1 UNITED STATES PATENT AND TRADEMARK OFFICE

2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CERTIFIED COPY

4 SAMSUNG ELECTRONICS CO., LTD.,)
) IPR2023-00621
5 Petitioner,) Patent No. 8,020,083
)
6 vs.) IPR2023-00701
) Patent No. 8,510,407
7 DODOTS LICENSING SOLUTIONS LLC,)
) IPR2023-00756
8 Patent Owner.) Patent No. 9,369,545
_____)

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14 DEPOSITION OF

15 EDWIN JOSEPH SELKER, PH.D.

16 VIA ZOOM VIDEOCONFERENCE

17 MAY 10, 2024

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Reported by:
24 COLLEEN M. PETERMAN, CSR 7882
Job No. 24-136955
25 Reference 39843-0148IP1, 39843-0149IP1, 39843-0150IP1

Exhibit 1030
Samsung v. DoDots
IPR2023-00756

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., Petitioner,	IPR2023-00621 Patent No. 8,020,083
vs.	IPR2023-00701 Patent No. 8,510,407
DODOTS LICENSING SOLUTIONS LLC, Patent Owner.	IPR2023-00756 Patent No. 9,369,545

DEPOSITION OF EDWIN JOSEPH SELKER, PH.D., a witness herein, taken on behalf of the petitioner via Zoom videoconference at 9:07 a.m. on Friday, May 10, 2024, before Colleen M. Peterman, CSR 7882.

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I N D E X

WITNESS: EDWIN JOSEPH SELKER, PH.D.

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VIA ZOOM VIDEOCONFERENCE

MAY 10, 2024

EDWIN JOSEPH SELKER, PH.D.,
HAVING BEEN DULY ADMINISTERED AN
OATH BY THE REPORTER, WAS EXAMINED
AND TESTIFIED AS FOLLOWS:

EXAMINATION

BY MR. BALLANCO:

Q. Good morning, sir. Would you please state your name for the record.

A. Yeah. I'm Ted Selker, legally called Edwin Joseph Selker.

MR. JUANG: Counsel, real quick, can we make our appearances for the record, all the attorneys in the room?

MR. BALLANCO: Yeah. Let's do that.

So appearing for Samsung in this proceeding is myself, Michael Ballanco, with the law firm of Fish & Richardson. Joined with me are my colleagues, my fellow partner Hyun Jin In and our technical adviser Christopher von Gunten. And that's all for Samsung.

MR. JUANG: And appearing on behalf of DoDots

is Richard Juang, for the witness, and we are from the law firm of Daignault Iyer LLP.

THE REPORTER: I'm sorry. I'm having problems with the volume, Mr. Juang.

MR. JUANG: Oh, you know what? We only have one mic. I'll talk louder. I apologize.

THE REPORTER: Okay.

MR. JUANG: But I'll say it again.

Do you need me to say it again, or are you okay with that one?

THE REPORTER: I'm good.

MR. JUANG: Okay. And I reckon one more party's here.

THE WITNESS: Who?

MS. CANINO: Paul Hart and Christina Canino are here, with Erise IP, on behalf of Apple, just sitting in.

MR. BALLANCO: And before we start with the questioning, I did want to ask one thing on the record to counsel. As you know, there's three IPR proceedings. We're doing one deposition for the common expert witness across those three.

Can we agree that this transcript can be used across all three of those proceedings?

MR. JUANG: Yeah. I think this one will apply

to all three. Usually there's a videographer that reads the case numbers onto the record.

Do we need to read those onto the record, or can we just agree?

THE WITNESS: '545, '083, '407.

MR. JUANG: The IPR numbers?

MR. BALLANCO: Maybe we can handle that after the next break. I can pull those, and we can read them into the record.

MR. JUANG: Okay. Yeah.

BY MR. BALLANCO:

Q. So good morning, Dr. Selker.

How many times have you been deposed before today?

A. Oh, I don't know. Something around 10.

Q. Okay. And have you been deposed in an IPR proceeding before?

A. Yes.

Q. How many times in an IPR?

A. Gosh. I'd have to look at my resume. I don't remember. A couple.

Q. Well, I'm going to just start with some ground rules. You've probably been through this before, but I think it's always good just to make sure we're on the same page.

So, sir, do you understand you're under oath today?
A. Yes.
Q. Okay. So you understand that you have to tell the truth in all your responses?
A. Yes.
Q. And you'll do that?
A. Yes.
Q. And you understand that if you don't understand a question I ask, you will let me know that you don't understand it; right?
A. I'll do my best.
Q. Okay. And then if you answer a question, I'll take that to mean that you understood it; is that fair?
A. Yes.
Q. We'll take breaks about every hour.
Okay?
A. Good.
Q. If you at any point need to take a break sooner than that, let me know, and I'll let you take a break.
Okay?
A. Thank you.
Q. The only caveat I'll give there is I'll ask you to finish answering any question that's pending

before we take the break.

Fair?

A. If I can. Yes. I'll try. I mean, you know, let's just say, you know, if you hit me 25 times with something, I might get to the point where I need a break anyway.

Q. All right. All I'll ask is for you to answer the pending question, and then we can stop there and take the break.

A. I'll try.

Q. Is there any reason, medical or otherwise, you can't give truthful, complete, and accurate testimony today?

A. No.

Q. Okay. If that ever changes, please tell me.

Okay?

A. Sure.

Q. Okay, sir. Let's start by asking, you mentioned you've been deposed maybe about 10 times; is that right?

A. Yeah.

Q. And those depositions, have they all been for cases involving patent infringement?

A. There was one real estate deposition. Other than that, they've been for patent infringement --

Q. Okay.
A. -- or -- yeah. I think they're all infringement. Or, I mean -- well, there may be -- like I said, there's a couple that were IPRs.
Q. Okay. All relating to patents in some way except for the one that was a --
A. Yeah.
Q. -- real estate; right?
A. Oh. I was also -- I'm sorry. I was also deposed -- I thought I'd turned this off. I'm so sorry. Yeah. Just a second. I've got to turn off my messages. Hang on. Ring volume to zero.
Yeah. So I was also -- there was one deposition that was around some Carnegie Mellon -- what do you call it -- somebody -- a work -- you know, HR issue.
Q. Understood. So there was a real estate matter, the employment matter, and the rest of your depositions have been for patent matters; fair?
A. Right.
Q. Okay. Let me first ask you about the real estate matter.
Were you serving as an expert in that proceeding?
A. No. It was real estate that I -- I was trying

to buy a house, and then I was trying to get -- I mean I was trying to get my earnest money back, and, you know, it became a mess. Yeah.

Q. Okay. A personal matter, not an expert.

A. Yeah, personal. And the other one was, you know, actually, I -- I actually was no longer employed with Carnegie Mellon. It was not about me. It was about another employee.

Q. Okay. So just to be clear, the Carnegie Mellon matter then was also not you serving as an expert. You were serving as --

A. I -- yeah. I was somebody that had been -- that had worked with this person and can tell what happened.

Q. Okay. So in your patent matters, on the other side of the ledger, when you testified in those matters, have you always served in the capacity of an expert witness?

A. Yes.

Q. And so if we put aside the Carnegie Mellon matter and the real estate matter, would you say you've been involved in eight or so patent matters?

A. Yeah. I mean it's in my resume, but that's kind of my recollection.

Q. Okay. And in those patent matters, have you

always represented the patent owner or the patent holder?

A. No. Some of them have been -- you know, they've been both sides. They've been different sides.

Q. Okay. In any of the cases that you've worked as an expert in -- strike that.

In the patent cases where you've worked as an expert, has your testimony, to your knowledge, ever been excluded from a case?

A. Oh, my gosh. I don't -- not that I know of.

Q. Sir, I'm going to start this morning by asking you a few questions about your background. And to do that, I'd like to have a look at your C.V. that was submitted in this proceeding. So I'm going to add that to the chat.

(Exhibit 2011 referenced)

THE WITNESS: Is there some way I could use both of these screens?

MR. JUANG: Yeah.

THE WITNESS: There's just another screen. It would be fun to have it up there.

BY MR. BALLANCO:

Q. Okay.

A. I don't know how to do that right off the bat. There's a little card here. But anyway -- oh, yeah.

Right there. Okay. Go there. Type in browser -- this will be fun -- 756. Sorry. I'm not going to take long doing this, I hope.

Q. Take your time.

Just for the record, I've added the document to the chat. Let me know if you've received that and if you're able to open that and view it, and let me know when you have.

A. Yeah. It would just be so nice to not have to exclude you while I'm looking at this stuff.

Q. Take your time.

A. Yeah. Now, what do I want to do? Window. Oh. Can I get another screen? Yeah. But how do I --

MR. BALLANCO: Counsel, if you'd like, if you want to go off the record for a minute to get the technology set up, we can do that. I'm happy to.

MR. JUANG: It shouldn't take him too much longer. We'll be done in a second.

THE WITNESS: Yeah. Okay. So I've got my C.V., and I want to save it or open. I don't have permission to save it. Well, we don't see it there. Let me see. Oh, I can't go there. Save as file name -- where the hell am I -- this PC.

THE REPORTER: We're still on the record; right?

MR. JUANG: Let's go off the record.
MR. BALLANCO: Yeah.
(Discussion off the record)
BY MR. BALLANCO:
Q. All right. So, sir, now you have your C.V. in front of you, which I'll note for the record has been marked in, I think, the '083 patent proceeding as Exhibit 2011; is that right?
A. Yes.
Q. And to your observation, it appears to be a fair and accurate copy of the C.V. that you submitted in this proceeding?
A. Yes.
Q. So, sir, let's start with your educational background.
You graduated with an M.S. in computer and information sciences in 1981; right?
A. That's right. That was my master's degree. Yes.
Q. Okay. Could you explain for me what you did for work following graduation with your master's degree.
A. I worked as a graduate student and lecturer at Stanford University until I began working at Atari Research in 1983. That was so much fun. And then I -- the place collapsed, and I went back to Stanford and

taught their AI graduate class. And then from there, I went and worked at Xerox PARC for about nine months. And then from there, I went to IBM Research, where I spent 14 years.

Q. Okay. Let me unpack that a little bit.

When you mentioned working at Atari, is that Atari as we know it, the video game manufacturer?

A. Absolutely. Back when they did that.

Q. Can you describe the work that you did at Atari.

A. Oh, yeah. I was allowed -- I was encouraged to envision the future. I worked on several things, some software for actually making a window system that would be stored and brought up at will. Somehow that seemed like a fancy, unusual thing. I used a Lisp machine to do that programming.

I designed something called Dreamwriter, which is a mobile device that would allow you to write anything you want anywhere, you know, pictures and stuff, rub them onto paper. And I worked on some motion platform stuff to get simulations that people could use for games. And I probably did other things. I evaluated their telephone offering, which was a piece of crap. And other things like that.

Q. One of the first things you mentioned in

describing your work at Atari was working -- I think I heard this correctly, but I maybe didn't.

You said you worked with envisioning windows for the application?

Maybe I misheard that. Could you explain to me what --

A. Yeah. So at that time there were these very, very fancy computers. Lisp machine was the name of the one I was using. And when you brought up windows for purposes to run applications in them, you'd have to set up your desktop every time you came to use it. These were shared computers, and so -- because they were -- they were a hundred thousand dollars each.

So I wrote a little piece of software that would collect all of the -- all the ways I've laid out my windows and let me regenerate them from -- when I needed them.

Q. And when you say "windows," are you talking about, like, a -- what are you talking about?

A. Yeah. I'm talking about the layout on the screen with various applications in them. I mean application's a little bit -- you know, there would be a text editor. There would be the compiler. There would be, you know, maybe something else that I've written. We had -- you know, we had an application for

controlling the room. Things like that.

Q. Okay. And you said this was on a -- did you say a Lisp machine, as in the programming language Lisp, or --

A. Yeah. Symbolics was the company that made something called the Lisp machine. There was also two other companies, TI and LMI, that made the same compatible machines, sort of. And then there was the Xerox Dorado, which I liked better. But they wouldn't let me have it.

Q. Well, we'll get to Xerox in a moment, because I know you worked there as well, but I want to ask a few more questions about Atari. I want to make sure I understand, though.

When you're talking about creating these windows and the use for them, are you talking about the -- this was for the developers, as opposed to the user using the Atari system; is that fair?

A. Certainly no Atari user was playing with these Lisp -- Symbolics Lisp machines, that I know. I mean except, you know, it was all -- it was all -- you know, there were 14 researchers, and I was one of them.

But what we -- what we -- what I used it for was resetting up my desktop the way I'd left it the last time I used it. And then I could modify it and save

that again.

Q. I understand. At least I think I do.

And is this -- I'm just trying to put myself back into the '80s and computing environments back then.

Is this because you could use windows, as opposed to, say, a DOS prompt, and windows would give you a better view as to how to access the programming interfaces that you wanted to work with, as opposed to, say, a DOS prompt?

A. Yeah. On the Lisp machine, there was -- the system was very, very -- you know, it was an extremely early use of mouse and windows. And certainly it had nothing to do with Microsoft DOS prompts or Windows systems. It was their own -- it was all constrained.

Built into the programming language was this idea of, you know, placing things on the screen. And so everything, you know, you did was as though you were rewriting the operating system. So everything was integrated in. And you'd have what would be a main space, it was called, where you controlled everything, and you could save your image.

Anyway, it was a long time ago. It's interesting. I hadn't even thought of it until you asked your question. It's been a long time since I've thought about that system. Yeah. I mean I had one that

I built specially.

(Reporter clarification)

BY MR. BALLANCO:

Q. And I don't want to go on for too much longer.

(Simultaneous speakers)

BY MR. BALLANCO:

Q. And I'm just curious.

These windows that you worked on, would you only be able to view one at a time, or were multiple windows viewable on the screen simultaneously?

A. Well, funny you should ask. At Stanford I actually built a system which allowed you to snap a different window onto a screen one at a time. Didn't show ever more than one. That was called the Stanford AI lab data disk system. And I helped build it. We could talk about that if you want.

At Xerox -- I mean at Atari, we were using this -- these Lisp machines, and we had the -- you know, this luxury of these gigantic screens, kind of like what we have today, about the same size, by the way. Well, not physically, but they had a couple thousand pixels by a couple thousand pixels. That's why they were expensive.

But they -- and so you could place different things you were -- different things, your email and the

compiler and some code you're looking at, maybe some -- you know, some interactive thing on the screen simultaneously.

Q. Okay. I understand. And this was -- you mentioned there's a big monitor. So I assume this was a -- I don't want to say a desktop.

Was it a mainframe that had a monitor connected to it? Is that a fair characterization?

A. These things actually, yeah, ran on 220, and they were, like, in a raised-floor room with big air going through them. We called them scientific workstations.

Q. Okay. Fair. Scientific workstations. Large monitor. And you would have different windows that would have a compiler, email, various things displayed on the screen.

