would
10 imagine it was, say, two, three months before
11 they were filed. But I -- I honestly don't
12 remember.
13 BY MR. JOHANNINGMEIER:
14 Q. Is that -- would you say that's typical
15 for IPR declarations?
16 MR. MELWANI: Objection. Relevance.
17 BY MR. JOHANNINGMEIER:
18 Q. Would you agree?
19 MR. MELWANI: Dr. Baker, I just want to
20 make sure the court reporter got the objection.
21 Ms. Burnette, did you get the objection
22 there?

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1 THE COURT REPORTER: Yes, sir. I'm
2 getting all of your objections.
3 MR. MELWANI: Great. Thank you.
4 THE COURT REPORTER: You're welcome.
5 THE WITNESS: I don't know what you
6 mean by "typical." I mean, maybe most often,
7 it's two to three months. Sometimes it's
8 considerably longer.
9 BY MR. JOHANNINGMEIER:
10 Q. Okay. Well, because the reason I
11 asked, actually, is just because, in doing my
12 research into other declarations that you found,
13 I -- I located 12 IPR declarations that you
14 filed in the month of March 2023.
15 And so I was just trying to sort of get
16 my mind around where you had time to do all of
17 those if it was taking you 100 hours per.
18 MR. MELWANI: Objection.
19 Mischaracterizes.
20 THE WITNESS: I -- I don't know what
21 the question is.
22 BY MR. JOHANNINGMEIER:

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1 Q. Well, I mean, I can put up another
2 exhibit. But, I mean, does -- are you willing
3 to -- well, would you agree that you filed
4 approximately 12 IPRs in -- in March of 2023, of
5 which three were in this case?
6 MR. MELWANI: Objection.
7 Mischaracterizes. Relevance. Outside of the
8 scope of Dr. Baker's declaration.
9 THE WITNESS: I -- I don't have any
10 reason to disagree. I do know that you can
11 probably point to the month I worked on the Mojo
12 Mobility patents with Samsung. I don't remember
13 the number that were -- and that may be included
14 in what you're talking to me about.
15 But there was so much overlap in those
16 IPRs that it really -- counting them the same
17 as, you know, IPR that there -- I worked on that
18 there's no overlap really isn't fair.
19 Further, IPR work, at least for me,
20 comes in -- in streaks. I'll do a bunch of it;
21 then I'll have months where I do little to no
22 IPR work. And then the depositions also come

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1 bunched up where there'll be months -- it's
2 probably been three, four months since I've been
3 deposed, but now, in January, I'll probably have
4 four depositions.
5 So everything -- I don't think trying
6 to characterize or point at one specific example
7 is really representative of the work.
8 But, I mean, I don't know if I've
9 answered your question because I don't know what
10 the question is.
11 BY MR. JOHANNINGMEIER:
12 Q. Well, just to -- just to make it more
13 fair, let's just -- I put in -- in the chat
14 Exhibit 6, where I've got just a listing of the
15 12 that I'm talking about. And go ahead and let
16 me know when you've downloaded that.
17 (Exhibit 6 marked for identification.)
18 MR. MELWANI: Objection. Relevance.
19 Scope. Authentication. Hearsay.
20 And those objections are to the
21 Exhibit 6 that patent owner counsel has just
22 introduced.

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1 BY MR. JOHANNINGMEIER:
2 Q. Sir, are you able to see the -- what I
3 just put in as Exhibit 6?
4 **A. Yes.**
5 Q. Okay. So these are, again, all
6 declarations that had that line about your birth
7 date from the CV. And it looks like there's
8 three in the Kioxia case, three in the Theta
9 case, several -- one, two, three, four, five --
10 in the Rosen case, and one in the Nintendo case,
11 right? And those are all declarations that you
12 filed, right?
13 MR. MELWANI: Objection. Relevance.
14 Outside of the scope.
15 THE WITNESS: Yes.
16 BY MR. JOHANNINGMEIER:
17 Q. Okay. So that -- would you say that
18 was an abnormally busy month for IPR filings for
19 you?
20 MR. MELWANI: Objection. Relevance.
21 Scope.
22 THE WITNESS: I don't recall. I can't

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1 answer.
2 I do know when there's a bunch of
3 patents that are related and overlapping --
4 like, for example, if I remember correctly, the
5 Lennox patents were -- that the amount of work
6 that I do drops, because when I do work for one
7 patent, it's similar or it can be used with the
8 other patents.
9 So I just -- I don't know how to answer
10 that. If I said, "Yes, that was a busy month,"
11 then you could pull up the month where I
12 submitted the Mojo Mobility patents, which are
13 very much overlapping, and point to, "Well,
14 wasn't that month even busier?"
15 I just don't know how to answer any of
16 these questions because it's really subjective
17 on what the -- the technical content of the
18 patents are and, you know, how in-depth the
19 claims are or how detailed the claims are, how
20 many grounds there are, what I'm asked to do. I
21 mean, I just can't give any definitive answers
22 on any of this.

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1 BY MR. JOHANNINGMEIER:
2 Q. So I guess -- I mean, the reason I'm
3 asking this is just -- it's going to process,
4 and -- as you -- you have figured out. And, you
5 know, you've -- you -- you said that you don't
6 just review and sign.
7 So, you know, what I'm trying to get at
8 is: How much time and what -- what of these
9 declarations is your original work versus things
10 that were copied from other declarations because
11 it's -- like your CV or qualifications and
12 things which were received from counsel?
13 So let's just go through a declaration,
14 and let me ask you a couple of questions about
15 that. So let's go back to Exhibit 2, which is
16 the 825 declaration.
17 **A. Okay.**
18 Q. Now, just to be -- you know, just to
19 have it clear on the record, what I've marked as
20 Exhibit 2 is a copy of your declaration in IPR
21 number -- which one is it? It's IPR2023-00697,
22 right?

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1 **A. (Witness examining document.)**
2 Q. With respect to the 825 patent?
3 **A. Yes.**
4 Q. Okay. And so on page 90 of the PDF --
5 I'm sorry. Page -- page 90 of the declaration,
6 page 96 of the PDF, that's your signature there,
7 right?
8 **A. Yes. On PDF page 96, my signature is**
9 **seen.**
10 Q. And you said you signed it on
11 March 7th, 2023, right?
12 **A. Yes.**
13 Q. Did you state your opinions in this
14 proceeding?
15 **A. Yes. Other than the typos I mentioned**
16 **at the beginning of this deposition.**
17 Q. Does it identify all of the bases for
18 those opinions?
19 **A. Yes.**
20 Q. Now going up to paragraph 17, which
21 starts on paragraph -- it starts on your page 6
22 or 7, PDF page 12.

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1 **A. (Witness complying.)**
2 Q. Are you there?
3 **A. Yes.**
4 Q. Okay. This is a list of the materials
5 that you considered for the declaration, right?
6 **A. Yes. And the other -- if there's**
7 **something missing in that paragraph, then it**
8 **will be -- and I cited it elsewhere in my**
9 **declaration. And I would have considered where**
10 **I cited the other document.**
11 Q. Okay. And so I noticed that one thing
12 that I don't see on here is the actual petition.
13 So my question is: Did you review the petition
14 that counsel filed before signing your
15 declaration?
16 **A. I don't even think I've reviewed the**
17 **petition to date. So, no, I have not.**
18 Q. Okay. And so, then, I assume the
19 answer to the next question, which is going to
20 be: Did you help draft the petition in any way?
21 MR. MELWANI: Objection. Relevance.
22 Scope.

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1 THE WITNESS: I didn't help draft the
2 petition directly, but I would imagine that
3 maybe my opinions were used in the petition and
4 copied from the petition -- or copied from my
5 declaration. But I don't know. I wasn't
6 involved with the drafting of the petition.
7 BY MR. JOHANNINGMEIER:
8 Q. Okay. Now, did you write every word in
9 this declaration yourself?
10 MR. MELWANI: Objection. Relevance.
11 THE WITNESS: I asked for help, for
12 example, on the legal sections. I'm not an
13 attorney. I guess the takeaway is that the -- I
14 made sure that the declarations that I signed in
15 these proceedings represented my opinions.
16 BY MR. JOHANNINGMEIER:
17 Q. Of course. So there were some
18 sections, like, for example, the legal opinion
19 section, that were drafted by counsel and then
20 you reviewed and ultimately adopted or
21 understood, right?
22 MR. MELWANI: Objection.

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1 Mischaracterizes. Relevance.
2 THE WITNESS: I had help drafting the
3 legal-matter-related words in my declaration,
4 yes.
5 BY MR. JOHANNINGMEIER:
6 Q. And, in fact, you say as much. You say
7 in paragraph 20 that your understanding of the
8 relevant legal principles is based on
9 information provided to you by counsel. And, of
10 course, that's -- that's normal, right?
11 MR. MELWANI: Objection. Relevance.
12 Scope.
13 THE WITNESS: I would think it's normal
14 unless the expert had or was qualified to opine
15 on the law.
16 BY MR. JOHANNINGMEIER:
17 Q. Now, are there any other sections that
18 you had help from counsel in drafting?
19 MR. MELWANI: Objection. Relevance --
20 BY MR. JOHANNINGMEIER:
21 Q. The first draft?
22 MR. MELWANI: Objection. Relevance.

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1 Scope.
2 THE WITNESS: I -- I -- maybe. I don't
3 know. I -- the takeaway is, again, I made sure
4 that the opinions in my declaration were true
5 and honest and that they reflected my opinions
6 on the matters in these two proceedings.
7 BY MR. JOHANNINGMEIER:
8 Q. Let's go to paragraph 83.
9 **A. (Witness complying.)**
10 Q. Starting on page 46 of your
11 declaration, page 52 of the PDF. Let me know
12 when you're there.
13 **A. I'm there.**
14 Q. Okay. So paragraph 83 is part of the
15 substantive opinion. My question is: Did
16 counsel help in the drafting this paragraph?
17 MR. MELWANI: Objection. Relevance.
18 THE WITNESS: I don't recall. Again, I
19 worked with counsel on my declaration, but I
20 didn't take or have any opinions that were
21 counsel's opinions and not my own. Everything
22 that's in this declaration is my opinion from my

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1 technical background and education and
2 experience.
3 BY MR. JOHANNINGMEIER:
4 Q. So if you had -- if counsel had
5 suggested something to you that you disagreed
6 with, you would have edited that, right, or
7 taken it out, or -- right?
8 **A. I would have considered it. If I ended**
9 **up disagreeing with it, it would not have made**
10 **it into my declaration.**
11 Q. Now, you said that you don't know if
12 you've read the petition in this case. Have you
13 read Theta's preliminary response in this case?
14 MR. MELWANI: Objection.
15 Mischaracterizes.
16 THE WITNESS: I don't think I said I
17 didn't know. I said I didn't read the petition
18 before I signed. I didn't look at the petition
19 before I signed my declaration.
20 And I did not, and I was not asked to,
21 read the document. Was it -- did you mention it
22 was the patent owner's preliminary response? Is

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1 that the document you're referring to?
2 BY MR. JOHANNINGMEIER:
3 Q. Yeah. So -- so Theta filed a response
4 after receiving the petition and your
5 declaration, right. And, you know, it's one of
6 the papers in the proceeding.
7 I'm just asking you whether counsel or
8 anyone else showed it to you or -- I'm just
9 asking you, straight up, did you read Theta's
10 patent owner preliminary response in this case?
11 MR. MELWANI: Objection. Relevance.
12 Outside of the scope of Dr. Baker's declaration.
13 THE WITNESS: Not that I recall.
14 BY MR. JOHANNINGMEIER:
15 Q. Okay. Do you know when you would have
16 drafted or edited paragraph 83?
17 MR. MELWANI: Objection. Relevance.
18 THE WITNESS: I don't want to be
19 flippant, but I would have worked on
20 paragraph 83 and all the other material in my
21 declaration prior to signing it.
22 BY MR. JOHANNINGMEIER:

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1 Q. Right. I'm guess what I'm asking is,
2 if you remember, was this a last-minute rush, or
3 was this something that you drafted well before
4 it was due? Do you remember? Were there -- do
5 you remember the circumstances of when this was
6 drafted?
7 MR. MELWANI: Objection. Relevance.
8 THE WITNESS: I -- the only thing I can
9 remember is I didn't feel rushed in working on
10 this -- these matters. I didn't feel there was
11 a time constraint or that I was being rushed to
12 sign something in a hurry. I felt there was
13 plenty of time to work on my declaration.
14 MR. MELWANI: Counsel, we've been going
15 about an hour. Do you have many more questions
16 in this line, or can we take a quick five-minute
17 break?
18 MR. JOHANNINGMEIER: Well, I mean, I
19 can -- yeah, a break's fine. I mean, that's
20 fine.
21 MR. MELWANI: Okay.
22 THE VIDEOGRAPHER: Stand by, please.

