

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 CROWDSTRIKE, INC.,

6 Petitioner,

7 v.

8 GOSECURE, INC.,

9 Patent Owner.

10
11 Case IPR2025-00070

12 Patent 9,954,872

13
14 Deposition of MARKUS JAKOBSSON, Ph.D.

15 VOLUME II

16 Conducted Remotely

17 Wednesday, April 15, 2026

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22 Reported by: Janet A. Hamilton

1 Deposition of MARKUS JAKOBSSON, Ph.D.,
2 held remotely:
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11 Pursuant to Notice, before Janet A.
12 Hamilton, Notary Public in and for the State of
13 Maryland.
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1 A P P E A R A N C E S

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C O N T E N T S

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E X H I B I T S

(None marked)

1 P R O C E E D I N G S

2 -----

3 MARKUS JAKOBSSON, Ph.D.,
4 a witness herein, being duly sworn, testified as
5 follows:

6 EXAMINATION BY COUNSEL FOR THE PATENT
7 OWNER

8 BY MR. PETERS:

9 Q Good morning, Dr. Jakobsson. Where are
10 you this morning?

11 A I am in Washington, Connecticut.

12 Q Okay. Are you at home?

13 A No. It's an Airbnb. I've been spending a
14 few days with my wife.

15 Q Is anybody in the room with you?

16 A No.

17 Q Do you have any windows open on your
18 computer besides this Zoom window?

19 A I -- the Zoom window covers the entire
20 screen, but there are windows underneath. I can
21 minimize them if you wish.

22 Q What are the windows open?

1 A Calendar, e-mail.

2 Q You can close your e-mail. That would be
3 great.

4 A I'll do that. Okay.

5 Q Do you have anything else open besides
6 your calendar?

7 A There was a bunch, like Spotify, and one
8 folder with tax-related documents, but all of them
9 are closed now.

10 Q Okay. And outside of this Zoom do you
11 have any open channels of communication with
12 counsel currently?

13 A I do not.

14 Q Is there any reason that you cannot
15 testify truthfully today?

16 A Not that I know of.

17 Q Did you bring any materials with you to
18 the deposition?

19 A No.

20 Q Okay. Did you do anything to prepare for
21 the deposition today?

22 A Yes.

1 Q Sorry. Let me rephrase that. I'll
2 withdraw that.

3 Did you do anything to prepare for today's
4 deposition?

5 A Yes, I did.

6 Q What did you do?

7 A One thing I did was to review my
8 declaration, the declaration that the deposition
9 corresponds to.

10 Q Did you do anything else?

11 A I also spoke with counsel for about an
12 hour day before yesterday.

13 Q Did you review any other documents in
14 preparation for today's deposition?

15 A Two documents. One is the '872 patent,
16 not in full, but reviewed it in part, and the
17 other one is that I reviewed a portion of
18 Dr. Stavro's testimony.

19 Q When you say his testimony, are you
20 referring to his declaration?

21 A No, the deposition.

22 Q Okay.

1 A And also I reviewed portions of Capalik.

2 Q Did you review any other documents that
3 are not in the record?

4 A No.

5 Q Okay. I'm going to drop Exhibit 1001, the
6 '872 patent, into the chat. It's already been
7 marked in this proceeding. And if you could
8 download that, open it up, and let me know when
9 you're ready.

10 A Just a moment. I have now downloaded it,
11 and now I've opened it. I have only one screen,
12 that on my laptop, so I would have to switch
13 between seeing you and seeing the document. I'm
14 going to switch to the document now.

15 Q Okay. Actually let me put this on the
16 screen. Maybe if I share my screen it might be a
17 little easier. Let me see here. Bear with me.
18 Sorry. Could you close out that document that I
19 sent you?

20 A Close it?

21 Q Yeah.

22 A Okay. That's done.

1 Q Okay. I'm going to give you a different
2 one; a different version of the same thing. Okay.
3 You can open up the one I just sent. And I
4 will --

5 A It has the same name?

6 Q It does, yes. The first one I dropped
7 inadvertently had some highlighting in it, and I
8 didn't want that to distract from our attention.

