

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PALO ALTO NETWORKS, INC.

Petitioner

v.

BT AMERICAS, INC.

Patent Owner

"CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER"

DEPOSITION OF KEVIN JEFFAY

DATE: February 7, 2024

TIME: 8:56 a.m. to 2:51 p.m.

LOCATION: Proskauer

1001 Pennsylvania Avenue, Northwest

Washington, DC 20004

REPORTED BY: Felicia A. Newland, CSR

A P P E A R A N C E S

On behalf of Petitioner:

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On behalf of Patent Owner:

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-- and --

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Also Present:

Edward Wang, Associate Proskauer

C O N T E N T S

EXAMINATION BY: PAGE

Counsel for Patent Owner 4

JEFFAY DEPOSITION EXHIBITS

NO. DESCRIPTION PAGE

Exhibit 1003 Declaration of Kevin Jeffay, Ph.D., in 7

Support of Petition for Inter Parties

Review of U.S. Patent No. 7,895,641

Exhibit 2006 Attachment A to the Stipulated 20

Protective Order Confidentiality

Agreement

Exhibit 1001 U.S. Patent 7,895,641 B2 22

Exhibit 1004 U.S. Patent 5,884,033 41

Exhibit 1032 Curriculum Vitae Kevin Jeffay 65

Exhibit 1005 Trust Management for the World Wide Web 134

Exhibit 2005 What TCP/IP Protocol Headers Can Tell Us 172

About the Web

Exhibit 1014 U.S. Patent 2001/0039579 A1 177

Exhibit 1015 U.S. Patent 6,484,315 B1 199

Exhibit 1033 U.S. Patent 6,859,783 B2 202

(*Exhibits attached to transcript.)

P R O C E E D I N G S

* * * * *

WHEREUPON,

KEVIN JEFFAY

called as a witness, and having been first duly sworn, was examined and testified as follows:

EXAMINATION BY COUNSEL FOR PATENT OWNER

BY MR. GOLDBERG:

Q Okay. Good morning, Dr. Jeffay.

A Good morning.

Q So my name Nolan Goldberg from the law firm of Proskauer Rose. I represent the patent owner, BT Americas, Inc.

You've been deposed before, correct?

A Yes.

Q Approximately how many times?

A Several dozen.

Q Have you been retained by PAN's counsel Sterne Kessler before?

A Yes.

Q Approximately how many times?

A Maybe two or three times.

1 Q And have you been retained by
2 Petitioner, Palo Alto Networks, before?

3 A Yes.

4 Q And approximately how many times?

5 A Well, it's hard to say because I'm
6 trying to think if it's all in relation to this
7 matter. Probably maybe once before.

8 Q Okay. And was that in relation to
9 these patents?

10 A No. There are other retentions, I
11 think, related to these patents, but the one I was
12 speaking of is independent.

13 Q Okay. Was that a patent case?

14 A Yes.

15 Q Okay. So let's take a minute just to
16 review the general ground rules for the day,
17 although I'm sure you're probably very familiar
18 with these.

19 You understand you're under oath and
20 obligated to tell the truth, correct?

21 A Yes.

22 Q And you understand that questions

1 must be answered directly, completely, and to the
2 best of your recollection, correct?

3 A Yes.

4 Q And you understand your answers to my
5 questions must be verbal and you may not nod or
6 just shake your head?

7 A Yes.

8 Q You understand?

9 And just please let me finish my
10 questions before you answer. And I'll do my best
11 to provide you with the same courtesy. Okay?

12 A I will do my best.

13 Q Thank you.

14 And if you don't understand a
15 question, please tell me and I'll rephrase it or
16 try to clarify it. Okay?

17 A Okay.

18 Q And you understand you may not
19 discuss anything with your attorney while a
20 question is pending?

21 Do you understand that?

22 A Yes.

1 Q Okay. And you understand that unless
2 your attorney instructs you not to answer, you must
3 answer every question even if your attorney in the
4 room objects?

5 Do you understand that?

6 A I do.

7 Q Now, please, sir, tell me if you need
8 a break. I would ask that we don't take a break in
9 the middle of a question, but otherwise if you need
10 a break, let me know and we'll take one as soon as
11 we can.

12 A Sure. That's fine.

13 Q Okay. Is there any reason you can't
14 testify fully and accurately today?

15 A No.

16 Q Okay.

17 MR. GOLDBERG: If I can have
18 Exhibit EX1003.

19 (Jeffay Deposition Exhibit Number EX1003
20 marked for identification.)

21 BY MR. GOLDBERG:

22 Q Dr. Jeffay, I think you already have

1 a copy of it in front of you. Whichever one you
2 want to refer to is fine. I believe they're
3 identical.

4 Dr. Jeffay, do you recognize
5 Exhibit EX1003?

6 A Generally I do. I'll note that this
7 appears to be highlighted, which is not my
8 highlighting.

9 Q So let's refer to the copy of EX1003
10 that you brought with you, sir.

11 A Okay.

12 Q I apologize for any -- any issues
13 with the copy. If I refer to your declaration --

14 MR. TUMINARO: This one also has
15 highlighting, just for the record.

16 MR. GOLDBERG: All right. Let's pull
17 that back and we'll get fresh copies.

18 MR. TUMINARO: Yeah. If I can have a
19 copy at some point in time, that would be great.

20 MR. GOLDBERG: Let's go off the
21 record for a second.

22 (Recess from 9:03 a.m. to 9:08 a.m.)

1 BY MR. GOLDBERG:

2 Q Dr. Jeffay, do you have
3 Exhibit EX1003 in front of you?

4 A I do.

5 Q And that's your declaration?

6 A Yes.

7 Q Sir, please keep your declaration out
8 throughout today's deposition. Even though I'm
9 going to refer to other documents, I think we're
10 going to continuously refer back to your
11 declaration, so please keep it, you know, at hand.

12 A Sure.

13 Q Approximately, when were you retained
14 by the Petitioner to assist in this matter?

15 A I believe it was in the spring of
16 '22.

17 Q And was that -- were you retained in
18 connection with a contemplated IPR?

19 A Yes.

20 Q And were you retained in connection
21 with the co-pending district court case?

22 A I was.

1 Q Prior to your being retained by the
2 Petitioner to assist in this matter, were you aware
3 of Dr. Bruce Schneier?

4 A Yes.

5 Q When did you first learn of Dr. Bruce
6 Schneier?

7 A I couldn't say with any certainty.

8 Q Would that have been more than a
9 decade ago?

10 A I can tell you that when he published
11 the first version of his book, the publisher sent
12 me a -- what in academia we call a desk copy. They
13 send you free copies of books and hope that you'll
14 use them. So I think that's when I -- I certainly
15 had heard of him by that point.

16 Q Okay. And had you subsequently used
17 his book?

18 A No.

19 Q Do you have any understanding of
20 Dr. Bruce Schneier's contributions to the field of
21 cybersecurity?

22 MR. TUMINARO: Objection. Form.

1 THE WITNESS: Contributions to me, as
2 an academic, means peer-reviewed publications. And
3 I'm not aware of any of his peer-reviewed
4 publications to the extent that he has any.

5 BY MR. GOLDBERG:

6 Q Do you have any understanding whether
7 Dr. Bruce Schneier is well respected in the
8 cybersecurity industry?

9 A I know he is a name in the
10 cybersecurity industry, primarily on the -- what I
11 would say the industry side of cybersecurity.

12 Q What do you mean by "the industry
13 side"?

14 A Well, again, you have the academic
15 side, which is really about publishing papers and
16 graduating students, and I have most often
17 encountered his name as -- in regards to practices
18 in industry and -- and someone who seems to be
19 promulgating ideas and best practices for industry.

20 Q Would it be fair to characterize your
21 experience as mostly on the academic side?

22 A Well, experience is a pretty --

1 depending on what you're limiting to experience, I
2 would say no.

3 Q Let me rephrase the question.

4 Would it be fair to characterize your
5 experience in the area of cybersecurity as mostly
6 on the academic side?

7 MR. TUMINARO: Objection to form.

8 THE WITNESS: Well, with the
9 understanding that I've done a lot in the area,
10 probably more than 50 percent of it has been in
11 academia, but I've had numerous collaborations --
12 research collaborations with industry concerns in
13 the area of cybersecurity.

14 BY MR. GOLDBERG:

15 Q And are those collaborations
16 identified on your CV?

17 A Probably not. I don't really list
18 collaborations, per se, on my CV.

19 Q Did any of those collaborations
20 involve firewalls?

21 A I'm sorry?

22 Q Did any of those collaborations

1 involve firewalls?

2 A Firewall is sort of a marketing term
3 for a box that you buy. I would say that I've
4 certainly used devices that were commercially sold
5 as firewalls, but most of the work that I did was
6 in, we'll call, deep packet inspection devices that
7 you could think of them as very advanced firewalls.

8 Q And were those deep packet devices
9 focused on malware?

10 A They were mostly focused on what was
11 generically described as anomaly detection and
12 intrusion detection.

13 Q Does anomaly detection relate to
14 malware?

15 A Malware from our -- from the work we
16 were doing, malware was a pretty simple problem.
17 What we were trying to understand were things --
18 things that were much more complicated and
19 sophisticated like -- like distributed
20 denial-of-service attacks, and things like that.
21 Malware detection for us was not a particularly
22 hard problem or a problem that we think warranted

1 research.

2 Q Prior to your being retained by the
3 Petitioner to assist in this matter, were you aware
4 of Andrew Gross?

5 A Was I aware of?

6 Q Andrew Gross.

7 A I don't believe so.

8 Q And prior to your being retained by
9 the Petitioner to assist in this matter, were you
10 aware of John Callas?

11 A John?

12 Q Callas, C-A-L-L-A-S.

13 A Callas. No.

14 Q Prior to your being retained by the
15 Petitioner to assist in this matter, had you ever
16 heard of Counterpane?

17 A Counter?

18 Q Pane.

19 A Pane. Can you spell that?

20 Q Sure. Counter, P-A-N-E.

21 A No.

22 Q You were retained by Fortinet in

1 connection with these same patents, weren't you?

2 A Correct.

3 Q Were you retained by anybody else in
4 connection with these same patents besides Fortinet
5 and Palo Alto Networks?

6 A No.

7 Q The Fortinet retention is not
8 disclosed on your CV, is it?

9 A The CV speaks for itself. I don't
10 recall if it's -- if there's mention of Fortinet on
11 there or not.

12 Q Do you recall approximately how many
13 hours you billed on the Fortinet matter?

14 A No.

15 Q Would it have been more than ten?

16 A Sure, probably.

17 Q More than 20?

18 A I don't remember the extent of
19 Fortinet but probably more than 20.

20 Q More than 100?

21 A I -- I don't know.

22 Q More than 50?

1 A I don't know.

2 Q Do you have records that would
3 reflect how many hours you billed in the Fortinet
4 matter?

5 A Yes.

6 Q As part of your retention in the
7 Fortinet matter, did you have access to any
8 documents that BT produced in that case?

9 A I don't recall. I don't recall -- I
10 can certainly say I don't recall having access to
11 anything that was confidential that was -- I don't
12 remember, for example, there being a protective
13 order or having to execute some protective order.

14 I don't recall any -- I certainly
15 don't recall any confidential documents and whether
16 or not there were public documents from BT, I don't
17 remember.

18 MR. GOLDBERG: Let's go off record
19 for one second.

20 (Discussion had off the record.)

21 BY MR. GOLDBERG:

22 Q Sir, it's your testimony that you

1 have no recollection of signing a Fortinet
2 protective order?

3 A Yeah. Sitting here today, that's
4 correct.

5 Q And sitting here today, you have no
6 recollection that you've accessed any documents BT
7 produced in that case?

8 A Correct.

9 Q Do you have an understanding of the
10 meaning of the term "managed security monitoring
11 service" as that term was used in the year 2000?

12 MR. TUMINARO: Objection to form.

13 MR. GOLDBERG: What's the basis of
14 the objection?

15 MR. TUMINARO: The form of the
16 question is vague to me. I don't understand what
17 it means.

18 MR. GOLDBERG: Vague. Okay.

19 BY MR. GOLDBERG:

20 Q Do you understand the question, sir?

21 A Could you just reask the question?

22 Q Sure.

1 Do you have an understanding of the
2 meaning of the term "managed security monitoring
3 service" as that term was used in the year 2000?

4 A That's not a term that appeared in
5 the literature that I'm most familiar with. I sort
6 of recognize that term as a term that was used in
7 the industry to refer to a managed -- I don't know
8 how to say it without using the same words --
9 security monitoring system. So a monitoring system
10 that was managed by a third party.

11 Q And did you have any understanding at
12 the time of the filing of the '641 patent how many
13 managed security monitoring services were in the
14 market?

15 A No.

16 Q Do you have any understanding of
17 whether managed security monitoring services were
18 common at the time of the filing of the '641
19 patent?

20 A I wouldn't know how to assess common
21 at that point.

22 Q So the answer is no?

1 MR. TUMINARO: Objection to form.

2 BY MR. GOLDBERG:

3 Q Let me rephrase the question.

4 A Please.

5 Q As you sit here today, is it fair to
6 say you don't have any understanding of whether
7 managed security monitoring services were common at
8 the time of the filing of the '641 patent?

9 MR. TUMINARO: Objection to form.

10 BY MR. GOLDBERG:

11 Q You can answer.

12 A Yeah, I'm -- that's not something I
13 have considered. I do not know how common or
14 uncommon they were.

15 Q At the time of the filing of the '641
16 patent, would companies have had concerns about
17 using a managed security monitoring service?

18 A I'm not sure what you're sweeping in
19 when you say "concerns."

20 Q At the time of the filing of the '641
21 patent, are you aware of any reasons why a company
22 would not want to use a managed security monitoring

1 service?

2 A Well, I know that at the University
3 of North Carolina we did not use one simply because
4 I think we felt we could do a better job ourselves.

5 Q Other than doing a better job, any
6 other concerns that you can think of?

7 A Sitting here today, I can't recollect
8 any other concerns.

9 Q I'm handing you an exhibit that will
10 be EX2006.

11 (Jeffay Deposition Exhibit Number EX2006
12 marked for identification.)

13 BY MR. GOLDBERG:

14 Q It's an attachment to the Stipulated
15 Protective Order Confidentiality Agreement from the
16 Fortinet matter.

17 A Thank you.

18 MR. TUMINARO: Just to be clear, this
19 marking the exhibits is consecutive with the
20 exhibits that are already in the IPR? Is that what
21 we're doing? So this is --

22 MR. GOLDBERG: EX2006.

1 BY MR. GOLDBERG:

2 Q Dr. Jeffay, have you seen EX2006
3 before?

4 A I don't recognize it, but I assume I
5 have.

6 Q And is that your signature on page 2
7 of EX2006?

8 A Yes.

9 Q Okay. What is EX2006?

10 A It looks like an attachment to a
11 Stipulated Protective Order in regards to the
12 British Telecom's PLC, et al. v. Fortinet, Inc.
13 litigation matter.

14 Q And does this refresh your
15 recollection of whether you were aware of a
16 protective order in the Fortinet matter?

17 A No, but I assume -- obviously, I
18 executed a protective order, but I still don't
19 remember it.

20 Q Okay. And does this change your view
21 that you have no recollection of receiving any
22 documents in connection with that matter?

1 A No, it doesn't change my view. I
2 still have no recollection of receiving any British
3 Telecom documents.

4 Q Would you have any records that show
5 whether or not you received access to any documents
6 produced by British Telecom in the Fortinet matter?

7 A I don't know. I would have to look.

8 MR. GOLDBERG: Let's go off the
9 record.

10 (Recess from 9:27 a.m. to 9:29 a.m.)

11 BY MR. GOLDBERG:

12 Q Okay. I'm going to hand you a
13 document marked EX1001, which is a copy of the '641
14 patent.

15 MR. TUMINARO: Thank you.

16 (Jeffay Deposition Exhibit Number EX1001
17 marked for identification.)

18 BY MR. GOLDBERG:

19 Q Sir, if I refer to a document as the
20 "'641 patent" or the "Schneier patent," will you
21 understand that I'm referring to EX1001?

22 A Sure.

1 Q Okay. And now just taking a step
2 back. We spoke earlier about the academic world
3 and industry. Do you recall that conversation?

4 A Yes.

5 Q And would you agree that the academic
6 world and industry have different focuses?

7 MR. TUMINARO: Objection to form.

8 THE WITNESS: As a very high-level
9 statement, sure.

10 BY MR. GOLDBERG:

11 Q Would you agree at the time of the
12 filing of the '641 patent, that malware was more
13 interesting in the industrial world than the
14 academic world?

15 A No, I would not agree.

16 Q And why not?

17 A Because in the academic world, we
18 have students, and students don't follow rules and
19 they do all kinds of crazy things. And they, in my
20 impression, more actively than people in the
21 industry try and subvert countermeasures that
22 exist, and so malware was a huge problem for us.

1 Q And so you're describing academic
2 research into malware?

3 A I'm sorry?

4 Q So when you said malware was a huge
5 problem for you, what did you mean by that?

6 A Keeping malware off of the campus was
7 a huge problem for us.

8 Q Okay. And as part of your work in
9 academia, were you developing systems to help keep
10 malware off of campus?

11 A Not malware specifically. We were
12 just generally doing research to try and understand
13 the nature of network traffic and trying to be able
14 to characterize what we called good traffic from
15 bad or anomalous traffic.

16 Q Okay. Returning to the '641 patent,
17 sir, EX1001, would you agree that each of the
18 independent claims of the '641 patent requires the
19 identification of potentially security-related
20 events?

21 A Claim 1 certainly does. It's not
22 clear to me that Claim 18 does.

1 Q Okay. Can you draw your attention to
2 the creating limitation, sir?

3 A Sure.

4 Q And it talks about where in the
5 potentially security-related event is identified by
6 filtering followed by an analysis of post-filtering
7 residue.

8 Do you see that, sir?

9 A I do.

10 Q Okay. And do you have any
11 understanding whether Claim 18 requires
12 identification of potentially security-related
13 events?

14 A Claim 18 requires creating an event
15 record for information about an identified
16 politically -- politically -- identified
17 potentially security-related event. I don't see a
18 requirement in Claim 18 that the method of Claim 18
19 itself actually identified a potentially
20 security-related event.

21 Q Would you agree that in order to
22 infringe Claim 18, the potentially security-related

1 event needs to be identified at some point?

2 MR. TUMINARO: Objection. Scope.
3 Outside the scope.

4 THE WITNESS: I think that the plain
5 claim language requires that at some point in time
6 something characterized as a potentially
7 security-related event had to be identified. But
8 as I say, sitting here today, it does not appear
9 that the method of Claim 18 needs to identify that.
10 BY MR. GOLDBERG:

11 Q And do you have an understanding of
12 what a potentially security-related event is as
13 that term is used in Claim 1 of the '641 patent?

14 A I just read it according to its plain
15 and ordinary meaning, and it's simply that it's --
16 it's something that in Claim 1, for example, the
17 operator of a system would consider a
18 security-related event.

19 Q So did I understand you correctly
20 that a potentially security-related event in the
21 context of Claim 1 of the '641 patent is something
22 that an operator would consider a security-related

1 event?

2 Is that right?

3 A The more fulsome statement of my
4 opinion is that it's a subjective term, and the --
5 and it's a broad term. And so it's something that
6 would bring into it the understanding of a user or
7 an operator of the system.

8 So at the end of the day, it's
9 whatever a user or an operator of a system would
10 consider to be security-related.

11 Q So it's your testimony that whether
12 something is security-related is subjective?

13 MR. TUMINARO: Objection to form.

14 THE WITNESS: The phrase that we're
15 talking about is potentially security-related. And
16 the -- just understanding the plain ordinary
17 meaning, the fact that it has worded as potentially
18 security-related, as I say, is subjective. And
19 that's going to rely on the understanding and the
20 interests of a person who's operating, for example,
21 the system of Claim 1.

22 BY MR. GOLDBERG:

1 Q In what way will that depend on the
2 interests of the person who's operating the system
3 of Claim 1?

4 A Well, for example, it's going to
5 depend on the network that -- that's being -- that
6 this -- this system for operating a probe is part
7 of.

8 Q Why would that depend on the network?

9 A Because different networks have
10 different security concerns. I've done
11 collaborations with folks that do government
12 research that is -- has some level of security, as
13 in, you know, top secret, although, since I have no
14 security clearance, I didn't know it was actually
15 top secret.

16 And I know that, for example, they
17 didn't allow anything into their network that came
18 from domains outside the U.S., and, in particular,
19 they were focused on domains at the time from
20 Eastern Europe and the Soviet Bloc.

21 In academia, we'll all about sharing
22 information with the world and we do not care --

1 it's not inherent that traffic coming in on our
2 network from Eastern Europe and the Soviet Bloc is
3 a security threat. So the exact same traffic in
4 one network is considered okay, and in other
5 network, it's considered a potential security
6 threat.

7 Q So is it fair to say whether
8 something or not is a potential security-related
9 event depends on the type of network involved?

10 MR. TUMINARO: Objection to form.

11 THE WITNESS: I think for someone
12 who's practicing this claim, what is a potential
13 security-related event can certainly -- as I say,
14 it's subjective and it depends on the context and
15 it would certainly depend on the type of network
16 that they're using. For them, a specific instance
17 of what is a potentially security-related event
18 would depend on -- might depend on their network.

