

Deposition of  
**Loren Terveen, Ph.D.**  
September 13, 2022  
Volume I

Apple Inc.  
vs.  
MemoryWeb, LLC



<p>1 UNITED STATES PATENT AND TRADEMARK OFFICE 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD 3 --oOo-- 4 APPLE INC., ) 5 Petitioner, ) 6 vs. ) IPR PARTES REVIEW 7 ) No. IPR2022-00031 8 ) IPR PARTES REVIEW 9 ) No. IPR2022-00031 10 ) IPR PARTES REVIEW 11 ) No. IPR2022-00031 12 MEMORYWEB, LLC, ) 13 Patent Owner. ) 14 ) 15 ) 16 ) 17 ) 18 ) 19 ) 20 ) 21 ) 22 ) 23 ) 24 ) 25 )</p> <p style="text-align: center;">VIDECONFERENC DEPOSITION OF LOREN TERVEEN, PH.D.</p> <p style="text-align: center;">Volume I (Pages 1-241)</p> <p>Date: Tuesday, September 13, 2022 Time: 9:04 a.m. CST Reporter: Renee Combs Quinby, RDR, CRR, CSR IL, CSR MO, CSR CA #11867 Job No.: 10107154</p>	<p>Page 1</p>	<p>1 INDEX 2 PAGE 3 4 EXAMINATION BY MR. SCHWARTZ .....5 5 EXHIBITS 6 Exhibit 1003 Declaration of Dr. Loren G. 10 7 Terveen 8 Exhibit 1005 Aperture 3 User Manual 13 9 Exhibit 2021 OSXHIGuidelines.pdf, with 19 10 "Apple Human Interface 11 Guidelines User Experience" on 12 the first page 13 Exhibit 2022 book entitled, "The Essential 47 14 Guide to User Interface Design" 15 (The original exhibits were provided to the court 16 reporter electronically to be attached to the 17 original and copies of the transcript.) 18 19 20 21 22 23 24 25</p>	<p>Page 3</p>
<p>1 A P P E A R A N C E S 2 3 FOR THE PETITIONER: 4 5 Kyle Smith, Esq. (remotely) 6 Jeffrey P. Kushan, Esq. (remotely) 7 Sidley Austin, LLP 8 1501 K Street, #600 9 Washington, D.C. 20005 10 (202)736-8914 11 kyle.smith@sidley.com 12 jkushan@sidley.com 13 14 and 15 Riana J. Freedman, Esq. (remotely) 16 Sidley Austin, LLP 17 787 7th Avenue 18 New York, NY 10019 19 (212)839-5300 20 rfreedman@sidley.com 21 22 FOR THE PATENT OWNER: 23 Daniel J. Schwartz, Esq. (remotely) 24 Nixon Peabody LLP 25 70 W. Madison Street, Suite 5200 Chicago, IL 60602 (312)977-4400 dschwartz@nixonpeabody.com</p> <p>APTUS MONITOR: Chris Landrum (remotely)</p>	<p>Page 2</p>	<p>1 UNITED STATES PATENT AND TRADEMARK OFFICE 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD 3 --oOo-- 4 APPLE INC., ) 5 ) 6 Petitioner, ) 7 ) 8 vs. ) IPR PARTES REVIEW 9 ) No. IPR2022-00031 10 ) IPR PARTES REVIEW 11 ) No. IPR2022-00031 12 ) IPR PARTES REVIEW 13 ) No. IPR2022-00031 14 ) IPR PARTES REVIEW 15 ) No. IPR2022-00031 16 MEMORYWEB, LLC, ) 17 ) 18 Patent Owner. ) 19 ) 20 ) 21 ) 22 ) 23 ) 24 ) 25 )</p> <p style="text-align: center;">--oOo--</p> <p style="text-align: center;">VIDECONFERENC DEPOSITION OF LOREN TERVEEN, PH.D., produced, sworn, and examined on Tuesday, September 13, 2022, with the witness appearing via videoconference from Washington, D.C., taken on behalf of the Patent Owner, before RENEE COMBS QUINBY, Registered Diplomate Reporter, Certified Realtime Reporter, Certified Shorthand Reporter for the State of Illinois, Certified Shorthand Reporter for the State of California, Certified Court Reporter for the State of Missouri, and a Realtime Systems Administrator.</p>	<p>Page 4</p>

