

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS INC.,

Petitioner,

v.

LIONRA TECHNOLOGIES, LTD.,

Patent Owner.

IPR IPR2024-00734

Patent No. 7,623,518

Thursday, April 3, 2025

9:00 a.m. (EDT)

REMOTE DEPOSITION OF DR. ERIC COLE, DPS

(This proceeding was conducted via Zoom.

All participants appeared remotely.)

STENOGRAPHICALLY REPORTED BY:

Deanna J. Dean, RDR, CRR

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Thursday, April 3, 2025
9:00 a.m. (EDT)

Remote deposition of DR. ERIC COLE, DPS,
held via Zoom videoconference, before Deanna J.
Dean, a Registered Diplomate Reporter, Certified
Realtime Reporter, and licensed court reporter
of the state of New Hampshire.

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

2 THE REPORTER: Here begins the remote
3 deposition of Dr. Eric Cole, taken in the matter
4 Cisco Systems, Inc., Petitioner, v. Lionra
5 Technologies Ltd., Patent Owner, before the
6 Patent Trial and Appeal Board, Case
7 IPR2024-00734, for US Patent 7,623,518.

8 Today's date is April 3, 2025.

9 The time is now 9:00 a.m. Eastern Daylight Time.

10 This deposition is being held remotely by
11 Zoom videoconferencing. I am the licensed court
12 reporter, Deanna Dean, presenting on behalf of
13 Henderson Legal Services.

14 Will counsel please introduce themselves
15 and state whom they represent, beginning with
16 the party noticing the deposition.

17 ATTORNEY HUH: Yes. This is Gregory Huh
18 on behalf of petitioner, Cisco Systems Inc.

19 ATTORNEY AUCHTER: And this is Robert
20 Auchter on behalf of patent owner, Lionra
21 Technologies Ltd.

22 THE REPORTER: At this time, do all
23 parties agree to waive any objection, now or in
24 the future, to me swearing in the witness
25 remotely?

1 ATTORNEY HUH: Yes.

2 ATTORNEY AUCHTER: Yes.

3 ERIC COLE,

4 a witness called for examination, having been first
5 duly sworn according to law, was deposed and
6 testified as follows:

7 EXAMINATION

8 BY ATTORNEY HUH:

9 Q. Great.

10 Good morning, Dr. Cole.

11 A. **Good morning.**

12 Q. Dr. Cole, you've been deposed before.

13 Correct?

14 A. **Yes, I have.**

15 Q. Do you know how many times?

16 A. **I'd say at least 50.**

17 Q. Okay. So you understand that you're under
18 oath today. Right?

19 A. **Correct.**

20 Q. And you understand that I'll be asking you
21 questions today?

22 A. **Yes.**

23 Q. And do you understand that the oath
24 requires that you answer my questions truthfully
25 and completely?

1 **A. Yes.**

2 Q. Do you have any other device with you
3 today other than a computer?

4 **A. Yes. I have two iPads. I have one iPad**
5 **that has Zoom, and then I have another iPad that**
6 **has my report, or my declaration.**

7 Q. Other than those two iPads, do you have
8 any other devices?

9 **A. I mean, I have my cell phone, but it's --**
10 **it's turned off.**

11 Q. Okay. Great.

12 **A. Or silent mode. Silent mode.**

13 Q. Okay. And do you have -- on the iPad that
14 is not rendering Zoom, do you have access to the
15 IPR record at issue today?

16 **A. I could probably get that if I needed to.**
17 **Currently, I only have the report open.**

18 Q. Okay. Got it.

19 But do you have a -- do you have access to
20 the PDFs that were filed in the proceedings?

21 **A. With your permission, yes. I could go**
22 **into Dropbox and find those.**

23 Q. Okay. And do you know, are those
24 documents clean copies?

25 **A. Yes, they are.**

1 Q. In other words, they don't have any
2 markings or notes on them. Correct?

3 A. **Correct. Those are the PDFs as they were**
4 **provided to me.**

5 Q. Okay. So what I'd like to do during
6 today's deposition -- you know, there's two ways to
7 provide documents. One is through the interface of
8 Zoom. Another way is just to allow you to access
9 your local copies with the understanding that those
10 would be accessed as the clean, as-filed versions
11 with the USPTO.

12 I believe it makes more sense and it's
13 probably easier just to access the documents that
14 you have locally so long as they're clean.

15 Is that fine with you?

16 A. **Yeah, as long as we can keep consistent.**
17 **Because I always want to be sure that what you're**
18 **looking at and what I'm looking at is the same. So**
19 **if it's not aligned, maybe it might be easier for**
20 **you to drop it in text, but we can try it your way**
21 **first.**

22 Q. Sure.

23 And what I'll do is, I will make sure to
24 call out the exhibits and confirm that what you're
25 looking at is, in fact, the same document.

1 **A. Okay.**

2 Q. Okay.

3 Now, just as a baseline, you understand
4 that you may not confer with counsel about your
5 testimony during the deposition. Correct?

6 **A. That's my understanding.**

7 Q. And you have counsel with you in the room.
8 Correct?

9 **A. That is correct. He's sitting across the**
10 **table from me.**

11 Q. Okay. And you agree to not communicate
12 with counsel during the deposition with respect to
13 the contents of your testimony. Correct?

14 **A. Correct.**

15 Q. Great. Thank you.

16 Just some, you know, simple logistics.

17 During the deposition, you know, we'll
18 have some set breaks, and I'll try to make breaks
19 as, you know, available as much as possible. All I
20 would ask is that if there's a pending question,
21 that the question would be answered and then we can
22 take the break.