19 BY MR. GOLDBERG:

20 Q Would it depend on any other context
21 besides the network?

22 A I mean, it can depend on what it is

1 the operator of the network is trying to keep off
2 their network.

3 Q Anything else?

4 A I think it's a multifaceted issue.
5 And as I say, it's -- it's subjective. And what's
6 potentially security related to one person may not
7 be potentially security related to another person.

8 Q Do you have an understanding of what
9 the word "potentially" in this context, in the
10 context of a potentially security-related event,
11 means, as that term is used in Claim 1 of the '641
12 patent?

13 MR. TUMINARO: Objection. Asked and
14 answered.

15 THE WITNESS: I don't understand that
16 in any way other than just its plain meaning in
17 English.

18 BY MR. GOLDBERG:

19 Q In your opinion, what's the
20 difference between a potentially security-related
21 event and a security-related event in the context
22 of the claims of the '641 patent?

1 A Well, because the claims specify
2 potentially security-related, and I understand that
3 every word in a claim is supposed to have meaning,
4 I think were there elements, and I'm not sure there
5 are, that just simply say security related, I think
6 a person of skill would understand that a
7 potentially security-related event is one that may
8 be a security-related event, but it's not clear;
9 whereas, a security-related event, in this context,
10 would be one that it is clear it is a
11 security-related event.

12 Q What does it mean to identify in the
13 context of Claim 1 of the '641 patent?

14 A I don't know how to answer that
15 without using the word "identify." I mean, I think
16 it's not an ambiguous term. I only understand it
17 by the plain language. And I'm not good at coming
18 up with synonyms that are airtight in a deposition
19 on the fly. I -- I think it's just clear and clear
20 on its face that, you know, the purpose of this --
21 of this analysis of status data is to identify
22 potentially security-related events.

1 Q What does identification in the
2 context of Claim 1 of the '641 patent require?

3 MR. TUMINARO: Objection. Asked and
4 answered.

5 THE WITNESS: I mean, again, I just
6 understand it by its plain meaning. And it seems
7 to me the only way I can answer your question is to
8 come up with synonyms that, you know, may not be a
9 perfect fit. And I don't view "identify" here
10 really as ambiguous in any way.

11 You're -- you're looking at various
12 things that are happening in your network and
13 you're just trying to identify ones that are
14 security-related -- potentially security-related.

15 BY MR. GOLDBERG:

16 Q In your opinion, what has to be shown
17 in the prior art in order to anticipate the
18 limitation of identification?

19 MR. TUMINARO: Objection. Asked and
20 answered.

21 THE WITNESS: That the system
22 identified a potentially security-related event,

1 that as a result of processing its data, it -- it
2 calls attention to, which is a very anthropomorphic
3 phrase for a computer system, but this is the
4 problem with trying to come up with synonyms to the
5 word "identify." Yeah, the system has to say,
6 "This event is different from this kind of event."

7 BY MR. GOLDBERG:

8 Q When you say "this kind of event,"
9 are you referring to something related to security?

10 A Well, something that's -- that's a
11 non- -- not a potentially security-related event.
12 I'm not saying you have to identify non-potentially
13 security-related events, I'm just trying to answer
14 your question without using the claim language,
15 even though the claim language, I think, is
16 unambiguous and fairly clear. And I don't know how
17 to better describe it than to use the claim
18 language.

19 Q Would you agree the '641 patent
20 describes a potentially security-related event as a
21 possible attack or intrusion?

22 A The spec of the '641 patent speaks

1 for itself. I haven't memorized it, but I believe
2 it has some reference to that as to those sorts of
3 events as being potentially security-related
4 events.

5 Q If I can draw your attention to
6 Column 2, Lines 13 to 14. Would you agree that
7 Schneier defines an incident or event as a possible
8 attack or intrusion?

9 MR. TUMINARO: Sorry. What lines did
10 you say?

11 MR. GOLDBERG: Column 2, Lines 13 to
12 14.

13 THE WITNESS: I'm not sure. What
14 exactly is the question that you're asking?

15 BY MR. GOLDBERG:

16 Q Would you agree that the patent
17 defines an event as a possible attack or intrusion?

18 MR. TUMINARO: Objection to form.

19 THE WITNESS: I would say that what
20 the patent is doing is it's saying that a possible
21 attack or intrusion is an event, but I don't
22 believe it's -- it's defining an event solely in

1 terms of those two possibilities.

2 BY MR. GOLDBERG:

3 Q And why don't you believe that?

4 A I think that's just the way that it's
5 written.

6 Q As you sit here today, can you point
7 me to any part of the '641 patent that defines a
8 potentially security-related event as being
9 something other than a possible attack or
10 intrusion?

11 A I don't believe the '641 patent
12 defines the phrase "possibly security-related
13 events." The passage we're talking about here, at
14 best, is just limited to the word "event."

15 Q Is "event" used in the context of
16 that '641 patent to refer to anything other than a
17 possible attack or intrusion?

18 A I think in the context of the claims,
19 a person skilled would understand that because it's
20 worded as a potentially security-related event, it
21 is fundamentally attempting to claim something that
22 is broader than what is described in Column 2.

1 Column 2 has described an attack or
2 an intrusion. Attacks and intrusion I think a
3 person skilled would understand are not potentially
4 related events, those are events, exactly as it is
5 described in Column 2.

6 Q Is there any identification that
7 supports your broader construction of a potentially
8 security-related event?

9 MR. TUMINARO: Objection to form.

10 THE WITNESS: Just the plain language
11 of the claims and the fact that, as I say, the --
12 the language in Column 2 is not addressing the
13 issue of potentially security-related events.

14 BY MR. GOLDBERG:

15 Q So are you relying on any other
16 section specification of the '641 patent in
17 construing a potentially security-related event?

18 MR. TUMINARO: Objection to the form
19 of the question.

20 THE WITNESS: So I'm not construing
21 potentially security-related events, I'm just using
22 the plain meaning of those terms. And as I say,

1 I'm not aware of anywhere in the '641 patent where
2 the patentee acted as their own lexicographer and
3 gave a definition for that phrase.

4 BY MR. GOLDBERG:

5 Q But is there anything expressed in
6 the specification of the '641 patent that supports
7 a construction of a potential security-related
8 event as something broader than an attack or
9 intrusion?

10 MR. TUMINARO: Objection to form.
11 Asked and answered.

12 THE WITNESS: So maybe I'm just
13 tripping up on your words. When you say "supports
14 a construction," I'm not construing it, I'm just
15 using the plain meaning. And I would say there's
16 nothing in the '641 patent that contradicts the
17 plain meaning of that phrase as it's used in the
18 claim.

19 BY MR. GOLDBERG:

20 Q I'd like you to refer to your
21 declaration, paragraph 137 on page 75 to 76.

22 MR. TUMINARO: At this point, do you

1 happen to have a paper copy?

2 MR. WANG: Yeah.

3 THE WITNESS: I'm with you.

4 MR. GOLDBERG: Let me just pause for
5 a second so we can resolve this exhibit issue.

6 MR. TUMINARO: Thank you.

7 MR. GOLDBERG: Paragraph 137.

8 MR. TUMINARO: Thank you.

9 BY MR. GOLDBERG:

10 Q Okay. So, sir, on paragraph 137 of
11 your declaration, you opine that, "Transmissions
12 that are not matching or completely matching the
13 filters are potentially security-related events."

14 Did I read that right?

15 A Let me find where you are.

16 Q Top of page 76.

17 A Thank you.

18 Q Bottom of page 75 as well.

19 A Yes, yes, yes. Let me just read the
20 whole thing in context.

21 Q Take your time, sir.

22 A Yes, I think you read that correctly.

1 Q Okay. What is the difference between
2 not matching a filter and not completely matching a
3 filter, as you understand it?

4 A Well, not matching -- a filter can
5 have many rules in it, if you will, and so you --
6 it's possible to not completely match a filter
7 because you don't match all of the elements of the
8 rules of a filter.

9 Q How much of a match is required with
10 a filter for it to rise to the level of a
11 potentially security-related event?

12 MR. TUMINARO: Objection to the form
13 of the question.

14 THE WITNESS: Well, all I'm simply
15 saying here is -- is that items that don't match
16 any of the filters are potentially
17 security-related. And then I give the basis for
18 that, which is why Duvall has its -- their
19 additional analysis of the -- of the -- the
20 packets, I think he calls them messages, that
21 didn't match any of the filters.

22 BY MR. GOLDBERG:

1 Q Are all data transmissions that don't
2 completely match a filter a potentially
3 security-related event or only certain
4 transmissions?

5 A In Duvall's world, it's only certain.

6 Q How do you tell which transmissions
7 that don't completely match qualified as a
8 potentially security-related event in the context
9 of Duvall?

10 A So Duvall will ultimately -- has the
11 possibility of will of ultimately allowing traffic
12 to be forwarded that didn't match any filter and
13 did not match its post -- post-filtering analysis.

14 Q So all traffic that's allowed by
15 Duvall is a potentially security-related event?

16 A No, I didn't say that.

17 Q Could you explain to me, sir, which
18 traffic in Duvall qualifies as a potential
19 security-related event?

20 MR. TUMINARO: Objection to the form
21 of the question.

22 THE WITNESS: So traffic that is

1 blocked, that matches a blocked filter in Duvall,
2 would be considered -- would in theory be blocked
3 because it's a potentially security-related event.
4 And traffic that is further blocked as a result of
5 Duvall's post-filtering analysis would also
6 represent a potential security-related event.

7 BY MR. GOLDBERG:

8 Q In paragraph 137, you reference
9 indecent material. Do you see that, sir?

10 A Yes.

11 Q And what would a person of ordinary
12 skill understand indecent material to mean in the
13 context of Duvall?

14 A I think in the context -- can we get
15 a copy of Duvall so I can use Duvall's words?

16 Q Yeah, absolutely.

17 MR. TUMINARO: Thank you.

18 THE WITNESS: Thank you.

19 (Jeffay Deposition Exhibit Number EX1004
20 marked for identification.)

21 BY MR. GOLDBERG:

22 Q Sir, what is EX1004?

1 A It's -- oh, there it is, it is marked
2 1004. This is a copy of what I have called the
3 Duvall Patent, which is Patent No. 5,884,033.

4 Q So let me reask the question that I
5 had asked earlier --

6 A Sure.

7 Q -- so the record is a little clearer.

8 A Sure.

9 Q What would a person of ordinary skill
10 understand "indecent material" to mean in the
11 context of Duvall?

12 A Sure. So Duvall describes in
13 Column 1 how congress has passed -- this is around
14 Line 17, 18 of Column 1, that congress has recently
15 passed the Communications Decency Act to outlaw
16 transmission of indecent material over the
17 internet.

18 So a person of skill reading Duvall
19 would understand that his reference to this --
20 indecent material is that material which has been
21 outlawed by the Communications Decency Act.

22 Q In the context of Duvall, is indecent

1 material necessarily illegal?

2 A As I say, I think a person of skill
3 reading Duvall would understand that Duvall's
4 notion of indecent material is a reference to
5 material that's outlawed -- whose transmission is
6 outlawed under the CDA.

7 Q Is it your view that Duvall defines
8 indecent material as something different in the
9 plain and ordinary meaning?

10 MR. TUMINARO: Objection to the form
11 of the question.

12 THE WITNESS: I don't know that
13 Duvall is defining indecent material, but I think
14 the way that Duvall uses the term in the
15 specification, I think that's what persons of skill
16 would understand they're referring to when they say
17 indecent material.

18 BY MR. GOLDBERG:

19 Q Okay. Do you have any understanding,
20 sir, of what percentage of indecent material
21 transmitted over the internet at the time of the
22 filing of the '641 patent threatened network

1 security?

2 A No. That's -- if -- if -- I mean, I
3 think I actually knew that at some point, but I
4 don't remember it. I don't recall it.

5 Q Would you agree that transmissions in
6 Duvall that are disclosed as allowed by default do
7 not match any filters?

8 MR. TUMINARO: Objection to the form
9 of the question.

10 THE WITNESS: Transmissions that are
11 allowed by default? Well, Duvall discloses a
12 concept of defaults as being implemented with a
13 filter that just has wild -- what we call wildcards
14 in it. So in Column 5, for example, it describes
15 how defaults can be implement -- sorry, Column 5,
16 starting at Line 3, says that, "Such defaults can
17 be implemented with a last filter that includes
18 entries any port and any IP."

19 So, ultimately, the stuff that's
20 allowed by default is matching a filter. It's
21 just a default filter that allows everything to
22 flow through.

1 BY MR. GOLDBERG:

2 Q Does Duvall disclose how to determine
3 whether something objectionable might or might not
4 threaten the security of the user or client device?

5 A How it might threaten? Duvall speaks
6 for itself. I'm trying to remember if I have a
7 definite recollection of Duvall describing how the
8 threat would be manifest. So Duvall speaks for
9 itself. I have some vague recollection that it
10 does talk about things like malware, but I might be
11 confusing two references. So Duvall says what it
12 says.

13 Q Okay. But as you sit here today, you
14 can't point me to a section of Duvall where Duvall
15 talks about how to determine whether objectionable
16 content is a threat to network security?

17 MR. TUMINARO: Objection to form.

18 THE WITNESS: Well, maybe I'm
19 misunderstanding your question. In terms of how to
20 detect it, yes, Duvall talks about doing things
21 like looking for particular IP addresses,
22 particular port numbers, particular domain names.

1 So in terms of the mechanism for
2 identifying it, yes, Duvall has fairly explicit
3 disclosures of that.

4 BY MR. GOLDBERG:

5 Q But as you sit here today, can you
6 point me to a section of Duvall where Duvall
7 describes how to determine whether something
8 objectionable might or might not threaten the
9 security of the network?

10 MR. TUMINARO: Objection to the form
11 of the question.

12 THE WITNESS: Duvall teaches you make
13 that determination based on information that's
14 discernable, for example, in the header of the
15 packet; addresses, domain names, and port numbers.
16 At least those three.

17 BY MR. GOLDBERG:

18 Q Can you show me where Duvall does
19 that?

20 A So in Column 4 at the top, it's
21 describing the fields on which it's going to
22 filter. And it discloses that it can filter based

1 on a specific port number and a specific IP
2 address.

3 Q Does Column 4 disclose filtering
4 based on port number, IP address for the purpose of
5 determining whether something is a security threat
6 or not?

7 A Read in context of the rest of
8 Duvall, the answer is yes. I mean, the whole point
9 of Duvall is to try and -- or one of the points of
10 Duvall is to try to keep this outlawed content off
11 of your network. And here, it's describing the
12 mechanism that it's going to use.

13 Q Sir, I didn't ask you -- maybe you
14 have misunderstood me. I didn't ask you about
15 outlawed content, I'm asking you about content that
16 may or may not be a security threat.

17 Does Duvall disclose at Column 4
18 filtering for that purpose?

19 MR. TUMINARO: Objection. Asked and
20 answered. And form.

21 THE WITNESS: So a person skilled
22 would understand that the outlawed content

1 represents a potential security threat.

2 BY MR. GOLDBERG:

3 Q And does Duvall say that, sir, or
4 that's just your understanding?

5 A It's not my understanding. I think
6 it's the understanding of what a person of ordinary
7 skill in the art would understand for all the
8 reasons that I put in my report; such as the fact
9 that it was well known to persons of skill in the
10 art that indecent material often carried malware
11 with it.

12 Q But that's not expressed in Duvall,
13 is it, sir?

14 A No, it's not -- that -- the
15 element -- that particular element of malware is
16 not expressed in Duvall, but it's expressed in the
17 knowledge of a person of ordinary skill in the art
18 that they bring with them when they read Duvall.

19 Q And do you cite any objective support
20 for that proposition in your declaration?

21 MR. TUMINARO: Objection to the form
22 of the question.

1 THE WITNESS: I mean, I cite what I
2 cite in here. I believe that I have cites to -- I
3 recall having citing other references that describe
4 the fact that indecent materials often carried
5 malware.

6 BY MR. GOLDBERG:

7 Q Can you show me where you see that,
8 sir?

9 A So in paragraph 118, I have a
10 reference to Chu for the proposition that data
11 transmissions from unknown or questionable sources
12 can carry viruses or malware. In addition, I have
13 cites to -- I have to go find these exhibit names.

14 So I also cite to the Trcka patent.

15 Q What page, sir?

16 A In the same -- same page, same --
17 same paragraph.

18 MR. TUMINARO: He's referring to --

19 THE WITNESS: 118.

20 MR. TUMINARO: Yeah, page 61 of his
21 report.

22 THE WITNESS: Yes. And I also have a

1 cite to the Sinrod publication about cybercrimes.

2 BY MR. GOLDBERG:

3 Q What page?

4 A Same page.

5 And let me look for -- I believe
6 there's still yet another one. And I also cite --
7 well, you're going to ask where, so let me find it
8 first. So I also have references in the paragraph
9 that we were looking at, at paragraph 137, to the
10 Rothfuss article from Lawrence Livermore.

11 And a cite to an article from the
12 Chicago Tribune about the Melissa virus. And those
13 cites are also -- appear in paragraph 138. Also in
14 reference to Chu's list of websites that serve
15 potentially dangerous active codes.

16 So those are at least four other
17 references that I'm citing for the knowledge of a
18 person of ordinary skill in the art --

19 Q Thank you, sir.

20 A -- that they would have understood --

21 Q Could you --

22 A -- the dangers of downloading, of

1 allowing this outlawed traffic.

2 MR. GOLDBERG: Can you read my
3 question back, please?

4 (The reporter read as requested.)

5 BY MR. GOLDBERG:

6 Q Okay. We can move on to your
7 declaration, sir, at page 77.

8 A Sure. I'm there.

9 Q At paragraph 141.

10 A Okay.

11 Q And you used the word "unresolved."
12 Do you see that, sir? I think it's at the top of
13 78.

14 A Yes. Yes, I see that.

15 Q What is unresolved data, as you use
16 that term in paragraphs 141 and 142 of your
17 declaration?

18 A So in the sense of the word
19 "unresolved" here is referring in Duvall to data,
20 to use the word that's here, that has not matched
21 an allowed filter and has not matched a Duvall's
22 blocked filter.

1 Q On paragraph 3, pages 1 to 2 of your
2 declaration --

3 A Hold on. Let me get the paragraph.
4 Okay. I'm there.

5 Q So referring to paragraph 3 of your
6 declaration, you say, "That the patent and claims
7 are broadly directed to monitoring of any system."

8 Do you see that, sir?

9 A Yes. Yes, I see that. "Patent,"
10 yes, I see that.

11 Q What is the basis for that statement?

12 A Well, let's maybe talk to make sure
13 we're talking about the full phrase, right? The
14 full phrase is that, "The patent and claims are
15 broadly directed to monitoring of any system
16 filtering the data from the -- filtering data from
17 the monitoring for noteworthy events happening in
18 or affecting any system and alerting human beings
19 to any such noteworthy events."

20 And the basis for that is the cite
21 from the '641 patent that I have.

22 Q And does that '641 patent cite refer

1 to the claims of the '641 patent?

2 A Let's take a look.

3 Well, the passage that I'm citing
4 here refers to the present invention. So I think a
5 person skilled would understand that they're
6 describing in English what is their invention as
7 claimed.

8 Q And is it your opinion that the
9 claims of the '641 patent are broadly directed to
10 the monitoring of any system, filtering the data
11 from the monitoring for noteworthy events happening
12 in or affecting any system and alerting human
13 beings to any such noteworthy events?

14 MR. TUMINARO: Objection to the form
15 of the question.

16 THE WITNESS: I mean the claims claim
17 what they claim. I mean I'm just giving a
18 characterization of the -- of the claims using the
19 language that the inventors used.

20 BY MR. GOLDBERG:

21 Q Sir, is it an accurate statement that
22 Claim 1 of the patent is broadly directed to

1 monitoring any system filtering the data from the
2 monitoring for noteworthy events happening in or
3 affecting any system and alerting human beings to
4 any such noteworthy events?

5 MR. TUMINARO: Objection to the form
6 of the question.

7 THE WITNESS: I'm not -- I'm not -- I
8 haven't characterized it that way. I'm just saying
9 this is how the inventors have described their
10 invention.

11 BY MR. GOLDBERG:

12 Q Sir, is it a true statement that the
13 claims are broadly directed to the monitoring of
14 any system?

15 MR. TUMINARO: Objection to the form.
16 Asked and answered.

17 MR. GOLDBERG: It hasn't been
18 answered.

19 MR. TUMINARO: Well, I mean you're
20 asking him what the claims are broadly directed to,
21 and he just -- he just answered that question.

22 MR. GOLDBERG: Noted.

1 BY MR. GOLDBERG:

2 Q I'd like an answer, please.

3 A My answer is I am not characterizing
4 the claims -- I'm not saying that the claims are
5 limited to that or that's what the claims are
6 exactly claiming. I'm saying this is how the
7 inventors described their invention.

8 Q Sir, if I can draw your attention to
9 Claim 1 of the '641 patent, to Column 33.

10 A Sure.

11 Q Is Claim 1 broadly directed, in your
12 opinion, to the monitoring of any system?

13 MR. TUMINARO: Objection to the form
14 of the question.

15 THE WITNESS: I mean the claim speaks
16 for itself. I mean it's clearly, you know,
17 drilling down to more detail. I mean it's directed
18 to monitoring a computer network.