Page 5

1 --oOo--  
2 IT IS HEREBY STIPULATED AND AGREED by and  
3 between counsel for the Patent Owner and counsel for  
4 the Petitioner that this deposition may be taken in  
5 machine shorthand by RENEE QUINBY, RDR, CRR,  
6 Certified Court Reporter, and Certified Shorthand  
7 Reporter, and afterwards transcribed into  
8 typewriting.  
9 --oOo--  
10 LOREN TERVEEN, PH.D.,  
11 of lawful age, having been first duly sworn to  
12 testify to the truth, the whole truth, and nothing  
13 but the truth in the case aforesaid, deposes and  
14 says in reply to oral interrogatories propounded as  
15 follows, to-wit:  
16 --o0o--  
17 PROCEEDINGS 9:04 a.m. CST  
18 EXAMINATION  
19 BY MR. SCHWARTZ:  
20 Q. Good morning, Professor Terveen.  
21 Again, just for the record, it's Professor Terveen;  
22 is that okay?  
23 A. Sure. Thank you.  
24 Q. I'm Dan Schwartz of Nixon Peabody. I'm  
25 in Chicago. I represent MemoryWeb in connection

Page 6

1 with these patent office proceedings, including the  
2 four that you have issued declarations in.  
3 Have you had your deposition taken  
4 before?  
5 A. Yes, I have.  
6 Q. And you've had your deposition taken  
7 before in PTAB proceedings; is that right?  
8 A. Yes, that's correct.  
9 Q. So you're familiar with how this is  
10 going to go, but I'll give a couple of background  
11 rules for the road and make sure that we're all on  
12 the same page going forward.  
13 I'll ask you a series of questions.  
14 You'll give me a series of answers. From time to  
15 time your counsel may interpose an objection, and  
16 other than an objection that instructs you not to  
17 answer on attorney-client privilege grounds, you'll  
18 still have to answer the question to the best of  
19 your ability.  
20 I will try and make the questions as  
21 clear as I can. And if you have any questions or  
22 need any clarification, just let me know.  
23 Otherwise, I'll assume that you understand the  
24 question.  
25 Is that fair and make sense?

Page 7

1 A. Yes, it does.  
2 Q. And also I appreciate the fact that you  
3 both nodded and said "yes, it does," because as you  
4 know, our wonderful court reporter is only taking  
5 down the words that we speak and not the gestures or  
6 "uh-huhs" and "uh-uhs" that we all will fall prey  
7 to, including myself. So I may remind you to keep  
8 the response audible.  
9 The only other kind of rules for the  
10 road that I'll throw out there that -- try to allow  
11 me to finish my question before answering it such  
12 that the court reporter cannot have people speaking  
13 over each other. It makes for a cleaner transcript.  
14 Does that make sense?  
15 A. Sure. That makes sense.  
16 Q. And we'll go for about an hour or an  
17 hour and a half in between breaks, but if for any  
18 reason you need to take a break, I may finish up a  
19 series of questions, but just let me know and we'll  
20 try and accommodate you if you need a comfort or  
21 restroom break or something like that.  
22 Does that work?  
23 A. Okay. Yes, that works.  
24 Q. All right. Good.  
25 So first off, where are you this

Page 8

1 morning, Professor Terveen?  
2 A. I'm in a Sidley Austin conference room  
3 in Washington, D.C.  
4 Q. And who is in the room with you?  
5 A. Kyle Smith.  
6 Q. Is Mr. Smith the only person in the  
7 room with you?  
8 A. Yes.  
9 Q. Okay. And in terms of the technology  
10 setup, just so I understand what you have there, can  
11 you describe your interface, your format for how  
12 you're experiencing this Zoom? Are we on a big  
13 screen at the end of the room? Do you have  
14 monitors, that kind of thing?  
15 A. Yes. You are on a big screen at the  
16 end of the room, and I have a laptop and a large  
17 monitor here to help myself if I want to look at  
18 PDFs of any of the exhibits that you introduce.  
19 Q. On any of the screens that you have  
20 there, is anything else open such as any messaging  
21 apps or email or any other applications?  
22 A. No.  
23 Q. And you don't have your phone on or  
24 with you at the present time?  
25 A. My phone is with me. It's in airplane