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1 We are going off the record. The time is 1400.
2 (Off the record.)
3 THE VIDEOGRAPHER: We are back on the
4 record. The time is 1410.
5 BY MR. JOHANNINGMEIER:
6 Q. Okay. Welcome back. I just have one
7 more set of questions in the, you know, "did you
8 look at" line that we were on.
9 With our preliminary response, Theta
10 filed an expert declaration. Did you review the
11 expert declaration that Theta filed in response
12 to yours?
13 MR. MELWANI: Objection. Form.
14 Relevance.
15 THE WITNESS: I don't recall doing
16 that, no.
17 BY MR. JOHANNINGMEIER:
18 Q. Okay. Do you know Professor Larry
19 Larson at Brown?
20 MR. MELWANI: Objection. Relevance.
21 THE WITNESS: No.
22 BY MR. JOHANNINGMEIER:

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1 Q. Okay. Well, he has an opinion that we
2 found. But I just wanted to know if you read
3 it, because then I'd have some more questions.
4 And since you haven't, I don't.
5 So let's go on to a different subject and
6 actually go to Exhibit 1, which is the 825
7 patent. So I'm going to ask you some questions
8 about Figures 2A and 2-B. Let me know when
9 you've got that up.
10 (Exhibit 1 marked for identification.)
11 THE WITNESS: (Witness complying.)
12 MR. MELWANI: What figures were those?
13 MR. JOHANNINGMEIER: 2A and 2-B.
14 They're on the same page.
15 MR. MELWANI: Got it. Thank you.
16 BY MR. JOHANNINGMEIER:
17 Q. It's page 5 of the exhibit.
18 **A. I have it up.**
19 Q. Okay. So these are examples of an
20 input spectrum, right? Or these are examples of
21 input spectra, right?
22 **A. (Witness examining document.)**

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1 **I think there's -- 2A and 2-B examples**
2 **of desired and interfering signals and noise**
3 **that may be received in a circuit in a wireless**
4 **receiver, yes.**
5 Q. And at column 6, lines 4 to 6, the
6 patent refers to these as examples of input
7 spectrum, right?
8 **A. What lines?**
9 Q. Four to 6.
10 **A. (Witness examining document.)**
11 **Yes.**
12 Q. Okay. Going back to Figure 2A and -B.
13 Now, these are showing a particular desired
14 signal at a particular frequency, right?
15 **A. (Witness examining document.)**
16 Q. For example, the bar labeled 206?
17 **A. It's showing desired signal occupying a**
18 **range of frequencies, yes.**
19 Q. And then it's showing two different
20 interferers occupying different ranges of
21 frequencies, right?
22 **A. (Witness examining document.)**

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1 **Yes. In Figure 2A, for example, 206 is**
2 **the desired signal spectrum, and the interferers**
3 **are labeled 208 and 210. And they have a**
4 **corresponding spectrum, which is indicated by**
5 **the rectangles that are labeled 208 and 210.**
6 Q. So looking at Figure 2A, these desired
7 signal spectra and interferer signal spectra
8 would be occupying the same time window, right?
9 They're occurring at the same time, right?
10 **A. Not exactly. The -- a sinusoid and the**
11 **measure of frequency, you have to look at a time**
12 **range.**
13 Q. Mm-hmm.
14 **A. So you can't just pick one instant in**
15 **time and tell anything about the spectral**
16 **content or frequency content of a --**
17 Q. I understand. You have to have one
18 period of the -- the sine wave, or potentially
19 more, right?
20 **A. Or one frequency within the spectrum.**
21 **If one were to go to a different frequency, say**
22 **a -- a smaller frequency, then that time frame**

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1 **would -- just to look at one period would be**
2 **longer.**
3 Q. I guess my question, just to restate
4 it -- and I'm just trying to see if we can come
5 to an understanding of what signal spectra show.
6 A -- a signal spectrum is going to show signal
7 components within the same time window, right?
8 Components of a signal within a time, right?
9 MR. MELWANI: Objection. Speculation.
10 Outside the scope.
11 THE WITNESS: No. That's not the way
12 it works when measuring those signals.
13 BY MR. JOHANNINGMEIER:
14 Q. I -- go ahead. Sorry.
15 **A. I mean, they're not all measured at**
16 **exactly the same time unless the extent of time**
17 **is how long it takes the instrument to measure**
18 **it. There's a local oscillator and a spectrum**
19 **analyzer that sweeps its value to measure values**
20 **at different points in time and then displays it**
21 **as a plot here, which is a spectral plot. So it**
22 **really isn't accurate to say that it's all**

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1 **measured at one time.**
2 Q. Well, to be clear, you inserted the
3 word "measure" into my question. What I'm
4 asking you is -- is: What is this diagram
5 showing? What is it meant to show?
6 And my understanding of this diagram is
7 it is meant to show a desired signal at a
8 particular frequency range and an interference
9 -- interferer -- one or more interferer signals
10 at a particular frequency range that are
11 occurring together in a signal spectrum, right?
12 That is what this is trying to communicate. Or
13 am I wrong?
14 MR. MELWANI: Objection. Form.
15 Mischaracterizes.
16 THE WITNESS: I think I agree with what
17 you're saying. I guess I had a problem with
18 saying that the spectrums were occurring all at
19 the exact same time, because there's so many
20 different reasons why that -- I mean, unless
21 it's like, "Oh, well, I'm looking at the
22 spectrum over this 30 seconds, and this is what

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1 it kind of, on average, looks like."
2 But, I mean, just saying "at one time"
3 just isn't technically correct, or correct on
4 any other level, other than if you broaden that
5 time to be a range.
6 BY MR. JOHANNINGMEIER:
7 Q. Right. And I think -- we don't have
8 realtime, as counsel pointed out, but I think if
9 we go back to my original question, I asked
10 about a time window. And maybe I didn't speak
11 it correctly, but -- so let me just try again.
12 What this diagram is attempting to show
13 is frequency and desired and interferer
14 components of a spectrum within some time
15 window, right?
16 MR. MELWANI: Objection. Form.
17 THE WITNESS: If I understand what you
18 mean by "time window," yes. It would be like
19 right now I'm looking at it versus later today
20 or tomorrow.
21 BY MR. JOHANNINGMEIER:
22 Q. Mm-hmm. Right. Well, like, for

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1 instance, if I have a desired signal of
2 amplitude X right now, and then I measure an
3 interferer signal of amplitude Y in a minute,
4 all right, that interferer signal of amplitude Y
5 is not part of the same spectrum, right?
6 MR. MELWANI: Objection. Calls for
7 speculation. Form.
8 THE WITNESS: I'm not exactly sure I'm
9 following you. If you measure a desired signal
10 right now, there still may be an undesired
11 signal in the spectrum you just aren't looking
12 at.
13 BY MR. JOHANNINGMEIER:
14 Q. Right. And --
15 A. And then it may go away. And then in a
16 minute, it may show up again.
17 Q. Right. They're -- they're varying over
18 time. A spectrum has components at various
19 frequencies, and each of those frequency
20 components can vary over time, right?
21 MR. MELWANI: Objection. Speculation.
22 Form.

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1 THE WITNESS: I mean, if you're
2 transmitting information, presumably the
3 information is changing over time. However, if
4 you're transmitting a carrier and things are
5 stationary, then the carrier may not be changing
6 over time. It may be fixed.
7 So, I mean, these -- I -- I need
8 specifics, because you can transmit something
9 that doesn't, ideally, change with nothing else
10 changing. But you can also transmit information
11 that is changing over time.
12 BY MR. JOHANNINGMEIER:
13 Q. Well, getting back into these figures
14 of the patent, Figure 2A could be, for instance,
15 showing a spectrum at a measured -- you know,
16 within the limits of the measurement window at
17 some time, right, with a desired and two
18 interferer components, right?
19 MR. MELWANI: Objection. Speculation.
20 Form.
21 THE WITNESS: Figure 2A is trying --
22 and 2-B are trying to represent that a spectrum

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1 that a radio receiver receives is going to have
2 a desired component and undesired components in
3 it. I think that's what it's trying to show.
4 BY MR. JOHANNINGMEIER:
5 Q. Right. Okay. All right. So I just --
6 so if -- if I say "components of a spectrum,"
7 then it is -- you'll understand we're -- well, I
8 understand that we're talking about something
9 like Figure 2A where the components shown there
10 would be a desired signal of a particular
11 amplitude and, you know, two interferers of
12 other amplitudes, right?
13 MR. MELWANI: Objection. Form.
14 Mischaracterizes.
15 THE WITNESS: I mean, we're being
16 really loose here. Is there some specific
17 context in my declaration we're talking about
18 that I'm just not following? Because, I mean,
19 all that Figures 2A and 2-B are trying to
20 represent is the received spectrum has a desired
21 range of frequencies and undesired ranges of
22 frequencies that are called interferers.

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1 BY MR. JOHANNINGMEIER:
2 Q. Right. Well, what I'm getting at is --
3 now, these -- these spectrums, you know, it's
4 frequency -- it's showing signal strength at
5 frequency, right? And it's showing discrete
6 components. And there's no time on here.
7 So this is why I was trying to understand
8 -- get to see if we have a common understanding
9 of how time factors into this, right. When you
10 say "a spectrum that's received," it is received
11 over time, right?
12 A. Right.
13 Q. And individual components can change
14 over time, right?
15 MR. MELWANI: Objection. Form.
16 Speculation.
17 THE WITNESS: In some particular
18 instance, the spectrum can change, yes. In
19 most, I would say, not all. If we're just
20 transmitting the carrier, then, in that case, it
21 wouldn't change if everything else -- or change
22 much if everything is stationary.

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1 BY MR. JOHANNINGMEIER:
2 Q. Now, what is your understanding of what
3 "interferer" means in the Tsividis patents that
4 we're talking about here?
5 And if you'd like, I'm going to go to
6 Exhibit 2. Your paragraph 79 of your
7 declaration is where I'm going next. So we can
8 just go there, if you'd like.
9 **A. Okay. I'm there.**
10 Q. So here at the end of -- in the middle
11 of this paragraph, the end of page 44, you say:
12 "Thus, the signal on the neighboring channel in
13 Rauhala corresponds to the interferer signal in
14 the 825 patent."
15 Right? So at least a signal on a
16 neighboring channel that interferes with the
17 desired channel could be an interferer in the
18 context of the 825 patent in your understanding,
19 right?
20 MR. MELWANI: Objection. Form. Calls
21 for speculation.
22 THE WITNESS: Yes. An adjacent

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1 channel, one that you're not interested in,
2 would be an interferer with the channel that
3 you're interested in.
4 BY MR. JOHANNINGMEIER:
5 Q. So if we're -- going back to Figure 2,
6 if we imagine that the desired signal is at a
7 particular frequency and that the frequency of
8 the interferer is on a different channel, that
9 would be consistent with what you're talking
10 about, right?
11 MR. MELWANI: Objection. Calls for
12 speculation. Form.
13 THE WITNESS: Yes. The interferers
14 would be signaled in the spectrum outside of the
15 desired signal spectrum as seen in Figure 2A and
16 talked about in Rauhala.
17 BY MR. JOHANNINGMEIER:
18 Q. Now, an interferer, though, that
19 doesn't appear until later in time cannot
20 interfere with the desired signal, right? A
21 signal on a neighboring channel that occurs two
22 seconds after the desired signal of interest

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1 doesn't interfere with it. Signals don't time
2 travel, right?
3 MR. MELWANI: Objection. Form. Calls
4 for speculation.
5 THE WITNESS: You're literally asking
6 me if, in Figure 2A of the 825 patent, for
7 example, if the interferers are not present,
8 will they interfere with the desired signal?
9 And the answer is no.
10 BY MR. JOHANNINGMEIER:
11 Q. Right. Because of the -- so -- and,
12 you know, this isn't a silly question, and this
13 is the reason why. Well, I mean, I think --
14 now, so a neighboring channel only interferes
15 with the desired signal when it has some
16 amplitude to interfere with the desired signal,
17 right?
18 MR. MELWANI: Objection. Form.
19 Mischaracterizes. Speculation.
20 THE WITNESS: Well, I mean, if there's
21 an amplitude, there's a signal. If there's no
22 amplitude, there's no signal. So if there's no

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1 amplitude or no signal in an interferer, it
2 doesn't interfere with the desired signal.
3 And, again, we're back to the situation
4 in Figure Exhibit 2A of the 825 where you're
5 asking me: If there's no interferers, do they
6 interfere with the desired signal? If there's
7 no 208 and 210, will they interfere with the 206
8 in Figure 2A? And the answer is no.
9 BY MR. JOHANNINGMEIER:
10 Q. Right. What I'm actually asking you --
11 and, you know, maybe poorly and indirectly -- is
12 whether or not the interferers, 208 and 210,
13 have to be present at the same time as the
14 desired signal, 206, in order to be interferers
15 with 206?
16 MR. MELWANI: Objection. Form. Calls
17 for speculation.
18 THE WITNESS: You have to be using the
19 receiver to receive a desired signal, and there
20 has to be interferers present in order to -- for
21 the interferers to interfere with the desired
22 signal.