19 BY MR. GOLDBERG:

20 Q Is your answer complete, sir?

21 A Yes.

22 Q So you would agree that Claim 1 of

1 the patent is not broadly directed to the
2 monitoring of any system?

3 MR. TUMINARO: Objection to form.

4 THE WITNESS: I think the any system
5 language is language that the inventors used to
6 describe their invention. And I think in the
7 context of the '641 patent, when they said "any
8 system," I think that would have been understood to
9 mean any network.

10 BY MR. GOLDBERG:

11 Q So is it your testimony that
12 paragraph 3 of your declaration, where you say "any
13 system," it should be any computer network system
14 to help interpret it?

15 A What I'm saying in paragraph 3 on
16 page 1 is I am directly quoting from the patent
17 using the language that the inventors used. So --
18 so there's no way what I've said here is inaccurate
19 because this is exactly what the inventors said.

20 To the extent this needs more
21 clarification, you know, someone could read the
22 specification to understand how to -- how to

1 interpret these phrases.

2 Q Sir, where did the inventors say the
3 claims are broadly directed to monitoring any
4 system?

5 A So you basically asked that question
6 before and what I said was this text here is
7 describing the present invention and, therefore, a
8 person of skill would understand that this
9 description here is meant to cover the claims.

10 Q But would you agree, sir, that
11 Column 15, Line 57, to Column 16, Line 6, doesn't
12 expressly refer to the claims?

13 A If you're just asking lexique to the
14 word "claims" not appear here, that's -- we can all
15 see that the word "claim" doesn't appear here. But
16 what we can see here is that the inventors are in
17 several places specifically referring to the
18 present invention.

19 Q And you would agree, sir, I believe,
20 and correct me if I'm wrong, that Claim 1 of the
21 '641 patent is not directed to broadly monitoring
22 any system, but rather is focused on a computer

1 network?

2 MR. TUMINARO: Objection to the form
3 of the question. Asked and answered.

4 THE WITNESS: As I said, I think a
5 person of skill reading the '641 patent, when they
6 hit the passage at the bottom of Column 15, I think
7 they're not going to interpret any system as
8 meaning, you know, some noncomputer-based system.

9 I think reading Column 15 in
10 context, they're going to understand that systems
11 mean networks, meaning any -- any network system,
12 any network -- any computer network.

13 BY MR. GOLDBERG:

14 Q Is it your opinion, sir, as a person
15 of ordinary skill in the art that the detection of
16 objectionable content necessarily also identifies a
17 potentially security-related event?

18 MR. TUMINARO: I object to the form
19 of the question.

20 THE WITNESS: Well, objectionable
21 content is -- is a broad concept, and whether or
22 not it necessarily results -- is going to be a

1 potential security threat is up to -- is up to the
2 person that's managing that network.

3 BY MR. GOLDBERG:

4 Q Sir, is it your opinion as a person
5 of ordinary skill that the detection of
6 objectionable content, as that term is used in
7 Duvall, always identifies a potentially
8 security-related event?

9 MR. TUMINARO: I object to the form
10 of the question.

11 THE WITNESS: I think -- Duvall, I
12 don't believe, makes that claim. I think what
13 Duvall is about is trying to provide mechanisms for
14 identifying any such content that an operator would
15 determine to be a potential security-related event.

16 BY MR. GOLDBERG:

17 Q And when you said "such content in
18 the context of Duvall," what did you mean?

19 A What Duvall refers to as -- as
20 indecent. And I don't recall if Duvall uses the
21 phrase "objectionable" or not, but at least the
22 reference to indecent content.

1 Q Is it your opinion, sir, as a person
2 of ordinary skill in the art that the detection of
3 indecent content, as that term is used in Duvall,
4 always identifies a potential attack or network
5 intrusion?

6 MR. TUMINARO: Objection to form.

7 THE WITNESS: As Duvall -- so we've
8 covered this. As Duvall uses that term, he's
9 referring to content that has been outlawed by the
10 Communications Decency Act, and so for such
11 outlawed transmissions, Duvall would consider that
12 to be a potential security-related event.

13 BY MR. GOLDBERG:

14 Q But Duvall doesn't expressly say
15 that, does it, sir?

16 A I mean it -- it does. I mean --
17 sorry. If you're asking for, you know, that crisp
18 of a sentence, no, but that's what it teaches a
19 person with ordinary skill in the art.

20 Q Can you show me where?

21 A We would have to go through the
22 entire patent. So in Column 1 of Duvall, as we've

1 talked about, it talks about how there has been
2 material that is outlawed. Okay? And then it
3 talks about how you can identify this content. You
4 can identify it by phrases that appear in URLs, you
5 can identify it by domain names, and you can
6 identify it by IP address and port number.

7 Q But you would agree, sir, that Duvall
8 does not expressly tie outlawed content to
9 security, correct?

10 MR. TUMINARO: Objection to form.

11 THE WITNESS: No, I would -- I would
12 not agree. I mean I think the issue is not does
13 Duvall use those words, I think the issue is what
14 does Duvall teach to a person of ordinary skill in
15 the art. And what I'm opining on is what Duvall
16 teaches to a person of ordinary skill in the art.

17 BY MR. GOLDBERG:

18 Q Can you show me the column and line
19 number where Duvall mentions security, sir?

20 A So I think Duvall speaks for itself.
21 I don't recall if it actually uses the word
22 "security" in here or not. But when Duvall talks

1 about outlawed transmissions, I think a person of
2 skill in the art would understand that those having
3 outlawed content on your network is about as clear
4 a disclosure of a security-related event as you can
5 get. And a person of skill would understand this.

6 I helped the IT group at UNC go
7 through these issues of having outlawed content on
8 our campus network. It was a -- it was a huge
9 morass for us, because, as I say, students are very
10 clever and they can circumvent measures. So I
11 think persons skilled in the art understand that
12 having outlawed content on your network is -- is --
13 is fundamentally a security-related event.

14 MR. TUMINARO: Nolan, do you think
15 it's time for a break?

16 MR. GOLDBERG: It's up to you. I'm
17 happy to break here. I know we have some time
18 pressure, but your call.

19 THE WITNESS: I'm happy to go, if
20 your fingers are still good.

21 COURT REPORTER: I'm good.

22 MR. TUMINARO: Okay.

1 THE WITNESS: If we can go -- my
2 mouth isn't that dry yet, so we can probably go
3 like another 20, 25 minutes or so.

4 MR. GOLDBERG: Okay. Sure.

5 MR. TUMINARO: Okay.

6 BY MR. GOLDBERG:

7 Q Would you agree, sir -- well, scratch
8 that.

9 In the context of Duvall, the
10 opposite of indecent material would be decent
11 material?

12 Would that be a fair
13 characterization?

14 A I -- I don't know how to -- no, I
15 don't think that would necessarily be a fair
16 characterization.

17 Q Would you agree that non-indecent
18 material can also contain viruses, worms, or
19 malware?

20 A Yes.

21 Q Do you cite to any evidence in your
22 declaration showing how indecent material is more

1 likely to have viruses, worms, or malware than
2 non-indecent material?

3 MR. TUMINARO: Objection to form.

4 THE WITNESS: My declaration speaks
5 for itself. I don't recall opining on that topic.
6 BY MR. GOLDBERG:

7 Q Have you conducted any study, sir,
8 concerning the probability that indecent material
9 will pose a threat to computer security?

10 A Have I? Yes.

11 Q And is that study identified in your
12 CV?

13 A I don't know. If we could take a
14 quick look.

15 Q Sir, at any point if you want a
16 document, please ask for it.

17 A Sure.

18 Q It's not a memory contest.

19 MR. GOLDBERG: So I'm going to hand
20 the witness EX1032, which is the curriculum vitae
21 of Kevin Jeffay.
22

1 (Jeffay Deposition Exhibit Number EX1032
2 marked for identification.)

3 MR. TUMINARO: Thank you, Nolan.

4 MR. GOLDBERG: Of course.

5 THE WITNESS: All right. Let me
6 quickly find the --

7 MR. GOLDBERG: And if we can repeat
8 the question, please.

9 (The reporter read as requested.)

10 THE WITNESS: Let me just look
11 through this quickly here. There's too many papers
12 here.

13 BY MR. GOLDBERG:

14 Q Take your time, sir.

15 A So I actually don't remember what's
16 in all of these papers. But the work that I'm
17 thinking of was work that was done in support of a
18 paper that is on page 11, the seven up from the
19 bottom, that is titled "Tracking the Evolution of
20 Web Traffic: 1995 to 2003."

21 So that was a long project where we
22 were measuring -- sorry, monitoring web traffic

1 entering and exiting the UNC campus and trying to
2 understand the structure and nature of that
3 traffic.

4 I'm going to take a guess that this
5 paper doesn't talk about the issue of malware
6 because of the publication venue. This venue
7 called MASCOTS is really a -- it's more of a
8 conference for analytical and statistical results,
9 but as part of that study of monitoring web
10 traffic, we were tracking the amount of malware
11 that was embedded in web content.

12 Q What were the results of that study?

13 A I'm sorry?

14 Q What were the results of that study?

15 A Well, I think what we published here,
16 as I say -- so I'm not really remembering this
17 well, I believe this paper is not going to talk
18 about that, it's not going to talk about malware.
19 It may. But I believe it's going to talk about
20 more statistical characterizations of traffic.

21 But, as I say, we did end up
22 generating data on fractions of -- fractions of

1 certain types of web requests that resulted in the
2 delivery of malware. And I'm guessing that's
3 probably not in that particular paper. So I don't
4 know if we ever published that research or not.

5 Q And in reaching your opinions in this
6 case, do you cite to that paper anywhere in the
7 body of your declaration?

8 A I don't -- I don't think so. No, I'm
9 pretty sure I don't.

10 Q Are you aware of any evidence
11 suggesting that it's actually a misconception that
12 indecent material would be more likely to have
13 viruses, worms, or malware than non-indecent
14 material?

15 A If you're asking am I aware of any
16 study of that, I don't recall any study of that.

17 Q Have you ever seen anything that
18 suggests it's a misconception that indecent
19 material is more likely to have viruses, worms, or
20 malware than non-indecent material?

21 A I don't recall any such paper. What
22 I would say, however, is that that, I think, is

1 clearly going to be a function of time of what
2 point in time you're looking.

3 Q In what way?

4 A Ne'er-do-wells on the internet are
5 very clever folks. And once their techniques get
6 discovered, people clamp down, they move to some
7 other aspect of the internet. So we sort of have
8 seen this -- it's the -- what we call the
9 whac-a-mole, that, you know, you beat down one
10 vector for attacks, people try to promulgate these
11 attacks, they discern this, and they move on to
12 something else. So anything like this is really a
13 function of where you're looking in time.

14 Q You don't discuss that in your
15 declaration, do you, sir?

16 A Discuss?

17 Q The function of time that you just
18 referenced.

19 A No. No. I mean the declaration
20 speaks for itself. I mean that's not really
21 relevant, I think, to any validity issue.

22 Q Would you agree that the detection of

1 indecent content, as a statistical matter, does not
2 mean it is more or less likely to be a
3 security-related event?

4 A As a statistical matter? Again, I
5 think that's going to be -- so I haven't seen any
6 studies on that. And, again, what I would say is
7 that's going to be a function of when you're doing
8 that study.

9 Q At the time of the filing of the '641
10 patent, would it have been more likely than not
11 that non-indecent material would represent a
12 security threat to the network?

13 Bad question. Withdraw that.

14 At the time of the filing of the '641
15 patent, was it more likely that indecent material
16 would be associated with a security threat than
17 non-indecent material?

18 MR. TUMINARO: Objection to form.

19 THE WITNESS: So as we talked about
20 earlier, these things are largely a function of
21 your network, your user population, and the use of
22 the network. So I don't think you can answer that

1 as a general proposition for any network.

2 The answer there is going to depend
3 on the specifics of your network, your user
4 population, and the traffic mix on that network.

5 BY MR. GOLDBERG:

6 Q If I can refer you to paragraph 118
7 of your declaration, sir.

8 A Sure. Got it.

9 Q So paragraph 118 of your declaration,
10 you mentioned that Duvall's filtering system can be
11 incorporated into a firewall.

12 Do you see that?

13 A Yes, I see that.

14 Q By the date of the filing of the '641
15 patent, would you agree that firewalls could
16 already protect systems against known viruses or
17 malware?

18 MR. TUMINARO: Objection to the form.

19 THE WITNESS: As of the filing -- so
20 my recollection is that the '641 claims priority,
21 it's either 2000 or 2001. And at that time,
22 firewalls, as best I recall, were not deep packet

1 inspection devices.

2 And the -- the most common way in
3 which malware, at the time, in 2000, was detected
4 was essentially through signature detection,
5 which required you to look further into a packet
6 than a firewall typically does.

7 So my recollection is that
8 firewalls -- the word "devices," it probably
9 could do this. I don't know that they were
10 necessarily sold or marketed as firewalls,
11 because at the time this concept of deep packet
12 inspection was a -- was a new thing and it was a
13 way to differentiate products.

14 So firewalls, per se, I don't
15 recall, but my guess is a traditional firewall,
16 unless it could do deep packet inspection, was
17 not terribly effective at detecting malware other
18 than detecting sources of malware, again, via,
19 things like IP address.

20 BY MR. GOLDBERG:

21 Q Okay. By the year 2000, though, you
22 would agree that firewalls could detect against

1 known viruses and malware or no?

2 A Well, again, the issue is what you're
3 sweeping into what all is a firewall. And whether
4 or not something is labeled as a firewall is really
5 a marketing decision.

6 What I'm saying is traditional
7 firewall and firewall rules were based on analysis
8 of packet headers. And typically you can't do an
9 effective job of keeping malware off of your
10 network just based on an analysis of packet
11 headers. So if there were firewalls that could
12 parse further into packets, they could do malware
13 detection.

14 Q You used the term "deep packet
15 inspection." Did I get that right?

16 A Yes.

17 Q What does that mean?

18 A It was a marketing term that
19 basically meant a device could in realtime, meaning
20 as packets are transiting the network without
21 slowing them down, could parse further into a
22 packet beyond the headers and do processing on data

1 that was actually contained in the packet.

2 And the most common thing at that
3 time, around 2000, was what was just called
4 "signature detection," looking -- looking -- being
5 able to in realtime determine whether or not one of
6 a large number of strings existed in a packet.

7 MR. GOLDBERG: This is a good spot
8 for a break.

9 MR. TUMINARO: Okay.

10 THE WITNESS: Sure.

11 (Recess from 10:36 a.m. to 10:46 a.m.)

12 BY MR. GOLDBERG:

13 Q Sir, if I can direct you to paragraph
14 104 of your declaration at page 50. And let me
15 know when you're there.

16 A Yes, I am there.

17 Q Okay. Sir, is it a fair
18 characterization of your declaration at
19 paragraph 104, that you rely on Step 104 of
20 Figure 3 to make the filtering requirement of the
21 claims of the '641 patent?

22 MR. TUMINARO: Objection to form.

1 THE WITNESS: What I'm primarily
2 relying on is the textual description in Duvall of
3 filtering, which I believe is at Column 4 -- bottom
4 of Column 4 to the top of Column 5.

5 BY MR. GOLDBERG:

6 Q And Column 5 is referring to
7 Step 104, sir. Is that correct?

8 MR. TUMINARO: Are you talking about
9 in Duvall?

10 MR. GOLDBERG: In Duvall, yeah.

11 THE WITNESS: I'm not seeing a
12 reference to Step 104 in Column 5, but maybe I'm
13 just missing it.

14 BY MR. GOLDBERG:

15 Q You started at Column 4 at the
16 bottom, 65, right?

17 A Oh, I'm sorry. I thought you said
18 Column 5. I see it at the bottom of Column 4.

19 Q Okay. Let me rephrase the question,
20 just to make things a little bit easier.

21 A Sure.

22 Q Is it a fair characterization of your

1 declaration at paragraph 104 that you rely on
2 Step 104 of Figure 3, and its associated text, to
3 meet the filter requirement of the claims of the
4 '641 patent?

5 MR. TUMINARO: Objection to the form
6 of the question.

7 THE WITNESS: I would reverse that.
8 I would say what I'm primarily relying on is the
9 text in Duvall. And I cite to Figure 3 because
10 Figure 3 is a -- is an illustration of a filtering
11 system that's consistent with what's described in
12 Column 4, but I'm primarily relying on the text in
13 Column 4, in particular the disclosures from
14 Lines 22 to 36. So I'm relying on the whole cite,
15 but the -- the primary part of it is 22 to 36.

16 BY MR. GOLDBERG:

17 Q And Column 4, Lines 22 to 36, that
18 refers to a direct action filter. Is that fair?

19 A No. I mean this is really describing
20 the whole pipeline of processing that goes on about
21 how you first have your direct actions, you have
22 your -- you first search for your allow filters,

1 then your block filters, and then you have your
2 deferred action filters.

3 Q So which portion of Column 4,
4 Lines 22 to 36 are you alleging meets the filtering
5 limitation of the claims of the '641 patent?

6 MR. TUMINARO: Objection to form.

7 THE WITNESS: So I rely on everything
8 that I've cited in my declaration. And I am
9 just -- in answering your questions, I've just been
10 trying to emphasize where sort of the core of the
11 opinion is, but I'm relying on everything that's in
12 here and -- so everything that is cited in my
13 declaration.

14 And the starting point and the bulk
15 of the opinion is that this is -- the filtering
16 limitation is disclosed in Column 4, at Lines 22
17 through 37, but not exclusively, so not to the
18 exclusion of the other passages that I'm citing.

19 BY MR. GOLDBERG:

20 Q On page 51 of your declaration, you
21 highlighted Box 104 in red. Do you see that?

22 A I do.

1 Q Why did you do that?

2 A Just to focus the attention of the
3 reader on the -- to match the text that's in
4 paragraph 104 about how at Block 104 you're
5 checking to determine if any filters require
6 immediate action, and then if immediate action is
7 required, you go to 106, and if no immediate action
8 is required, you take the deferred action. And so
9 I'm just highlighting that box to highlight the
10 text that I'm -- the text that's written in
11 paragraph 104.

12 Q Okay. And you wrote,
13 "Positive/negative filters" in red next to 104. Do
14 you see that?

15 A I do.

16 Q Why did you do that?

17 A Because this is -- the immediate
18 action filters of Duvall are "allow" and "block,"
19 which a person of skill would understand is
20 positive and negative filtering. You're either
21 going to allow something or block it.

22 Q And the residue is what shown coming

1 out of Box 104 on the left. Is that fair?

2 A Well -- so as the case with many
3 flowcharts, this is really a control flow, it's not
4 really a data flow diagram, so part of the reason
5 for putting this highlighting here is to sort of
6 illustrate some semblance of data flow.

7 So what it's trying to illustrate is
8 that the data that is neither -- that doesn't match
9 one of the immediate action filters, the R or the
10 Y. That data is the residue and that's passed off
11 to the deferred action processing.

12 Q If I can refer you to Claim 1 of the
13 '641 patent.

14 A Sure.

15 Q And do you see where Claim 1 in
16 Element B says, "Wherein the analysis includes
17 filtering"?

18 Do you see that, sir?

19 A Yes.

20 Q Is it your view that is disclosed in
21 Duvall at Step 104?

22 MR. TUMINARO: Objection to the form

1 of the question.

2 THE WITNESS: So as I said, for that
3 element, I'm primarily relying on the text in
4 Column 4. And the flowchart here is consistent
5 with that passage.

6 BY MR. GOLDBERG:

7 Q The text in Column 4 includes
8 reference to deferred action filters, right, sir?

9 A Yes.

10 Q Okay. Are you alleging deferred
11 action filters in Duvall meets the wherein the
12 analysis includes filtering limitation in Claim 1
13 of the '641 patent?

14 A Well, I don't know how much you're
15 reading when you say "the limitation," but the --
16 but it certainly is disclosing the analysis of the
17 post-filtering residue.

18 Q I didn't ask you about that, sir.
19 What I'm --

20 A But I -- sorry. Go ahead.

21 Q I just want to make sure we're not
22 talking past each other. Maybe it was my fault,

1 maybe the question wasn't clear enough.

2 I'm doing this as two parts, right?
3 Part 1, wherein the analysis includes filtering;
4 part two, followed by an analysis of post-filtering
5 residue. Is that a fair way of looking at it, sir?

6 A Thank you. That's much clearer.

7 Q Okay. So let's focus on the first
8 part now, "Wherein the analysis includes
9 filtering." Okay?

10 A Okay.

11 Q Is it your opinion that that portion
12 of the '641 patent is met by Element 104 of
13 Figure 3 of Duvall?

14 A It's -- it's -- I think it's -- if
15 you -- if you -- so the disclosures I'm relying on
16 are the disclosures in Column 4, primarily, not
17 exclusively, at 22 to 37. If you're asking -- if
18 you're limiting your question to Figure 3, it's
19 really the combination of 104 and 106. Well, I
20 mean the filtering itself, the actual filtering,
21 would be 104, 106, 110, and 108.