23 Do you agree with that?

24 **A. I do.**

25 **And as I mentioned before we went on the**

1 **record, if we could take a break at 10:10 East**
2 **Coast time for 15 minutes, I'd appreciate that.**

3 Q. Sure. Definitely.

4 Okay. Well, let me ask you, with respect
5 to your engagement for this matter, when were you
6 engaged for this matter?

7 A. **I don't remember. I'd have to check the**
8 **engagement letter.**

9 Q. Well, was it nine months ago?

10 A. **It could have been. I work on many cases.**
11 **I don't -- I don't have engagement dates memorized.**

12 Q. Do you have access to the engagement
13 letter?

14 A. **With your permission, I could try to find**
15 **it on Dropbox, if you'd like.**

16 Q. Sure. Please do.

17 A. **I am seeing there was one engagement**
18 **letter that's October 31, 2022. But I know I was**
19 **working on -- I worked on many different matters**
20 **for Lionra, so I don't know if there was a separate**
21 **engagement letter for this IPR or if it's covered**
22 **by that one.**

23 Q. Are you also the expert for litigation in
24 District Court?

25 A. **I'd have to check it. I do -- I have**

1 worked with this counsel on Lionra on other cases.

2 Q. Right.

3 So I'm just asking that you focus on this
4 case with respect to the '518 patent.

5 A. Okay.

6 Q. So when were you engaged for the '518
7 patent?

8 A. I'm not sure. I'm not able to check at
9 this time. I just have that one engagement. I
10 have to go back and do more research.

11 Q. Are you also the District Court expert for
12 the '518 patent?

13 A. Like I said, I don't have all my cases
14 memorized. Like I said, I have worked with Lionra
15 on other cases.

16 Q. Including District Court?

17 A. I don't have that information memorized.
18 But I'd have to go back and check. I'd have to go
19 back and look at the cases.

20 Q. Okay. But in any District Court
21 litigation for Lionra, have you been an expert?

22 A. Like I said, I don't have the cases
23 memorized. I'd have to go back and check that.

24 Q. So I'm not asking -- I'm asking for any
25 litigation with respect to Lionra, have you ever

1 been the District Court expert?

2 **A. I don't remember if I have or not.**

3 Q. Do you know who approached you with
4 respect to the '518 patent first?

5 **A. I do not recall today.**

6 Q. Do you have any interest in Lionra
7 Technologies, financial or otherwise?

8 **A. No, I do not.**

9 Q. Do you know how many cases you worked on
10 for Lionra Technologies?

11 **A. Not offhand, no.**

12 Q. Was it 20 cases?

13 **A. I would go back and check. I would refer**
14 **to whatever is in my CV.**

15 Q. Please do so.

16 **A. At a quick glance, I see three, but that's**
17 **just active cases. So if there's cases where I'm**
18 **working but I haven't been disclosed yet, they**
19 **might not be on the CV. But at least three.**

20 Q. Okay. And those three that are listed in
21 your CV, those would have been cases that you were
22 a District Court expert. Correct?

23 **A. I was an expert, yes.**

24 Q. In the District Court litigation.
25 Correct?

1 **A. Okay. Looks like all three of those are**
2 **United States District Court.**

3 **Q. Thank you.**

4 Do you know how many IPRs you've been
5 engaged in generally?

6 **A. Not offhand. I don't have that number**
7 **memorized.**

8 **Q. Can you discern that from your CV?**

9 **A. I'm just doing a search on the word "IPR."**
10 **It appears -- it appears 14 times. So I would say**
11 **as an estimate, just an estimate, around 14.**

12 **Q. Okay. Thank you.**

13 So in preparing for this deposition, what
14 documents, if any, have you reviewed?

15 **A. I looked at my report on my declaration in**
16 **this case. And anything that's referenced in that**
17 **declaration, I might have looked at also. So the**
18 **patent or the prior art.**

19 **Q. Okay. So did you review the petition in**
20 **preparing for today's deposition?**

21 **A. I don't recall if I specifically looked at**
22 **that or not.**

23 **Q. Okay. Let's step back a little bit.**

24 When did you begin preparing for this
25 deposition?

1 **A. Yesterday.**

2 Q. So yesterday you began preparing for
3 today's deposition. Correct?

4 **A. Correct.**

5 Q. And how much time did you spend to prepare
6 for today's deposition?

7 **A. Approximately five hours.**

8 Q. And did you meet with anyone to prepare
9 for today's deposition?

10 **A. Yes, I did.**

11 Q. With whom?

12 **A. Mr. Auchter.**

13 Q. Anyone else?

14 **A. Not that I can recall.**

15 Q. Did you speak with anyone other than
16 Mr. Auchter regarding today's deposition?

17 **A. I mean, regarding today's deposition. I**
18 **mean, my team knows that I had a deposition, so**
19 **they would come into the office. My PA knows. So,**
20 **I mean, regarding it is pretty broad. So a few**
21 **people on my team know that I have a deposition**
22 **today.**

23 Q. Any other patent owner attorneys other
24 than Mr. Auchter?

25 **A. Not that I can recall.**

1 Q. And how long did you meet with Mr. Auchter
2 in preparing for today's deposition?

3 A. A few hours.

4 Q. And by "few," do you mean more than three
5 hours?

6 A. A few is two to three. Two to three
7 hours.

8 Q. Okay. So now let's focus on what you
9 actually did to prepare for today's deposition in
10 that five-hour period of time.

11 Did you read the '518 patent in preparing
12 for today's deposition?

13 A. I looked at the '518 patent. I don't know
14 if I read it cover to cover, but I did look at it.
15 And then I read through my report, my declaration.

16 Q. Did you read the totality of your
17 declaration?

18 A. I read it. I did not memorize it, but I
19 did read it.

20 Q. The totality of it?

21 A. Yes.

22 Q. And did you review the Gai reference in
23 preparing for today's deposition?

24 A. With regard to what's in my declaration,
25 but I didn't necessarily read it cover to cover.

1 Q. You understand the Gai reference?

2 A. To what's covered in the report, yes.

3 Q. Would it be fair that there's other
4 aspects that are not covered in the report that, in
5 fact, you do not understand?

