UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC. and	)	
FORTINET, INC.,	)	
	)	
Petitioner,	)	
	)	IPR2024-00539
Vs.	)	
	)	
INFOEXPRESS, INC.,	)	
	)	
Patent Owner.	)	Patent
_____	/	8,051,460 B2

DEPOSITION OF ERIC COLE, Ph.D.
(Taken Virtually by Petitioner)
Friday, May 2nd, 2025
9:33 a.m. EDT

Certified Stenographic Court Reporter

1 VIRTUAL APPEARANCES

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1 REMOTE DEPOSITION OF ERIC COLE, Ph.D., a
2 witness called on behalf of Petitioner, before Amy A.
3 Brauser, RPR RMR CRR, Certified Stenographic Court
4 Reporter and Notary Public, on Friday, the 2nd day of
5 May, 2025, commencing at 9:33 a.m.
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1 INDEX OF EXAMINATIONS

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4 INDEX OF EXHIBITS

NUMBER	DESCRIPTION	MARKED/IDENTIFIED
Exhibit 2565	Declaration of Dr. Eric Cole in Support of the Patent Owner's Response to the Petition	6
Exhibit 1027	Excerpts from Computer Networks, Fourth Edition, by Andrew S. Tanenbaum	28

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11 (Exhibits not attached)

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1 P R O C E E D I N G S
2 ERIC COLE, Ph.D.,
3 after having been first duly sworn by the certified
4 stenographer, was examined and testified as follows:
5 EXAMINATION
6 BY MR. BORDER:
7 Q. Good morning, Dr. Cole. How are you?
8 A. Good morning.
9 Q. State your full name for the record,
10 please.
11 A. Eric Cole.
12 Q. And do you have any copies of your
13 declarations, or what papers do you have with you?
14 A. So I have an iPad that I'm doing the
15 Zoom on, and on the iPad, I do have copies of my
16 declaration and the patents.
17 Q. Okay. And do you know how to use --
18 have you used this software before, Zoom, to do a
19 remote deposition?
20 A. Yes, I have.
21 Q. Okay. So I'm going to drop some
22 exhibits into the chat. If it's one of your
23 declarations and you prefer to use whatever version
24 is on your iPad, that's fine.
25 A. Okay.

1 Q. I assume they're all clean copies?
2 A. Yes.
3 Q. Okay. I'm going to drop in your
4 declaration for the '460 Patent proceeding into the
5 chat. This is for IPR2024-00539.
6 (Exhibit Number 2565 was marked for identification.)
7 BY MR. BORDER:
8 Q. Let me know when you've got it open or
9 you've got it in front of you.
10 A. Yes, I have it.
11 Q. Okay. So let's -- if you can go to
12 Paragraph 45, please.
13 A. Okay. I'm there.
14 Q. All right. And so this is an overview
15 of the '460 Patent?
16 A. Correct.
17 Q. And if we were to look at your other
18 declarations, there would be similar overviews of
19 the '484, '450 and '444 patents; is that right?
20 A. That's correct.
21 Q. And just so we don't have to do this
22 four times, you agree that the specifications for
23 each of the challenged patents are identical; is
24 that right?
25 A. That is my understanding.

1 Q. Okay. Great.
2 And so if I refer to them as the
3 "challenged patents," is that okay?
4 A. Yes.
5 Q. All right. So let's -- Paragraph 46,
6 you have some description related to the patent and
7 checking a user's credentials.
8 So let me ask the question: Do you
9 agree that in the context of the challenged
10 patents, that a security policy may include
11 requirements for usernames and passwords?
12 A. Is it okay if I go to one of the
13 patents to use that as a reference?
14 Q. Yes. In fact, if you want to, why
15 don't -- if you already have it, I won't drop it in
16 the window. But if you want to open up
17 Exhibit 1001, that's the '460 Patent.
18 (Witness reviews document.)
19 Q. Dr. Cole, your camera seems to have
20 turned off.
21 A. Oh, okay. Let me get that back. Okay.
22 Is that on now?
23 Q. Yeah.
24 A. Sorry. For some reason when I --
25 because I have one iPad. For some reason, when I