9 A Okay. So I have opened the second one
10 now.

11 Q Yes. Thank you. And I'll also share my
12 screen. Let's see. Technical difficulties.

13 Okay. Here we are. I am sharing what has
14 been marked as page 30 of Exhibit 1001. Can you
15 see that?

16 A Yes, I can.

17 Q Okay. And this covers columns 19 and 20.
18 I'd like to focus your attention momentarily on
19 Claim 2.

20 Do you see that Claim 2 recites the method
21 of Claim 1 wherein the monitoring further
22 comprises monitoring all activity on the first

1 computer system? Do you see that?

2 A Yes.

3 Q Is it your opinion that Claim 2 is limited
4 to a decoy system?

5 MR. HART: Object to form.

6 A It could be a hybrid system where there is
7 a decoy and there is a non-decoy portion.

8 Q Does there have to be a decoy portion?

9 MR. HART: Object to form.

10 A It doesn't say one way or the other.

11 Q But do you have an opinion as to whether
12 there must be a decoy in Claim 2?

13 A I've only seen monitoring described in the
14 context of a virtual machine, and the patent
15 doesn't describe how to perform monitoring on a
16 non-virtual machine. So the claim itself does not
17 say either way, but relying on the specifications
18 I would not know what monitoring means in the
19 context of a system that does not have the virtual
20 machine that is the decoy.

21 Q And, therefore, Claim 2 requires a virtual
22 machine that is the decoy? Is that your opinion?

1 MR. HART: Object to form. Misstates the
2 testimony.

3 A That's not what I'm saying. I said that I
4 do not see a description anywhere in -- sorry --
5 anywhere in the specification that describes
6 monitoring in the context of a non-decoy. So I
7 would have to consider what a POSITA would have
8 understood this to mean since it's not described.

9 Q And have you considered what a POSITA
10 would have understood that to mean in the context
11 of Claim 2?

12 MR. HART: Object to form. Same
13 objection.

14 A I think a POSITA would not have understood
15 what monitoring meant in the context of the
16 specifications based on the hypothetical system
17 without a decoy system.

18 Q Okay. So that means Claim 2 is -- Claim 2
19 requires a decoy system; right?

20 MR. HART: Object to form.

21 A I've only seen examples where monitoring
22 is performed in the context of a decoy system. I

1 understand in general outside the spec.

2 Monitoring could be done in other ways that does
3 not involve a decoy system, but in the context of
4 the specs I do not see any description.

5 Q In those examples do they limit Claim 2?

6 MR. HART: Object to form.

7 A Would you please explain what you mean?

8 Q Okay. You said you've only seen examples
9 in the context of a decoy system. Do those
10 examples limit Claim 2?

11 A That's not how I understand it. What I'm
12 saying is that a POSITA reading Claim 2 and Claim
13 1 looking at the term monitoring would need to
14 understand what does it mean. Turning to the
15 specification, there is no description clarifying
16 what monitoring mean outside a decoy system, which
17 I think actually Dr. Stavro agrees with. There
18 are -- there's no guidance for a POSITA what that
19 would mean.

20 Q And, therefore, a POSITA would not
21 understand what Claim 2 means?

22 MR. HART: Object to form.

1 A What I'm saying is that a POSITA would not
2 know what monitoring means in a hypothetical
3 setting where there's no decoy system. So a
4 POSITA would, of course, have to understand all
5 the terms in the claim he or she is reading, and
6 looking at the word monitoring in Claim 2 which is
7 referring back to the monitoring in Claim 1, the
8 POSITA would have to think about and determine
9 what does monitoring mean?

10 And turning to the specs there is guidance
11 what monitoring means in the context of a decoy
12 system, and I believe a POSITA would have
13 understood what that means; that, in fact, is --
14 the notion of a honey pot is fairly well
15 understood and was at the time of the priority
16 date. So a POSITA would have understood what
17 monitoring means in that context, but there's no
18 guidance what a -- what monitoring would mean
19 outside such a setting.

20 Q Okay. So what does that mean for the
21 scope of Claim 2? What does monitoring mean in
22 Claim 2?

1 MR. HART: Objection.

2 A So I -- I don't want to -- I'm not
3 describing the boundaries of the term monitoring
4 now, but rather, I am giving you examples of what
5 monitoring means. And a good analogy is to record
6 events. If you think of the computer system as a
7 house, monitoring could mean to, using cameras in
8 every room, simply record all activity. They
9 store it on a card inserted in the camera, and
10 anybody who wishes to understand more about what
11 happened the night the TV vanished would pop out
12 those memory cards and potentially identify the
13 criminal.