6 A. I wouldn't phrase it that way. I would
7 phrase I was asked to opine on my opinion on
8 certain cases, and that's in my declaration.

9 And just for the record, I sometimes say
10 "report," but when I say "report" or "declaration,"
11 I'm referring to the same document.

12 But my declaration in this case was fairly
13 limited, so I was only asked to opine on certain
14 areas. I wouldn't say I didn't understand the
15 other areas. I just wasn't asked to opine on them.

16 Q. Is it fair to say that portions of the Gai
17 reference that are not cited in your declaration,
18 you had not considered?

19 A. Once again, I'm always careful with
20 wording. I wasn't asked to offer an opinion on
21 everything in the reference. So my opinions are
22 limited to what's in my declaration. I don't have
23 an opinion on anything outside my declaration.

24 Q. Right.

25 So I just want to clarify that portions of

1 Gai that you have not cited in your declaration,
2 you have not considered in rendering your opinion.
3 Correct?

4 ATTORNEY AUCHTER: Objection. Form.

5 A. Once again, I don't agree with the
6 wording. I wasn't asked to opine on that. I can't
7 say I didn't consider it. But my opinions are
8 what's in the declaration.

9 Q. Well, Dr. Cole, if you didn't read it, how
10 did you consider it?

11 ATTORNEY AUCHTER: Objection. Form.

12 A. I never said I didn't read it. Of course
13 I read it in preparing my declaration. I think
14 your earlier question was preparing for my
15 deposition, which is different than writing the
16 declaration.

17 So I, of course, read it when I wrote my
18 declaration, but I didn't necessarily read the
19 whole thing in preparing for my deposition.

20 Q. Do you understand the Gai reference in its
21 totality?

22 ATTORNEY AUCHTER: Objection. Form.

23 A. I understand the Gai reference to offer
24 the opinions that I opined on in my declaration.

25 Q. And we'll come back to this, but have you

1 reviewed the Yip reference in preparing for today's
2 deposition?

3 **A. That was one of the pieces of prior art**
4 **that I do opine on in my declaration. So I did**
5 **look at it.**

6 Q. But you did not read the totality of it in
7 preparing for today's deposition. Is that correct?

8 **A. In preparing for today's deposition, that**
9 **would be correct.**

10 Q. And did you review the Kwan reference in
11 preparing for today's deposition?

12 **A. To the extent that it's covered in my**
13 **declaration, yes.**

14 Q. But you did not review the totality of the
15 Kwan reference in preparing for today's deposition.
16 Correct?

17 **A. I don't believe I read it cover to cover**
18 **in preparing for the deposition.**

19 Q. Did you review the Georgiou reference in
20 preparing for today's deposition?

21 **A. To the extent that it's covered in my**
22 **declaration.**

23 Q. But portions not covered in your
24 declaration, you did not read for today's
25 deposition. Correct?

1 **A. Preparing for today's deposition, I did**
2 **not, to the best of my recollection, read it cover**
3 **to cover.**

4 **Q. Did you review any other prior art**
5 **reference in preparing for today's deposition?**

6 **A. Other than what's in my declaration, that**
7 **would be the extent.**

8 **Q. What do you mean by that?**

9 **A. I don't have my declaration memorized, so**
10 **the declaration is the opinion I'm offering in this**
11 **matter. So whatever is in the declaration, I would**
12 **have reviewed and looked at.**

13 **Q. Right.**

14 So I'm asking about prior art references
15 that you've reviewed in preparing for today's
16 deposition, and my question is did you review any
17 other prior art reference in preparing for today's
18 deposition?

19 **A. Once again, I reviewed my report, my**
20 **declaration. I didn't memorize it. So to the**
21 **extent that what's in my declaration, that's what I**
22 **reviewed. If it's not in my declaration, then I**
23 **would not have reviewed it.**

24 **Q. So is it your testimony here today that**
25 **every reference cited in your declaration, you**

1 reviewed separately yesterday?

2 ATTORNEY AUCHTER: Objection. Form.

3 A. To the extent that it was needed. To me,
4 the declaration is pretty concise and clear. So in
5 some cases there was enough information in the
6 declaration that I wouldn't need to. In some cases
7 I did. I just don't recall.

8 Q. Did you review the '518 patent yesterday?

9 ATTORNEY AUCHTER: Objection. Form.

10 A. Once again, reviewed. Did not memorize.

11 Q. Did you read the '518 in its totality in
12 preparing for today's deposition?

13 A. I, of course, read it in its totality in
14 writing my declaration. I don't remember if I
15 actually read it cover to cover yesterday in
16 preparing for this. I just -- I reviewed the
17 sections that I needed to support my declaration.

18 Q. Do you have understanding of the '518
19 patent?

20 A. Once again, not memorized, but a general
21 understanding, yes.

22 Q. So I'm not going to ask you any
23 memorization questions. That's for sure. So I --
24 I don't expect you to memorize things. But I, you
25 know, I do want to know if you understand what

1 you're reading.

2 So to the extent you've read the '518
3 patent, did you have an understanding of it?

4 **A. Yes. I understand the patent and I**
5 **understand everything that's in my declaration.**

6 Q. Okay. So let's pull up your declaration,
7 then, which is Exhibit 2001.

8 And just for the record, on the face of
9 this document, page 1, you should have
10 IPR2024-00734, US Patent No. 7,632,518.