1 switch -- if that happens, just let me know.
2 Q. Okay.
3 (Witness reviews document.)
4 A. So if we go to like the '460 Patent,
5 Column 6, line 46: (Reading)
6 To enforce the security policy
7 that requires a user of access device
8 to provide a username and a password,
9 requiring access device to be running.
10 So you have the security policy
11 provides a username and password.
12 Q. Okay. So it's part -- so just to
13 clarify. In the context of the challenged patents,
14 a security policy may include requirements for
15 username and passwords?
16 A. Yes.
17 Q. Okay. My mouse is dying.
18 And I guess let's stick with that same
19 section of the patent.
20 Do you also agree that in the context
21 of the challenged patents, that a security policy
22 may include requirements -- may include
23 configuration requirements related to the
24 configuration of an access device?
25 And I can direct you to line 42 and 43,

1 if that's helpful.
2 A. I was just going there.
3 So: (Reading)
4 The security policies may
5 include requirements for user
6 identification such as username and
7 passwords, configuration requirements
8 relating to the configuration of an
9 access device.
10 So I would agree that it may include
11 configuration requirements.
12 Q. Okay. Do you also agree that in the
13 context of the challenged patents, that user
14 authentication may also be considered a part of a
15 security policy audit?
16 A. Well, in the context, if we are saying
17 authentication is a username and a password, and we
18 have said that that's included in the security
19 policy, then that potentially could be the case.
20 Q. Okay. Well, let's go to Column 12,
21 line 5, please.
22 And that states: (Reading)
23 In some embodiments,
24 authenticated user step 440 is
25 considered part of the security policy

1 audit.
2 And that's lines 5 through 6. Do you
3 see that?
4 A. I do.
5 Q. Okay. And so would you agree that in
6 the context of the challenged patents, that user
7 authentication may be considered part of a security
8 policy audit?
9 A. Yes, I would.
10 Q. Okay. Thank you.
11 Let's go to Paragraph 53, please. And
12 we may need to go back to the patent again, but I
13 wanted to ask the question. Here, you're talking
14 about the protected network.
15 Do you agree that in the context of the
16 challenged patents, that a protected network may
17 either be physically or logically divided into a
18 restricted subset and less-restricted subset?
19 A. And it's okay if I go back to the
20 patent?
21 Q. Yeah, of course.
22 A. Okay.
23 (Witness reviews document.)
24 A. And I think you're referring to
25 Column 5.

1 Q. Well, yeah, if you direct your
2 attention there. I just got there as well.
3 A. Mine is 56.
4 Q. Okay. So I guess I'll ask my question
5 again. Do you agree that in the context of the
6 challenged patents, that a protected network may
7 either be physically or logically divided into a
8 restricted subset and less-restricted subset?
9 A. That's exactly what the patent says, so
10 I would agree with that.
11 Q. Okay. Thank you.
12 All right. Let's look at Paragraph 55.
13 And I think here, you are describing some of the
14 activity that occurs or is described in the
15 challenged patents related to VLANs.
16 At the bottom on page 23, which is --
17 of your declaration, and this is still
18 Paragraph 55, you've got what looks like Figure 3A
19 and Figure 3B. Do you see that?
20 A. I do.
21 Q. And then there's a description below
22 which appears to be from the '460 Patent, Column 8,
23 lines 20 to 27. Do you see that?
24 A. Yes.
25 Q. Okay. And so just as an example,

1 looking at Figure 3A here. Port 305A on the left
2 is configured to be associated with, I think that's
3 VLAN 310C, in Figure 3A; is that right?
4 A. That is -- that is correct.
5 Q. And so I guess that means that network
6 traffic or communications that flow through
7 Port 305A can only go to VLAN 310C. Is that what
8 that means?
9 A. That's my understanding.
10 Q. Okay. And then if we look over at
11 Figure 3B, so now Port 305A is -- it appears to be
12 connected to VLAN 310A now; is that right?
13 A. That is my understanding, yes.
14 Q. Okay. And so I think the way the
15 patent describes it, it says that Port 305A is
16 reconfigured to be associated with VLAN 310A and
17 not VLAN 310C; is that right?
18 A. Yes, that's what the patent says.
19 Q. And so this means now that traffic
20 flowing through 35A can only go to VLAN 310A?
21 A. That is my understanding.
22 Q. And so what -- I guess what the patent
23 is trying to explain here is that because the
24 association of Port 305A has been changed from one
25 VLAN to another VLAN, that communication port has

