
Transcript of Kevin Jeffay, Ph.D.

Date: May 7, 2020

Case: Resideo Technologies, Inc. -v- Ubiquitous Connectivity, LP

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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

Case: IPR2019-01335

U.S. Patent No. 8,064,935

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RESIDEO TECHNOLOGIES, INC. :
Petitioner :
v. :
UBIQUITOUS CONNECTIVITY, LP :
Patent Owner :
-----X

Deposition of KEVIN JEFFAY, Ph.D.

Conducted Virtually

Thursday, May 7, 2020

9:08 a.m. EST

Job No.: 297390

Pages 1 - 193

Reported by: Lisa M. Blair, RMR, CRR

1 Deposition of KEVIN JEFFAY, Ph.D., conducted
2 virtually.

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8 Pursuant to agreement, before
9 Lisa M. Blair, RMR, CRR, E-Notary Public in and
10 for the Commonwealth of Virginia.

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A P P E A R A N C E S

ON BEHALF OF PETITIONER RESIDEO TECHNOLOGIES:

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A P P E A R A N C E S (Continued)

ON BEHALF OF PATENT OWNER, UBIQUITOUS
CONNECTIVITY, LP

CORTNEY ALEXANDER, ESQUIRE
KENT & RISLEY LLC
5755 N. Point Parkway, Suite 57
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ALSO PRESENT

Daniel Terry, Planet Depos technician

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C O N T E N T S

EXAMINATION OF KEVIN JEFFAY, PH.D.	PAGE
By Mr. Alexander	6

E X H I B I T S

1	Declaration of Dr. Jeffay
2	Curriculum vitae of Dr. Jeffay
3	'935 patent
4	Document entitled, "Excerpts From Microsoft Computer Dictionary"
5	Document entitled, "Excerpts From Comprehensive Dictionary of Electrical Engineering"
6	Exhibit 1016 Oinonen '710 patent
7	Exhibit 1023 Whitley reference
8	Exhibit 1017, Bielski reference
9	Exhibit 1018, Wu reference
10	Exhibit 1020, Menard reference
11	Sears reference

REPORTER'S NOTE: ALL EXHIBITS WERE RETAINED BY
COUNSEL.

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P R O C E E D I N G S

Whereupon,

KEVIN JEFFAY, PH.D.,

being first duly sworn or affirmed to testify to
the truth, the whole truth, and nothing but the
truth, was examined and testified as follows:

EXAMINATION BY COUNSEL FOR UBIQUITOUS
CONNECTIVITY, LP

BY MR. ALEXANDER:

Q. Good morning, Dr. Jeffay. I'm
Cortney Alexander. I'm with Kent & Risley, and I
represent Ubiquitous Connectivity. How are you
doing?

A. I'm doing well.

MR. PLEUNE: Cortney, I apologize. I
didn't want to interrupt, but I do have a
couple of things. I was planning to note
that -- this is Ben Pleune on behalf of Residio
Technologies, and with me is Chris Douglas and
Adam Doane.

I wanted to note just a couple of
things at the outset. I understand that we're

1 starting with the '935 patent first; is that
2 correct? That's going to be the subject of the
3 deposition starting this morning?

4 MR. ALEXANDER: That's correct. So
5 since you've brought that up, let me also kind
6 of I think formalize what you and I discussed
7 the other day, which is that yeah, I'll start
8 with the '935, and don't intend to cover
9 '655-specific issues until we're done with the
10 '935. But as we talked about, some issues --
11 claim terms and the like -- are common to both
12 patents. So my understanding is that in such
13 instances where it makes sense, you don't have
14 any objection if we cite to the transcript of,
15 say, the '935 in connection with the '655 for
16 common issues so that we don't have to rehash
17 the same ground in each deposition.

18 MR. PLEUNE: That's right. Agreed.

19 And I do want to note that
20 Dr. Jeffay has a paper copy of the '935 patent
21 and his declaration just to make sure that
22 there's no technical issues and that he has

1 that at his fingertips.

2 I also want to note for the record
3 that Anita Spieth and Peter Flynn are joining
4 us on behalf of CSG. And as we all know, those
5 petitions have now been joined. So I'll be
6 making the objections on behalf of both
7 parties, although as we noted before the
8 deposition got under way, that both Anita and
9 Peter are on the line. So they may at some
10 point have objections or comments that are
11 specific to their client, but for the most part
12 and for the sake of the deposition proceeding
13 smoothly, I'll be making the objections on
14 behalf of both respondents.

15 MR. ALEXANDER: Okay. That's fine. And
16 with respect to the exhibits, it's great
17 Dr. Jeffay has paper copies of those exhibits.
18 So were you able to access the Dropbox folder
19 that I sent, Ben?

20 MR. PLEUNE: Yes, we got those. And I
21 think that both myself and Dr. Jeffay have been
22 able to access those. So I think we're in good

1 shape.

2 MR. ALEXANDER: Okay. Very good. So
3 depending on how it goes, I might add a couple
4 of things to it. We'll just see. As we do it,
5 either with respect to the stuff that's in
6 there now or future stuff, you know, I took the
7 Planet Depos recommended document stamper, and
8 so I've stamped the first couple of exhibits.
9 But I'll plan on continuing to try and do that
10 on the fly as we hit the appropriate exhibits.

11 MR. PLEUNE: That sounds good.

12 MR. ALEXANDER: Very good. Anything
13 else that we need to cover at the outset, then?

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

15 MR. ALEXANDER: I guess one thing -- I
16 mean, this probably goes without saying, but
17 just to make sure. So my understanding of the
18 rules of the Board are that once the testimony
19 starts, there is not supposed to be substantive
20 communication between counsel and the witness
21 about the substance of the testimony. And I
22 assume that goes for electronic communication

1 as in emails, instant messaging, and all that
2 sort of thing.

3 MR. PLEUNE: Yeah, absolutely. We
4 certainly recognize that this is a different
5 format than we're used to, but absolutely, we
6 don't plan on having any conversations or
7 interactions with Dr. Jeffay about the
8 substance of his testimony during this
9 deposition for the '935 patent.

10 MR. ALEXANDER: Okay. Great. So I
11 think I'm ready to get started. Are you all
12 ready to get started?

13 MR. PLEUNE: Yes.

14 BY MR. ALEXANDER:

15 Q. Okay. Dr. Jeffay, thanks for joining
16 us and thanks for bearing with us in this new
17 format. So hopefully it will go smoothly, but if
18 we have any kick-outs I'm sure we'll work through
19 it. I'll confess this is my first remote
20 deposition, so bear with me if I struggle with it.

21 A. Sure.

22 Q. And then like usual, I'm sure I'll

1 ask imperfect questions. So if you don't
2 understand what I'm asking, just let me know and
3 I'll do my best to rephrase.

4 A. Okay.

5 Q. I also assume that we'll take breaks
6 kind of like the usual deposition schedule every
7 hour or so, give or take. But if at any point you
8 need a break, just let me know. We will
9 accommodate it.

10 And I think that's it in terms of
11 formalities. Let me -- so let me turn now to the
12 exhibits. You mentioned you have a paper copy of
13 your declaration?

14 A. Yes.

15 Q. Okay. And that will be Exhibit 1.
16 And in the documents I shared through the Dropbox
17 folder, that was already stamped as Exhibit 1. I
18 stamped your CV, which I believe was a separate
19 exhibit to the '935 petition, I stamped that as
20 Exhibit 2. And then the '935 patent is stamped as
21 Exhibit 3.

22 A. Okay.

1 Q. I was going to start with actually
2 your CV. So that would be Exhibit 2 as I stamped
3 it. Do you have a paper copy of it?

4 A. I don't, but I have the soft copy.
5 So again, the numbers on the Dropbox, these
6 exhibit numbers are different than the numbers
7 that you're using?

8 Q. Yeah.

9 A. I have it here as Exhibit 1004.

10 Q. Yeah, so -- yeah, let me explain
11 that. I apologize if this is an imperfect way of
12 doing it. So when I referenced stamped Exhibit 2,
13 if you open the soft copy you'll see there's a
14 little electronic copy of an exhibit sticker. So
15 that means Exhibit 2 to your deposition. That's
16 what that was intended to convey.

17 A. That's fine.

18 Q. The numbers in the file names are the
19 numbers as they were exhibits to the petition that
20 was filed.

21 A. Okay.

22 Q. So do you have your CV in front of

1 you?

2 A. I do.

3 Q. Okay. Let me start. So you have
4 your education listed at the top, right?

5 A. Correct.

6 Q. Can you give me the years of your
7 various degrees listed there?

8 A. I can. In the order listed here, my
9 Ph.D. is 1989, the M.S. degree is 1984, and the
10 B.S. degree is 1982.

11 Q. Okay. Great. I know you've had a
12 long distinguished career in academics. Did you
13 -- do you have any experience in industry?

14 A. Yes, and that should be somewhere on
15 here.

16 Q. Yeah, I think maybe I can help you.
17 Page 3.

18 A. So what page 3 lists is the
19 experience I have being paid to work in industry.
20 And most of it is prior to becoming an academic.
21 Since becoming an academic, I have engaged in a
22 number of projects working directly with industry.

1 For whatever reason I don't list it here,
2 primarily because I was -- I was employed as a
3 faculty member at UNC when that work was being
4 done.

5 Q. Okay. So looking at that list of
6 industry experience on page 3, which where would
7 the cutoff be in terms of once you had entered the
8 academic world?

9 A. Well, I entered in '89. So basically
10 there are a couple of things that are listed here
11 post '89. But these are projects where I stepped
12 out of the university and worked for a company for
13 some numbers of months or years, as is listed
14 here. So anything before '89 is before I started
15 as a faculty member at UNC.

16 Q. Okay. When you say you stepped out
17 of university in those situations, do you mean
18 that you actually left the employ of the
19 university?

20 A. For parts of the year, yes. So for
21 example, the Hewlett-Packard item here, I was on
22 leave from the university for a period of time

1 then.

2 Q. Okay. And so does that mean that you
3 were working full time for Hewlett-Packard during
4 that period?

5 A. Yeah, for parts of that period, yes.

6 Q. Okay. How long were you working full
7 time for Hewlett-Packard?

8 A. Wow. I don't know that I can give
9 you a very precise answer, but probably on the
10 order of nine months.

11 Q. Okay. And so are any of the other
12 post '89 experiences that you've listed here also
13 situations where you were working full time for
14 some period?

15 A. Yes. The INTEROP Graduate Institute
16 item and the Monterey Technologies item, those
17 were ones where there were periods of time where I
18 was working full time for them.

19 Q. Okay. Were those also on the order
20 of months that you were working full time for
21 those companies?

22 A. Yes. Those ones I was primarily

1 working for them full time during the summer. So
2 it was a couple of summers.

3 Q. And did I understand that you were
4 not employed by the university during that period
5 or you were just on -- you didn't have any current
6 duties?

7 A. I didn't have any current duties. I
8 mean, technically -- technically I only have a
9 nine-month appointment at the university.

10 Q. Okay. So on a regular basis I
11 suppose your summers are free for you to engage in
12 whatever you choose to?

13 A. More or less, yes.

14 Q. Okay. What was the nature of your
15 work at Hewlett-Packard?

16 A. At Hewlett-Packard I helped them
17 design a robotic manufacturing cell, cells that
18 they used for a workspace, a chunk of space on a
19 factory floor. And it was a robot that was making
20 what's called the mandrel of an inkjet.
21 Essentially it's the business end of an inkjet.
22 It's the -- it's a little piece of nickel with

1 very tiny holes where the ink actually shoots
2 through. And it's made by -- at least then it was
3 made by a robot.

4 Q. And were you working on the hardware
5 or the software for that robotic manufacturing
6 cell?

7 A. Primarily the software.

8 Q. Okay. Let's talk about your work at
9 Monterey, which you mentioned. What was your work
10 for Monterey?

11 A. Monterey was building collaboration
12 support tools, things like Zoom, except far more
13 primitive. Just primitive because that was just
14 the state of the art 25 years ago.

15 Q. And so did your work for Monterey
16 involve software or hardware?

17 A. Primarily software.

18 Q. What did your work for the INTEROP
19 Graduate Institute entail?

20 A. That was developing course materials
21 for a professional master's degree that this
22 institute was going to attempt to offer to

1 practitioners.

2 Q. And so did you help develop
3 coursework?

4 A. I did.

5 Q. What were the courses that you helped
6 develop?

7 A. Mostly networking courses, realtime
8 systems courses, and multimedia courses. And part
9 of it also was -- the idea was there was going to
10 be a remote lab that -- so this was -- today we
11 would call it an online course, an online degree.
12 And the idea was that there was going to be also a
13 lab component where students could perform
14 laboratory exercises. And I was involved in the
15 setup of that laboratory.

16 Q. Did that Graduate Institute and those
17 online programs that you're mentioning coming to
18 fruition?

19 A. No. We got it up running to the
20 prototype, and then this company SOFTBANK who ran
21 it canceled the project.

22 Q. So now let's go back in time to your

1 pre-1989 work that you have listed here. You have
2 listed -- your first experience listed is computer
3 programmer for the U.S. Army Corps of Engineers;
4 is that correct?

5 A. That's correct.

6 Q. So if I understand right from your
7 timeline of your education, would this have been
8 during your undergraduate work?

9 A. Yes. This is how I paid for school.

10 Q. And so what sort of work were you
11 doing for the Corps of Engineers?

12 A. It was mostly software development
13 related to understanding the energy usage of
14 buildings and structures that the Army had, and
15 trying to conserve -- conserve energy usage.

16 Q. Were you able to help them conserve
17 energy usage?

18 A. I certainly -- yes. Yes. We did
19 develop software that went out in the field, and I
20 assume it helped them save energy.

21 Q. Did you help develop any new hardware
22 in connection with that work?

1 A. No.

2 Q. How, generally speaking, did the
3 software that you helped develop conserve energy?

4 A. Well, it's a fairly straightforward
5 system. I mean, the idea was that these buildings
6 would have controllable thermostats and
7 thermometers in them, essentially humidity
8 sensors, things like this. And the key thing that
9 that project was about was about networking. So
10 networking was quite a -- much more of a new thing
11 in 1981 than it is today. And so the idea was to
12 try and network together all of these sensors --
13 the thermostat, the thermometers, humidity
14 sensors, things like this so that you could, from
15 a remote location, you know, understand, you know,
16 these environmental parameters of a building and
17 control them remotely.

18 Q. What were the -- how did you control
19 the systems that you mentioned remotely in the
20 systems that you were working with?

21 A. Well, part of the project was to
22 build essentially digital interfaces to these --

1 to what in many cases were really analog devices
2 so that you could -- there was essentially a
3 little controller that got manufactured that would
4 go in these locations, something that would
5 literally, you know, be put on top of an existing
6 thermostat, but was a networked device so that you
7 could send it a command and it would either
8 electrically or mechanically effect the -- for
9 example, the thermostat of the -- in some remote
10 space.

11 Q. And so what were the -- how were you
12 controlling that sort of thing remotely? What
13 device was the user using to do the remote control
14 that you described?

15 A. So this is back in the days of
16 essentially terminal base computing. So there was
17 a computer in our facility in Champagne that would
18 acquire data sensors, and we had a very cheesy
19 little dashboard -- today we call it a
20 dashboard -- that would be rendered on this
21 terminal. And then with a keyboard command,
22 keyboard inputs you could generate commands that

1 would be sent down to the controllers to, you
2 know, effect whatever type of control you were
3 trying to do.

4 Q. And you mentioned I believe terminal
5 based -- they were terminal-based devices?

6 A. Yes. I mean, there was a computer
7 involved. But, you know, the computer was this
8 refrigerator-sized thing that was in another room.
9 So the computer was the thing that was attached to
10 the network that got all the sensor data. It
11 developed the user interface, pushed it out to
12 this terminal. Then you sat in another room with
13 a -- you know, with essentially a
14 character-oriented terminal where you would then
15 type in commands that would go back to the
16 computer that you sent over the network to the
17 little controller devices.

18 Q. Did I understand that your work --
19 you mentioned building digital interfaces to four
20 analog devices; did I understand that right?

21 A. Yes.

22 Q. And is that what your work focused

1 on?

2 A. No. No. I mean, that was part of
3 the effort. That was one of the things that team
4 members had to do, but that was not my personal
5 responsibility.

6 Q. What was your personal
7 responsibility?

8 A. Doing the software, mostly the
9 communications.

10 Q. And what sort of communications were
11 you using?

12 A. So these were using old-fashioned
13 telecommunication circuits, what were called
14 leased lines, so using services provided by the
15 telephone company to effectively create a network
16 between our centralized sites and the remote sites
17 of interest.

18 Q. Let's move on to your experience in
19 1984 at R.R. Donnelley & Sons Company?

20 A. Sure.

21 Q. What did that work entail?

22 A. That involved developing what we call

1 a process control system for a printing press, a
2 web offset printing press.

3 Q. And what did your work involve?

4 A. I was involved in the design and
5 implementation of the system. So it's a very
6 similar sort of system to what I did for the Army
7 Corps of Engineers. It's essentially a
8 distributed control system where you're trying to
9 allow someone to control aspects of the printing
10 press remotely because these printing presses were
11 huge. These are football-field-size presses, and
12 it's an incredibly loud environment. And so the
13 engineers -- there was a desire for them to be
14 able to control the presses from the nice confines
15 of their air-conditioned offices. So it was about
16 getting sensor data off of the presses, delivering
17 it to a computer in this remote location, and then
18 allowing the engineers there to control the press
19 remotely.

20 Q. Okay. And then from -- so that would
21 have been -- would that have been while you were
22 doing your master's degree?

1 A. It started while I was doing my
2 master's degree, but most of the work actually was
3 done after -- right after I graduated.

4 Q. Okay. And then you worked for a
5 couple of years as a consultant for Boeing, I see?

6 A. Correct.

7 Q. Was that while you were -- when you
8 were in your Ph.D. program at that point?

9 A. That's correct.

10 Q. Okay. And what was the nature of
11 your work for Boeing?

12 A. That was a pretty cool project. I
13 was working with a group that was designing
14 control software for the International Space
15 Station.

16 Q. And what was your particular role?

17 A. My role there was I was the operating
18 systems expert.

19 Q. When you say operating systems, what
20 do you mean?

21 A. Just the software that controls the
22 computer. In this case it was a flight control

1 computer. So this would have been an operating
2 system for a computer that was slated to be on
3 board the International Space Station.

4 Q. Okay. And do you know -- I'm
5 guessing there was probably more than one computer
6 on the Space Station; is that right?

7 A. There was many. I was just working
8 on -- my project was just one computer.

9 Q. Right. What was the general function
10 of that computer?

11 A. It had the generic name of the flight
12 control computer.

13 Q. Okay. And so the last one before you
14 entered the academic world was visiting researcher
15 at IBM, correct?

16 A. Correct.

17 Q. And what did that work entail?

18 A. Literally it was designing a juggling
19 robot.

20 Q. How did it go?

21 A. We got it to juggle in two
22 dimensions.

1 Q. Okay.

2 A. Think of an air hockey table that you
3 tilt on its side and you sort of juggle pucks. So
4 it was juggling, but only on a 2-D plane.

5 Q. The third dimension added some
6 complexity?

7 A. Oh, boy, yes.

8 Q. So let me jump forward to a couple
9 that I didn't ask you about earlier. You were a
10 member of the Technical Advisory Board at Ganymede
11 Software, correct?