11 Is that the document that you're reviewing
12 right now?

13 **A. I believe that is, yes.**

14 Q. At the bottom right-hand corner, it would
15 say "Exhibit 2001." Correct?

16 **A. That is correct.**

17 Q. Okay. And during today's deposition, I'll
18 just refer to this document as your declaration.

19 Would you understand that?

20 **A. Yes. And based on my prior comment, when**
21 **I say "report," I'm also referring to the**
22 **declaration.**

23 Q. Understood.

24 Are there any errors in your declaration
25 that you'd like to correct?

1 **A. Not that I'm aware of.**

2 Q. Okay. So I'm -- now I'm going to focus on
3 what you did to prepare your declaration. So,
4 previously, we talked about what you did to prepare
5 for today's deposition, but now I want to focus on
6 what you did to prepare your declaration. Okay?

7 So what materials did you consider in
8 preparing your declaration?

9 And feel free to refer to your declaration
10 if you would like.

11 **A. I believe my declaration on page 5 --**
12 **sorry. I guess it's Appendix 5 or page 54 -- I**
13 **list the materials considered.**

14 Q. Did you consider any other documents in
15 preparing your declaration that were not listed in
16 the appendix on page 54?

17 **A. Other than what's on page 54 or what would**
18 **be in the body of the declaration, that would be**
19 **the extent of what can I recall that I considered.**

20 Q. Okay. So in preparing your declaration,
21 did you review Exhibit 1001, the '518 patent, in
22 its totality?

23 **A. Did you say Exhibit 1508?**

24 Q. '518.

25 **A. Oh, '518. Yes.**

1 Q. Exhibit 1001.

2 A. Oh, 1001. Yes.

3 Q. Yes.

4 And you read that in its totality when you
5 prepared your declaration. Is that correct?

6 A. To the best of my recollection, yes.

7 Q. Did you review Exhibit 1006, the Gai
8 reference, in its totality when you prepared your
9 declaration?

10 A. To the best of my recollection, yes.

11 Q. Did you review Exhibit 1007, the Kwan
12 reference, when you prepared your declaration?

13 A. To the best of my recollection, yes.

14 Q. Did you review Exhibit 1008, the Georgiou
15 reference, when you prepared your declaration?

16 A. To the best of my knowledge, yes.

17 Q. Did you review Exhibit 1013, the Yip
18 reference, when you prepared your declaration?

19 A. To the best of my knowledge.

20 Like I said, I don't remember everything
21 that I did. But if it's in the materials
22 considered, I most likely did review and read
23 those.

24 Q. And you understood what you read. Is that
25 correct?

1 **A. That would be correct.**

2 Q. In preparing your declaration or
3 otherwise, did you assess any products manufactured
4 by petitioner Cisco Systems?

5 ATTORNEY AUCHTER: Objection. Form.

6 **A. I mean, there's some user manual or user**
7 **guides in the materials considered, like a Telenet**
8 **and Netgear. So I do look at those user guides. I**
9 **did not actually physically look at any products.**

10 Q. Are the user guides listed in your exhibit
11 list on page 54?

12 **A. Yes, they are.**

13 Q. And which specific exhibit numbers are you
14 referring to?

15 **A. Exhibit 1017 and 1018.**

16 Q. Other than Exhibit 1017 and 1018, did you
17 review any other product guides associated with
18 products manufactured by petitioner Cisco Systems?

19 **A. If I did, it would be listed in the**
20 **declaration.**

21 Q. And if I understood your answer correctly,
22 you did not assess any actual products manufactured
23 by petitioner Cisco Systems. Is that correct?

24 **A. I did not feel that I needed to examine**
25 **the physical products in order to form my opinions**

1 **in the declaration.**

2 Q. Did you examine physical products when you
3 worked on behalf of Lionra generally?

4 ATTORNEY AUCHTER: Objection. Form.

5 A. **I don't recall whether I have or not.**

6 Q. Let me ask some specific questions.

7 In preparing your declaration, did you
8 review any documentation related to network
9 switches manufactured by petitioner Cisco Systems?

10 A. **Anything I reviewed in putting together**
11 **the declaration would be in the report or in the**
12 **materials considered. I don't have that memorized.**

13 Q. Please review your report then and let me
14 know.

15 A. **What was the specific question?**

16 Q. Did you review any documentation related
17 to network switches manufactured by petitioner
18 Cisco Systems?

19 A. **I refer back to what's in the declaration,**
20 **but I do not believe I looked at physical products.**
21 **I did not need to look at physical products to form**
22 **my opinions in the declaration.**

23 Q. My question isn't about physical products
24 right now. My question is did you review any
25 documentation related to network switches

1 manufactured by petitioner Cisco Systems?

2 A. That wouldn't -- I don't believe that I
3 did. That would have been outside the scope of my
4 declaration. I was asked to look at the specific
5 prior art references, and I do not believe that
6 Cisco switches were prior art references that I was
7 asked to opine on.

8 Q. Did you review any documentation related
9 to network switches or routers generally that were
10 commercially available as of April 2004?

11 A. That would have been outside the scope of
12 what I was asked to do in this case. I was asked
13 to specifically look at the four references of
14 what's covered in the declaration.

15 Q. Did you review any documentation related
16 to Cisco's network switch 8500?

17 A. I believe I mention it in -- on page 24 of
18 my report of one of the exhibits, 1006, where I
19 reference the Catalyst 8500.

20 And I also noticed just now, it looks like
21 the paragraph at the page of 24 might be
22 misnumbered. Because, like, it's 54 and in that
23 paragraph it's 44 and then it's 55.