1 been reconfigured. Do I have that right?
2 A. That is my understanding, correct.
3 It's been reconfigured, yeah, from 3A to 3B.
4 Q. Okay. Let me find my mouse. It keeps
5 disappearing on me.
6 Well, let's go to Paragraph 57. And in
7 Paragraph 57, you begin an explanation of the
8 reference, the Krantz reference. Do you see that?
9 A. Yes.
10 Q. Do you also have a copy of Krantz, or
11 would you like me to put it in the chat?
12 A. I have a copy of Krantz also.
13 Q. Okay. Let's -- if you don't mind,
14 let's -- let's go to figure -- let's start with
15 just Figure 2, for example.
16 A. Okay. So you want me to pull up
17 Krantz?
18 Q. Yeah, if you could pull up Krantz. And
19 let's just look at Figure 2.
20 A. Okay.
21 Q. Let me know when you're there.
22 A. I'm there.
23 Q. Okay. And so at the bottom of this
24 figure, we see what is a Client 205. Do you see
25 that?

1 A. Yes.
2 Q. And is Client 205 a computer?
3 A. That's my understanding.
4 Q. Okay. And then -- and then I guess we
5 see here Network 213 at the top. Do you see that?
6 A. Yes.
7 Q. And did you agree that Network 213 may
8 be a corporate or enterprise network?
9 A. It could be, yes.
10 Q. Okay. Let's go to Paragraph 63,
11 please.
12 A. In Krantz, right?
13 Q. Sorry?
14 A. Or the report. Sorry.
15 Q. In your declaration.
16 A. In the declaration. Sorry. Just want
17 to -- there's two different 63s, so . . .
18 Q. I'm sorry.
19 A. Okay. I have Paragraph 63 in my
20 declaration.
21 Q. Okay. Do you agree that -- well, so
22 I'll just, for context, 63 appears to be discussing
23 the provisioning steps of Krantz or at least
24 includes some description of those.
25 Do you agree that Krantz discloses that

1 a user may be required to download provisioning
2 files for gaining full access to resources located
3 on a network? Do you agree with that?
4 A. Were you reading from Krantz or --
5 Q. No, I'm just asking a question because
6 of your description of the provisioning aspects
7 here. If you would like to go to Krantz, we can.
8 A. Well, I guess if -- if you're looking
9 at sentence 3 in 63: (Reading)
10 As discussed in Krantz,
11 typically, this involved installing an
12 ISP software on the user's device.
13 Q. Okay.
14 A. So there would be -- there could be
15 some installing of software on a user's device.
16 Q. Okay. Well, let's go to Paragraph 32.
17 A. Of Krantz or my . . .
18 Q. Yes, of Krantz, please.
19 A. Okay.
20 Q. All right.
21 A. Okay. I'm there.
22 Q. Okay. And so there's a description
23 there of -- of some of the provisioning steps. And
24 it says: (Reading)
25 When full access to resources

1 located on the second network is not
2 authorized, the server can authorize
3 limited access to the first or second
4 network such that the client can
5 download provisioning files for
6 gaining full access resources located
7 on this network -- the second network.
8 Do you see that?
9 A. Yes, I do.
10 Q. And so would you agree that this is
11 describing the requirement of downloading
12 provisioning files so that it may access -- it may
13 be granted full access to resources located on the
14 second network?
15 A. That's what Krantz says I think we just
16 read -- that's almost word-for-word of what we just
17 read.
18 Q. Okay. Okay. And then at the bottom
19 of -- sticking with Paragraph 32 in Krantz, do you
20 see the sentence beginning with "restricting"?
21 A. Yes.
22 Q. And it describes several techniques.
23 Do you see that?
24 A. Yeah. It says "using a wide variety of
25 techniques."