12 A. Yes.

13 Q. What did Ganymede Software do during
14 that period that you were a member of the advisory
15 board?

16 A. At that time they were doing what are
17 called network management products. So these are
18 products that acquire data from devices in the
19 network, analyze the data, try and get a sense of
20 how the network is performing; and then, if need
21 be, push out commands to the devices to, you know,
22 change their -- some aspect of their operation.

1 Q. So can you give me an example of what
2 sort of data that the network management system
3 was looking at and responding to?

4 A. Yeah, sure. It would typically get
5 things related to volume of traffic. So it would
6 get things like counts of the number of packets
7 seen per unit time, number of bytes. It could
8 also get information of the number of -- if the
9 device was a router, the number of routes that are
10 currently being used, the size of the routing
11 table, just all sorts of data that network devices
12 keep internally.

13 Q. Okay. So what sort of thing would it
14 do based on that data?

15 A. It allowed network managers to, for
16 example, dynamically change the topology of their
17 network to maybe try and, for example, load
18 balance traffic between links, or if there were
19 different costs to operating different types of
20 links, try and optimize traffic flow to minimize
21 the cost of running their network.

22 Q. Okay. And then the final experience

1 that you have listed -- industry experience you
2 have listed is as a consultant for -- maybe you
3 can pronounce the university name for me?

4 A. Mälardalen.

5 Q. What did you do Mälardalen?

6 A. That was primarily academic-related.
7 I helped them design -- it's really related to,
8 for example, work I did with INTEROP. It was
9 helping them design a graduate program in
10 multimedia networking.

11 Q. Okay. Very good. Now, you have a
12 number of patents on which you're identified as an
13 inventor, correct?

14 A. I believe I have four.

15 Q. Okay. I think you have five, maybe.
16 Actually, one maybe is an application. So maybe
17 it hasn't issued. Maybe a couple of them are
18 that. Maybe turn to page 20 of your --

19 A. Sure.

20 Q. -- of your CV.

21 A. Okay.

22 Q. So you've got it looks like to me

1 three issued patents and two patents applications
2 listed here; is that right?

3 A. Yeah. I should actually update this.
4 The top one I believe issued.

5 Q. Okay. Congratulations.

6 A. Thank you. Really the first inventor
7 is a student. This is really his dissertation, so
8 he should really get -- I'll pass along your
9 congratulations.

10 Q. I noticed that all of these at least
11 issued after -- after you had been in the academic
12 world. I know sometimes it takes a while for them
13 to issue. Do all of these patents result from
14 your work in the academic world?

15 A. No.

16 Q. Which do not arise from your work in
17 the academic world?

18 A. The last one -- sorry, the bottom
19 one, the user controlled adaptive flow control, is
20 a patent that is actually joint with IBM.

21 Q. And that would have related to your
22 work on the -- I forget what you referred to it --

1 but the juggling robot?

2 A. No.

3 Q. Okay.

4 A. As I mentioned, the industry
5 experience in my vitae is -- really just lists
6 instances where I was employed outside the
7 university. As I believe I also mentioned, I've
8 had a significant number of projects with industry
9 while an academic. So effectively these were
10 projects that were performed with my UNC hat on.
11 And the patent that we're speaking of is an
12 example of a patent that resulted from a project
13 that was joint with UNC and IBM.

14 Q. Okay. Were the other patents and
15 applications that you have listed here the result
16 of academic work?

17 A. All the other ones here are purely
18 academic work. There was no industry involvement
19 with the other patents.

20 Q. Okay. Were you involved in the
21 prosecution of any of these patents?

22 A. Yes, in the sense that I helped

1 develop the specification and the claims, but --
2 and I believe one of them, the fourth patent, the
3 method for understanding the use of TCP/IP
4 networks by users, that one there were some office
5 actions that I did get involved in.

6 Q. How were you involved in those office
7 actions?

8 A. Oh, I'm sorry, no, I said that wrong.
9 It's the one above that, the methods and systems
10 for computer program products for network server
11 performance anomaly protection, that was the one I
12 believe I was involved in some office actions
13 with.

14 Q. Okay. How were you involved with
15 those office actions?

16 A. Well, the claims at some point were
17 rejected, in particular over the fourth patent
18 that I mentioned, the one with Hernandez-Campos as
19 the first inventor. So I explained to the patent
20 attorney why they were two different bodies of
21 work, and he then responded to the office action,
22 and then the patent issued.

1 Q. So he accepted your declaration
2 testimony?

3 A. I did not do a declaration. I just
4 simply -- I was just simply consulted on the
5 office action. And I don't believe I had any -- I
6 didn't do anything like submit a declaration.

7 Q. You provided input to whoever was
8 working on the response to the office action?

9 A. Correct.

10 Q. I see. Were you involved in the
11 prosecution of any of the other patents or
12 applications you have listed here, other than you
13 mentioned just your general -- you know, as an
14 inventor reviewing the claims and the
15 specification before it was filed?

16 A. No.

17 Q. Other than what you've already
18 described, do you have any experience with the
19 patent prosecution process?

20 A. Just working on things like inter
21 partes reviews.

22 Q. And that would all relate to post

1 issuance proceedings, correct?

2 A. Correct.

3 Q. So you mentioned your work on IPRs
4 and the like. I believe you have your recent
5 testifying experience listed here in your CV,
6 correct?

7 A. Yes.

8 Q. Do you know where that's at? I'm
9 looking for it right now, but if you --

10 A. It should be on page 2.

11 Q. Okay. Very good. Let's look at
12 that. Do you know how many -- how many
13 proceedings you've testified in, in the last four
14 years? I think we kind of looked at a little less
15 than 20.

16 A. I was going to say it's whatever
17 this -- whatever this list is, plus I think I've
18 been deposed at least once since this list was
19 generated.

20 Q. Okay. And then you have a trial
21 coming up shortly, I understand?

22 A. I do.

1 Q. Does that relate to one of the
2 proceedings that's listed here?

3 A. Sort of. You'll see the second,
4 third, and fourth IPR entries here. They're all
5 on behalf of -- IPRs on behalf of Cisco. These
6 are all patents that have been asserted against
7 Cisco. And the trial that's about to start is --
8 concerns these patents.

9 Q. Okay. Is Cisco a defendant in that
10 litigation?

11 A. Yes.

12 Q. Do you know who the plaintiff or
13 patent owner in that litigation is?

14 A. I do.

15 Q. Who is that?

16 A. It is an outfit called Centripetal
17 Networks.

18 Q. And I am assuming, based on your IPR
19 work here, that you'll be -- you're an expert for
20 Cisco in that case; is that correct?

21 A. That's correct.

22 Q. So this testifying experience covers

1 your past four years. Do you have other IPR
2 experience that would go back further than four
3 years?

4 A. Yes.

5 Q. How many times have you represented a
6 patent owner in post grant proceedings at the
7 Patent Office?

8 A. For all of the IPR work I've done, I
9 would probably say it's probably around a 60/40
10 split, with 60 percent being petitioners and 40
11 percent being patent owners.

12 Q. Okay. What are the proceedings that
13 you can identify, whether or not they're included
14 on this list, where you represented a patent owner
15 in a patent office proceeding?

16 A. So on this list I guess the IPR
17 doesn't show up here, but two-thirds of the way
18 down on page 2 there is Qualcomm versus Apple. I
19 defended a set of Qualcomm patents in IPR
20 proceedings.

21 Q. Were the patents involved in those
22 IPR proceedings also involved in the litigation

1 that you have listed here?

2 A. I believe, yes.

3 Q. Okay. Any other instances that you
4 can recall where you represented a patent owner in
5 a post grant proceeding?

6 A. Sure. If you look on page 3 in the
7 middle, there is an IPR of the '211 patent that
8 was on behalf of patent owner Cisco.

9 Q. Right. I see that. Are there any
10 instances where you represented a patent owner in
11 a post grant proceeding that you can recall that
12 would -- that aren't listed here, because I assume
13 they would go back further in time than four
14 years?

15 A. Yes. I know I have done others. I
16 believe I've done one for IBM, for patent owner
17 IBM. I'd have to just go and check my records,
18 but I think -- I know I've done some for some
19 smaller companies whose names I'm not going to
20 remember off the top of my head.

21 Q. Okay. What percentage of your time,
22 your working time approximately over the last four

1 years has been devoted to expert witness work?

2 A. So I actually track this in terms of
3 the nine-month -- or sorry, the 9 to 5 Monday
4 through Friday time. And I try and keep it under
5 20 percent.

6 Q. So is it somewhere in the vicinity
7 approaching 20 percent?

8 A. Yeah, it's probably 20 percent, you
9 know, plus or minus a couple percentage points
10 depending on, you know, when you're looking.

11 Q. Sure. Are you aware of any instances
12 in which any of your testimony or proposed
13 testimony has been disallowed by a court or
14 other -- or the Patent Trial and Appeal Board?

15 A. I am aware of one instance in a
16 district court.

17 Q. What case was that?

18 A. That was quite some time ago, and it
19 was a case in North Carolina. It was a contract
20 dispute between a cellular telephone company and
21 an equipment vendor. And the issue there was I
22 was working for the telephone company. And they

1 had a large number of experts, and they were
2 required to reduce the number of experts. And
3 what the attorneys in that case did -- I had no
4 knowledge that this had occurred -- apparently
5 they had taken the other expert -- expert reports
6 and included them to my report as an exhibit and
7 said, Oh, you know, Jeffay will testify to all of
8 this stuff. And the other side complained. And
9 the judge made some rulings striking all those
10 exhibits from my expert report.

11 Q. Ben Pleune wasn't the counsel who did
12 that to you, was he?

13 A. No.

14 MR. PLEUNE: I was hoping you'd never
15 find out.

16 (Laughter).

17 BY MR. ALEXANDER:

18 Q. Do you remember the name of that
19 case?

20 A. I do. It's a French cellphone
21 company. We all learned how to pronounce it.
22 It's pronounced "Bouygues," but it is spelled

1 B-O-U-Y-G-U-E-S. And even there I'm probably
2 misspelling it. So Bouygues Telecom versus the
3 U.S. company was called Tekelec, which was
4 T-E-K-E-L-E-C, I think.

5 Q. Thank you. Any other instances that
6 you recall in which -- or that you're aware of in
7 which a court or other tribunal disallowed any
8 portion of your testimony or proposed testimony?

9 MR. PLEUNE: Objection.

10 THE WITNESS: That's the only one I'm
11 aware of.

12 BY MR. ALEXANDER:

13 Q. Are you aware of instances in which a
14 court disagreed with your opinion?

15 A. No, I can't think of -- I can't think
16 of any.

17 Q. Does that mean that courts always
18 agree with your opinion, or that you just don't
19 always know how the cases turn out?

20 A. Well, I certainly don't know how a
21 lot of the cases turn out, but I just don't
22 recall -- I mean, there are things like IPRs

1 where, you know, they often say, you know, we
2 credit the testimony of Dr. Jeffay. But generally
3 I just don't recall instances where, you know,
4 they ever say, you know, we disagree with this
5 expert. It seems like they always take the higher
6 ground. If they agree with an expert they say, We
7 agree with this expert or we credit their
8 testimony. And if they don't like your testimony,
9 it seems to me they just say, We like the other
10 guy's testimony.

11 Q. Fair enough. I understand what
12 you're saying.

13 Are you aware of situations in which
14 a court or the Patent Trial and Appeal Board has
15 reached a conclusion that disagrees with the
16 opinion that you offered?

17 A. I mean, I'm sure -- I'm sure it's
18 happened. I can't think of any obvious examples.

19 Q. Do you have any idea of what
20 percentage of the time a court or tribunal's
21 decision on an issue on which you've opined aligns
22 with your opinion?

1 A. So in terms of IPRs and things in
2 front of the PTAB, I think it's the case that the
3 vast majority of times the positions that I've
4 taken, or the ultimate conclusion of something
5 being valid or invalid has carried the day.

6 Q. Is that something that you keep track
7 of?

8 A. No.

9 Q. Do you know about how much time
10 you've spent working on the -- these matters? I
11 guess I'll limit myself specific to your work on
12 the '935 patent and the corresponding petition for
13 the moment.

14 A. That is certainly a knowable number
15 in terms of like how many hours I've worked, but
16 that's not a number I have off the top of my head.
17 The bulk of the work was done last year.

18 Q. Do you have a rough idea?

19 A. Probably between 50 and 100 hours.

20 Q. And would that be on just your
21 declaration of the '935, or would that cover both
22 the declaration that you submitted in the '935 and

1 then the declaration in the other IPR on the '655
2 patent?

3 A. That's a good question. I believe
4 that's for the -- for the two combined.

5 Q. Now, I see that your report -- each
6 of your declarations is approaching 400 pages.
7 Did you write the reports yourself?

8 A. I developed the first draft of each,
9 and then from there on out it was an iterative
10 process with Residio and CSG's counsel.

11 Q. Do you recall how many pages
12 approximately your first draft of the '935
13 declaration was?

14 A. No. I mean, I didn't print it.

15 Q. Do you think it would have been more
16 than 100 pages?

17 A. Probably not.

18 Q. Do you have your expert report for
19 the '935 patent handy?

20 A. I do.

21 Q. Why don't you turn to that?

22 A. Okay.

1 Q. I'm looking at the table of contents
2 that starts on little Roman Numeral (i).

3 A. Sure.

4 Q. I see there, for example, the section
5 titled, "File History." Do you see that?

6 A. Yes.

7 Q. And it looks like, according to the
8 table of contents, that spans a little more than
9 50 pages; does that seem right?

10 A. Yes, it's quite long.

11 Q. Did you write that section?

12 A. No, I did not write that section.

13 Q. Did you provide any substantive edits
14 in that section?

15 A. I did. I mean, I had discussions --
16 lengthy discussions with counsel prior to the
17 drafting of any of this text. And so we
18 discussed -- we discussed the file history
19 generally and the important points that needed to
20 come out here. And then it was drafted, and then
21 I took passes over it and sort of made it my own.

22 Q. Do you recall any edits you made to

1 the prosecution history?

2 A. I mean, I don't know if I could tell
3 you specific things that I changed, but I do
4 remember editing that section.

5 Q. How about the section related to the
6 litigation involving the '935 patent, did you
7 write that section?

8 A. No.

9 Q. How about the next section on claim
10 construction, did you write that?

11 A. I believe I wrote portions of that.

12 Q. Would -- did you have -- in that
13 initial draft -- you said that you wrote the
14 initial draft, you said. Did it include a claim
15 construction section?

16 A. I believe it did.

17 Q. Do you remember what terms you
18 addressed in that?

19 A. I don't recall if they were different
20 than the terms that were here. I mean, generally
21 my recollection is, you know, you had discussions
22 about claim construction because that's obviously

1 always a very important part of these matters.
2 And talking about how -- it seems like the key
3 terms really just required their plain and
4 ordinary meaning.

5 MR. ALEXANDER: Okay. Ben, I'm probably
6 ready to move into a more substantive portion.
7 It might take a while. So we've been going it
8 looks like not quite an hour. So I'll kind of
9 turn it to you. What do you think about taking
10 a break now -- you know, a short break, five,
11 ten minutes?

12 MR. PLEUNE: Yep, let's go ahead and
13 take a break. We will endeavor to make this
14 about ten minutes. And I think potentially
15 we'll get better at it as we go, but let's do
16 that.

17 MR. ALEXANDER: Sounds good.

18 THE WITNESS: So come back at ten after
19 the hour?

20 MR. ALEXANDER: Yeah.

21 (Whereupon, a recess was taken).

22 BY MR. ALEXANDER:

1 Q. Dr. Jeffay, let's keep looking at
2 your declaration on the '935 patent. Turn to the
3 claim construction section, please, which looks to
4 me like it begins at page 87. Oh, you know what?
5 I may be looking at the wrong declaration. So
6 that's probably about right, but may not be
7 exactly right.

8 A. That is exactly right.

9 Q. All right. So you list here several
10 terms on which you have some discussion of your
11 opinion on the appropriate construction, correct?

12 A. Correct.

13 Q. And then on page 93 you begin a list
14 of other terms that the patent owner apparently
15 provided constructions in litigation, correct?

16 A. That's my understanding, yes.

17 Q. And you don't -- you don't offer an
18 opinion one way or the other, basically, other
19 than to say -- I'm sorry, you say, in my opinion
20 these terms should be given the plain and ordinary
21 meaning, correct?

22 A. That's correct.

1 Q. But you don't provide an
2 understanding of what that means, correct?

3 A. That's correct.

4 Q. Okay. Let me point you to one of
5 these terms, the last one, data bearer service; do
6 you see that?

7 A. I do.

8 Q. What is your understanding of what
9 the plain and ordinary meaning of that term is?

10 A. So data bearer service per se is not
11 really a term of art. Bearer service is in the
12 telecommunications world. And a bearer service
13 is -- refers to -- it's a telecommunications
14 service that essentially has the construction
15 that's proposed by the patent owner with the
16 understanding that this notion of network
17 interfaces are network interfaces of a
18 telecommunications network. They're not -- we're
19 not talking about generic network interfaces here.

20 Q. So I don't want to put words in your
21 mouth, but did I understand you correctly that the
22 construction proposed by the patent owner is

1 accurate if it's clarified that network interfaces
2 would be telecom network interfaces?

3 A. Correct. Interfaces in the
4 telecommunications network.

5 Q. Okay. What would be examples of such
6 a bearer service?

7 A. So bearer service is really sort of a
8 legacy term referring -- it's an old term, and
9 networks have evolved significantly since then.
10 So as it relates to the patents here, because they
11 qualify with data bearer service, I think, you
12 know, SMS messaging would be an example of a data
13 bearer service.

14 Q. Are there any other examples you can
15 think of?

16 A. There are. They don't really relate
17 to the patent. I mean, there is a lot of what's
18 called signaling that is also a type of bearer
19 service where data is exchanged between network
20 interfaces for, you know, the purpose of typically
21 establishing other types of services. And
22 today -- so, not necessarily in 2004 -- a lot

1 of -- informally people refer to Internet services
2 that are provided over the cellular network as a
3 type of bearer service.

4 Q. Referring to the signaling that you
5 mentioned, you said data was exchanged between
6 networks. I didn't catch what that would be used
7 for. What's the purpose of those signaling
8 functions that you described?

9 A. It's typically to set up other types
10 of services, to control services that a
11 telecommunications network can provide.

12 Q. Can you give any examples?

13 A. Sure. So around the 2004 time frame
14 there still existed services that went under the
15 general name of ISDN, which was an acronym that
16 stood for Integrated Services Digital Network.
17 And they had bearer -- they had what are called
18 bearer channels. They had channels both for
19 transmitting data and transmitting signaling
20 information which is used to control the flow of
21 data in the telecommunications network. So you
22 can think of it as control data.

1 Q. Okay. Control data meaning data
2 that's used in controlling the network; is that
3 right?

4 A. Yes, or the service that's being
5 provided.

6 Q. And just to make sure I understand,
7 what sort of service would be being provided?

8 A. Well, that depends on the -- that
9 depends on the service. I think for purposes
10 here -- as I say, there were also -- in the ISDN
11 world, for example, you had channels for actual
12 data and channels for signaling. And they were
13 both considered, you know, bearer services. So in
14 one case the signaling could control the flow of
15 the data on a data bearer channel. So by control,
16 for example, determine how the data is being
17 routed. You know, what's the destination to which
18 the data is destined?

19 Q. Okay. Did the ISDN functionality
20 you're describing transmit data from, say, one
21 user to another user?

22 A. ISDN was a generic service. And if

1 two users subscribed to the service, then yes, you
2 could transmit data from one user to another user.