14 Q Are you done answering?

15 A Yes.

16 Q Okay. Okay. Well, in your example, you
17 didn't say anything about a decoy; right?

18 A No. The reason is that monitoring in a
19 decoy system, it's -- it's well understood what it
20 means. So a decoy system, which is also referred
21 to as a honey pot, is something that a legitimate
22 user would not access, and, therefore, all

1 activity in such a system is understood to belong
2 to unwanted activity.

3 So anybody who accesses it, you know, this
4 is something that is not desired and, for example,
5 typically you would run this in a virtual machine
6 where the processor, as it executes an instruction
7 given to it, would in addition to executing that
8 instruction also log what instruction is being
9 executed, and a party, whether a person or a
10 script, can later look at the log and identify
11 behavior that is of one kind or the other and
12 classify it. So it's well understood what
13 monitoring means in the context of a decoy system.

14 Monitoring outside that could mean various
15 things, and it is not clear from the specification
16 what those things potentially would be.

17 Q What are some of those things that
18 monitoring outside the decoy system could be?

19 MR. HART: Objection. Form.

20 A So I'm not speaking in the context of the
21 '872 patent now because it simply doesn't say.
22 I'm speaking in general outside the '872 patent.

1 Monitoring could be to create a log
2 corresponding to what processes are executing.
3 Monitoring could be to create a log of the system
4 activity to, for example, observe what resources
5 are being used and potentially by what processes.

6 So there are various ways of monitoring in
7 non-decoy systems, and they're done for various
8 purposes. For example, in the context of
9 monitoring resource usage, that could be because
10 you're concerned that you have an insufficient
11 processor or not enough space in RAM, and you
12 determine by examining the logs that one
13 particular activity seems to be a bottleneck.

14 It could also be used for security
15 purposes. You could say if something is used in
16 an anomalous manner -- let me give you one
17 example. The processor is incredibly busy all the
18 time and nothing else is. Maybe the system is
19 mining bitcoin, and if that is not an activity
20 that you initiated, then maybe you should suspect
21 that your computer has been, been compromised, and
22 your computer system is doing things that you

1 don't wish it to do, and you could start looking
2 for that.

3 If you're logging what processes are
4 executing on a computer system, that could be part
5 of collecting information that an anti-virus
6 system would analyze for indications of what we
7 might call badness. So that's about monitoring in
8 general and not in the context of the claim
9 language or the specifications, but it shows that
10 monitoring could mean different things.

11 Q Understood. So correct me if I'm wrong,
12 but it seems to be your opinion that Claim 2's
13 monitoring is not limited to a decoy, but a person
14 of ordinary skill in the art wouldn't know how to
15 build Claim 2 outside of a decoy system? Is that
16 what you're saying?

17 MR. HART: Object to form.

18 A I haven't formed an opinion about this.
19 I'm trying to answer the best I can as you're
20 asking questions. These are not questions that I
21 believe I have opined on, nor do I have a ready-
22 made opinion to volunteer.

1 Q Okay. Well, let me break it down because
2 my question did technically have two parts.

3 So you haven't formed an opinion as to
4 whether the monitoring of Claim 2 is limited to a
5 decoy; is that right?

6 A I haven't had to. I was not asked to, to
7 do that. I know that all the examples I've seen
8 and which I know a POSITA would understand are in
9 the context of a decoy system. And I, having read
10 the specification, do not know of any description
11 that would shed light on this. But that said, I
12 don't believe I have opined on it, and if you
13 think I'm mistaken, please bring that to my
14 awareness. It's potentially something I could
15 opine on, and given time I believe I could.

16 Q How much time would you need?

17 A These things are hard to know because what
18 I would do is I would start by reviewing the '872,
19 and then I would, based on my findings in the
20 context of this question, identify what tasks I
21 need to perform to find a potential answer to the
22 question.

1 Since I don't know those tasks yet I don't
2 know how long it would take. Neither do I know
3 whether I would be successful to identify all the
4 things that I would set out to identify, which is
5 part of the discovery process.

6 So it's -- until you have done at least a
7 portion of this, it's typically hard to give an
8 estimate of how long it will take.

9 Q And just to be clear, you haven't done
10 that analysis; right?

11 A I don't recall having done the analysis in
12 the context of my first deposition, but since I
13 haven't reviewed my first deposition in this, in
14 the context of the preparation here, that's why I
15 added the disclaimer that if I'm mistaken about
16 this, I'd like to ask you to remind me because I
17 haven't read my first deposition -- my first
18 declaration, I'm sorry.