1 Q. Okay. And the first one, it describes
2 virtual local area networks or VLANs?
3 A. Correct.
4 Q. These are the same kind of things
5 described in the '460 Patent?
6 A. It's described differently, but yes,
7 it's the same VLAN.
8 Q. Okay. Yeah. And -- and that's a type
9 of, I would say, security capability of a network?
10 A. I mean, VLANs were typically done for
11 sort of like performance reasons and other factors,
12 but then it also could have a security benefit
13 also.
14 Q. Okay. How about IP filtering, would
15 that also have a security benefit?
16 A. Once again, typically, the IP filtering
17 was done more for sort of the performance and other
18 reasons, but depending on how that's done, that
19 could.
20 Q. Okay.
21 A. Depending on how it's used, it would
22 have to depend on the use of it on whether there
23 was a security benefit or not.
24 Q. Okay. And how about virtual private
25 networks, does that provide a security benefit to a

1 network?
2 A. Once again, depending on how it's used
3 and the reason it's used, it could.
4 Q. Okay. And what about IP security
5 protocols, could those be used for security
6 capability of a network?
7 A. Once again, depending on how it's used,
8 it could.
9 Q. Okay. And if it's used to restrict or
10 limit access, would that mean that it is a security
11 capability of a network?
12 A. If it's done for security reasons.
13 Like you could restrict things for performance,
14 like if you want to limit bandwidth going across a
15 network, you could do that too. But if it's done
16 for security reasons, then, yes, it would be a
17 security benefit.
18 Q. Okay. All right. You can put Krantz
19 down for now.
20 Let's go to Paragraph 87, please. Let
21 me know when you're there.
22 A. So 87 starts with "as with Figure 4"?
23 Q. Yes.
24 A. Okay.
25 Q. Okay. And I guess if you flip over to

1 the next page, you state that: (Reading)
2 Krantz never even recites a
3 protected network or subsets is
4 recited.
5 Do you see that?
6 A. No. Sorry. Where are you at?
7 Q. If you -- it's still Paragraph 87, but
8 on the next page.
9 A. Okay.
10 Q. Over to page 39.
11 A. Okay. Krantz never recites a protected
12 network or subsets and is recited?
13 Q. Right. Do you see that?
14 A. Yes.
15 Q. Now, I assume this is not your first
16 patent case, is it?
17 A. No, it is not.
18 Q. Okay. And you are not stating that
19 Krantz needs to have literally stated those words
20 in order to disclose those concepts, are you?
21 A. Well, I'm saying it doesn't disclose a
22 restricted subset of the protected network. So I
23 mean it would have either say that, teach that. So
24 I'm basically saying it doesn't teach that aspect
25 of it. But it's never reciting it either. So

1 what -- one way to teach it would be to say
2 protected network. It could potentially teach it,
3 but I didn't see anything that would imply a
4 protected network or that it teaches that.
5 Q. Okay. But what is your understanding
6 of a protected network in the context of the
7 challenged patents?
8 A. It's okay if I go back to the patent?
9 Q. Please.
10 A. Just with virtual depos, I always want
11 to make sure you know what I'm doing.
12 Q. Not a problem.
13 (Witness reviews document.)
14 A. So I think if we look at Column 2,
15 lines like 52 and 53, it's saying: (Reading)
16 The protected network
17 physically or logically divided into a
18 restricted subset of one or more
19 less-restricted subsets.
20 So a protected network is going to have
21 a restricted subset that it's protecting.
22 Q. Okay. Any other requirements for a
23 network to be a protected network?
24 (Witness reviews document.)
25 A. I mean, there's several. I mean, if

1 you look at even the summary, I mean, there's:
2 (Reading)
3 The protected network is
4 divided into a restricted subset of
5 one or more less-restricted subsets.
6 And then there's components where:
7 (Reading)
8 If the security policy is
9 satisfied, the access device is
10 granted access to a less-restricted
11 subset of the protected networks.
12 So I mean, there's aspects of the
13 protected network that are sort of covered
14 throughout the patent.
15 Q. Okay. All right. Well, let's go to --
16 let's go to Paragraph 98, please. Let me know when
17 you're there.
18 A. I'm there.
19 Q. Okay. And if you can read it to
20 yourself, I want to ask you about the final
21 sentence there which states: (Reading)
22 Rather, they are related to
23 user authentication.
24 You agree they're related to other type
25 of security techniques, correct?