22 Q Which specific portions of Column 4

1 of Duvall, Lines 22 to 36, are you alleging meets
2 the first portion that we talked about earlier of
3 Claim 1 wherein in the analysis includes filtering?

4 MR. TUMINARO: Object to the form of
5 the question.

6 THE WITNESS: So -- okay. As I said,
7 I'm not relying on this exclusively. What -- what
8 Column 4 -- sorry. All right. We started this
9 discussion with the filtering limitation, and now
10 we're deep inside the filtering limitation.

11 When we're talking about the
12 filtering limitation as a whole, I was saying
13 that the primary thing I'm relying on to show
14 that there's filtering and then an analysis of
15 post-filtering residue is disclosed in Column 4.

16 In addition, to fully flesh it out,
17 we have to point to the fact that allow filters
18 allow traffic and block filters block traffic and
19 deferred action does additional processing.

20 So the passage of Column 4
21 describes the overall structure of the filtering,
22 which is the filtering that -- the filtering and

1 analysis of post-filtering residue, which is
2 exactly what's claimed. It doesn't describe the
3 actual-actual allowing or blocking, but that's
4 clearly described in other passages of Duvall.

5 BY MR. GOLDBERG:

6 Q And, sir, I apologize if I've already
7 asked this. I'm just trying to get some more
8 clarity on what your opinion is here, sir.

9 So I understand that for the entire
10 clause of Claim 1 of the '641 patent, wherein the
11 analysis includes filtering followed by an analysis
12 of post-filtering residue, you're relying on
13 Column 4, Lines 22 through 36, not exclusively. Is
14 that correct, sir?

15 A Not exclusively, that's correct.

16 Q Okay. And so now I would like to
17 divide it into two pieces like we talked about
18 earlier.

19 A Okay.

20 Q And I'm trying to understand which
21 pieces of that section match to which elements of
22 the claims of the '641 patent?

1 Does that -- do you follow that, sir?

2 A We can try.

3 Q Okay. With regard to the first --
4 scratch that.

5 With regard to the portion of
6 Claim 1, that requires, "Followed by an analysis of
7 post-filtering residue," are you generally mapping
8 to the deferred action filters of Duvall for that
9 portion of limitation?

10 MR. TUMINARO: Objection to the form
11 of the question.

12 THE WITNESS: Since your question
13 used the word "generally," the answer is yes, that
14 generally Duvall's deferred action is processing an
15 analysis of post-filtering residue.

16 BY MR. GOLDBERG:

17 Q Okay. And would you agree that
18 generally, for wherein the analysis includes
19 filtering, you're relying on the "allow" and "block
20 direct action" filters of Duvall?

21 A Yes.

22 Q Other than the "allow" and "block

1 direct action" filters of Duvall, what other
2 elements of Duvall are you mapping to wherein the
3 analysis includes filtering in the '641 patent?

4 A I'm just mapping the disclosures of
5 the "allow" and "block" filters for the -- for the
6 wherein the analysis includes filtering.

7 Q And are there any other elements of
8 Duvall besides the deferred action filters that
9 you're mapping to with the portion of the claim of
10 the '641 patent that requires followed by an
11 analysis of post-filtering residue?

12 A The declaration speaks for itself,
13 but I believe I'm just relying on the disclosures
14 of deferred action processing.

15 Q If I can refer you, sir, to
16 paragraph 105 of your declaration. It's page 51.

17 A I'm there.

18 Q Okay. So at paragraph 105 of your
19 declaration, you say that, "The techniques
20 disclosed by Duvall to analyze residue data include
21 keyword matching and pattern matching."

22 Do I have that right?

1 A I believe so, yes. I thought you
2 were quoting, but I think you're -- Duvall does
3 disclose techniques for analyzing the residue data,
4 which can include keyword matching and pattern
5 matching.

6 Q And that's consistent with Column 1,
7 Lines 45 to 47 of Duvall. Is that fair?

8 A Column 1? I'm sorry, just give me
9 those line numbers again.

10 Q Sure. 45 to 47.

11 A Okay. Thank you.

12 Q And I'll read it to you, sir, just to
13 make it even clearer. "The system can defer the
14 decision whether to allow or block and then monitor
15 transmissions to search for a particular command
16 and a particular filter pattern."

17 Is that describing keyword matching
18 and pattern matching, sir?

19 A Generally, yes. Or keyword matching
20 and pattern matching is consistent with this.

21 Q Do you identify in your declaration
22 any other techniques besides keyword matching or

1 pattern matching that Duvall uses to analyze
2 residue data?

3 I'm referring to your declaration,
4 sir, but you can look at anything you want.

5 A In terms of my analysis in the
6 declaration, the two things that I'm relying on for
7 post-filtering analysis include keyword matching
8 and pattern matching.

9 Q Would you agree, sir, that the
10 application of the keyword matching and pattern
11 matching relies on the first two deferred action
12 fields disclosed in Duvall at Column 5, Lines 8 to
13 11, which is a keyword and a filter pattern?

14 A So what's being disclosed here at
15 Column 5 -- I think you said 8 to 11, is that
16 correct?

17 Q I did.

18 A Okay.

19 -- is that in addition to fields like
20 IP address and port number, the deferred filters
21 can have keywords, they can have strings, I guess
22 what they call patterns, and directionality,

1 whether it's ingress or egress traffic. So those
2 are what's disclosed as the types of things you can
3 filter on for deferred action processing or
4 analysis.

5 Q Let me ask the question maybe a
6 little more specifically.

7 The keyword matching technique that
8 we discussed to analyze residue status data, does
9 that rely on the keyword field disclosed in
10 Column 5?

11 A I'm sorry, could you just say that
12 again?

13 MR. GOLDBERG: Could you read it
14 back, please?

15 THE WITNESS: Yeah, that would be
16 great.

17 (The reporter read as requested.)

18 THE WITNESS: Yes.

19 BY MR. GOLDBERG:

20 Q Okay. And the pattern matching
21 technique to analyze residue data that we discussed
22 earlier, does that rely on the filter pattern field

1 also disclosed in Column 5 of Duvall?

2 A Yes.

3 Q Now, would you agree that the keyword
4 field disclosed at Column 5 of Duvall relates to
5 data that is formatted in accordance with the
6 protocol that's at a higher level than TCP?

7 A I don't recall any qualification like
8 that in Duvall. If there is, I'm happy to review
9 it.

10 Q Would you agree that the filter
11 pattern discussed at Column 5 relates to data that
12 is formatted in accordance with the protocol that's
13 at a higher level than TCP?

14 A So you're just asking the same
15 question again, and what I'm saying is --

16 Q Well --

17 A -- I don't recall any restriction
18 like that in Duvall.

19 Q I was focusing on a different field,
20 sir.

21 A I'm sorry?

22 Q I was focusing on a different field,

1 just to --

2 A My apologies.

3 Q Let me --

4 A My apologies.

5 Q So let me -- if we can just --

6 A Yeah, let's do them -- do them over.

7 MR. GOLDBERG: Do the last one,
8 please.

9 (The reporter read as requested.)

10 THE WITNESS: I -- I would not agree,
11 just because I don't recall any restriction like
12 that in Duvall.

13 BY MR. GOLDBERG:

14 Q Okay. If I can refer you to
15 paragraph 103 of your declaration.

16 A Okay.

17 Q It's page 50.

18 A Thank you. I'm there.

19 Q So in paragraph 103 of your
20 declaration, you quote that the patent at 364 to
21 66, for the proposition that an "allow" filter
22 allows data transmissions to pass through and a

1 "block" filter blocks data transmissions from
2 passing through.

3 Did I get that right, sir?

4 A Yes, you got that right.

5 Q Okay. How does Duvall say it blocks
6 data transmissions from coming through?

7 A I don't know if Duvall addresses
8 that. And that would be because it's such a
9 straightforward and obvious concept to a POSITA. A
10 POSITA would understand that fundamentally allowing
11 means traffic to pass through and blocking means
12 that you drop traffic.

13 Q If I can draw your attention, sir, to
14 Column 4, Lines 56 to 58. Does this refresh your
15 recollection on how Duvall says it blocks data
16 transmissions from coming through?

17 A Yes. This is talking about it in the
18 context of the embodiment of Duvall's filtering
19 that runs on the client, I believe.

20 Q And does Duvall expressly discuss
21 blocking transmissions from coming through in any
22 other context?

1 A Well, Duvall generally discloses
2 blocking. And as I say, persons of skill in the
3 art understand what blocking entails. So for a
4 server embodiment, it would understand that
5 blocking means you -- you know, ultimately you
6 don't allow packets to pass, which effectively
7 means you're dropping them.

8 Q Returning back to Column 5 just for a
9 second.

10 A Sure.

11 Q Is it fair to say that in forming
12 your opinion, you didn't consider whether the
13 contents of the additional fields added in the
14 deferred action filter relate to a higher protocol
15 than TCP?

16 MR. TUMINARO: Objection to the form
17 of the question.

18 THE WITNESS: I mean I considered
19 everything in Duvall. And I think a person of
20 skill in the art would understand that a keyword is
21 exactly that, it's just a literal string. And I
22 don't believe a person skilled in the art would

1 care.

2 I mean Duvall is disclosing a
3 mechanism, and what it teaches to a person of
4 ordinary skill in the art is one of the
5 mechanisms you can use to process and analyze
6 traffic is a keyword search.

7 And I don't believe a person
8 skilled would understand Duvall to be limiting
9 the keywords to those appearing in any particular
10 protocol, simply because from a mechanism
11 standpoint, there's -- you can identify keywords
12 anywhere. There's no -- it's not harder or
13 easier identifying keywords in any layer of the
14 stack.

15 BY MR. GOLDBERG:

16 Q If I can refer you to Column 4, sir,
17 Line 58. Do you see the reference to "the open
18 command"?

19 A Yes.

20 Q What is the open command in this
21 context?

22 A Yeah. So this is referring to the

1 embodiment that's on the client. And it appears
2 that Duvall is writing its disclosures in the
3 context of the way that an application developer
4 would view the network communications.

5 So what it's -- what a person skilled
6 would understand is what you're talking about here
7 is the TCP connection establishment process. And
8 that what you're doing is you're blocking the
9 packets concerning TCP connection establishment.

10 At the application layer, it's
11 considered an open because ultimately you're
12 creating a structure called a "socket," a "socket"
13 is viewed as a file, which is something you open,
14 you read, and you write.

15 So it's describing it from sort of an
16 application developer's point of view, but a person
17 of skill would understand that when you get down to
18 network packets, what you're talking about are the
19 packets for TCP connection establishment.

20 Q Okay. What's the syntax in the open
21 command?

22 A There is no open command on the wire.

1 What you're looking for here is a TCP SYN packet,
2 which is a TCP packet that has the SYN bit set in
3 the header. That's what a person of skill would
4 understand is you're looking for when you're
5 saying -- when it says "not execute the open
6 command."

7 Q Okay. Does the TCP SYN bit packet
8 have keywords?

9 A I guess that depends on how you want
10 to define keywords. I mean it has literal strings
11 in it. It has literal strings that you can search
12 for, yes.

13 Q Does a TCP SYN bit packet have a
14 payload?

15 A The SYN -- the connection
16 establishment packet does not have a payload.

17 Q Could the filter pattern field
18 disclosed in Column 5 of Duvall be compared to a
19 TCP SYN bit packet?

20 A I mean filter patterns are about as
21 general as you get. So you could define a filter
22 for any type of packet.

1 Q Is a TCP SYN bit packet conveying
2 data?

3 A To TCP, it is, yes.

4 Q Referring to Column 4, again Line 56.
5 To allow data transmissions to pass through, would
6 Duvall just allow the open command to execute as it
7 normally would?

8 A I'm not -- unfortunately, I'm not
9 with you. Could you give me that -- did you say
10 Column 4?

11 Q So Column 4 --

12 A Line --

13 Q -- Line 56 --

14 A Yeah.

15 Q -- talks about blocking --

16 A Yeah.

17 Q -- right?

18 A Yes. Yes. That I see.

19 Q Okay. And that refers to the block
20 filters. Is that fair?

21 A Yes.

22 Q Okay. Let's talk about the opposite

1 of that, the "allow" filters. Okay?

2 A Okay.

3 Q Okay. Would Duvall allow a
4 transmission to transmit by allowing the execution
5 of the open command?

6 A Duvall doesn't phrase it that way.
7 So remember, that at this point, the blocking is
8 being done on the basis of an IP address. And
9 Duvall teaches that you can have "allow" filters on
10 the basis of an IP address. And so an "allow"
11 filter would allow the TCP SYN packet to transit
12 the monitoring system and, therefore, that would be
13 part of the execution of the open command.

14 Q Okay. Can you transmit data using
15 TCP without first establishing a TCP connection
16 using the TCP SYN bit packet?

17 A Application data, no.

18 And I should mention it's S-Y-N, it's
19 not -- yes, it's capital S, capital Y, capital N.

20 Q Okay. When you said "application
21 data," what did you mean by that?

22 A Something drives TCP. TCP is

1 passive. It doesn't do anything, you know, on its
2 own, per se. So there is TCP data that is
3 exchanged as part of connection establishment, but
4 there's no application data -- well, as part of the
5 first SYN packet, there's no application data
6 exchanged.

7 Q And would the application data relate
8 to a higher protocol level than TCP?

9 A That's -- when one says "application
10 data," they're typically referring to the use of
11 some application layer protocol, which will be a
12 protocol on top of TCP.

13 Q Is it a fair characterization of
14 Duvall that direct action filters, as disclosed in
15 Column 4, are focused on whether a TCP stream
16 should be opened and not on the content of that
17 stream after it's opened?

18 MR. TUMINARO: Objection to the form
19 of the question.

20 THE WITNESS: I'm not sure how to
21 parse your question.

22 BY MR. GOLDBERG:

1 Q Let me rephrase the question.

2 A Sure.

3 Q Does Duvall ever disclose applying
4 direct action filters to the content of an already
5 opened TCP string?

6 A So a person skilled reading Duvall
7 would understand that the direction -- direction --
8 direct action filters are applied to every --
9 there's a test to determine if direct action
10 filters apply to every packet, independent of
11 whether or not any connection -- any -- independent
12 of whether or not any TCP connection has been
13 established or not.

14 Q Can you show me where Duvall
15 discloses the application of a direct action filter
16 on the contents of an already opened TCP string?
17 Column and line number.

18 A It's implicit. So I don't think
19 Duvall deals with that level of detail because
20 persons of skill in the art understand that every
21 single packet that's transmitting this monitoring
22 system is subjected to Duvall's filtering.

1 Because a person of ordinary skill in
2 the art would understand none of this would work or
3 have any utility if you didn't do that. So it's
4 implicit in Duvall because it's implicit in
5 filtering systems. This is just the way they work.

6 You know, you have to look at every
7 packet independent of whether or not any connection
8 has been established. So it may not say it
9 explicitly, but that's exactly what a person of
10 ordinary skill in the art would take away from
11 Duvall.

12 Q And does Duvall ever explicitly
13 disclose the application of a deferred action
14 filter on the open command, as they described it?

15 MR. TUMINARO: Objection to form.

16 THE WITNESS: So remember, Duvall is
17 very generic in how you write filters. And Duvall
18 discloses that a person in skill would
19 understand -- a person of ordinary skill in the art
20 would understand that it is entirely possible for
21 what Duvall is referring to as an open command, the
22 TCP SYN packet, to not be -- sorry, I want to say

1 this without saying a double negative -- to -- to
2 not be the subject of an "allow" filter and not be
3 the subject of a "block" filter and, therefore, be
4 the subject of Duvall's deferred action processing.

5 BY MR. GOLDBERG:

6 Q But it's not expressly disclosed
7 anywhere, is it, sir, column and line number?

8 MR. TUMINARO: Objection to form.
9 Asked and answered.

10 THE WITNESS: There are an infinite
11 number of possibilities here because there's an
12 infinite number of packet types that you can see.
13 And Duvall doesn't describe what happens to every
14 single one of these infinite number of packet types
15 because it doesn't have to, because what it teaches
16 to a person of ordinary skill in the art is that
17 a -- the packet behind a TCP open command is
18 something that may not be flagged by an "allow"
19 filter or a "block" filter.

20 And the other way I would say it is
21 there is nothing in Duvall that precludes that.
22 So a person of skill in the art would not expect

1 that level of specificity.

2 Duvall is about mechanism. And
3 it's a general mechanism and a person of skill in
4 the art would understand they can use those
5 mechanisms in a large variety of ways. And one
6 of the ways they could use it is such that the
7 packets behind a TCP open command could be
8 processed as part of deferred action.

9 BY MR. GOLDBERG:

10 Q Could you show me column and line
11 number anything in Duvall that shows the same
12 transmission being subject to both direct and
13 deferred action filters?

14 A I'm sorry, I missed the part
15 before -- the what transmission?

16 MR. GOLDBERG: Could you read it
17 back?

18 (The reporter read as requested.)

19 BY MR. GOLDBERG:

20 Q And maybe let me reask the question.

21 A Tell me what same was.

22 Q Can you show me anything in Duvall,

1 column and line number, that shows the same
2 transmission being subject to both direct and
3 deferred action filters in sequence?

4 MR. TUMINARO: Objection to form.

5 THE WITNESS: Maybe I'm not
6 understanding what you're asking, but isn't that
7 exactly what's disclosed in Column 4, Lines 22
8 through 37? That a packet, a transmission, the
9 first thing you're going to do is you're going to
10 determine whether or not an "allow" filter applies,
11 so you're subjecting it to allowing filtering.

12 Then you're going to determine if a
13 block filtering applies. So you're being
14 subjected to block filtering. And then, if not,
15 it's going to be subjected to deferred action.

16 So the same packet is going to be
17 subjected to allowed, blocked, and then deferred,
18 assuming there was no hit on allowed or blocked.

19 BY MR. GOLDBERG:

20 Q Other than Column 4, is there any
21 other support for that opinion?

22 A I mean, Duvall speaks for itself, and

1 the totality of it explains to a person of ordinary
2 skill in the art that there are three distinct
3 phases to Duvall's analysis of traffic. So all of
4 the disclosures in Duvall where it talks about how
5 "allow" comes first, then "blocked," then "deferred
6 action."

7 Q If I can refer you to Column 5. And
8 it's Line 20. And do you see the reference to
9 Figure 4?

10 A Okay. I'm with you.

11 Q Okay. Referring to Figure 4, "When
12 data is transmitted over an open TCP/IP
13 connection." What does that mean?

14 A I think a person skilled would
15 understand this to mean data that's transmitted
16 after a TCP connection has been established.

17 Q Okay. So would you agree there's no
18 disclosure of Figure 4 being applied before a TCP
19 connection has been established?

20 MR. TUMINARO: Objection to the form
21 of the question.

22 THE WITNESS: I think in this passage

1 here, Figure 4 is just talking about one particular
2 example. I don't think the person skilled would
3 understand that Figure 4 is somehow limited to
4 this.

5 BY MR. GOLDBERG:

6 Q So it's your view that Figure 4 can
7 also apply before the TCP connection is opened?

8 A Figure 4 can apply to all forms of
9 traffic. That's what a person of skill in the art
10 would understand, because the descriptions of
11 allowing and blocking and deferred action are not
12 specific to any particular protocol.

13 They use examples of TCP, but a
14 person skilled in the art would understand that
15 Duvall applies to UDP traffic as well and ICMP
16 traffic and ARP traffic and any number of -- and
17 really, I don't think a person skilled in the art
18 would understand that Duvall's disclosures of
19 allowing, blocking and deferred action are limited
20 to any particular packet type.

21 Q I'd like to take that one by one.

22 Where does Duvall expressly mention

1 UDP, column and line number?

2 A Duvall says what it says, you know?

3 And the advantage of doing these depositions in
4 person is you can't search. So whether or not
5 Duvall specifically references UDP, a person of
6 skill -- again, the issue is what does Duvall -- as
7 I see it, the issue is what does Duvall teach to a
8 person of ordinary skill in the art? And what
9 Duvall teaches is a generic packet filtering
10 system.

11 There's nothing in here that limits
12 it to TCP or HTTP, and a person of skill in the art
13 would understand that a system that just limited
14 itself to TCP is not going to be an effective
15 filtering system.

16 Q Would a person of ordinary skill in
17 the art understand that a system that limited
18 itself to TCP wouldn't be an effective filtering
19 system with regard to filtering for indecent
20 content?

21 A I think a person of ordinary skill in
22 the art, as I say, would understand that Duvall's

1 filtering system isn't limited to any traffic type.
2 To the extent there was some sentence in here that
3 somehow implied that it was, a person of skill
4 would understand it would be completely obvious to
5 apply Duvall's filtering system to all traffic
6 types, because nothing in Duvall would have to
7 change in order to filter, for example, UDP
8 traffic. It's just filtering rules. So Duvall
9 says what it says.

10 And in terms of illegal or outlawed
11 traffic, a person of skill would understand that
12 that could be carried on any transport protocol.
13 Technically HTTP does not require the use of TCP.

14 Q With reference to paragraph 103 of
15 your declaration. So you referred to an "allow"
16 filter allows data transmissions to pass through.

17 Do you see that?

18 A Yes, I see that.

19 Q Okay. And a "block" filter blocks
20 data transmissions from passing through. Do you
21 see that?

22 A I do.

1 Q Okay. And a "deferred action" filter
2 can specify additional criteria to filter data
3 transmissions. Do you see that?