19 In the context of the declaration that
20 this deposition corresponds to I have not opined
21 on this.

22 Q And just to be clear, when you say you

1 have not opined on this, you're saying you have
2 not opined on whether Claim 2 is limited to a
3 decoy system; right?

4 A That's the question I understand you to
5 ask me.

6 Q Okay. Similarly, have you opined on
7 whether Claim 2 is limited to monitoring a virtual
8 machine?

9 A For the very same reasons here all the
10 decoy systems in the examples are virtual
11 machines. It's almost like we're talking about
12 the same thing.

13 You know, you could have a virtual machine
14 that is not a decoy system, but the decoy systems
15 that are described are virtual machines. I would
16 have to go through the very same analysis in order
17 to determine what the answer is to this question.

18 Q Okay. And you haven't done that analysis;
19 right?

20 A Not in the context of the current
21 declaration.

22 Q And sitting here today you don't recall

1 having done it in the context of your first
2 declaration?

3 A I don't recall having done it in the
4 context of the first either.

5 Q Have you formed an opinion as to whether
6 Claim 2 only requires monitoring activity in
7 response to attacker interaction?

8 A So for all the examples given, the
9 monitoring is done on a virtual machine that is --
10 that is a decoy system. This virtual machine is
11 there to give an attacker the impression that it
12 is on a computer system that is not a decoy
13 system, and all the activity that is performed in
14 the context of the decoy system is understood to
15 be undesirable. There's nobody else who's
16 accessing the decoy system.

17 So whether you log everything or you log
18 almost everything, the specifications do not say,
19 but it's understood that you could log everything
20 because it's understood that a decoy system
21 running in this manner could simply create a log
22 based on, for example, the instructions being sent

1 to a processor which is the processor in the
2 context of the decoy system. So whatever the
3 attacker perceives is the processor, which could
4 be represented by multiple processors, that is
5 being logged.

6 Q Okay. I don't think I heard anything
7 about Claim 2, so I just wanted to be clear. Have
8 you formed an opinion as to whether Claim 2 only
9 requires monitoring activity in response to
10 attacker interaction?

11 MR. HART: Object to form.

12 A So the monitoring that is described in the
13 specification is in the context of a decoy system.
14 Monitoring in the context of a decoy system, it's
15 whatever is logged is attacker information because
16 no, nobody else accesses the computer system
17 corresponding to the decoy.

18 Q Right. And you have testified today that
19 you don't recall having performed any analysis or
20 formed an opinion as to whether Claim 2 requires a
21 decoy; right?

22 A What I've been saying is that the

1 specification makes it clear that the monitoring
2 could be done on a decoy system. There is no
3 description how monitoring would be done on a
4 non-decoy system, and based on my knowledge of
5 monitoring in general and my understanding of
6 POSITAs I know that it would not be automatically
7 clear that one kind of monitoring inside a decoy
8 system would be the same as monitoring outside the
9 decoy system. It will not necessarily have a
10 one-to-one correspondence, and I know a POSITA,
11 therefore, would not be able to read the examples
12 about what the monitoring in the context of a
13 decoy system is doing and conclude what that means
14 in terms of non, non-decoy systems.

15 Q Okay. Well, I'm asking you about Claim 2.
16 You understand that you've opined about the
17 validity of Claim 2 in this proceeding?

18 A Yes.

19 Q Did you form an understanding of what
20 Claim 2 means when you did that analysis?

21 A Yes.

22 MR. HART: Objection.

1 A I believe so.

2 Q Okay. What's that understanding?

3 MR. HART: Object to form.

4 A So are you screen sharing at this point?

5 Q I'll bring it back up.

6 A Okay. I somehow cannot see it.

7 Q Can you see it now?

8 A Yes. I need to find a way of not having
9 it minimized. Give me a moment. Now I cannot see
10 it though. Would you try again, please.

11 Q You can't see my screen share?

12 A No.

13 MR. PETERS: Paul, can you see it?

14 MR. HART: I can.

15 Q Okay. So I think you need to fix your
16 window somehow.

17 A I can see it now very small. Let me see
18 if I can do this.

19 I am not able to maximize this window. I
20 can squint a little bit and read it, but what I'd
21 like to do is that later on we find a way of
22 making sure it appears in the same window.