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1 If we're talking about turning off the
2 receiver and not looking at a desired signal or
3 just not even transmitting a desired signal,
4 then it doesn't matter if the interferers are
5 there or not.
6 BY MR. JOHANNINGMEIER:
7 Q. Do the interferers have to be present
8 at the same time as the desired signal in order
9 to interfere with the desired signal?
10 MR. MELWANI: Objection. Asked and
11 answered. Same objections as prior.
12 THE WITNESS: I think I've answered
13 that already. But just to keep it short and
14 incorporate my previous answers, yes. There has
15 to be -- if the interferers are present, they
16 can interfere at the same time with the desired
17 signal.
18 BY MR. JOHANNINGMEIER:
19 Q. Now, I actually have some questions
20 that relate to a discussion of this -- I'm going
21 to go ahead and introduce the next exhibit. I
22 guess we're up to 7. And I'm going to put it in

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1 the chat. Hold on.
2 (Exhibit 7 marked for identification.)
3 BY MR. JOHANNINGMEIER:
4 Q. It might take a minute to upload.
5 Okay. So I've just uploaded to the chat a copy
6 that I downloaded legally of your book, Third
7 Edition: CMOS: Circuit Design, Layout, and
8 Simulation.
9 Let me know when you can call it up and
10 look at it.
11 MR. MELWANI: I'm going to object to
12 the Exhibit 7 that counsel has introduced on the
13 grounds of relevance, hearsay, authentication,
14 beyond the scope.
15 THE WITNESS: I'm there.
16 BY MR. JOHANNINGMEIER:
17 Q. Okay. Now, I just want to go back
18 to -- well, let's start at page -- PDF page 215.
19 And in particular, this is a copy of one of your
20 books, right, on CMOS circuit design?
21 **A. Yes.**
22 Q. So let's go to page 215, and let me

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1 know when you're there. And now going to the
2 bottom, there's a Section 8.1.2, Power Spectral
3 Density.
4 MR. MELWANI: Page 215 of the file or
5 of the book?
6 MR. JOHANNINGMEIER: It's actually both
7 in this case, but I just typed "215" into my
8 Acrobat Reader, the page number, and I got
9 there. But it's -- it's also 215 in the book.
10 MR. MELWANI: Yeah. For me, it's 215
11 on the book and 250, I think, of the PDF.
12 MR. JOHANNINGMEIER: Okay. Sorry.
13 MR. MELWANI: Yeah. 215 --
14 MR. JOHANNINGMEIER: 215 of the book,
15 Chapter 8, Section 8.1.2.
16 BY MR. JOHANNINGMEIER:
17 Q. Let me know when we're all there.
18 **A. I'm there.**
19 Q. Okay. Now, in this paragraph, this is
20 a chapter -- this is part of a chapter called
21 Electrical Noise, right?
22 MR. MELWANI: Objection.

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1 Mischaracterizes.
2 THE WITNESS: Chapter 8 is Electrical
3 Noise: An Overview, yes.
4 BY MR. JOHANNINGMEIER:
5 Q. Right. And so what I wanted to start
6 with, at the bottom here, there's a sentence,
7 and I'll just read it: "Figure 8.3b shows the
8 spectrum of a signal containing two sine waves
9 and a DC component with arbitrary amplitudes
10 using lines and dots."
11 Right? And then on the next page is the
12 figure it's talking about.
13 **A. (Witness examining document.)**
14 Q. Do you see that?
15 **A. Yes.**
16 Q. So this line plot in -- on the left
17 side of the Figure 8.3b looks very similar to
18 Figures 2A and -B and others in the Tsividis
19 patent, right? It shows amplitudes of various
20 components of an input signal spectrum, right?
21 MR. MELWANI: Objection.
22 Mischaracterizes.

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1 THE WITNESS: No. It's not the same.
2 It doesn't look the same. In Figure 8.3b, we're
3 plotting a DC signal and two sine waves.
4 In the 835 patent -- or 825 patent, for
5 the 2A, the reason a rectangle was used instead
6 of a line is that the rectangle represents a
7 range of lines, if you will, or a range of
8 frequencies that could occur.
9 I also notice or want to point out
10 that, even though the amplitudes of the
11 interferers and the desired signals are shown as
12 a flat horizontal line at the top of the
13 rectangle -- Box 206, 208, or 210 -- it's
14 understood by a person -- or it would have been
15 understood, and it currently is understood --
16 that those amplitudes are varying, and that's
17 just a representation.
18 BY MR. JOHANNINGMEIER:
19 Q. Well, yeah. And, actually, you say
20 something -- you say that in the previous
21 paragraph at the bottom of page 215, right?
22 It's understood that we are comparing a

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1 spectrum with spectral components that are, or
2 may be, changing.
3 Right?
4 MR. MELWANI: Objection.
5 Mischaracterizes.
6 THE WITNESS: Yes. But, I mean, the
7 point of my previous answer was that lines
8 representing single sinusoids shouldn't be
9 confused or compared to spectrums that represent
10 a range -- an infinite range of sinusoids, as
11 shown in Figure 2A.
12 That's like pointing to the interferers
13 and saying, "Oh, at one time, the amplitude of
14 the interferer is smaller, but at another time
15 it's larger." But you can't capture that unless
16 you're comparing the amplitude of the desired
17 signal to the amplitude of the interferers at
18 exactly the same instant. That's just
19 technically wrong on so many levels.
20 BY MR. JOHANNINGMEIER:
21 Q. Now, going down to page 218, at the
22 bottom you talked about how you can use a

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1 discrete Fourier transform of an analog wave
2 form as a way to look at spectrums, right?
3 MR. MELWANI: Objection.
4 Mischaracterizes. Relevance. Beyond the scope.
5 THE WITNESS: Well, I compare it to
6 using a spectrum analyzer, which I've
7 abbreviated as SA.
8 And, again, in the spectrums, what is
9 happening is there's a sweeping of time. When
10 you measure the signal in one part of the
11 spectrum, it occurs at a different time than
12 measuring the noise in a different part of the
13 spectrum. You are basically changing the
14 measurement over time to get measurements of the
15 signal at one point in time and measurements of
16 the undesired signal and the other components of
17 a spectrum at other points in time.
18 And I depict that with the varying
19 frequency of the spectrum analyzer seen in
20 Figure 8.4.
21 BY MR. JOHANNINGMEIER:
22 Q. Mm-hmm.

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1 **A. It shows that you're sweeping a local**
2 **oscillator and then measuring the output power.**
3 **And so you would understand that at some point,**
4 **say at one millisecond, you measure a desired**
5 **signal. And then, say, at two milliseconds --**
6 **just putting in arbitrary numbers -- you measure**
7 **the undesired signals at that time frame.**
8 Q. So you can use a spectrum analyzer to
9 pick out spectral components of interest, right?
10 MR. MELWANI: Objection. Beyond the
11 scope.
12 BY MR. JOHANNINGMEIER:
13 Q. And measure them?
14 MR. MELWANI: Objection. Beyond the
15 scope.
16 THE WITNESS: Yes. The spectrum
17 analyzer can be used to measure the signal in a
18 spectrum.
19 BY MR. JOHANNINGMEIER:
20 Q. And what you're saying in 218 at the
21 bottom is that you can also get to that same
22 place using a discrete Fourier transform to

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1 measure spectral components with a DFT
2 calculation, right?
3 MR. MELWANI: Objection.
4 Mischaracterizes. Outside of the scope of
5 Dr. Baker's declaration.
6 THE WITNESS: Yes. The input of the
7 discrete Fourier transform time domain is the
8 time domain signal. And so you take that time
9 domain signal and you run the discrete Fourier
10 transform on the time domain signal, and the
11 output of the discrete Fourier transform is the
12 spectral components like what you see in the
13 output of a spectrum analyzer.
14 That's what that paragraph is -- at the
15 bottom of page 218 is teaching the reader.
16 BY MR. JOHANNINGMEIER:
17 Q. Okay. So while we're in this book, I'm
18 just going to go ahead and save time by asking a
19 couple other questions that are from this book.
20 Let's go to page 256.
21 A. (Witness complying.)
22 Okay.

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1 Q. All right. So this is a discussion
2 about input-referred noise sources. And what I
3 wanted to, I guess, point out and then get your
4 reaction to here is: So there is a reference
5 here to RS, calling it a resistance or, then at
6 the bottom of page, a real input resistance,
7 right?
8 MR. MELWANI: Objection.
9 Mischaracterizes. Relevance. Outside of the
10 scope.
11 BY MR. JOHANNINGMEIER:
12 Q. It's called a source resistance. Do
13 you see that?
14 A. (Witness examining document.)
15 I think that's right. I'm looking for
16 where it says that.
17 Q. In the third line, it says "source
18 resistance," right? And my understanding is
19 that's referring to what's shown in the Figure
20 8.42 as RS; is that right?
21 MR. MELWANI: Objection. Outside the
22 scope. Relevance.

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1 THE WITNESS: Yes. RS is resistance of
2 the source.
3 BY MR. JOHANNINGMEIER:
4 Q. Okay. Here, at least, you're referring
5 to that as a resistance, right?
6 A. If it has -- if it's just the real part
7 of impedence, then it's a resistance, yes.
8 Q. Okay. Because then, right below
9 Figure 8.42, you have a section called Complex
10 Input Impedence where you talk about
11 generalizing to an input impedence with a, for
12 instance, capacitive component, right?
13 MR. MELWANI: Objection. Relevance.
14 Scope. Mischaracterizes.
15 THE WITNESS: Yes. By adding the word
16 "complex" -- which is unfortunate when teaching
17 students, because they tend to think it's
18 complex -- it means there's a -- the impedence
19 is not just the real or resistive component, but
20 it also has the complex component of capacitance
21 for inductance.
22 BY MR. JOHANNINGMEIER:

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1 Q. So you'd agree, then, that someone
2 might use "resistance" when they're referring to
3 a simple resistor and "impedence" when referring
4 to a complex input circuit with imaginary
5 components?
6 MR. MELWANI: Objection.
7 Speculation -- Objection. Speculation.
8 Mischaracterizes.
9 THE WITNESS: I mean, if it's a
10 resistor, they would refer to it as a
11 resistance. If it's reactance, they would --
12 from an inductor or capacitor, they would refer
13 to it as reactance.
14 If you're talking about things that
15 impede the flow of current -- that would be a
16 resistor or reactance or the sum of the two --
17 then it's called an impedence.
18 BY MR. JOHANNINGMEIER:
19 Q. Mm-hmm. Now, this source resistance
20 here, that would be a resistance that was
21 exposed to, like, an A/C input signal, right?
22 MR. MELWANI: Objection. Relevance.

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1 Outside of the scope. Mischaracterizes.
2 THE WITNESS: Not necessarily. You
3 could be sensing a D/C input voltage, and the
4 source is a D/C. But there's noise, which has
5 an A/C component that's added in the circuit.
6 BY MR. JOHANNINGMEIER:
7 Q. So are you referring to this as a
8 resistance because it's looking at a -- because
9 it is carrying a D/C current?
10 MR. MELWANI: Objection. Same
11 objections as earlier.
12 THE WITNESS: I'm referring to it as a
13 resistance because it's a resistor. It's the
14 real part of the impedence. It doesn't have a
15 reactive part of the impedance. The reactive
16 part of the impedance is zero.
17 BY MR. JOHANNINGMEIER:
18 Q. Would you -- and you -- okay. If it
19 was carrying alternating current, you would
20 still refer to it as a resistor, right?
21 MR. MELWANI: Objection. Speculation.
22 Outside of the scope.

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1 THE WITNESS: If there's no imaginary
2 part of the impedance -- it's just resistive --
3 then I would still refer to a resistor. The
4 only way I would refer to it as complex
5 impedance is if it had both the real and the --
6 or at least the imaginary part due to the
7 reactance of a capacitor or an inductor.
8 BY MR. JOHANNINGMEIER:
9 Q. Okay. Now, another thing I wanted to
10 ask about this book, and it's just -- well, it's
11 just sort of something that was actually raised
12 by this book.
13 Do you know Professor Tsividis, the
14 inventor on these patents?
15 MR. MELWANI: Objection. Relevance.
16 Outside of the scope.
17 THE WITNESS: I've met him, yes.
18 BY MR. JOHANNINGMEIER:
19 Q. I just noticed because I -- there's
20 about maybe five or six cites to his books and
21 articles in your book. So I take it you've read
22 a fair amount of his work in this field, right?