1 A. I mean, to me, Krantz is
2 authentication. So to me, I mean, if you look at
3 Krantz and what Krantz focuses on, it's focused on
4 authentication.
5 Q. Well, that could include machine
6 authentication, right?
7 A. So authentication, in general, could
8 include machine authentication. I would have to go
9 back and check Krantz of whether it specifically
10 covers that or not, but I know Krantz is related to
11 user authentication.
12 Q. But EAP-TLS, that includes techniques
13 from machine authentication, correct?
14 A. Do you have the E protocol so I can
15 check that?
16 Q. I don't.
17 A. So sorry. I would have to check that
18 to double-check. I don't have all the specs
19 memorized.
20 Q. Okay. EAP-MSChapV2, that also includes
21 machine authentication, correct?
22 A. I would have -- like I said, I don't
23 have the specs memorized, so I would have to go
24 back and check that.
25 Q. Okay. Let's go to Paragraph 151.

1 A. Okay. One second.
2 Q. I was going to say, while you're going
3 there, if you want to -- we might need to open up
4 Herrmann for a moment. But let me ask you the
5 question. Paragraph 151, you state: (Reading)
6 Herrmann discloses a
7 client-side solution.
8 Do you see that?
9 A. I do.
10 Q. Do you agree that Herrmann also
11 discloses a server-side solution?
12 A. I would have to check the patent for
13 that.
14 Q. All right. Well, let's open up
15 Exhibit 1006, which is the patent or Herrmann. Go
16 to Paragraph 61, please, in Herrmann.
17 A. Okay.
18 Q. Paragraph 61 is -- just states "system
19 components." Do you see that?
20 A. I do.
21 Q. And your discussion of some of the
22 client-side solutions in Herrmann, it looks like
23 you are pulling that from Paragraph 62, which is
24 right below that, right?
25 A. Yes.

1 Q. Okay. So if you go to Paragraph 65 of
2 Herrmann, you agree with me that Paragraph 65
3 describes some of the server-side components of
4 Herrmann.
5 A. Yes. That's under System Components.
6 And it says: (Reading)
7 The server-side components of
8 the currently preferred embodiment of
9 the present invention.
10 Q. Right. And that includes proxy
11 server 440, the IGW server 450, and the policy
12 integrity server 460. You see that?
13 A. I do.
14 Q. And there's a couple of other servers
15 there as well.
16 So do you agree with me that Herrmann
17 also discloses a server-side solution?
18 A. Yes.
19 Q. Okay. And if we go to Paragraph 67, it
20 states: (Reading)
21 The policy server 460, which
22 supports the methods of the present
23 invention, ensures that all users
24 accessing a particular system or
25 network comply with a specified

1 security policies, including access
2 rights and cooperative antivirus
3 enforcement.
4 Do you see that?
5 A. I do.
6 Q. And so the policy server 460 in
7 Herrmann is involved in enforcing security
8 policies. Do you agree with that?
9 A. That's what 67 says.
10 Q. Okay. And even in Paragraph 68, about
11 middle of the paragraph, it says: (Reading)
12 The policy server -- it's
13 referring to 460 -- would then
14 evaluate whether or not each client
15 device was in compliance with the
16 specified policy before approving the
17 client device for network access.
18 Do you see that?
19 A. I do.
20 Q. And again, that's -- do you agree that
21 this is describing the policy server applying a
22 security policy?
23 A. Well, yeah, the policy server is
24 checking whether it's compliant with the specified
25 policy.

1 Q. Okay. Well, let's go to Paragraphs 152
2 of your declaration.
3 I just want to confirm. Here, you --
4 you're describing and you quote from a '611 Patent.
5 Do you see that?
6 A. Yes.
7 Q. That's not Herrmann, though, is it?
8 A. No, it's -- Herrmann incorporates, by
9 reference, the US Patent '611, but that's a
10 different patent.
11 Q. Okay. Thank you.
12 All right. My mouse keeps dying.
13 Let's go to Paragraph 156. You state:
14 (Reading)
15 As explained above, Krantz's
16 server 215 is centralized. Thus, it
17 would not be obvious to combine
18 Herrmann's client-side approach,
19 including its infrastructure, into
20 Krantz.
21 Do you see that?
22 A. I do.
23 Q. But we just agreed that Herrmann also
24 has a server-side approach, correct?
25 A. A component to it, yes.

