Transcript of Patrick McDaniel, Ph.D.

Date: September 25, 2024
Case: Apple, Inc. -v- Carbyne Biometrics, LLC (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

CARBYNE BIOMETRICS, LLC,

Patent Owner,

Case IPR2024-00332

U.S. Patent No. 10,929,512

Case IPR2024-00334

U.S. Patent No. 11,514,138

REMOTE DEPOSITION OF PATRICK McDANIEL, PH.D.

September 25, 2024

Reported by: Susan S. Klinger, RMR-CRR, CSR

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2

September 25, 2024

9:59 a.m.

Remote Deposition of PATRICK McDANIEL, PH.D., held before Susan S. Klinger, a Registered Merit Reporter and Certified Realtime Reporter of the States of Texas and California.

3

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(Exhibits not attached.)

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1 P R O C E E D I N G S
2 PATRICK McDANIEL, Ph.D.,
3 having been first duly sworn testified as follows:
4 EXAMINATION
5 BY MR. FISHBACK:
6 Q Good morning, Dr. McDaniel.
7 **A Good morning.**
8 Q How are you today?
9 **A I'm doing well.**
10 Q Probably as well as you can for a
11 deposition, right?
12 **A Yeah, I suppose.**
13 Q Could you please state your name for the
14 record?
15 **A Yes, Patrick McDaniel.**
16 Q And Dr. McDaniel, where are you located
17 today?
18 **A I am in Verona, Wisconsin.**
19 Q Are you by yourself today?
20 **A I am.**
21 Q And besides the computer that you have in
22 front of you right now, do you have any other

6

1 devices with you?
2 **A My cell phone is here on the desk, but I**
3 **will put it in a backpack here.**
4 Q As long as you promise you are not going
5 to use it, you can leave it on. It is fine with
6 me.
7 **A Okay.**
8 Q Some basics going forward, you understand
9 that this deposition is going to be covering your
10 declarations in two IPR proceedings, correct?
11 **A That's correct.**
12 Q And those IPR proceedings are
13 IPR2024-00332 related to the U.S. Patent
14 10,929,512 and IPR2024-00334 related to U.S.
15 Patent 11,514,138; is that correct?
16 **A That sounds right.**
17 Q And if I refer to the '512 IPR, will you
18 understand that that is referring to the IPR
19 related to the '512 patent?
20 **A Yes.**
21 Q And same for the '138, if I refer to the
22 '138 IPR, you will understand that is relating to

7

1 the IPR related to the '138 patent?
2 **A That's correct.**
3 Q Great. Okay. Dr. McDaniel, when were you
4 engaged in this matter?
5 **A Geez, probably about a year ago is my**
6 **guess. I think the substance I can't remember the**
7 **exact filing date. I want to -- I want to say it**
8 **was in the fall of last year, but a lot of work**
9 **would have been in the last, you know, few months**
10 **before then.**
11 Q Got you.
12 MR. FISHBACK: And just so everyone is
13 aware, Mr. Iliasevitch is joining. He's a
14 colleague of mine joining on the call.
15 Q How many hours do you think you have spent
16 on both of your IPRs declarations?
17 **A I couldn't say. It is probably north of**
18 **100 I would expect.**
19 Q And would you expect that to be evenly
20 divided between the '138 and the '512
21 declarations?
22 **A Approximately, yeah.**

8

1 Q Did you write your declarations for each
2 of the IPRs?
3 **A I did. The opinions expressed in there**
4 **are mine and they are a report that I wrote.**
5 Q Without discussing the content of any
6 attorney-client communications, what did you do to
7 prepare for today's deposition?
8 **A About probably, I think it was about a**
9 **month ago we learned that the two had been**
10 **instituted. I had some brief email exchanges**
11 **followed by some additional reviewing of the**
12 **patents. And a week ago I received sort of the**
13 **official final version of all of the materials and**
14 **had been reviewing them since. I had a series of**
15 **meetings last Friday, Monday and Tuesday**
16 **with counsel.**
17 (Audio interruption.)
18 MR. FISHBACK: Dan, can you mute both of
19 those? You're echoing.
20 MR. ILIASEVITCH: Okay.
21 Q Dr. McDaniel, are you aware of the
22 underlying district court litigation?