3 Q. Are you aware of any examples of that
4 being implemented in that way?

5 MR. PLEUNE: Object to the form.

6 THE WITNESS: I mean, as I say, it's a
7 generic service provided by the phone
8 companies. I used ISDN, for example, to
9 connect a computer in my home to equipment that
10 was on the UNC campus.

11 BY MR. ALEXANDER:

12 Q. So one term that's used in some of
13 the '935 patent claims that I don't see addressed
14 in your claim construction section specifically is
15 the term microcontroller; is that right?

16 A. I believe that's correct.

17 Q. Okay. Can you tell me what your --
18 well, let me ask: Is it your opinion that for
19 purposes of this proceeding microcontroller should
20 be given its ordinary meaning?

21 A. Yes.

22 Q. Can you tell me what your

1 understanding of the ordinary meaning of the term
2 microcontroller was as of November 2004?

3 A. Sure. I think microcontroller is a
4 bit of a -- an old term by 2004. And I think it
5 effectively is really just referring to some sort
6 of processing unit, and possibly an embedded
7 processing unit.

8 Q. Now, when you say some sort of
9 processing unit, do you mean any sort of
10 processing unit?

11 A. Well, I think it's typically
12 understanding that it's a digital processing unit.
13 So we're not talking about analog processing, but
14 it's effectively something that has a processor, a
15 memory, and some I/O capabilities.

16 Q. So it would have built-in memory?

17 A. Yes.

18 Q. And when you say built-in memory, are
19 you referring -- well, when you say memory, are
20 you referring to random access memory?

21 A. It probably has random access memory,
22 but I'm just simply referring to something from

1 which it can fetch instructions from. So it could
2 be, for example, ROM just as easily.

3 Q. And when you refer to I/O
4 capabilities, what do you mean?

5 A. Just simply the ability to interact
6 with devices external to the microcontroller.

7 Q. Did you consult any textbooks or
8 dictionaries or other materials in forming your
9 view of the ordinary meaning of microcontroller as
10 of the relevant time frame?

11 MR. PLEUNE: Object to the form.

12 THE WITNESS: No. I mean,
13 microcontroller is a fairly generic term. By
14 2004 I think it was a built of an old term. I
15 don't know that the term was being widely used
16 then. You know, I've had experience with
17 microcontrollers as of 2004 for at least, you
18 know, 25 years.

19 BY MR. ALEXANDER:

20 Q. So when you've referred to a
21 microcontroller a couple of times as an old term,
22 what do you mean by that?

1 A. I just don't think it was as popular
2 a term in 2004 as it was, say, ten years ago. I
3 think there were more -- more modern terms.
4 Microcontroller comes out of the days when micro,
5 referring to microelectronics, was a big deal.
6 And that was a big deal in, you know, the '70s and
7 the '80s. So by 2004, you know, we just didn't
8 call things micro much anymore.

9 Q. So you said by 2004 the term
10 microcontroller was not as popular as it had been
11 ten years before. Did the meaning to a person of
12 ordinary skill in the art change between 1994 and
13 2004?

14 A. No. I think it's always -- it's
15 always meant the same thing, that it's a digital
16 electronic -- think of it as a small, you know,
17 embedded processor and memory and I/O, a little
18 teeny computer.

19 Q. Is there a difference between a
20 microcontroller and a microprocessor?

21 A. It depends on how fine you're -- you
22 know, how precise you're trying to be with the

1 terms. I mean, some people can certainly use them
2 synonymously in a lot of contexts. If one is
3 trying to be more precise, it would be that a
4 microcontroller would include some type of
5 processor.

6 Q. I may have misunderstood you. Could
7 you repeat the last part of what you said? You
8 said some people could use them synonymously, but
9 if somebody is trying to be more precise they
10 might -- and then I think I --

11 A. They would say that the
12 microcontroller is more of a system, a small
13 system, whereas the microprocessor would be just a
14 component of the system.

15 Q. Did you consult any materials
16 regarding the meaning of microcontroller in
17 preparation for your deposition today?

18 A. No. I'm just basing my understanding
19 of microcontroller on my years of experience
20 working with microcontrollers and teaching aspects
21 of how and when and where microcontrollers are
22 used.

1 Q. I added a couple of documents to the
2 Dropbox folder that I provided to the '935 patent.

3 A. Let me just refresh.

4 Q. Yeah, I know it may take a second.
5 So one of them -- the first one I'd like to direct
6 your attention to is entitled, "Excerpts From
7 Microsoft Computer Dictionary." I stamped that as
8 Exhibit 4.

9 A. Okay. I've got that.

10 Q. Okay. Great.

11 MR. PLEUNE: So we're looking at
12 Microsoft Computer Dictionary excerpts from the
13 Microsoft Computer Dictionary?

14 MR. ALEXANDER: Yeah. And you'll see
15 that it's stamped Exhibit 4. Have you got that
16 on your copy, Ben?

17 MR. PLEUNE: I do.

18 MR. ALEXANDER: Okay. Very good.

19 BY MR. ALEXANDER:

20 Q. All right. Dr. Jeffay, are you
21 familiar with the Microsoft Computer Dictionary?

22 A. Yes.

1 Q. Do you ever -- do you ever use it?

2 A. I do not. I believe in my experience
3 the Microsoft Dictionary tends to take a very
4 Microsoft-centric view of technology.

5 Q. Is that a problem?

6 A. It can be.

7 Q. How so?

8 A. Well, I think it often has narrower
9 definitions of terms than as someone who has been
10 involved in the field for nearly 40 years and has
11 a great deal of experience in this area and
12 teaches this stuff. There is lots of concepts
13 that I've found in the Microsoft Dictionary that,
14 as I say, I just find they tend to comport with a
15 particular view of technology that I associate as
16 being espoused by Microsoft.

17 Q. Why -- why is that? You mentioned
18 that Microsoft Dictionary might take narrower
19 views of particular terms; did I understand you
20 right?

21 A. Correct.

22 Q. So why would that be a

1 Microsoft-focused view of technology?

2 MR. PLEUNE: Object to the form.

3 THE WITNESS: Knowing a lot about
4 technology, I can often see that there little
5 bits of Microsoft philosophy embedded in a lot
6 of the terms that they've defined.

7 BY MR. ALEXANDER:

8 Q. Okay. Well, let's look at the -- so
9 this is the Microsoft Computer Dictionary Fifth
10 Edition; do you see that from the --

11 A. I do.

12 Q. -- cover page?

13 This -- if you look at the second
14 page of the excerpts I provided here it says the
15 copyright date is 2002, correct?

16 A. Yes.

17 Q. Okay. And you're generally familiar,
18 you said, with the Microsoft Computer Dictionary,
19 correct?

20 A. Yeah, I have not read it cover to
21 cover, but I have -- I have -- I've seen it used
22 quite a bit.

1 Q. Right. And you're aware that it's
2 published in various editions, right?

3 A. Yes.

4 Q. Okay. And so this fifth edition is
5 from 2002, according to the copyright page,
6 correct?

7 A. Yes.

8 Q. You said you are familiar with it
9 being used. Where have you seen it used?

10 A. I have seen it used often in
11 proceedings like this and in litigation-related
12 proceedings.

13 Q. Are you aware of any situations where
14 it's been rejected by a court or a tribunal as not
15 credible?

16 A. I -- I don't know.

17 Q. Let's look at the -- if you look at
18 the bottom of the pages, there are pages from the
19 dictionary itself; do you see that? Well, if you
20 turn to kind of one of the pages with the actual
21 definition. I want to direct your attention to
22 that page that's marked 337 at the bottom, and I

1 believe it's page 5 of the PDF.

2 MR. PLEUNE: Just for the sake of
3 clarity for the record, this is a seven-page
4 document; and appears to be the first and
5 perhaps the second page, although that's not
6 clear, and pages 33, 232, 337, 338, and 339.

7 MR. ALEXANDER: Okay. I don't mind you
8 doing that, Ben, but I think that's not really
9 appropriate for you to interrupt to -- if you
10 want to clarify, you'll have the opportunity to
11 redirect.

12 MR. PLEUNE: Okay. Well, then I'll also
13 lodge an objection to the extent that this is
14 not a complete version of the book. I was just
15 trying to make a point to clarify the record,
16 but I'll lodge the objection as well.

17 MR. ALEXANDER: Fair enough. Do you
18 want me to put a complete copy of the book into
19 the record? I tried to respect the copyright,
20 so I didn't do that.

21 MR. PLEUNE: It's your deposition,
22 Counsel, but I want to make sure that the

1 transcript is clear.

2 BY MR. ALEXANDER:

3 Q. Okay. All right. Dr. Jeffay, are
4 you with me on page 337?

5 A. I am.

6 Q. And do you see that this page
7 includes the definition of microcontroller?

8 A. I do.

9 Q. Can you read that, please, for the
10 record?

11 A. Sure. It says microcontroller, noun,
12 a special-purpose, single-chip computer designed
13 and built to handle a particularly -- a particular
14 narrowly-defined task. In addition to the central
15 processing unit (CPU) a microcontroller usually
16 contains its own memory input/output channels
17 (ports) and timers. When part of a larger piece
18 of equipment, such as a car or a home appliance, a
19 microcontroller is an embedded system. See also,
20 embedded system.

21 Q. Is that an accurate definition of
22 microcontroller as of the time frame of the '935

1 patent's effective filing date?

2 MR. PLEUNE: Object to the form.

3 THE WITNESS: I think it's a perfectly
4 okay definition. I mean, I believe
5 microcontroller actually has a slightly broader
6 definition than this. I do not think in any
7 way, shape, or form microcontrollers are
8 limited to single-chip designs. And I also
9 don't believe that they are designed and built
10 to handle a particular narrowly-defined task.
11 The microcontrollers that I am familiar with
12 are programmable devices, and they can be
13 programmed to handle a wide variety of -- I
14 mean, they may be narrow in their application
15 because of the interfaces they have, but you
16 can program these to do many different tasks.

17 So, you know, at a high level for,
18 you know, just getting a gestalt of what a
19 microcontroller is, sure, this is fine. But as
20 I said, I think this is a fairly narrow
21 definition of what a microcontroller is.

22 BY MR. ALEXANDER:

1 Q. And did you already cover the aspects
2 where you think it's narrow?

3 MR. PLEUNE: Object to the form.

4 THE WITNESS: Well, let me just restate
5 it. In terms of, you know, a black-and-white
6 definition of something, I would not say that a
7 microcontroller is required to be a single-chip
8 computer. Those are something different that
9 are called systems on chips, or SOC, which an
10 SOC can be a microcontroller, but a
11 microcontroller need not be an SOC.

12 And I would also say that they're
13 also being quite narrow when they say that
14 microcontrollers are designed and built to
15 handle a particular narrowly-defined task. As
16 I say, virtually all microcontrollers that I am
17 familiar with are programmable devices. And
18 because they are programmable devices, they can
19 be programmed to handle a wide variety of
20 tasks.

21 BY MR. ALEXANDER:

22 Q. But would you agree that they're

1 generally programmed to handle a particular task
2 like it says here?

3 MR. PLEUNE: Object to the form.

4 THE WITNESS: It does not say that here.

5 It says -- it does not say programmed to. It
6 says designed and built. So when it says
7 designed and built, I'm viewing that as a
8 statement about the hardware. And I disagree
9 that they are designed and built to handle a
10 narrowly-defined task. I would agree that once
11 they are programmed, they typically are
12 programmed to handle a narrowly-defined task.
13 But as the hardware is designed and built,
14 they're programmable devices; and, therefore,
15 they are capable of performing a wide variety
16 of tasks.

17 BY MR. ALEXANDER:

18 Q. Okay. Can you look at the next page
19 for me?

20 A. Sure.

21 Q. So this page ends in 338, and the
22 last definition on this page is the term

1 microprocessor.

2 A. Okay.

3 Q. And you'll see it continues on to the
4 next page --

5 A. Yes.

6 Q. -- which is also included. Can you
7 read that definition for the record, please?

8 A. Sure. Microprocessor, noun, a
9 special processing unit (CPU) on a single chip. A
10 modern microprocessor can have several million
11 transistors on an integrated circuits package that
12 can easily fit into the palm of one's hand.
13 Microprocessors are at the heart of all personal
14 computers. When memory and power are added to a
15 microprocessor all the pieces, excluding
16 peripherals, required for a computer are present.
17 The most popular lines of microprocessors today
18 are the 680x0 family from Motorola which powers
19 the Apple Macintosh line, and the 80x86 family
20 from Intel, which is at the core of all IBM
21 PC-compatible computers. See also 6502, 65816,
22 6800, 68000, 68020, 68030, 68040, 80286, 80386DX,

1 80386SX, 8080, 8086.

2 Q. All right. Thank you, Dr. Jeffay.
3 Sorry to make you read the list of -- perhaps
4 unnecessary, but at least we got the whole thing
5 in there.

6 All right. So do you agree with this
7 definition of microprocessor?

8 A. I think this definition is fine, but
9 I think this definition also illustrates the
10 problem with the Microsoft Dictionary. It's just
11 not a scholarly dictionary. I mean, the fact it
12 has a sentence saying that a microprocessor can
13 easily fit into the palm of one's hand, I mean,
14 that's just not appropriate, you know, if you're
15 looking for a solid technical definition of
16 something. So I think this illustrates part of
17 the problems I have with this dictionary.

18 But in terms of a central processing
19 unit being on a single chip, I think that is --
20 that is exactly how microprocessors are
21 understood. It is the case that they can have
22 several million transistors, and it is the case

1 that they are at the heart of all personal
2 computers.

3 Q. How about the next sentence: When
4 memory and power are added to a microprocessor,
5 all the pieces, excluding peripherals, required
6 for a computer are present; is that true?

7 A. No. So again, it's kind of silly to
8 say when power is added. Again, it just shows a
9 very chatty sort of dictionary. In the art when
10 we teach freshman who take a literacy class what a
11 computer is we say that it's a processor, it is
12 memory, and it is I/O. And so, what this is
13 fundamentally missing here for there to be a
14 computer is the I/O, the ability to do input and
15 output. This is talking about the peripherals,
16 but it's completely overlooking the fact that you
17 need -- to have a computer, you need to have I/O
18 on there.

19 For a coffee table definition, sure,
20 you know, very informal. You could say when you
21 add power, all the pieces, excluding peripherals,
22 are present. But as a technical definition, and

1 for something to try and understand technical
2 disclosures in a patent, I don't think this is an
3 appropriate definition.

4 Q. So tell me what you would change
5 about this to make it appropriate in your opinion.

6 A. Well, so there's nothing wrong with
7 saying it fits easily into the palm of one's hand,
8 but, you know, that doesn't inform the definition.
9 Today I will tell you there are dies for
10 microprocessors that if you have a small hand,
11 they will not fit into the palm of your hand. You
12 know, the big thing, as I say, it's just
13 fundamentally missing any -- when it's talking
14 about how the microprocessor is used when added
15 with memory, all the pieces, excluding
16 peripherals, it's just missing I/O. I mean,
17 computers fundamentally are understood as a
18 processor, memory, and I/O.

19 Q. Okay. Anything else you would
20 change?

21 A. I would just recommend the reader to
22 a more technical dictionary.

1 Q. Okay. Well, let's look at Exhibit 5,
2 which is what I added to the Dropbox. This is --
3 "Excerpts from Comprehensive Dictionary of
4 Electrical Engineering" is the file name.

5 A. Okay.

6 Q. Do you have that?

7 A. Hang on. Okay. I have that.

8 Q. Are you familiar with this
9 dictionary?

10 A. I am not.

11 Q. Do you know who Phillip A. Laplante
12 is?

13 A. Maybe. I do know a Laplante. I
14 don't know if I know him or not.

15 Q. Okay. Who is the Laplante that you
16 know?

17 A. It's -- he's a faculty member at --
18 in New York. I want to say maybe Rochester.

19 Q. Do you know his first name?

20 A. I think it's Phil.

21 Q. Okay. Do you know -- you said he's a
22 faculty member. Do you know the nature of his --

1 what sort of faculty he is?

2 A. I believe he's either computer
3 science or computer engineering.

4 Q. All right. So this is the Second
5 Edition of the Comprehensive Dictionary of
6 Electrical Engineering, according to the cover
7 page, correct?

8 MR. PLEUNE: Objection, lacks
9 foundation.

10 THE WITNESS: Yes. I'll also note this
11 appears to be a 2005 dictionary.

12 BY MR. ALEXANDER:

13 Q. Do you know whether the meaning of
14 microcontroller changed between November 2004 and
15 2005?

16 MR. PLEUNE: Object to the form.

17 THE WITNESS: I don't know. I don't
18 think so.

19 BY MR. ALEXANDER:

20 Q. Can you turn to the third page of
21 this exhibit, which is page 439 from this
22 dictionary?

1 A. I'm having little problems here with
2 the interface. I can't get -- I think I'm on the
3 last page.

4 Q. Okay.

5 MR. PLEUNE: Similar objection to
6 before, that this is an excerpt of the
7 Comprehensive Dictionary of Electrical
8 Engineering, Exhibit 5.

9 BY MR. ALEXANDER:

10 Q. So Dr. Jeffay, are you able to see
11 the page with definitions?

12 A. Yes, now I have it now.

13 Q. Okay.

14 A. I have to be very careful not to hit
15 something to display on top of the text.

16 Q. Sorry. We're all dealing with the
17 new world, right? Unusual situation.

18 A. I think I've got it.

19 Q. Okay. Bottom left-hand corner of
20 page 439 includes a definition of microcontroller;
21 do you see that?

22 A. I do.

1 Q. Can you read that for us?

2 A. Let me see if I can't blow this up
3 without screwing this up. Okay. That's better.

4 It says, Microcontroller an
5 integrated circuit chip that is designed primarily
6 for control systems and products. In addition to
7 a CPU a microcontroller typically includes memory,
8 timing circuits and I/O circuitry. The reason for
9 this is to permit the realization of a controller
10 with a minimal quantity of chips, thus achieving
11 maximum possible miniaturization. This in turn
12 will reduce the volume and the cost of the
13 controller. The microcontroller is normally not
14 used for general purpose computation, as in a
15 microprocessor.

16 Q. I think it says, as is a
17 microprocessor, right there at the end.

18 A. It does say that, yes.

19 Q. Okay. Do you agree with this
20 definition of microcontroller?

21 A. So this is a better definition than
22 Microsoft. You could note that this specifically,

1 exactly as I just testified, it includes I/O
2 circuitry. And I was saying that's sort of a
3 central component. So it is better in that sense.
4 You know, all of the dicta that's here about why
5 it's the case, you know, I -- I just don't think
6 that's necessary. I don't really agree with it.
7 And as I say, I don't agree that it's necessarily
8 a single chip.

9 Q. Okay. Just to be clear, this does
10 not say single chip, does it?

11 A. Well, it says an -- a microcontroller
12 is an integrated circuit chip. So to me that says
13 that it's one chip.

14 Q. Okay. Is there anything else that
15 you disagree with in this definition?

16 A. No. I mean, I like -- I do like the
17 second sentence. It says, In addition to a CPU, a
18 microcontroller typically includes -- and I would
19 get rid of the word typically -- memory -- well, I
20 guess maybe they don't have to have timing
21 circuits. But I agree with the second sentence
22 that in addition to a CPU, a microcontroller

1 typically includes memory, timing circuits, and
2 I/O circuitry. That I agree with.