1 Q. Okay. What do you mean by "including
2 its infrastructure"?
3 A. That means all of the components that
4 are required. So if you look at Herrmann, there's
5 a lot of code, infrastructure code that has to go
6 on the client so it wouldn't be obvious to combine
7 that with Krantz.
8 Q. Okay. So you're stating that sort of
9 the -- all the hardware components of Herrmann
10 wouldn't work with Krantz. Is that what you're
11 stating?
12 A. All the software, all the different
13 software components.
14 Q. Okay. So you're stating that you
15 couldn't -- you wouldn't be able to physically
16 combine them?
17 A. Yeah. It wouldn't be obvious to
18 combine those for performance reasons and others.
19 Q. Okay. All right. So I'm going to open
20 up -- do you have Exhibit 2566, which is a book by
21 Tanenbaum? Do you have that among your files, or
22 at least do you recall it?
23 A. I do recall it, yes.
24 Q. Okay. Let me drop something into the
25 chat here. So I had -- I'd like to do it. All

1 right. I'm going to drop this into the chat. I
2 couldn't -- I couldn't see the exhibit number so I
3 created a new exhibit with Tanenbaum. I pre-marked
4 it as Exhibit 1027.
5 (Exhibit Number 1027 was marked for identification.)
6 BY MR. BORDER:
7 Q. I just dropped it into the chat. Let
8 me know when you get it.
9 A. Okay. I have it.
10 Q. Okay. Okay. Do you recognize this?
11 A. Yes.
12 Q. This is -- I assume on page 2, that's
13 your finger?
14 A. I'm looking at the nail and my nail.
15 I'm not -- I'm not sure if it's my finger or
16 somebody else's who took it.
17 Q. But you do recognize this is the
18 Tanenbaum book that you cited in your expert
19 report?
20 A. Yes.
21 Q. Okay.
22 MR. KUO: Scott, the exhibit number is
23 really small, but it's in the lower right
24 hand corner.
25 MR. BORDER: Yeah, I -- yeah, so I

1 just -- just for ease of my eyes, I just
2 dropped the whole document in.
3 MR. KUO: That's fine.
4 BY MR. BORDER:
5 Q. And just to confirm, Dr. Cole, if you
6 take a quick look and just make sure that we did
7 this correctly and included all the pages.
8 (Witness reviews document.)
9 A. I believe -- I mean, I don't have the
10 ability to bring up both side by side, but it
11 appears to have the relevant information. It
12 appears to be Tanenbaum. I don't see any --
13 anything that raises a concern.
14 Q. So let's go to page, let's see, 331.
15 And I believe that is page 6 of the exhibit.
16 A. Okay. I have 331 of Tanenbaum.
17 Q. Okay. Let me -- so at the bottom
18 there, it says: (Reading)
19 To make VLANs function
20 correctly, configuration tables have
21 to be set up in the bridges or
22 switches.
23 Do you see that?
24 A. Yes.
25 Q. And it says: (Reading)

1 These tables tell which VLANs
2 are accessible via which ports.
3 Do you see that?
4 A. Yes.
5 Q. And so what this is describing are
6 these configuration tables are on -- on the switch.
7 I read that correctly?
8 A. Yeah, the bridges are switches, yeah.
9 Q. Okay. These configuration tables don't
10 exist on, you know, the end user's device?
11 A. Correct.
12 Q. Okay. And if we go over to page 333,
13 which is page 8. So at the bottom, the last
14 paragraph, it says: (Reading)
15 The key to the solution is to
16 realize that the VLAN fields are only
17 actually used by the bridges and
18 switches and not by the user machines.
19 You don't have any reason to dispute
20 that statement, do you?
21 A. No, I do not.
22 Q. So I guess, do you agree that it's the
23 bridge or switch that performs the tagging
24 functionality in a VLAN device?
25 A. No, I wouldn't because VLAN tags are

1 something different.
2 Q. Okay. Well, where, in your mind, are
3 VLAN tags inserted?
4 A. So typically, a client -- at a client
5 system, when they send out a package would put on a
6 VLAN tag, and then the switch could use that to
7 determine which VLAN, but it wouldn't be a
8 reconfiguration of the VLAN.
9 Q. Well, let's go to page 334. It says --
10 I am reading the second paragraph: (Reading)
11 So if the originator does not
12 generate the VLAN fields, who does?
13 The answer is that the first
14 VLAN-aware bridge or switch to touch a
15 frame adds them and the last one down
16 the road removes them.
17 See that?
18 A. I do.
19 Q. And so this is disclosing that the
20 VLAN -- the first VLAN-aware device is the device
21 that generates the VLAN field, or at least -- let
22 me strike that.
23 This is explaining that a VLAN-aware
24 device may generate VLAN fields, correct?
25 A. Sorry. Let me just get the context.