9

A I am vaguely aware of it, yes.
Q Have you reviewed any of the materials in the underlying litigation?
A I'm not really sure what you mean by the scope of underlying materials.
Q And have you reviewed any pleadings, infringement contentions, anything related to the district court litigation outside of the patents themselves?
A Okay, okay. Yeah, so no, I don't believe so.
Q And so is it fair to say you haven't reviewed any of Apple's expert reports in the underlying district court litigation?
A Yeah, I don't -- I don't believe I have, no.
Q Prior to this engagement, were you familiar with Dr. Jakobsson, the inventor of the patents?
A Yes.
Q How were you familiar with him?
A Markus, I think his name is Markus

10

Jakobsson. I think he -- about 20 years ago he used to hang around in some of the security conferences that I was attending as a graduate student. And then thereafter at Bell Labs I believe I met him although I haven't had any, you know, specific contact with him beyond just sort of an acquaintance meeting at a conference I suspect.
Q All right. I'm going to put Exhibits 1 and 2 into the chat. And these should just be both of the '512 and the '138 patent, so let me know when you get these.
(Exhibit 1 marked.)
(Exhibit 2 marked.)
A Okay. I have -- I have files available to me that are clean copies, so I can use my own. If you would rather -- you would rather me use yours, that is fine, however you want to do it.
Q As long as you confirm they are clean copies, you are more than okay to use those.
A Okay, yes, so I have both of those.
Q Okay. So let's take a look at the '512

11

patent if you have in front of you.
A I do.
Q The only term in your declaration that you put forward a construction for was the restricted interface; is that correct?
A May I access my report?
(Exhibit 3 marked.)
(Exhibit 4 marked.)
Q Yeah, why not. I will put it in the chat as well. I will put your declarations for both in the chat for your -- to assist you out here. I think that that is paragraph --
A 53, yeah.
Q Correct. For the other terms applied the plain and ordinary meaning; is that right?
A That's correct.
Q Can you flip to claim 1 of the '512 patent for me?
A I am at the claims, yes.
Q Do you see where it says in the last limitation the second to last limitation secure backup?

12

A We're talking claim 1?
Q Yes, correct.
A Okay.
Q Setting aside secure, what is your understanding of the plain and ordinary meaning of "backup"?
A In what context?
Q In the context of the '512 patent?
A So backup is to make a copy for later use colloquially speaking.
Q Do you see the limitation that starts with "in response"?
A Yes.
Q What is your understanding of the term "facilitate"? And it is in the -- right after the comment facilitate a login. What is your understanding of facilitate?
A I'm sorry, we're in the same limitation here?
Q Yeah. It is about column 11, line 17 on to 18, facilitate a login of a user to the external resource.

13

A I see.
Q Yeah.
A It was split across two lines.
Q Sorry, sorry about that.
A It is all good, it is all good.
It is to support the -- support and enable login at least.
Q And then up a little bit on lines 9, 10, 11, access a record stored in secure storage. Do you see that?
A Yes.
Q And then right below it on line 10, on line 12 and then on line 22 it says "the record." Do you see that?
A Yeah, on line 10, yes.
Q Is "a record" and "the record," is that a single record?
A Well, the record can be -- I mean, that is accessing a record, which is a collection of data.
Q So could there be more than one record that is being discussed throughout this claim?
A In the context it is accessing a record.

14

Q So I'm sorry, I guess maybe -- maybe we're talking past each other.
So moving on beyond the access a record, when it is talking about retrieve from the record in line -- what is it, line 12 here, and then in line 25 perform a secure backup of the record, is that a single record or are there multiple records that are being retrieved and backed up?
A It is -- it is a record.
Q As in one record?
A That is a record, yes.
Q On line 9, access a record stored in secure storage, do you see that?
A Which line now, I'm sorry?
Q This would be column 11, line 9?
A Right.
Q I'm sorry, go ahead.
A No, go ahead, ask your question.
Q What is your understanding of secure storage?
A You know, it at least means the storage in a secure manner.