A. Yeah. More in my case than most people. Most people would just bring up one window, mostly, and that was why I was kind of -- you know, I built this to make it easy for them to do that.

Q. But it must have been pretty convenient back in those days to have people like that, I have to imagine.

A. Yeah. It was fun. I mean even the mouse was, you know, kind of novel. Yeah. That was the first

place I worked with a mouse, yeah.

Q. Okay. Let's talk then about -- I think the next one you mentioned after Atari would have been Xerox; is that right?

A. Yeah. Yeah. I was at Xerox --

Q. Okay.

A. -- PARC for nine months.

Q. Xerox --

A. Palo Alto Research Center.

Q. What were you doing at Xerox PARC?

A. I was working on a project called CoLab. It was a collaboration project. We had a room that was just full of monitors, and they could share information across the monitors and on the big, wall-size display. That display was something called a GE Light Valve that cost a hundred thousand bucks. Very interesting thing. And I made the touchscreen for that, actually, for that wall's device.

But anyway, I made something called -- I mean I don't know if any of this stuff is relevant, actually, but, you know, I'm happy to talk about it. I made something called Instruments. Instruments was this thing called -- which I called a composite icon.

And you have these different parts of icons that you could snap together to make icons that were,

like, you know, if the -- if the -- one was a picture of a Pyrex pitcher, and if it filled up, it would kind of go over -- it would go over the edges. And if it was completely empty, the thing would crack. So those were states. But, also, there was this analog nature of filling up like a bar chart.

And these were both controls as well as presentation devices. So I could hook it onto a computer program, and then I could watch the variable changing, or I could change the variable with my mouse.

Q. And what was the application of this work that you did at Xerox?

I mean I'm familiar with Xerox copiers.

Was this relevant to that or for some other aspect --

A. No.

Q. -- of Xerox?

A. Xerox PARC was the envisioning center of the universe, in my view. I mean it was where the mouse and windows were first demonstrated. It was a place where people were trying out new ways of using systems, things like the WYSIWYG editor that we use on Word. That was actually stolen from PARC. So it was a very exciting place, full of these quite arrogant but very impressively smart people.

And so -- and so I worked on kind of, you know, two things. That -- well, more than two. But that interface Instruments thing that I was building, that was to demonstrate some interesting ideas we called active values in a language called Loops.

Loops was supposed to be something where you could attach functionality to any of the variables or even constants. And the problem with that, of course, is it's kind of invisible programming. You don't see whether something's going to start a program or not.

So this idea of Instruments was using that facility, demonstrating it, and thinking about -- well, for me, I was thinking about new ways of thinking about -- you know, I had this idea of active icons, icons that were live. You could wiggle them and change them, and they would change, and they weren't just static. So that was one aspect of my work there.

The other aspect was supporting this team that was building this collaborative work environment, where there was something called Argnoter and Cognoter.

These were applications which allowed you to lay out your arguments for a discussion, or your ideas, and they would be shown on multiple computers simultaneously, so people could sit around this nice, beautiful room full of built-in oak furniture and try to

have meetings and pretend they were being serious.

Q. Going back briefly to Instruments, what became of your work there? Was that commercialized in any way, shape, or form, to your knowledge?

A. The only thing I -- yeah. The sad news is the only place that I think you can find it now is there's a paper I wrote about visualization that went into a book -- Art Appel was a coauthor on that -- about presentation layer of -- graphics being presentation layer. It was visual language.

So I had this dream of, you know, making a whole linguistics, a visual language, and I had a few papers about that back in '88, '9. You can look in this C.V. I don't remember. But something in that area.

So there's two or three papers, one with Larry Koved, one with Wendy -- what's her last name? I don't remember. It's not Wendy. Anyway, with the woman and Larry. And then this one.

Those are the only places I ever -- and, you know, I left to go to IBM. And I thought it was such a special thing, but they didn't kind of keep working on it. And then PARC had this history. They had a very big problem. They never really liked -- they never commercialized things effectively. That was their big problem. So --

Q. Going back to Wendy, is it Wendy Ark?

A. No. Let me see. I can look it up. It was a long time ago. She was -- well, she's gone now. Cathy Wolf.

Q. Cathy Wolf. Okay.

A. Yeah. Psychologist.

Q. So I know you mentioned going to IBM.

Before that, did you go back to Stanford -- is that right -- after Xerox PARC?

A. No. No. I was -- I mean I -- you know, when there was a grad student there, I ran a seminar series called User System Ergonomics from '81 to '83. I don't think I continued running that -- I may have when I was at PARC. I think I did.

But then I -- but then I went -- when I left Atari and I needed something to do, I taught at Stanford until my job started at -- well, for the fall of '84 is my memory. And then -- and then I went to PARC sometime -- my memory is around the turn of -- maybe January. Maybe earlier. Maybe earlier.

Q. Okay. So then I guess after PARC, that's when you went over to IBM, where you were --

A. Yes.

Q. -- close in time; right?

A. Yeah, yeah, yeah.

Q. I know you were at IBM for a while, and I seem to have left there. Would you summarize for me the main projects or endeavors you worked on at IBM.

A. Well, there are three projects that I'm most proud of at IBM. And I got to be an IBM fellow, which was quite an honor for me, and I probably recognize its value more in retrospect.

Q. Congratulations.

A. Yeah. It was great fun. They treated -- you know. But basically, there was this pointing device that became my calling card, and you see it on my collar, which is now called TrackPoint. See? There it is. See?

(Simultaneous speakers)

(Discussion off the record)

THE WITNESS: So anyway, I worked -- I went there to work on -- what I wanted to do is adaptive help. I wanted to make that my Ph.D. And I went to IBM because they were going to give me the equipment and the freedom to do research as I wanted to. I had several ideas, but the one I wanted to do was making AI drive a help system. So that became my Ph.D.

And what happened was that turned into SmartGuides in OS/2. So it did get commercialized. My boss told me he wasn't going to give me as big an award

as I wanted at all because I picked an operating system that was going to die. They still -- but it still shipped. This is 25 years ago it went in, something.

And believe it or not, it was two associates with SmartGuides, which changes the way it helped, depending on demonstrated performance and experience and expertise. So that ended up to be my Ph.D. at City University of New York.

But my side projects turned into things too. So one was I worked with some -- I was in the math department for a lot of that time. And there were some people thinking about visualization -- I mean thinking about how memory went through to a computer.

And I made a visualization called the Memory Hierarchy, which you'll see is a paper in visualizations, kind of 1990, I think. Should be in here somewhere. And also -- there it is. Maybe. Yeah. And also as an algorithmic paper.

And the value of that was that it -- for all -- for operations on the power PC, it demonstrated how you could speed them up by 30 times by just how you filled with memory. So that was a really exciting thing.

And my contribution was the visualization. There would be some mathematicians that were doing a lot

of the heavy lifting, but I did the visualization and made it obvious, and there were plenty of good things about that visualization I'm very proud of.

And the third thing was that I'd had this idea, even before I went to Atari, actually, of -- it came from an early paper by English and Englebart, where they showed that the mouse was better than other things. But I looked at the data, and I saw that the knee bar was actually better than a mouse for the first 10 or 15 minutes.

And that blew my mind, and it made me think about the time you take to take your hand away from the keyboard. And so I thought what if I integrate the pointing device into the keyboard.

And the hard part -- well, there were lots of hard parts, but it all looks like quite simple. But the hard part was figuring out that people, whenever they made joysticks in the past, they made them so they were uncontrollable.

THE REPORTER: Hold on. Could I just get you to slow down? You're just going super fast.

THE WITNESS: Okay.

THE REPORTER: Thank you.

THE WITNESS: I will speak slower.

So anyway, the big problems were that people

would -- with a joystick, they couldn't control the cursor very well.

And I figured out how to control the cursor well by running some experiments and figured out what the problems were with controlling it, which had to do with a lot of things. One of them was the control of your finger, and the other one was how fast your eye could track things. Some very simple things that nobody had noticed in 40 years.

And I had a big fight with the -- I had a big fight with the people that had written the other papers saying that joysticks can't be very good. But in the end, immediately, when this went into product -- and it took so many ideas. So many different places I tried to put this into product. You can't believe it. I used to say that getting things to product is 75 airplane flights and getting things rejected is 50.

So anyway, I got it into this product, and then I spent the next several years just trying to do all sorts of great innovation, from my point of view, that some of it got into the ThinkPad.

For example, the camera at the top of the screen. We put the first one in. That was my idea. Tipping keyboards, thin keyboards, putting the wrist rest below the key- -- a bunch of stuff, a bunch of

industrial design stuff, even power supply stuff.

So that at that point, after I got this TrackPoint going, I had a big group. So at that point I got to hire a few people, people that normally don't get hired at IBM: Anthropologists, psychologists, as well as computer scientists, electrical engineers.

And my group was 35 people during the winter, and in the summer a little bit more. I think. Maybe I'm wrong about those numbers, but that's my memory. And we prototyped ideas and tried to make them matter to the company.

I don't know if that's all relevant. I hope it is.

BY MR. BALLANCO:

Q. It is. I'm very interested to hear about your background. And I'd like to ask a few questions to follow up on a few of those, but before I do, I just want to make sure I got it correctly.

You had mentioned that there were three projects you were most proud of at IBM.

I think I tracked them as the AI-related help system is one, the second is the visualization of memory hierarchy, and the third is TrackPoints and related technology to TrackPoint; is that fair?

A. Yeah. I mean there's a fourth area that I'll

mention that's relevant to this, to what we're talking about, a little bit more than those, which is I did a whole lot of prototyping of mobile devices. And the one that actually made it to market was the One Laptop per Child. So I had this idea of a hundred-dollar device that a child would use instead of a book. And I made -- I made prototypes of that.

But I also made prototypes of many other things, such as wearables and a wallet that had software in it, a PDA you hung on the wall next to your office door, before Steelcase did that. I don't know. I'm trying to remember. I can probably remember if I think about it. I've designed lots of -- I was dreaming of -- gosh, we can -- you know.

But the wallet was the one I was most excited about because I said -- I had kind of decided that when you replace something that people are used to using with something that they can use better, that, you know, it's easier for them to accept it than if you make something they've never imagined. So a wallet, a better computer, stuff like that.

Q. I hate to keep going back, but I do have a couple follow-up questions on the first project that you mentioned, the AI help system.

Was there a name for that?

A. Yeah. Well, there was -- it was called SmartGuides in the product. In my thesis, it was called Proactive and Reactive Computer Help, PIACH, a ridiculous name, and that name came because my thesis adviser hated me calling it COACH. That's Cognitive Assistive Computer Help.

And the problem with COACH was I used it in many different ways throughout the thesis, something that you lawyers could understand, as you don't use the same word for multiple things. And I didn't understand that, and my adviser slapped my wrists over and over again until I ended up with PIACH.

Q. I thought it might have been COACH, which is why I asked you the question.

A. Yeah, yeah.

Q. So I appreciate you clarifying that.

A. It was COACH.

Q. Okay.

A. Yeah.

Q. Briefly, on COACH, or PIACH -- we'll call it that, I suppose.

A. COACH.

Q. Was there a graphical user interface component to that, or was your work on that more based on the use of AI to assist the user?

A. It's a really interesting point, which is that what I -- what I built was an interface that put stuff that was really relevant to what you were doing right close to where you're doing it and then stuff that was more background information or examples farther away. And that, actually, my boss pointed out, might have been the reason people were succeeding with it.

So then I ran an experiment showing that with that same super-fancy interface that I've made with the help system, people did five times more work than with the help system that was exactly the same, the same contents, same everything, only it used pull-down menus.

Now, there's one more piece to the answer, if you want to -- if it's all right for me to go on, which is that --

Q. Please.

A. -- when we went to try and put it into the OS/2 operating system, the request was to use this thing to -- the same techniques to teach people how to use a graphical user interface. And we had -- I don't even know if there's any -- I'd love to have some video showing this thing.

I made a tool where you could literally point at things on the screen and say I'm going to make a help system about this, and here's the text I want to show

about it, here's the graphics I want to happen next to it, and stuff like that.

So it was an authoring tool, but, also, there was techniques for putting animated GIFs and things like that on the screen near -- as a layer on top of the operating system to annotate what we were trying to -- what a person was having difficulty with on the interface, be it a form they were trying to fill out, in which case we put a scrim over parts of it that would highlight certain places where it let you see through, or there was -- or there was that -- like I talked about, some little animated thing that happened near it. And sometimes there would be some demarcation that this GIF is about that thing.

So there was -- I don't know if that -- is that being helpful?

Q. Yes, it is. And I'll ask you as far as, like, you're on team GIF, as opposed to team JIF [phonetic]. I know there's a big debate.

A. I don't know. I can't even remember if they were BIPs. They may have been -- they may have been JPEGs. I'm not sure. But yeah. I'm trying to remember what they were. It was a while ago.

Q. One point of clarification I just want to make sure I have here is you mentioned this SmartGuide's

first shift with OS/2.

Did you say '95? Is that right?

A. It was in the Merlin edition. That I remember. And it could have been -- it could have been -- it certainly was around that time. '94, '95, '96. We'd have to look it up. We could look up when, Merlin shift. I'm not going to do it unless you ask me.

Q. Okay. Fair enough. Shift with Merlin. Probably in the '94-to-'96 time.

A. Yes, yeah.

Q. Let's talk a little bit more -- as much as I would like to talk more about TrackPoint, because I find that fascinating, I'd like to jump to the fourth project that you mentioned, which was -- correct me if I'm wrong -- prototyping mobile devices, and this also included wearables, the wallet. That's sort of one bucket of things that you were doing --

A. Yeah.

Q. -- at IBM.

A. Yeah.

Q. First of all, what time frame was this work being done at IBM?

A. I think '94 to '98, when I left IBM. Maybe '99. I mean I actually was still associated with my job, but I was on sabbatical, for '98, '99. And then

the stuff continued after I left.

But the one that no one knows that did deploy was we made a smart boarding pass that was based on a Hitachi computer, as I remember it. And so as you went into the airport, it seemed so fancy back then to have this idea that the airport would know who you are, like, you could go through without any reason, tell you that the gate had changed, give you a free Starbucks while you waited because it had been delayed.

And we actually got this used in New Zealand by an airline, that's also defunct, named Ansett. And they tried to -- and we made 50 of these things. It was a big push. And -- well, that was the end of that.

Q. And would the person boarding the flight have a mobile device that had this boarding pass on it, like a PDA or something like that?

A. Yeah. It was a custom-made PDA we made that was leather cover. It was very -- it was absolutely only made for this purpose. We -- yeah. We wrote the color ourselves.

Q. Okay. You had mentioned earlier that you'd done prototyping of mobile devices and that --

A. Yeah.

Q. -- some went to market.

Was this the one you were referring to when

you mentioned that some went to market?

A. Well, there was another one that went to market, in a much more circuitous manner, and that was the One Laptop per Child, which I showed my -- what I called an Eslate at a presentation at MIT in '95 or '6. Nicholas Negroponte, the man that led the media lab, was delighted and excited about it.