1 (Witness reviews document.)
2 So -- so this is in the context of sort
3 of the older Ethernet cards. So if you're looking
4 at Paragraph 334, as new Ethernet cards come out on
5 the market, the hope is that they will be 802.1Q
6 compliant and correctly fill in the VLAN fields.
7 So this -- so the originator doesn't
8 generate. It's talking about the older Ethernet
9 cards, but it's saying with the newer cards that
10 are VLAN-aware, the client would sort of fill in
11 that VLAN tag.
12 Q. Okay. But so -- but you're agreeing
13 with me that a VLAN-aware device can generate a
14 VLAN field, correct?
15 A. Correct.
16 Q. Okay. Let's -- let's go back to your
17 declaration. And this is more of a general
18 question. And I'm -- you know, I'm looking at
19 Paragraph 79 and 80 and 81. Can you explain to me
20 what it -- what you -- what is meant by "changing
21 the communication port of an access point"?
22 (Witness reviews document.)
23 A. Sorry, can you repeat the question?
24 Q. Yeah. I'm just -- I'm just wondering
25 if you can explain to me in simple terms what it

1 means to change the communication port of an access
2 point.
3 A. So the configuration of the
4 communication port is what we talked about earlier
5 where you actually go into the access point and you
6 set an actual configuration of how you're actually
7 moving without VLAN tag. So how the VLANs are
8 actually set up on that switch is the configuration
9 of those communication ports.
10 So with a VLAN tag, it's not actually
11 changing any of the communication ports. That's
12 still set up. The VLANs are still configured the
13 same way. In this case, the VLAN tag is just
14 saying which VLAN to go over, but it's not actually
15 changing that configuration of how the VLANs are
16 actually set up on the access point.
17 MR. BORDER: Can we take a 5-minute
18 break?
19 THE WITNESS: Sure.
20 (Recess taken from 10:25 a.m. to 10:31 a.m.)
21 BY MR. BORDER:
22 Q. If you look at Paragraph 81, Dr. Cole,
23 you state: (Reading)
24 That configuration of the
25 communication ports themselves could

1 be done by changing the instructions
2 that correspond to a particular tag
3 header.
4 Do you see that?
5 A. I'm sorry. Where were you again? I
6 was getting to Paragraph 81.
7 Q. Paragraph 81, in the middle of the
8 sentence, you say: (Reading)
9 Reconfiguration of the
10 communication ports themselves could
11 be done by changing the instructions
12 that correspond to a particular tag
13 header.
14 Do you see that?
15 A. Yeah.
16 Q. So you can reconfigure a communication
17 port without physically altering the port itself;
18 is that right?
19 (Witness reviews document.)
20 A. That's what it says.
21 Q. Okay. And you say: (Reading)
22 Changing the instructions that
23 correspond to a particular tag header.
24 What do you mean by "instructions"?
25 A. That would be how to handle sort of

1 that particular tag header.
2 Q. Are those similar to the configuration
3 table mentioned in Tanenbaum? Is that what you
4 loosely mean by "instructions"?
5 A. Loosely, yes.
6 Q. Okay. So they're essentially
7 configuration rules that tell a switch how to react
8 to a particular tag header; is that right?
9 A. Right. So you're changing the
10 instructions that correspond to the tag header, but
11 the tag header isn't doing the reconfiguration.
12 Q. But you can -- it's your opinion that
13 you can reconfigure a communication port simply by
14 changing the configuration rules associated with
15 that port. Do I have that right?
16 A. Right.
17 Q. Okay. But you do agree in Krantz, that
18 it is the access point that is inserting the tag
19 headers, correct?
20 A. You would like me to go back to the
21 patent for Krantz?
22 Q. Okay. You can -- or you could go to
23 your Paragraph 79, if you want.
24 A. Okay.
25 (Witness reviews document.)