24 So it looks like that one paragraph might
25 not have got the template. So there might be a

1 **numbering issue there.**

2 Q. Okay. So let's examine your answer just
3 briefly.

4 The last part of your answer is about a
5 typographical error in your declaration. Correct?

6 **A. A paragraph number, yes.**

7 Q. Okay. And the first part of your answer
8 is that your declaration mentions the Catalyst
9 8500. Is that correct?

10 **A. That is correct.**

11 Q. And did you review any documentation
12 related to the Catalyst 8500 switch?

13 **A. That would have been outside the scope of
14 what I was asked to do. So I did -- other than
15 what's listed in Gai, that would be the extent.**

16 Q. Okay. And that paragraph also mentions a
17 6000 switch. Correct?

18 **A. That is correct.**

19 Q. And did you review any documentation
20 related to Cisco's 6000 switch?

21 **A. That's fairly open-ended.**

22 **Are you saying in writing my declaration
23 or just in general?**

24 Q. Well, right now let's just focus on in
25 writing your declaration.

1 **A. That would have been outside the scope of**
2 **what I was asked to do. So I didn't actually look**
3 **at specific Cisco switch documentation.**

4 **Q. Okay. So let's then ask the other**
5 **question that you alluded to.**

6 Did you generally review documentation
7 related to Cisco's 6000 switch?

8 **A. Over the course of my 30-year career, I'm**
9 **pretty confident I did. I mean, I'm familiar with**
10 **the switches, the Catalyst family switches. I've**
11 **worked on other cases involving the Cat switches.**

12 So I'm pretty confident in the course of
13 my consulting and potential expert witness work
14 that I would have reviewed documentation on those
15 switches.

16 **Q. Did you perform any research in preparing**
17 **opinions in your declaration?**

18 **A. Could you clarify? That question is**
19 **pretty ambiguous.**

20 **Q. Sure.**

21 Research with respect to any other
22 materials other than those listed on page 54.

23 **A. To the best of my recollection, any**
24 **materials I considered would be listed on page 54**
25 **in my report, in my declaration.**

1 Q. Did you perform any experiments to reach
2 opinions in your declaration?

3 A. The extent of anything I did or relied on
4 would be in my declaration. "Experiment" is sort
5 of a broad term. So I'm not -- do you mean
6 laboratory experiments? No, I was not -- that was
7 outside the scope and I wasn't asked to do that.

8 Q. Did you perform any calculations to reach
9 opinions in your declaration?

10 A. Once again, these are pretty broad terms.
11 I mean, I did analysis. I don't know if you
12 consider that a calculation or not. But any
13 analysis that I did would be in my declaration.
14 The declaration is the extent of my opinions and
15 what I did in this case.

16 Q. Do you have calculations for your
17 declarations?

18 A. Once again, "calculation" is a broad term.
19 If you mean like mathematical calculations, I don't
20 believe -- I would refer to my declaration. I
21 don't have it memorized. I don't believe I had
22 mathematical calculations in my declaration. That
23 was not something that was needed to do in this
24 case.

25 Q. So to be clear, I will never ask you to

1 memorize anything. The document will always be in
2 front of you.

3 And I'm not asking any trick questions.
4 I'm just asking questions that I want to know the
5 answers to which pertain to how you prepared your
6 declaration. So if you need to refer to your
7 declaration, please do so.

8 And my question is did you perform any
9 calculations to reach opinions in your declaration?

10 A. Well, like I said, "calculation" is a
11 broad term. If you mean like mathematical
12 calculation, like 7 multiplied by 15 divided by 17,
13 I do not believe there was mathematical
14 calculations because I did not need to do that to
15 form my opinions in this case.

16 Q. So you did not perform any mathematical
17 calculations to reach opinions in your declaration.
18 Correct?

19 A. I mean, to the best of my recollection,
20 that would be correct.

21 Q. Did you perform any simulations to reach
22 opinions in your declaration?

23 A. Once again, these are broad terms. By
24 "simulation," you mean like actually running
25 products or testing products in labs? That was not

1 **something I was asked to do in this case and**
2 **something I needed to do in this case to form my**
3 **opinion. So, no, I did not.**

4 Q. So let's turn to your declaration at
5 page 9.

6 Please let me know when you're there.

7 A. **I'm there.**

8 Q. This is where you provide analysis of
9 level of ordinary skill in the art. Correct?

10 A. **That is correct.**

11 Q. That section, Section 4, covers pages 9
12 and 10. Correct?

13 A. **That appears to be the case.**

14 Q. Now, at paragraph 29, which is on page 10,
15 the last sentence, you state, "I further note that
16 as of April 8, 2004, I was at least at this level
17 of skill."

18 Do you see that?

19 A. **I do.**

20 Q. What do you mean by that statement?

21 A. **That meant that as of April 8, 2004, I met**
22 **the requirements of a POSITA.**

23 Q. Are you an expert as to the subject matter
24 of the '518 patent?

25 A. **Once again, very broad questions. I would**

1 say access control lists, network security, the
2 technology that's in the '518 patent, yes, I would
3 consider myself an expert in.

4 Q. And you were an expert as of April 8,
5 2004?

6 A. That would be correct.

7 Q. So were you an expert in developing access
8 control lists as of April 8, 2004?

9 A. Yes.

10 Q. And what is your understanding of an
11 access control list?

12 ATTORNEY AUCHTER: Objection. Form.

13 ATTORNEY HUH: Counsel, what is the form
14 objection for, specifically?

15 ATTORNEY AUCHTER: Vague and ambiguous as
16 to -- the term "access control list" has not
17 been used in the claims of the patent. Are you
18 asking for claim construction? Are you asking
19 for a general understanding, and in what context
20 and what time?