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1 MR. MELWANI: Objection. Relevance.
2 Scope.
3 THE WITNESS: Yes.
4 BY MR. JOHANNINGMEIER:
5 Q. Do you have any opinions about -- good
6 or bad about whether or not Professor Tsividis
7 is a talented and competent engineer and
8 teacher?
9 MR. MELWANI: Objection. Scope.
10 Relevance.
11 THE WITNESS: In my opinion, he is a
12 technical -- he is good technically and
13 competent, and he is a good engineer.
14 I don't think that that has any bearing
15 on the fact that somebody else had already
16 patented, as I discussed in my declarations, the
17 ideas in this patent.
18 BY MR. JOHANNINGMEIER:
19 Q. All right. I was just asking just to
20 sort of close it out whether you had anything,
21 you know, to say about Professor Tsividis, is
22 all. So it's not a -- you made your point.

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1 Have you ever taken any classes from him
2 or sat in on any of his courses?
3 MR. MELWANI: Objection. Outside of
4 the scope. Relevance. Form.
5 THE WITNESS: No.
6 BY MR. JOHANNINGMEIER:
7 Q. Now, going back to your declaration,
8 Exhibit 2 -- you can set this book aside for
9 now. I want to go to a paragraph we talked
10 about already, but -- paragraph 83.
11 **A. (Witness complying.)**
12 Q. Let me know when you're there.
13 **A. I'm there.**
14 Q. Okay. Now, this paragraph discloses
15 your opinion about the alleged disclosure in
16 Rauhala of this element D here, right?
17 **A. Paragraph 83 starts my discussion of**
18 **how Rauhala -- R-A-U-H-A-L-A -- teaches the**
19 **settlement, yes.**
20 Q. Now, you agree that Rauhala discloses
21 only one detector, DET, right? Just one, right?
22 MR. MELWANI: Objection.

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1 Mischaracterizes.
2 THE WITNESS: I mean, I don't know if I
3 agree with that. I think in Figure 4, for
4 example, there's a block called DET in Rauhala.
5 In -- let me pull it up. Did you post the
6 Rauhala reference?
7 BY MR. JOHANNINGMEIER:
8 Q. Let's go ahead and do that. Give me a
9 sec. I will do it.
10 Okay. This is going to be Exhibit 8.
11 (Exhibit 8 marked for identification.)
12 BY MR. JOHANNINGMEIER:
13 Q. It should be appearing shortly. Do you
14 have it now?
15 A. I just downloaded it. I'm opening it.
16 All right. Would you mind reasking the
17 question?
18 Q. Yeah. You would agree -- well, strike
19 that.
20 Would you agree that Rauhala discloses
21 one detector? As you say here in paragraph 83,
22 a detector, DET?

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1 A. (Witness examining document.)
2 I would agree that Rauhala discloses a
3 detector. I don't agree that it discloses only
4 one, because the detector may be detecting
5 different things.
6 Q. Well, okay. So it is -- but even in
7 that answer, you said "the" detector, right?
8 You say in this paragraph that there is a
9 detector that can provide an indication about
10 either the receive channel signal strength, RSS,
11 or the signal strength of any signal on the
12 reception band, right?
13 A. Yes. But, I mean, just to be clear,
14 there is a block called DET, which is a detector
15 block. And then that detector block is going to
16 have circuitry.
17 And what I was getting at inside is
18 they may be able to design the detector block so
19 that it detects the desired signal at a specific
20 frequency range and the undesired signal at
21 range of frequencies outside the desired natural
22 range. So it would generate two signals, as

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1 seen in, for example, Figure 4 of Rauhala on
2 page 9 of the PDF, where there's two signals,
3 RSS and RSSN.
4 And I also note that in these block
5 diagrams of Rauhala, they regularly use one wire
6 in the block diagram to represent more than one
7 wire in the actual implementation. An example
8 being Figure 6, for example, which is an
9 amplifier. But in the block diagrams, they show
10 one wire going in and one wire going out. But
11 in Figure 6, they showed two.
12 Q. Now, you -- none of that is in
13 paragraph 83. You agree with me on that, right?
14 You don't cite Figure 4, you don't mention two
15 wires, and you don't say anything else about the
16 detector other than what I read, right?
17 A. (Witness examining document.)
18 I -- what's in paragraph 83 is what I
19 disclosed in my declaration, yes.
20 Q. This is your opinion and -- and the
21 basis for your opinion about disclosure.
22 Now I have another question, actually,

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1 because in your response just now, you said they
2 may design it to do -- to detect two things,
3 essentially.
4 What's your basis for saying that they
5 might be able to design it in that way?
6 MR. MELWANI: Objection. Form.
7 THE WITNESS: Rauhala teaches that in
8 Figure 4. RSS and RSSN are coming out of the
9 detector. And I did cite what RSS and RSSN are
10 doing in paragraph 83.
11 BY MR. JOHANNINGMEIER:
12 Q. Paragraph 83. You said that it can
13 provide an indication about one or the other. I
14 mean, that's -- the word's there. "Or" is the
15 word, right?
16 MR. MELWANI: Objection. Form.
17 Mischaracterizes.
18 THE WITNESS: The word "or" is in the
19 sentence that I quoted from Rauhala. It says:
20 "...an indication about either the received
21 channel strength -- channel signal strength,
22 RSS, or the strength of any signal on the

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1 reception band, such as RSSN, which stands for
2 the signal strength of the neighboring channel."
3 Yes. It uses "or."
4 BY MR. JOHANNINGMEIER:
5 Q. Mm-hmm. But you are now suggesting
6 that you believe that detector could be designed
7 to detect both?
8 MR. MELWANI: Objection.
9 Mischaracterizes. Form.
10 THE WITNESS: I'm not changing my
11 testimony from my declaration. They can be
12 designed to determine RSS or RSSN. But, I mean,
13 I think it's reasonable that if you can design
14 one -- or you can design the detector to detect
15 one or the other, you can also design it to
16 detect both. They are detecting both.
17 BY MR. JOHANNINGMEIER:
18 Q. Well, okay. So there again, you said,
19 "I think it's reasonable that you could."
20 We are talking here about anticipation,
21 right? This is -- this is an opinion about
22 whether Rauhala anticipates the element, right?

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1 **A. Right. Maybe I'm mis- --**
2 MR. MELWANI: Objection. Legal --
3 objection. Legal conclusion.
4 THE WITNESS: Maybe I'm
5 misunderstanding "argument." Because I'm
6 thinking of this like an OR gate, where the
7 output of the OR gate is a 1 with a 1 input on
8 one input or 1 with another input.
9 But it's also one of both inputs. Both
10 inputs, "and," are high. You know, both Input 1
11 and Input 2 are high. So I'm -- I may be
12 missing something fundamental, because my
13 understanding is pretty simplistic.
14 BY MR. JOHANNINGMEIER:
15 Q. Well, can you look at paragraph 13 of
16 Rauhala, which is now Exhibit 8?
17 **A. (Witness complying.)**
18 Q. Paragraph 13 says that "Detector DET
19 provides information about the signal strength,
20 RSS, on the channel to which the receiver is
21 tuned."
22 Right? Do you see that?

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1 **A. Yes, I see those words.**
2 Q. So Rauhala is teaching that if you tune
3 the receiver to a channel, you can detect the
4 RSS on that channel, right?
5 MR. MELWANI: Objection. Form.
6 Mischaracterizes. Legal conclusion.
7 THE WITNESS: Yes. But the detector in
8 all cases is still detecting the same range of
9 frequencies. The way you adjust the channel is
10 with the local oscillator and the mixer, and
11 when you've adjusted the channel, you move that
12 channel down to the same frequencies in every
13 single example that the detector sees. So the
14 detector is not changing anything at any time.
15 It's still looking at a range of frequencies.
16 It's called heterodyning.
17 BY MR. JOHANNINGMEIER:
18 Q. Right. If you -- if you retune the
19 circuit by, as you say, changing the -- the
20 upstream components, it would then be tuned to a
21 different channel, and it would detect on, for
22 instance, a neighboring channel, right?

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1 MR. MELWANI: Objection. Calls for
2 speculation.
3 THE WITNESS: No. No components are
4 changed. Every component is the same. The only
5 thing that's changed is the local oscillator or
6 oscillator frequency that's mixed with the -- an
7 input of the receiver.
8 MR. JOHANNINGMEIER: I'm sorry --
9 THE WITNESS: And then what it sees in
10 the detector is -- in every case, independent of
11 the channel you're on -- the same range of
12 frequencies, which the detector will understand
13 to be a component of desired and a component of
14 undesired.
15 BY MR. JOHANNINGMEIER:
16 Q. What's inside the box labeled DET in
17 the figures in Rauhala?
18 MR. MELWANI: Objection. Form.
19 THE WITNESS: Circuitry that will
20 detect the received signal strength or the
21 signal strength of the interferers.
22 BY MR. JOHANNINGMEIER:

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1 Q. Right. But what circuitry?
2 MR. MELWANI: Objection. Form.
3 THE WITNESS: I don't think that's
4 taught in Rauhala.
5 BY MR. JOHANNINGMEIER:
6 Q. Right. So it could be a threshold
7 comparator?
8 **A. Objection.**
9 MR. MELWANI: Objection. Speculation.
10 THE WITNESS: I don't think a threshold
11 comparator by itself would be a continuous
12 indication of the received signal strength. It
13 would just be a "is the signal above or below
14 some value."
15 BY MR. JOHANNINGMEIER:
16 Q. Well, Rauhala doesn't say that it
17 produces a continuous indication of the signal
18 strength. It says that it produces an
19 indication about the received channel signal
20 strength. All right. So it could be -- the
21 indication could be that it's above threshold X,
22 right?

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1 MR. MELWANI: Objection. Speculation.
2 Mischaracterizes.
3 THE WITNESS: It has to have some more
4 indication than one value, based upon the
5 teachings of Rauhala. If you look at the
6 tables, for example.
7 THE VIDEOGRAPHER: Excuse me. We have
8 around seven more minutes before I have to
9 change medias. Thank you.
10 BY MR. JOHANNINGMEIER:
11 Q. Okay. Well, I guess I'll -- let me
12 just try to -- to close this out. Then we'll
13 take a break. Well, let me just get to a
14 stopping point. Then we'll take a break.
15 The point is, I guess -- and it goes to
16 your counsel's objection -- is that you would
17 only be speculating as to whether or not there
18 is a -- one or more threshold detectors or any
19 other kind of circuit, because, as you said,
20 Rauhala doesn't teach what's inside that box --
21 MR. MELWANI: Objection.
22 Mischaracterizes.

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1 BY MR. JOHANNINGMEIER:
2 Q. -- right? It just mentions what its
3 function is at a very high level, right?
4 MR. MELWANI: Objection.
5 Mischaracterizes.
6 THE WITNESS: Rauhala doesn't teach the
7 details of what's in the detector. But it does
8 teach that it provides an indication of the
9 received signal strength and the signal strength
10 of the noise or interferers, including the
11 adjacent channel.
12 BY MR. JOHANNINGMEIER:
13 Q. Assuming you retune to the adjacent
14 channel, right?
15 MR. MELWANI: Objection.
16 Mischaracterizes.
17 THE WITNESS: No. I already went over
18 that. The detector itself will always get the
19 same range of frequencies as a desired frequency
20 spectrum and always the same frequencies as the
21 undesired frequency spectrum, because to change
22 channels is done earlier, in the receiver, using

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1 the mixers.
2 BY MR. JOHANNINGMEIER:
3 Q. I understand. But the -- paragraph 13
4 says that the detector "provides information
5 about the signal strength on the channel to
6 which the receiver is tuned."
7 So there is no disclosure in this
8 reference of measuring a signal strength other
9 than on the channel to which the receiver is
10 tuned, right?
11 MR. MELWANI: Objection.
12 Mischaracterizes.
13 THE WITNESS: I think what you're
14 literally asking is: Is the received signal
15 strength the desired range of frequencies that
16 you want to receive? And the answer is yes.
17 BY MR. JOHANNINGMEIER:
18 Q. No, that's not what I'm asking. But
19 we're going to need to take a break. So let's
20 take a -- well, what time is it? Well, we can
21 either push through or -- well, let's go off the
22 record so we're not using up tape.