4 A I do.

5 Q Okay. Are the -- is the reference to
6 data transmissions in all three sentences referring
7 to the same data transmission?

8 A I'm not sure what you're -- what --
9 what you're asking. Maybe let me answer this way
10 and you can tell me if this is responsive.

11 Data transmissions here, to get more
12 precise, would be packets. So an "allow" filter
13 allows packets to pass through, a "block" filter
14 blocks packets from passing through, and a
15 "deferred action" filter can specify additional
16 criteria to filter packets on, with the
17 understanding that deferred action is also
18 stateful, so it can potentially be doing its
19 analysis over multiple packets.

20 Q And I guess -- and that's very
21 helpful. Thank you.

22 I guess I'm trying to understand if

1 paragraph 103 is opining that the same packet is
2 subject to the "allow, block" and "deferred action"
3 filters?

4 A So Duvall discloses that absolutely
5 is the case, but that's not the point -- that
6 particular point is not being made in
7 paragraph 103.

8 Q Thank you.

9 Is Duvall -- strike that.

10 Does Duvall discuss operating on any
11 protocols at a lower level than TCP?

12 A Duvall discloses what it discloses.
13 I don't actually recall any disclosure in Duvall of
14 operating at lower levels than IP; however, I would
15 say that the application of Duvall's teachings to,
16 as I say, any layer of the protocol stack would be
17 obvious to a person of ordinary skill in the art
18 because nothing in Duvall's mechanisms changes as a
19 function of where you are in the protocol stack.

20 Q If I can refer you to Duvall
21 Column 6, Lines 23 to 25, where it says, "Client
22 sends a transmission with a get request." And then

1 it talks about the server responding with data.

2 Do you see that?

3 A Yes, now I see it. Let me just read
4 it quickly.

5 Got it.

6 Q Okay. What is the "get" request --
7 strike that.

8 What is the "get" command?

9 A It's called a method actually. I
10 mean Duvall calls it a command and most people call
11 it a command. So within the HTTP protocol, HTTP
12 specifies a variety of methods. And a "get" is the
13 dominant HTTP method that's used to request content
14 from a web server.

15 Q And the response they talk about, is
16 that also HTTP?

17 A A person of skill in the art reading
18 this would understand that the response being
19 referenced at Line 26 is an HTTP response.

20 Q Would you agree that Duvall only
21 expressly discloses the operation of the deferred
22 action filters against data formatted according to

1 the HTTP protocol?

2 A I would agree that as examples of its
3 filtering scheme, it uses -- it seems to
4 exclusively use examples of HTTP transmissions, but
5 a person of skill in the art would understand that
6 Duvall wasn't limiting themselves to HTTP.

7 Q And would it be fair to say that the
8 examples Duvall provides with regard to direct
9 action filters are exclusively limited to TCP/IP?

10 A With regard to direct action filters?

11 Q Are the examples exclusively limited
12 to TCP/IP?

13 A No, I don't think a person of skill
14 in the art would understand that -- or sorry.
15 Sorry. So maybe let's clarify. When you say
16 "TCP/IP," are you using it in kind of a colloquial
17 sense of TCP/IP, meaning the TCP/IP protocol suite?

18 Or are you trying to be specific
19 about protocols?

20 Q Let me be even more specific.

21 A Okay. Thank you.

22 Q Would you agree, sir, that the

1 examples that you use in Duvall for the application
2 of the direct action filters exclusively rely on
3 the TCP open command?

4 A No.

5 Q Where does Duvall show an example --
6 an express example of the application of a direct
7 action filter on something other than a TCP open
8 command?

9 A For the direct action, it
10 specifically talks about how the filters will match
11 an IP address and port number. And that's generic.
12 That's -- that will match on packets that have
13 nothing to do with TCP open commands.

14 Q And what portion of Duvall are you
15 referring to, sir, just so the record's clear?

16 A Sure. So it's several places. One
17 of the places that I'm looking at right now is
18 Column 4, Line -- the sentence that starts at
19 Line 30, "In this order, allow filters thus take
20 precedence over block filters. Accordingly, if a
21 specific IP address/port is matched by both an
22 allow filter and a block filter, the allow filter

1 takes precedence."

2 So that's an example of how allow or
3 block can occur based on matching IP address and
4 port number, which has got nothing to do with
5 whether or not the packet is -- corresponds to a
6 TCP open command.

7 Q But does Duvall reference any other
8 command to which a direct action filter is applied
9 expressly other than a TCP open command?

10 A It's not -- it's -- it's not
11 referencing any command that is specific to allow
12 and block. It's -- it's -- it's first and
13 fundamental teaching is allow and block is based on
14 IP address and port number, full stop. And as I
15 say, that's completely independent of whether or
16 not something is a TCP open command or not.

17 Q With regard to the '641 patent, sir,
18 is there any discussion in it about not executing a
19 command that would open a TCP stream?

20 A About not executing a command that
21 would open a TCP stream?

22 Q Uh-huh.

1 A The '641 patent speaks for itself. I
2 don't recall -- I don't recall it describing a
3 system at that level of detail, but a person of
4 skill in the art would understand that what's
5 disclosed in the '641 could easily be used to
6 filter for what Duvall calls a TCP open command.

7 Q Is the presence of a TCP open command
8 necessarily a potentially security-related event?

9 MR. TUMINARO: Objection to form.

10 THE WITNESS: The answer is no, which
11 is why Duvall teaches a broader form of filtering,
12 in particular filtering on IP address and port
13 number for the initial phase of filtering.

14 BY MR. GOLDBERG:

15 Q If you can turn to paragraph 133 of
16 your declaration.

17 A I am there.

18 Q Is it fair to say you're opining that
19 Duvall's direct action filter selects data by
20 allowing a transmission?

21 MR. TUMINARO: Objection to the form
22 of the question.

1 THE WITNESS: Sorry. I was reading
2 the paragraph while you were asking the question,
3 so perhaps you can just read it back.

4 (The reporter read as requested.)

5 THE WITNESS: For the data that
6 matches an "accept" filter -- or sorry, an "allow"
7 filter, that is the case.

8 BY MR. GOLDBERG:

9 Q Now, on page 70 to 71, the last
10 sentence of paragraph 129.

11 A Seventy to 71. Okay.

12 Q So in paragraph 129, you say that,
13 "Even under the agreed-upon construction, Duvall
14 teaches post-filtering residue, wherein the
15 post-filtering residue is data neither discarded
16 nor selected by filtering."

17 Is that right, sir?

18 A That is what I say.

19 Q Okay. And the agreed-upon
20 construction says, "Status data that undergoes
21 positive and negative filtering, but is neither
22 discarded by such negative filtering nor selected

1 by such positive filtering."

2 Is that an accurate reading, sir, of
3 the construction of post-filtering residue?

4 A Let me go and check. I believe that
5 is correct.

6 Q Would you agree that the construction
7 of post-filtering residue requires the
8 post-filtering residue to be status data?

9 A Yes.

10 Q Where in your declaration do you
11 discuss how the status data rather than the traffic
12 is being selected or discarded by Duvall's direct
13 action filter?

14 And I'll refer you, for example, to
15 paragraph 133, but I'm not limiting the question to
16 that paragraph.

17 MR. TUMINARO: Objection to the form
18 of the question.

19 THE WITNESS: Well, a person of skill
20 in the art reading Duvall would understand that it
21 discloses status data because, for example, it
22 discloses things like IP addresses, which I

1 understand previously was found to constitute
2 status data.

3 Duvall discloses these are
4 operating on packets, just like a person of skill
5 would understand the '641 is operating on, and so
6 a person of skill in the art would understand
7 that if a packet carrying an IP address is not
8 subjected to allow filtering, not subjected to
9 block filtering, it goes on to deferred action
10 processing, that packet still carries with it the
11 status data.

12 So the status data is still there,
13 and it's -- it's still -- things -- status data,
14 such as, for example, the IP address are still in
15 the packet when it hits the deferred action
16 processing stage.

17 BY MR. GOLDBERG:

18 Q Sir, I didn't ask you what Duvall
19 disclosed, my question was pretty specific.

20 A Okay.

21 Q Where in your declaration, not
22 Duvall, do you discuss how the status data, rather

1 than traffic, is either selected or discarded by
2 Duvall's direct action filter?

3 MR. TUMINARO: Objection to the form
4 of the question. And treat the witness with
5 respect. He answered your question about where the
6 status data was, and I -- I object to the tone of
7 your voice when asking my witness these questions.

8 MR. GOLDBERG: There was no tone. I
9 asked a question about his declaration, he answered
10 about Duvall, and I'm asking him to answer my
11 question.

12 MR. TUMINARO: He did answer your
13 question. Objection. Asked and answered.

14 BY MR. GOLDBERG:

15 Q I would like an answer to my
16 question, please. But certainly no disrespect
17 intended.

18 A That's okay.

19 So the declaration speaks for itself.
20 I do describe how post -- that post-filtering
21 residue is analyzed by deferred -- Duvall's
22 deferred action filters. I say that, for example,

1 in paragraph 135.

2 If what you're asking is does that
3 tie this to the status data, I mean the court says
4 what it says. I would argue that it's clear from
5 the context of what I've written and the context of
6 how Duvall works, that when you're analyzing the
7 post-filtering residue, you have the status data
8 that started this whole process.

9 Q But, sir, you don't expressly refer
10 to status data in your declaration at
11 paragraphs 133 to 135, do you, sir?

12 A Paragraphs 133 through 135 speak for
13 themselves. These paragraphs are written with
14 the -- with the focus on the post-filtering
15 residue. The post-filtering residue includes the
16 status data. And I believe that is clear from the
17 totality of my report, as it is also clear from the
18 disclosures of Duvall that I'm describing.

19 Q But the words "status data" don't
20 appear in paragraphs 133 to 135, do they?

21 A Again, the report speaks for itself.
22 Just scanning it, I don't see those words, but I'm

1 telling you what the opinion is that was intending
2 to be expressed here. If it was worded inartfully,
3 I apologize. The focus here was on phrasing this
4 in terms of post-filtering residue, which I think
5 given the totality of my report, it makes clear
6 that that includes status data.

7 Q We're about to move on to a new
8 topic, should we break for lunch now or push
9 through? What do you -- what do you prefer?

10 A I'm fine.

11 Q I'm fine, too.

12 Okay. Referring to Duvall, Column 1,
13 Lines 15 to 17.

14 A Okay.

15 Q Let me know when you're there.

16 A Column 1, 15 through 17. I am there.

17 Q Okay. And do you see at Column 1
18 Lines 15 to 17 of Duvall, where it discusses the
19 idea of a parent censoring the material that their
20 children can see online?

21 A I think you're connecting a bunch of
22 dots here. I mean, I certainly see a sentence that

1 says that, "Many believe that parents should have
2 primary responsibility for controlling what their
3 children obtain and view over the internet."

4 Q Is it fair to characterize Duvall, as
5 at least in part, focused on the ability of a
6 parent to control what their children see on the
7 internet?

8 MR. TUMINARO: Objection to the form
9 of the question.

10 THE WITNESS: I would say no. I mean
11 I think this is just background and potential
12 motivation, but I don't think -- you know, a person
13 skilled reading this would understand that Duvall
14 was not about the parents.

15 BY MR. GOLDBERG:

16 Q Is it fair to describe Duvall as
17 having two types of users, someone with the
18 authority to manage the filters and someone without
19 the authority to manage the filters?

20 A The first part of your question was
21 two types of users?

22 Q Let me break it apart into pieces.

1 A Sure.

2 Q Would you agree that Duvall has a
3 type of user that has the authority to manage
4 filters?

5 A It does have the concept of an
6 individual that has the authority to manage
7 filters, yes.

8 Q And by managing the filters, would
9 you agree that that same type of individual can
10 determine what should or should not be blocked?

11 MR. TUMINARO: Objection to form.

12 THE WITNESS: I think the person
13 managing the filters has control over what is and
14 isn't blocked.

15 BY MR. GOLDBERG:

16 Q And is it fair to describe Duvall as
17 having a type of user that can't manage the filters
18 and has to live with whatever restrictions are set
19 by the system?

20 A Yes, with the understanding that I
21 wouldn't say set by the system, I would say
22 implemented by the system.

1 Q If I could turn to your declaration
2 to paragraph 107.

3 A Okay. Paragraph 107 -- hold on.
4 I've got -- I've messed up the pages. All right.
5 I'm sorry. What paragraph again?

6 Q 107.

7 A Thank you.

8 Q Page 53.

9 A Okay. My pages got all messed up. I
10 have it.

11 Q Okay. Is it fair for me to
12 characterize or describe that at paragraph 107 of
13 your declaration, you're suggesting that the
14 problems of filtering too much or too little is
15 attributable to Duvall's default actions?

16 MR. TUMINARO: Object to form.

17 THE WITNESS: No.

18 BY MR. GOLDBERG:

19 Q What did you mean when you said,
20 "Duvall itself provides that such default actions
21 could result in a filtering system filtering too
22 much or too little"?

1 A So I'm just simply expressing an
2 opinion here that Duvall discloses a concern and a
3 means for dealing with the concern of a filtering
4 system potentially filtering too much or too
5 little. One of the ways you can be in this
6 situation is because of the default actions of
7 Duvall, but it's not limited to that.

8 Q Okay. Can you show me where Duvall
9 expressly attributes the problem of filtering too
10 much or too little to default actions?

11 MR. TUMINARO: Object to the form.
12 You can answer.

13 THE WITNESS: I didn't know if you
14 were done.

15 So what Duvall discloses is a
16 mechanism for the user to address the fact that
17 they may believe that the filtering system is
18 filtering too much or too little. This, I think,
19 would be understood by a person of ordinary skill
20 in the art as a reference to the totality of
21 Duvall's filtering system, which includes default
22 actions.

1 All the more so, because Duvall
2 discloses default actions that will essentially
3 allow things with any address and any port number
4 to pass through.

5 BY MR. GOLDBERG:

6 Q Okay. Is it fair, sir, that -- I'm
7 not trying to get argumentative with you, I'm just
8 trying to pin this down, that there's no express
9 reference in Duvall tying the default actions to
10 the problem of filtering too much or too little?

11 A So Duvall speaks for itself. I don't
12 recall if it has an expressed package -- passage
13 that discloses that. My point here is, again, what
14 does Duvall teach to a person of ordinary skill in
15 the art?

16 And what it teaches is that the
17 filtering system, including the default actions,
18 may result in filtering too much or too little and
19 it provides a way for the user to address -- for
20 the user that's described in Column 8 to address
21 that.

22 Q Would a person of ordinary skill in

1 the art at the time of the filing of the '641
2 patent have understood that there were benefits to
3 having default actions in a system?

4 And let me rephrase the question.

5 A Sure.

6 Q Would a person of ordinary skill in
7 the art at the time of the filing of the '641
8 patent have understood that there were benefits to
9 having default actions in a filtering system?

10 A As a -- as an abstract, high-level
11 general principle, sure.

12 Q And what would those be?

13 A I think the one that most immediately
14 comes to mind is not having to specify filters for
15 every possible traffic type, because the operator
16 may not be interested in every possible traffic
17 type and may be only interested in certain traffic
18 types.

19 Q Any other benefits to the default
20 filters?

21 A I think it's just a convenience. I
22 think that's what -- that the -- the benefit I can

1 think of sitting here today is just it's a
2 convenience.

3 Q Okay. And in reaching the opinions
4 reflected in your declaration, do you expressly
5 discuss any of the benefits to having default
6 actions that would have been understood at the time
7 of the filing of the '641 patent?

8 MR. TUMINARO: I object to the form
9 of the question.

10 THE WITNESS: Well, again, my
11 declaration speaks for itself. I don't recall
12 addressing that issue, but I think the benefits of
13 defaults are -- are pretty obvious. It certainly
14 would be obvious to a person of ordinary skill in
15 the art.

16 BY MR. GOLDBERG:

17 Q Now, if I can refer you to Column 2,
18 Lines 12 to 16 of Duvall.

19 A 2, 12 to 16. Got it.

20 Q Okay. And do you see where it refers
21 to an individual's -- individual taste and
22 sensitivities?

1 A Yes.

2 Q Do you have an understanding of
3 what's meant by that in the context of Duvall?

4 A I think this is exactly speaking to
5 the point we talked about at the start of this
6 deposition, about potentially security-related
7 events and how they are subjective and how they are
8 up to a user or an operator to decide. And I think
9 this is exactly a reflection of that.

10 Q This section is talking about
11 material that could be sexually explicit. Do you
12 see that?

13 A I do.

14 Q Is that necessarily a
15 security-related event?

16 A It certainly can be.

17 Q But it is necessarily?

18 A In terms of a potentially
19 security-related event? Yes.

20 Q Do individual tastes and
21 sensitivities vary with cultural norms?

22 A I don't -- I don't know. What are we

1 talking about here? I mean as it relates to
2 network traffic, I'm not aware that that's the
3 case.

4 Q Okay. Well, with regard to
5 individual tastes and sensitivities, with regard to
6 sexually explicit material for example, right, as
7 disclosed in Duvall, does that vary with cultural
8 norms?

9 MR. TUMINARO: Objection to the form.
10 Outside the scope.

11 BY MR. GOLDBERG:

12 Q You can answer.

13 A Again, this isn't sexually explicit
14 material in the abstract. We're talking about
15 material received over the internet. And as it's
16 disclosed in Duvall of this content potentially
17 being outlawed, I think the tastes and
18 sensibilities here would just be with respect to
19 whether or not that traffic is likely to be
20 outlawed or not. And I'm not aware of how that
21 would differ as a function of cultural norms.

22 Q Okay. So it's your understanding as

1 a person of ordinary skill in the art, that the
2 reference to individual tastes and sensitivities
3 here is referring to whether something is specified
4 as illegal in the CDA?

5 A No, that's not my testimony.

6 Q Well, then -- well, then can you
7 explain -- can you take another shot at explaining
8 to me why individual tastes and sensitives with
9 regard to sexually explicit material don't vary
10 with regard to cultural norms in the context of
11 Duvall?

12 MR. TUMINARO: Objection. Asked and
13 answered.

14 THE WITNESS: I don't how to say it
15 any better than I said it previously.

16 MR. GOLDBERG: Could you read back
17 his answer, please, the prior answer?

18 (The reporter read as requested.)

19 BY MR. GOLDBERG:

20 Q Was it my reference to the CDA, sir,
21 that was wrong? Was I too narrow?

22 In other words, it's individual

1 tastes and sensitivities that references whether
2 somebody is illegal generally and not just with
3 regard to the CDA?

4 Is that a fair description?

5 MR. TUMINARO: Objection. Asked and
6 answered.

7 THE WITNESS: I've -- I've lost track
8 of what the original question was. I mean I would
9 have to look at the question and look at the
10 answer.

11 BY MR. GOLDBERG:

12 Q Let's just start from scratch then.
13 Maybe it's a little bit easier to get rid of some
14 of the history here.

15 I'm focusing to the reference of
16 individual tastes and sensitivities, at Column 2,
17 Lines 12 to 16 of Duvall. And my question is
18 whether individual tastes and sensitivities just
19 refers to whether the content is outlawed by any
20 statute?

21 MR. TUMINARO: Objection. Asked and
22 answered.

1 THE WITNESS: I think reading -- a
2 person skilled reading Duvall would understand that
3 the goal is to have objectionable material stay off
4 of your network, in particular because there was a
5 concern that content may be illegal or outlawed, as
6 Duvall says.

7 That's going to be a subjective
8 determination because obviously traffic doesn't
9 come with a tag on it that says this is illegal
10 or not. And this is exactly an example of what I
11 described earlier as what the '641 patent
12 describes as potentially security-related events.

13 I said that that is a subjective
14 term and is going to depend on the person
15 operating the network, the type of network, and
16 the traffic on the network. And this is an
17 example of that.

18 BY MR. GOLDBERG:

19 Q With regard to the individual
20 referred to -- with regard to the user whose
21 individual tastes and sensitivities are referred to
22 here --

1 A Yes.

2 Q -- is that the same user who's
3 authorized to adjust the filters in Duvall?

4 A That person is certainly included in
5 this description.

6 Q Is there anyone else included in this
7 description?

8 A I -- I -- I don't know. I don't know
9 that I've considered that question.

10 Q If the Duvall system is blocking too
11 little, can't the user who's authorized to adjust
12 the filters just go to the website and figure out
13 how they feel and then use the editing manager to
14 adjust the filter?

15 A I have no idea what you're -- I don't
16 understand your question.

17 Q Okay. Let's assume the system in
18 Duvall is filtering too much or too little. Okay?

19 A Okay.

20 Q All right. And you have a person
21 who's authorized to adjust the filters, right?

22 A Okay.

1 Q Okay. Could the person who is
2 authorized to adjust the filters see what content
3 is allowed and blocked and use the editing manager
4 to tune the filters?

5 A They can certainly see what is being
6 allowed in terms of the individual packets, they
7 can see what's being allowed and blocked, and they
8 can use that to historical information to tune the
9 filters.

10 Q Okay. Does Duvall recognize the need
11 for any additional techniques to address the
12 problem of filtering too much or too little beyond
13 the disclosed editing manager?