In the next several years, a project was formed. I was part of parts of it. And a device that had all the aspects that I was envisioning came out of the lab. There was -- I don't know -- a million of them made or something. Maybe -- I don't know the real number.

So that was -- that was a -- you know, many people thought that was a success. I wish I had been more engaged in that to make it more of a success than it was.

Q. What was the Eslate? What was --

A. The Eslate is this little green thing that was -- that had a little handle on it, just like the one that the child had a handle. It was green. And it had -- it had -- we made an authoring language for making things that had hyperlinks on it and making things that also had images.

And the idea was to make authoring for

teaching and training of children. So you could read books, but also you could go through some curated activities, graphically or textually, and, you know, take -- you know, answer questions, and it would keep track of what you learned.

And then it had this cute thing on it, which was a button. So if you were in trouble, you'd push the button, and somebody would come running to help. So it was kind of a safety/security device also.

Q. Okay. And did it have a -- strike that. Let me ask you this.

What was the display for viewing these different --

A. Yeah.

Q. -- three --

A. Well, we were trying -- yeah. We tried various things. And at first we prototyped it with a PDA that was existent and made a form factor that was kind of that shape, with a little handle on top, with a PDA inside.

And I'm actually trying to remember what -- I mean displays were -- you know, were kind of -- well, they were the size of these phones, basically. They were a little bit wider, maybe, but they weren't -- you know, they weren't -- they weren't gigantic.

You know, at that time I was trying to hit a hundred-dollar price point, and that didn't -- that didn't allow a lot of processor, a lot of display, or anything. It was just a very simple presentation device for teaching children and then collecting data when they interacted with it.

Q. Okay. And just because we're not on video, I want the record to reflect, when you say this phone, you're talking about a modern smartphone there?

A. Yeah, that's right. Yeah, that's right.

Q. Okay.

A. But, I mean, it didn't have the resolution of these phones. It was, you know, a similar size, you know.

Q. I'm thinking back to that time frame of the mid '90s.

Is it fair to say similar to the PDAs that were around back then, the PalmPilots?

A. Exactly. Exactly. It had that kind of a display.

Q. Okay. Okay. I understand.

A. Black and white, you know. Yeah. I mean I could put -- I could draw something on the screen, but, you know, very, you know, impoverished --

Q. Okay.

A. -- from what we're used to now.

Q. Sir, I wanted to ask you. On your C.V., it shows that you were at IBM clearly through the '90s, but there were also other entities that appear that you worked for in that time frame.

Were those consulting projects that were going on in the '90s?

If you could explain to me sort of what you were doing besides IBM in the '90s. I guess that would be my question.

A. Yeah. In the '90s I was teaching at Stanford as an adjunct consulting professor, and I did that one class a year, on Fridays. And it was Proactive and Reactive Agents in User Interface. Fun to teach that.

And I was not allowed to consult as an IBM employee, but I did spend time with lots of graduate students at Stanford. You know, the ones that I'm -- that are most notable are Sergey and -- Sergey Brin and Larry Page. They were students that I don't know why, but they sought me out all the time, and that was a lot of fun, although they were frustrating because they wouldn't get off this stupid idea of a search engine.

(Simultaneous speakers)

THE WITNESS: Yeah. In the end, it seems like they did a good job. And other students. So I hung out

with students, and I mentored them, and that was just a real joy for me.

The other thing I did was IBM sent me all over the world giving talks about innovation and the research projects I was doing. And I went to conferences about papers that I've written.

ACM CHI -- I'm going to go there Sunday, actually, again -- is my -- was one of my go-to ones. SIGGRAPH was another conference that I would go to. And AAAI artificial intelligence conference. Those are -- I mean there may have been others. Visualization. So I went to conferences. You know, how many? You know, two or three a year.

BY MR. BALLANCO:

Q. And what was the focus of these conferences that you were going to?

A. Scientific exchange.

Q. Okay.

A. Yeah. They were all -- they were all scientific exchange, full of professors and people that, you know, wrote papers and thought that was going to make their life better.

Q. All focused on computing, on display, depending on the conference?

A. Sure. So things about visual interface,

things about intelligent interface, and things about, you know, ergonomic interface. But, you know, I was always focused on user experience and technologies that would support that.

So I was very, very early on, you know, very excited about AI interface. That's what my Ph.D. thesis stuff was about. But somehow visual interface stuff was a big piece of my life, and I always built things. So that's the other part.

Q. And at those conferences in the '90s, what were some of the things that people were talking about when it came to user interaction with interfaces? What were the hot topics, so to speak?

A. Well, you know, I -- the TrackPoint was an extremely well-received paper. I presented at Interact in 1989, I think, in Cambridge, England. The ScrollPoint -- that's a mouse with a joystick on it -- was another paper that I wrote. I wrote papers about adaptive help systems that I presented that were well received.

And I got in deep discussion about pie menus. I had a path at one point about pie menus. That's -- sometimes they're called marking menus. I had colleagues that we talked about that. There were discussions about graphical user interface.

You know, it was a very exciting time. So much going on in the development of the graphical user interface and dealt with computers, interaction, you know, lots of stuff.

Q. And particularly with graphical user interfaces, what were people aiming to achieve with innovations there?

A. There were some camps, like Ben Schneiderman used to talk a little bit that direct manipulation was the only way to interact with things, and he'd have fights with Pattie Maes about whether AI had anyplace in user interface, and they'd have discussions about that, you know.

And there was techniques for, you know -- of various sorts that people would show off. You know, I described a couple that I presented. I mean I'm trying to remember if we even got some of these things to papers or they weren't. But, you know, different ways of presenting mood, motion, and representing things and -- you know, a lot of cognitive psychology was involved with the CHI community, sometimes to a fault.

Just to give you an example of a debunked paper that pissed me off when I went to IBM, somebody at IBM had proved that "what you see is what you get" text editors were not as good as text editors that just put

the text up and you couldn't layer up.

And that was because, in their experiment, people would focus more on the text than on the layout. So they'd spend more time doing that, which makes sense, but, as you know, people got used to laying things out and got very bored with looking at text by itself. Anyway, so that's an example of an unusual paper.

And, you know, collaboration, there's so many interesting things. I mean I'll give you one more that I loved, which is not that -- you did ask -- is if you give -- if you give everybody in a collaboration a window to speak to the group in and you give one person a bigger window, because maybe they're more important, they get listened to less. I just loved that result. So --

Q. Don't want to listen to the person with the big window.

A. Well, a big window is harder to read through. The little window is much more like a headline. You know, I just was surprised. You know, there's lots of surprises like that. Yeah. You know, I could go on and on.

But one of my favorite -- I teach this stuff. So one of the things I loved is when Nex came out with the drop shadows. Drop shadows are great because they

actually -- there's something called precognitive psychology that shows that there's things that you can see before you ever use any thinking. And drop shadows you can pick up automatically.

And there's just a few different techniques, and one of them is it turns out shadows. So when you put shadows on icons all over the screen, you can find them much faster. And so all of this last 10 years of people taking them off makes me mad.

And then there's skeuomorphing. I mean we can go into this all day long. I can talk about lots of different interface things.

Q. Well, let me ask you about something that you mentioned in your declaration that I wasn't sure how it related to your C.V., and I was hoping you can explain it to me.

This MotoCarma app, what is that?

A. It was a way of me demonstrating, look, I made this toolchain for making private generative AI systems, and it's called transformermodeling.com, and my team in Bangladesh called techdojo.org. One of my students from Carnegie Mellon made this little consulting company I've been helping forever. They made this.

And so somebody -- I was sitting at dinner with somebody that wanted to make an app for selling

cars. And I said I want to try out -- I want to demonstrate a generative AI system.

So being Ted, as much of the app's value if you play with it -- I'd love if you play with it -- I would be interested in your feedback -- is about the graphical user interface simplifying the process of buying a car as about the generative AI, which it generates from graphical things you do, but also from textual things you do, to give you a unique and simplified way of getting more information and better information that you can share with whoever you're going to buy a car from.

So that's what I'm -- I've spent the last year trying to do that with a guy named Jeremy Taunton.

Q. So this is a newer -- this is not something that was going on in the '90s. This was a newer endeavor.

A. This started in May of 2023, maybe --

Q. Got it.

A. Yeah.

Q. Got it. And what was your first foray into work on mobile apps, like this one?

A. You know, working on systems that were mobile that had applications on them goes back with me to before the WAP phone.

So it goes back to this -- you know, things like that -- like that boarding pass, things, you know, very -- very early I, in fact, even had a mock-up that I carried around in '83 called Dreamwriter. And it was this box that I put on my belt. And I tried to explain how this pen would be better than a, you know, display for being an interface. You know, it was a provocative mobile scenario.

So I often make scenarios, when I had resources later -- not when I made that Dreamwriter, but later. I made working versions. We call them mock-ups when they're just a box, prototypes when they work, and products when they sell.

And so we -- you know, in 1998 or '9, I helped some people make a phone-based search system, a company called Sift, because they weren't able to compete with Google on the desktops, so they tried to do it on the phone. And those phones used -- I think they used the WAP protocol.

But when I was at IBM earlier, like I said, I made a range of things. We had a PC that was so small that I made up a little holster. You could wear it on you. I made a wearable computer that you wore as a belt that you had virtual reality glasses in '96, '97. I made probably half a dozen different wearable things in

the '90s.

You know, in the 2000s, you know, a lot of apps like -- for example, we made one for shopping. You went into a grocery store, and we put sensors all over this grocery store so you could tell which aisle you were on. And based on which aisle you were on, we could give you a different experience, and you could actually even buy stuff.

And they actually took our device and turned it into something, and Stop & Shop deployed something based on -- based on our work. I don't think they used our code or a physical device, but it was absolutely we were involved in getting -- helping get a company to get a -- you know, you don't have university students write products that sell things at big stores. So for that -- but yeah. Many things. Many things.

And then the thing that -- in terms of apps on -- maybe I'm jumping ahead, but I taught -- when Android came out, I taught -- when the One Laptop per Child came out, I taught a course at MIT to make the -- to make the applications for it. We had students from MIT and Harvard, and they actually wrote applications that actually did ship with that product.

Then when I was at Carnegie Mellon and the Android came out, for four years I taught a course on

Android product development. Very different from the way we develop now. It was -- I had people writing Java on the phones, you know. You'd make it for one phone. It wouldn't reshape to go on the other phone, you know. You'd have to use the facilities that were available on that particular phone.

You know, we had all these problems. This was in 2000- -- I don't know -- '8 -- no -- '9 to '13. But it was a lot of fun. Made probably a hundred different apps. Most of -- a lot of them you can get off of my website. You can go there and actually run some of them or see them, videos of them, some of those ones.

But they were all -- those were all -- you know, those were all very one-off, teaching people. You know, those were graduate students learning how to envision products.

Android product development, my focus was, what's a product? What's an idea? What's a value idea? Creating -- of course, the Android was the brand-new, beautiful, simple, unusual, and extremely capable device that we could -- that we could -- that we could show off some of these ideas on.

MR. JUANG: We've been going for about an hour. I mean I don't know if you want to take a break for 10, 15 minutes.

MR. BALLANCO: Yeah. We can take a break now. Yeah. This is a good time for a break. I could do 10 minutes. Does that work?

THE WITNESS: That's fine.

MR. JUANG: A 10-minute break?

MR. BALLANCO: Yeah. And then let's come back at -- I guess your time, it's 10:12. Let's come back 10:22. How about that?

MR. JUANG: Sounds good.

(Recess)

THE WITNESS: I have to say, Mike, you're bringing me back to stuff I haven't talked about or thought about in a long time. So it's kind of fun.

BY MR. BALLANCO:

Q. It's very fascinating for me as well. I appreciate it. Thank you very much, Dr. Selker.

MR. BALLANCO: Before we get back into questions, I do want to read into the record the proceeding numbers just so that we have them, as counsel for DoDots mentioned.

So the proceedings are IPR2023-00621, and that's a proceeding that concerns the -- I'll call it the '083 patent. The second proceeding is IPR2023-00701. That's the proceeding that relates to what I will short-cut as the '407 patent. The last

proceeding that we're here today in relation to is IPR2023-00756, and that's the proceeding that relates to what I will call the '545 patent.

BY MR. BALLANCO:

Q. That's not a question, Dr. Selker. I'm just letting the record reflect.

One area I want to follow up on, that we were talking about just before the break, was the -- I believe you mentioned that WAP -- is that protocol? Could you explain what you meant by that?

A. Yeah. WAP was a kind of phone that had a goal of letting people run, you know, stuff on their phone besides just being a phone. And so you could have an app, and you could have an internet browser. You could have a -- you could have a geolocation system.

I'm thinking about -- I think the Nokia N95, which is the one I always think about, was ran on WAP. But it had, you know, a variety of things that you could do on the phone that, you know, use the graphical and sensors in it and use the, you know, camera and this and that.

And people tried, even before the N95, which was later, with the phones that we had -- I remember that these WAP phones were -- when we were looking at it with Sift, you know, they were -- we could put up a web

browser, and that was kind of exciting. I'm talking about '98, '99. Already we were trying to put web browsers on these phones.

Q. Okay. And N95, that was a phone that was an early adopter of the WAP protocol?

A. Actually, the WAP -- I'm sorry. I didn't mean to talk over you.

The N95 was kind of the pinnacle of smartphones before the iPhone came, in 2008. So it had a beautiful Zeiss camera. It had an AM/FM radio. It had a good battery life. It had a good antenna. All things that the iPhone didn't have at the beginning, by the way. And, you know, it burned through batteries like crazy.

Q. Like any good smartphone.

When did the N95 release?

A. I mean I remember having one in -- I think it was 2007, I think. That's pretty -- you know, that's pretty -- it's pretty late, you know. Yeah. If you tried to use the GPS on that thing -- no, no. It wasn't 2007. It was earlier. I think it was 2005, maybe.

Q. Okay. And you described it as the pinnacle and that WAP phones started coming out in the '98-'99 time frame.

So what were some of the early WAP phones that

you can recall from that time?

A. I don't remember the model numbers of the WAP phones.

Q. Okay. The WAP phones, though, that were coming out in the '90s, they attempted to integrate things like internet browsers onto the phones themselves; is that fair?

A. Yeah.

Q. And what other types of applications would these phones have on them besides the web browsers that made them more --

MR. JUANG: I'm just going to object to the form because it seems like we're getting into technical, nonbackground questions that seem to be outside of the scope of the report, but I'll allow it for now.

THE WITNESS: So I can really speak more to the things that I was building. It's hard for me to remember everything that was going on. And I really haven't been thinking about that. Maybe I should.

So we built, you know, things to work with -- we made a smart couch that had a phone in it. We made -- we made, you know, this thing that, like I said, would keep track of, you know, whether a room was being used.