15

Q Let's turn to the '138 patent?
A Okay, I have it open.
Q On column 11, line 51 there is the limitation facilitate wiping. Do you see that?
A What column, please, 11, what line?
Q Column 11, line 51. It should be the second to last limitation?
A Yes, yes, I'm there, 51, yes. What was your question?
Q Well, what is your understanding of the term "wiping"?
A In what context?
Q In the context of the '138 patent?
A So in this context what it is -- what it is doing is wiping the data. If you go to my declaration I sort of layout what at least incorporates that which is to in this case zero out the data.
Q And in claim 8 which is --
MS. SHI: Sorry to interrupt, Mr. Fishback. Your voice sometimes is a little bit choppy. Can you speak closer to the

16

microphone?
Q Sorry about that, is that better?
A Yes.
Q My microphone was set to my laptop which is closed and 5 feet away from me, so I'm amazed you guys heard anything. That should be better. I appreciate that, thank you.
In claim number 8 this is column 12, line 5, let me know when you are there?
A Okay.
Q I'm sorry, are you there?
A Yeah, I'm just reviewing my declaration.
Q Sorry, no rush. And take your time. I do not think we're going to be here all day, so feel free to take your time. We have ample time.
A Okay, I'm on claim 8.
Q What is your understanding of the word "policy" in this claim?
A So if you go to my declaration, page 90, particularly with respect to Brown it says, the policy may include various predefined roles relating to the wipe. So a policy is predefined

17

1 **rules that -- at least it means the predefined**
2 **rules that in this case with respect to claim 8**
3 **result in automatically wiping at least portions**
4 **of the -- of a record.**
5 Q Okay. Going back to claim 1, going down
6 to the limitation.
7 **A What patent?**
8 Q I'm sorry, of the '138 patent?
9 **A Okay, I'm back there.**
10 Q Going down to the limitation that starts
11 on line 24 it says, based at least in part. Do
12 you see that limitation?
13 **A Yes.**
14 Q Do you see where it says, access of at
15 least one record stored at least in part in
16 storage on the device?
17 **A Yes.**
18 Q Does "at least one record" indicate that
19 there can be more than one record?
20 **A That is a reasonable interpretation of "at**
21 **least one," yes.**
22 Q And is that a different claim scope than

18

1 the "a" or "the" record that is discussed in the
2 '512 patent?
3 MS. SHI: Objection, form.
4 **A So these are -- these are -- these are**
5 **different patents. And you're asking me to**
6 **compare the scope of the two claims, which I**
7 **haven't done that is not an opinion I've rendered**
8 **here today. I'm not -- I haven't done a**
9 **comparison.**
10 Q Can you open up your '512 declaration?
11 **A I am there.**
12 Q Could you flip to paragraph 4 and, excuse
13 me, I don't know what page that is on, so you are
14 going to have to search.
15 **A The introduction that is page 4. I have**
16 **reviewed and considered the following documents,**
17 **is that the paragraph you are talking about.**
18 Q Correct, yeah.
19 You have listed five items here, Alpha A
20 through E; is that correct? And just for the
21 record, that is the patent-in-suit, the '512, the
22 file history and then the three references that

19

1 you use in your grounds; is that correct?
2 **A That is correct.**
3 Q For items C, D and E, did you pick these
4 prior art references?
5 **A Those -- those prior art references were,**
6 **I think, presented to me as a part of the process**
7 **on which I was doing my analysis. And I reviewed**
8 **them in forming my opinions, which are stated here**
9 **which were not influenced by their selection.**
10 Q Are you aware of any other prior art that
11 you could have relied on?
12 **A There is a pretty large universe of prior**
13 **art that I could have relied on, because these are**
14 **fairly straightforward and well-known techniques**
15 **certainly by the priority date.**
16 Q All right. Can we flip to page 26 of your
17 declaration?
18 **A I'm there.**
19 Q Footnote 7 is a reference to the Trusted
20 Computing Group do you see that?
21 **A Yes.**
22 Q What is the Trusted Computing Group?

20

1 **A It is a -- it is a organization. I**
2 **believe it is supported by some of the standards**
3 **organizations as well as industry which sought to**
4 **standardize the use of the trusted platform**
5 **module, but more generally secure enclaves which**
6 **are hardware security zones that are typically put**
7 **in modern processors.**
8 Q Are you a member of the Trusted Computing
9 Group?
10 **A No.**
11 Q Have you ever been?
12 **A No.**
13 Q In writing your declaration, did you
14 consult with any members of the Trusted Computing
15 Group?
16 **A No, but I've certainly written multiple**
17 **papers using TPMs and written code for them.**
18 Q While we're talking about it, what is a
19 TPM?
20 **A You know, informally it is a trusted -- it**
21 **is called the trusted platform module. It is a**
22 **subprocessor or a coprocessor, if you will, of**