14 A I -- I think a person of skill would
15 understand that what Duvall is disclosing is a
16 mechanism for updating filter database. And it's a
17 very general purpose and generic mechanism. And I
18 think that -- Duvall does not disclose that
19 anything more than that is needed. And given the
20 operation of Duvall, a person of ordinary skill in
21 the art would understand that nothing more is
22 needed.

1 MR. GOLDBERG: This is a good time
2 for a lunch break.

3 (Recess from 12:06 p.m. to 12:47 p.m.)

4 BY MR. GOLDBERG:

5 Q Okay. Sir, I'm going to hand you
6 EX1005, which is the Chu reference.

7 A Thank you.

8 MR. TUMINARO: Thank you.

9 (Jeffay Deposition Exhibit Number EX1005
10 marked for identification.)

11 BY MR. GOLDBERG:

12 Q Now, if you can also turn in your
13 declaration to paragraph 82, which is at page 38, I
14 believe.

15 A I am there.

16 Q Okay. You're ahead of me, sir. Give
17 me a second.

18 And in the last sentence of
19 paragraph 82 of your declaration, you say that, "If
20 a URL is unknown, the user is prompted for
21 attention." Do you see that, sir?

22 And I left out some unrelated words

1 in the middle.

2 A Thank you. Yes, I -- yes, I see
3 that.

4 Q Okay. Am I correct in understanding
5 that the user that you're referring to in that
6 sentence is the individual who is trying to
7 download a file?

8 A No.

9 Q Do you agree that the Chu reference,
10 EX1005, discloses sending the prompt to the same
11 person that's trying to download the file?

12 A I don't recall that disclosure in
13 Chu, so I would disagree.

14 Q Do you ever cite in your declaration
15 to any part of Chu that discloses that it's sending
16 a prompt to someone other than the person trying to
17 download the file?

18 A I mean, I cite to Chu what I cite.
19 And I don't recall -- I don't recall citing to that
20 in Chu.

21 Q To whom does Chu disclose sending the
22 prompt?

1 A Chu discloses -- I think what a
2 person of skill in the art would understand is that
3 Chu is disclosing that the prompt is being sent to
4 the person that has generated Chu's filtering
5 rules.

6 Q Sir, I have to ask, can you show me
7 expressly where in Chu it shows it -- it shows
8 sending the prompt to the individual that set Chu's
9 filter rules?

10 A No offense taken by the question. So
11 I think a person of skill reading Chu in context
12 would understand that the feedback that's being
13 provided is to the person, as I say, who has
14 authored these rules. I mean, Chu gives examples
15 of the rules, or what he calls "profiles." And
16 these rules are given in the context of -- or
17 listed in the context of being displayed to the
18 person who developed them.

19 And in that context, when it
20 references the user or the word "me," it's -- a
21 person of skill would understand that the "me"
22 that's being prompted is the "me" that developed

1 the profile.

2 Q Okay. And are you relying on any
3 specific page of Chu for that understanding?

4 A I mean, I cite what I cite. I'm
5 relying on the totality of Chu. And as I say, I
6 think Chu fairly discloses that an individual
7 writes these rules. And as I say, the prompting is
8 done to the person that writes the rules.

9 Q So is it fair to say you're relying
10 on the totality of Chu and not on any specific
11 section of Chu?

12 MR. TUMINARO: Objection to form.

13 THE WITNESS: I mean I -- I cite what
14 I cite in the -- in the declaration. And I have
15 considered all of Chu. And I don't know that
16 sitting here today, I can point you to a specific
17 passage, but it's my opinion that this is what a
18 person of ordinary skill in the art would take away
19 from Chu.

20 The fact that it's talking about --
21 typically it's dealing in a firewall context.
22 These are things that people are trying to

1 download files aren't operating with, so these
2 are parties that are developing these policies
3 that are people other than the users that are
4 affected by the policies.

5 BY MR. GOLDBERG:

6 Q Is it your view that when Chu refers
7 to "I," they're talking about the individual who
8 sets the filters?

9 A I don't -- perhaps we can talk about
10 a specific context. I don't recall an "I."

11 Q If I can refer you to page 43 --

12 A Thank you.

13 Q -- of Chu.

14 A Okay. I'm there.

15 Q When it says, "Should I download the
16 active content at this URL" --

17 A I see.

18 Q -- who's the "I" referred to in that
19 section on page 43 of Chu?

20 A So this is the quote -- the quoted
21 language at the bottom of the page?

22 Q Yes.

1 A Okay. Let me just read this.

2 So I think in context -- so it's
3 important to understand that Chu is a master's
4 thesis, written by this guy named Chu. And Chu
5 seems to, in many places, describe their -- their
6 system in the first person.

7 And so I think the way -- I think a
8 person of skill would understand reading Chu that
9 "I" is referring to Chu himself, but as an example
10 of a user that's being affected by the filtering
11 rules of Chu.

12 Q Okay. So the "I" in that context is
13 talking about somebody impacted by the filtering
14 rules of Chu, not somebody who sets the filtering
15 rule of Chu. Is that fair?

16 MR. TUMINARO: Object to the form.

17 THE WITNESS: Yeah. I mean I -- I
18 think the way a person of skill would read this is
19 Chu has a very colloquial explanation of their
20 technology, and, you know, it's -- I would not have
21 approved this -- this thesis. But the way they're
22 writing it is trying to explain the operation of a

1 system in terms of some, you know, abstract
2 dialogue that someone is having with the system.

3 But, generally, this abstract
4 person that's being referred to here in that
5 case, in the bottom of page 43, is a person
6 that's being subjected to the filtering.

7 BY MR. GOLDBERG:

8 Q Okay. So at the start of
9 paragraph 82 of your declaration --

10 A Okay.

11 Q -- we're talking about the person who
12 is subjected to the filtering in the first
13 sentence, correct?

14 A Well, 82 is really disclosing
15 policies that -- that use the blacklist. And it's
16 just phrasing this in terms of this -- this
17 abstract question that gets asked in the context of
18 Chu.

19 Q You mentioned earlier that you
20 wouldn't have approved Chu. Did I get that right?

21 A I wouldn't have approved the writing
22 of Chu.

1 Q Why not?

2 A Because I'm -- I'm not a fan of this.
3 I think that a -- an important goal of a master's
4 thesis or a Ph.D. dissertation is that the
5 individual should learn how to write, write
6 formally, and write clearly. And writing in this
7 colloquial style of a human dialogue that they're
8 having with a computer is just -- it's just not an
9 appropriate way, in my opinion, to describe this.

10 So I understand what they're writing.
11 I think a person of skill would understand what
12 they're writing. If it was my student, I would
13 have suggested they write this in a more
14 technically appropriate way.

15 Q You would have asked that they write
16 it clearer?

17 A It's not that it's unclear, it's just
18 that you could express this idea, I think, more
19 concisely and more formally. But I think it's
20 perfectly clear what they're trying to convey.

21 Q If I can refer you to paragraph 108
22 of your declaration, pages 53 to 54. And really,

1 I'm going to focus more on top of 54.

2 A Great. Thank you.

3 Q And there you reference that Chu
4 discloses techniques for determining whether to
5 block or allow residue data.

6 Do you see that?

7 A I do.

8 Q Okay. Can you show me where in your
9 declaration the techniques from Chu that could be
10 used to block or allow residue data are shown?

11 A Where in the declaration Chu's
12 techniques are shown?

13 Q I'll ask the question again.

14 MR. GOLDBERG: Can you just read it
15 back?

16 (The reporter read as requested.)

17 THE WITNESS: Okay. Thank you. I
18 have the question.

19 So the -- a place where this is
20 described in my declaration is, I think the
21 passage that we were just looking at, in
22 paragraph 82 on page 38, and in particular, the

1 annotations that I have provided to Chu's figure
2 from page 44.

3 BY MR. GOLDBERG:

4 Q And which aspects of the annotations
5 on page 38 under paragraph 82 of your declaration
6 relates to the techniques that Chu discloses that
7 could be used to block or allow residue data?

8 A I'm not sure what you're asking. I
9 mean Chu gives examples of URL filters that are
10 used to both block or allow a -- a URL to be
11 fetched with the -- with the understanding that
12 things that neither block nor allow end up -- is
13 residue that for which an operator gets prompted
14 for attention.

15 Q So with regard to Chu, is it fair to
16 say the only mechanism that you disclose that
17 relates to residue data is shown as unmatched
18 residue for human review at the bottom of page 38?

19 MR. TUMINARO: Object to form.

20 THE WITNESS: Well, the report speaks
21 for itself, but that certainly is one example that
22 I give.

1 BY MR. GOLDBERG:

2 Q Are there any other examples you can
3 provide of techniques disclosed by Chu other than
4 human review that can be used to block or allow
5 residue data?

6 A Well, the issue isn't blocking or
7 allowing residue data, the issue is doing further
8 analysis of the residue data. And that's what I'm
9 pointing to is occurring in Chu.

10 Q Other than the human review discussed
11 at the bottom of page 38, do you disclose in your
12 declaration or discuss any other techniques that
13 Chu can use to analyze residue data?

14 A As I said, the report speaks for
15 itself, but sitting here today, I think this is all
16 I recall pointing to in Chu.

17 Q If I can refer you next to
18 paragraph 116 -- I'm sorry, paragraph 226 on
19 page 116. I had it backwards.

20 A Okay. I'm there.

21 Q So in paragraph 226 on page 116, you
22 say that "Chu prompts a user with expertise to

1 resolve unknown data," while citing to page 44 of
2 Chu.

3 Do you see that?

4 A Not yet. Yes, I think I see that.

5 Q Okay. You said, "Chu already
6 discloses prompting a user with expertise to
7 resolve unknown data," right?

8 A Yes.

9 Q Can you show me where in Chu it
10 discloses prompting someone with expertise rather
11 than just the person who's trying to download the
12 file?

13 A Chu discloses -- I cite to page 44,
14 which is the figure of -- showing profile 0.92.
15 And what Chu is teaching a person of ordinary skill
16 in the art is that you're prompting the person that
17 has developed this profile for -- for action on
18 what to do with the residue data.

19 And because you're prompting the
20 person who developed this profile, that person is a
21 person with expertise because they were the ones
22 who developed the profile.

1 Q And it's your opinion that a person
2 who developed the profile is always going to have
3 expertise?

4 A Yes. They certainly had enough
5 expertise to develop the profile, which, as
6 disclosed in Chu, would require some significant
7 amount of expertise.

8 Q Where does Chu characterize the
9 amount of expertise required as significant?

10 A So you -- one wouldn't expect that
11 kind of characterization in Chu. Again, the issue
12 is, what does Chu teach to a person of ordinary
13 skill in the art? Chu is teaching a filtering
14 system. That's not something that a nontechnical
15 person is going to be able to use. He's teaching
16 essentially a programming language and the use of a
17 programming language.

18 So this is going to be a somewhat
19 sophisticated user, who understands programming,
20 who understands network traffic, who understands
21 URLs, and can understand them in such a way that
22 they can actually express rules in this language.

1 So I think that teaches a person of ordinary skill
2 in the art that Chu's user here is a user with
3 expertise in the technology of Chu.

4 Q Does Chu expressly require the
5 individual who sets the filters to have specific
6 expertise or is it only implicit to a person of
7 ordinary skill, in your opinion?

8 A Chu says what it says. It's --
9 it's -- at a minimum, it's absolutely implicit. I
10 mean developing these profiles is not something
11 that mere mortals can do. And a person of ordinary
12 skill in the art would clearly understand that.

13 Q If I can refer you to paragraph 142
14 on page 78 of your declaration.

15 A 142. Okay. I'm there.

16 Q And you say at paragraph 142, "In the
17 Duvall-Chu combination, the human intervention
18 would be performed by an analyst system having
19 people trained to manage Duvall's corporate
20 network."

21 Do you see that?

22 A I do.

1 Q Okay. Do you cite any support for
2 that sentence in your declaration at paragraph 142?

3 A Well, I mean, for the broader points
4 being made in this paragraph, I'm citing to the
5 passages in Duvall that describe Duvall's
6 server-based embodiment that operates on a
7 corporate network.

8 Q Which reference specifically and
9 expressly discloses the analyst system?

10 MR. TUMINARO: Objection to the form
11 of the question.

12 THE WITNESS: So in context, Duvall's
13 disclosure of a server-based probe, that's separate
14 from the user's computers, and a facility in that
15 system to edit the rules for filtering and to push
16 those rules out into the database for application
17 would be -- that person would be fairly
18 characterized as an analyst.

19 And I think a person of skill in
20 the art would understand that the person using
21 Duvall's editing system, in particular combined
22 with Chu's disclosures of specifically notifying

1 individuals, that that's a fair disclosure of an
2 analyst and the system that they are using,
3 therefore, for example, the editing system of
4 Duvall, in the combination of Duvall and Chu,
5 would be the analyst system.

6 So, again, the issue isn't so much
7 what words appear in the combination of Duvall
8 and Chu, it's what does Duvall and Chu teach to a
9 person of ordinary skill in the art? And that's
10 what Duvall and Chu teaches to a person of
11 ordinary skill in the art.

12 BY MR. GOLDBERG:

13 Q Is it your opinion that the editing
14 system of Duvall is the analyst system?

15 MR. TUMINARO: Objection. Asked and
16 answered.

17 THE WITNESS: It's --

18 MR. TUMINARO: Form.

19 THE WITNESS: So we're talking about
20 the combination of Duvall and Chu, and the editing
21 system would be part of the analyst system in the
22 Duvall-Chu combination.

1 BY MR. GOLDBERG:

2 Q If the editing system is part of the
3 analyst system, what forms the rest of the analyst
4 system?

5 A The notifications that -- the
6 notification system that is part of Chu.

7 Q Anything else?

8 A I mean, for this particular sentence,
9 that's what I'm referring to here.

10 Q Okay. Referring back to
11 paragraph 142, you also --

12 A Okay.

13 Q Sorry.

14 A I'm sorry.

15 Q Go ahead.

16 A I was looking for it, and I'm there.

17 Q Just too efficient.

18 A Yeah.

19 Q Referring to paragraph 142, you talk
20 about people trained to manage Duvall's corporate
21 network.

22 Do you see that?

1 A Yes.

2 Q Okay. Where is there a disclosure of
3 people trained to manage Duvall's corporate
4 network?

5 A I think that is part and parcel of
6 Duvall's disclosure of running its system in a
7 corporate network. Again, people of ordinary skill
8 in the art are familiar with the basics of, for
9 example, running a firewall on a corporate network,
10 right? This is part of their background, this is
11 what they know.

12 And what they know is that the people
13 that would manage the system disclosed in Duvall
14 would be people trained in Duvall's corporate
15 management. They know that these are not systems
16 that, you know, end users or untrained people are
17 allowed to operate.

18 Again, Duvall talks about things
19 like -- remember, this is a password-protected
20 system, so you have to have -- there is some access
21 control, and a person of skill will understand that
22 part of the access -- implicit in that access

1 control is that only people who are knowledgeable
2 and trained to use this system are the ones that
3 are going to have access to it.

4 Q Are you done answering, sir?

5 A Yes. Sorry.

6 Q No, you were looking down. I just
7 wanted to make sure I wasn't cutting you off.

8 A No, no, no. I'm done.

9 Q As you sit here today, can you cite a
10 column and line number in Duvall that expressly
11 discloses people trained to manage Duvall's
12 corporate network?

13 A So as I believe I describe in my
14 declaration, there may not be an express disclosure
15 of that, only because that is such an obvious
16 concept, that a person of skill understand that the
17 people that manage these systems, and in particular
18 in a corporate network, are special people.
19 They're people with special backgrounds, people
20 with special training.

21 So to the extent it's not explicitly
22 disclosed, it's obvious in light of the

1 knowledge -- of a person of ordinary skill in the
2 art's knowledge, as is suggested by the fact that,
3 as I mentioned, the editing manager is password
4 protected.

5 Q I'm going to change topics for a
6 second here.

7 Let's go to paragraph 153 on page 85
8 of your declaration.

9 A Okay. I'm there.

10 Q Okay. And so here you say that, "A
11 main benefit of databases is that entries can be
12 edited or added without taking the system offline."

13 Do you see that?

14 A Yes, now I do.

15 Q Okay. So I just want to clarify this
16 statement so I can understand it better.

17 A Sure.

18 Q Are you saying that the database
19 itself doesn't need to be taken offline or that an
20 application using the database wouldn't need to be
21 taken offline?

22 A Well, both. I mean you certainly

1 don't have to take an application using a database
2 offline to update a database. I mean that's --
3 that's fairly obvious. And what I'm primarily
4 saying here is that databases, and the use of
5 databases, is something that can happen -- I'm
6 missing a verb there. Databases, and the use of
7 databases, is something that can continue to
8 operate while databases are being updated.

9 Databases are -- every database -- I
10 have no recollection of ever seeing a database that
11 you could not update while the database is
12 operational; meaning the database is up and running
13 and people can use the database.

14 This is well-known stuff. Databases
15 can be updated while they're being used. Putting
16 data into databases is a core function of
17 databases. And putting databases -- putting
18 information into databases while they're being used
19 is stock and trade to a person of ordinary skill in
20 the art.

21 Q If it's so well known, why in
22 paragraph 153 don't you cite any articles or any

1 subjective support for that proposition?

2 A Well, come on, that's like saying,
3 you know, why didn't I cite anything to say that
4 the database is only operational while it's plugged
5 in. I mean, you can -- there was a famous paper
6 written in 1983 by a guy named Gary Peterson,
7 published in ACM TOPLAS, the Transactions on
8 Programming Languages and Systems, called,
9 "Concurrent Reading While Writing."

10 Ten years before Duvall. And it was
11 one of a series of papers that established a --
12 this sort of the theoretical and the algorithmic
13 underpinnings of how you can read and write at the
14 same time. And it was applied to databases and
15 operating systems to show how they can be used --
16 they can operate in parallel with modification.
17 And that's an example of something a person of
18 skill would know.

19 And I don't cite anything here
20 because -- well, so I'm just giving you a cite, and
21 the point is that cite is over ten years prior to
22 Duvall. And that's evidence that this stuff is

1 just so well known that no cite is -- is necessary.

2 No cite would be necessary for a
3 person of ordinary skill in the art. So maybe for
4 the attorneys who aren't persons of ordinary skill
5 in the art, I have given you a cite, but it's --
6 it's not stock and trade.

7 Q And is it also stock and trade that
8 any application using a database wouldn't have to
9 be taken offline?

10 A Yes.

11 Q Okay.

12 A Yes, taking -- if it -- if the
13 application that's using the database had to be
14 taken offline, then it makes no sense to say that
15 you can update a database while it's being used.
16 So the whole notion of concurrent reading and
17 writing is that an application -- multiple
18 applications can read and write at the same time
19 without anybody having to go offline.

20 Q Are you saying that any use of a
21 database inherently enables any application from
22 dynamic updating?

1 MR. TUMINARO: Objection to form.

2 THE WITNESS: You know, inherency is
3 always a funny thing with software, because you can
4 always write bad software. Nothing ever stops
5 people from writing bad software. So I'm not
6 saying it's inherent, what I'm saying is that
7 it's -- the -- the '641 patent itself essentially
8 acknowledges -- there's two ways you can do it, you
9 can do it offline or you can do it online. Those
10 are the only two ways. Both of them, therefore,
11 would be obvious things for a POSITA to try.

12 Of those two things that would be
13 obvious for a POSITA to try, the most obvious
14 one, is to design the database to be modified
15 while the system is in operation because that's
16 the way that virtually every database works.

17 BY MR. GOLDBERG:

18 Q Paragraph 153, which is -- you're
19 ready?

20 A Yes.

21 Q You say that, "Since Duvall's system
22 searches the filter database for matching filters

1 when a new data stream is opened, the analysis
2 capability of said probe always reflects the latest
3 and current sets of filters."

4 Did I read that right?

5 A I assume so. I wasn't actually
6 tracking it, but I assume you read it right.

7 Q Okay. Do you want to take a second
8 and read it?

9 A I've read it. I think I -- I'm aware
10 of what this says.

11 Q Okay. Can you show me where in
12 Duvall it expressly indicates that the analysis
13 capability of its filtering system will always
14 reflect the latest and current set of filters?

15 MR. TUMINARO: Objection to the form
16 of the question.

17 THE WITNESS: So, again, this is the
18 issue of connecting dots in Duvall that are --
19 would be very obvious to a person of ordinary skill
20 in the art. So Duvall -- okay. So we start at --
21 so we start at Column 4, at the passage that I
22 cited here, around Line 40, where it describes

1 searching -- searching the filtering database
2 around Line 42. Okay?

3 So discloses you search the
4 filtering database. And this teaches a person of
5 ordinary skill in the art that you're doing this
6 search for each packet, if you will, that is
7 being analyzed here. Okay? So always searching
8 and something comes in.

9 Column 8 is the editing manager of
10 Duvall. And it describes here that the editing
11 filter allows the users to make custom changes in
12 the case that the filtering system is filtering
13 too little or too much. And how -- that this
14 implementation is -- is generally based on known
15 database editing techniques, which would
16 absolutely include the known technique of adding
17 information to a database while the database is
18 operational.