We made various applications. We used various

technologies, sometimes WAP phones, but sometimes they weren't the most -- they weren't the only or simplest way to try things. So we'd try them with whatever mobile hardware we would snap or slap together.

Things that -- I mean I don't think we were able to do it on a WAP phone. I had something called -- that was supposed to make you aware of what was available where on campus at MIT, and we found ourselves using a Sony laptop with a camera on it, not a WAP phone.

You go around campus, and it would show you where there's free food and where there's, you know, lectures and where there's some sports event and stuff like that.

So, you know, people -- yeah. I mean back then, quite frankly, touchscreens had yet to be something people embraced well. So there was a big fight, you know, and, you know, people loved their BlackBerrys, and the WAP phones didn't do very well, phones that had this ability to, you know -- had internet and other activities to them.

And even this N95 I described, it was big. It was very cumbersome software. So, you know, they were slow, burn through batteries, and then the applications weren't very compatible.

BY MR. BALLANCO:

Q. Okay. Let me make sure I understand.

The WAP phones were touchscreens, and people didn't adopt them, or were they not touchscreens because people didn't want touchscreens?

A. You know, I'm trying to remember which ones were touchscreens and which ones weren't. Variously, most phones had a keyboard. And I think that -- I'm trying to remember phones that didn't have -- that didn't have buttons on them at that time frame. And it's vague. I'm sorry. I'm not -- I'm not -- if you showed me some, I'd recognize them is all.

Q. I'm going to move on to something related but slightly different.

The work you were doing in the '90s at IBM, particularly this work on mobile applications, I think you kind of described it before as the fourth project that you were really proud of --

A. Right.

Q. -- what type of coding languages were being used to develop that technology?

A. Mostly C++, you know. Mostly -- I mean I'm sure we used Java and C++. You know, iPhone wasn't a thing, though, yet.

Q. So fair to say --

(Simultaneous speakers)

THE WITNESS: What?

BY MR. BALLANCO:

Q. So fair to say object-oriented programming languages?

A. Yeah, yeah. I mean I'm thinking about, you know -- so, you know, I was the manager of this group, and, I mean, a guy named Steve Ihde and Ron Barber did most of those programs, and, you know, I really -- you know, I mean I didn't care what they both wrote them in.

I mean I made -- yeah. I mean if I had it my way, we'd be using HyperCard because I -- and Flash, but those -- you know, those were -- those were not things that we could run on mobile phones so easily.

Q. I'm not familiar with HyperCard.

What is that?

A. HyperCard was a language that let people -- like, you know, they used to pretend secretaries could do it -- snap together cards with controls on a Macintosh to make applications.

I actually made some very big applications using HyperCard. I mean big in that they had a lot of functionality, for creating a visual language, for example. And yeah. They were all very visual, very graphical.

Flash was the same, in that you could make things animate, make them have actions, and interact with them. And so those were the -- those were two of my go-to prototyping tools until they became unavailable.

Q. Okay. Is -- well, strike that.

What about, to what extent at that time was HTML being used for the work that you were doing?

A. Well, HTML came on like a -- like a -- you know, it was great. And, you know, like a lot of these guys say in these patents, I mean, what I at first saw HTML like is I saw it as this half-duplex -- that means it writes to you; you don't write back to it -- communication.

You know, we could see all these books that were online, you know, the whole HTML being SGML. It was all formatted. The data in these documents was formatted with these tags.

And the whole point of the HTML was mostly to just give layout information. It didn't specify the fonts or the actual layouts. So, in fact, as a user interface guy, I hated that because if the visual look of a page changes, you actually can't find things on it anywhere near as easily, and so that drove me crazy.

So HTML was obviously just completely,

spectacularly better than what we had before, though. I mean WAIS and Archie and Veronica. All these -- you know, I ran a workshop at IBM. And Terry Winograd, who actually helped Larry and Sergey also, he gave a talk before Mosaic came out about, you know, using all these tools to hack through the forest of the internet with Archie, Veronica, and WAIS and all this stuff.

You know, within months of when he gave that talk, it was obsolete because this -- because you could -- you know, because people make these web pages, and they were just exponentially growing, a tremendous amount of information available on the web. And it seemed like interactivity was not going to happen easily.

But guess what? People, when they have a will, they have a way. And they found all sorts of ways to start adding interactivity, you know, the HTML and all of these tools that we're going to talk about probably in these today.

Q. HTML, did that shift from being, like, Veronica and these other approaches?

Is HTML what then introduced, like, a style template? Is that an HTML-derived notion?

MR. JUANG: Object to form.

THE WITNESS: Yeah. I mean HTML didn't start

off with a style template, but the idea -- all those other things didn't have, you know -- I mean you could -- sure. You could do them through a command line. They were interface -- you know, all those things, you would go, and you'd, you know, make a request, and something might come back.

Whereas HTML, it was formatted, and there was this uniform -- well, you know, the protocol, you know, the HTML, the WWW. And so there was a uniform way of putting it so that people could find it, and there was a uniform way of presenting it on the screen. And it worked across platforms to the extent that you have browsers on all these things, and quick like a rabbit, everybody wrote browsers for every damn thing they could think of.

BY MR. BALLANCO:

Q. So that was HTML.

When did XML start becoming a thing? Was that also in the '90s, along that same timeline, or was that a different time?

A. Well, that came later. I don't offhand recall when the first XML was released. I saw that timeline recently. But it was a big change. I mean it was -- it came after, you know, several -- maybe it was -- I think it was HTML 3 or so, at that time frame.

But it really was a new -- it had new goals. It wasn't all about formatting a page on the screen. It was about storing data that you would utilize for various purposes. And it was used with web browsers, but also with other things. So it became a data format in a structure that you could store things in.

Q. Okay. You mentioned just a moment ago HTML 3. So I apologize for my ignorance here.

Is that a version of HTML that started with --

A. Yeah.

Q. -- 1, 2, then it went to 3?

A. Yeah. And I think -- I mean we'd have to look at the dates, but I think that HTML 3 kind of, you know, came out around the time of these patents.

Q. Okay. And going back to something else that you mentioned a moment ago, is that HTML didn't start off with style templates.

At what point did it gain those? Was it with 3? Was it with 2? Somewhere along there?

A. I'm not -- I'm not enough of a historian to have that in my mind. But certainly the -- you know, the march forward was people wanting more -- trying -- wanting to figure out more interactivity, more function, more responsiveness, and, finally, to put things that looked so different from what we thought could happen

with the web browser that we ended up having apps in browsers.

And to this day -- I mean now -- I mean I guess not that it's relevant to this, but one of the most shocking things to me was I got a demonstration of using a TPU for inside of a browser, you know, that they'd actually integrated that stuff.

And so lots and lots of work has gone into, somehow or other, making browsers compatible enough. They weren't, for a long time, compatible with each other. For example, you know, ActiveX was not available in all browsers. But they, you know, have gotten better at that.

Q. And so was introduction of style templates a way to address that problem, to make it so that you could use the HTML across different browsers because there was a template that would work on all of them? Is that sort of the idea?

MR. JUANG: Object to form.

THE WITNESS: I'd have to look at what we're talking about specifically for style templates. I haven't -- I haven't thought -- I don't know if it's in my declaration. I'm not sure that I talked about which browsers used what kind of -- had what kind of technology around then.

BY MR. BALLANCO:

Q. Let's actually talk a little bit about your -- well, actually, no. There is one other thing I just have to ask about.

At Magic Leap, your position was a wizard.

Can you tell me what that means, sir?

A. Well, technically, I was a consultant. But at Magic Leap, there was this role of wizard.

And I definitely, you know, talked to Rony Abovitz, the CEO, about strategy for the company. I've talked to the people that were doing industrial design about the design of the physical object. I talked to the people that were trying to make a user interface research group about how to set that up. I talked to the people doing physiology about how to do that.

But most of my work, by the end of my tenure there, were two things. One was writing a quite long piece about what it would be like to live in a world all day long with mixed reality. That means you have things out there that are real and things that aren't.

And the second thing was I was involved with the research group in Seattle for the last -- most of the time the last couple years that I was there, and that group's charge was to make an alternative headset that would have a new kind of a display, and the headset

would be, you know, one, you know, fifth the weight of the one that we were about to ship as a product.

And so there was this -- there was this special mechanical, spinning fiberoptic display that was one millimeter cubed that I -- I spent a lot of time in the clean room, actually. I spent a lot of time physically working on mechanical, optical, electrical engineering around this very, very difficult display that we were trying to make.

Q. Got it.

A. So pretty broad. Pretty broad. Typical Ted, you know. I mean -- you know, I mean I brought in machine learning to help with calibration, you know. So, you know, I reach across borders, and that's kind of why people would give me a role. Like, they'd call me something like a wizard because I'm reaching across borders to solve problems that will impact more generally than a person that's just at a simple task.

Q. Got it. Oh. One other thing that I forgot to ask that I wanted to ask you, sir.

In your time -- in your career, before working on this case, had you worked with DoDots before at all, the DoDots entity that was around in the early 2000s?

A. No. I was not actually aware of it until this case.

Q. Okay. And, actually, that's a good segue.
How were you first -- and without revealing any privileged information, how were you first approached about working on this case?
MR. JUANG: Object to form.
THE WITNESS: I remember it being a little more than a year ago. And I don't remember, actually, how it started. I mean I talked to Ron. And that's -- I remember -- I remember talking to him first. That's my memory.
BY MR. BALLANCO:
Q. Ron being one of the main partners in --
A. Yeah.
Q. -- the law firm?
A. He's the main partner. Yeah. Yeah.
Q. Have you worked with this law firm before?
A. Never.
Q. And you submitted for DoDots three separate declarations; right?
A. Yes.
Q. One in each of the proceedings that I read out into the record earlier?
A. Yes.
Q. And I want to ask about the work you did on those declarations.

How much time did you spend over the course of those three declarations putting them together?

A. Oh, I'd have to look at my accounting. But I would say it's in the hundred to 200 -- it would be -- you know, I see it as maybe a couple hundred hours. Maybe it's more.

Q. Okay. And that's from your first work on the case, looking at material, to finished product?

A. Yeah. I mean it might be a couple hundred. It might be 400. I'd have to -- I'd have to look it up. Yeah.

Q. Okay. What material did you review in putting together your declaration -- or declarations?

MR. JUANG: Just object to form and caution the witness not to reveal any attorney-client communication. But you can answer it to the extent you know.

THE WITNESS: Well, I looked at -- I looked at prior judgments in the Lenovo case. I looked at the patents mostly. I looked at the provisionals a lot. I looked at other produced patents that I think you guys may have brought up: Wecker, Shimada, Buchholz, Beer.

You know, I -- you know, I would do the occasional, you know, just reminding myself of techniques and technologies running around in Google

searches.

But none of that that I -- I don't even think -- I guess at one time I remember printing out Darnell and thinking this is just gigantic and stupid and I better not bother myself with this. Later on I found myself finding it a fascinating document. But, you know, it's a long document. Well-written, actually.

So let's see. I have read Schmidt's statement, and I've read Kembels' statements. And, boy, that's pretty much it, I think.

BY MR. BALLANCO:

Q. And just so the record's clear, when you say Schmidt's statement, you're talking about Dr. Schmidt, a statement he submitted in an earlier proceeding; is that fair?

A. Yeah. I mean I don't think I have seen proceedings from the earlier IPR. I'm trying to think. I mean I saw the judgment. I don't think I saw any of the, you know, declarations or depositions from then.

Q. Yeah. And I misspoke. I meant to say not an earlier proceeding, but earlier in this proceeding --

A. Yeah, yeah.

Q. -- Dr. Schmidt.

A. Right. Yeah. I don't even know if he was involved with the earlier one or not.

Q. One thing I did want to ask. You mentioned you've reviewed patents. You've described several of the prior art patents. You also reviewed -- or I'll ask you.

Did you review the DoDots patents that are at issue in this case?

A. Absolutely. So I read those.

Q. And -- I'm sorry. I didn't mean to cut you off.

A. No, no. And I -- you know, and it's a lot. And I hope I have everything as well in my mind as I want it to be, but, you know, hopefully we'll have to -- maybe I'll have to look at things again to remind myself.

Q. Sure. And we'll have the patents, too, so if you need to refer to them.

A. Okay.

Q. We're talking, though, when we talk about the DoDots patents at issue in this set of IPR proceedings, about the '083 patent, the '545 patent, and the '407 patent; right?

A. Yes, yes.

Q. Beyond those, which other DoDots patents did you review as part of your analysis?

A. Only the provisionals, the '99 provisional and

the 2000 provisionals, to my memory.

Q. Okay. The provisional applications that the '083, '407, and '545 patents list on their cover as --

A. Right.

Q. -- claim priority. Okay.

The other set of patents that you reviewed are patents that were submitted by Samsung as prior art; right?

A. Right. Right.

Q. What was your practice for generating your declarations in these cases?

A. So I -- you know, I tried to take down notes and write in some text and then collaborate heavily with the other -- with the other people involved, with the lawyers at whatever you call -- how do you say the name?

MR. JUANG: Daignault Iyer. Daignault Iyer.

THE WITNESS: Daignault Iyer. Okay. Fine.

Anyway, so yeah. I mean, so how many -- how many drafts? Dozens. How many times did I read it? Dozens. How many times did I -- did I edit all of the drafts? Yes. You know, were there big changes that I wanted? Yes.

BY MR. BALLANCO:

Q. And so the resulting work product, the declaration that you submitted, is your declaration;

right?

A. Yep. Yep.

Q. I'm going to put into the chat your -- well, let me put it in the chat first, and then we can talk about it. Give me just a moment here. It's loading now.

(Exhibit 2010 referenced)

BY MR. BALLANCO:

Q. Okay. You should be able to see it in the chat. Let me know if you've able to view the document I just placed in there.

A. Right.

Q. Okay. When you're able to see it, can you identify for the record what this document is.

A. Yeah. I'm trying to. Just a second.

Q. Take your time.

A. No. It's just that there's -- the screen that's on the wall has delay. That's all. So why isn't it downloading? I've got to change something. Then I can do it. Yeah. Okay. Save.

Yeah. This is the '083 version of the declaration. I say version because there's quite a bit of similarity between the various versions.

Q. And that's actually something I wanted to discuss.

You'd agree that there's significant overlap between the three patents that you looked at and then, because of that, your declarations?

A. They're distinct, you know, claims. They're different, you know, on the three. But there's, you know, a lot of commonality, and that makes it easy to speak to all of them with a lot of the same language.

Q. Okay. I'm going to focus my questions, at least right now, on the '083 version of your declaration. If at any point in a question that I ask, if there's a distinction between the different declarations or patents that you identify, please let me know that. But I'm going to focus on the '083.

Okay?

A. Okay.

Q. One question I had for you before we get into the substance of your declaration, sir, is, throughout the declaration -- for example, at paragraph 34.