1 So Claim 2 speaks about the monitoring.
2 That refers to the monitoring that is described in
3 Claim 1, and the distinction between the
4 monitoring in Claim 1 and the monitoring in Claim
5 2 is that the monitoring in Claim 2 is of all
6 activity on the first computer system. So it's
7 not necessitated in the first claim that the
8 monitoring is of all the activity.

9 So, for example, in the first system maybe
10 there's some form of filtering so that only some
11 information is being logged, whereas in the second
12 claim on the information of the computer system,
13 which is the decoy, is being logged.

14 So in my -- in my understanding the
15 distinction is simply a matter of whether there is
16 assurance of all or nothing -- or not.

17 Q You said in your answer that the first
18 computer system is the decoy, and so my question
19 again is, does Claim 2 require a decoy? Is that
20 what you're saying?

21 MR. HART: Object to form.

22 A I'm sorry. What I was saying is that if I

1 were to free my answer from the decoy system which
2 is for illustrative purposes since I know that
3 there is support in the specification for that, I
4 can reframe everything without involving that
5 aspect of it and say that the difference between
6 the first and the second claim is that the second
7 claim requires that the first computer system is
8 all the activity is monitored as opposed to
9 activity is being monitored.

10 Q Right. And Claim 2 doesn't say -- let me
11 withdraw that.

12 It's not your understanding that Claim 2
13 only requires monitoring activity in response to
14 attacker interaction; is that right?

15 MR. HART: Object to form.

16 A So, again, in the context of the
17 specifications where the first computer system is
18 a decoy, all activity is attacker activity. If we
19 were to hypothesize for a moment that the
20 monitoring could be of a non -- of activity in a
21 non-decoy, it's not -- it's not known from the
22 specs what this would mean. So I will not be able

1 to answer your question without knowing what is
2 being performed.

3 Activity in different contexts means
4 different things. So in the context of the decoy
5 system the activity is activity being initiated by
6 the attacker. That's by definition how a decoy
7 system is used. Nobody else would access the
8 decoy system unless they wish to test it by acting
9 as an attacker, but that falls in the same --
10 that's the same thing. You're posing as an
11 attacker to see that it works. For a moment you
12 are the attacker.

13 For non-decoy system, and as I've
14 described before, monitoring is not explained in
15 the specification, and so the distinction between
16 activity and all activity it's not clear unless
17 you know what monitoring means. This is another
18 reason why I say that it's very clear what the
19 specification means when the first system, when
20 the first computer system is a decoy system.
21 Outside that I would have to spend significant
22 effort in order to determine what it really means

1 since the patent doesn't say it.

2 Q Okay. And you haven't performed the
3 analysis to determine what monitoring all activity
4 means in Claim 2?

5 MR. HART: Object to form.

6 A So it means -- it means that what is being
7 monitored is not some of the activity but all of
8 the activity, and that is actually -- in the
9 context of a decoy system that is the most
10 straightforward thing. All activity would
11 correspond to everything that is being sent to
12 virtual machine processors.

13 So the one or more processors in the decoy
14 system would receive instructions from, based on
15 the execution of some software or some probes by
16 the attacker. Anything they get it's known to
17 correspond to attacker activity, and so it's the
18 easiest thing to do is to actually record, that is
19 to monitor, everything. If it's sent to this
20 virtual machine processor, then it's logged.

21 Now in some context that might not be
22 efficient in terms of storage space, of course.

1 So a POSITA might opt to only record some portion
2 of it that is deemed to be more relevant, and so
3 that kind of logging would be partial, and that is
4 what Claim 1 speaks of: logging that is not
5 necessarily a log. There is logging. That's the
6 monitoring, but no assurances beyond that.

7 Q You mentioned earlier a hybrid system with
8 a decoy portion and a non-decoy portion. Do you
9 recall that?

10 A Yes.

11 Q What do you mean by non-decoy portion?

12 A So, for example, you could have a computer
13 system that corresponds to one or more servers
14 that you and I can access via, you know, the
15 network, and on those one or more servers there's
16 a component that corresponds to the decoy, and
17 then on other corners there are other things.

18 So as a kind of visual example, image that
19 you have in your home a folder that says "top
20 secret" or "all my valuable information." That's
21 what it's labeled, and you put that on your desk.
22 You're never going to care about opening it

1 because you know that it doesn't have anything of
2 value, but you know that anybody who opens it has
3 bad intent. They might be a burglar, and they
4 wish to know whether maybe you have your bank
5 information in that. You're not going to open it;
6 the burglar is.