19 So this is what teaches a person of
20 ordinary skill in the art that you edit, the
21 edits are pushed to the database, and at the next
22 search for a filter, you're going to pick up the

1 latest filters.

2 BY MR. GOLDBERG:

3 Q If I can refer you to Duvall,
4 Column 3, Lines 46 to 49.

5 A Sure. Got it.

6 Q And do you see that it indicates that
7 a database is typically maintained on the hard
8 drive, but then copied to RAM during operation?

9 A I see that.

10 Q A fair read?

11 A Yes.

12 Q Okay. Edits to the database on the
13 hard drive aren't going to be automatically
14 reflected in the RAM copy until it's copied again
15 into RAM, right?

16 A So this is describing the client-side
17 filtering system, which is not the embodiment in
18 Duvall that I'm relying on.

19 Q And you're relying on the server
20 embodiment?

21 A Correct.

22 Q Okay. Where in Duvall does it

1 discuss how the database is stored in the server
2 embodiment?

3 A I don't know that Duvall discloses
4 that detail, because that's just simply an
5 implementation detail that's well within the
6 knowledge of a person of ordinary skill in the art.
7 Again, because it's saying that -- you know,
8 because you're using known database editing
9 techniques, I think a person of skill in the art
10 would understand that you're just using known
11 database technology.

12 Duvall isn't claiming any innovation
13 in databases, so that detail isn't specified here,
14 but that's well within the knowledge of the person
15 of ordinary skill in the art's knowledge.

16 Q But would you agree with regard to
17 the embodiment disclosed at Column 3, Lines 46 to
18 49, that after the database in the hard drive is
19 updated, the application is working off old data
20 until the database is copied again to RAM?

21 A You know, I wouldn't read a lot into
22 this passage in Column 3, knowing how databases

1 actually work. When it says, could be copied in a
2 RAM, not is copied in a RAM, a person of skill
3 would probably understand this to mean that as
4 results are obtained from the database, they're
5 copied into RAM.

6 So the database is maintained on the
7 hard drive, and the database is the thing that's
8 disclosed as being searched. So the fact that you
9 may have some search results cached in RAM doesn't
10 take away from the point that as you push things in
11 a database, even in this client embodiment, which
12 is not the one I'm relying on, they still would not
13 be immediately available.

14 Q So you agree that in a client
15 embodiment, there are updates to the database that
16 may not be immediately available as disclosed in
17 Duvall Column 3?

18 MR. TUMINARO: Objection. Asked and
19 answered.

20 THE WITNESS: The answer is no, I do
21 not agree.

22 BY MR. GOLDBERG:

1 Q Okay. And why don't you agree that
2 there may be updates in the database in Duvall in
3 the client embodiment that are not immediately
4 available?

5 MR. TUMINARO: Objection. Asked and
6 answered.

7 THE WITNESS: Yeah, we covered this.
8 The database, the database, would typically be
9 maintained in the client's hard drive. The
10 database is the thing that is searched, it's
11 disclosed as being searched.

12 So, therefore, a person of skill in
13 the art would understand that the database on the
14 disk is the one that's searched as it relates to
15 the searching feature that's disclosed in Duvall.
16 BY MR. GOLDBERG:

17 Q So Duvall is searching the hard-drive
18 copy, not the RAM copy. Is that what you're
19 saying?

20 MR. TUMINARO: Objection to the form
21 of the question.

22 THE WITNESS: Yeah, so when it

1 says -- so, first of all, it doesn't say the
2 database is copied into RAM, it just says it could
3 be copied into RAM. And when Duvall talks about
4 searching the database -- so a person of skill in
5 the art would understand that what's -- what Duvall
6 was talking about here is caching, is the fact that
7 search results can be sorted in RAM as a
8 performance optimization.

9 This is classic, very
10 straightforward, database operations, consistent
11 with the fact that Duvall talks about using known
12 database techniques.

13 The master database is stored on
14 the hard drive. That is what is updated and
15 that's what a person of ordinary skill in the art
16 would understand is searched in the client
17 embodiment, which again is not the embodiment
18 that I'm relying on.

19 BY MR. GOLDBERG:

20 Q But would you agree in the client
21 embodiment of Column 3, that caches are sometimes
22 out of date?

1 A Caches can certainly be out of date,
2 which is why any system, in particular a database
3 system, would be known to run a cache consistency
4 protocol to make sure the cache always has fresh
5 contents. This again is a classic problem in
6 databases, and actually transcends databases.

7 And persons of ordinary skill in the
8 art know that there are ways -- that a fundamental
9 problem is you have to mitigate the issue of cache
10 inconsistency, otherwise known as making your cache
11 consistent, so that if you write something to the
12 master copy, you invalidate in the cache, if
13 there's inconsistent data in the cache.

14 Q Where does Duvall discuss a cache
15 consistency protocol?

16 A This is under the notion -- the
17 rubric of known database editing techniques. Cache
18 consistency is a problem that goes back to the
19 1960s, and it's something that persons of ordinary
20 skill in the art know about. It's a problem that
21 exists at all levels of the storage hierarchy, it
22 exists between the processor and the processing

1 cache, between the registers and main memory,
2 between a memory cache and main memory, between a
3 disk cache and storage on a disk.

4 This is what a person of ordinary
5 skill in the art knows, and knows that there are
6 protocols to mitigate the effects of cache
7 inconsistency. And that's all wrapped up in
8 Duvall's disclosure of known database editing
9 techniques, that if you don't edit a database -- if
10 you edit the database, you have to deal with the
11 cache consistency problem.

12 Q I'm going to move on from Chu, for at
13 least a bit here, and focus on Claim 6 of the '641
14 patent.

15 A Okay. Claim 6. Got it.

16 Q So Claim 6 refers to the multistage
17 analysis, including analysis at the probe and
18 analysis at a secure operations center.

19 Do you see that?

20 A I do.

21 Q Okay. And the multistage analysis is
22 referred to back in Claim 2. Fair?

1 A Yes.

2 Q Okay. And the multistage analysis
3 refers to the identifying step of Claim 1. Is that
4 fair?

5 A Yes.

6 Q Okay. And the identifying step is
7 labeled as Step B in Claim 1?

8 A Yeah, the identifying step is part of
9 B. Yeah, I would agree.

10 Q And Step B, including the identifying
11 step, occurs before Step C. Do you agree?

12 MR. TUMINARO: Objection to the form.

13 THE WITNESS: You're just asking me
14 does B occur before C?

15 BY MR. GOLDBERG:

16 Q In Claim 1 of the '641 patent, yes.

17 A For a particular event, I would --
18 for a particular identified event, I would say
19 that's -- at least the identifying step of B, the
20 identifying limitation, which is, I'll just read it
21 as identifying potentially security-related events
22 represented in the status data. That that step has

1 to occur before communication of the identified
2 events to an analyst system.

3 Q And would you agree that the
4 requirements of Claim 6 --

5 A Six.

6 Q -- are referring to Element B -- let
7 me strike that.

8 Would you agree that the requirements
9 of Element 6 further build on the limitations of
10 Element B of Claim 1 of the '641 patent?

11 THE WITNESS: Could you read the
12 question back?

13 (The reporter read as requested.)

14 THE WITNESS: Thank you.

15 Perhaps you will accept this
16 answer. I believe that Claim 6 narrows the
17 disclosures -- the limitations of B of Claim 1.

18 BY MR. GOLDBERG:

19 Q And I'm, in fact, happy with that
20 answer.

21 Let's move on to Claim 15.

22 A Okay.

1 Q What is -- do you have an
2 understanding of what the word "self-tuning" means
3 in the context of Claim 15 of the '641 patent?

4 A A person of skill would understood
5 here that self-tuning just means that the probe
6 itself is adapting based on previously collected
7 status data.

8 Q And when you say "the probe itself,"
9 you're not referring to a human, right?

10 A I don't know. Let me -- so in 15, I
11 mean, the probe is tuning itself in the sense that
12 it's now basing its operation on updates that have
13 been based on previously collected status data. So
14 there may be a human in the loop, but the -- the
15 probe itself is the thing that's changing its
16 behavior because it now has, for example, new
17 filtering rules.

18 Q In the context of Claim 15, what does
19 instantaneous mean?

20 A So instantaneous, I think, is a bad
21 word to have in a patent like this because nothing
22 is instantaneous. So to the extent it's not

1 indefinite, I think a person of skill would just
2 read that as -- as soon as possible.

3 Q In your opinion, is tuning still
4 instantaneous if the analysis capability of
5 Duvall's probe is not actually dynamically
6 modified?

7 A I don't understand the question.

8 Q Okay. Claim 1 of the '641 patent, in
9 Limitation E, talks about dynamic modification. Do
10 you see that?

11 A Yes.

12 Q Okay. Does dynamic modification in
13 Element E of Claim 1 need to actually occur in
14 order for the probe to be instantaneously
15 self-tuned?

16 MR. TUMINARO: Objection to the form
17 of the question.

18 THE WITNESS: I think dynamic
19 modification is certainly a way in which
20 instantaneous self-tuning can occur. But are there
21 other ways in which it can occur? I haven't
22 considered that question.

1 BY MR. GOLDBERG:

2 Q Claim 16 refers to -- strike that.

3 Claim 16 of the '641 patent refers to
4 the dynamic modification step.

5 Do you see that?

6 A I do.

7 Q Okay. And at paragraph 180 of your
8 declaration on page 195, if you can turn there and
9 then I'll ask you a question about that.

10 A Okay. I'm there.

11 Q Okay. It's the third sentence in the
12 paragraph you say, "A person of ordinary skill in
13 the art would have understood the Duvall-Chu
14 combination prompts a user to consider past-network
15 activity to determine how to edit the filters."

16 And I removed a few words that were
17 extraneous to the sentence. But do you see that?

18 A Yes, I see that.

19 Q Okay. When you say a person of
20 ordinary skill in the art would have understood at
21 the start of that sentence, are you saying it's
22 expressly disclosed by Duvall or Chu?

1 A Well, what I'm saying is that I think
2 there are elements of this that are expressly
3 disclosed in Duvall and Chu; however, the full
4 scope of the concept of prompting a user to
5 consider past network activity is obvious in light
6 of the Duvall-Chu combination.

7 Q I'm going to hand you a document
8 which we'll refer to as EX2005 entitled, "What
9 TCP/IP Protocol Headers Can Tell Us About the Web."
10 (Jeffay Deposition Exhibit Number EX2005
11 marked for identification.)

12 THE WITNESS: Awesome.

13 BY MR. GOLDBERG:

14 Q Why is it awesome, sir?

15 A A, it's shocking. This is 23 years
16 ago. This was a lot of fun work. And I haven't
17 thought of dear Felix Hernandez-Campos or David Ott
18 in a long time.

19 Q So what is EX2005?

20 A This appears to be a copy of a paper
21 that my students and I wrote; although the lead
22 author is -- I don't know how to describe him, a

1 research associate. He's not -- the first author
2 is not a student -- that we wrote and published way
3 back when in 2001 about -- I don't know -- I think
4 the title fairly describes it, what TCP/IP
5 Protocol, how headers can tell us about the web.

6 Q On the first page, the last
7 paragraph, you note an explicit decision not to
8 capture HTTP protocol headers.

9 Do you see that?

10 A You're going to have to help me.
11 Which paragraph?

12 Q It's the last paragraph on the first
13 page.

14 A The one that says "final motivation"?

15 Q It's about midway down, the "final
16 motivation" paragraph. You say, "We explicitly
17 decided not to capture" --

18 A Oh. Oh, yes.

19 Q -- "protocol headers."

20 A Yes. Sorry. I thought I heard that
21 as the last sentence. Yes, I see that.

22 Q Okay. What's an HTTP protocol

1 header?

2 A I don't know how to describe it other
3 than to say it's a header of a packet, according to
4 the HTTP protocol.

5 Q And why did you decide not to capture
6 HTTP protocol headers?

7 A Fascinating question. At this time
8 in history, in the networking measurement
9 community, there was a question about whether or
10 not doing that was illegal. There was some
11 consensus that if you didn't go past the transport
12 layer header, that was okay. And there was some
13 concern that looking further into a packet without
14 a user's permission was illegal.

15 Q And are those the privacy concerns
16 about tracing user's data referred to in the
17 article?

18 A Yeah, that's the polite -- the polite
19 way we said it. There were privacy concerns.

20 Q In reaching your opinions in this
21 case, did you consider these privacy concerns
22 anywhere in your declaration?

1 A No. I mean, these privacy concerns
2 that existed for this work would not appear in --
3 are not relevant to the patent or any of the prior
4 art.

5 Q Why not?

6 A You can filter your own traffic and
7 you can look at your own -- as much of your own
8 traffic as you would like, and network operators --
9 so this all goes back to the Pen Trap and Trace Act
10 of, like, 1920, which defines wiretapping. And the
11 Act had not been updated, as best I understand it,
12 since then and there were big issues as to how does
13 that apply to people that are doing network traces.
14 And if we do this kind of work, are we wiretapping?

15 And that was -- that was an open
16 legal question. And we were led to believe that --
17 so we actually -- you know, we actually had to talk
18 to lawyers to do this research. And we were led to
19 believe -- I mean we're working with a bunch of
20 graduate students who want to do anything, and they
21 know the mechanisms, they're like, "Oh, we can --
22 we can monitor anything."

1 And we could. We actually had a live
2 tap on the campus network. We could see anything
3 we wanted to, but the grownups in the room
4 consulted with lawyers. And our understanding was
5 that a network operator, so someone who would
6 operate a firewall, operate a network, they have
7 the right to trace as to -- to record and trace as
8 far into a packet as they want, because in the law
9 there was an exception for -- I can't remember the
10 phraseology, but something like operational
11 considerations.

12 So our understanding at the time was
13 that if you're talking about the '641 patent, or
14 Duvall, or any of the prior art where people are
15 basically monitoring networks who are -- could be
16 considered the manager of the network or an
17 operator of the network, that they would not have
18 the constraints that we have.

19 And so we actually got around that in
20 a subsequent paper by just taking one of the
21 students and making them an employee of the
22 networking group on campus, and then we could do

1 whatever we wanted.

2 MR. GOLDBERG: Let's take a break.

3 (Recess from 1:40 p.m. to 1:50 p.m.)

4 (Jeffay Deposition Exhibit Number EX1014
5 marked for identification.)

6 BY MR. GOLDBERG:

7 Q Dr. Jeffay, I'm going to hand you an
8 exhibit marked EX1014. I think we pronounce it the
9 Trcka reference, unless you've got a different way
10 of saying it, we can go with that.

11 A We put an "I" in it, I think. I
12 think we said Trcka.

13 Q Trcka.

14 A Yeah.

15 Q Good.

16 A When you only got one vowel.

17 Q We'll go with that.

18 If I can refer you to your
19 declaration at paragraph 185.

20 A Okay.

21 Q It's pages 97 to 98.

22 A Got it.

1 Q In paragraph 185 of your declaration,
2 you discuss Trcka's set of interactive analysis
3 applications.

4 Do you see that?

5 A Are you referring to the sentence on
6 the bottom of page 97 to the top of 98? I see
7 that.

8 Q And would you agree that Trcka only
9 discloses using interactive analysis in connection
10 with archival copies of traffic?

11 MR. TUMINARO: Objection to the form.

12 THE WITNESS: I don't recall the
13 disclosures in Trcka at that level of detail to
14 recall whether or not Trcka exclusively discloses
15 that or not. Let me quickly review my memory.

16 BY MR. GOLDBERG:

17 Q Take your time, sir.

18 A Thank you.

19 Q If it helps, sir, you can certainly
20 feel free to read whatever you want, but I will
21 direct you to paragraph 53 on page 5 of Trcka.
22 But, again, feel free to read anything you want.

1 A What I was going to say is could you
2 just read back the question, please?

3 (The reporter read as requested.)

4 THE WITNESS: As I recall, that is --
5 that is a focus of Trcka. I don't recall if that
6 is Trcka's exclusive focus.

7 BY MR. GOLDBERG:

8 Q Can you point me to any place in
9 Trcka that discloses how its interactive
10 applications can be used on live data, as you sit
11 here today?

12 A Yeah, I don't know that it's limited
13 to that. I'll note that in its description of the
14 present invention, in paragraph 9 on page 1 of
15 Trcka, it describes how to interactively monitor
16 and analyze traffic on a LAN. So interactively
17 monitoring would tell a person of skill in the art
18 that the present invention here wasn't limited to
19 archives of traffic.

20 In addition, it discloses that -- I
21 lost it. Also in that paragraph 9, it's talking
22 about the system being implemented in the computer,

1 which passively captures and monitors bidirectional
2 traffic. So I think that would also tell a person
3 of skill in the art that Trcka is capable and
4 interested in -- in looking at and analyzing live
5 traffic.

6 Q And is there any disclosure in Trcka
7 of interactive analysis applications that work on
8 live traffic?

9 MR. TUMINARO: Objection. Asked and
10 answered.

11 THE WITNESS: Yeah. I mean I would
12 just point back to the paragraphs that I read that
13 say that Trcka is a system, it's present invention
14 is capable of analyzing traffic interactively as
15 it's flowing on a LAN. So that would apply to --
16 that would certainly apply to the tools that Trcka
17 discloses. I certainly -- I don't believe there's
18 a disclosure of the tools in Trcka being limited to
19 just the archival embodiments.

20 BY MR. GOLDBERG:

21 Q Would a person of ordinary skill in
22 the art consider the analysis of archived traffic

1 to raise the same issues as analyzing live traffic?

2 A I don't know what you're referring to
3 by -- what you're sweeping in when you're referring
4 to issues, but typically when you are -- so there's
5 a notion of stateful inspection, which, for
6 example, was part of what Duvall was about.

7 And stateful inspection, it
8 fundamentally means that you are basing your
9 analysis of a packet, data that you're seeing right
10 now, based on data you have previously seen.

11 So that is certainly covered by
12 Trcka, as well as other references. So that sort
13 of -- so when you're talking about analyses that
14 are -- there are certain analyses that you can do
15 on archived traffic that you fundamentally can't do
16 on live traffic, and stateful inspection is an
17 example of that.

18 Q So you can't perform a stateful
19 inspection on live traffic?

20 A Well, you can in the sense -- but a
21 stateful inspection requires that you have state,
22 that you have -- state refers to recording

1 something. So you can do a stateful inspection on
2 live traffic, but it's going to require information
3 about traffic that you have previously seen.

4 So you can process traffic in
5 realtime, but that processing is going to be based
6 on packets or events that you've previously seen.

7 Q Does Duvall disclose applying its
8 filters to archived traffic?

9 A Not archived traffic, per se, but
10 Duvall discloses what a person of skill would
11 understand as stateful inspection. And stateful
12 inspection fundamentally means you remember things
13 about packets you have previously seen.

14 Q Referring to Duvall, and the example
15 at Column 4, Lines 56 through 58, referring to the
16 open command.

17 A Fifty-six through 58. Okay. Got it.

18 Q Could Duvall block the execution of
19 the open command if the open command was recorded
20 in archive traffic rather than live traffic?

21 A I'm sorry. Say that again. Can
22 Duvall --

1 MR. GOLDBERG: Can you read it back,
2 please?

3 (The reporter read as requested.)

4 THE WITNESS: Well, the blocking of
5 the open command is something that happens live.
6 Depending on which actual TCP -- so the connection
7 establishment process in TCP is a three-way
8 process. There's three messages that get
9 exchanged. And depending on which one -- and then
10 blocking any one of them is really sufficient to
11 block the connection establishment.

12 So it's not clear which one
13 specifically Duvall is interested in blocking.
14 But to the extent it's blocking something other
15 than the first message, that's sort of an example
16 of a stateful processing, because you're keeping
17 track of the state of the connection, the fact
18 that you've seen one type of packet and now
19 you're seeing another type, that tells you that
20 this TCP process is in a particular state and
21 then you block it.

22 So the actual command that's

1 blocked is seen live, but the blocking may be
2 based on -- the block decision may be based on
3 the fact that you've seen something previously.

4 BY MR. GOLDBERG:

5 Q So Duvall can't work entirely on
6 archived traffic, it needs some live traffic,
7 correct?

8 A I don't understand. I can't parse
9 that question.

10 Q Let me rephrase it.
11 The filtering system of Duvall
12 requires some live traffic in order to operate,
13 correct?

14 A Well, the filtering system in Duvall
15 fundamentally only filters live traffic. In terms
16 of what it allows or what it blocks, that's only
17 based on -- it's only filtering -- it's only
18 allowing or blocking traffic that it sees live.

19 Q Okay. And you would agree that the
20 only examples in Trcka refer to archived and not
21 live traffic, correct?

22 A So Trcka speaks for itself. I don't

1 recall all the examples sitting here today, but
2 again, I pointed to passages -- a passage in Trcka
3 where it says that it's clearly not limited to
4 working with live -- with archived traffic.

5 Q And that's paragraph 9 that you're
6 referring to?

7 A That was the one that I pointed you
8 to.

9 Q In combining Duvall to -- with Trcka,
10 did you consider how Trcka's techniques that are
11 intended to apply to archived traffic might have to
12 be adopted in order to apply to Duvall?