3 Q. Okay. If you look on the right-hand
4 column.

5 A. Okay.

6 Q. You'll see a definition of
7 microprocessor.

8 A. Okay.

9 Q. Do you see that?

10 A. I do.

11 Q. Okay. Can you read that for us?

12 A. A CPU real -- microprocessor: A CPU
13 realized on an LSI or VLSI chip.

14 Q. Do you agree with that definition?

15 A. This strikes me as a really old
16 definition. It's not incorrect, but I would not
17 have limited it to -- in 2005 to be talking about
18 LSI or VLSI I don't think helps anyone understand
19 what a microprocessor is.

20 Q. All right. Let's turn back to your
21 report, which is Exhibit 1, please.

22 A. Okay.

1 Q. Can you turn to Paragraph 267,
2 please?

3 A. Okay. I'm there.

4 Q. You're faster than me. You'll have
5 to give me a second.

6 Okay. So in this paragraph you say
7 that a person of ordinary skill in the art would
8 understand the disclosures of a microcontroller to
9 include a generic processor in an embedded system,
10 right?

11 A. Correct.

12 Q. And if I understand you right, you're
13 basing that on passage column 4 lines 10 through
14 13 of the '935 patent, correct?

15 A. I think the cite there is primarily
16 for the passage that's quoted.

17 Q. Okay. Let me step back, then. Why
18 would a person of ordinary skill in the art
19 understand the disclosures -- I'll start over.

20 You are citing column 4 lines 10
21 through 13 as the support for your statement that
22 a person of ordinary skill in the art would

1 understand the disclosures of a microcontroller to
2 include a generic processor in an embedded system,
3 right?

4 A. Yes.

5 Q. Okay. Let me first ask you: What do
6 you mean here by a generic processor?

7 A. You can think of that as just a
8 microprocessor. I mean, it's -- it just simply
9 means a processor, not a special purpose or
10 somehow customized processor. Just, you know,
11 any -- some microprocessor.

12 Q. Okay. And what do you mean when you
13 say a generic processor in an embedded system?
14 What's the significance of that last portion in
15 reference to an embedded system?

16 A. It's simply trying to give a little
17 color to how micro -- to the disclosures of
18 microcontroller in the '935 patent, that the
19 disclosures of the microcontroller are really in
20 an embedded system context.

21 Q. Okay. So what about the passage
22 you've cited from column 4 lines 10 through 13

1 supports your understanding that microcontroller
2 would include a generic processor?

3 A. I think it's just simply the
4 disclosures of the -- it says the context here of
5 column 4 is that it's talking about a cellular
6 telephone as a suitable remote control unit, and
7 that the phone includes a microcontroller that has
8 the text that's quoted here. So I think given the
9 disclosures of how -- so I think persons of
10 ordinary skill in the art fundamentally understand
11 that there are processors in cellular telephones.
12 So it's not talking about any sort of specific or
13 specialized cellular telephone. And so, given the
14 disclosures of the cellular telephone and
15 including a microcontroller with these
16 interconnecting properties, persons of skill in
17 the art would understand that this includes a
18 generic processor.

19 Q. Could you open up the '935 patent,
20 please?

21 A. Sure.

22 Q. And that's already been marked as

1 Exhibit 3. Let me know if you don't see the stamp
2 on the first page, but I think it should be there.

3 A. I'm good.

4 Q. All right. Now, the remote unit or
5 the cell phone disclosed in the '935 patent is not
6 wholly conventional; would you agree with that?

7 A. No, I don't think I would agree with
8 that.

9 Q. Okay. Look at the bottom of column
10 6, please.

11 A. Whereabouts?

12 Q. Starting at line 65. And so here it
13 says, In the preferred embodiment, the remote
14 control units are conventional cellular telephone
15 handsets that are equipped with a programming
16 kernel, such as Java or J2ME that enables the
17 telephone to be customized to perform functions
18 that are not typical of standard cellular
19 telephone operation, correct?

20 A. Correct.

21 Q. So isn't this disclosing something
22 more than simply a conventional cellular

1 telephone?

2 MR. PLEUNE: Object to the form to the
3 extent it misstates the record.

4 THE WITNESS: So maybe -- maybe you have
5 a different conception of what it means to be
6 conventional, but I think the passage at column
7 6 explicitly says the remote control units are
8 conventional cellular handsets. So I think as
9 a cellular handset, they are entirely
10 conventional.

11 BY MR. ALEXANDER:

12 Q. They configure to perform
13 nonconventional functions, correct?

14 MR. PLEUNE: Object to the form.

15 THE WITNESS: I mean, that's what it
16 says, but I think that's not a statement about
17 a handset. I think those are entirely
18 conventional. I think all this is simply
19 saying is that these are programmable devices,
20 and as a programmable device they can be
21 programmed to potentially do things that are
22 not typically done in regular -- as it says, in

1 standard cellular telephone operations. So
2 it's not a statement about the handset. It's
3 really just saying that they're programmable.

4 BY MR. ALEXANDER:

5 Q. A conventional cellular handset would
6 have a variety of functions unrelated to the
7 specific uses discussed in the '935 patent,
8 correct?

9 MR. PLEUNE: Object to the form.

10 THE WITNESS: That could certainly be
11 the case for some cellular handsets.

12 BY MR. ALEXANDER:

13 Q. Are you aware of any handsets that
14 would only have functionality related to that
15 disclosed in the '935 patent?

16 MR. PLEUNE: Object to the form.

17 THE WITNESS: I haven't researched that
18 question.

19 BY MR. ALEXANDER:

20 Q. Okay. Are you aware of anything,
21 because you pointed to this passage referring to
22 conventional remote telephone handsets, right?

1 Are you aware of any such conventional cellular
2 telephone handsets that were made specifically for
3 use only with -- only to provide the functions
4 described in the '935 patent?

5 MR. PLEUNE: Object to the form to the
6 extent you understand the question.

7 THE WITNESS: First, to be clear, you
8 were the one who pointed to the language in
9 column 6. And I can't think of any -- you
10 know, I am aware of programmable handsets. So
11 in terms of handsets, yes, I'm aware of
12 handsets that I believe could do the functions
13 that are described. If you're asking, you
14 know, handsets that were actually programmed to
15 do that, as I say, I haven't researched that
16 question.

17 Q. I'm asking a different question. Are
18 you aware of any cellular telephone handsets that
19 could provide only the functionality disclosed in
20 the '935 patent?

21 MR. PLEUNE: Object to the form.

22 THE WITNESS: I haven't researched that

1 question.

2 BY MR. ALEXANDER:

3 Q. So the answer is no, correct?

4 A. I think the more accurate answer is I
5 simply haven't researched that question.

6 Q. Actually, I think that's -- you're
7 wrong. And so I think I'm entitled to a yes or no
8 answer, Dr. Jeffay. I said, are you aware of any
9 cellular telephone handsets that perform only the
10 functions disclosed in the '935 patent?

11 MR. PLEUNE: And I just want to caution
12 counsel. I don't think that Dr. Jeffay has
13 done anything in this deposition other than
14 attempt to give wholesome and honest responses
15 to the questions that have been posed to him.
16 So I think the characterization that he is
17 somehow wrong is inappropriate, and I would ask
18 everybody involved in the deposition to make
19 sure that the rhetoric stays at a professional
20 level.

21 MR. ALEXANDER: Then you're exceeding --
22 you're the one who is violating the guidelines.

1 You're doing a lot of talking in this
2 deposition, and you know you're not supposed to
3 do that under the very specific rules of the
4 Board.

5 MR. PLEUNE: I don't agree with that.
6 If anything, I have only made very succinct
7 objections throughout the course of the
8 deposition. I don't think I've done anything
9 improper, and I am only specifically commenting
10 on your characterization of Dr. Jeffay's
11 testimony, which I think is inappropriate. I
12 want to make sure that's clear.

13 THE WITNESS: So will you reask your
14 question --

15 BY MR. ALEXANDER:

16 Q. Sure.

17 A. -- to reset?

18 Q. I think I am entitled to a yes-or-no
19 answer to this question, notwithstanding your
20 counsel's opinion on it.

21 Are you aware of any conventional
22 cellular telephone handsets that are programmed to

1 do only the functionality disclosed in the '935
2 patent?

3 MR. PLEUNE: Object to form.

4 THE WITNESS: Well, what is the
5 functionality that -- so let's enumerate. If
6 you want to dig into this, let's dig into this.
7 So what are the functions that you're
8 specifically interested?

9 BY MR. ALEXANDER:

10 Q. Sure. Let's look at Claim 1.

11 A. Okay.

12 Q. Are you aware -- and you can read
13 Claim 1 to refresh your memory if you'd like, but
14 you'll see that there is various functionality
15 claimed with respect to the remote unit, correct?

16 A. Yes.

17 Q. Okay. Are you aware of any
18 conventional cellular remote handsets programmed
19 to provide only that functionality that's recited
20 in Claim 1?

21 MR. PLEUNE: Object to the form.

22 THE WITNESS: So I don't believe that

1 Claim 1 requires the remote unit to only be
2 limited to the functions that are described --
3 attributed to the remote unit in Claim 1.
4 There are disclosures of the remote unit in the
5 specification that clearly do more than just,
6 for example, send and receive SMS messages. So
7 I am not aware of a remote unit having wireless
8 connectivity as disclosed in the '935 patent
9 that can only send and receive short
10 messages -- short message service, SMS,
11 messages.

12 BY MR. ALEXANDER:

13 Q. What other functionalities would
14 conventional cellular telephones have provided as
15 of the filing date of the '935 patent or the
16 effective filing date in November of 2004?

17 A. I think there were a wide range of
18 conventional -- of cell phones that were
19 conventional. I think most phones at that point
20 had cameras on them. They could take pictures.
21 Some phones had web browsers integrated in. You
22 could surf the web. Some of them had PDA -- most

1 of them had PDA, personal-digital-assistant-like
2 functions. So you could have address books and
3 lists of contacts and things like this. So I
4 think conventional cellular telephone handsets as
5 of 2004 were fairly richly functional devices.

6 Q. Did those various functionalities
7 that you described require the phone to have
8 random access memory?

9 A. So I haven't researched that
10 question; but as an expert, my bet is the answer
11 is yes.

12 Q. Why would your bet be yes, if I
13 understood you right?

14 A. Without a random access memory,
15 you're really -- you're really limited to either
16 things like a flash memory, which is pseudorandom
17 access. And I would have to -- knowing how these
18 things are programmed, I just would have to
19 believe that they would have to have some amount
20 of random access memory in order to function.
21 Processors -- all processors that I know of really
22 can only operate with a random access memory.

1 Q. Do you know how much random access
2 memory a phone having the capabilities like that
3 you described would have been typical in 2004
4 would have needed?

5 MR. PLEUNE: Objection to the form.

6 THE WITNESS: I think that would
7 probably vary all over the map.

8 BY MR. ALEXANDER:

9 Q. Do you have an idea of what that
10 range would be?

11 A. I would expect that it would range
12 from either several hundred kilobytes to some
13 number of megabytes.

14 Q. Are you aware what the typical phone
15 available during that time frame would have
16 provided in terms of random access memory?

17 A. As I say, I think if you're really
18 talking about a typical phone, I really think it
19 would have varied quite widely.

20 Q. How about to provide the specific
21 functionalities that you listed a few moments ago,
22 would that have been towards the lower end of that

1 range that you provided or the higher end?

2 MR. PLEUNE: Object to the form.

3 THE WITNESS: It would probably be the
4 higher end. Phones that had cameras of any
5 reasonable resolution would require some
6 significant amount of random access memory.

7 BY MR. ALEXANDER:

8 Q. Would a phone also need read-only
9 memory to provide the functionalities that you
10 said would have been typical as of 2004?

11 A. So virtually all computer systems,
12 including phones, require some form of read-only
13 memory.

14 Q. Do you know how much read-only memory
15 they would have needed to provide the
16 functionality that you've described that a phone
17 would have had around 2004?

18 A. No, I haven't researched that
19 question.

20 MR. PLEUNE: Counsel, we've been going
21 for about another hour. Is now a good time for
22 a break?

1 MR. ALEXANDER: Give me just a couple
2 more minutes and then we'll break. I think
3 we'll hit a convenient stopping point here in a
4 minute.

5 BY MR. ALEXANDER:

6 Q. Dr. Jeffay, if you could look at
7 Figure 4 of the '935 patent, please.

8 A. Okay. Got it.

9 Q. Do you know what this figure shows?

10 A. I believe Figure 4 is a diagram of
11 the base unit, and in particular the base unit
12 from Figure 1, the CPU from Figure 1.

13 Q. This diagram doesn't show any random
14 access memory or read-only memory, does it?

15 A. It does not explicitly have any
16 indication of this. I think that would be
17 understood as being part of the micro -- what's
18 labeled micro-control box, 106. And there also
19 may be some in the wireless modules, 70.

20 Q. Look back at Figure 3 for a moment,
21 please.

22 A. Figure 3?

1 Q. Yeah.

2 A. Okay.

3 Q. Is it possible that the
4 microcontroller shown in Figure 3 would also have
5 some built-in random access memory?

6 A. It could, yes.

7 Q. And it could also have some read-only
8 memory built in?

9 A. It could, yes.

10 MR. ALEXANDER: All right. Let's go
11 ahead and take a break. Do you want to try for
12 ten minutes again?

13 MR. PLEUNE: Yeah, we will.

14 (Whereupon, a recess was taken).

15 BY MR. ALEXANDER:

16 Q. Did you have any communications with
17 your counsel during the break?

18 A. We chatted on the phone.

19 Q. Okay. Did you discuss your testimony
20 that we just finished?

21 A. No. We discussed whether UNC was
22 delaying their start date for the fall semester.

1 Q. Are they?

2 A. No. We're all beholden to crazy
3 accreditation agencies who don't allow us to do
4 these things.

5 Q. I don't know if they're that crazy.
6 Well, they may be crazy, but I don't know if
7 they're crazy for that reason.

8 A. They're well-meaning. They're not
9 crazy. I shouldn't be so negative. Everything
10 about the fall is just up for grabs.

11 Q. That's fair to say.

12 So, all right, did you review any
13 documents during the break?

14 A. No.

15 Q. Let's continue on with -- I want to
16 ask you a few more questions about Paragraph 267
17 of your declaration.

18 A. Okay.

19 Q. So the -- I guess it's the third
20 sentence that begins, this is confirmed; do you
21 see where I'm reading from?

22 A. I do.

1 Q. This is confirmed by the fact that
2 the microcontroller described in the '935
3 communicates with and controls components in the
4 base unit and attached devices via traditional
5 communication buses, serial or parallel, and the
6 microcontroller executes Java software.

7 Is this sentence providing support
8 for your statement that a person of ordinary skill
9 in the art would understand the microcontroller of
10 the '935 patent to include a generic processor?

11 A. Yes.

12 Q. Okay.

13 A. The full statement is generic
14 processor in an embedded system.

15 Q. Yes. Okay. Why does the fact that
16 the microcontroller described in the '935 patent
17 communicates with and controls components in the
18 base unit and attached devices via traditional
19 communication buses support your opinion on that
20 point?

21 A. So there's no disclosures in the '935
22 patent really about any -- you know, any of the

1 internal workings of the microcontroller. So I
2 think a person of skill in the art would
3 understand we're just talking about a generic
4 microcontroller here. And the fact that it also
5 describes that the microcontroller performs, you
6 know, sort of expected, ordinary functions like
7 controlling components and attached devices and
8 communicating over traditional interconnects, just
9 all communicate that this is a generic, you know,
10 microcontroller, and it would include a processor.
11 And the whole context for the base unit is that,
12 you know, it's an embedded system.

13 Q. Okay. Do you recall Exhibit 5, which
14 was excerpts from the Comprehensive Dictionary of
15 Electrical Engineering?

16 A. That was the Laplante?

17 Q. Laplante.

18 A. Laplante, sorry.

19 Q. You can feel free to pull that back
20 up, if you'd like.

21 A. Okay. I have that.

22 Q. Okay. So my question is: Would the

1 microcontroller, as defined by that dictionary, be
2 able to communicate with and control components
3 via traditional communication buses?

4 A. Yes. I think that the sentence in
5 the microcontroller definition that says in
6 addition to a CPU, a microcontroller typically
7 includes memory, timing circuits, and I/O
8 circuitry would communicate to a person of
9 ordinary skill in the art that we're just -- that
10 in particular for the I/O portions, you're going
11 to have to have some -- you know, some traditional
12 bus in there.

13 So yes, this statement is consistent
14 with the understanding of a person of ordinary
15 skill in the art.

16 Q. Okay. In the second half of that
17 sentence in Paragraph 267 you say the fact that
18 the microcontroller executes Java software also
19 supports your opinion that a person of ordinary
20 skill would understand the '935 patent's use of
21 microcontroller to include a generic processor in
22 an embedded system, correct?

1 A. Correct.

2 Q. Would a microcontroller, as defined
3 in the Comprehensive Dictionary of Electrical
4 Engineering, be able to execute Java software?

5 A. So the microcontroller definition in
6 Exhibit 5 is really just talking about the
7 hardware construction, but -- so I think a person
8 of ordinary skill in the art understands that
9 microcontrollers are programmable devices. And
10 certainly, you know, one of the options that
11 existed in 2004 was that they could be programmed
12 via Java or really any number of programming
13 languages. So the definition in Exhibit 5 doesn't
14 specifically address this issue, but as I say, a
15 person of ordinary skill in the art would
16 understand these are programmable devices. Java
17 is one way you can program such a device.

18 Q. Let's look at Paragraph 268 of your
19 report.

20 A. Okay.

21 Q. Here you're citing the Oinonen
22 reference; is that correct?

1 A. Correct.

2 Q. And perhaps -- I don't know if I have
3 an immediate question on it, but maybe I should
4 take a moment to go ahead and mark that as an
5 exhibit, just in case you want to reference it.
6 So give me just a minute.

7 A. Sure.

8 Q. In the Dropbox folder I labeled what
9 was Exhibit 1016 to the petition. I have labeled
10 it as Exhibit 6. So I don't know how fast that
11 will refresh in your Dropbox folder, Dr. Jeffay,
12 but hopefully it will be fairly quick. Let me
13 just refresh this here.

14 A. Sure. So I see there was
15 previously -- I think this was here already --
16 there was Exhibit 1016. That's what you're --

17 Q. Yeah, it was already in there. The
18 only thing I just changed is I added an exhibit
19 stamp to it in the lower left-hand corner --

20 A. Oh, okay.

21 Q. -- of the first page. I don't know
22 if that -- I don't know how quickly Dropbox will

1 refresh. I kind of take my upload -- or download
2 it to you.

3 A. Is it okay if I just look at this
4 Exhibit 1016?

5 Q. It's perfectly okay with me. If you
6 don't have the document stamp now, it will later
7 refresh with the Exhibit 6 marking.

8 A. Okay. So I have the Oinonen
9 reference up.

10 Q. Okay. So in Paragraph 268, as I
11 understand your declaration, you're saying that
12 Oinonen discloses a microprocessor as well as an
13 application-specific integrated circuit, correct?

14 A. Correct.

15 Q. And you say at the -- a little bit
16 later in Paragraph 268, the last sentence, that
17 both the microprocessor and application-specific
18 integrated circuit operate as the claimed
19 microcontroller, correct?

20 A. Yes.

21 Q. Okay. I'm unclear whether you're
22 saying that both the microprocessor -- are you

1 saying that either the microprocessor or the
2 application-specific integrated circuit could
3 satisfy the microcontroller element of the claim
4 that you're opining on here?

5 A. Let me just review. I think what I'm
6 trying to communicate here is that either the
7 microprocessor or the ASIC could be the claim
8 microcontroller and the combination could also be
9 the microcontroller.