21 ATTORNEY HUH: Counsel, I'm asking
22 Dr. Cole's understanding of the term that he
23 said he's an expert in.

24 A. Are you asking in general --

25 Q. I'm asking your --

1 **A. -- or certain parts of the patent?**

2 Q. I'm asking your understanding of what an
3 access control list is.

4 ATTORNEY AUCHTER: Same objection.

5 **A. So I would say, outside the scope of the**
6 **patent generally, in 2004, an access control list**
7 **would be a list that's used to determine who can or**
8 **can't access a network or a resource.**

9 Q. And how is that different than how the
10 term is used in the '518 patent?

11 **A. Can I pull up the patent?**

12 Q. Sure. Please do.

13 What in your statement is different than
14 how that term is used in the '518 patent?

15 ATTORNEY AUCHTER: Objection. Form.

16 **A. I actually think it's very similar, if you**
17 **look at the abstract, the first sentence: "A**
18 **method controls access of a user to a network**
19 **including a plurality of hosts coupled together**
20 **through a network switch."**

21 **So an access control list is generally**
22 **controlling access of who can or can't access**
23 **resources.**

24 Q. Were you as of April 8, 2004, an expert in
25 access control lists that used IP addresses to

1 control access?

2 **A. Yes.**

3 Q. Were you as of April 8, 2004, an expert in
4 access control lists that used physical addresses
5 to control access?

6 **A. I was an expert in physical MAC addresses
7 and how they're used with IP addresses and how
8 they're used in correlation with access control
9 lists, yes.**

10 Q. I think we just answered this, but let me
11 confirm. Were you as of -- as a -- strike that.

12 Were you as of April 8, 2004, an expert in
13 access control lists that used MAC addresses to
14 control access?

15 ATTORNEY AUCHTER: Objection. Form.

16 **A. To the extent that they utilized that in
17 some form or fashion, yes.**

18 Q. So what is a MAC address?

19 **A. A MAC address is a layer 2 address. It's
20 a 6-byte address that's typically assigned to the
21 network interface card when it's manufactured.**

22 Q. Were you as of April 8, 2004, an expert in
23 access control lists that included a username to
24 control access?

25 **A. To the extent where -- where they were**

1 utilized in some form or fashion with an access
2 control list, yes.

3 Q. Were you as of April 8, 2004, an expert in
4 access control lists that included DNS names to
5 control access?

6 A. Once again, to the extent that a DNS name
7 would be used, I would say yes.

8 Q. And what is a DNS name?

9 A. DNS stands for Domain Name Server, or
10 Services. And it's basically a name that would be
11 associated with an IP address.

12 So, for example, if you go to a web
13 browser and you type in www.cisco.com, cisco.com is
14 a domain name and then that would be resolved to an
15 IP address that would actually be put in the IP
16 header. IP headers don't contain domain names.
17 They have to get translated to IP addresses.

18 Q. As of April 8, 2004, were you an expert in
19 DHCP?

20 A. Yes.

21 Q. And what is DHCP?

22 A. Dynamic Host Configuration Protocol. It's
23 a protocol that allows computers on a network, when
24 they start up or connect to the network, to be
25 assigned an IP address so it doesn't have to be

1 done statically within each configuration.

2 So if I'm deploying 100 computers in a
3 network, instead of having to go in and enter an
4 individual IP address for each computer and making
5 sure they're unique, you would just use DHCP. So
6 when the computer connects to the network, it sends
7 out a DHCP request that provides them an IP
8 address, and then that's the IP address that would
9 be assigned to that MAC address for the duration of
10 the lease of that IP address.

11 Q. Why would DHCP be used instead of static
12 IP addresses?

13 ATTORNEY AUCHTER: Objection. Form.

14 A. One reason I just mentioned is if I have
15 100 computers, and you want to go in and use an
16 image to image those computers, to install, say,
17 Windows on those computers, an admin having to go
18 in and manually type in an IP address for each of
19 those 100 computers would be time-consuming and
20 could potentially produce errors, where somebody
21 might type in the same IP address.

22 So it's much more scalable and easier just
23 to turn on DHCP, so this way every computer can get
24 the same exact image. There's no -- there's no
25 manual configuration there. When you connect to

1 the network, you automatically get assigned a
2 unique IP address.

3 Q. Does DHCP provide the same IP address in a
4 given computer every time?

5 ATTORNEY AUCHTER: Objection. Form.

6 A. It would depend on many factors:
7 configuration, lease, caching, and many things like
8 that. So it could. It might not necessarily, but
9 typically it could. But like I said, it's not a
10 requirement of DHCP. It depends on how it's
11 configured.

12 Q. Does DHCP allow for sharing a pool of IP
13 addresses across multiple computers?

14 ATTORNEY AUCHTER: Objection. Form.

15 A. Once again, I'm always careful with terms.
16 What do you mean by "pooling"?

17 But DHCP has a range of IP addresses, and
18 when a computer starts out or refreshes the lease,
19 it would go out to the DHCP server and request an
20 IP address from that DHCP server, from that range
21 of IP addresses that the DHCP server has.

22 Q. As of April 8, 2004, were you an expert in
23 ARP?

24 A. Yes.

25 Q. And what is ARP?

1 **A. That's the Address Resolution Protocol.**

2 Q. And what is RARP?

3 **A. It's the advanced Reverse Address**
4 **Resolution Protocol.**

5 Q. Let me step back for a second.

6 You mentioned MAC addresses with ACL. Why
7 would a MAC address be included in an ACL?

8 ATTORNEY AUCHTER: Objection. Form.

9 **A. I think I was careful in my wording. In**
10 **the extent that it's utilized -- typically, ACLs**
11 **use IP addresses. So in the extent where you might**
12 **have to resolve to an ARP, but like I said, it**
13 **depends on the specific configuration. But,**
14 **typically, ACLs would use IP addresses, not MAC**
15 **addresses. There would just be a resolution that**
16 **would take place.**

17 Q. Is it your position that an access control
18 list would not include a MAC address?

19 ATTORNEY AUCHTER: Objection. Form.

20 **A. I did not say that, no. I said it depends**
21 **on the type of access control list and how it's set**
22 **up and configured.**

23 Q. So an access control list, that would
24 include a MAC address.

25 Do you see -- do you understand that?

1 ATTORNEY AUCHTER: Objection. Form.

2 Q. My question is why would a MAC address be
3 included in an access control list? For what
4 purpose?

5 ATTORNEY AUCHTER: Counsel, I would note
6 that Dr. Cole asked that he be able to take a
7 break at 10:10, which is in five minutes.