7 So this corresponds to a hybrid system.
8 Your desk, you carry out lots of activities on
9 your desk that is corresponding to this computer
10 system of one or more servers, but you don't touch
11 the folder that says "top secret" and "very
12 important" and all of that. That is a decoy
13 system that is part of -- it's a subsystem. It's
14 a computer system in a computer system. That --
15 if that is being accessed, everything is logged.

16 So in this context imagine that there's a
17 camera in this folder. If I access your office
18 and I, you know, you're not there and I go and
19 open the folder, I'm going to be filmed. All the
20 activity that is happening, which is me sticking
21 my head in there and, you know, taking things out,
22 that is being filmed. That is a decoy system in,

1 in the context of a non-decoy system, and that is
2 what I refer to as a hybrid system. I don't think
3 the term was used in the specification, but this
4 is my description.

5 Q You mentioned that that folder is a
6 subsystem of a computer system; right?

7 MR. HART: Object to form.

8 A So what I mean is that it's a computer
9 system is really one or more computational devices
10 that are connected to each other or to the
11 surroundings. This means that a subset of a
12 computer system could be a computer system. You
13 could also have a subsystem that isn't, but that
14 would be meaningless in this context. You can't
15 run the virtual machine there. You can't have the
16 decoy system. It simply has no capabilities.

17 So say that the subsystem is a buffer that
18 you use to send messages to the printer. Not a
19 useful place to put this decoy system, but
20 anything that is a meaningful place to put a decoy
21 system is a computer system by itself, and it's a
22 computer system that is comprised in or is equal

1 to the computer system that in my explanation is
2 your desk.

3 Q So is a buffer that is used to send
4 information to a printer, is that a computer
5 system?

6 A So typical buffers don't have
7 computational capabilities, and typically when
8 people speak about computer systems, they mean
9 with computation capabilities.

10 Now if you build a buffer that has
11 computation capabilities, you might call that a
12 computer system, too.

13 Q And a folder labeled "top secret," that's
14 a computer system?

15 A Well, now this is where the analogy gets
16 difficult because it's a part of what's on your
17 desk, right, but in anything that is part of your
18 desk in the computation analogy it's part of the
19 computer system. It could be a virtual computer
20 system or it could be a nonvirtual computer
21 system, but it's the portion that you have
22 dedicated as the decoy.

1 The decoy is where you're not going to
2 touch contents but others might. It doesn't have
3 to run on a virtual machine, but in the context of
4 the specifications it does.

5 Q So sorry. I'm confused. Is the folder a
6 computer system or not?

7 MR. HART: Object to form.

8 A The folder in the context where it
9 corresponds to computation capability would be a
10 computer system. So --

11 Q What would you -- sorry -- sorry about
12 that.

13 A If it can do something, it's a computer
14 system. So a virtual machine can do something.
15 It can process. So that's a computer system. A
16 file that is stored on a hard drive is not a
17 computer system. It does not have computation
18 capabilities.

19 Q What about a folder with nothing in it,
20 which was your original hypothetical? Is that a
21 computer system?

22 MR. HART: Objection.

1 A If you mean the folder on the desk. I'm
2 not saying that that corresponds to folder in the
3 context of the computer system. We know that in
4 order to perform the monitoring it needs to have
5 computation capabilities.

6 So the system, the computer systems
7 described in the specifications and referred to in
8 the first and second claims are not -- they have
9 computation capabilities. They're not simply a
10 file or a folder. They have virtual or real
11 processing capability. That's what it means to be
12 a computer system.

13 Let me clarify that. I'm not defining
14 computer system, but I'm saying a computer system
15 corresponds to something with computation
16 capability, but it might have other things as
17 well.

18 Q Okay. I'm going to keep sharing my screen
19 here. I'm opening up what's been labeled Exhibit
20 1004. This is the Capalik reference.

21 A I think I need to figure out how to...

22 Q Sure. I'll also drop it into the chat

1 here. Let me --

2 A Now I can see it.

3 Q Okay. Great.

4 A Thank you.

5 Q I'll also drop it into the chat for the
6 court reporter's benefit. I'd like to focus your
7 attention on paragraph 9 of Capalik where the
8 first sentence says, "The front end presents a
9 standard fully functional operating system such as
10 Windows or a flavor of Linux or Sun Microsystems
11 Solaris."