10 Q. Where do you say that the combination
11 could be the microcontroller?

12 A. Well, I don't think that's explicitly
13 said, but I believe that's what was intended here
14 by the word "both."

15 Q. Okay. Well, you say actually in
16 the -- I thought the sentence I read was the last
17 sentence, but I realize now I'm wrong because
18 there is -- the last sentence reads, These
19 microcontrollers are illustrated in annotated
20 Figure 3 of Oinonen, correct?

21 A. Yes.

22 Q. And you have a red box around the

1 processor and a red box around the ASIC, correct?

2 A. Correct.

3 Q. So those are both labeled -- you're
4 calling both of those microcontrollers?

5 A. Yes. As I said, they each can be a
6 microcontroller.

7 Q. Okay. What is an
8 application-specific integrated circuit?

9 A. So an ASIC -- they're just called
10 ASICs, A-S-I-C -- is sort of the more modern term
11 for what used to be called microcontrollers, and
12 essentially they are -- they're systems on a chip.
13 So they're custom silicon that is designed to
14 perform an application-specific function. And
15 really they're all over the map as to what they
16 actually do. So you can think about it as
17 essentially a program that's burned into silicon.

18 Q. Are ASICs programmable?

19 A. They're typically not programmable
20 after they are put in silicon.

21 Q. Okay. Can you return to Exhibit 4,
22 which was the Microsoft dictionary, the excerpts

1 from it?

2 A. Sure. Just give me a minute. Okay.
3 I'm there.

4 Q. If you look at the third -- can you
5 look at the third page of the PDF which is page 33
6 from the dictionary.

7 A. I'm there.

8 Q. Okay. Towards the bottom of the
9 left-hand column there is an entry for
10 application-specific integrated circuit, correct?

11 A. I see that.

12 Q. And that's what -- that's the same
13 term you used in Paragraph 268, correct?

14 A. Yes.

15 Q. And it says, See gate array?

16 A. Correct.

17 Q. So now if you look at the next page
18 of the excerpts, it's page 232 from the
19 dictionary.

20 A. I see that.

21 Q. And there is a definition for gate
22 array, correct?

1 A. Correct.

2 Q. Can you read that, please?

3 A. Gate array, noun, a special type of
4 chip that starts out as a nonspecific collection
5 of logic gates. Late in the manufacturing
6 process, a layer is added to connect the gates for
7 a specific function. By changing the pattern of
8 connection, the manufacturer can make the chips
9 suitable for many needs. This process is very
10 popular because it saves both design and
11 manufacturing time. The drawback is that much of
12 the chip goes unused. Also called
13 application-specific integrated circuit or logic
14 array.

15 Q. Do you agree with that definition?

16 A. You know, again, this is a little
17 overly narrow. I mean, there are other ways to
18 realize ASICs other than gate array. So a gate
19 array can absolutely be part of an ASIC. And I
20 think the issue with gate arrays is that they're
21 typically -- the term is typically used. These
22 are things that can actually be programmed after

1 manufacturing. So there are things called fields
2 programmable gate arrays or FPGAs. So certainly
3 this is a technology, the use of gate arrays that
4 can be used to realize an ASIC, but there's other
5 ways to build ASICs.

6 Q. What are other ways to build ASICs?

7 A. You basically -- so what's being
8 described here is a way in which you take a
9 vanilla chip and then you add a mask, what it
10 calls here a layer, to interconnect the -- to
11 interconnect the gates. So what you're really
12 doing when you're making an ASIC is you're really
13 creating this particular mask layer. You can also
14 create ASICs by just interconnecting the gates
15 directly without this other mask layer.

16 Q. Do ASICs include built-in RAM?

17 A. So ASICs are generic. I mean, the
18 notion of application-specific is really important
19 here. I mean, it's really completely a function
20 of the application. So you can -- because you're
21 starting with just generic transistors, you can
22 implement pretty much anything in ASIC.

1 Q. Would a person of ordinary skill in
2 the art understand from the term "ASIC" that it
3 includes random access memory?

4 A. It's going to depend on the
5 application, but just as a general matter I think,
6 you know, virtually every ASIC is probably going
7 to have some form of random access memory on it.

8 Q. Would a person of ordinary skill in
9 the art understand that an ASIC would have I/O
10 circuitry built in?

11 A. Yes. That it's absolutely going to
12 have to have.

13 Q. How about timing circuitry?

14 A. Timing circuitry is pretty generic,
15 so it will probably depend on the application.
16 But, you know, there's typically a processor
17 somewhere on the ASIC, and processors and memory
18 all need a clock. So there's going to have to be
19 some sort of clocking or timer feature undoubtedly
20 on the ASIC.

21 Q. Well, in Oinonen there is not just an
22 ASIC, there is also a microprocessor, right? A

1 separate microprocessor?

2 A. Correct. But an ASIC is going to
3 need its own time source in order to function.

4 Q. And it's your testimony that that
5 would certainly be on the ASIC itself?

6 A. Yeah, it essentially has to be on the
7 ASIC; otherwise, it's typically not, for example,
8 going to be able to use the I/O interfaces. I/O
9 is all about timing.

10 Q. So are ASICs considered -- let me
11 back up. Do microcontrollers have to be
12 specifically designed for every application?

13 A. If you're referring to the hardware,
14 I would say no, not for every application. If
15 you're referring to software, I would say yes.

16 Q. Okay. So my question was intended to
17 refer to the hardware.

18 A. Okay.

19 Q. And so no, it would not have to be
20 specifically designed for every application?

21 A. Yeah, it's completely application
22 dependent, but, I mean, there are generic systems,

1 little boards you can buy that are
2 microcontrollers that are -- you know, it's just
3 generic components.

4 Q. Does the hardware for an ASIC have to
5 be specifically designed for every application?

6 A. So the -- it depends what you mean by
7 the hardware. So the notion of an ASIC is that
8 you are effectively programming the hardware. So
9 in that sense the hardware -- the configuration of
10 the hardware is going to be specific to the
11 application.

12 Q. So you said, if I understood right,
13 that -- you used the phrase it is burned onto the
14 hardware?

15 A. Yes, I did use that phrase.

16 Q. Okay. Can you explain what you mean
17 by that?

18 A. Yeah, that's some jargon that I
19 probably shouldn't use. What I mean is that as
20 part of the fabrication process of the chip, as
21 part of -- yeah, the fabrication part of the chip,
22 you can think of it as you sort of physically

1 hardware transistors together in particular
2 configurations to realize the functions that are
3 required for your application.

4 Q. And that's not necessarily true of
5 microcontrollers, correct?

6 A. Correct.

7 Q. Are you aware of any dictionaries or
8 textbooks that would define the term ASIC, or
9 application-specific integrated circuit, as the
10 more modern term for microcontroller?

11 A. I'd have to go and check. I don't
12 know that I can give you a reference just sitting
13 here today.

14 Q. Do you know if it's typically more
15 expensive to design a system that includes a
16 programmable microcontroller like you've described
17 already versus an ASIC that has the program burned
18 onto the chip?

19 A. So I had a little trouble at the
20 beginning of your question. Did you say extensive
21 or expensive?

22 Q. I'm sorry, I said expensive like

1 cost.

2 A. So a generic microcontroller is
3 something that you can just buy and program with
4 the software. So those would tend to be cheaper
5 than an ASIC; or, said another way, the issue with
6 ASICs is the issue with all semiconductors, which
7 is how many are you going to make? If you make,
8 you know, ten, they're expensive. If you make a
9 million, they're super cheap.

10 Q. So can you turn back to the Oinonen
11 reference for a moment.

12 A. Sure.

13 Q. Is it your opinion that Oinonen
14 discloses sending a command for an environmental
15 device from a remote unit -- I kind of lost track
16 of my question, so let me start over. You were
17 probably tracking it better than I was, but I'll
18 start over anyway.

19 Is it your opinion that Oinonen
20 discloses using a remote unit to send an SMS
21 message containing a command for an environmental
22 device?

1 MR. PLEUNE: Object to the form.

2 THE WITNESS: Yes. I have said that,
3 for example, with regard to the -- one, two,
4 three, four -- fifth limitation of Claim 1 that
5 Oinonen discloses that limitation, which is a
6 remote unit configured to send an SMS message
7 including a command for the environmental
8 device to the base unit.

9 BY MR. ALEXANDER:

10 Q. Does Oinonen disclose the format that
11 that message would be sent in?

12 A. Let me check. I think what Oinonen
13 discloses is simply that the remote unit can send
14 an SMS message, including a command. I think the
15 only -- the notion of format is it's as an SMS
16 message.

17 Q. Okay. So nothing beyond that?

18 A. I think that's correct.

19 Q. Okay. The Whitley reference is
20 another reference you rely on, correct?

21 A. Correct.

22 Q. So I'm in the process now of marking

1 that as Exhibit 7 in the Dropbox folder and I just
2 closed it. So hopefully that will upload shortly,
3 but it was Exhibit 1023 to the petition.

4 And so it's my understanding, I
5 believe, that your opinion is similar with respect
6 to Whitley that it discloses a remote unit sending
7 an SMS message with a command for an environmental
8 device; is that right?

9 A. Yes.

10 Q. Okay. And so I have the same
11 question about Whitley that I asked about Oinonen.
12 Does Whitley disclose the format of that SMS
13 message that would be sent to the environmental
14 device for the environmental device with a
15 command?

16 A. I think the disclosure in Whitley is
17 just simply that the command is sent as an SMS
18 message.

19 Q. And nothing beyond them?

20 A. No. There's no formatting disclosure
21 beyond that it's formatted as an SMS message.

22 Q. So I'm marking -- I'll just go ahead

1 and mark these primary references that you rely
2 on. So Exhibit 7 is Whitley. Exhibit 8, Bielski,
3 which was Exhibit 1017 to the petition.

4 Is it your opinion that Bielski
5 discloses sending an SMS message from a remote
6 unit to -- or intended for an environmental
7 device?

8 A. Let me just review.

9 Q. Certainly.

10 A. (Witness perusing document).

11 So I recall your question was about
12 formatting of the command for -- from the remote
13 unit to the base unit. And the disclosures in
14 Bielski are just -- what Bielski teaches is that
15 this command would be sent in the form of an SMS
16 message.

17 Q. Okay. But nothing beyond that in
18 terms of formatting?

19 A. I think that's correct.

20 Q. Okay. Well, let me ask a follow-up
21 question on that because -- could you point me in
22 Bielski to where it discloses sending an SMS

1 message from a remote unit with a command for an
2 environmental device?

3 A. So what Bielski discloses is that
4 the -- hang on. Let me find the right reference,
5 the rite cite. So Bielski discloses that the
6 remote unit is something that is connected
7 wirelessly via telecommunications network, and
8 discloses that at least the base unit can
9 correspond with the mobile terminal via SMS.

10 Q. And where -- just so we're on the
11 same page -- where in Bielski, which I labeled as
12 Exhibit 8, where are you looking at for that
13 statement that it discloses the base unit sending
14 an SMS to a remote unit?

15 A. Let me --

16 Q. Bielski was Exhibit 1017 to your
17 declaration, if I didn't say that before.

18 A. You did. Thank you.

19 So what I cite in the declaration
20 includes Paragraph 69 of Bielski. And this is
21 describing how the mobile terminal can be informed
22 about the devices in the system or in --

1 periodically or upon special conditions of the
2 devices -- I'm just reading in Paragraph 69 -- and
3 that these communications can be by the form of an
4 SMS message.

5 So I think that establishes that the
6 base unit can certainly communicate with the
7 remote unit via SMS. So when we're now looking at
8 Bielski's disclosures of communications in the
9 other direction, we have that, for example, in
10 Paragraph 63 of Bielski that the information
11 that's transferred from the remote unit to the
12 base unit is via the telecommunications network of
13 the operator.

14 So I think given the disclosures of
15 SMS from the base unit to the remote unit, and
16 then given the disclosures of communication in the
17 other direction via the telecommunications
18 network, that would either explicitly teach or
19 certainly suggest to a person of ordinary skill in
20 the art that that latter communications was via
21 SMS as well. Devices that can receive SMS can
22 send SMS. And so the fact that SMS is disclosed

1 in one direction, and we certainly know you're
2 using the same network to go back in the opposite
3 direction, would teach or suggest to a person of
4 skill in the art that the communications from the
5 remote unit to the base unit was via SMS.

6 Q. Okay. So you pointed to Paragraph
7 69, correct, of Bielski?

8 A. Correct.

9 Q. Okay. And to your knowledge, is that
10 the only place that a reference is made in the
11 specification to SMS?

12 A. To the actual SMS -- letters SMS,
13 yes.

14 Q. And you'd also agree that Bielski
15 does not expressly teach the remote unit sending
16 an SMS message to what you've called the base
17 unit, correct?

18 MR. PLEUNE: Object to the form.

19 THE WITNESS: If by express you're
20 meaning is there a sentence in there that has
21 the word SMS, the answer is no. But I think
22 what it does expressly teach to a person of

1 ordinary skill in the art, or at least suggest,
2 is the use of SMS in the reverse direction.

3 BY MR. ALEXANDER:

4 Q. When you say the reverse direction,
5 what --

6 A. Sorry.

7 Q. I lost track of our directions.

8 A. My fault. I meant from the remote
9 unit to the base unit.

10 Q. Okay. And I did mean -- with my
11 question I mean there is not -- there is not a
12 statement in Bielski that actually refers to
13 sending an SMS from the mobile terminal to the
14 check-in communication unit, correct?

15 A. There is not a statement. But as I
16 have walked you through it, I believe this is
17 exactly what Bielski would teach to a person of
18 ordinary skill in the art.

19 Q. Okay. Paragraph 64 -- so let me step
20 back. Paragraph 63, what does Paragraph 63 teach
21 you?

22 A. This is simply describing a scenario

1 where the remote terminal, a user can enter
2 commands for the environmental devices, and they
3 can enter the commands into the remote terminal
4 and send the information. And as is described in
5 the latter half of Paragraph 63, it says that
6 these commands are going to be transferred via the
7 telecommunication network of a network operator.
8 And as I say, this is I believe what teaches a
9 person of ordinary skill in the art that you're
10 going to be using, you know, a traditional
11 telecommunication service to transfer this
12 information. And the most traditional service for
13 this purpose is SMS. And then, of course, this is
14 informed by Paragraph 69, which talks about the
15 use of SMS in the reverse direction.

16 Q. Well, Paragraph 64 is -- Paragraph 69
17 is, like you say, it's the reverse direction,
18 right? Paragraph 69, at least the portion you've
19 pointed to, isn't about the remote unit sending
20 commands to the check-in communication unit,
21 correct?

22 MR. PLEUNE: Object to the form.

1 THE WITNESS: That's correct, but let's
2 understand that Paragraph 69 is fundamentally
3 talking about, you know, properties of the
4 communications between these two -- between the
5 remote unit and the base unit.

6 BY MR. ALEXANDER:

7 Q. Well, communications in one
8 direction, correct? I mean, Paragraph 69 only
9 speaks of communications from the check-in
10 communication unit to the remote or the mobile
11 terminal, correct?

12 MR. PLEUNE: Object to the form.

13 THE WITNESS: Sure. But a person of
14 skill in the art reads all of these paragraphs
15 together. And this one paragraph is talking
16 about one direction of the communication. And
17 I think a person of ordinary skill in the art
18 would understand absent -- if it were not the
19 case that SMS -- if it were the case that SMS
20 was impossible between the remote unit and the
21 base unit, that that would require some sort of
22 explicit statement, because that would be a

1 very unusual situation where a
2 telecommunications device could receive but not
3 send an SMS message. So yes, Paragraph 69 is
4 about one direction, but it informs the
5 understanding of how communications would occur
6 in the other direction.

7 BY MR. ALEXANDER:

8 Q. Paragraph 64 immediately follows
9 Paragraph 63, right? That's something we can
10 agree on?

11 A. That's the way integers work.

12 Q. All right. And so Paragraph 64 is
13 talking about communicating in the direction from
14 the remote unit or the mobile terminal to the
15 check-in communication unit, correct?

16 A. Correct.

17 Q. Okay. And it talks about the user
18 dialing the number of the check-in communication
19 unit, correct?

20 A. No, it doesn't say dialing the
21 number. It says enter the dialing number.

22 Q. Okay. What do you understand that to

1 mean?

2 A. Well, I think that the most
3 straightforward interpretation of this is that,
4 for example, in the case of SMS messaging, right,
5 you have to at a minimum -- at the end of the day,
6 SMS messages are sent to phone numbers. So if you
7 want to send an SMS message, you certainly have to
8 enter the phone number, which is what I assume is
9 meant by the dialing number here. So Paragraph 64
10 is certainly consistent with the notion of the
11 user ultimately sending an SMS message to the
12 check-in communication unit, which is the base
13 unit.

14 Q. Bielski is presented -- Bielski is
15 not just in one language, right? In the Exhibit
16 to the petition it has another version of Bielski
17 in German; is that correct?

18 A. I believe that's correct.

19 Q. Do you know which was the original
20 language?

21 A. I don't recall.

22 Q. Have you analyzed the German version

1 of Bielski?

2 A. No, I'm -- no, I don't speak German.

3 Q. Are you familiar with systems that
4 existed prior to 2004 that allowed a user to
5 remotely control some sort of home system by
6 entering dial tones?

7 A. By entering dial tones?

8 Q. By calling -- calling in to a system
9 and pressing numbers on the display to enter a
10 tone into the system.

11 A. I believe -- yes, I believe
12 reading -- I remember reading about some of those
13 as part of the file history.

14 Q. So why couldn't Paragraph 64 be
15 talking about that sort of system?

16 A. It's just simply doesn't say that. I
17 mean, this just simply says you're entering -- so
18 there's no -- there is no disclosure anywhere here
19 of a tone or of a dial tone or any ETMS or EMTS,
20 you know, signals being generated. I mean, I
21 think Paragraph 64 completely comports with the
22 process of sending an SMS. You enter in the

1 number of the destination of the SMS. And then
2 you, as it says, you press a symbol on the
3 display.

4 Q. Well, it actually says, or presses
5 the corresponding symbol on the display, correct?

6 A. Sure. Let me just get the sense of
7 the sentence here.

8 Yes. Yes, that's what it says.

9 Q. Okay. So, I mean, pressing a
10 corresponding symbol on the display doesn't tell
11 you -- that would not tell one of ordinary skill
12 in the art that an SMS message is being sent,
13 would it?

14 A. If it was -- the corresponding symbol
15 was to send an SMS, yeah.

16 Q. Okay. But Paragraph 64 does not say
17 that, correct?

18 A. No. It doesn't exclude it, but what
19 I'm saying is that I think a fair read -- in terms
20 of what does Paragraph 64 teach or suggest to a
21 person of ordinary skill in the art, I think
22 there's a fair case to be made Paragraph 64, read

1 in light of the other disclosures in Bielski, a
2 fair read of this is that it's disclosing a
3 process that's entirely consistent with sending an
4 SMS message.

5 Q. Okay. Is there anything in Paragraph
6 64 that is inconsistent with sending dial tones to
7 control the system, rather than an SMS message?

8 MR. PLEUNE: Object to the form.

9 THE WITNESS: Well, I think the --
10 because there is no disclosure of that, you'd
11 have to -- we'd have to demonstrate that there
12 was something in here to suggest that. And I
13 just don't see anything to suggest that that's
14 the case.

15 BY MR. ALEXANDER:

16 Q. Okay. Well, Paragraph 69, which is,
17 as I understand -- Paragraph 69 is your primary
18 support -- actually, is it fair to say it's your
19 only support for the disclosure of the SMS in
20 Bielski?