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1 THE VIDEOGRAPHER: Thank you, counsel.
2 We are going off the record. The time is 1504.
3 And we are off the record now. Thank you.
4 (Off the record.)
5 THE VIDEOGRAPHER: Everybody, stand by.
6 Here begins the Media Number Two. Back on the
7 record. The time is 1521. Thank you.
8 BY MR. JOHANNINGMEIER:
9 Q. Welcome back.
10 **A. Thank you.**
11 Q. Now, before we took a break, we were
12 talking about Rauhala's detector, and I just
13 wanted to sort of make sure I understood the --
14 the answers you gave us to some of my inquiries
15 about the detector and, your know, relative to
16 your declaration.
17 Now, paragraph 83 in your declaration is
18 the only paragraph where you discuss the circuit
19 for determining and the circuit for determining
20 elements of the -- of claim -- (Indistinct.)
21 MR. MELWANI: Objection.
22 Mischaracterizes.

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1 THE COURT REPORTER: And I don't know
2 if you got lower or not, but I'm having a
3 little -- just a little trouble hearing you. So
4 if you could speak up, please, just a little
5 bit. Thank you.
6 MR. JOHANNINGMEIER: I was probably
7 turning away. My apologies.
8 BY MR. JOHANNINGMEIER:
9 Q. So let's go to -- let me just rephrase
10 that one, because I don't think that was a very
11 good question. Let's go to paragraph 83.
12 **A. (Witness complying.)**
13 Q. In the last sentence of that paragraph,
14 where, again, you say that there is namely a
15 detector, DET, that determines the received
16 channel signal strength, denoted RSS, and the
17 neighboring channel signal strength, denoted
18 RSSN.
19 Is it your opinion that the detector can
20 detect both of those signal strengths at the
21 same time?
22 **A. Yes. In the context of what we**

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1 discussed on how a spectrum analyzer detects the
2 signal strengths of a spectrum at the same time.
3 But keep in mind all the discussion I made
4 earlier that you can't -- if you just look at
5 one specific instance in time, you can't
6 determine a frequency, because a frequency is
7 determined by the period of the sine waves.
8 So -- but, I mean, to answer your question, yes.
9 Q. Well, let's just be clear. When I say
10 at "the same time," I don't mean instantaneously
11 simultaneous. I mean without, for instance,
12 retuning, okay, or incurring some other
13 reconfiguration delay.
14 Is it your opinion that the detector in
15 Rauhala can detect both channels without
16 retuning?
17 MR. MELWANI: Objection. Form.
18 THE WITNESS: The way you worded,
19 that's about detectible channels. There's only
20 one desired channel. And then after the
21 received signal propagates through the mixers
22 and the filters, the other channels are

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1 undesired, and they're attenuated.
2 But, yes, the detector can detect the
3 received signal strength of the desired channel,
4 RSS, and the received signal strength of the
5 interfering channels and noise, RSSN, at the
6 same time.
7 BY MR. JOHANNINGMEIER:
8 Q. All right.
9 A. We can go back up in one instance and
10 look at the block diagram of a spectrum analyzer
11 and look at how that operates.
12 Q. Well, are you suggesting that Rauhala
13 discloses a spectrum analyzer?
14 MR. MELWANI: Objection.
15 Mischaracterizes.
16 THE WITNESS: To the extent that -- the
17 detector portion of the spectrum analyzer, yes.
18 You can look at the spectrum and determine what
19 the received signals -- (Internet connection
20 failure.)
21 -- and power over a bandwidth. You can
22 look at the other portions of the spectrum and

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1 measure the power in the signal over the
2 unwanted spectrum and divide the two numbers.
3 BY MR. JOHANNINGMEIER:
4 Q. I understand that this is a thing that
5 can be done. But the question here is: What
6 does Rauhala disclose or teach? All right.
7 So does Rauhala disclose or teach any of
8 what you just said? In fact, it does not,
9 right?
10 MR. MELWANI: Objection.
11 Mischaracterizes. Form.
12 THE WITNESS: You are asking me how it
13 could be done. I'm not saying Rauhala discloses
14 or teaches the details of the detector. I'm
15 simply literally parroting back what Rauhala
16 says, which is it can determine the signal
17 strength of the desired channel and the signal
18 strength of the neighboring channels, which
19 would be the noise and it calls RSSN.
20 But I don't know what or how Rauhala --
21 what method they're going to use to do that. I
22 simply know that that's what -- that detecting

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1 both the desired and the undesired is what
2 Rauhala teaches and is seen in Figure 4.
3 BY MR. JOHANNINGMEIER:
4 Q. Would you agree with me that Rauhala
5 teaches that the detector can detect some
6 indication about the signal strength on the
7 channel to which the receiver is tuned?
8 MR. MELWANI: Objection. Asked and
9 answered. Form. Mischaracterizes.
10 THE WITNESS: Yes. Rauhala teaches
11 determining a value, RSS, which corresponds to
12 the received channel signal strength.
13 BY MR. JOHANNINGMEIER:
14 Q. Well, I want to ask you about another
15 portion.
16 MR. MELWANI: Counsel, it's hard to
17 hear you. I'm not sure...
18 MR. JOHANNINGMEIER: Yeah. Okay.
19 Apologies. I'm switching to a different
20 question. It's still about the same reference.
21 I just need to...
22 BY MR. JOHANNINGMEIER:

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1 Q. So I want to switch to Exhibit 4, which
2 is your declaration -- well, let's just call up
3 Exhibit 4.
4 (Exhibit 4 marked for identification.)
5 MR. MELWANI: Is what you're referring
6 to, Exhibit 4, Dr. Baker's declaration marked as
7 1002 in the IPR for the 202 patent?
8 MR. JOHANNINGMEIER: Yes. The 202
9 patent declaration.
10 MR. MELWANI: Okay.
11 THE WITNESS: I have it.
12 BY MR. JOHANNINGMEIER:
13 Q. Okay. So is what's been marked as
14 Exhibit 4, does this look to be a copy of your
15 declaration in IPR2023-00678?
16 **A. Yes.**
17 Q. Okay. And I have to do some of the
18 basic questions again just for completeness'
19 sake.
20 Does this declaration accurately capture
21 your opinions in that proceeding?
22 **A. Yes.**

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1 Q. And does this declaration provide all
2 of the bases for those opinions?
3 **A. Yes.**
4 Q. Other than the typos that you
5 identified earlier, there's nothing about this
6 declaration that you think needs changing or
7 revising since it was originally filed, right?
8 **A. Yes.**
9 Q. Now let's go to paragraph 120.
10 **A. Did you say 120?**
11 Q. Yes. 120 on your paragraph -- your
12 page 63, PDF page 70.
13 **A. I'm there.**
14 Q. Okay. Now, this is a paragraph that's
15 part of your opinion about the -- comparing the
16 strength of the desired signal relative to the
17 strength of the interferer signal element of
18 Claim 7, right?
19 **A. Yes.**
20 Q. Now -- and in this paragraph you state
21 the opinion that Rauhala discloses calculation
22 by Unit 53 of the signal-to-noise ratio, right?

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1 MR. MELWANI: Objection.
2 Mischaracterizes.
3 THE WITNESS: Not exactly. I write in
4 paragraph 120: "A person of ordinary skill in
5 the art would have understood that calculation
6 by Unit 53 of the signal-to-noise ratio is a
7 comparison of the strength of the desired signal
8 relative to the strength of the interferer
9 signal." It's a ratio. It's the signal over
10 the noise or signal divided by noise.
11 BY MR. JOHANNINGMEIER:
12 Q. Okay. So that's the claim comparison
13 that you are pointing to, right? Or, sorry,
14 that is the comparison that you are pointing to
15 as allegedly disclosing the claim element,
16 right?
17 MR. MELWANI: Objection. Legal
18 conclusion.
19 THE WITNESS: I'm -- my opinion is
20 Rauhala teaches the -- comparing the signal
21 strength to the strength of the interfering
22 signal. And I do point to the signal-to-noise

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1 ratio as that comparison.
2 BY MR. JOHANNINGMEIER:
3 Q. You don't point to anything else in
4 this paragraph as that comparison, right?
5 MR. MELWANI: Objection.
6 Mischaracterizes.
7 THE WITNESS: In that paragraph, the
8 only thing I point to as being a comparison of
9 signal-to-noise ratio is what's labeled
10 signal-to-noise ratio or the bit error rate,
11 BER, in Figure 5.
12 Of course, in Figure 4, you also have
13 the received signal strength and the signal of
14 the interfering signals. That would be RSS and
15 RSSN, respectively. And those go into the --
16 the control unit, 42. And that's disclosed in
17 the tables. They're compared to do certain
18 things.
19 But to answer your question, the only
20 place in paragraph 120 that I point to as
21 meeting the claim limitation is the
22 signal-to-noise ratio coming out of 53.

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1 BY MR. JOHANNINGMEIER:
2 Q. All right. Well, so none of what you
3 just said about Figure 4 is in your declaration,
4 right? You just volunteered that now, right?
5 MR. MELWANI: Objection.
6 Mischaracterizes.
7 THE WITNESS: I don't know if I'd say
8 none of it is in my declaration. I would say
9 none of it is within -- the part I said that's
10 in paragraph 120 is in paragraph 120.
11 BY MR. JOHANNINGMEIER:
12 Q. Yeah. Well, in this entire
13 Section 7.9, starting at 117 through 120, you
14 don't mention Figure 4. You've done that for
15 the first time as you sit here today, right?
16 MR. MELWANI: Objection.
17 Mischaracterizes.
18 THE WITNESS: Yes.
19 BY MR. JOHANNINGMEIER:
20 Q. Okay. Now, the RSS -- and hopefully,
21 you've reproduced and annotated a copy of
22 Figure 5 at 119 here, so I'll just refer to that

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1 instead of going back to Rauhala. You're free
2 to go back to Rauhala if you want.
3 RSS is not an input to Box 53, right?
4 **A. The RSS wire coming out of the DET**
5 **block does not go to Block 53. Correct.**
6 Q. How are you suggesting -- well, you
7 weren't suggesting any way in which Block 53
8 could do anything with the RSS, right?
9 MR. MELWANI: Objection.
10 Mischaracterizes.
11 THE WITNESS: Well, Block 53 will
12 calculate the signal strength, just not the
13 parameter RSS that is output by the detector.
14 But the detector isn't connected -- its output
15 that's labeled "RSS" isn't connected to 53, no.
16 BY MR. JOHANNINGMEIER:
17 Q. Rauhala doesn't say anything about how
18 Unit 53 works, right?
19 **A. I mean, other than the disclosure in**
20 **the figure -- in Figure 5 that it generates the**
21 **bit error rate or signal-to-noise ratio, I don't**
22 **recall having the details of what's in 53.**

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1 Q. Now, in this section, you say: A
2 POSITA would thus have understood that
3 calculation by Unit 53 of the signal-to-noise
4 ratio is the comparison.
5 Right?
6 MR. MELWANI: Objection.
7 Mischaracterizes.
8 THE WITNESS: It's a comparison of the
9 strength of the desired signal to the strength
10 of the interferer signal, yes.
11 BY MR. JOHANNINGMEIER:
12 Q. Now, would a POSITA have understood
13 that from black Box 53 and the letters SNR?
14 A. Because they can look and see that the
15 output of 53 is the signal-to-noise ratio, which
16 is the desired signal divided by -- the strength
17 of the desired signal divided by the strength of
18 the interferer signal. I mean, it literally
19 says "SNR" on it.
20 Q. So in your opinion -- well, let me ask
21 you this: Did you consider whether there were
22 ways to calculate signal-to-noise ratio that do

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1 not involve directly comparing those two signal
2 components?
3 MR. MELWANI: Objection. Speculation.
4 Beyond the scope.
5 THE WITNESS: Well, I mean, the bit
6 error rate, which tells you the number of bad
7 bits out of the number of good bits, is the -- a
8 representation of the signal-to-noise ratio, as
9 indicated there in Figure 5.
10 BY MR. JOHANNINGMEIER:
11 Q. So it's possible for receiver circuits
12 to use various error rates to calculate or
13 estimate a signal-to-noise ratio, right?
14 MR. MELWANI: Objection. Speculation.
15 Beyond the scope.
16 THE WITNESS: In Figure 5, they show
17 bit error rate and put in parentheses that
18 that's the signal-to-noise ratio. And, yes, you
19 can use -- or you can compare the signal
20 strength of the desired signal relative to the
21 signal strength of the interferer signal using
22 bit error ratio.