Page 9

1 mode. I did that right away, yeah.  
2 **Q. Perfect. Thank you.**  
3 **And is there anything about your**  
4 **present state of being that would prevent you from**  
5 **testifying truthfully and honestly in this**  
6 **proceeding?**  
7 A. No, I don't think so.  
8 **Q. We sent a link to your counsel about a**  
9 **half an hour or so ago that contained a set of**  
10 **exhibits. Have you received that?**  
11 A. Yes, I received that, and I downloaded  
12 the exhibits.  
13 **Q. Okay. Good.**  
14 **And you'll have the ability to open up**  
15 **an exhibit and put it on a screen in front of you**  
16 **while keeping the screen that I'm on and the Zoom is**  
17 **on up and available to you?**  
18 A. Yes, I will.  
19 **Q. Okay. Good. All right. All right.**  
20 **Give me a second to get myself organized. All**  
21 **right.**  
22 A little bit more just groundwork  
23 because there are four different proceedings here.  
24 And you have authored declarations in each of the  
25 four. Professor Terveen, you've authored and

Page 10

1 offered declarations in a PGR proceeding relating to  
2 MemoryWeb's U.S. Patent 11,017,020; is that right?  
3 A. Yes, that's right.  
4 **Q. Okay. And just so we can do this on**  
5 **the record, I'm going to ask you in the box that was**  
6 **sent to you to open up, Exhibit 1003, the**  
7 **Declaration of Dr. Loren G. Terveen, PGR2022-006.**  
8 (Whereupon, Exhibit 1003 was  
9 marked for identification.)  
10 **THE WITNESS: Okay. Okay. I've opened**  
11 **that.**  
12 **BY MR. SCHWARTZ:**  
13 **Q. And this is a copy of your declaration**  
14 **in the '020 PGR; is that right?**  
15 A. Yes, I think so.  
16 **Q. And you'll see down in the bottom**  
17 **right-hand corner of the first page it says**  
18 **Exhibit 1003?**  
19 A. Oh, yes, Exhibit 1003, cover, yeah.  
20 **Q. Correct. Thank you.**  
21 A. Yeah.  
22 **Q. And I'm going to bring up each of the**  
23 **other ones which are also labeled Exhibit 1003**  
24 **because they're 1003 in each of them, and I'm just**  
25 **going to go through a little naming convention so**

Page 11

1 **we're all on the same page.**  
2 A. Okay.  
3 **Q. If you'll bring up the -- from the box**  
4 **what's also labeled Exhibit 1003, Declaration of**  
5 **Loren G. Terveen, IPR2022-00033.**  
6 A. Okay. I see it. Okay. I've brought  
7 that up.  
8 **Q. And I'm guessing that what's on your**  
9 **screen is the cover page for your declaration in the**  
10 **'658 IPR proceeding?**  
11 A. Yes, that's right.  
12 **Q. And that's a 173-page document?**  
13 A. Yes.  
14 **Q. Next I'll ask you to open up**  
15 **Exhibit 1003, Declaration of Loren G. Terveen,**  
16 **IPR2022-00032, which is the declaration in the '376**  
17 **proceeding.**  
18 A. Yes, I've opened that up.  
19 **Q. And this is a copy of your declaration**  
20 **of the '376 IPR proceeding, correct?**  
21 A. Yes.  
22 **Q. And this one has 169 pages?**  
23 A. That's right.  
24 **Q. And then finally is your declaration,**  
25 **Exhibit 1003, Declaration of Dr. Loren G. Terveen,**

Page 12

1 **IPR2022-00031, and this is the declaration in the**  
2 **'228 proceeding; is that right?**  
3 A. Yes.  
4 **Q. And this one says it's 151 pages.**  
5 A. That's right.  
6 **Q. I will endeavor throughout the next day**  
7 **or so to properly refer to the one that I am talking**  
8 **about, and I will refer to them, if it is okay with**  
9 **you as, you know, either Exhibit 1003 or 1,003 in**  
10 **the '020 proceeding, and that will refer to the PGR**  
11 **'020 proceeding declaration.**  
12 **Does that make sense?**  
13 A. Yes, that makes sense.  
14 **Q. And similarly if I'm referring to one**  
15 **of the other ones, I will identify it by the patent**  
16 **that it relates to and/or the proceeding that it's**  
17 **in.**  
18 **Is that fair?**  
19 A. Yes.  
20 **Q. And I have my trusty colleague with me**  
21 **that if I forget and it's unclear which one, he may**  
22 **throw something at me, so if you see that on the**  
23 **screen, you know, I'll -- I'll, you know, be sure to**  
24 **properly identify which one we're talking about.**  
25 **But that's the way I'm going to operate**