21 MR. PLEUNE: Object to the form.

22 THE WITNESS: It's the only explicit --

1 it's the only place where the letters SMS
2 appear.

3 BY MR. ALEXANDER:

4 Q. Okay. That same sentence in
5 Paragraph 69 that you're pointing to also says
6 that the communication from the base unit to the
7 remote terminal can be by means of a voicemail,
8 correct?

9 A. Correct.

10 Q. So that would involve a telephone
11 call as opposed to an SMS message, correct?

12 A. That's certainly one way you could do
13 a voicemail. I think there's other ways you can
14 send voicemails without having to actually make a
15 phone call.

16 Q. Okay. Well, I'll ask a more specific
17 question. You could send a voicemail using a
18 telephone call using the telecommunications
19 network, correct?

20 A. I'm sorry, could you just ask that
21 again? I --

22 Q. Sure.

1 A. -- kind of stumbled on it.

2 Q. One way to leave a voicemail -- let
3 me back up.

4 Bielski talks about using the
5 telecommunication network, correct?

6 A. Correct.

7 Q. And phone calls are made using the
8 telecommunication network, correct?

9 A. Correct.

10 Q. So would a fair reading of Bielski
11 mean that when using a -- using the
12 telecommunication network, that you would
13 understand that the voicemail would likely be left
14 based on a telephone call?

15 MR. PLEUNE: Objection.

16 THE WITNESS: So Bielski is certainly
17 disclosing that there's two ways this could be
18 done. One is by SMS and the other is via
19 voicemail, which a person of skill in the art
20 would assume would be performed over the
21 telecommunication network.

22 BY MR. ALEXANDER:

1 Q. Why do you think Bielski doesn't say
2 that it sends a command to the check-in
3 communication unit via SMS, if that's what it
4 intended to disclose?

5 MR. PLEUNE: Object to the form.

6 THE WITNESS: I think -- you know, I
7 think what's important to understand here is
8 that SMS was a profoundly common, widespread
9 service. As I say in my declaration, I think
10 by the early 2000s we were sending billions of
11 SMS. So it's sort of like oxygen, right? We
12 don't talk about how we need oxygen to go about
13 every one of our tasks. So when you describe a
14 task for a human to do you don't say "breathe,"
15 because, you know, we just assume we all
16 breathe. And so I don't think it's unusual at
17 all that it doesn't specify precisely every
18 single use of SMS just because it's just so --
19 it's just so common. I mean, it's not
20 disclosing that any of these devices are
21 plugged into the wall or how they're getting
22 electricity, but, you know, a person of skill

1 in the art would understand that that's going
2 to be required.

3 So I think a fair response here is
4 just simply SMS is just so common and so
5 widespread that you don't have to mention it
6 every single time that you use it. And
7 moreover, I mean, Bielski is -- it is
8 referencing SMS.

9 BY MR. ALEXANDER:

10 Q. Right. Well, that was -- you
11 anticipated my next question. Given what you said
12 about SMS being like oxygen, why does it, then,
13 later -- later in the specification mention SMS
14 only in the direction from the base unit to the
15 remote unit in your mapping of the claims?

16 A. Well, I think -- so I don't want to
17 speculate for why Bielski said what he said, but I
18 think what speaks to me is the fact that in
19 Paragraph 69 they're talking about two options.
20 And so because they're talking about two options,
21 they explicitly lay them out. One is SMS. The
22 other option is a voicemail.

1 Q. Now, in Bielski -- if someone were
2 actually implementing Bielski, right --

3 A. I'm sorry, you went a little too fast
4 for me. If someone were?

5 Q. Implementing Bielski.

6 A. Okay. Thank you.

7 Q. You would not expect to have control
8 over what -- let me start over. What is Bielski's
9 mobile terminal?

10 A. Bielski -- so the remote unit is
11 called the mobile terminal, and I think there is a
12 disclosure here of it being a mobile phone.

13 Q. Okay. The mobile phone likely would
14 not be a dedicated unit used solely for this
15 system that Bielski is disclosing, correct?

16 A. I mean, that's an inference you're
17 making. It could be a fair inference, but I think
18 Bielski is probably agnostic on that issue.

19 Q. Let's leave the Bielski reference for
20 a moment and turn to the Wu reference, which I
21 marked as Exhibit 9 in the Dropbox folder. It was
22 Exhibit 1018 to the petition.

1 A. Okay.

2 Q. Do I understand correctly that it is
3 your opinion that Wu discloses sending an SMS from
4 a remote unit that includes a command for an
5 environmental device?

6 A. Yes.

7 Q. Okay. Does Wu disclose what the
8 format of that command sent via the SMS would be?

9 A. I think the only disclosures in Wu
10 are simply it's in the form of -- the only format
11 is that of an SMS message.

12 Q. Okay. So nothing beyond that?

13 A. I don't believe so.

14 MR. ALEXANDER: All right. I think we
15 may have been going almost -- right at an hour,
16 close to it, anyway. It seems from my
17 standpoint like a convenient stopping point for
18 lunch, but I'll defer to you all.

19 MR. PLEUNE: Yeah, why don't we go ahead
20 and break and reconvene at 1:20.

21 MR. ALEXANDER: Yeah, that's fine with
22 me. I could probably come back faster, if

1 you'd prefer, but 1:20 is fine.

2 MR. PLEUNE: Okay. Got it.

3 (Whereupon, a recess was taken)

4 BY MR. ALEXANDER:

5 Q. I want to ask you a follow-up
6 question about ASICs.

7 A. Sure.

8 Q. Is it your testimony that an ASIC
9 would always contain a CPU?

10 A. No. As I say, what an ASIC contains
11 is fundamentally a function of the application.
12 And as I say, I think, you know, the vast majority
13 of ASICs have a processor on them of some form.

14 Q. Would the vast majority of ASICs have
15 a central processing unit?

16 A. You know, I don't know how finely
17 you're trying to parse the language here as to
18 what constitutes a CPU. But a CPU is often
19 understood as, you know, a free-standing chip. So
20 I think most ASICs will have some form of CPU
21 function -- processing function on them, but I
22 don't know that people would say there's a CPU on

1 it, because as I said, CPU is commonly understood
2 as a separate hardware device.

3 Q. You used a term that I didn't quite
4 understand, CPU function?

5 A. Yes.

6 Q. What do you mean by that?

7 A. The function of a processor, the
8 ability to fetch the code, execute instructions.

9 Q. But the CPU functionality that an
10 ASIC may have that you're describing isn't the
11 same thing as a -- like a CPU that a
12 microprocessor would have, correct?

13 A. Well, a microprocessor is a CPU. So
14 as I said, a CPU is commonly understood today and
15 in 2004 as a chip. So ASICs are typically more
16 like what we call systems on a chip. They contain
17 more than just a processor. They typically
18 contain memory and I/O infrastructure and things
19 like that.

20 So I think what I said was I think
21 the vast majority of ASICs contain, you know, the
22 equivalent -- have processing functions on them.

1 They would have either a processor, a general
2 purpose processor built into the silicon or, you
3 know, some subset. But they typically have a
4 processor in some form or another as part of the
5 ASIC.

6 Q. Are you aware of any ASICs in 2004
7 that you can identify that would have had a
8 general purpose processor built in?

9 A. I mean, if by general purpose you
10 mean something that was commercially available,
11 no. I mean, that would sort of defeat the purpose
12 of an ASIC.

13 Q. Okay. I'm trying to understand what
14 you mean. I'm talking specifically about the 2004
15 time frame when you say that a -- an ASIC would
16 have had CPU functionality.

17 A. It would have had the ability to
18 fetch the code and receive instruction, so process
19 instruction that could be stored in the memory.

20 Q. And would an ASIC be processing those
21 instructions in a way that a microprocessor would?

22 A. There's no rules here. I mean, you

1 know, as I say, ASICs are application-specific, so
2 you can pretty much do whatever you want, but the
3 simplest way to do that is to mimic what a real
4 CPU does.

5 Q. Are you aware of any textbook or any
6 other technical reference that would say that an
7 ASIC mimics a CPU?

8 MR. PLEUNE: Object to the form.

9 THE WITNESS: No. I mean, as I say,
10 ASICs fundamentally are application-specific.
11 So if you look up technical references on
12 ASICs, they'll talk about what they are and
13 the physical substrate that gets programmed as
14 part of the fabrication process. What they're
15 actually programmed to do is completely a
16 function of the application.

17 BY MR. ALEXANDER:

18 Q. And is it your testimony that if you
19 had asked one of ordinary skill in the art in
20 2004, do you understand that an ASIC will contain
21 a CPU, that they would have said yes?

22 A. Well, I told you that they most

1 likely don't contain CPUs. So they would probably
2 say no.

3 Q. Can you turn to Paragraph 186 of your
4 declaration, please?

5 A. Okay. I'm there.

6 Q. This is a section that -- where you
7 identify why you think a person of ordinary skill
8 in the art would have been motivated to combine
9 Oinonen with Whitley, correct?

10 A. Correct.

11 Q. And you say that it would have
12 been -- you said that there were several reasons
13 why that would have been obvious, correct?

14 A. Correct.

15 Q. In Paragraph 186 you say Whitley
16 discloses that it would be desirable to take
17 advantage of the short messaging service
18 capability of a deployed GSM network to more
19 efficiently provide remote monitoring and control
20 of multiple distributed gateways, correct?

21 A. Correct.

22 Q. Okay. So I'm not sure what -- how

1 that differs from what you say when it discloses.
2 So I guess that's the question. Are you saying
3 that Whitley is disclosing something different
4 here than what you say Oinonen discloses?

5 A. Well, I think Oinonen discloses the
6 ability to potentially monitor and control
7 multiple environmental devices through a
8 particular means. And Whitley has a more
9 general -- a more general purpose description of
10 being able to potentially control multiple
11 environmental devices.

12 Q. Okay. Did you say -- I may have
13 misunderstood. Did you say Oinonen discloses
14 controlling multiple devices?

15 A. Oinonen discloses the means by which
16 it can potentially control multiple devices, but
17 it's a fairly limited means. They have these, you
18 know, eight control lines. And Whitley is a much
19 more general purpose -- a much more general
20 purpose discussion of the ability to control
21 multiple gateways. So it's a -- it's a more
22 general solution.

1 Q. Okay. The independent claims of the
2 '935 patent don't require controlling multiple
3 environmental devices, do they?

4 A. I would say, properly understood,
5 that's correct.

6 Q. In Paragraph 188 you say that Whitley
7 allows for monitoring of activities at a facility
8 over time, correct?

9 A. Correct.

10 Q. Are you saying that Oinonen doesn't
11 disclose that?

12 A. I think one could argue that Oinonen
13 teaches this, but I think the point here is that
14 Whitley is much more -- is explicit about this.
15 And so as I say in this sense, Whitley is just a
16 more general purpose reference. So to the extent
17 POSITA would have needed more details on how to do
18 monitoring over time, Whitley could be used as a
19 reference to provide missing details.

20 Q. What do you mean when you reference
21 monitoring activities over time?

22 A. Just -- I don't know how to say it

1 any simpler than that. It's just some notion of
2 control that's occurring over some long period of
3 time. So we're not just talking about, for
4 example, turning something on or off, you know,
5 like opening or closing a door. We're talking
6 about, you know, monitoring properties of an
7 environment over some period of time like, you
8 know, temperature or fluctuations in temperature.

9 Q. Do the independent claims of the '935
10 patent include a requirement such as that you're
11 describing?

12 MR. PLEUNE: Object to the form.

13 THE WITNESS: Independent claims? I
14 mean, you know, the claims become cells. I
15 don't see anything -- nothing jumps out at me
16 just reviewing them quickly right now.

17 BY MR. ALEXANDER:

18 Q. Okay. Let's look at Paragraph 189,
19 please. This is a little bit longer. So let me
20 give you an opportunity to read it, and then let
21 me know when you're ready.

22 A. Thank you.

1 (Witness perusing document).

2 Okay.

3 Q. Is there anything that you describe
4 about Whitley in this paragraph that Oinonen does
5 not also disclose?

6 A. So I think that's a matter of
7 opinion. I think you can argue that there are
8 teachings of this in Oinonen. And Whitley I think
9 just has more clear disclosures of it. So to the
10 extent you want more details or more color about
11 things that are potentially disclosed in Oinonen,
12 Whitley provides those details.

13 Q. Okay. What is it exactly that
14 Whitley provides more detail on than Oinonen?

15 A. Well, as I state here, Whitley's
16 method of allowing customers to receive monitoring
17 information about activities at their facility.

18 Q. Okay. What additional detail does
19 Whitley provide on that topic that Oinonen does
20 not?

21 A. I think, as I say, Whitley is just a
22 more general reference. So Oinonen, for example,

1 talks about receiving data values. It's just
2 described at a lower level of detail, whereas
3 Whitley is a little higher level, and talks about
4 the ability to use these functions -- these
5 lower-level functions -- to do things like receive
6 monitoring information over time.

7 Q. Okay. Anything else in Paragraph 189
8 where you describe something that Whitley
9 discloses that Oinonen does not?

10 A. Well, I mean, Whitley describes, as I
11 say, a more general purpose environment. You
12 know, there's this notion of -- a more express
13 notion of a user or a customer involved. And so
14 Whitley discloses, you know, for example, how the
15 gateway, its base unit, can interact with, you
16 know, the end user. It just has a richer set of
17 disclosures about this than Oinonen does.

18 Q. Okay. Let me make sure I understand.
19 Are you saying that Oinonen -- you're not saying
20 Oinonen doesn't disclose an end user, correct?

21 A. No.

22 Q. Okay. So what is it? Is it the fact

1 that the end user might be a customer that Whitley
2 discloses?

3 A. It's just Oinonen's disclosures here
4 are very terse. And just because I don't want to
5 get into an argument about what -- you know, where
6 does Oinonen, you know, specifically disclose
7 this, or, you know, this one fragment of a
8 sentence in Oinonen combine with Whitley because
9 they're compatible references, and Whitley just
10 provides more details than Oinonen does. And I
11 think a person of skill, to the extent they had
12 any concerns about or issues with what was
13 disclosed in Oinonen, they would look to something
14 like Whitley to find more details.

15 Q. Why don't you read Paragraphs 190 and
16 191, because I have similar questions about those.
17 And so if the answer is the same, then that's
18 fine. But I'm interested in anything where you're
19 saying that Whitley discloses something that
20 Oinonen does not.

21 A. (Witness perusing document).

22 Okay.

1 Q. Is there anything other than what
2 you've already described in connection with the
3 earlier paragraphs in Paragraphs 190 and 191
4 describing something that Whitley discloses that
5 Oinonen does not?

6 A. So again, I think the issue here is
7 that that's debatable. I think there are fair
8 disclosures or teachings or suggestions of the
9 features that are described in Paragraphs 190 and
10 191 in Oinonen. To the extent someone would
11 disagree, and that's a reasonable disagreement,
12 you know, Whitley provides, you know, the details
13 that are maybe less expressed in Oinonen.

14 Q. Okay. Is there any such thing where
15 you think it would be reasonable to -- in
16 Paragraphs 190 and 191, what is there that might
17 reasonably be said to be absent from Oinonen that
18 Whitley discloses?

19 A. Well, I'm not arguing that something
20 is missing. I'm just simply saying when you
21 compare the two references, Whitley is more
22 express in its disclosures of -- for example, in

1 Paragraph 190 it talks about bidirectional
2 messaging. Bidirectional messaging is something
3 that appears in the file history, I believe, as an
4 important aspect -- alleged aspect of the
5 invention. I believe that that is disclosed in
6 Oinonen. Oinonen doesn't come out and say fully
7 bidirectional message transfer, but Whitley does.
8 So that's an example where I think Oinonen has
9 disclosures of this. They're less express than
10 they are in Whitley. If POSITA was unsure or
11 unclear about whether or not Oinonen has
12 bidirectional messaging or whether or not those
13 are good to have in a system like Oinonen, they
14 can consult a reference like Whitley,
15 compatible -- a fully compatible reference and say
16 oh, yes, bidirectional messaging would be good to
17 have.

18 Q. What do you mean by bidirectional
19 messaging?

20 A. Bidirectional messaging to me just
21 simply means that you have messages that flow in
22 both directions, that you're fundamentally talking

1 about two end points, and messages can flow in
2 both directions between two end points.

3 Q. Okay. And you say that Oinonen
4 discloses that, right?

5 A. Yes, I believe it does.

6 Q. Is there anything in Paragraph 191
7 identifying anything that Whitley discloses that
8 Oinonen does not?

9 A. I think what Whitley is disclosing
10 here is more of advantages of doing bidirectional
11 messaging. Again, Whitley just has more fulsome
12 disclosures of bidirectional messaging and its
13 advantages.

14 In particular, I guess, you know, I
15 don't know that Oinonen really has disclosures of
16 polling, or they're as express as they are in
17 Whitley. So Whitley would teach further advantage
18 to bidirectional messaging for use for polling.

19 Q. Do the independent claims of the '935
20 patent require polling, as described here?

21 A. I don't think they require it, and
22 I'm not claiming they do. I'm just simply

1 expressing why there's motivation to combine.

2 Q. Do you think there are any elements
3 of any of the independent claims of the -- let
4 me -- I'll take it one by one.

5 Is there any element of independent
6 claim 1 of the '935 patent that you think Oinonen
7 does not disclose?

8 A. I think one could make an
9 anticipation argument for Oinonen, but I
10 personally don't feel that -- I think the stronger
11 argument is an obviousness argument that's made
12 through the combination, for example, with
13 Whitley.

14 Q. Is there any element of independent
15 claim 1 that the Bielski reference does not
16 disclose, in your opinion?

17 A. I think it's basically the same issue
18 that one could make a case for anticipation by
19 Bielski, but you're probably going to have to rely
20 on statements of this is what a person of ordinary
21 skill in the art would understand. You know, for
22 example, we talked about the SMS messaging from

1 the remote unit to the base unit. And so rather
2 than go down that path, I think the stronger case
3 to be made is to combine Bielski, for example,
4 with Wu. And then we don't have to get into this
5 discussion about what's expressed in Bielski and
6 what's not.

7 Q. Is that true of the other independent
8 claims of the '935 patent where you've relied on
9 the combination of Bielski and Wu?

10 MR. PLEUNE: Object to the form.

11 THE WITNESS: Well, claim 20 I
12 believe --

13 BY MR. ALEXANDER:

14 Q. Just to clarify, I was not counting
15 claim 20 or 22 because you don't rely solely, as I
16 understand it, on the combination of Bielski and
17 Wu?

18 A. That's correct.

19 Q. Right. So my question was limited to
20 the independent claims where you rely only on
21 Bielski and Wu.

22 MR. PLEUNE: Object to the form.

1 THE WITNESS: I mean, I think the report
2 fairly lays out where each of the elements of
3 the independent claims are found in each of the
4 references. And I believe that for each of
5 these independent claims for both the Oinonen
6 and Whitley grounds and the Bielski and Wu
7 grounds, I describe where each reference has
8 each one of the elements. So I'm not -- so the
9 report speaks for itself, and I'm not recalling
10 an instance where I said this is absolutely
11 missing from this reference.

12 BY MR. ALEXANDER:

13 Q. So is it fair to say that for all of
14 those independent claims where you rely on Oinonen
15 and Whitley or Bielski and Wu, that your opinion
16 is that someone could make a case for anticipation
17 based on Oinonen or Bielski, but that you've
18 chosen to rely on the combinations as described in
19 your report?