21

1 many modern general purpose architectures that
2 provide additional security. And it provides a
3 zone of security that is isolated from general
4 processors.
5 Q And does that protect against malware?
6 A Amongst many other things, yes.
7 Q What are some of the other things?
8 A Insider attacks, side channels, software
9 bugs, you know, the list -- think of any kind of
10 security problem isolation helps more or less.
11 Q What is an insider attack?
12 A Insider attack is where you have somebody
13 within an organization who has privileges to
14 access some data and seeks to manipulate it.
15 Sometimes they may not have access to the data
16 they're looking for, but they can use their
17 privileged access and something called privileged
18 escalation to access that data.
19 Q And how does a TPM defer or deter an
20 insider attack?
21 A Well, it provides the zone that regardless
22 of the credentials and the privilege escalation

22

1 you have within a general purpose operating system
2 it prevents somebody from accessing data without
3 the proper access to the APIs.
4 Q And then what is -- what is a side channel
5 attack?
6 A A side channel attack is an attack where
7 you use some byproduct of the environment such as
8 energy use or heat or process scheduling and in an
9 extreme case to learn something about data that is
10 somehow adjacent to a computation or is within
11 secondary or a primary processor.
12 Q Could you provide me with a layman's
13 example of a side channel attack?
14 A Sure. A side channel attack, one of the
15 most famous is you can send requests to a, for
16 example, a web server that is using specific kinds
17 of cryptographic keys. And if you know something
18 about the algorithm, the cryptographic algorithm
19 it is using, you can actually use timing
20 information on how fast that -- that website
21 responds to you to provide you information on
22 which you can break those keys. So using timing

23

1 information you can infer data.
2 Q And how does a TPM deter a side channel
3 attack like the one you just discussed?
4 A Because within the -- within the TPM in
5 this coprocessor it is -- it is actually hiding
6 its execution. You are not able to see the
7 execution, because it is running in specific
8 hardware mode for one example.
9 Q Okay. Let's flip to page 21 of your
10 report or declaration. And if I say report, I'm
11 sorry, I'm so used to dealing with reports, but
12 declaration?
13 A Understood, I'm there.
14 Q Actually I may have -- may have led you
15 astray here. I may not be talking about 21, hold
16 on a sec. I'm sorry, I meant 31?
17 A Okay, the beginning in ground one.
18 Q Correct.
19 A Okay, I'm there.
20 Q Do you see in paragraph 61 a reference to
21 Kesanupalli?
22 A Kesanupalli, yes, I see that reference.

24

1 Q Do you know who the inventors of the
2 Kesanupalli reference are?
3 A Apart from what I've read on the cover of
4 the -- of the patent.
5 Q So you're not familiar with Ramesh
6 Kesanupalli?
7 A Not that I'm aware of.
8 Q Can we flip to page 33 of your report?
9 A Yes, I'm there.
10 Q What is your understanding of what
11 processor is sending the credentials to the
12 external resource in the Kesanupalli reference?
13 MS. SHI: Objection, form.
14 A Is there something in my report you want
15 to point me to?
16 Q Yeah. At the end of paragraph 66 you say,
17 the release credentials are then communicated to
18 the external resource by application 214 of the
19 host PC. Do you see that?
20 A Yes.
21 Q Is that the -- is the processor of host PC
22 202 what is doing the communication?

25

1 **A The system is doing the communication.**
2 Q And the system being host PC 202?
3 **A And the --**
4 MS. SHI: Objection, form. Sorry, Dr.
5 McDaniel, just if you could just pause a little
6 bit after the --
7 **A Yeah.**
8 MS. SHI: -- after the question so I get a
9 chance to object if I have any, that will be
10 appreciated thank you.
11 Objection, form.
12 **A So with respect to Kesanupalli, the system**
13 **itself is including the sensor and the secure**
14 **storage on the PC as I'm talking about in this**
15 **particular characterization.**
16 Q Application 214 in the figure you have got
17 right above paragraph 66, do you see that?
18 **A Yes.**
19 Q That is not running on the processor on
20 sensor 204, correct?
21 **A So just for the record you haven't given**
22 **me Kesanupalli, but I have a copy here that is**