13 MR. TUMINARO: Objection to the form.

14 THE WITNESS: For the purpose that I
15 am using Trcka, I don't really think there is -- so
16 the answer is yes, I considered it. And I really
17 don't think there's anything out of the ordinary
18 that would have to do -- that a person with skill
19 would have to do to combine Trcka's teachings of
20 recording and viewing past activity in the
21 Duvall-Chu combination.

22 BY MR. GOLDBERG:

1 Q In paragraph 185, did you discuss any
2 modifications that might need to be made to the
3 applications of Trcka in order to combine them into
4 Duvall and Chu?

5 A I don't think there are any
6 modifications that -- any substantive modifications
7 that need to be made to the applications of Trcka
8 to work with Duvall and Chu. At the end of the
9 day, Trcka's applications are just working on
10 captured packet data. And that is what you would
11 have in the combined Duvall-Chu-Trcka system. So I
12 don't think any substantive modifications are
13 necessary.

14 Q Turning back to Trcka. I want to
15 draw your attention to paragraph 54, I believe.

16 A Okay.

17 Q And 54 is --

18 A I got it.

19 Q Paragraph 54 and 55 of Trcka refer to
20 a hardware-level architecture. Do you see that?

21 A Yes.

22 Q Where do you discuss in your

1 declaration how Trcka's hardware components could
2 be added to the Duvall-Chu system?

3 MR. TUMINARO: Objection to form.

4 THE WITNESS: I'm not adding Trcka's
5 hardware components. What's described here in 54
6 and 55 is the means by which Trcka's system
7 acquires network traffic. Duvall already has a
8 means of capturing network -- network traffic.

9 So I'm not -- I'm not -- there's no
10 need to take these disclosures of hardware in
11 Trcka and bring them into Duvall and Chu. What
12 I'm primarily using Trcka for is for its
13 techniques of analyzing archived traffic, which
14 are completely independent of the means by which
15 the traffic was originally acquired.

16 BY MR. GOLDBERG:

17 Q And would you agree that Duvall's
18 disclosed means of capturing network traffic are
19 different than the means of capturing network
20 traffic disclosed in Trcka, starting at
21 paragraph 55?

22 A No, I would not. I would say they're

1 not different in any -- in any substantive way that
2 affects the disclosures in Duvall or the
3 disclosures in Trcka. It's -- they differ in the
4 details, but they are just that, they are just
5 details. They are just different ways in which you
6 get packets, and neither Trcka, nor Duvall, none of
7 their disclosures are a function of the way in
8 which packets are captured.

9 Q If I can refer you to paragraph 197
10 at page 103 of your declaration.

11 A Paragraph 197. Got it.

12 Q And am I correct that at
13 paragraph 197, you are discussing a secure
14 operations center?

15 A Yes.

16 Q And is that the same secure
17 operations center you discussed in context with
18 Claim 6?

19 A I don't know that I have addressed
20 that issue. I mean, my report speaks for itself,
21 but I -- let me see these back cites that I have.
22 It's Section 7G.

1 So the report speaks for itself, but
2 sitting here today, it does look like I'm saying
3 that's the same secure operations center in
4 Claim 10 and Claim 6.

5 Q I just want to ask the question a
6 little bit differently.

7 A Okay.

8 Q With regard to the secure operations
9 center you referred to in paragraph 169, which
10 relates to Claim 6 --

11 A Okay. Wait. 169. Got it.

12 Q -- is that the same secure operations
13 center you're talking about in paragraph 197 in
14 relation to Claim 10?

15 A So Claim 6 and Claim 10 are -- the
16 analysis is slightly different because they're
17 different -- I'm saying they're disclosed by
18 different systems. So this -- the starting point
19 for Claim 10, the secure operations center, the
20 starting point is the secure operations center that
21 was discussed with regard to Claim 6.

22 Q And you would agree --

1 A Yes.

2 Q Sorry. My apologizes. I didn't mean
3 to cut you off there.

4 With regard to paragraph 197, would
5 you agree that the secure operations center you
6 discussed is remote from the probe?

7 A I'm saying that the secure operations
8 center could be either local to the probe or at a
9 remote site -- a secure remote site.

10 Q Does Trcka teach how to implement its
11 analysis applications at a remote secure operations
12 center?

13 A I think persons of skill in the art
14 reading Trcka would understand that you can
15 practice -- you can use Trcka's analysis
16 applications anywhere you have access to the data.
17 The -- in principle, the location of the analysis
18 tools doesn't matter as long as you have access to
19 the data.

20 Q If I can refer you to Trcka,
21 paragraph 12.

22 A Got it.

1 Q And it says, "It's important that the
2 recording process captures and records data at the
3 data link level where the data has transferred its
4 packets."

5 Do you see that?

6 A It says it's an important benefit. I
7 see that.

8 Q What is the data link level?

9 A A person of ordinary skill in the art
10 would understand that that is a reference to the
11 data link layer of the canonical protocol stack,
12 which is layer two. And to make it more concrete,
13 an example of a data link layer would be, for
14 example, ethernet.

15 Q What layer is TCP/IP in the canonical
16 stack?

17 A It's commonly understood as layer
18 four, which is the transport layer.

19 Q So would it be fair to describe the
20 data link level as a lower layer in TCP/IP?

21 A Yes.

22 Q Can you show me where in Trcka it

1 teaches how to get packet level data to a remote
2 SOC?

3 A I'm sorry. Packet level data to a
4 remote?

5 Q SOC, secure operations center.

6 A SOC. Thank you. SOC. Okay.

7 Q Let me reask the question so it's
8 clear.

9 A Thank you.

10 Q I've been hanging around too many
11 security folks with the acronyms.

12 A Yes. Yes.

13 Q Can you show me where Trcka teaches
14 how to get packet level data to a remote secure
15 operations center?

16 A Thank you.

17 Trcka speaks for itself. I don't
18 recall where it discloses transmitting the data,
19 but once you've captured data, it's data. Moving
20 it anywhere is trivial, and well within the level
21 of skill of a person of ordinary skill in the art.

22 And a person of ordinary skill in the

1 art would not need any teaching or suggestion of
2 moving the data, because that's just what you do
3 with data. I mean, it's -- it's -- it's an obvious
4 operation to data, which you always have to take
5 data to wherever the processing is being done and
6 getting it there is trivial.

7 Q If you were building a security
8 system for a client at the time of the filing of
9 the '641 patent, would you have considered the
10 privacy implications of that security system?

11 A I'm not sure what you're referring to
12 when you say "privacy implications."

13 Q Well, in reaching the conclusion that
14 a person of ordinary skill would have been
15 motivated to combine Trcka into Duvall-Chu so that
16 Trcka's analysis applications could be used at the
17 SOC, at paragraphs 197 and 198 in your declaration,
18 did you consider any privacy concerns relating to
19 letting a third-party security operations center
20 have a full recording of a company's packet level
21 traffic?

22 MR. TUMINARO: Objection to form.

1 THE WITNESS: I see. So if by
2 privacy concerns, it's letting analysts have access
3 to your data. If they're a third party working for
4 you, in theory, all of those issues get nailed down
5 as part of your service contract. So whatever
6 issues are there, they're eminently solvable.

7 There's a handful of solutions that
8 you apply. Persons of skill would understand
9 this. And whether or not those were important in
10 a particular system or combination of systems, is
11 a function of the unique details of that system.

12 BY MR. GOLDBERG:

13 Q And did you discuss those solutions
14 in your declaration in reaching your opinions here?

15 A My report speaks for itself. I don't
16 recall discussing those solutions because, as I
17 say, there's nothing new under the sun with regard
18 to those solutions. Securing data is -- it's well
19 known how to do that.

20 Persons of skill will understand how
21 to do that. And you don't require a reference to
22 mention that in order to either suggest it or to

1 tell a person of skill in the art they have to do
2 that.

3 Q In reaching your opinions in this
4 case regarding combining Trcka with Duvall-Chu, at
5 paragraphs 197 to 198 of your declaration, did you
6 consider any security concerns relating to any
7 increased risk that a company's data would be
8 exposed because it's giving remote access to all
9 the company's packet level traffic to a SOC?

10 MR. TUMINARO: Objection to the form.

11 THE WITNESS: Yeah, so it's not
12 giving all of its data. There's no disclosure of
13 giving all of your data. And to the extent there
14 are any privacy concerns, as I say, these things
15 get worked out when you contract with a third
16 party.

17 And there's any number of very
18 obvious, very well-known techniques that you can
19 use to mitigate any privacy concerns you have,
20 some of which are -- for example, are discussed
21 in my 2001 paper that we talked about, "What
22 TCP/IP Protocol Headers Can Tell Us About the

1 Web."

2 BY MR. GOLDBERG:

3 Q So I know it was a long question,
4 sir. I think maybe it wasn't clear. I wasn't
5 referring to privacy concerns, I was referring to
6 security concerns that would be inherent in
7 exposing a company's packet level data to a SOC.

8 A So my answer is the same. And it's
9 interesting that you went there, because that's how
10 I was hearing your first questions when you were
11 talking about privacy. I was hearing them in terms
12 of security, then I got bought into your privacy
13 language and didn't realize you had switched to
14 security.

15 But my answer is the same, whether
16 it's security or privacy, they're sort of two
17 sides -- as I hear your question, it's two sides of
18 the same coin. And there are common, well-known,
19 established techniques. Some of them are described
20 in my paper, which was in public domain by 2001,
21 for how you mitigate any security or privacy
22 concerns in a situation like that.

1 Q Okay. But your declaration doesn't
2 discuss any of those solutions to mitigate security
3 or privacy concerns, does it?

4 A It doesn't because there is no
5 security or privacy concern in any of the -- in
6 the -- in the claims. And there's nothing -- for
7 example, there's no issue about this remote
8 operations center or secure operations center.

9 There's no security or privacy issue
10 that's discussed in the '641 patent, there's no
11 requirement for it in the claims, and there's
12 basically no issue for that that would transcend a
13 person of ordinary skill in the art's knowledge
14 that exists in any of the combinations that I'm
15 proposing.

16 Q This is the last question in this
17 sequence of questions.

18 With regard to paragraphs 197 to 198
19 of your declaration, did you consider any bandwidth
20 issues relating to retransmitting all the company's
21 packet level data to a secure operations center in
22 connection with the Duvall-Chu-Trcka combination?

1 A What bandwidth issues are you
2 contemplating?

3 Q Well, is it your opinion there would
4 be any bandwidth issues if you retransmit all the
5 company's packet level data to a secure operations
6 center at the time of the filing of the '641
7 patent?

8 A I'm not sure I understand what
9 you're -- let me just say this: Moving -- if you
10 capture data, moving data is trivial. And you
11 don't generate more data than you captured, you
12 typically generate less data than you captured.

13 So as long as you have a network
14 that's at least as capable as the network that
15 you're capturing on, which is what everybody does,
16 moving data from the point of capture to a point of
17 analysis is trivial.

18 There are -- there are -- in a
19 well-designed system, the most obvious design for
20 the system is you don't use a slower link to move
21 the data than the link you're capturing on. You
22 typically use either the same link or a faster

1 link. And in that scenario, there are no issues of
2 bandwidth. And a person of ordinary skill in the
3 art would understand that.

4 (Jeffay Deposition Exhibit Number EX1015
5 marked for identification.)

6 BY MR. GOLDBERG:

7 Q I'm going to hand you a document
8 marked EX1015. It's U.S. Patent Number 6,484,315,
9 Ziese.

10 A Okay.

11 Q And I'm going to refer you to
12 paragraph 210 of your declaration.

13 A Okay. I'm there.

14 Q Okay. In paragraph 210, you talk
15 about using Duvall's filtering system with multiple
16 servers. Do you see that?

17 A I do.

18 Q Okay. Which reference provides the
19 motivation to make Duvall use more than one server?

20 A Where are we? Well, I think it comes
21 from -- I mean, the motivation comes from both
22 references independently. I mean Duvall -- Duvall

1 explains that the clients can be distributed, they
2 can be part of a LAN, they can be part of a
3 broadband network.

4 And in the diagram of Duvall, it
5 illustrates the server-based embodiment, Figure 1,
6 a person of skill would understand that the network
7 14 is -- could have sort of an arbitrary topology.

8 And just as a general matter, persons
9 of skill in the art understand that when you're
10 monitoring a network, it's very common to
11 monitor -- for a network that's comprised in
12 multiple links, you monitor on each link typically
13 with a separate monitoring device, so a particular
14 server.

15 So it's in the -- it's in the general
16 knowledge of a person of ordinary skill in the
17 art's knowledge, and it's suggested by Duvall's
18 description of clients being both on a LAN or on a
19 broadband commercial service, a broadband network.

20 Q And where do you discuss this in your
21 declaration?

22 A I'm reading to you from paragraph 209

1 on page 108, as motivation for clients being
2 distributed widely beyond a traditional local area
3 network, which motivates a distributed corporate
4 network as discussed in paragraph 210, which then
5 motivates employing multiple servers.

6 Q At the end of paragraph 211, you talk
7 about essentially analyzing filters. Do you see
8 that?

9 A Yes.

10 Q And where does that concept come
11 from?

12 A That comes from any number of places.
13 We could start with Duvall's disclosures of the
14 location, the -- the place, the server, if you
15 will, in certain embodiments of where the
16 modification of the database takes place. There's
17 also the centralized monitoring facility disclosed
18 in Chu, and the same is disclosed in Trcka.

19 Q And where in your declaration is that
20 disclosed?

21 A Well, I talk about it in
22 paragraph 211.

1 (Jeffay Deposition Exhibit Number EX1033
2 marked for identification.)

3 BY MR. GOLDBERG:

4 Q I'm going to hand you a document
5 marked as EX1033. It's the Cogger reference. It's
6 U.S. Patent Number 685,9783.

7 A Thank you.

8 Q Sir, does Cogger discuss opening a
9 trouble ticket in response to anything other than a
10 telecommunication network fault or a service
11 problem?

12 A I think Cogger discloses opening up
13 trouble tickets generally for the concept of what
14 it just calls an "event," and I can't remember if
15 it uses the word "network event" or not. So a
16 person of skill reading Cogger would understand
17 that it's fundamentally about this customer support
18 management system and this trouble ticket system.

19 And that a person of skill would
20 understand from reading Cogger that its disclosures
21 are not limited to any -- the use of its teachings
22 are not limited to transcend -- it's generic,

1 it's -- at the end of the day, it's a generic
2 trouble ticket system. Cogger discloses specific
3 uses of it. A person of skill would understand
4 that Cogger is not limited to those uses.

5 Q And in paragraph 224 of your
6 declaration, you mentioned Cogger's network
7 administrators. Do you see that?

8 A Not yet.
9 Yes.

10 Q Can you show me where Cogger
11 discloses a network administrator for a computer
12 network?

13 A Well, what Cogger discloses, as I
14 say, is a fairly generic -- without taking away
15 from the fact that this is a patent and it's
16 supposedly an invention, but at the end of the day,
17 part of what a person of skill takes away from this
18 is, is this is a generic trouble ticket system.

19 And Cogger teaches that it's for
20 generating trouble tickets relating to services
21 provided by an enterprise. That's at the very,
22 very bottom of Column 2. So a person of skill

1 would understand that would include issues with the
2 network.

3 The -- further down in Column 3, it
4 specifically says, like around Line 56, that the
5 customer is going to enter any information into a
6 problem classification dialogue, the problem
7 classification dialogue describes the type of
8 network problem, or failure.

9 So Cogger discloses that network
10 issues can be recorded in trouble tickets. And a
11 person of skill would understand that when it comes
12 to dealing with the trouble tickets, as disclosed
13 in Cogger, if you're talking about a network event,
14 a network problem, a network failure, that this is
15 going to be resolved by someone with network
16 credentials. And a person of skill in the art
17 would understand that an obvious example of that
18 would be some sort of network analyst.

19 Q In your declaration, let's turn to
20 paragraph 230.

21 A Got it.

22 Q You say that in paragraph 230 of your

1 declaration, that a person of ordinary skill in the
2 art would have implemented Cogger's CSM. Do you
3 see that?

4 A Yes.

5 Q What's the CSM?

6 A That stands for what Cogger was
7 calling, I think, customer service management
8 system or -- let's see if we can -- I think in --
9 in my report I think I defined that one when I
10 first talk about Cogger. Yeah, it's what Cogger
11 refers to as a customer service management system.

12 Q And with reference to Column 13,
13 Lines 22 to 24, of Cogger, would you agree --

14 A Hold on. Hold on.

15 Q Sure.

16 A Okay. Start with column.

17 Q Column 13.

18 A Thank you.

19 Q Lines 23 to 24.

20 A Got it.

21 Q With reference to Cogger, Column 13,
22 Lines 22 to 24, would you agree that Cogger calls

1 the CSM a legacy host system?

2 A No.

3 Q Why not?

4 A I think what this is saying is this
5 is -- Figure 2. I think the reference to a legacy
6 host system, I think -- I think a person of skill
7 would read that as just a characterization of the
8 computer that is hosting the CSM.

9 Q Can you show me where in Cogger it
10 discloses how to implement the CSM?

11 A I think what Cogger discloses are the
12 functions of the CSM, and some of the data flows of
13 the CSM. And like most patents, it leaves the
14 implementation details up to a person of ordinary
15 skill in the art.

16 For example, the '641 provides no
17 description of how to implement any aspects of its
18 claims. It just states them as functions -- as
19 elements that have particular functions and relies
20 on the knowledge of a person of ordinary skill in
21 the art to do the actual implementation. And I
22 think the '783 patent is just similar in that

1 regard.

2 Q So the '783 patent relies on a person
3 of ordinary skill in the art to know how to
4 implement the CSM rather than expressly disclosing
5 it. Is that fair?

6 A That's an oversimplification of what
7 I just said. So what I said was it discloses the
8 functions of the CSM and the interactions of the
9 CSM with other elements in the system, and it
10 discloses some of the basic components of the
11 CRM -- CSM.

12 And given the disclosures of the
13 systems, its functions, its operations, a person of
14 skill in the art would know -- does not require
15 additional instruction as to how to build this CSM
16 given the disclosures in the '783 patent.

17 MR. GOLDBERG: Let's go off the
18 record.

19 (Recess from 2:40 p.m. to 2:51 p.m.)

20 BY MR. GOLDBERG:

21 Q Sir, did you discuss your testimony
22 with your counsel during any of our breaks today?

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A No.

MR. GOLDBERG: Thank you for your
time, sir.

I pass the witness.

THE WITNESS: Thank you.

MR. TUMINARO: I have no questions.
(Whereupon, at 2:51 p.m., the deposition
of KEVIN JEFFAY was concluded; signature
reserved.)

CERTIFICATE OF NOTARY PUBLIC

I, FELICIA A. NEWLAND, CSR, the officer before whom the foregoing deposition was taken, do hereby certify that the witness whose testimony appears in the foregoing deposition was duly sworn by me; that the testimony of said witness was taken by me in stenotype and thereafter reduced to typewriting under my direction; that said deposition is a true record of the testimony given by said witness; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken; and, further, that I am not a relative or employee of any counsel or attorney employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.



FELICIA A. NEWLAND, CSR

Notary Public

My commission expires:

September 15, 2024

A C K N O W L E D G E M E N T O F
D E P O N E N T

I, KEVIN JEFFAY, do hereby acknowledge I have read
and examined the foregoing pages of testimony, and
the same is a true, correct and complete
transcription of the testimony given by me, and any
changes or corrections, if any, appear in the
attached errata sheet signed by me.

Date

KEVIN JEFFAY

Jonathan Tuminaro, Ph.D., Esq.

jtuminar@sternekessler.com

February 11, 2024

RE: PALO ALTO NETWORKS, INC. vs. BT AMERICAS, INC.

February 7, 2024, Kevin Jeffay (JOB NO. 6447561)

The above-referenced transcript has been completed by Veritext Legal Solutions and review of the transcript is being handled as follows:

___ Per CA State Code (CCP 2025.520 (a)-(e)) - Contact Veritext to schedule a time to review the original transcript at a Veritext office.

___ Per CA State Code (CCP 2025.520 (a)-(e)) - Locked .PDF Transcript - The witness should review the transcript and make any necessary corrections on the errata pages included below, notating the page and line number of the corrections. The witness should then sign and date the errata and penalty of perjury pages and return the completed pages to all appearing counsel within the period of time determined at the deposition or provided by the Code of Civil Procedure.

___ Waiving the CA Code of Civil Procedure per Stipulation of Counsel - Original transcript to be released for signature as determined at the deposition.

___ Signature Waived - Reading & Signature was waived at the time of the deposition.

1 _X_ Federal R&S Requested (FRCP 30(e)(1)(B)) - Locked .PDF

2 Transcript - The witness should review the transcript and
3 make any necessary corrections on the errata pages included
4 below, notating the page and line number of the corrections.
5 The witness should then sign and date the errata and penalty
6 of perjury pages and return the completed pages to all
7 appearing counsel within the period of time determined at
8 the deposition or provided by the Federal Rules.

9 ___ Federal R&S Not Requested - Reading & Signature was not
10 requested before the completion of the deposition.

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1 PALO ALTO NETWORKS, INC. vs. BT AMERICAS, INC.
2 Kevin Jeffay (JOB NO. 6447561)
3 E R R A T A S H E E T
4 PAGE_____ LINE_____ CHANGE_____
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24 WITNESS _____ Date _____
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[analysis - argumentative]

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted

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