20 MR. PLEUNE: Object to the form.

21 THE WITNESS: I think one could make the
22 case if pressed. I am not making that case

1 because I believe the stronger case is to
2 simply combine the references, and then there's
3 just no question that all the elements are
4 present in the combination.

5 BY MR. ALEXANDER:

6 Q. Can you turn to Paragraph 498,
7 please.

8 A. Okay.

9 Q. Go ahead and read it and let me know
10 when you're ready.

11 A. Sure.

12 (Witness perusing document).

13 Okay. I read it.

14 Q. All right. So here you say, so Wu
15 provides specific motivation to rely on the SMS
16 protocol as it is disclosed as being simple to use
17 because it consists of only two layers and because
18 it's a device independent of service, right?

19 A. Correct. I think that's actually a
20 typo, just to clarify the record. I think it
21 should actually say a device-independent service.
22 I think the word "of" is superfluous there.

1 Q. Okay. What do you mean by that? So
2 as clarified, so it should read because it is a
3 device-independent service, correct?

4 A. Correct.

5 Q. The SMS protocol is a
6 device-independent service?

7 A. Correct.

8 Q. What do you mean by that?

9 A. You may implement it on a wide
10 variety of devices. So for example, the class
11 project in my networking class I have people
12 implement SMS on their laptop, get the SMS
13 protocol on their laptops. So SMS is not limited
14 just to cell phones, for example.

15 Q. You say in the next sentence that Wu
16 also discloses that efficient use of SMS can allow
17 for reduced costs, correct?

18 A. Correct.

19 Q. That's true of SMS generally rather
20 than anything specific to Wu, correct?

21 A. I believe that's correct.

22 Q. And the same is true in the next

1 sentence, too, right? You say Wu also discloses
2 that SMS is based on a GSM network which was
3 already well known and widely implemented across
4 the world.

5 That isn't anything specific to Wu,
6 correct?

7 A. Correct. So actually, if I can just
8 amend one of my answers. I think actually part of
9 the statement that Wu discloses efficient use of
10 SMS is specific to Wu because Wu does talk about
11 specific uses of SMS to reduce cost.

12 Q. How does Wu -- can you explain what
13 you mean by that?

14 A. Sure. It basically talks about, for
15 example, setting appropriate polling frequency so
16 that you're not sending messages SMS -- so it
17 talks about polling by SMS, sending SMS messages
18 to check for something. And it talks about how
19 you should set an appropriate period for polling
20 so that you're not sending messages that aren't
21 likely to provide you with any new information.
22 And so it's talking about the tradeoff between the

1 cost of polling versus the ability to -- you know,
2 the delay with which you can detect events that
3 you're interested in. And it also talks about
4 combining messages to the extent possible, since
5 you maximize the use of the SMS payload to send
6 data.

7 Q. How much did text messaging cost in
8 2004?

9 A. I think it all depended on your
10 carrier and the type of plan that you had.

11 Q. Do you have any general idea of what
12 an average would be or a range?

13 A. I haven't researched that.

14 Q. Do you know when unlimited texting
15 plans became common?

16 A. I haven't researched that question.

17 Q. Today typically there isn't an
18 additional charge for making a long distance phone
19 call using a cell phone, correct?

20 A. I think that is correct.

21 Q. Do you know when that became the
22 norm?

1 A. I'm not sure what you're asking. I
2 mean, I believe cell phones more or less never
3 charge -- well -- so there typically only was a
4 charge if you exceeded the parameters of your
5 plan. And so, yeah, I mean, that's my
6 recollection that we were never really charged,
7 per se. You know, long distance was free, you
8 know, once you buy your \$50 plan.

9 Q. Right. But calls -- it didn't matter
10 whether you were calling a local number or a long
11 distance number is what you're saying?

12 MR. PLEUNE: Object to the form.

13 THE WITNESS: Yeah, there certainly came
14 a time where that was the case.

15 BY MR. ALEXANDER:

16 Q. Would that have been true in 2004?

17 MR. PLEUNE: Object to the form.

18 BY MR. ALEXANDER:

19 Q. I'll listen to your counsel's
20 objections and ask a longer question.

21 In 2004, is it your understanding
22 that typically there was no additional charge for

1 making a long distance call with a cell phone
2 versus a local call?

3 A. I believe that was the case, again,
4 so long as you stayed within the parameters of
5 your plan.

6 Q. Can you turn to Paragraph 442 of your
7 declaration, please?

8 A. Sure thing. Okay. I'm there.

9 Q. All right. Give me a moment. So
10 this section relates to the Menard reference,
11 correct, at least in part?

12 A. Correct.

13 Q. I haven't marked that yet, so give me
14 just a moment and I'll go ahead and mark that in
15 case you want to take a look at that.

16 A. Thank you.

17 Q. I feel really powerful getting to
18 mark the exhibits. Usually that's the court
19 reporter's responsibility.

20 So I just saved -- put an Exhibit 10
21 sticker on than the Menard reference, which was
22 Exhibit 1020 to the petition. So hopefully that

1 will refresh for you shortly.

2 A. Yes. Thank you. I have the Exhibit
3 1020.

4 Q. All right. So in Paragraph 442 of
5 your declaration you say that a person of ordinary
6 skill in the art would have understood that when
7 sending, monitoring, and control messages it would
8 be desirable to receive a confirmation that the
9 message was delivered to the intended recipient.
10 Do you see that?

11 A. I do.

12 Q. Does Menard disclose that?

13 A. Yes.

14 Q. Okay. Where does Menard disclose
15 that?

16 A. Sure. So in Paragraph 68 of Menard
17 it talks about sending messages to deal with alarm
18 condition.

19 And in Paragraph 179, which talks
20 about alternate embodiments of the same process,
21 that after instruction are completed from an RP --
22 that's the responsible party -- another round of

1 notification may occur. So it's disclosing that
2 you can get an instruction from a responsible
3 party. That was the party that was notified. And
4 after those instructions, the responsible party
5 can be notified about the completion of those
6 instructions.

7 Q. Okay. But in Paragraph 442 you say
8 it would be desirable to receive a confirmation
9 message -- a confirmation that the message was
10 delivered to the intended recipient. And I didn't
11 see anything in what you just pointed to that says
12 anything about a confirmation that a message was
13 delivered to an intended recipient.

14 A. I'm sorry, maybe I misunderstood your
15 question. So I think what's being stated in 442
16 is sort of the setup for why there would have been
17 motivation to combine with Menard.

18 Q. Okay. So that first sentence of
19 Paragraph 442 is not referencing anything in
20 Menard; is that correct?

21 A. Correct. This is just simply the
22 understanding of a person of ordinary skill in the

1 art.

2 Q. But you didn't offer any support for
3 that, other than your own statement, correct?

4 A. Well, I mean, the entire history of
5 network communication protocol is based on the
6 notion of what are called acknowledgments, which
7 are precisely what's being spoken of here. So I
8 don't cite anything here. This is just bedrock
9 computer communications. And even outside of
10 computer communications, you know, we often know
11 that when you send a message to someone, it's nice
12 to get an indication that it was delivered. And,
13 in fact, I'm citing to Oinonen as an example of
14 this.

15 If I could make a procedural point.
16 I'm hearing a lot of idle noise in the background
17 and I noticed lots of folks aren't muted. Maybe
18 more folks might want to mute. I don't know if
19 you're hearing this, Courtney, or not.

20 Q. I'm not hearing anything, so maybe
21 it's on my end. But it's pretty quiet in my
22 house. All my kids are in Louisiana. So sorry if

1 it's on my end.

2 A. Okay. Maybe it's just me.

3 MR. ALEXANDER: Ben, are you having any
4 problems with sound?

5 MR. PLEUNE: Likewise, maybe it's me.
6 I'll be a little bit more careful.

7 THE WITNESS: Well, I noticed that Adam,
8 Chris, and Peter don't appear to be muted.
9 Sorry to interrupt.

10 MR. ALEXANDER: No, no problem.

11 BY MR. ALEXANDER:

12 Q. Could you look at Paragraph 444,
13 please, of your declaration?

14 A. Okay. Give me a minute. Okay.

15 Q. So in this paragraph you say that a
16 person of ordinary skill -- I'm looking at -- so
17 probably about halfway down the sentence that
18 begins -- the first full sentence on page 221.

19 A. Okay.

20 Q. Begins "that is." Do you see where
21 I'm at?

22 A. I do.

1 Q. It says there, A person of ordinary
2 skill in the art would be motivated to add such
3 functionality to, for example, confirm an alarm
4 has been activated.

5 Let me stop there. I'm going to --
6 you list a few examples, right? So I'm going to
7 stop there for a moment. Does Menard disclose
8 sending a confirmation that an alarm has been
9 activated?

10 A. So I think Menard does have
11 disclosures of notifying that an alarm has been
12 activated. It's suggested in Paragraph 68 of
13 Menard, and then there is a more express
14 disclosure in Paragraph 69 where it talks about
15 System 50 notifying RPs and other users.

16 Q. What do you mean when you say that an
17 alarm has been activated?

18 A. Well, this is just what Menard is
19 describing.

20 Q. Can you point me to the exact
21 sentence you're talking about?

22 A. So Paragraph 68 and 69 going on into

1 70 are talking about an example of dealing with
2 alarms, or what they describe as managing alarm
3 processing in Paragraph 68. So 68 sort of sets up
4 the context. And 68 also says that the present
5 system then executes the process which may
6 included -- that's a typo -- may included further
7 notification, dispatching of one or more response
8 agencies, data processing, or other action based
9 upon executing instruction for the particular RP
10 monitoring account or alarm condition.

11 And then that's made a little more
12 clear in Paragraph 69 where it talks about
13 systems -- the last sentence, System 50 notifies
14 and receives messages from RPs and other users.
15 And that's specifically in regard to the alarm
16 signal.

17 Q. So like if we got a security alarm,
18 the alarm goes off and the RPs are notified; is
19 that what you're talking about?

20 A. I think that's part of what Menard is
21 talking about.

22 Q. That's what you mean by alarm

1 activation?

2 A. Correct.

3 Q. Okay. Back to your paragraph in your
4 declaration, Paragraph 444.

5 A. Okay.

6 Q. You also say -- so the same sentence
7 that I was referencing before you say, A person of
8 ordinary skill in the art would be motivated to
9 add such functionality to, for example, and then a
10 later example in this sentence is confirm that the
11 temperature has been adjusted in the case of an
12 environmental alarm; do you see that?

13 A. I do.

14 Q. Are you referring to something in
15 Menard here?

16 A. I believe so. Let me see if I can
17 find it.

18 Yeah, so there's a reference in
19 Paragraph 98 to alarms that can be associated
20 with, for example, changing temperature.

21 Q. Okay. In Paragraph 98 I don't see
22 anything that refers to a confirmation that a

1 temperature has been adjusted.

2 A. Well, this is a confirmation that
3 you're going outside -- or that just --

4 Q. It is an alarm signal, right? The
5 temperature is getting too high, higher than we
6 set it. We've exceeded some threshold, or I
7 suppose gone below, is that right? And so it
8 triggers an alarm?

9 MR. PLEUNE: Object to the form.

10 THE WITNESS: That's not what this says.
11 It's calling it an alarm, but what it's simply
12 saying is that it can incorporate dynamic
13 measures such as changing temperature. So if
14 you attempt to change the temperature, you're
15 going to get some alarm, what Menard calls an
16 alarm when the temperature changes.

17 BY MR. ALEXANDER:

18 Q. Where does it say it would send this
19 alarm in response to the user trying to change the
20 temperature are?

21 MR. PLEUNE: Object to the form.

22 THE WITNESS: I mean, this is just

1 simply saying an instance in which you can get
2 what this would call -- what Menard calls an
3 alarm.

4 BY MR. ALEXANDER:

5 Q. Okay. And so I'm trying to
6 understand what you think this means. What would
7 the situation be as it relates to temperature in
8 which this alarm would be triggered?

9 A. Well, I think a person of skill in
10 the art reading Mellard [sic] -- not Mellard --
11 Menard would understand that there is going to
12 have to be some setup required in order to effect
13 this alarm. So you're going to have to provide
14 some sort of command, for example, to specify, you
15 know, temperatures of interest, and then you'll be
16 notified. You'll get confirmation whether or not
17 you're compliant with whatever it is you told the
18 system to do.

19 Q. Does it use the word confirm anywhere
20 in here in this Paragraph 98?

21 MR. PLEUNE: Object to the form.

22 THE WITNESS: I think the issue is not

1 what words are used here, but what does this
2 teach to a person --

3 BY MR. ALEXANDER:

4 Q. I asked --

5 A. -- of ordinary skill in the art? And
6 the paragraph speaks for itself, right?

7 Q. Dr. Jeffay --

8 MR. PLEUNE: I think you guys should
9 probably -- now I know I'm adding to the
10 cacophony, but I think we should have one
11 person talk at a time.

12 THE WITNESS: You go ahead.

13 BY MR. ALEXANDER:

14 Q. Does Paragraph 98 use the word
15 "confirm"?

16 A. I don't see the word "confirm" in
17 Paragraph 98. I think we understand the teachings
18 of Paragraph 98 in the context of Menard as a
19 whole.

20 Q. Is there anything in Paragraph 98
21 that refers to compliance? I'll just -- you used
22 the word "compliant," and I want to make sure I

1 understand. Do you see that word in Paragraph 98?

2 MR. PLEUNE: Object to the form.

3 THE WITNESS: I don't think so. I
4 mean -- and again, my focus here is on what
5 does Menard teach to a person of ordinary skill
6 in the art, not does a word appear in a
7 paragraph.

8 BY MR. ALEXANDER:

9 Q. Well, you used the word because I --
10 I don't understand your previous answer,
11 Dr. Jeffay. So I'm trying to understand the basis
12 for what you're saying in Paragraph 98 teaches to
13 a person of ordinary skill. So I don't see the
14 word -- any form of the word "compliant" in the
15 specification in Menard's packet. So I'm trying
16 to understand your basis for your answer.

17 MR. PLEUNE: Object to the form. If
18 there's a question there, you can try and
19 answer it, Dr. Jeffay.

20 THE WITNESS: Well, I'm not -- I think
21 I've lost track of which answer it is that you
22 have issue with.

1 BY MR. ALEXANDER:

2 Q. Do you know if the word "compliant"
3 appears in Menard anywhere?

4 A. I -- I don't know. I haven't -- I
5 haven't made a concordance of words in Menard.

6 Q. Could you look at Menard Figure 1,
7 please?

8 A. Sure. I have it.

9 Q. And it shows here something labeled
10 system, correct?

11 A. Correct.

12 Q. Is that system external to the house
13 or other building that's being monitored?

14 A. I don't recall. Let me refresh my
15 memory as to what's taught in Menard with regard
16 to System 50.

17 As best I can tell, I think Menard is
18 agnostic about where 50 -- System 50 is actually
19 located.

20 Q. Okay. In 51 it's outside the house,
21 correct?

22 MR. PLEUNE: Object to the form.

1 THE WITNESS: I'm -- I'm not seeing a
2 51.

3 BY MR. ALEXANDER:

4 Q. I'm sorry, in Figure 1 the System 50
5 is outside the house that's being monitored,
6 correct?

7 MR. PLEUNE: Object to the form.

8 THE WITNESS: No. What I said is that I
9 think Menard is agnostic as to where System 50
10 is actually located.

11 BY MR. ALEXANDER:

12 Q. Okay. I'm asking you a question
13 about Figure 1.

14 MR. PLEUNE: Asked and answered.

15 BY MR. ALEXANDER:

16 Q. In Figure 1, System 50 is outside the
17 house too, correct?

18 MR. PLEUNE: Object to the form.

19 THE WITNESS: Maybe we're talking past
20 each other. Are you just asking me about how
21 the figure is drawn, or are you asking me about
22 where actually is System 50 located?

1 BY MR. ALEXANDER:

2 Q. Yeah, I guess I am asking you how
3 it's drawn. So Figure 1 shows a house, right?
4 And that house is labeled 2?

5 A. Yes.

6 Q. And it shows a car, and the car is
7 labeled 1, correct?

8 A. Correct.

9 Q. And it shows a person holding some
10 device that's labeled 3, correct?

11 A. Correct.

12 Q. And so with respect to the house
13 labeled 2, the System 50 is external to the house,
14 correct?

15 A. In terms of the way it's drawn -- so
16 Figure 1 is considered -- is described as an
17 overview, a schematic diagram depicting an
18 overview. So I don't think it's attempting -- I
19 think it's just simply trying to provide an
20 overview. And we can all see that the box labeled
21 50 is drawn separately from the house, but I
22 don't -- a person of skill in the art would not

1 infer anything deep from that.

2 Q. Okay. Look at Paragraph 11 of
3 Menard.

4 MR. PLEUNE: While he's doing that,
5 Counsel, we've been going for over an hour. It
6 would be great if we could just look for a time
7 for a break. I understand that you're in the
8 midst of a line, but maybe before you switch
9 gears.

10 MR. ALEXANDER: Sure.

11 THE WITNESS: Give me a second to review
12 11.

13 BY MR. ALEXANDER:

14 Q. And actually while you're at it,
15 Dr. Jeffay, it probably makes sense to look at
16 Paragraph 10 as well, because I think my question
17 is actually more related to the beginning of
18 Paragraph 11, which I think refers back to
19 Paragraph 10. Sorry, I should have started with
20 that.

21 A. No problem.

22 (Witness perusing document).

1 Okay. I've read 10 and 11.

2 Q. So 10 refers to a home security
3 system with a commercial -- commercially-provided
4 monitoring service, correct?

5 A. Yes.

6 Q. And this section is in -- this
7 paragraph is part of the summary, correct?

8 A. Yes.

9 Q. Okay. And then Paragraph 11, its
10 first sentence refers to the monitoring service,
11 right?

12 A. Yes.

13 Q. And specifically it says the
14 monitoring service receives an alarm from the
15 protected home, correct?

16 A. Yes.

17 Q. Okay. This is talking about a
18 third-party monitoring service that would be
19 located outside the protected home, correct?

20 A. Yeah, this seems to be talking about,
21 you know, an existing commercial service. Yes,
22 this is referring to I think some traditional

1 commercial monitoring -- home security monitoring
2 service.

3 Q. And so if you look at Paragraph 68.

4 A. Okay.

5 Q. Towards the end of this paragraph it
6 refers to when a particular customer establishes
7 monitoring services, correct?

8 A. Sure.

9 Q. And it also in the previous sentence
10 refers to a monitoring account, correct?

11 MR. PLEUNE: Object to the form.

12 THE WITNESS: It does refer to a
13 monitoring account.

14 BY MR. ALEXANDER:

15 Q. Okay. When this Paragraph 68 talks
16 about the present system executing the process at
17 290, do you see where I'm referring to in this
18 paragraph?

19 A. Yes, I do now.

20 Q. Like Figure 2, this is an overview of
21 a method, right, according to one embodiment of
22 the present subject matter?

1 A. Yes.

2 Q. Okay. And in various places in this
3 paragraph it refers to the present system taking
4 some action, correct?

5 A. Correct.

6 Q. And that system that's being referred
7 to here is the system that's shown in Figure 1,
8 correct?

9 MR. PLEUNE: Object to the form.
10 Mischaracterizes.

11 THE WITNESS: It's not clear. They're
12 both referred to as the present system, but
13 this specification here is full of multiple
14 embodiments. So it's not clear which ones
15 apply to Figure 1 and which ones don't.

16 BY MR. ALEXANDER:

17 Q. Are you aware of any embodiment of
18 Menard in which the monitoring system is located
19 inside the monitored house, the protected house?