26

1 **clean and that I'm going to access.**
2 Q Okay.
3 **A The application 214 is running on the host**
4 **PC.**
5 Q At the bottom of page 33 do you see the
6 reference to Challener, I think that is what he
7 says?
8 **A Challener, yes, I do, I see that.**
9 Q Are you familiar with David Challener?
10 **A I am not.**
11 Q Are you familiar with any of the authors
12 of the Challener reference?
13 **A Not that I'm aware of.**
14 Q Can you flip to page 36 of your report or
15 declaration again, I'm sorry?
16 **A That is okay. I know what you mean when**
17 **you are saying that.**
18 **Okay, yes, I'm looking at it.**
19 Q First off, do you know what this figure
20 is?
21 **A Yes, this is from Challener.**
22 Q Correct. And I just have one -- what is

27

1 your understanding of -- now, they're not labeled
2 in the figure, but they -- the dark arrow is
3 connecting the components. What is your
4 understanding of those arrows?
5 **A They're -- they're pathways through the**
6 **system by which data can pass.**
7 Q So is it -- is it fair to say that
8 keyboard 22 is directly connected to processor 26
9 in the security portion of 14?
10 MS. SHI: Objection, form.
11 **A In the case here, you know, they can be --**
12 **in the Challener reference -- well, let me -- let**
13 **me review the Challener reference. That is**
14 **definitely one possibility.**
15 Q Can you flip to page 37 of your report?
16 **A I'm on page 37.**
17 Q All right. In paragraph 69 you say
18 Challener provides an implementation framework for
19 secure systems, which may be TPM based. Outside
20 of TPMs, what do you mean by "which may"? What
21 are -- what are other solutions?
22 **A Well, there are other kinds of**

28

1 **cryptographic coprocessors other than TPMs.**
2 Q Sorry, I didn't mean to interrupt.
3 **A There are -- there are external hardware**
4 **secure processors. There are key fobs. There is**
5 **the IBM, I want to say it is 3088, but I would**
6 **have -- I would have to go back, which is a little**
7 **bit older. But there are other solutions for**
8 **providing hardened coprocessors or external**
9 **attached devices that implement a security**
10 **portion.**
11 Q All right. I am putting into the chat
12 Exhibit 5, which is Exhibit 1012 to your
13 declaration. It is an article you wrote.
14 **A Yes.**
15 (Exhibit 5 marked.)
16 **A I actually have a copy, so --**
17 Q Perfect. You have it in front of you?
18 **A I do.**
19 Q What is the Handbook of Computer Networks?
20 **A The Handbook of Computer Networks was**
21 **essentially an encyclopedia of computer science**
22 **that I contributed to in the middle 2000s.**

29

1 Q On page -- can we flip to page 570?
2 **A I'm there.**
3 Q The second full paragraph in the
4 right-hand column, the most widely used
5 authentication credential is a password. Do you
6 see that?
7 **A Yes.**
8 Q Is that still true today?
9 **A I think there is a combination of things.**
10 **I think passwords are usual for many kinds of**
11 **authentication systems. I think there are many**
12 **more uses of second -- two-party authentication**
13 **I'm sorry. Second factor authentication I think**
14 **people are using a wide array of different**
15 **authentication mechanisms today, but I think it is**
16 **one of the dominant technologies today.**
17 Q Going down to the third paragraph you say,
18 passwords are subject to guessing attacks. Do you
19 see that?
20 **A Yes.**
21 Q What are guessing attacks?
22 **A It is where somebody simply just guesses**

30

1 **your password.**
2 Q And what is a little bit further down,
3 five sentences down or five lines down you say
4 dictionary attack. What is a dictionary attack?
5 **A A dictionary attack is where the adversary**
6 **has a precomputed set of passwords for sort of**
7 **well-known or frequently used passwords, and then**
8 **just simply uses that dictionary to -- to identify**
9 **what a particular password is.**
10 Q So that is pretty similar to a guessing
11 attack. They're just putting in a set of
12 passwords they think it may be?
13 **A Yeah. It is kind of -- it is kind of an**
14 **off -- what is referred to as an offline guessing**
15 **attack.**
16 Q If we could flip to page 571.
17 **A Uh-huh.**
18 Q And let's see, where is it here. In the
19 second full paragraph that begins with,
20 particularly in cases, do you see that?
21 **A Yes.**
22 Q About halfway down you discuss phishing