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1 BY MR. JOHANNINGMEIER:
2 Q. Did you think about whether there were
3 any other ways to calculate signal-to-noise
4 ratio that didn't involve directly comparing the
5 strength of the desired signal relative to the
6 strength of the interferer signal?
7 MR. MELWANI: Objection. Speculation.
8 Scope.
9 THE WITNESS: I don't recall thinking
10 much about that particular aspect, other than it
11 was very clear that Rauhala teaches this claim
12 element.
13 BY MR. JOHANNINGMEIER:
14 Q. Now, this is an anticipation opinion,
15 right? You're saying that this -- this element
16 is anticipated by the disclosures in Rauhala,
17 right? This is not an obviousness opinion,
18 right?
19 MR. MELWANI: Objection. Legal
20 conclusion.
21 THE WITNESS: I wasn't asked to do an
22 obviousness analysis or an anticipation

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1 analysis, or, from what I know, a 102 or a 103.
2 I was simply asked to look at the claim
3 elements and interpret what would be known by a
4 person of ordinary skill in the art back in -- I
5 think it was in the neighborhood of -- was it
6 this one? -- March 2003, and look at that person
7 or what they would understand and -- and
8 determine if -- if the references that I picked
9 would teach the elements.
10 BY MR. JOHANNINGMEIER:
11 Q. Okay. Now, in paragraph 21, you have
12 a -- this is your legal conclusion section. So
13 this is the section where you explain your
14 understanding of the legal principles as
15 provided to you by counsel; right?
16 A. It's not a legal conclusion section.
17 It's the -- what I understand are the legal
18 standards for patentability.
19 Q. Oh, sorry. Did I say legal
20 conclusions? I misspoke. So this is -- this is
21 the legal standards section, right, of your --
22 of your opinion -- of your declaration?

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1 **A. Yes.**
2 MR. MELWANI: Mischaracterizes.
3 BY MR. JOHANNINGMEIER:
4 Q. And you have a paragraph here,
5 paragraph 21, where you state that you have been
6 informed and understand that for a claim to be
7 invalid as anticipated, "every limitation of the
8 claim must be found in a single prior art
9 reference, either expressly or inherently,"
10 right?
11 **A. That was what was explained to me for**
12 **anticipation, yes.**
13 Q. So in order for this comparing element
14 to be anticipated, it has to be found, either
15 expressly or inherently, in the reference you're
16 pointing to, which is Rauhala, right?
17 MR. MELWANI: Objection. Calls for
18 legal conclusion.
19 THE WITNESS: Again, I didn't offer any
20 legal opinions. I -- my opinion is that Rauhala
21 teaches what is taught in that claim element.
22 But, I mean, from there on, whether it's obvious

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1 or anticipating, I -- I don't make any -- any --
2 I don't provide any opinions on that. I simply
3 indicated that Rauhala teaches that claim
4 element.
5 BY MR. JOHANNINGMEIER:
6 Q. Well, wait. But now I'm confused,
7 because in paragraph 82 of your declaration, you
8 say: "The following sections provide my opinion
9 that claims 7 through 11, 13, and 19 through 21
10 of the 202 patent are invalid as anticipated or
11 rendered obvious by the prior art."
12 Right? So do you or do you not have an
13 opinion that Claim 7 is invalid?
14 MR. MELWANI: Objection. Calls for a
15 legal conclusion.
16 THE WITNESS: My understanding is that
17 a claim is only invalid if it's anticipated or
18 obvious. There may be some other way it's
19 invalid, and I -- I don't know. I'm not an
20 attorney.
21 But I don't know -- I basically just
22 looked at if it's anticipated or obvious to a

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1 person of ordinary skill in the art. And the
2 lawyers can figure it out from there.
3 BY MR. JOHANNINGMEIER:
4 Q. Okay. So you looked at whether the
5 element would be anticipated or obvious based on
6 the disclosures, right?
7 MR. MELWANI: Objection. Calls for a
8 legal conclusion.
9 THE WITNESS: Right. I looked to see
10 if a POSITA would have looked at what I cited as
11 teaching the particular element. And when I
12 think the -- the POSITA did, I wrote about it.
13 And I wrote how they would perceive that that
14 element was taught by the prior art.
15 BY MR. JOHANNINGMEIER:
16 Q. So in paragraph 120 and the surrounding
17 section, are you saying that a POSITA would find
18 the element anticipated, or a POSITA would find
19 the element obvious?
20 MR. MELWANI: Objection. Calls for a
21 legal conclusion.
22 THE WITNESS: My understanding is

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1 anticipation and obvious are legal standards,
2 and my opinion is that Rauhala teaches this
3 claim element. So I don't have an opinion on
4 anticipation or obviousness other than Rauhala
5 teaches what is taught here in this element.
6 BY MR. JOHANNINGMEIER:
7 Q. Okay. Well, "teaches" is a word that
8 sometimes is used for anticipation. All right.
9 But as we looked in -- in your legal standard
10 section, anticipation can be explicitly
11 disclosed or inherently disclosed.
12 Do you have a -- do you know the legal
13 standard for what constitutes inherent
14 disclosure?
15 MR. MELWANI: Objection. Relevance.
16 THE WITNESS: Yes.
17 BY MR. JOHANNINGMEIER:
18 Q. Okay. What is the legal standard for
19 what constitutes inherent disclosure, in your
20 understanding?
21 MR. MELWANI: Objection. Calls for a
22 legal conclusion.

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1 THE WITNESS: It has to be there.
2 BY MR. JOHANNINGMEIER:
3 Q. When you say "it has to be there," you
4 mean it -- it -- there's no possible -- there's
5 no possibility that it isn't there?
6 MR. MELWANI: Objection.
7 Mischaracterizes. Calls for legal conclusion.
8 THE WITNESS: My understanding -- and
9 again, I'm not an attorney -- is if something is
10 inherent, then that something has to be there.
11 BY MR. JOHANNINGMEIER:
12 Q. Mm-hmm. So if there's -- if there's
13 another way to do something than the claimed
14 way, you can't say that there's inherent
15 disclosure, right?
16 MR. MELWANI: Objection. Calls for
17 legal conclusion. Beyond the scope of
18 Dr. Baker's declaration.
19 THE WITNESS: I'm not sure I'm
20 following. I -- my analysis was to see if
21 Rauhala taught this claim element, and Rauhala
22 does. I don't think there's any inherency or

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1 any other legal -- legal hand-waving. I mean,
2 Rauhala just teaches it. It's disclosed.
3 The claim requires comparing the
4 strength of the desired signal relative to the
5 strength of the interferer signal. And I can go
6 to Rauhala Figure 5, and I can point to the
7 output of Block 53, and I can say, "There. That
8 is teaching what this claim element is
9 requiring."
10 Now, I don't know where inherency is
11 relevant. I don't know -- you know, I'm not
12 writing legal opinions in this declaration. I'm
13 simply pointing to what a person of ordinary
14 skill in the art would have understood back in,
15 I think it was, 2003 when they look at that
16 claim element in light of the specification and
17 then they look at Rauhala.
18 BY MR. JOHANNINGMEIER:
19 Q. Well, what I -- what I take you to be
20 saying in this paragraph is that by disclosing
21 signal-to-noise ratio or SNR, that that is
22 somehow necessarily teaching comparing the

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1 signal strength of the desired signal relative
2 to the strength of the interferer signal.
3 Because there's no other way that SNR
4 could possibly disclose comparing the strength
5 of one signal to another signal unless comparing
6 the strength of the -- one signal to another
7 signal was the only way to do SNR, right?
8 MR. MELWANI: Objection.
9 Mischaracterizes.
10 THE WITNESS: I'm not sure I'm
11 following. I don't know why you're introducing
12 the word "only" into -- into anything.
13 The claim requires a comparison of the
14 signal strength of the desired signal to the
15 signal strength of the interferer signal, and
16 that's literally what the SNR does. So I don't
17 know why you're trying to talk about some other
18 way of doing it.
19 BY MR. JOHANNINGMEIER:
20 Q. Well, SNR is a -- is a mathematical
21 concept, right? It's not a thing that does
22 anything, right? It is a -- a -- a ratio,

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1 right?
2 **A. It's a comparison. The bigger the**
3 **signal strength, the bigger relative to the**
4 **noise, the bigger SNR.**
5 Q. Right.
6 **A. It literally is what is done in -- what**
7 **is claimed here in 7.9.**
8 Q. Right. But just a minute ago, you said
9 you've had -- or you agreed that you could
10 derive the SNR from error rate measures, as an
11 example, right?
12 MR. MELWANI: Objection.
13 Mischaracterizes.
14 THE WITNESS: I don't know if I'd say
15 "derive." I would say the signal-to-noise ratio
16 is determined from the bit error rate. But you
17 could determine the -- the received signal
18 strength, which could be a voltage, and use that
19 in the signal-to-noise ratio.
20 So I'm not really following the line of
21 what's going on.
22 BY MR. JOHANNINGMEIER:

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1 Q. Well --
2 **A. I mean, there's intermediate values in**
3 **determining a comparison.**
4 Q. So you could determine the
5 signal-to-noise ratio from the bit error rate,
6 right?
7 MR. MELWANI: Objection. Form.
8 THE WITNESS: Well, I would say bit
9 error rate is the signal-to-noise ratio. I
10 mean, they literally put "BER," in parentheses,
11 "SNR" on the figure.
12 BY MR. JOHANNINGMEIER:
13 Q. Well, in your understanding of circuits
14 more broadly, right, are there ways to derive
15 signal-to-noise ratios using, for instance,
16 error measures?
17 MR. MELWANI: Objection. Beyond the
18 scope. Calls for speculation.
19 THE WITNESS: If you're asking me if
20 there's other ways to meet this claim element,
21 maybe. I wasn't asked or I didn't look at other
22 ways to meet the claim element.

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1 I looked at Rauhala and asked: Would a
2 person of ordinary skill in the art understand
3 Rauhala teaches this claim element? And the
4 answer is yes. And that's what I wrote about
5 and highlighted in Figure 5.
6 BY MR. JOHANNINGMEIER:
7 Q. Right. But the claim element, to be
8 clear, is comparing two signals, right? Or two
9 spectral components, right?
10 **A. The claim element is comparing the**
11 **strength of the desired signal relative to the**
12 **strength of the interferer signal. And to do**
13 **that, one would need to measure the signals.**
14 **And we would use, for example, Block 53 to**
15 **measure the signal and the noise in the received**
16 **signal, SB. And that would output the**
17 **signal-to-noise ratio, or the bit error rate if**
18 **you want to call it that.**
19 Q. But you don't have any basis to
20 conclude, because this is -- Unit 53 is
21 literally a box with nothing in it, that Unit 53
22 is actually doing that comparison in order to

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1 output SNR?
2 MR. MELWANI: Objection. Asked and
3 answered. Form.
4 THE WITNESS: If I were to remove what
5 is taught in the figures -- for example, SNR and
6 BER -- and there was just a wire going from 53
7 to 52, I could not look at Figure 5 and indicate
8 that the -- 53, sorry -- indicate that 53 is
9 doing the claimed element.
10 BY MR. JOHANNINGMEIER:
11 Q. So --
12 **A. I mean -- (Internet connection**
13 **failure.)**
14 **-- doing it. It's literally providing**
15 **an SNR.**
16 Q. Could you compute the SNR using fast
17 Fourier transforms?
18 MR. MELWANI: Objection. Calls for
19 speculation. Beyond the scope.
20 THE WITNESS: I didn't write about
21 that. But I think it's reasonable that if one
22 were to have a spectrum, one were to know where

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1 the desired signal was and the undesired signal
2 was, that, taking the fast Fourier transform of
3 the spectrum and then moving the values
4 appropriately, one could calculate the desired
5 signal strength and the undesired signal
6 strength.
7 BY MR. JOHANNINGMEIER:
8 Q. Could you -- could one determine the
9 signal-to-noise ratio by taking power
10 measurements across a wideband and measurements
11 across a narrowband around the frequency of
12 interest and then calculating from that,
13 subtracting?
14 MR. MELWANI: Objection. Form. Calls
15 for speculation.
16 THE WITNESS: And I didn't write about
17 the specific methods of implementing Block 53 or
18 the detector in the earlier line of questioning.
19 But, yes, there are all kinds of ways to
20 determine the signal power and the strength of
21 the interferer signal.
22 BY MR. JOHANNINGMEIER:

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1 Q. Mm-hmm. And there are ways to do that
2 that don't involve directly comparing them,
3 right, at least in theory?
4 MR. MELWANI: Objection. Calls for
5 speculation.
6 THE WITNESS: I don't see how you can
7 not compare the signal strength of the desired
8 signal with the signal strength of the
9 interferer signal without -- in a
10 signal-to-noise ratio without doing the
11 comparison. It's dividing one by the other to
12 get a number of which one's bigger or smaller to
13 indicate the comparison.
14 I -- I'm not following -- I mean, I
15 don't think it's reasonable to -- to point to
16 SNR and say that that doesn't do what's claimed.
17 BY MR. JOHANNINGMEIER:
18 Q. Well, we're kind of going around in
19 circles, I guess. But I guess the -- you know,
20 the SNR is the output of what you're saying is
21 the comparison, right?
22 MR. MELWANI: Objection. Asked and