20 A. So as I say, System 50 from Figure 1,
21 I don't think -- I think Menard is really agnostic
22 as to where System 50 is located.

1 Q. Okay. Are you -- let me ask my
2 question again. Are you aware of any embodiment
3 in Menard where the monitoring service is
4 disclosed as being located inside a protected
5 home?

6 MR. PLEUNE: Object to the form.

7 THE WITNESS: As I said, I don't think
8 Menard has any clearer disclosures of the
9 location of what's listed as System 50.

10 MR. ALEXANDER: Okay. We can take a
11 break now.

12 MR. PLEUNE: Ten minutes?

13 MR. ALEXANDER: Yeah.

14 (Whereupon, a recess was taken).

15 BY MR. ALEXANDER:

16 Q. Dr. Jeffay, could you turn to
17 Figure 2 of Menard, please?

18 A. Sure.

19 Q. All right. So I want to look at box
20 290; do you see that?

21 A. I do.

22 Q. In this box it says, System executes

1 further notification dispatching data processing
2 or other actions based upon executing instructions
3 received, correct?

4 A. I believe you read that correct.

5 Q. Okay. So that's talking about the
6 system executing instructions received, correct?

7 MR. PLEUNE: Object to the form.

8 THE WITNESS: Right. Not in this box.
9 This box is about executing notification
10 dispatching, but it does say that it's based
11 upon executing instructions received.

12 BY MR. ALEXANDER:

13 Q. Okay. Based upon -- and that's the
14 system that's executing the instructions received,
15 correct?

16 MR. PLEUNE: Object to the form.

17 THE WITNESS: All this box says is that
18 the system is executing notification
19 dispatching based on -- it's not I think clear
20 from this figure what the entity was that was
21 executing the instructions received.

22 BY MR. ALEXANDER:

1 Q. So you don't know who is executing
2 the instructions received?

3 A. No. I'm just commenting about this
4 figure.

5 Q. Okay. I guess I'm unclear. My
6 question was you don't understand who is executing
7 the instructions received that's referenced in
8 this figure?

9 MR. PLEUNE: Object to the form.

10 THE WITNESS: I haven't said a word
11 about my understanding. I'm just simply saying
12 what this -- you are putting words into the
13 text that are not here.

14 BY MR. ALEXANDER:

15 Q. Okay. I'm asking for your
16 understanding, Dr. Jeffay. So do you understand
17 who is executing the instructions received that's
18 referenced in Figure 2?

19 A. Well, let's see what Menard says. So
20 Figure 2 is discussed in Paragraph 68. And it
21 says there that the present system -- at box 290,
22 the present system then executes the process which

1 may -- this is the awful sentence -- included, or
2 include, further notification dispatching of one
3 or more response agencies, data processing, or
4 other actions based upon executing the
5 instructions for a particular RP, or the
6 monitoring account, or the alarm condition.

7 Q. And so -- I'm sorry, go ahead.

8 A. So I think, yeah, based on the
9 disclosure in Paragraph 68, this would suggest
10 that it's the system that's executing the
11 instruction.

12 Q. Okay. You mentioned Paragraph 179
13 earlier, correct -- paragraph 179 of Menard?

14 A. Yes.

15 Q. All right. So in this paragraph I
16 think you mentioned it says that -- it refers to a
17 notification that may entail a message such as the
18 police would get dispatched at 10:05 a.m.,
19 correct?

20 A. Yes, that's an example they're
21 giving.

22 Q. Who calls the police?

1 A. I don't think that's disclosed in
2 this passage.

3 Q. Do you know if Menard discloses who
4 would call the police or do something that results
5 in the police being dispatched?

6 MR. PLEUNE: Object to the form.

7 THE WITNESS: Well, there are
8 embodiments of Menard where it talks about
9 having a connection to a responding agency,
10 which could be a police department.

11 BY MR. ALEXANDER:

12 Q. And do you know who would notify the
13 police department?

14 MR. PLEUNE: Object to the form. Asked
15 and answered.

16 THE WITNESS: Well, there's certainly
17 one embodiment where it disclosed that the
18 present system would contact the police.

19 BY MR. ALEXANDER:

20 Q. Okay. Where are you referring to?

21 A. Well, there's several places. What
22 I'm looking at here is -- so if we start with, for

1 example, Paragraph 72, this is a paragraph where
2 it talks about the notion of a responding agency.
3 And the responding agency can be -- in Paragraph
4 228 it discloses that the -- an embodiment of the
5 system, there can be a connection to a responding
6 agency such as police. And then in Paragraph 83,
7 one of these places it says that they had the
8 phone numbers of -- yes, Paragraph 82, it
9 describes how the phone numbers and messaging
10 address information for the responding agencies
11 stored in the present system. And then in 84 -- I
12 can't find a clean disclosure of the system
13 notifying the responding agency.

14 Q. How about Figure 8?

15 A. Figure 8. I think Figure 8 is
16 describing a more manual process where the
17 dispatching is done by the responsible party.

18 Q. Okay. What about Figure 6?

19 MR. PLEUNE: Object to form.

20 THE WITNESS: It certainly discloses
21 notifying the users, but with regard to Figure
22 6 -- no, I don't think Figure 6 is -- Figure 6

1 is showing the system dispatching the example
2 of the police.

3 BY MR. ALEXANDER:

4 Q. Okay. Are you able -- does that mean
5 that you're not able to tell who does that in
6 Figure 6?

7 A. Well, I think it's not disclosed in
8 figure -- I mean, Figure 6 says --

9 Q. That's fine. I'm just making sure --

10 A. Figure 6 is about an operator. The
11 box 200 in Figure 6 is about the central station
12 operator. So this is what a human is doing. And
13 the best we know about the responding agency is
14 shown in box 300, and there's just -- I think as
15 it relates to Figure 6, what's being shown here is
16 a manual process.

17 MR. ALEXANDER: Okay. Can we take a
18 short break? I know we're not long after our
19 last break, but I think I'm close to wrapping
20 up on the '935. It would be helpful to take a
21 minute to look over my notes.

22 MR. PLEUNE: Sure. That sounds good.

1 MR. ALEXANDER: Just I guess
2 preliminarily -- I know you might or might not
3 have any, but I guess that is a question. I
4 guess I assume that you would ask any questions
5 that you have on the '935 and then we'll
6 conclude on that?

7 MR. PLEUNE: Yeah, that's right.

8 MR. ALEXANDER: So regardless of what
9 you're questioning may look like, do you have a
10 sense for whether you'd want to continue with
11 the '655 today, or pick it up afresh in the
12 morning?

13 MR. PLEUNE: Let me talk to the witness
14 and consult with my co-counsel, and we can
15 maybe just see how everybody is feeling.

16 MR. ALEXANDER: That sounds great, yeah.
17 So for me I'm kind of tired, but I'll power
18 through. I'm really agnostic on it. It's
19 interesting, we don't have to fly anywhere and
20 that sort of thing. So we can pick it up
21 tomorrow or keep going.

22 MR. PLEUNE: Let me ask you this: Do

1 you expect that what you have for '655 is
2 wildly different in terms of length than what
3 you had today?

4 MR. ALEXANDER: No, I don't -- no, not
5 wildly different. The tough part is -- I don't
6 know exactly how long it will take. You know,
7 as you know, it's always very difficult to
8 predict, but --

9 MR. PLEUNE: That tells me a lot right
10 there. I mean, if you were to say, look, I've
11 got a lot and we should probably get started,
12 then you would communicate to me pretty
13 clearly. If it's not clear, I'm just trying to
14 get a sense of whether --

15 MR. ALEXANDER: No, right. So just kind
16 of laying the cards on the table, I would
17 expect in a vacuum the '655 length to be
18 similar -- almost exactly, right -- to what
19 we've covered on the '935. Since there is a
20 fair amount of overlap between them, my
21 expectation is that the '655 total will be
22 shorter than '935 total. So if we start '655

1 tomorrow, I would expect that we would be
2 done -- I would be hopeful we could break by
3 lunch. I could be wrong on that, but I would
4 be hopeful we could. If we try and plow
5 through it all tonight, it might be later than
6 any of us were interested in.

7 MR. PLEUNE: Yeah, no, I was even really
8 just -- really in terms of leaning towards
9 starting fresh in the morning, but just wanting
10 to make sure that if there was any indication
11 that we really should try and get some of it
12 done, to jump on it.

13 MR. ALEXANDER: I'm kind of leaning
14 toward -- like I said, I'll stick with your
15 preferences, but I think I would be leaning
16 toward starting tomorrow as well.

17 MR. PLEUNE: Okay. That sounds good.
18 We'll be back in ten.

19 (Whereupon, a recess was taken).

20 BY MR. ALEXANDER:

21 Q. We are near the end, but I do have
22 another topic that we haven't covered yet. So

1 could you pull out the '935 patent. I think that
2 was Exhibit 3.

3 A. I have it.

4 Q. All right. And let me take you back
5 to the bottom of column 6 that we briefly
6 discussed earlier.

7 A. Okay.

8 Q. And specifically starting at line 65
9 it says in the preferred embodiment, The remote
10 control units are conventional cellular telephone
11 handsets that are equipped with a programming
12 kernel such as Java or J2ME that enables the
13 telephone to be customized to perform functions
14 that are not typical of standard cellular
15 telephone operation; do you see that?

16 A. I do.

17 Q. And then it goes on -- the passage
18 goes on from there. My question for you is what
19 you understand to be that nontypical functionality
20 that the '935 patent discloses is provided by this
21 programming kernel discussed in this passage?

22 A. Sure. I would say in modern 2020

1 parlance what I'd say is that this phone has apps
2 on it that are not typically found on standard
3 telephones. Basically I think what this is saying
4 is that because it has a Java run time on it you
5 can -- you can write Java apps for your phone.
6 And because you're writing them they're customized
7 apps, and therefore with those apps your
8 conventional handset can now perform functions
9 that aren't found on regular cell phone handsets.

10 Q. And what are the atypical functions
11 that you can have on your phone based on this
12 disclosure? I guess that is the question. What
13 is the atypical functionality that can be provided
14 through this programming kernel disclosed in the
15 '935 patent?

16 MR. PLEUNE: Object to the form.

17 THE WITNESS: Well, I think as an
18 example, I mean, further down in column 7 they
19 talk about how you can effect a SMS-based data
20 pass between the remote unit and the control
21 unit.

22 BY MR. ALEXANDER:

1 Q. I didn't catch -- I just didn't catch
2 the wording there at the --

3 A. What I tried to say was what they're
4 disclosing further down in column 7 is the ability
5 to provide a SMS-based data pass, so communicate
6 application data on SMS between the remote control
7 units and the base control unit.

8 Q. Okay. Is there any other atypical
9 functionality that the '935 patent can be --
10 disclosed can be provided through the programming
11 kernel?

12 MR. PLEUNE: Object to the form.

13 THE WITNESS: I mean, they're not really
14 specific about time functions specifically to
15 Java functionality. So I think this is really
16 the only disclosure using Java in the spec.
17 And those are the examples that they provide of
18 you can write an app that will be able to
19 communicate via SMS with the base control unit.

20 BY MR. ALEXANDER:

21 Q. Okay. Can you turn to -- let's see,
22 it would be page 197 of your report, the section

1 regarding Count 1B.

2 A. Sure. 197, okay, I'm there.

3 Q. Okay. And here in this section you
4 talk about -- probably among other things --
5 motivation to combine Oinonen and Whitley and
6 Sears, correct?

7 A. That is correct.

8 Q. Okay. What -- does Sears disclose
9 the use of Java technology for any particular
10 application?

11 A. I don't recall. We should just go
12 take a look at Sears.

13 Q. Sure. Let me go ahead and mark it
14 for you. Well, you can -- I'll go ahead and mark
15 it. I don't mind, if your counsel doesn't mind,
16 if you go ahead and open it up. I've got to
17 figure out where I'm at with my exhibit numbering.
18 I think I'm up to Exhibit 11.

19 MR. ALEXANDER: Ben, I think the last
20 thing I marked was Menard; does that sound
21 correct to you? I'm going to mark Sears as
22 Exhibit 11. Okay. It should be eventually

1 refreshed in your Dropbox with Sears as Exhibit
2 11. And I'll follow up with you, Ben, after
3 all this is over so we can square away what was
4 marked and all that.

5 MR. PLEUNE: Sure.

6 MR. ALEXANDER: But I suppose you'll
7 have access to it almost in realtime.

8 THE WITNESS: So I think Sears is pretty
9 agnostic about applications, or said another
10 way, it really just very generically considers
11 content distribution the way in which mobile
12 devices can access a variety of information.

13 BY MR. ALEXANDER:

14 Q. Okay. Can you point me to where
15 you're looking at where it talks about a mobile
16 device?

17 A. So if we start in the summary on
18 page 2 of Sears Paragraph 12, that provides the
19 context. It talks about one embodiment that
20 includes a server, which may be used as a central
21 point of focus for users and mobile devices. So I
22 think that establishes the context for the users,

1 and then there is multiple further disclosures of
2 users of mobile -- mobile devices. And then in
3 each of the following paragraphs it talks about
4 various embodiments for disseminating information
5 to mobile devices.

6 Q. In Paragraph 396 of your declaration
7 you say that Java technology is not only well
8 suited for mobile devices, but is also well suited
9 for control applications?

10 A. Correct.

11 Q. In 2004 was Java technology commonly
12 used on cell phones?

13 A. I don't know how common it was. I
14 know it certainly was used on mobile devices. I
15 remember, you know, a lot of the PDAs that we had
16 prior to the development of smartphones were
17 essentially Java -- Java-based. And I know that,
18 again, some of the phones that existed at the time
19 like BlackBerrys had Java -- Java support on them.
20 Essentially any device that was trying to allow
21 you to access the web from a mobile phone had Java
22 support on it.

1 Q. But you're not sure how widespread it
2 was at that point, if I understood correctly?

3 A. I think it was widespread. How
4 widespread exactly it was, you know, I haven't
5 researched that question.

6 Q. What's the difference between an
7 application implemented in C code and an
8 application implemented in Java?

9 A. I'm not sure how to answer that
10 question. Can you maybe help me with what you're
11 sort of looking for?

12 Q. Maybe it would help if you -- can you
13 tell me why the question is hard to answer? Then
14 maybe that would help me reformulate it?

15 A. It's just so vague. You know, if
16 you're comparing and contrasting two languages,
17 typically you have some measure or metric that
18 you're interested in using as the basis for
19 comparison. You could talk about how compact the
20 code is, you know, the memory footprints. You
21 could talk about the run-time performance. You
22 could talk about, you know, any number of things.

1 So, you know, from a user standpoint I don't think
2 users know the difference. So fundamentally if
3 you're going to compare them, you know, it's
4 typically on some sort of technical metric.

5 Q. Why would a developer choose Java
6 versus C, or vice versa?

7 A. Well, for the mobile world I think
8 they would choose -- they would be more likely to
9 choose something like Java over C because there
10 was better support for Java in mobile devices.
11 There's -- you know, nobody builds anything from
12 scratch and -- or hasn't for a long time. So when
13 you're contemplating a project like this, what you
14 want to know is what sort of libraries and what
15 are called frameworks exist in your application
16 space. And Java was certainly a very rich area
17 where libraries and platforms and classes existed
18 in particular for the mobile space, because as I
19 say coming at least out of PDA world where Java
20 was used quite exclusively for, you know, many
21 PDA-based applications. And if those applications
22 migrated into smartphones, they were all

1 Java-based. And anything having to do with the
2 web would drive you immediately to Java.

3 Q. In Paragraph 396 you go on to say
4 that a person of ordinary skill in the art would
5 have appreciated that the data security provided
6 by Java would enhance the control applications
7 disclosed by Oinonen and Whitley?

8 A. Yes.

9 Q. What are the -- what's the data
10 security that you're referencing there?

11 A. So this is a technical point, but
12 languages like C, there are no guardrails there.
13 You can get yourself into big trouble writing a C
14 application without knowing it. So the language
15 itself and what's called the run-time system
16 doesn't -- doesn't protect you from yourself. So
17 you can write clean code in C, but you've got to
18 really, really know what you're doing.

19 And in contrast, Java provides a
20 safer infrastructure for developing code. The
21 technical point that's made in the parenthetical
22 is that essentially what it's saying is that you

1 can't access memory directly with a pointer in
2 Java, which is -- doing so is essentially the root
3 of every security attack known to man. And as
4 we're seeing in C earlier, this is trivial to do
5 in C. And it's essentially impossible to do in
6 Java. So Java just provides, as I say, you know,
7 bumpers, if you will. It keeps you in your lane
8 and it makes it much harder to write code that can
9 go wrong on you.

10 Q. I suppose if you're writing an
11 application to control your own security system,
12 you'd prefer security in that process?

13 A. You undoubtedly would.

14 Q. In the final sentence of -- actually,
15 I'm sorry, I'm looking back up at 395. There in
16 the last sentence of paragraph 395 you say that a
17 person of ordinary skill in the art would have
18 understood that the implementation of a Java
19 application would provide a more desirable,
20 robust, fault-tolerant application that would
21 allow the users to interact with the devices in
22 the home or offices as disclosed by Oinonen and

1 Whitley.

2 What's the fault tolerance that
3 you're referring to there?

4 A. I think fault tolerance here is just
5 simply a reference to the fact that if an
6 exceptional condition occurs in Java, there is a
7 framework for handling such faults. You
8 essentially have what are called fault handlers.
9 So if something happens unexpected in Java, you
10 can tie a piece of code to handle that fault. So
11 there is basically a framework in the -- within
12 the Java application space that allows you to
13 write applications that can potentially recover
14 from faults.

15 Q. Is that better in Java than available
16 alternatives at the time?

17 A. Yes. I mean, languages like C, for
18 example, have no facilities for this.

19 MR. ALEXANDER: Okay. Dr. Jeffay, I
20 don't have any more questions on the '935
21 declaration, subject to anything your counsel
22 might ask you in redirect.

1 MR. PLEUNE: And so we will take a
2 break. I'm going to confer with co-counsel,
3 and then we'll be back.

4 MR. ALEXANDER: Okay. Just so I have an
5 idea, because I may step away from the
6 computer, generally do you know how long you're
7 talking?

8 MR. PLEUNE: Why don't we plan to
9 reconvene at 4.

10 MR. ALEXANDER: Sure.

11 (Whereupon, a recess was taken).

12 MR. PLEUNE: No questions from
13 petitioner.

14 MR. ALEXANDER: Okay. That was easy.
15 So do you want to adjourn for the day and pick
16 up tomorrow morning at 9 or some other time?

17 MR. PLEUNE: Yeah, that's do that.
18 Let's plan to adjourn for the day, and we'll
19 start again at 9 tomorrow morning.

20

21 (Off the record at 4:00 p.m.)

22

ACKNOWLEDGMENT OF DEPONENT

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

(DATE)

(SIGNATURE)

CERTIFICATE OF SHORTHAND REPORTER-NOTARY PUBLIC

I,
LISA M. BLAIR, RMR, the officer before whom the
foregoing deposition was taken, do hereby certify
that the foregoing transcript is a true and
correct record of the testimony given; that said
testimony was taken by me stenographically and
thereafter reduced to typewriting under my
direction; that reading and signing was requested;
and that I am neither counsel for, related to, nor
employed by any of the parties to this case and
have no interest, financial or otherwise, in its
outcome.

IN WITNESS WHEREOF, I have hereunto
set my hand and affixed my notarial seal this 10th
day of May 2020.

My commission expires October 31, 2020.



Lisa Blair, RMR, CRR

Date

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