8 ATTORNEY HUH: Sure.

9 Q. Dr. Cole, did you understand my question?

10 A. I am. I'm just looking at my report
11 because I'm thinking you're getting outside the
12 scope of what's in my report, so I'm just verifying
13 what's in my report.

14 Q. Dr. Cole, I'm just asking a very simple
15 question.

16 My question is why would a MAC address be
17 included in an access control list?

18 ATTORNEY AUCHTER: Objection. Form.

19 Q. You can just say you don't know. It's
20 fine.

21 A. Like I said, typically IP addresses --
22 MAC -- sorry -- access control lists are used with
23 IP addresses. So I would have to research that.
24 That's not something I directly opined on.

25 Q. Well, you previously testified that MAC

1 addresses were included in access control lists.

2 Correct?

3 A. I think I said to the extent that they're
4 utilized within -- like, for ARP, like you talked
5 about addressing an IP address to a MAC. Like I
6 said, access control lists are typically utilizing
7 IP addresses. So if -- and they might resolve to a
8 MAC. But IP addresses typically use IP addresses.
9 So I'd have to research specifically how they might
10 be used specifically with a MAC address.

11 Q. Dr. Cole, have you seen MAC addresses
12 included in access control lists?

13 A. Like I said, a typical router IP access
14 control list would be an IP address. It would not
15 include a MAC address. So that would be something
16 I would have to research.

17 Q. That's not my question. Okay?

18 My question is have you seen MAC addresses
19 included in access control lists? Yes or no.

20 ATTORNEY AUCHTER: Objection. Form.

21 A. I don't recall. That was something
22 outside the scope of what I was asked to opine on.

23 Q. Did you see any prior art in record that
24 included a MAC address in access control lists?

25 A. I don't recall. I'd have to go back and

1 **look at the prior art.**

2 Q. Based on all of your experience, you've
3 never seen a MAC address in an access control list.
4 Is that your testimony here today?

5 ATTORNEY AUCHTER: Objection. Form.

6 A. **I don't recall. That was outside the**
7 **scope of what I was asked to do in this case.**

8 Q. I'm asking about your experience,
9 Dr. Cole.

10 A. **I said I don't recall.**

11 Q. Do you dispute that MAC addresses were
12 known to be included in access control lists?

13 ATTORNEY AUCHTER: Objection. Form.

14 A. **That was not something I was asked to**
15 **opine on in this case, so I don't have an opinion**
16 **one way or the other.**

17 Q. So you do not dispute that a MAC address
18 was known to be included in an access control list.
19 Correct?

20 ATTORNEY AUCHTER: Objection. Form.

21 A. **Once again, to the extent that what's in**
22 **my report, but I don't believe that's something I**
23 **was directly asked to opine on in this case.**

24 Q. So you don't dispute it. Correct?

25 ATTORNEY AUCHTER: Objection. Form.

1 **A. I don't have an opinion one way or**
2 **another.**

3 Q. Which means you don't dispute it.
4 Correct?

5 ATTORNEY AUCHTER: Objection. Form.

6 **A. I don't have an opinion on it.**

7 Q. Which means you cannot dispute it.
8 Correct?

9 ATTORNEY AUCHTER: Objection. Form.

10 **A. To me, "dispute" means you have an**
11 **opinion. So I don't have an opinion one way or the**
12 **other.**

13 Q. I said you do not dispute it because you
14 have no opinion on it. Right?

15 ATTORNEY AUCHTER: Objection. Form.

16 **A. I don't have an opinion one way or**
17 **another.**

18 **(Brief interruption.)**

19 ATTORNEY HUH: We can take a break here.
20 I hear the ringer.

21 THE WITNESS: Sorry. That's just my
22 reminder.

23 ATTORNEY HUH: Okay. We'll come back.

24 THE WITNESS: Okay. It would be around
25 10:30.

1 ATTORNEY HUH: Sure.

2 THE WITNESS: Thank you.

3 THE REPORTER: Off the record at
4 10:10 a.m.

5 (Recess taken from 10:10 a.m.
6 to 10:33 a.m.)

7 THE REPORTER: Back on the record at
8 10:33 a.m.

9 BY ATTORNEY HUH:

10 Q. Great. Welcome back, Dr. Cole.

11 A. **Thank you.**

12 Q. Have you spoken with counsel regarding the
13 subject of your testimony during the break?

14 A. **No, I did not.**

15 Q. So let's refocus on your areas of
16 expertise as of April 8, 2004.

17 Were you an expert in network switches?

18 A. **Yes.**

19 Q. And what is your understanding of a
20 network switch?

21 A. **A network switch is a layer 2 device that**
22 **typically connects computers to form a local area**
23 **network.**

24 Q. And were you an expert as of April 8,
25 2004, in network switches that utilized access

1 control lists?

2 A. Once again, access control lists typically
3 were layer 3 devices that sit on routers. So,
4 normally, you wouldn't have an access control list
5 on a layer 2 switch.

6 Q. Okay. So my question was were you an
7 expert -- as of April 8, 2004 -- an expert in
8 network switches that utilized access control
9 lists?

10 ATTORNEY AUCHTER: Objection. Form.

11 A. Like I said, in 2004, a network switch
12 typically wouldn't use an access control list.
13 That's a layer 2 device.

14 So I understand the concepts, but you
15 typically wouldn't have access control lists on a
16 layer 2 switch.

17 Q. Is it fair to say you were not an expert
18 as of April 8, 2004, an expert in network switches
19 that utilized access control lists?