A. Yeah. Let's go to 34.

Q. Yeah. Let's go there.

A. Omitted. That's not a paragraph. That's omitted. Let's go to something that -- that's nothing. That's a non.

Q. Well, that's the question I have.

So there are several paragraphs that, instead

of having substance, they, in brackets, say omitted. I'm just wondering if you can explain to me why that is.

A. When you're drafting something, lots of changes happen. And, you know, you could -- you know, basically, it was a way of keeping the numbering the way we thought of it before we didn't want that paragraph in there anymore.

Q. Okay. And whose decision was it to omit those paragraphs?

A. It was a -- it was a collaborative thing. And I, quite frankly, don't remember what was in 34 or 35 before we omitted them or if there was anything there.

Q. Okay.

A. You caught me off guard with that question.

Q. Purely out of --

A. No.

(Simultaneous speakers)

BY MR. BALLANCO:

Q. I just wanted to know.

A. Absolutely. Absolutely.

Q. You, in your declarations, proposed several constructions for claim terms that are present in the patents; right?

A. Yes.

Q. And in proposing those constructions, what

material did you consider or evaluate to propose them?

A. I considered technology that was available at the time, materials that people were thinking about, what these patents descriptively included. That's what I think I included. We'd have to look at a specific one for me, you know, to get specific about it.

Q. Well, let's do that. So if I could direct you to paragraph 42 of the '083 declaration that you're looking at. This, I'll just say for the record, relates to the term "execute the template."

Do you see that?

A. Oh, yeah. No. That -- yeah. Okay. That's interesting. I mean there's -- there's some -- there was some -- you know, some things that came out of, I guess, the Lenovo IPR that affect this also.

Q. Okay. So that was another --

(Simultaneous speakers)

THE WITNESS: Source.

(Reporter clarification)

THE WITNESS: Source. It was another document that I considered.

BY MR. BALLANCO:

Q. And so the record's clear, we're talking about a prior IPR proceeding between Lenovo and DoDots that involved these patents; right?

A. Right.

Q. And what in particular from the Lenovo proceeding did you rely upon in coming up with the construction for "execute the template" you provided in paragraph 42?

MR. JUANG: Object to form.

THE WITNESS: So the idea of a NIM template has to be a -- something that does not have executable code.

And executable code means there's going to be a program counter, and you've got to go through a program, instruction by instruction, doing something, whereas executing a NIM template has a different -- has a different meaning, and it means instantiating it. That means making it come to life.

And that has to do with the installer, you know, bringing in everything from the XML description, the NIM description, which is a data structure that has everything you need to make yourself a NIM, and using that kind of like a blueprint, I would call it.

So there's a blueprint that you -- that gives you the instructions of what to do, and then there's everything else about building a house, where there's actual physical things happening and, you know, carpenters moving around and procedures occurring and

all of that. But the blueprint doesn't have any of that stuff.

So that's what I say is executing a NIM template, is to go gather all that wood and those carpenters, but it doesn't have the -- it doesn't have the code itself. It just tells you how to do it.

BY MR. BALLANCO:

Q. And to back up, you had mentioned that in the Lenovo case, the board talked about executing a NIM, and if I understand you, your contention is that's different than executing a NIM template.

Did I get that right?

MR. JUANG: Objection. Misstates testimony.

THE WITNESS: I'm not sure about executing a NIM. I talk about instantiating a NIM and running an app that's a NIM, running a NIM. I think of executing a NIM template as, you know, bringing it to life, putting all the things in place and getting it ready to do its thing.

BY MR. BALLANCO:

Q. I guess my question is -- let me try to ask it a better way.

In Lenovo, the board or patent office didn't provide a construction of "execute the template"; right?

A. We'd have to look at that for me to remember

exactly what they did and what they said in that regard. If you want, we can do that.

Q. Well, let's instead talk about the '083 patent.

So you said you considered the '083 patent in coming up with the construction you're proposing for "execute the template"; right?

A. Right.

Q. Okay. I am going to, so we have it, because I'm sure we'll be talking about it --

(Simultaneous speakers)

BY MR. BALLANCO:

Q. Yeah. Let's bring that to the chat.

A. Right.

Q. Give me one moment.

A. It's so nice to have it in front of me, these things.

Q. Yeah. And I will tell you. If you have a printed copy in front of you that you'd like to look at, I'm fine with that. I mean --

A. I brought -- I didn't -- I brought nothing here.

Q. Okay.

A. I was instructed not to bring anything. I mean in my backpack over there, there might be

something, but nothing in front of me.

Q. Well, let's use this version then. I dropped it into the chat. So let me know when you're ready --

A. Great.

Q. -- to access that.

(Exhibit 1001 referenced)

THE WITNESS: Great. Great.

Okay. I'm looking at it now.

BY MR. BALLANCO:

Q. Okay. And I'll just let the record reflect that the exhibit we're looking at now is the '083 patent at issue in the '083 proceeding. It's Exhibit 1001 to that proceeding.

Dr. Selker, can you direct me to where in this '083 patent you found support for your construction of "execute the template"?

MR. JUANG: Object to form.

THE WITNESS: It's going to take a moment to get oriented here. Well, actually, let's see.

(Discussion off the record)

THE WITNESS: I'm sorry. I'm looking for where the Home Dot gets the NIM template and puts it in. Sorry it's taking me a little bit of time to find that.

BY MR. BALLANCO:

Q. Okay.

A. Dot, Dot, Dot. I'm reading the whole damn thing. It's ridiculous.

I mean even in, you know, column 33, 7, the XML, you know, describes the Dot. So XML was not a -- is not, you know, something that's read sequentially. It's something that slipped out as a source, a data structure.

And in describing this Dot, it's not, you know, downloading the code of the Dot. It is simply describing it, giving the resources that are needed for it, the styles, you know, the icons, where to find -- where to find resources, you know, where the URLs are, where the code can be found, you know, and so things like that.

Q. And that's in column 33.

Could you read the line you were --

A. Seven. Yeah. Line 7, it just describes the Dot, and that's what describing the Dot means to me.

Q. Okay. So --

A. Yeah. I'm sorry I -- you know, I absorb information, and then I internalize it, and that's a little different than tying it to specific lines, which I should be able to do, but that happens more in writing.

Q. Okay. So the support you, sitting here today,

can provide for the "executing the template" limitation, construction that you provided, is at column 33, line 7, where it says "The server 153 returns the XML that describes the Dot"; right?

A. Yeah.

MR. JUANG: Object to form. Also misstating the expert report.

BY MR. BALLANCO:

Q. Any other places that you --

A. Well --

(Simultaneous speakers)

THE WITNESS: I guess I do -- I guess I do want to go to the report and -- 'cause, you know, that would be a place where I wrote down and then I can go back to easily. So let me take --

BY MR. BALLANCO:

Q. Okay.

A. -- a quick look at that, if it's all right. Maybe you can even point me to where you'd like me to look for that.

Q. Well, you know, yeah. To short-circuit it, I think in your report at paragraph 42, if I'm remembering correctly, where you provide your construction for this claim term. Actually, paragraphs 42 and 43 is where I think it is.

MR. JUANG: I'm going to object to form because it also misstates the testimony.

THE WITNESS: I see that. Of course, what I'm looking for is back to your question, exactly line and columns of the patent. And so we talked about the claims 1, 5, 8, 9, 13, and 16.

BY MR. BALLANCO:

Q. Is there a different part of your declaration that provides the column and line numbers where there's support for the "execute the template" construction in your declaration somewhere?

A. I can't remember these document numbers. 1010. What's 1010? Samsung 1010. That's not --

MR. JUANG: You'll find it in 1014, paragraph 23.

THE WITNESS: Yes. I have to go look at these specifically to make sure. But the '083, what is that? Which Samsung Bates number? What is that called? That's 10- --

BY MR. BALLANCO:

Q. The '083 patent proceeding is the proceeding that ends in 621, if that's helpful.

Or are you asking the exhibit --

A. Yeah.

Q. -- number?

A. Yeah. The document number for '083.
Q. The '083 patent in that proceeding is Exhibit 1001.
A. Okay.
Q. Correct. So it would be Samsung 1001.
A. Okay. All right.
Q. At least I'll represent that.
MR. BALLANCO: And, Counsel, please correct me if I misstate anything. But that's my understanding. It's 1001.
MR. JUANG: I believe there's a listing at the front of the report. And I haven't checked it yet, but -- or no. It's an attachment to the report.
MR. BALLANCO: Oh, yes. I see it.
BY MR. BALLANCO:
Q. Just so we can help along here, at Exhibit A in the declaration, beginning at page 148, there's a listing of the exhibit numbers that correlate. And feel free to reference that.
MR. JUANG: Is there a question pending right now?
THE WITNESS: He's asking if there's other evidence I have for the "executable" definition. And I think for now -- I think I'll leave it for now.

BY MR. BALLANCO:

Q. Okay. So you had identified the line 7 of column 33, and we'll leave it at that for now.

A. Yeah, for now.

MR. JUANG: I'm going to object to form. He also mentioned the Lenovo decision earlier.

THE WITNESS: Yeah.

MR. BALLANCO: Okay. I'm talking about the patent itself. And we'll let the record speak for itself. We can move on.

BY MR. BALLANCO:

Q. Let's discuss, Dr. Selker, "client device." That's another term that you had mentioned in your declaration.

Do you recall that?

A. What was that term?

Q. "Client device."

A. "Client device." Yes.

Q. What are examples of client devices?

A. I think of a client device relative to a server. So a client device is something that a user's engaged with. And for these patents, typically these would be something like a cell phone. And so that's what I think of as a client device.

Q. Okay. Would a desktop computer be a client

device in --

A. Yeah.

(Simultaneous speakers)

THE WITNESS: A desktop computer could be a client device, but these patents are particularly focused on making a technique that will be a bit cross-platform. So it would work on a variety of client devices.

BY MR. BALLANCO:

Q. Okay. So if it would work on a variety of client devices, a desktop computer might be one.

A. That's right.

Q. And what would be others?

A. The others would be, like, a phone, maybe a tablet, although tablets weren't very much around in 19- -- well, there were some, but they were terrible. But yeah. I think there was a PalmPilot, I guess. You know, there were PDAs.

But, again, the PDAs didn't have facility to render web pages in the ways that we think of being the premium, preferred way that the developer would want.

Q. So the PDAs weren't able of rendering web pages in a user-friendly manner, but they'd still be considered client devices that were one of the flavors of cross-platform client devices that would be

considered under the patent; right?

(Reporter clarification)

THE WITNESS: I'm not -- I'm not completely sure that they were considering PDAs at all. They were much more interested in this fully configurable frame. And so in terms of impoverished devices that couldn't actually render the things that they were trying to -- these Dots -- to the extent that they weren't, the whole -- the process breaks down because they aren't able to fully configure them.

BY MR. BALLANCO:

Q. Let me unpack that a little bit. I just want to make sure I understand.

So PDAs, your contention is, weren't able of receiving and displaying the type of information that was being used on client devices by the patent.

Is that a fair way to put it?

MR. JUANG: Object to form. Misstates the testimony.

THE WITNESS: So it depends on the PDA. And, you know, there are clients that were able to do the kind of fully functioned, fully configured, you know, Dots that we're talking about, and there were ones that weren't. And I really am not convinced that those ones are relevant, because the point of the patents is to

make these fully configured NIMs, frames.
BY MR. BALLANCO:
Q. But for the PDAs that were capable, they would be considered client devices; right?
A. Yes. Yes.
MR. JUANG: We've been going for an hour, exactly one hour. Is this a good time for a break? It goes fast.
MR. BALLANCO: It goes fast. I thought we'd been going for about 10 minutes. Yeah. We can take a break.
(Recess)
BY MR. BALLANCO:
Q. All right. Dr. Selker, before the last break and earlier in our discussion, we were talking about HTML and XML.
Do you recall that?
A. Yes.
Q. Now, HTML and XML are both markup languages; right?
A. That's right.
Q. And they are also both structured languages; is that right?
A. Structured? They have tags that relate to definitions.

Q. Okay. And so is that what would be known in the industry as a structured language?

A. I don't think of it by that name. But they both have tags that define the way they're going to -- you know, in HTML, the way things are going to be laid out by a browser, that's going to define the fonts and the size and, you know, layout and stuff and, in XML, the way the data's going to be structured that can be used for a variety of purposes.

Q. What is -- strike that.

Are they also both hierarchical languages?

Does that make sense?

A. When I think of a hierarchical, there's, you know, these different headings, heading 1, 2, 3 in HTML, and certainly in XML, there are tags that structure data. So yeah. I guess they're -- are they -- I'm trying to think of where they are hierarchical, but I think of them as hierarchical.

Q. Okay. Now, let's go back to your declaration for the '083 proceeding in particular. And you offered a construction for "data structure" in that declaration. If I could direct you, to make it more convenient, to paragraph 103.

Do you see that?

A. Right, right. It's going to have about

efficient access to data. Let's see. 103. Yeah. "A data structure is a way of organizing and storing data in a computer so that it can be accessed and used efficiently."

Q. And what did you evaluate in proposing this construction that's presented in paragraph 103?

A. I mean there are various definitions of "data structure" and "data." You know, Niklaus Wirth, for example, has these four things that he thinks you have to do. You have to be -- delete it. You have to be able to access it, and this and that. I don't know. I just wanted a simple way of describing a data structure.

You know, a data structure is something -- it's not something that's part of a linear sequence of doing things. It's something that you can look at and find things when you need to find them if you'd stored them in an organized way. That means, you know -- actually, a lot of people make databases that they can't find the things they're looking for, unfortunately.

But anyway, that's what I -- that's what I came up with.

Q. Okay. And so this is your understanding of the term, not necessarily the industry understanding. It's what you came up with.

A. I don't see any conflict with it with other

things that others have described, and I'm aware of many people, you know, talking about data structures. So I'm not ignorant of other things. I wasn't trying to ride away from anybody else's definition of a data structure. This is just a simple thing I could write down without making this document even longer.

Q. Fair enough. In other words, it's your articulation of it, even if it's, you know --

A. Yeah.

(Simultaneous speakers)

(Reporter clarification)

BY MR. BALLANCO:

Q. Even if it's not in conflict with, you know, other articulations. I'm not trying to suggest that's what I'm trying to say. Let me strike that and just ask another question.

Dr. Selker, this is your articulation of "data structure"; fair?

A. Yes.

Q. Now, we got at this a bit before, but let's talk about it some more.

NIM templates. We agree that they must be coded in a web browser-readable language; right?

A. They have to be coded in a way that can be interpreted by an installer. I haven't really thought

of it as having to be a web browser-readable language because they are -- they're installed by an installer. And is it within the browser only? I kind of haven't thought about that, as to whether it has to be inside the browser when you -- that this happens.

But yes. That's an example of what a NIM template is, interpreted within -- in a web browser-interpretable way.