12 Do you see that?

13 A Mm-hmm. Yes.

14 Q What is an operating system?

15 A An operating system is software that
16 manages other software. For example, typically an
17 operating system would allow multiple processes to
18 run at the same time or in a manner that a user
19 would be, to perceive at the same time, and the
20 way to do that would be to allow one processing
21 task to be performed for a while, and then
22 interrupt it and say, I'll save all you state and

1 I'm going to get you back to this state again and
2 you can continue computing like nothing happens,
3 but for now I'm going to process another task. So
4 the operating system is the, what you can think of
5 as the task manager that sees who gets to do what
6 at what time.

7 Q Does the operating system have any other
8 responsibilities?

9 A Yes.

10 MR. HART: Objection.

11 A Lots of other responsibilities. So for
12 example, the operating system would perform memory
13 management. When you request a particular file,
14 it will look up to see where in, on your hard
15 drive, for example, are those files, or is that
16 file, and it might be in multiple places. It
17 might be fragmented, and if you request a file to
18 be loaded, then it will -- the operating system
19 will see to that you're getting information from
20 the hard drive transferred to first RAM and second
21 to the cache, typically, assuming there is a
22 cache, and then if you perform a processing action

1 on this file such as executed or execute on it,
2 the operating system will also control how that is
3 done.

4 Q Does the operating system perform tasks
5 without user interaction?

6 A So there are background tasks that are
7 performed without a particular request from a
8 user. So, for example, there's what's called a
9 trash collection. Trash collection is when the
10 operating system determines what stored
11 information is not going to be useful for anybody
12 anymore, and then free up the memory space for the
13 portions of memory that contains that information.

14 You're not explicitly asking the operating
15 system please do trash collection now, but it's a
16 desirable thing for the operating system to do
17 things like that in the background every once in a
18 while.

19 Q It's been about an hour. Why don't we
20 just take a little break. About ten minutes?

21 A That sounds good.

22 Q Okay. Let's go off the record.

1 (A discussion was held off the record.)

2 (A recess was taken.)

3 MR. PETERS: Dr. Jakobsson, thank you for
4 your time. I have no further questions.

5 MR. HART: And no redirect from my side.

6 THE REPORTER: And transcript orders,
7 counsel.

8 MR. PETERS: Yes. Could we get ours by
9 Monday?

10 THE REPORTER: Sure.

11 MR. PETERS: Thank you.

12 MR. HART: And we'll just do a standard
13 turn-around time transcript, whenever that's
14 ready. We don't need a rough.

15 THE REPORTER: Thank you.

16 (Off the record at 11:37 a.m.)

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1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2 I, JANET A. HAMILTON, Certified Reporter and
3 Notary Public within and for the State of
4 Maryland, do hereby certify:

5 That MARKUS JAKOBSSON, Ph.D., the witness whose
6 deposition is hereinbefore set forth, was duly
7 sworn by me before the commencement of such
8 deposition and that such deposition was taken
9 before me and is a true record of the testimony
10 given by such witness.

11 I further certify that the adverse party,
12 CROWDSTRIKE, INC., was represented by counsel at
13 the deposition.

14 I further certify that the deposition of MARKUS
15 JAKOBSSON, Ph.D., occurred remotely via Zoom link
16 on Wednesday, April 15, 2026, commencing at 10:26
17 a.m. to 11:37 a.m.

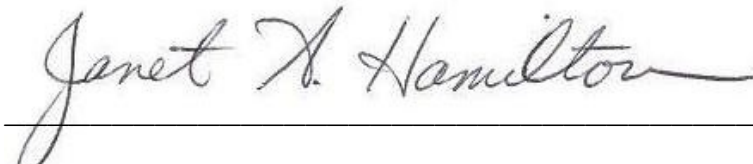
18 I further certify the inspection, reading and
19 signing of said deposition was not discussed.

20 I further certify that I am not related to any
21 of the parties to this action by blood or
22 marriage, I am not employed by or an attorney to

1 any of the parties to this action, and that I am
2 in no way interested, financially or otherwise, in
3 the outcome of this matter.

4
5 IN WITNESS WHEREOF, I have hereunto set my hand
6 this 17th day of April, 2026.

7
8 My commission expires: February 4, 2028

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12 _____

13 NOTARY PUBLIC IN AND FOR THE
14 STATE OF MARYLAND

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A			
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