31

1 attacks, do you see that?
2 **A Yes.**
3 Q What are phishing attacks?
4 **A Phishing attacks are where someone sends**
5 **you some kind of communication, most often a kind**
6 **of email that poses as somebody else and uses what**
7 **we call social engineering to convince somebody to**
8 **enter their passwords in a, say, a fake website.**
9 Q So that is about tricking the user?
10 **A Yeah, I mean, yes, I think that is fair to**
11 **say.**
12 Q And you just mentioned social engineering.
13 What are other forms of social engineering
14 attacks?
15 **A There is something called pretexting,**
16 **where you setup a scenario where something seems**
17 **like it would be the normal thing to do, but it**
18 **would actually not be. For example, they will**
19 **call and say, you know, your brother or sister has**
20 **been in a traffic accident and they need a credit**
21 **card so they can treat them. It seems in the**
22 **moment they prey upon your -- your psychology.**

32

1 **That is a general kind of attack, yeah.**
2 Q And later on in this paragraph you discuss
3 a man in the middle attack. Is that -- is that a
4 type of social engineering?
5 **A Man in the middle is a very general**
6 **attack. Sometimes it is -- it is social**
7 **engineering and sometimes it can be a technical**
8 **attack.**
9 Q And generally, what is a man in the middle
10 attack?
11 **A A man in the middle attack is where**
12 **somebody interposes themselves between you and**
13 **some trusted entity. And then they talk to you as**
14 **if they're that entity and then they talk to the**
15 **entity as if they're you. And if you give them**
16 **information that man in the middle that -- that**
17 **information as they pass onto the trusted entity**
18 **they can exploit that data later.**
19 Q And how is a man in the middle attack done
20 in a social engineering context?
21 **A Let me think of an example. So the**
22 **obvious one is if I put in a, say, what we call**

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1 **this a trouble ticket into a computer system that**
2 **says, oh, there is something wrong with my -- my**
3 **password and that goes to an IT organization, some**
4 **evil person in the IT organization. And calls you**
5 **and says hey, I am your bank. I need your**
6 **password to access this so we can -- we can unlock**
7 **your account, for example.**
8 **You would give them that information and**
9 **then they would turnaround and give it to the bank**
10 **and unlock your account, legitimately unlock your**
11 **account, but at the same time they've captured**
12 **your credential. You might go on using your bank,**
13 **but now they have your credential and they can**
14 **exploit that later.**
15 Q Can you flip to page 577?
16 **A Yes.**
17 Q The first full paragraph on the left
18 column that starts, "in essence," do you see that?
19 **A 577?**
20 Q Yes, right above the Kerberos?
21 **A Okay. I thought you said second column.**
22 Q By the way how do you say that? I see it

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1 all time.
2 **A Kerberos, you pronounced it right. It is**
3 **Kerberos.**
4 Q I see it all the time and I never -- I
5 never follow through on that.
6 At the end of the paragraph that starts
7 with "in essence" it says, for example, RSAs
8 widely use SecurID, combines a physical token with
9 one time password protocols. Do you see that?
10 **A Yes.**
11 Q What is RSA's SecurID?
12 **A It is a physical token that you would**
13 **receive at that time from the company called RSA**
14 **that would have -- that has a window on it, which**
15 **would display, I believe it was every 10 seconds a**
16 **different number.**
17 **And so when you logged in, you entered a**
18 **password into a system. You would have to enter**
19 **in that six digit value into the system. That is**
20 **called a second factor authentication. So you**
21 **would have to have both your password and be in**
22 **possession of that token in order to gain access.**

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1 Q Why don't we take a 5 minute break here, I
2 don't have very much more.
3 **A Okay.**
4 Q And I just want to -- I want to put some
5 final thoughts together and we will probably be
6 done here before noon.
7 **A Great.**
8 (Recess, 10:43 to 10:50 a.m.)
9 Q Right before the break, Dr. McDaniel, you
10 were talking about a RSA SecurID. Do you remember
11 that?
12 **A Yes.**
13 Q You said it was a physical device with a
14 screen on it with a -- was it a two-factor
15 authentication code?
16 **A Yes.**
17 Q Do you know -- were you able to backup
18 that security code in any way?
19 **A There were -- there were a couple of kinds**
20 **of data that you -- that were actually backed up**
21 **on to other systems. They could replicate those**
22 **IDs if they needed to. I know that RSA did. And**