Q. Okay. Would XML be an example of such a language?

A. XML is used by the internet community extensively for things inside and outside of browsers. Yes.

Q. So XML would be a web browser-readable language?

A. It is used by web browsers in various ways. It is not read in a sequential way, the way HTML is, when you're building a web page. It is something that's a resource in that data structure sort of way that these apps or whatever is worth running on a web browser often use.

Q. Okay. Let's take a step back.

I had asked you a question about whether NIM templates had to be coded in a web browser-readable language; right?

A. Right.

Q. Okay. And I believe your response -- and please correct it if I'm misstating it. I'm not intending to. I just want to make sure we're on the same page.

You had, I believe, testified that your understanding of NIM template is that it had to be something that could be -- go through an interpreter to do --

A. Well, you have to parse. It has to be parsed. Now, parsing doesn't mean that it's read with a program counter as a piece of code. That's different.

Q. Okay. And so let me take that to XML.

XML is a language that can be parsed; right?

A. It can be -- you can use, you know, something to look through it -- that's what they call parsing it -- and finding the things you're looking for in it as a data structure.

Q. Okay. So let me just ask a simple question as a yes or no.

XML is a language that can be parsed? Yes?

A. It is not parsed in a sequential way, is my point. It is this question of, you know, what is executable? You know, things where you run through a program counter, that's parsed, as in running a program.

Things that you parse by looking through them for specific things, that is parsed in a way, like a data structure or some other resource that you might rely on for parts of -- finding things for a program or whatever.

Q. Putting aside sequential parsing, XML is a language that is parsed; right?

A. The reason I keep putting these caveats on "parsed" is because there's a way in which parsing looks like going through something in a sequential way, and that is not the typical way that XML was used. So yes. It is parsable in that you can interpret the tags and know what you're looking at and find them, do things with the things that -- or the data that is stored within.

Q. So yes, XML is parsable.

MR. JUANG: Objection. Asked and answered.

THE WITNESS: Yeah, I don't know. I've said it the way I want to say it.

BY MR. BALLANCO:

Q. Okay. Well, I believe this is a slightly different question than was asked before.

(Simultaneous speakers)

BY MR. BALLANCO:

Q. XML is parsable. Agree?

MR. JUANG: Objection. Asked and answered.

THE WITNESS: A program can look inside of it and find things. To the extent that that's parsable, that's a yes.

BY MR. BALLANCO:

Q. What are examples of other parsable programs, beyond XML?

MR. JUANG: Objection. Outside the scope of the report.

THE WITNESS: All languages are parsable. English language is parsable. So that's the idea of a language, is that there are -- that it has aspects that can be separated and have different meanings for different purposes, whether it's a dataflow programming language or a functional line of program language or an object-oriented language or a, you know, applicative language. All of them can be parsed. But, also, data structures are parsed to find things within them as well.

BY MR. BALLANCO:

Q. Is HTML parsable?

A. HTML is parsable.

Q. Is HTML a web browser-readable language?

A. Yes. HTML is the primary language that browsers were designed to use to lay out pages in a

sequential way --

Q. Okay.

A. -- by reading it in a sequential way.

Q. Is HTML code capable of being stored in memory and then accessed later?

A. Absolutely. Yes.

Q. All right, sir. I'd like to ask you, going back to the '083 patent, there is a description in that patent about a web conduit.

Do you recall that?

A. A web conduit?

Q. Yeah.

A. I will look at what you're talking about. I like that term.

MR. JUANG: I'm going to object to the form of the questioning because it seems to be outside the scope of both the Schmidt declaration and also the Selker declaration. I'm not finding "web conduit" in the Schmidt declaration. So it seems like you're treading on these territories.

THE WITNESS: Yeah. I don't remember using this term.

BY MR. BALLANCO:

Q. Okay. Let me ask you this, sir.

Did you consider the web conduit described in

the '083 patent in rendering the opinions you provided in your declaration?

A. Well, I don't actually recall. I mean there's 34 mentions of conduit. But I wasn't thinking of that term as I was writing my declaration. I was thinking about the things Schmidt had said and what I wanted to respond to those.

Q. Okay. We can put that aside then for a minute.

What type of controls are compatible with the Dot framework described in the '083 patent?

A. So I think of the controls as something within the patent that let a user have -- change what the NIM is doing. So it can -- you know, it can bring up information. It can change what's presented. It can be part of some -- any kind of interactive. So it's something within the NIM that is defined by the developer, has something that they would want to do, they would want the user to do.

Q. A quick point of clarity. You mentioned "defined by the developer."

When you say "the developer," who exactly are you speaking about?

A. Yeah. I mean that's kind of an interesting thing in these patents, where they're fully configurable

by the developer.

So the point of these patents is that whoever is paying for these NIMs to be built is basically saying I want an experience for this user. I want them to fill out a form to get their, you know, IRS money or whatever it is that I've designed this thing to do. And so I want to have an experience that I have provided for them, that I can depend on having the qualities that I want it to have, them seeing the things that I want them to see, and having the actions that are planned for them to do.

So that's kind of part of the fully configurable idea. And --

Q. And --

A. -- the developer have too -- let me just -- or the funder, you know, whoever meant for this thing to be created.

Q. Okay. So I just want to make sure we're piecing that -- so we're not talking, when we say "developer," necessarily about the specific coder there.

It might be the entity that that person is employed to do the work for; right?

That's the developer.

A. In the end, there's a -- I believe in programmers, when they get paid, they actually made

the -- they had to be evaluated. Hopefully they did what they're asked to do. But they -- you know, some -- I don't know whether there's a distinction -- that's interesting -- between the persons programming and the person that designed it and the people that wanted it in the first place.

Q. Okay. All right. I appreciate that clarification.

A. Right.

Q. I wanted to make sure we were precise.

A. Yeah.

Q. What does it mean to -- going back to controls, what does it mean to call a control?

A. The actions of the user of using a control on a NIM is calling on some level a control. It is going, and it's making an action happen over the -- over an active network to make something -- to make something happen.

Q. Okay. And talking about the '083 patent and these patents at issue, the Dot framework, what types of controls are compatible with that Dot framework?

A. I'm trying to think about which ones aren't. The ones that are compatible are ones that don't subvert the developer's goals.

So these controls are within the realm of what

the developer wanted this NIM to do, you know, whether it's going and getting a new app in Play Store or it's finding out about an app in Play Store -- you may click on something, and it will give you some information about that, about that Play Store -- or it's updating or comparing some stocks, things that are -- things that -- you know, they will often ask for information over the network.

Q. Okay.

A. But not always. They might -- there might be something local that happens.

Q. What is ActiveX, and is that -- well, let me just ask that.

What is ActiveX?

A. ActiveX is a framework that was first originated with -- I don't know. At one point it was called OLE, and that was, you know, their -- Microsoft's attempt to have these embedded programs that you could grab. It's kind of a library of things that you can snap into something on the desktop or the web, certainly the web.

And it became -- you know, they're kind of a way of getting people kind of -- I don't know -- I don't want to call them widgets, but parts that they could include in their programs. And so they, you know, have

a program inside of them and way of finding them. And they could, you know, be behind the scenes on a web -- on a web experience.

Some people worry that they're a little bit like a virus, and in fact, that's what was the downfall of the ActiveX thing, is that people did use them as a tunnel to get security problems. I don't know. They may have tried to fix that, but somehow by then -- who knows. So that's some about it.

Q. And I think part of that, if I'm understanding correctly, is they could be exploited because ActiveX was an example of something that allowed for control; is that fair?

MR. JUANG: Objection. Misstates the testimony.

THE WITNESS: Well, ActiveX runs programs, and these programs had behavioral -- behavior change. And yes, it could have sequential.

BY MR. BALLANCO:

Q. And is ActiveX a type of control scheme that's compatible with the Dot framework?

A. I hadn't thought of it that way, but the possibility of using ActiveX code after the NIM has been instantiated, you have code that is running in a NIM, and it could be any code. That's when the NIM's

running. That's not when the NIM's being set up.

Q. I just want to make sure I heard that correctly.

You said it could be any code?

A. When the NIM is running, the NIM runs programs that do things. And the patents are agnostic as to what programs are run. They are much more about how you install and set up a NIM.

Q. I see. So if they're agnostic, fair to say then that ActiveX could be one of the control schemes used because of the agnosticism?

A. Yeah. I mean, quite frankly, I would be surprised because the NIM template -- if anybody would do that because the NIM template, NIM architecture, is, you know, trying to be cross-platform, and ActiveX was not good at being cross-platform.

Q. What does it mean to embed a control?

I saw that in the patent. This term "embed," could you explain to me what that means.

A. Is this something I wrote about in my declaration?

Q. Well, it's certainly related to the control characteristic described in your declaration. It's something in the patent. Maybe we can look at the patent and I can show you the --

A. No. I see -- I see at, you know, line 4 or something of column 17, the developer might embed an ActiveX control in an HTML page rendered in the web conduit.

Q. Right. So let me ask a new question then.

Having looked at that portion of the specification you just mentioned, what does that mean to embed a control?

A. That means it's part of the program that is being run when the NIM is using it.

Q. Okay. And what is the relationship of the X -- strike that. Let me orient where we are again.

So you had just read from the specification at column 17. I'm going to read it again so we're all looking at the exact same thing. So I'm reading at column 17 from the '083 patent.

And it says "Also, just like a browser, a Dot developer may embed an active-x control in an HTML page rendered in the Web Conduit control as is the practice for use with full screen browsers."

Do you see that?

A. I do see that.

Q. In this passage I just read, what is the relationship of this HTML page to the Dot?

A. This is part of when the program, the NIM, is

running, in my understanding.

I am not convinced that I've written about this in my declaration, however. And so I really should be -- we should be referring to things that I can -- that I can refer to in my -- you know, I'm -- at some point I'm not going to be able to go into hypotheticals and think about things that I haven't -- that weren't part of me responding to Schmidt very well.

Q. Okay. Well, let's move on then. I want to ask about something that I think is in your declaration, which is "control characteristic."

What is your understanding of "characteristic" in that claim term "control characteristic"? What is "characteristic"?

A. It's something that has an affordance. So I have this idea of it having something I can do, and that characteristic is what it can do. So I have this control, and the control has the ability to be pushed or moved or whatever, typed into.

Q. Okay. The patent talks about characteristics.

What are the characteristics that the patent talks about that you considered when you talk about this in your declaration?

A. I'm just looking at if I defined "control characteristic" in my declaration. That's what I'm

looking at.

Do you want me to go to the patent?

There's exactly one reference to "control characteristic." That surprises me. Yeah. We got frame viewer and control characteristics. So I describe what I thought a control characteristic was. I don't know if that was adequate for you.

Q. Right. Well, is size a characteristic? Is that one of the things contemplated?

A. Size within a frame might be something, but the size of the frame certainly is not. And it also has to do with whether it was a control that, you know, was put in by the developer for the purpose of controlling the NIM.

Q. Okay. I apologize. There's no question pending. Too many things open on my screen. Just give me a moment.

A. Luckily, I don't have that luxury right now.

Q. Dr. Selker, you had mentioned, I believe, that "control characteristics" is defined or mentioned in the specification in just one place; is that right?

A. I see control characteristics, you know, frame, viewer, and control characteristics. But the word "control" comes up many times.

Q. Okay. The place where "control

characteristics" comes up is in column 7. It looks like it's around line 22; is that right?

A. Yes.

Q. And so we're all on the same page, why don't I just read into the record that sentence, and let's talk about it. It says "Each Application Media Package template defines the characteristics of a specific Application Media Package, including fully configurable frame characteristics, viewer and control characteristics, and Application Media Package content references."

Did I read that right?

A. Yes.

Q. And so here there's no specific, narrow definition of "control characteristics" provided in the patent; right?

A. Well, it is applicable to the NIM that's going to be created. That is my understanding.

There's no -- there's no question about -- it's not -- this is not something that has to do with the operating system it's in or -- you know, in Brown, it's not controlling the placement on the screen. That's defined by the developer, where this frame's going to be placed and how -- what size it's going to be and things like that.

So this really has nothing to do with things outside of the fully configurable frame.

Q. Okay. So just so we're on the same page, control characteristics, in your opinion, relate to the NIM, not things outside of that; right?

A. Yes.

Q. But beyond that, nothing that we see here in column 7 gives a narrower articulation of control characteristics; right?

A. The only thing that I would add is that the NIM template has to have the complete definition of the NIM that can be expanded within it. And it does not depend on other things. It isn't depending on specific operating system tools.

It includes its own libraries, its own -- you know, its own programs, whatever -- not the programs, but all of the resources it's going to have to -- it's going to have to access. As a blueprint, you know, it's -- you know, I'm going to have to have all these things show up before I can build my building.

Q. Okay.

A. And those are all contained within what I -- I think of them -- I think of the APK when I think of that, although there's some, you know, other diagrams that are very similar in some of the provisional and

patents. But anyway, that's my understanding, is everything has to be right there.

Q. Okay. You mentioned APK a moment ago. Is that Android --

A. Yes.

Q. -- programming kit?

A. Yeah.

Q. APKs aren't specified specifically in the patents; right?

A. No, they aren't. But they are -- but the diagrams that they show of -- you know, I call it a blueprint. The, you know, stuff that really relates very much to the APK, that is something that's -- a data structure that has all the -- that points at all the things you need to make the application is so consistent with it that I find myself thinking about it all the time.

Q. Okay.

MR. JUANG: So our lunch is here. I don't know if --

MR. BALLANCO: This would actually be a good time to stop for a break if you want to eat lunch.

MR. JUANG: Okay.

* * *

(LUNCHEON RECESS)

* * *

BY MR. BALLANCO:

Q. All right. Welcome back.

Dr. Selker, one of the pieces of the patents here that they discuss is the display of internet content.

Do you recall that from the patents?

A. Yes.

Q. What are examples of internet content?

A. Internet content is content that comes over the network. In general, it's in, you know, some HTML format, but -- so it, you know, can be images, text, animations.

Q. You mentioned coming across the wire on HTML format.

What other formats might internet content take the form of?

A. Well, the web is defined by HTML content, but the internet has every possible, you know, format. You can have GP. You know, that isn't really what we're talking about here, though.

Q. For example, is Flash a format that might be used by internet content?

MR. JUANG: Object to form.

THE WITNESS: Well, Flash is not supported by

web browsers so much anymore. At the time of the patent, I don't -- I mean the -- I'm not sure I wrote about that. I mean it's hard -- you know, what -- Flash is a whole world of its own. And -- yeah.

I don't -- I really don't know if I've opined on that. I'm not sure what I'd say about -- I'd have to think about that word carefully, whether Flash is a -- you know, is a language that browsers interpret and would be on this.

BY MR. BALLANCO:

Q. The '083 patent, at least, describes Flash as one of the formats that internet content might comprise; right?

A. Okay. I'd forgotten that.

MR. JUANG: I'm going to object to form to the extent it's going beyond the scope of the report. I don't think he discussed Flash, and Dr. Schmidt I don't think has discussed Flash as well.

BY MR. BALLANCO:

Q. Okay. Well, let's do this.

Do you still have the '083 patent from when I put it up?