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1 answered.
2 THE WITNESS: The SNR is the
3 comparison. And it compares the -- does -- or
4 generates the number that's the comparison by
5 comparing the desired signal strength to the
6 undesired signal strength. I mean, that's what
7 signal-to-noise ratio is.
8 BY MR. JOHANNINGMEIER:
9 Q. What does Rauhala mean by "noise"?
10 MR. MELWANI: Objection. Form. Calls
11 for a legal conclusion.
12 THE WITNESS: The noise or interfering
13 signal in Rauhala is the spectral content
14 outside the desired spectrum.
15 BY MR. JOHANNINGMEIER:
16 Q. Okay. Now, there are, in RF circuits,
17 many different kinds and sources of noise,
18 right?
19 MR. MELWANI: Objection. Calls for
20 speculation. Outside of the scope.
21 THE WITNESS: If I understand what
22 you're talking about, there's shot noise,

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1 flicker noise, thermal noise, different origins
2 of noise sources.
3 But noise in all instances is an
4 unwanted signal outside the desired signal
5 spectrum, or even, in some cases, within, if the
6 signal is too small.
7 BY MR. JOHANNINGMEIER:
8 Q. But you wouldn't have -- well, you
9 don't state any opinion about whether or not
10 noise in all instances is an interferer signal,
11 right?
12 MR. MELWANI: Objection.
13 Mischaracterizes. Form.
14 THE WITNESS: I may be missing
15 something, because the 202 patent will talk
16 about interfering signals and noise; Rauhala
17 talks about noise and interfering signals. In
18 all instances, it's understood, or at least a
19 person of ordinary skill in the art would have
20 understood, that noise is undesired signal
21 content.
22 BY MR. JOHANNINGMEIER:

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1 Q. Well, but, I mean, you don't say that
2 in your declaration, right?
3 MR. MELWANI: Objection.
4 Mischaracterizes.
5 THE WITNESS: Paragraph 34, for
6 example, I talk about a radio receiver having
7 a -- or improving the quality of a signal by
8 reducing the noise. I think that it's
9 understood that noise is unwanted, then, if
10 you're going to reduce it or eliminate it.
11 BY MR. JOHANNINGMEIER:
12 Q. In paragraph 2 of Rauhala, it refers
13 repeatedly to noise and interference, right?
14 **A. Yes. And then it characterizes RSSN as**
15 **the combination of the noise and interference.**
16 Q. Right. But RSS isn't an input to Block
17 Number 53, right?
18 MR. MELWANI: Objection.
19 Mischaracterizes.
20 THE WITNESS: That question doesn't
21 make sense. RSSN is -- or RSS is a indication
22 or a measurement result. And as we've already

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1 talked about, RSS -- or RSSN, if we look at
2 another figure -- are not connected to inputs of
3 53. But the signal that generates RSS and RSSN
4 is the same signal that's input into 53 to
5 generate the signal-to-noise ratio.
6 BY MR. JOHANNINGMEIER:
7 Q. Rauhala could be meaning to describe a
8 calculation of the signal versus the thermal
9 noise, for instance, right?
10 MR. MELWANI: Objection.
11 Specification -- speculation. Sorry.
12 THE WITNESS: I don't think that's a
13 reasonable thought or conclusion. The issue is
14 when you're designing the radio, you don't care
15 -- I mean, you might care when you're -- you're
16 looking at a specific noise component, but
17 there's no way to separate out the thermal noise
18 from the shot noise from the interference from
19 any other noise. It's just noise. It's outside
20 the desired signal spectrum.
21 BY MR. JOHANNINGMEIER:
22 Q. Well --

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1 **A. That's the art of the --**
2 Q. If there's no way to separate out the
3 noise, then there's no way to -- or separate out
4 the interference from the other noise, then you
5 can't possibly be doing a comparison of the
6 interferer signal, right?
7 MR. MELWANI: Objection.
8 Mischaracterizes. Calls for a legal conclusion.
9 BY MR. JOHANNINGMEIER:
10 Q. -- strength of the interferer signal?
11 MR. MELWANI: I renew my objections.
12 THE WITNESS: That's not right. I
13 mean, you -- as you talked about earlier -- use
14 a filter to filter out the spectrums of --
15 filter the spectrum so that only the desired
16 signal goes to one direction, and then the --
17 use a complementary filter to filter out, for
18 example, a spectrum of the noise -- (Internet
19 connection failure.)
20 -- area.
21 But trying to -- trying to put them --
22 trying to mix those together and say, "I'm going

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1 to do a noise measurement" doesn't make any
2 sense, because you have the desired signal and
3 what you are measuring for noise. You have to
4 separate them out.
5 BY MR. JOHANNINGMEIER:
6 Q. Well, I mean, I guess the point of all
7 of this is that there's a lot of different
8 things that Rauhala could be talking about.
9 There's a lot of potential things that "noise"
10 could mean and include or not include, and you
11 don't have any opinions about any of that in
12 your declaration, right?
13 MR. MELWANI: Objection. Mis- --
14 BY MR. JOHANNINGMEIER:
15 Q. You actually said, what is the
16 interferer signal? You haven't differentiated
17 that from the noise, and you haven't described
18 the calculation or whatever is going on in Box
19 53, right?
20 MR. MELWANI: Objection.
21 Mischaracterizes. Asked and answered.
22 THE WITNESS: I mean, just as a matter

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1 of common sense, a person of ordinary skill in
2 the art would understand that noise is an
3 interferer signal, no matter what its origin is,
4 and that what is taught in Rauhala is comparing
5 the signal to the interferer or to the noise by
6 taking the ratio and doing that comparison of
7 the number. If there's a large signal relative
8 to the noise, then the number is big. And if
9 the signal is comparable to the noise, the
10 number is smaller.
11 BY MR. JOHANNINGMEIER:
12 Q. Have you ever heard of something called
13 SINR in wireless RF?
14 MR. MELWANI: Objection. Calls for
15 speculation. Relevance. Beyond the scope.
16 THE WITNESS: If it's what I'm thinking
17 of, it's also got a term called SINAD. It's a
18 particular measurement for a single tone. That
19 particular type of characterization, if it's
20 what I'm remembering -- and I don't know for
21 sure, this is from memory -- is more for
22 designing components rather than relevant to --

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1 to the components in an actual transceiver where
2 they operate over a wider frequency spectrum.
3 BY MR. JOHANNINGMEIER:
4 Q. I -- I should have been clearer. I
5 mean, so there is something in RF -- in wireless
6 RF communication that's commonly referred to as
7 a signal-to-noise ratio, SNR, right?
8 MR. MELWANI: Objection.
9 Mischaracterizes. Calls for speculation.
10 Beyond the scope.
11 THE WITNESS: SNR, signal-to-noise
12 ratio, yes.
13 BY MR. JOHANNINGMEIER:
14 Q. Yeah. And there is something called
15 signal to interference plus noise ratio, SINR,
16 right? And to be fair, I just Wikipediaed it
17 because I couldn't remember.
18 But Wikipedia says: SINR is commonly
19 used in wireless communication as a way to
20 measure the quality of wireless connections.
21 And it talks about how it has an
22 interference term plus a noise term.

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1 Does any of that ring a bell?
2 MR. MELWANI: Objection. Beyond the
3 scope to the extent that counsel is introducing
4 a purported Wikipedia page. Relevance.
5 Hearsay. Authentication.
6 Counsel, are you going to enter that
7 into the record?
8 MR. JOHANNINGMEIER: No. I'm just -- I
9 mean, I'm just asking questions about his
10 knowledge of -- of ratios used in wireless RF
11 communication. And I happen to know of one
12 called signal to interference plus noise ratio,
13 SINR, which I just checked myself using
14 Wikipedia on.
15 But my question remains the same. Are
16 you aware of a ratio called signal to
17 interference plus noise that includes an
18 interference term and a noise term?
19 MR. MELWANI: Same objections.
20 THE WITNESS: I know about other
21 ratios, yes. I don't recall clearly writing
22 about that one in my mixed signal book, for

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1 example. But there are other ones for noise,
2 such as quantization noise in data converters.
3 BY MR. JOHANNINGMEIER:
4 Q. So there are a lot of different
5 signal-to-something ratios that are used by
6 people of ordinary skill in RF communication,
7 right?
8 MR. MELWANI: Objection. Beyond the
9 scope. Mischaracterizes. Form.
10 THE WITNESS: I would say that if
11 somebody wants to define other measurement
12 capabilities, they can. I don't think -- I
13 don't feel they have any bearing on my opinions.
14 I don't think any reasonable person
15 would argue that noise isn't an interferer or
16 that a measurement of spectrum outside of the
17 desired spectrum and reporting as RSSN, as
18 Rauhala teaches, wouldn't include the adjacent
19 channels or interfering channels.
20 I feel very confident in my opinion
21 that Rauhala teaches this claimed element.
22 BY MR. JOHANNINGMEIER:

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1 Q. Well, I guess the reason I'm getting at
2 this is just, you know, we have Rauhala talking
3 about noise and interference and then having an
4 acronym, SNR. And neither you nor, honestly, I
5 or anyone else knows exactly what that means
6 because there's any multiple number of things it
7 could mean.
8 And so I guess, you know, Rauhala could
9 have meant the ratio of the signal to the total
10 noise power, right?
11 MR. MELWANI: Objection.
12 Mischaracterizes. Form.
13 THE WITNESS: So if we look at PDF
14 page 70 of my declaration and we look at the
15 annotated Figure 5, that received signal, Sb,
16 will have two components. It'll have the
17 desired spectrum, and it'll have the spectrum of
18 the noise and interferers.
19 What is shown there is 53 taking and
20 measuring the signal and the noise and comparing
21 them and the ratio. If we go to the previous
22 page and we look at Figure 4, annotated, what

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1 the detector is doing is it's looking at the
2 received signal, Sb, and it's measuring the
3 received signal and the received signal with
4 noise, which has to be the noise and interferer
5 and anything that's outside the desired signal.
6 So trying to say that Rauhala is
7 teaching something different in measuring the
8 noise separate from the interferers or that
9 they're somehow separated, that just isn't the
10 case. Because you can literally see that it's
11 looking at the received signal and it's
12 separating out the desired signal, or RSS, and
13 the received signal with the noise and
14 interference, RSSN.
15 BY MR. JOHANNINGMEIER:
16 Q. Well, Figure 4 doesn't include the
17 block that you're saying does the comparison,
18 right? Just --
19 A. Figure 4 does not include 53. But in
20 both figures, they represent the output of the
21 receiver after the down conversions and mixing,
22 after the filters to separate out or remove

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1 image components and interference. They
2 represent the received signal as Sb.
3 In Figure 5, 53 is measuring the
4 interfering signal and comparing it to the
5 strength of the desired signal, and it's
6 annotating that with the term SNR.
7 Q. So the only -- the only potential
8 disclosure in here that you're pointing to is
9 the letters SNR, which is why I've been asking
10 you questions about what N is, right? Because
11 your opinion only works if "N" is equivalent to
12 "interferer signal," right?
13 MR. MELWANI: Objection.
14 Mischaracterizes.
15 THE WITNESS: Maybe all my previous
16 answer wasn't understood. Interference signal
17 and the noise signal in the blocks Figure 4 and
18 Figure 5 are the same. They're the unwanted
19 signal that's outside of the desired signal
20 spectrum. That's the measure of power that
21 we're measuring and providing in the
22 signal-to-noise. That's the interferer.

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1 BY MR. JOHANNINGMEIER:
2 Q. But it doesn't say that in Rauhala,
3 though, right?
4 MR. MELWANI: Objection.
5 Mischaracterizes. Calls for legal conclusion.
6 Form.
7 THE WITNESS: I think it shows it in
8 figures 4 -- or Figure 5, anyway.
9 BY MR. JOHANNINGMEIER:
10 Q. Figure 5 shows, in your opinion, that
11 the interferer is the -- strike that.
12 So just to be clear about your opinion,
13 in Rauhala Figure 5, in the S -- it says SNR,
14 right? What are you saying is the signal, the
15 S? What is "S"?
16 MR. MELWANI: Objection. Asked and
17 answered. Form.
18 THE WITNESS: The desired signal the
19 receiver is supposed to receive. And the
20 interferer signal is everything else. It's what
21 the receiver shouldn't -- doesn't want to
22 receive or doesn't need to receive.