1 A. So what was the question?
2 Q. Well, let's just walk through your
3 statement.
4 You're -- what you state here is if the
5 VLAN -- well, when a data frame is received from a
6 client device, the access point in Krantz, if it's
7 untagged, is configured to send the data to VLAN B.
8 Do I have that, correct?
9 A. So -- so in Krantz, the VLAN-aware
10 device would check to see if the VLAN tag is in the
11 VLAN database. And then if it does, the data is
12 sent to the assigned VLAN, which in Krantz is
13 VLAN C. If the VLAN does not have a tag, the data
14 frame is sent to where the access point is
15 configured.
16 So -- so Krantz is not reconfiguring
17 anything. It's just using VLAN tags to basically
18 assign the VLAN based on the current configuration.
19 It doesn't actually change the configuration of the
20 access point.
21 Q. Okay. But if the -- if the data frame
22 comes from a subsequently authorized user, then the
23 access point changes which VLAN that user can
24 access; is that right?
25 A. I wouldn't agree with that language.

1 It basically will just use the configuration
2 already. It doesn't change it. And it just looks
3 for the VLAN tag. So it's using the current
4 configuration, and that just uses the VLAN tag and
5 say we assign it here or assign it there, but
6 that's not reconfiguring the access point.
7 Q. But you agree with me that the access
8 point is the device that is inserting these tags
9 into the header of the data frame; is that right?
10 A. No, it's typically the client. And
11 then only in a case where it does not have a tag,
12 then it's going to basically use sort of the
13 preprogrammed tag. So we're talking about the
14 client is going to insert a VLAN tag and that's --
15 and it looks in its VLAN database. And if it
16 doesn't have a tag, that's like what Tanenbaum
17 talked about with the older cards that doesn't have
18 the ability to do VLAN tags, then the device would
19 just use sort of the default configuration, but
20 it's not changing the configuration.
21 Q. That's your general understanding of
22 how VLAN works?
23 A. Yes.
24 Q. Okay.
25 MR. BORDER: I have no further

1 questions.
2 MR. KUO: I guess we didn't need to
3 schedule this so early. I have nothing. The
4 witness will read and sign.
5 MR. BORDER: Okay.
6 (Discussion held off the record.)
7 MR. BORDER: Can we get this on Monday?
8 THE CERTIFIED STENOGRAPHER: Do you
9 want the rough today?
10 MR. BORDER: Yes, please.
11 THE CERTIFIED STENOGRAPHER: I will
12 send the rough today. The same with you,
13 Mr. Kuo?
14 MR. KUO: I don't need a rough.
15 THE CERTIFIED STENOGRAPHER: Do you
16 want the final at the same time they get
17 theirs?
18 MR. KUO: Yes, please.
19 Both be Monday morning for you?
20 MR. BORDER: That would be great, thank
21 you.
22 MR. KUO: Thank you.
23 (Signature reserved)
24 (Deposition concluded at 10:40 a.m.)
25 - - -

1 CERTIFICATE OF REPORTER

2 I, Amy A. Brauser, Registered Merit Reporter
3 and Notary Public for the State of South Carolina at
4 Large, do hereby certify:
5 That the foregoing deposition was taken
6 before me on the date and at the time and location
7 stated on page 1 of this transcript; that the deponent
8 was duly sworn to testify to the truth, the whole
9 truth and nothing but the truth; that the testimony of
10 the deponent and all objections made at the time of
11 the examination were recorded stenographically by me
12 and were thereafter
13 transcribed; that the foregoing deposition as typed
14 is a true, accurate and complete record of the
15 testimony of the deponent and of all objections made
16 at the time of the examination to the best of my
17 ability.
18 I further certify that I am neither related
19 to nor counsel for any party to the cause pending or
20 interested in the events thereof.
21 Witness my hand this is 5th day of May,
22 2025.
23 Amy A. Brauser_____
Amy A. Brauser, RPR RMR CRR
24 Notary Public
State of South Carolina at Large
25 My Commission expires:

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