A. I do. I do. But I'd really like to stay with the declaration and the work that I've really spent all my time understanding and thinking about relative to

Schmidt's problems with these patents.

Q. Okay. Well, that's fine, sir. And I do want to talk about your declaration. But, you know, one of the pieces of information that you explained that you considered in putting together your declaration was the '083 patent.

So --

A. Yes.

Q. -- I think we should be able to talk about what's contained in the patent; fair?

A. Sure. I can talk about it. But, you know, I mean there's, you know -- let's just say when the guy brought the paperwork down my driveway, it was a hundred pounds of stuff. And, you know, there's a lot -- there's a lot there. And while I'm -- and we didn't really --

Q. I'm sorry.

A. We didn't really -- yeah. We didn't really spend -- I really wasn't thinking about Flash in my declaration, but --

Q. Okay. Let me ask you a different question, sir.

A. I mean I can think about it for a while, and, you know, we can go out and learn about -- I mean I can remind myself of everything I think about Flash and

how it was -- how -- you know, whether you can define a control characteristic that is there and how something's presented on the screen and where, you know, the viewer -- what is, you know, in the background of the part you can draw in or the frame, you know, where it is on the device, those are the things we really define.

Now, you know, Flash -- yeah. I'm going to have to think about Flash.

Q. Okay. I want to take a step back, and let's put aside, at least for now, control characteristics. So my question doesn't relate to control characteristics. I'm talking about internet content, which is something that's in the '083 patent.

Can we just talk about that separate from control characteristics?

A. Sure.

Q. Okay. And let's also just put to the side, for now, Flash.

And one of the things you had mentioned that internet content could comprise in terms of format is HTML; is that fair?

A. Sure. Sure.

Q. How about XML? Is XML a format that internet content comprises?

A. Yes.

Q. Let me ask you about another format, that I wasn't familiar about. It's CDF.

What is that?

A. It's channel description format. And so it, you know, sets up these channels, if you will. You know, we see that, you know, in a couple of patents, you know, that Schmidt talks about.

Q. And what language are these CDF files written in?

A. The CDF files -- let me take a look at them for a moment.

Q. I'm just after -- are you pulling something up on your computer?

A. I'm going to look -- I'm going to look inside of my -- inside of my declaration, actually.

Q. Okay.

A. I mean I think of them as being -- you know, calling out to JavaScript to do some of their work. I'm looking for -- yeah. I mean, you know, they're -- I mean I'm looking at -- what am I looking at?

I'm looking at page 51, and I've got this CDF file, and it's, you know, telling us where to look for the stock, which is a URL, but I'm not going to be able to point you to any -- point at something beyond, you know -- beyond a URL, something -- a place to look for

something to put up. Microsoft, whatever.

So yeah. This is -- this is -- you know, it's got angle brackets. It's frame readable.

I'm sorry. Was there a question I didn't answer maybe?

Q. No. No. There's no question pending. Sorry. I'm just thinking about my construction. And let me ask you -- let me ask you this way.

You had mentioned, I believe -- correct me if I'm wrong -- that the CDF file might call out to JavaScript.

Did I get that right?

A. Yeah. Yeah. To --

Q. What --

A. -- script file.

Q. Okay. So the CDF file might call out to script files.

And what programming language in the CDF files are making those callouts to the script files?

MR. JUANG: Object to form.

THE WITNESS: I really -- you know, I hadn't considered, but I think -- I mean it looks to me like, you know, it's a scripting language. It's -- these are -- they're set up to set up these channels, and they have this -- they go off to files to do it, and they

label things and places to go and seem to be more of a functionality.

BY MR. BALLANCO:

Q. I'm not sure I'm understanding, only because I had thought you'd said that the CDF file needs to call out to a scripting file.

But are you also now saying that the CDF file itself is written in a scripting language?

MR. JUANG: Object to form. Misstates the testimony.

BY MR. BALLANCO:

Q. I'm sorry. Did you --

(Simultaneous speakers)

THE WITNESS: Yeah. I'm --

BY MR. BALLANCO:

Q. Take your time. I just wasn't sure if I had missed a response.

A. I see the MisScript files that -- you know, that can access JavaScript and other things to make a channel.

Q. Okay. And I don't want to keep going over this, but there was some interruption. So I just want to make sure the record's clear.

So your testimony is that a CDF file is written in a scripting language, and it calls out to

other working languages like JavaScript?

MR. JUANG: Object to form.

THE WITNESS: That is the way I think of it.

BY MR. BALLANCO:

Q. And how did you form that opinion on CDF files?

A. I was looking at these channel definitions in a couple of the patents that we're talking about.

Q. Before your work on this case, had you encountered CDF files before?

A. I didn't -- no. I had not specifically used them.

Q. Can CDF files be written using XML?

MR. JUANG: Object to form. Outside the scope of this report.

THE WITNESS: You know, I looked into channel to these things enough to see what the purpose was and what they -- and how they did it. I don't know. It's not something that I've -- I don't see why they would be written in XML, by the way, but that's just a hypothetical. I'm just -- I see them as something that's doing something, not something that's sitting there as a data structure.

BY MR. BALLANCO:

Q. Okay. One of the prior art references that

you opined about in your declaration is the Brown.
Do you recall that?
A. Absolutely.
Q. Okay. And let's talk about that for a moment.
A. Okay.
Q. I'm going to try to put it into the chat just so we have it.
A. Thank you.
Q. Yeah. No problem. Give me a moment here. Okay. It should load here in just a moment in the chat.
For the record, this is Exhibit 1005 to Samsung's '083 petition.
(Exhibit 1005 referenced)
BY MR. BALLANCO:
Q. Let me know when you have it available, Dr. Selker.
A. Sure.
Q. And at the same time, I'm also going to put into the chat another reference that we might talk about, which is the Wecker reference. So I'm going to let that one go in as well so we have both of them.
(Exhibit 1006 referenced)
THE WITNESS: Good. Good.
BY MR. BALLANCO:
Q. And for the record, this is Exhibit 1006 to

the '083 proceeding, Wecker. And if you have both of those, I think we can move along. Just let me know if you do.

A. Yeah. I'm just --

Q. Take your time.

A. -- thinking. Sometimes I'm surprised what my -- okay.

By the way, my -- I should be a little careful. At some point this Adobe Reader of mine, with too many things in it, will blow up, and then we'll have to reload everything. It's just -- I don't know what's wrong with it, but that's probably because I'm not paying. I just have a reader and not a --

Q. Don't have the professional? Don't worry. I don't have too many more. So hopefully it stays stable with these.

A. Right. Right. Okay.

Q. Okay. So one of the questions that I wanted to ask you about Brown was its disclosure of a desktop.

Do you recall that?

A. A desktop, yeah. Brown has this active desktop. Right.

Q. Okay. And describe that for me.

What is the active desktop that Brown instructs?

MR. JUANG: And, Mike, you're breaking up a little. You're a little choppy. I don't know if your kid's streaming something else.

THE WITNESS: Probably streaming.

So an active desktop allows Microsoft to have this text.htt, which is a list of all of the active desktop elements. That's going to show the starting places where they are on the screen, and it's going to make them different shapes and sizes. They might have, you know, static or dynamic data in them.

They are sitting on a desktop as a layer, separate from the icons that are part of the rest of the graphical user interface. There might be -- yeah -- multiple parts to the screen where the active desktop gets to sit.

And they are basically coming out to let whoever gets a window to put up whatever they want inside of that window from the network.

BY MR. BALLANCO:

Q. Okay. Fair to say that the desktop -- the active desktop, rather, in Brown, it relates to a graphical user interface? Is that what I'm understanding?

A. Absolutely.

Q. Okay. How is that graphical user interface

instantiated to the user? Through what medium?

MR. JUANG: Object to the form.

THE WITNESS: There's -- the operating system has a facility, and it refers to the text.htt to decide what should go up. And the user can shape and size and move these things around. And they'll probably be recorded back into this text file, this script file, for the next time that they load it.

That's how I do it. I mean it reminds me of my Symbolics example, where I had these windows that I could store the positions of and come back to them.

BY MR. BALLANCO:

Q. The example from your work at Atari?

A. Yeah. Yeah.

Q. Okay.

A. Although I haven't thought of that until today.

Q. And going back to that, if I recall correctly, you had mentioned that when you were at Atari, working on the Symbolics, you were looking at it on a large monitor in the room; is that fair?

A. Yeah. Large monitors at the time did not get beyond 30 inches. But yes, large.

Q. Relatively large for 1983.

A. Well, yeah. About 150 pounds, yes. Very

heavy.

Okay. So we've got this -- we have this -- you were asking me about what ActiveX --

MR. JUANG: Do you have a pending question?

THE WITNESS: Yeah.

MR. BALLANCO: I don't think there is, but there will be in a minute.

THE WITNESS: I'm sure there will be.

BY MR. BALLANCO:

Q. The Brown active desktop would then also be displayed to the user in a similar way, on a monitor?

A. Yeah. It's displayed on a monitor.

Q. Okay. So if I understand it, the Brown active desktop is then instantiated on the user's desktop computer; right?

A. Yes.

Q. Now, Brown also -- well, strike that.

Let me ask you, stepping aside, is the notion of an active desktop unique to Brown, or is that something that was known in the industry?

MR. JUANG: Object to the form. Outside the scope of the report.

THE WITNESS: There was something very special about what they were trying to do. They were -- they were trying to present web content excluding browsers so

that they could -- so that they could try to, you know, eliminate the -- their goal was to kill browsers. I mean Bill Gates said he was hoping to kill every browser.

So this was an idea of, hey, our desktop's such a great thing. Why don't we absorb everything that's being done today in the desktop.

BY MR. BALLANCO:

Q. Okay. That's interesting. But let's talk about Wecker then for a moment, which that was a different reference that you also considered --

A. Yeah.

Q. -- as far as --

A. Yeah.

Q. Okay. And, again, for the record, I think I mentioned this. I've added it into the chat. It's Exhibit 1006.

A. I'm looking at it.

Q. Okay. So Wecker is related to -- sorry. Strike that. I want to ask a better question.

Wecker uses which Windows operating system?

A. Windows CE.

Q. And what is Windows CE?

A. Windows CE is a attempt for -- by Microsoft to make small computers be able to, you know, have things

happen on them that would be relevant at the time. And, you know, the early ones had questionable use of their visual real estate, and later on they kind of tried to mimic, pretty much, Windows 3.1 kind of look. So they had things that looked like Windows but were done in a very different way.

And because they were meant to be mobile, they had very different constraints on, you know, how they did things, as well as the processing power being less. You know, they weren't sitting there wired up by a T1 line to anything.

Q. Okay. Now, if you recall, in your declaration -- we can actually go there. This is paragraph --

A. Okay.

Q. -- 159 that I want to talk about.

A. Well, that's helpful. Okay.

Q. And I will just state for the record I believe in this paragraph you provided an opinion that a person of skill would not combine Brown's system with Wecker's system because they use different versions of the Microsoft operating system.

A. They were different operating systems. They aren't the same operating system at all. So it isn't versions of the Microsoft operating system. Microsoft

was a gigantic company -- it still is -- that makes many, many products, with, you know, hundreds of thousands of programmers doing different things. So they're different operating systems, actually.

MR. JUANG: I also would like to interject that misstates the full scope of his opinion. I don't want to represent on the record that that's the full scope of his opinion.

BY MR. BALLANCO:

Q. Okay. Well, let's just talk about this one opinion in --

A. Sure.

Q. -- paragraph 159 for now, sir.

And I appreciate this isn't the full scope of your opinions and motivation to come out of it, but I want to talk about this one; is that fair?

A. Fine.

Q. So I did misspeak before. You're right. These aren't different versions of an operating system. We're talking about different operating systems altogether.

Brown is talking about Windows 95 and its progeny, whereas Wecker is talking about Windows CE; right?

A. Uh-huh, yeah.

Q. And so your opinion is based -- that one still would not combine the two, as reflected in paragraph 159, is because they are different operating systems.

And do I have that right?

A. They have different goals. And that's kind of the way I was describing it as well. So they're different operating systems, but they have different goals, and they have different constraints.

Q. Okay. Now, for your opinion in paragraph 159, had Brown been using Windows 95, that opinion would no longer hold -- right -- because then Brown and Wecker would both be using Windows 95; fair?

A. You meant, probably, to say that if it was Brown using Windows CE, probably; right? 'Cause Brown does use Windows 95, I think.

Q. Let me start it again.

A. Okay.

Q. If Wecker was using Windows 95, then your opinion in paragraph 159 would no longer hold because then Brown and Wecker would both be using Windows 95; right?

A. So the use of the operating system is not the only thing that keeps them from being combined. They're really solving different purposes -- or different things

for different -- in different ways.

And, you know, certainly this idea of Brown being able to put something around on a screen and make it different sizes is so different from, you know, the figure A of Wecker, where you've got this hierarchy of things that you've subscribed to, and you're going to be updating, and you're literally taking very small amounts of space, not being real complicated, you know, fancy graphical thing.

This was really -- you know, these ideas that Wecker was putting forward and the way that they were doing it were for the purpose of a kind of efficiency that made sense for what they were trying to do, which was different.

Q. Okay. I understand.

Now, as just a matter of context, Windows 95 described in Brown has progressed along to the current Windows operating system we have on our computers today; is that fair?

In other words, it's still a going concern in that progeny of operating systems?

A. Oh, yeah. Absolutely. Surprising, but yes.

(Simultaneous speakers)

THE WITNESS: Yeah.

BY MR. BALLANCO:

Q. Go ahead. I don't mean to cut you off.

A. Oh, it's just, you know, other companies, like Lotus, gave up their desktop, and Windows didn't.

Q. Windows CE, on the other hand, is that still a going concern, as far as you're aware, or no longer?

A. Windows CE is no longer. There's just been a big war in the mobile -- in the mobile operating system world and -- yeah. It just ceased to be competitive. I think. I mean I actually saw that they had some support for it, but, you know, I think it's pretty much dead.

Q. Okay.

A. I know there was something in 2019 that I saw about Windows CE. I can't remember what it was.

Q. Now, I want to make sure I understand a little bit more about Wecker. If I understand your position correctly, it's that Wecker had certain requirements that caused it to use Windows CE.

Is that a fair way to say it?

And if it's not complete or if it's incorrect, please let me know.

MR. JUANG: Objection.

THE WITNESS: Yeah. I see it as an architecture for making simple information accessible from these mobile devices. Windows CE was its target.

And the way Microsoft happens -- right -- whether it's applicable to every operating system, I'm not really, you know, able to say.

BY MR. BALLANCO:

Q. Okay. In your review of Wecker, would it have been possible to implement that invention or claimed invention on Windows 95?

MR. JUANG: Objection to the form. Outside the scope of the report.

THE WITNESS: I don't see -- I don't see a reason to do it. I mean any Turing machine can run any program. And, you know, there's some display and everything like that. But I don't see, you know, a reason to put Wecker on a Windows platform.