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1 **I think you could clone them as well, so that**
2 **would require that they have to be backed up.**
3 Q Just a couple of questions on your '138
4 declaration if we could move to that.
5 **A Sure.**
6 Q If we could go to page 30 and 31 of your
7 declaration.
8 **A Yes, the claim construction discussion.**
9 Q Yeah. And this is more of a logistics
10 question I guess. Why in this -- maybe there is
11 no difference and I'm just missing it. In your
12 '512 declaration, you just discussed the
13 restricted interface, but in the '138 you also
14 included discussion of the processor.
15 Did you apply the same definition of a
16 processor to the '512 declaration and it just
17 didn't make it in the claim construction part?
18 And feel free to reference your '512 declaration.
19 **A Yeah, I mean it is -- it is the -- here**
20 **let me...**
21 Q My question, I guess, more so is there a
22 reason a processor is in your '138 declaration and

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1 not in your '512? And if there isn't, there
2 isn't, that is perfectly fine. I just want to
3 make sure I'm not missing something.
4 A I don't remember the answer.
5 Q Okay. Is the definition that you provide
6 in paragraph 56, would that equally apply to the
7 '512 patent?
**8 A It is a plain and ordinary meaning as
9 assisted by the -- the same specification, so I
10 don't see any reason why.**
11 Q Okay. That was my understanding, but just
12 wanted to make sure I didn't miss anything there.
13 Just flipping through, I think we're done.
14 Let me just flip through real quick.
15 A Sure.
16 Q Do you remember when we discussed social
17 engineering attacks?
18 A Yes.
19 Q What is the best way for a user to defend
20 themselves against a social engineering attack?
21 MS. SHI: Objection, form.
22 A Yeah, I think I could -- I could say that

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**1 you know there is -- the best is really a
2 subjective term. I can say that their education
3 is really important if you make people aware that
4 social engineering attacks are out there. That is
5 really critical. In fact, a lot of the campaigns
6 and a lot of the companies that work on
7 anti-phishing do that. But technical measures are
8 equally important to prevent someone who is being
9 fooled things like safe URLs and emails and things
10 like that, so it is a combination of things.**
11 MR. FISHBACK: All right. That is -- that
12 is all I had. I appreciate your time, Dr.
13 McDaniel and thank you again.
14 MS. SHI: Can we take a quick break so
15 that I can review my notes as well?
16 MR. FISHBACK: Yes.
17 MS. SHI: How about a 5 minute break?
18 MR. FISHBACK: Yeah, that is fine. Come
19 back at 11:00?
20 MS. SHI: Yes.
21 (Recess, 10:55 to 11:00 a.m.)
22 MS. SHI: I don't have further questions,

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1 thank you everyone.
2 MR. FISHBACK: Thank you.
3 (Deposition adjourned at 11:00 a.m.)
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1 CERTIFICATE OF SHORTHAND REPORTER
2
3 I, Susan S. Klinger, Certified Reporter and
4 Notary Public within and for the State of Texas
5 do hereby certify:
6 That PATRICK McDANIEL, PH.D., the
7 witness whose deposition is hereinbefore set forth,
8 was duly sworn by me before the commencement of such
9 deposition and that such deposition was taken before
10 me and is a true record of the testimony given by such
11 witness.
12 I further certify that the adverse party,
13 APPLE INC., was represented by counsel at the
14 deposition.
15 I further certify that the deposition of
16 PATRICK McDANIEL, PH.D., occurred at the virtually
17 via videoconference on September 25, 2024,
18 commencing at 9:59 a.m. to 11:00 a.m.
19 I further certify that I am not related to
20 any of the parties to this action by blood or
21 marriage, I am not employed by or an attorney to any
22 of the parties to this action, and that I am in no way

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1 interested, financially or otherwise, in the outcome
2 of this matter.
3
4 IN WITNESS WHEREOF, I have herunto set my
5 hand on the 27th of September, 2024.
6
7
8 Susan S. Klinger
9 Susan S. Klinger, RMR-CRR, CSR
10 Texas CSR 6531, Exp: 10/23/25
11 California CSR 14487, Exp: 11/30/24
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