Page 13

1 today even if -- because we have four Exhibit 1003s.  
2 Is that fair?  
3 A. Sure. That makes sense.  
4 Q. All right. And then if you will go  
5 back into the link that was sent, there is a  
6 document labeled Exhibit 1005, A3UM-HTML.  
7 (Whereupon, Exhibit 1005 was  
8 marked for identification.)  
9 THE WITNESS: Okay, yes, I opened that.  
10 BY MR. SCHWARTZ:  
11 Q. And this is the version of the  
12 Aperture 3 User Manual that you relied on in  
13 connection with your declaration; is that correct?  
14 A. Yes, that's correct.  
15 Q. And actually I'll -- let me ask that  
16 further. It's the version of the Aperture 3 User  
17 Manual that you relied on in all four of your  
18 declarations, correct?  
19 A. Yes, that's right.  
20 Q. And Exhibit -- in each of the four  
21 proceedings, this exhibit was labeled as 1005, and I  
22 just want to confirm with you that there are no  
23 differences between the versions that you attached  
24 in any -- no differences in Exhibit 1005, the  
25 Aperture 3 User Manual HTML version in any of your

Page 14

1 four declarations?  
2 A. Not that I'm aware of, no.  
3 Q. When you prepared your declarations you  
4 intended for that version of the user manual to be  
5 the same in each of the four declarations, correct?  
6 A. Yes.  
7 Q. Okay. All right. So throughout the  
8 day, I may refer to that as "Exhibit 1005" or "the  
9 user manual," and that will apply to the document as  
10 it relates to any of the four proceedings.  
11 Does that make sense?  
12 A. Yes, that makes sense.  
13 Q. All right. Good. Thank you, Professor  
14 Terveen.  
15 Just a couple of quick questions. What  
16 did you do to prepare for your deposition today?  
17 A. Well, I reviewed the -- I reviewed my  
18 declarations and the patents. I spoke with the  
19 attorneys from Sidley Austin. Yeah. I think that's  
20 pretty much what I did, yeah.  
21 Q. And how long did you spend with the  
22 attorneys at Sidley and Austin?  
23 A. Well, let's see. I probably had four  
24 or five teleconferences, maybe an hour or two each,  
25 and then -- let's see. This Sunday I spent a couple

Page 15

1 hours, and I think I spent about three or four hours  
2 yesterday in person.  
3 Q. Okay. And how long did you spend  
4 reviewing your declarations and the patents and  
5 related materials?  
6 A. Boy, I don't know. There's four  
7 patents and, you know, I guess about 600 pages of  
8 declarations, so I don't know. You know, 20 to 30  
9 hours maybe. Yeah. I'm just guessing.  
10 Q. Okay. That's -- that's fair. Okay.  
11 Did you review any materials in  
12 addition to those that are listed in the "Materials  
13 Considered" sections of your declarations?  
14 MR. SMITH: I caution the witness not  
15 to reveal the substance of any privileged  
16 conversations or attorney work product.  
17 THE WITNESS: I'm sorry. Could you  
18 just ask that again? I want to make sure I answer  
19 what you're after.  
20 BY MR. SCHWARTZ:  
21 Q. Sure. I'm asking whether you reviewed  
22 any materials in preparation for your deposition  
23 today that were not listed in the "Materials  
24 Considered" portion of your four declarations.  
25 A. Not that I recall, no.

Page 16

1 Q. Okay. For ease of reference, I'm going  
2 to ask you to open up the '020 declaration of yours,  
3 which is Exhibit 1003 in the '020 proceeding.  
4 A. And this is my declaration in the PGR?  
5 Q. Correct.  
6 A. Okay. I've got it open.  
7 Q. Gotcha. And on page romanette v  
8 there's a list of exhibits considered starting on  
9 page romanette v, sorry.  
10 A. Yes, I see that.  
11 Q. Okay. And it extends to romanette vii.  
12 Do you see that?  
13 A. Yes, yes.  
14 Q. And it lists a few dozen documents.  
15 Are these all of the materials that you reviewed in  
16 connection with preparing your declaration for the  
17 '020 PGR proceeding?  
18 A. Oh, I -- I may have looked at some  
19 other documents, but these are the ones that I would  
20 rely on for the opinions that I expressed here.  
21 Q. Do you have any specific recollection  
22 of what those other documents may have been?  
23 A. No. No.  
24 Q. The documents that are in this list,  
25 did you find them -- how did you come across these

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