I mean one can imagine mobile devices where some of the same advantages might be accrued. For example, the OQO handheld Windows machine, that failed, by the way, was a small device that, you know, had a lot of the same problems that Windows CE devices have. But it ran Windows whatever at the time, whatever lineage it was at.

BY MR. BALLANCO:

Q. So even if not perhaps optimal, the Wecker conceivably could be run on Windows 95.

MR. JUANG: Objection. Misstates the

testimony and outside the scope of the report.

THE WITNESS: You have to speak louder because the microphone's --

THE REPORTER: I can't hear.

MR. JUANG: Yeah. Sorry. You got it, though.

THE WITNESS: Did she get it?

MR. JUANG: Yeah. She got it.

THE WITNESS: I'm sorry. There's a pending question?

BY MR. BALLANCO:

Q. Yes. I'll ask it again.

So even if not optimal, it's conceivable that the Wecker invention could be run on the Windows 95.

MR. JUANG: Objection. Misstates the testimony and outside the scope of the report.

THE WITNESS: My answer before was I would need to have a reason to do it for it to be a valuable thing to do. Any computer can run programs, and you could use the display that way. I don't see why I'd do it.

BY MR. BALLANCO:

Q. So in other words, you could do it, but you don't see a reason why one would do it.

MR. JUANG: Objection. Misstates the testimony.

THE WITNESS: Yeah. I don't see a reason to do it. I certainly -- the main thing about it is that I don't see how these two patents would work together to support any goal that a user would need. They just are solving different problems in different ways with different technology.

BY MR. BALLANCO:

Q. There's no pending question. I'm just scrolling through menus.

A. No, that's fine.

Q. So I know we've only been going about 40 minutes, but I'll be quite frank. I don't have much left. But would we be able to take maybe a five-minute break just so I can organize my notes for the next session? And, again, I don't think we'll be too much longer.

MR. JUANG: Yeah, that's fine.

(Recess)

BY MR. BALLANCO:

Q. Dr. Selker, I would like you to pull up the Brown exhibit that I sent earlier in the chat. And let me know when you have that in front of you.

A. All right.

Q. And, again, for the record, I believe this is Exhibit 1005 in the '083 proceeding.

A. Brown.

Q. Okay. If you would navigate to figure 3A. I believe it's PDF page 4.

A. Okay. I'm looking at it.

Q. Okay. Dr. Selker, this is one of the figures that you analyzed in preparing your opinions in this case; is that right?

A. Yes.

Q. And what is displayed here in figure 3 of Brown?

A. There's three kinds of active desktop items, one that's static and one that's animated and one that's got some updatable content.

Q. Okay. And I'll just note for the record figure 3A identifies different icons with numbers.

Do you see that, Dr. Selker?

A. Yes, I do. Different --

Q. Would you identify -- would you identify for the record the three icons that you had explained were active desktop icons here.

A. So I don't call them icons. I call the things on the left, 304, icons. I call those other things active desktop -- I don't know -- windows or something.

And so if we take a look at, you know, 308, it has, you know, some operating system controls that allow

you to resize it on the right, and something that lets you start or stop it is part of -- not part of the definition that I saw in the -- in desktop.htt.

And then for 310, we have similar. We use some scroll things. Again, they're part of the desktop. They are not part of -- they actually deviate from a fully configurable frame in that you can make it any shape you want.

And whoever's designed that animation's going to be mad because they aren't going to get presented in that beautiful way that whatever it is is presented. I don't know what it is.

And 306 does not seem to have any controls, but it's got a nice shadow border on it. I like shadow borders.

Q. Okay. Can I understand then the active desktop windows you've identified in figure 3A are 306, 308, and 310? Right?

A. Yes.

Q. Okay. I want to ask you a few more questions about them.

A. Sure.

Q. In 308, I believe you mentioned that it has several controls, including to start and stop.

Did I get that right?

A. Those are not control -- they don't have a control characteristic defined in the -- in any NIM template that I've been able to see. So I don't -- and they aren't actually described as a resource that is defined in a NIM template that I've seen. So I don't see those as controls in the sense of the paths we're talking about.

Q. Okay. And in 308, you see where it says "Dow" and then it provides a number?

A. Yes.

Q. What do you understand that to represent?

A. That looks like a stock price, you know, Dow, you know, a conglomerate stock price. And I assume that you can find it for specific times that occur.

Q. Okay. Let's move then down to active desktop window 306, which is below 308.

A. Yes.

Q. Do you see that one?

And what content is displayed in active desktop window 306?

A. It looks like the whole world's in somebody's hands. That's what -- I see an animation -- I mean an image. And -- yeah. That's what I see.

Q. Okay. And then moving to the third one that's displayed in figure 3A, which is active desktop window

310 --

A. Yes.

Q. -- what content is displayed in that active desktop window?

A. Well, there's some sort of an image I don't know how to parse myself, but I can imagine that it's, you know, part of some -- it could be an animation. It could be an image. In the patent they talk about it being an animation.

Q. Okay. And when you say in the patent they describe it as being an animation --

A. It's in Brown, I believe. I can go back and look. But I believe that that one is their example of something that's animated.

Q. Okay. Actually, could we look at that?

I believe, just to short-circuit it, column --

A. Sure.

Q. -- 11 is where these active desktop windows are described in Brown.

A. 11, you say?

Q. Column 11.

A. Fine.

Q. And I -- again, please have a look at it, but I believe they talk about active desktop window 310 in this column.

Does that help refresh your recollection --
A. You can see it.
Q. -- of what's described?
And let me direct you to -- it's about line --
(Simultaneous speakers)
BY MR. BALLANCO:
Q. -- 22.
A. Thank you for saying.
"A Web page inserted onto a composite desktop as a Web page desktop component functions similarly to the corresponding Web page viewed in a browser window. When a user clicks on a hyperlink within a Web page desktop component 310, a new browser window is created and the URL corresponding to the hyperlink is used."
Well, so I do have a way of going to a new web page, but it isn't by filling in anything.
Q. So is it fair to say then that in active desktop window 310, that content is retrieved from a URL?
(Reporter clarification)
THE WITNESS: Yes.
BY MR. BALLANCO:
Q. Okay. Let's put down Brown, at least for the moment, and I want to ask about a different section of your declaration. I want to give you the paragraph

number so we can just go there together. I believe it's paragraph 294 of your declaration. If you wouldn't mind pulling that back up or navigating there to it.

A. Yes. I've got it.

Q. Okay. So I've got to navigate there myself. Give me one second.

A. Okay. It's nexus. Yeah. It's recent. It does the stuff.

So what do you want me to think about?

Q. Give me one moment. I actually think it might be paragraph -- oh. Yeah. This is the question I wanted to ask you, sir, about paragraph 294. If you -- it's a long paragraph, and it's really toward the end that I wanted to focus on.

Do you see there's a sentence maybe six lines up from the end of the paragraph beginning with "This is shown by the fact that each and every element"? Do you see that?

A. I've reviewed -- I've looked at this. "Each and every element" -- so we've got 294. It's not a very long thing. Where's this?

Q. And actually, you know, maybe I'll strike that because I'd actually like to even start at the sentence before that that says "Based on this information."

A. Yeah. I've forgotten how to read maybe.

Q. And not to interrupt, but --
A. No. Just tell me --
(Simultaneous speakers)
BY MR. BALLANCO:
Q. -- paragraph so that we can talk about it. I'm happy to let you read the whole paragraph again and refresh your --
A. Okay. Yeah, yeah, yeah. Okay.
Okay. "Based on this information it is my opinion that such a nexus exists between the DoDots technology, and the evidence discussed below, because the DoDots technology is the invention disclosed and claimed by the '083 patent." Yes.
This is shown by the fact that each and every element of claim 1, which is exemplary of the other claims, is met by DoDots technology. I have reviewed the elements contained in the other claims as well, and it is my opinion that all the claims also have such a nexus based on the foregoing and my analysis and discussion.
Q. Okay. I think that now you've read the paragraph, is it okay if I proceed with my question?
A. Oh, absolutely.
Q. This paragraph explains your basis for why you believe there's a nexus for the patents and DoDots

commercialized technology; is that right? Do I understand that correctly?

A. Yes.

Q. And I just want to make sure that my understanding is correct that your basis for believing there's a nexus is that all of the claim elements for the '083 patent are found in the DoDots technology; right?

A. That -- I believe that's true.

Q. And I know now we're talking about the '083 patent, but the nexus opinion you derived for the '545 and the '407 patents is for the same basis; right?

A. Well, they have slightly different things. You've got, you know, multiple templates in the '545 and time varying in the '407. But yes.

Q. Fair enough. I guess the point I'm trying to make is, your basis for believing that there's a nexus is that for the claims of the '545 and the '407 patents, those claim features are all found in the DoDots technology that was commercialized; right?

A. Yes.

Q. Okay. Now, if we go down to page 131 of your declaration --

A. 131.

Q. -- beginning at about paragraph 300.

Are you there with me?
A. I'm at "With regards to long felt need."
Q. Right. Well, actually, let me take it a level up. Paragraph 299, you lay out that you're going to provide opinions on long felt need, praise by others, and commercial success.
Do you see that?
A. Yes.
Q. And then those opinions follow, beginning at paragraph 300 and going through -- well, through the end of 325; is that right?
A. Okay. Okay. Yeah. I'm in.
Q. Now, if I understand it, your basis for that opinion is conversations you had with the Kembels and declarations they provided; is that right?
A. Yeah. It's really the declarations and then looking at their materials. I actually did not have any substantive conversation with them.
Q. Okay. So it was really the declarations the Kembels provided and the materials referenced in those declarations; right?
A. Yeah, yeah. Yeah.
Q. And that material forms the sum total of your basis for providing these secondary consideration opinions; right?

MR. JUANG: Objection. Misstates the report.

THE WITNESS: I did -- I did consider those materials.

BY MR. BALLANCO:

Q. Are there other materials, beyond those, that you analyzed in forming your secondary consideration opinions provided in your declarations?

A. Just my experience and what I -- you know, what I knew of at that -- putting myself back in that time frame and recognizing that those frustrations were frustrations that I experienced as well and, quite frankly, was not convinced that anyone was going to overcome.

I also was somewhat surprised by these patents in that regard, in that they anticipated a commercial direction that was being -- was in question. I don't know if you remember, but in -- even as late as 1998, people were saying, oh, the web will never be commercially valuable.

And these -- what I find intriguing about these patents is they're so focused on a company or developer wanting to give an experience to a user, which runs counter to the whole idea that, you know, many people were considering of it being all about the user, you know, and their -- and their -- and their desktop

and whatever was going on there.

So those were considerations that aren't in the Kembels', you know, presented materials. But, you know, as everyone else, I go back to what a POSITA was experiencing then relative to my experience.

MR. BALLANCO: Dr. Selker, with that, I have no more questions for you, but I expect your counsel might have a few. But I pass the witness.

THE WITNESS: Thank you.

MR. JUANG: Mike, let's take a 10-, 15-minute break.

(Recess)

MR. JUANG: I'm going to go ahead and share on the screen Dr. Selker's report. It will be relatively quick.

EXAMINATION

BY MR. JUANG:

Q. All right. So if you have the report, Dr. Selker, if you can go to paragraph 64.

A. 64. You can't share?

Q. It's shared, but it's blocking --

A. Yeah. Okay. "Unlike a frame characteristic, a control characteristic is a characteristic of a

control."

Q. Go ahead and read that sentence to -- or that paragraph to yourself, Dr. Selker.

A. I've got it.

Q. And does that refresh your recollection as to what a control characteristic is?

A. Well, all these characteristics are visual characteristics. The frame characteristic is the shape and size of the -- of the NIM, and the view characteristic's the part of it that is -- that is writable, and maybe it's blue -- I don't know -- and the -- and the control characteristic, again, is the size and shape and where it is.

Q. And, also, does this refresh your recollection as to the sources from the '083 patent -- scratch that. Let me clarify.

You'll see in paragraph 64, there's some citations to Samsung 1001.

Do you see that?

A. Yes. I do see that.

Q. So does that refresh your recollection as to what support you used in the '083 to support this --

A. Yeah.

Q. -- construction?

A. So do you want me to go there, or is that

enough?

Q. And just for the record, that's columns 8:49 to 53; 9:61 to 10:6; and column 14, lines 47 to 53; and figures 4 and 5. So those are the portions of the '083 specification that you relied on to support.

A. Yes.

MR. BALLANCO: Objection. Leading.

MR. JUANG: Okay. I have no further questions, unless you have any redirect, Mike.

MR. BALLANCO: Nothing for me. So I think we can go off the record.

(Discussion off the record)

THE REPORTER: Richard, did you want to order a rough draft of the transcript?

(Discussion off the record)

MR. JUANG: I will take whatever Fish is taking. So if you're already preparing it, go ahead. It might as well happen.

(Discussion off the record)

MR. JUANG: We're going to go ahead and reserve the right to check the transcript and sign and serve an errata sheet.

(Discussion off the record)

MR. JUANG: We'll send back an errata, a signed errata sheet, by the 20th of May, to the extent

there's any issue.

(Discussion off the record)

MR. JUANG: Go ahead and close the deposition of Ted Selker in all three of the cases, so the IPR2023-701, IPR2023-756, and IPR2023-621. The depositions are now closed.

MR. BALLANCO: Yes.

(Deposition concluded at 2:20 p.m.)

***

STATE OF CALIFORNIA)
) ss
COUNTY OF SAN DIEGO)

I, EDWIN JOSEPH SELKER, PH.D., having appeared for my deposition on May 10, 2024, do this date declare under penalty of perjury that I have read the foregoing deposition, I have made any corrections, additions or deletions that I was desirous of making in order to render the within transcript true and correct.

IN WITNESS WHEREOF, I have hereunto subscribed my name this _____ day of _____, 20_____.

_____
EDWIN JOSEPH SELKER, PH.D.

REPORTER'S CERTIFICATE

I, COLLEEN M. PETERMAN, CSR No. 7882, Certified Shorthand Reporter, certify:

That the foregoing proceedings were taken before me at the time and place therein set forth, at which time the witness was put under oath by me;

That the testimony of the witness, the questions propounded, and all objections and statements made at the time of the examination were recorded stenographically by me and were thereafter transcribed;

That a review of the transcript by the deponent was requested;

That the foregoing is a true and correct transcript of my shorthand notes so taken;

I further certify that I am not a relative or employee of any attorney of the parties, nor financially interested in the action.

I declare under penalty of perjury under the laws of California that the foregoing is true and correct.

Dated this 17th day of May, 2024.

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COLLEEN M. PETERMAN, CSR No. 7882

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CASE: SAMSUNG vs. DODOTS
DATE OF DEPOSITION: MAY 10, 2024

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Exhibits

Selker Ph.D. Exhibit 1001
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Selker Ph.D. Exhibit 1005
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