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1 BY MR. JOHANNINGMEIER:
2 Q. Okay. So you're saying, then, that
3 the -- the N in SNR is everything else besides
4 the desired signal, right?
5 A. Yes.
6 Q. So you -- your understanding of
7 interferer signal is that it is everything but
8 the desired signal?
9 A. Yes.
10 Q. Okay. Now, going back to the 825
11 patent -- well, let's do the 202 patent, since
12 we're on the 202. Exhibit 3.
13 (Exhibit 3 marked for identification.)
14 BY MR. JOHANNINGMEIER:
15 Q. And I want to look again at this
16 figure, 2A. So let me know when you're there.
17 A. (Witness complying.)
18 MR. MELWANI: Counsel, did you want to
19 take a break before starting your line of
20 questioning on a new exhibit?
21 MR. JOHANNINGMEIER: Well, it's -- no,
22 it's the same line. I'll -- I'll -- I'll be

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1 quick. I just...
2 BY MR. JOHANNINGMEIER:
3 Q. Are we there?
4 **A. Yes.**
5 Q. Okay. So Figure 2B, what, in your
6 understanding, is the desired signal in Figure
7 2B?
8 **A. (Witness examining document.)**
9 **A spectrum that's labeled 206 and**
10 **labeled "desired signal."**
11 Q. Right. And so in Figure 2B, that would
12 be 256, right?
13 **A. Oh, in 2B, yes. 256.**
14 Q. Well, we can do either one, actually.
15 You see the -- well, okay. My next question is:
16 What is your understanding of what is the
17 interferer signal in Figure 2A?
18 **A. The interferers are labeled as 208 and**
19 **210.**
20 Q. About -- you see where there's a dotted
21 line, N?
22 **A. Yes.**

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1 Q. Do you understood that that's
2 representing a noise floor, below which there is
3 some amount of noise?
4 MR. MELWANI: Objection.
5 Mischaracterizes.
6 THE WITNESS: Yes.
7 BY MR. JOHANNINGMEIER:
8 Q. Okay. So in your understanding, is the
9 noise integrated under the dotted line, N, part
10 of the interfering signal?
11 MR. MELWANI: Objection. Form --
12 objection. Form.
13 THE WITNESS: The interfering signals
14 are the signals that are labeled "interfering"
15 and the noise. If we go take a look at the
16 figure description in column 3, roughly line 19,
17 it literally says -- excuse me -- "interfering
18 signals and noise."
19 BY MR. JOHANNINGMEIER:
20 Q. Well, I'm just trying to understand.
21 Because when we looked at Rauhala, that you said
22 that everything that's not the desired signal

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1 was the interfering signal.
2 And now we're looking here at the figures
3 in the patent. And so is it also your opinion
4 that this patent is describing everything that's
5 not the desired signal is the interferer signal?
6 MR. MELWANI: Objection.
7 Mischaracterizes.
8 THE WITNESS: Yes.
9 MR. MELWANI: Form.
10 THE WITNESS: Yes. And that's why I
11 pointed to column 3, line 19. It literally says
12 that: "Interfering signals and noise."
13 BY MR. JOHANNINGMEIER:
14 Q. Mm-hmm. Well --
15 **A. Anything outside the desired signal**
16 **spectrum is an interfering signal made up of**
17 **adjacent channel, noise, and inherent noise in**
18 **the receiver.**
19 Q. Well, actually, what -- you're quoting
20 at line 19 and 20?
21 **A. I'm quoting: "Figures 2A and 2B**
22 **illustrate examples of desired and interfering**

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1 **signals and noise that may be received."**
2 Q. Okay. When I read that, I see three
3 things. But I -- I'm not trying to interpret
4 the patent here. I'm asking you about your
5 interpretation.
6 Is it desired and interfering signal --
7 well, it doesn't say "desired signals and
8 interfering signals and noise." It says
9 "desired and interfering signals and noise,"
10 right?
11 **A. Yes, it does say that.**
12 Q. Okay. Well, so this is -- I guess
13 we're not going to resolve this dispute today,
14 because we don't have a plain construction of
15 what "noise" means.
16 But I mean, just to be clear, you don't
17 have any interpretation in your declaration
18 about what is or isn't -- whether or not noise
19 is included in interfering signals in the
20 claims, right?
21 MR. MELWANI: Objection. Calls for
22 legal conclusion. Mischaracterizes.

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1 THE WITNESS: My interpretation is
2 consistent with the patent: That the
3 interfering signals are the signals outside the
4 desired signal spectrum, and they're measured
5 and compared. But --
6 BY MR. JOHANNINGMEIER:
7 Q. Well, I guess what I'm asking is if you
8 have an opinion that when Claim 7 says
9 "interfering signals," it means -- well, when it
10 says -- sorry. When Claim 7 says "the
11 interfering signal," that it's referring to
12 everything that's not the desired signal. That
13 opinion is not stated anywhere in your
14 declaration, right?
15 MR. MELWANI: Objection.
16 Mischaracterizes.
17 Counsel, your question cut off
18 Dr. Baker's last reply. Would you like him to
19 finish?
20 MR. JOHANNINGMEIER: I -- I don't care,
21 honestly.
22 BY MR. JOHANNINGMEIER:

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1 Q. But yes. I don't mean to interrupt you
2 if you were going to say more.
3 A. I mean, the claim literally says
4 "comparing the strength of the desired signal,"
5 which would mean a spectrum of signals, "to the
6 strength of the interferer signal," which
7 literally means the undesired signal.
8 And my interpretation and what I've
9 written there is consistent with what a person
10 of ordinary skill in the art would understand
11 those words to mean: That the signal-to-noise
12 ratio that Rauhala talks about teaches this
13 element.
14 Q. Well, and the reason I'm not letting
15 this go is because that sounds to me an awful
16 lot like a claim construction opinion. You're
17 saying that a person of ordinary skill in the
18 art would understand the words "the interferer
19 signal" to mean everything that's not the
20 desired signal. All right. Is that what you're
21 saying?
22 MR. MELWANI: Objection.

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1 Mischaracterizes. Calls for a legal conclusion.
2 THE WITNESS: I'm not sure about the
3 claim construction or -- and I'm not trying to
4 offer legal conclusions. I'm simply reading the
5 words of the claim element, looking at what they
6 mean in light of the specification, and
7 providing an analysis, as I've written in
8 paragraphs 117 through 120.
9 The desired signal, a person would
10 understand, is the signal that someone wants.
11 And the interferer signal would be the signal
12 that is unwanted. And providing the
13 signal-to-noise ratio does what that claim is
14 saying. It's comparing the desired signal to
15 the -- the strength of the interferer signals or
16 the undesired signal.
17 BY MR. JOHANNINGMEIER:
18 Q. So are you --
19 A. I don't think it's reasonable to say
20 that "Well, oh, you can have a desired signal,
21 and you can have an undesired signal, but
22 there's this third signal that you really don't

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1 care about."
2 I mean, I don't -- I hadn't really
3 thought about that, but that, just sitting here
4 right now, doesn't seem reasonable.
5 Q. Well, I'm -- I'm not attempting to have
6 or win or lose an argument about what is
7 reasonable. I'm trying to figure out just the
8 basis of your opinion.
9 So when you did your analysis that you
10 mentioned in 117 to 120, did you apply the
11 understanding that the "interferer signal" means
12 the undesired signal spectrum?
13 MR. MELWANI: Objection. Form.
14 Mischaracterizes. Calls for a legal conclusion.
15 Asked and answered.
16 THE WITNESS: So if we go back to the
17 202 patent and look at Figure 2A, you can see
18 the interferers are adjacent channels labeled
19 208 and 210. You see the noise in the spectrum
20 is labeled N.
21 So the interfering signal would be the
22 signal outside of the -- outside of the desired

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1 signal. And I don't think it's reasonable, and
2 I don't think this is what the 202 patent
3 teaches is that when you measure that signal,
4 that if the noise floor, N, is above the
5 interferers, 208 and 210, that we don't need to
6 apply what this patent teaches in how to adjust
7 the bias currents. It clearly doesn't teach
8 that.
9 It teaches that you look at the
10 interferers, which is the signal outside of the
11 desired spectrum, and you use that to make your
12 adjustment on how much you want to increase the
13 gain in the signal path to boost the desired
14 signal.
15 So I think my analysis is rock solid,
16 and I think what I've done there in my
17 declaration is solid as well: That the Rauhala
18 reference, by disclosing the calculation or the
19 comparison of the signal-to-noise ratio, teaches
20 comparing the strength of the desired signal to
21 the strength of the interfering signal.
22 And when we get done with this, can we

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1 get a break?
2 BY MR. JOHANNINGMEIER:
3 Q. Yes. So let me just try to cut to the
4 chase, because I'm not attempting to -- you
5 know, I understand that you might believe --
6 that you believe that your declaration is rock
7 solid. I'm literally just trying to find out
8 what understanding you applied to your
9 declaration.
10 So when you did your declaration, did you
11 apply the understanding that the -- that you
12 just described, that the interferer signal means
13 everything that's not the desired signal? And
14 it's just yes or no.
15 MR. MELWANI: Objection --
16 BY MR. JOHANNINGMEIER:
17 Q. Did you apply that understanding when
18 you did the declaration?
19 MR. MELWANI: Objection. Asked and
20 answered. Mischaracterizes.
21 THE WITNESS: I applied my
22 understanding of what the 202 patent teaches,

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1 and that is measuring the spectrum outside the
2 desired signal as the interfering signal. And
3 that's what you have to do in the -- to
4 determine the desired signal strength relative
5 to the interfering signal. Because, as I gave
6 an example, the interfering signal could be
7 dominated by the inherent noise, and the
8 adjacent channels could be lower.
9 But my analysis is consistent with --
10 and interpretation is consistent with what the
11 202 patent teaches: That the desired signal is
12 the signal, and the noise is the spectrum
13 outside the desired signal.
14 BY MR. JOHANNINGMEIER:
15 Q. Well, the -- the interferer signal is
16 the spectrum outside the desired signal. That's
17 what -- that's what you applied, right?
18 **A. Yes.**
19 MR. MELWANI: Objection. Mis- --
20 objection. Mischaracterizes.
21 MR. JOHANNINGMEIER: All right. Well,
22 so -- we can take a break. I believe I'm done

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1 except for some follow-ups. So ten minutes.
2 THE VIDEOGRAPHER: Stand by, please.
3 We are going off the record. The time is 1633.
4 Thank you.
5 (Off the record.)
6 THE VIDEOGRAPHER: Stand by, please.
7 We are back on the record. The time is 1644.
8 Thank you.
9 MR. JOHANNINGMEIER: Well, Dr. Baker, I
10 don't have any further questions at this point.
11 If your counsel decides to ask you any, I might
12 have more. But from now on, it won't be my
13 fault that you're here. So I'll pass the
14 witness.
15 MR. MELWANI: Can we take a 15-minute
16 recess to determine if we'll have any redirect,
17 please?
18 MR. JOHANNINGMEIER: Okay. Well -- all
19 right. Well, I'm going to ask him if you
20 talked. But, you know, that's fine. You can.
21 All right.
22 MR. MELWANI: I'm sorry, I didn't get

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that.
MR. JOHANNINGMEIER: Yeah -- no. It -- it -- it -- it's fine. Go ahead. I mean, 15 minutes is fine.
MR. MELWANI: Okay. Thank you.
THE VIDEOGRAPHER: Going off the record. The time is 1645.
(Off the record.)
THE VIDEOGRAPHER: Stand by, please. Back on the record. 1659. Thank you.
MR. MELWANI: We don't have any redirect. I believe this concludes the Dr. Baker cross-examination.
THE VIDEOGRAPHER: All right. If there's no more questions, then I will close the deposition. Stand by, please.
This marks the end of the videotaped deposition of Dr. Baker. We are going off the record, and the time is 1700.
Thank you. And we are off the record now.
THE COURT REPORTER: Mr. Melwani, do

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you need the transcript?
MR. MELWANI: Yeah, I'd like to get a transcript.
THE COURT REPORTER: Thank you.
(Proceedings concluded at 5:00 p.m. Eastern time.)

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CERTIFICATE OF REPORTER

I, TAMIKA M. BURNETTE, Certified Reporter and Notary Public within and for the State of Georgia do hereby certify:
That R. JACOB BAKER, P.E., PH.D., the witness whose deposition is hereinbefore set forth, was duly sworn by me before the commencement of such deposition and that such deposition was taken before me and is a true record of the testimony given by such witness.
I further certify that the adverse party, Petitioners, was represented by counsel at the deposition.
I further certify that the deposition of R. JACOB BAKER, P.E., PH.D., occurred remotely via Zoom videoconference Wednesday, January 10, 2024 commencing at 1:01 p.m to 5:00 p.m.
I further certify that I am not related to any of the parties to this action by blood or marriage, I am not employed by or an attorney to any of the parties to this action, and that I am in no way

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interested, financially or otherwise, in the outcome of this matter.
IN WITNESS WHEREOF, I have hereunto set my hand this 24th day of January, 2024.
Tamika Burnette
_____
TAMIKA M. BURNETTE
CERTIFIED COURT REPORTER, RPR, CSR-2870
NOTARY PUBLIC IN AND FOR THE GEORGIA

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