20 ATTORNEY AUCHTER: Objection. Form.

21 A. Like I said, network switches typically
22 didn't use access control lists. So it would be an
23 area -- I mean, you're coming up with something
24 that wasn't how technology worked at the time.

25 Q. Is it your position that switches as of

1 April 8, 2004, were not known to utilize access
2 control lists?

3 ATTORNEY AUCHTER: Objection. Form.

4 A. I mean, the concept of an access control
5 list is a layer 3 list. An access control list
6 would be on a router, a layer 3 device. It
7 wouldn't be on a layer 2 device.

8 So if we're giving a different definition
9 of an access control list, an access control list
10 typically use IP addresses and are layer 3 devices,
11 not layer 2.

12 Q. Have you ever seen any document or prior
13 art reference that describes an access control list
14 in a layer 2 switch?

15 A. Not offhand, no.

16 Q. Not offhand.

17 But review your declaration, please.

18 A. Yes. Sorry. I stand corrected.

19 So if you look at the patent in column 3,
20 line 12, there is a need for access control lists
21 that allow access of hosts. In a computer network,
22 an Ethernet network can be restricted or controlled
23 based upon user names, MAC addresses, domain names,
24 and DNS names instead of merely IP address
25 information. And just to be clear, that's what

1 we're calling, in the patent, sort of the dynamic
2 access control list.

3 So the patent recognized the standard
4 access control list didn't contain that, and that's
5 where the patent comes in to be able to add that
6 capability to their dynamic access control list,
7 which is what the patent covers.

8 So at the time of the patent, that was not
9 something that was known, but there was a need for
10 that. So that wasn't known, but there was a need
11 for that, and that's what this patent addresses.

12 Q. So was it known in the art for a network
13 switch to have an access control list?

14 ATTORNEY AUCHTER: Objection. Form.

15 A. So just going through my declaration, if
16 you look at 55, I mean, a POSITA would have
17 understood that the access control lists discussed
18 in Gai were directed to layer 3 switching, which
19 would have been source and destination, port, and
20 IP addresses, not MAC addresses.

21 So that would be one where it's talking
22 about layer 3 and IP addresses. And I can keep
23 going through.

24 I do not see anything in my report about
25 prior art reference that talks about access control

1 **lists using MAC addresses.**

2 Q. Okay. So my question was it was known in
3 the art for a network switch to have an access
4 control list. Correct?

5 ATTORNEY AUCHTER: Objection. Form.

6 A. **So you have to be careful of the term.**

7 **So, generally, outside the scope of the**
8 **patents and the prior art, a switch is a layer 2**
9 **device and a router is a layer 3 device.**

10 Now, some of the prior art like Gai talks
11 about a layer 3 switch. So if you're talking
12 within that specific context, to me, that's really
13 a router. That's not what you call a traditional
14 switch.

15 So layer 3 devices would have access
16 control lists. Layer 2 devices typically would
17 not.

18 Q. Okay. You're reviewing the Kwan
19 reference. Correct?

20 A. **Yes.**

21 Q. And what layer is that device?

22 A. **So that's in paragraph 66 of my**
23 **declaration: "A POSITA would understand that**
24 **Kwan's teachings are directed to the subnet or**
25 **layer 2 level. 'One approach to improving defenses**

1 **against source IP spoofing is to attack the problem**
2 **at the subnet or layer 2 level.'"**

3 Q. Okay. So let's go to Exhibit 1007, which
4 is Kwan where you've cited it in your paragraph.

5 Let me know when you're there, please.

6 A. **I'm there.**

7 Q. Do you see the paragraph where it begins
8 "Figure 2 shows," at line 42 or 43?

9 A. **Oh. Are we in the patent or the report?**

10 Q. The patent.

11 A. **Okay, the patent.**

12 Q. Exhibit 1007.

13 A. **Yeah.**

14 Q. And in your report, you cite to column 3,
15 line 42 through 45.

16 A. **Okay.**

17 Q. And read that into the record, please.

18 A. **"Figure 2 shows a view of an embodiment of**
19 **a network device 200 of the present invention.**
20 **This network device provides layer 2 switching**
21 **functions."**

22 Q. Is it fair to say that Kwan discloses a
23 layer 2 switch?

24 A. **That's what it said in that sentence, yes.**

25 Q. Kwan also discloses an access control list

1 in CAM. Correct?

2 **A. Is there a specific point you're**
3 **referencing in the patent?**

4 Q. Sure. You can look at column 6, line 28
5 through 30.

6 **A. Yes. So that sentence says, "Once learned**
7 **IP address has been confirmed and the IP address/**
8 **MAC address pair has been stored in the ACL CAM,**
9 **blocking procedures are applied to the port."**

10 **So it does talk about an ACL CAM.**

11 Q. Kwan discloses a layer 2 switch that has
12 an access control list in CAM. Correct?

13 **A. That appears to be the case.**

14 Q. Further, Kwan discloses that the access
15 control list has stored a MAC address and IP
16 address pair. Correct?

17 **A. If -- once again, paragraph 6, line 28:**
18 **Once the learned IP address has been confirmed and**
19 **the IP address and MAC address pair has been stored**
20 **in the ACL CAM. So the ACL CAM stores the IP**
21 **address and MAC address in Kwan.**

22 Q. Kwan is prior art. Correct?

23 **A. That is my understanding.**

24 Q. Again going back to my previous question,
25 it was known in the art for a network switch to

1 have an access control list. Correct?

2 ATTORNEY AUCHTER: Objection. Form.

3 A. If we were saying layer 2, then, yes, I
4 would say Kwan -- Kwan does disclose that.

5 Q. And it was known for a layer 2 network
6 switch to have an access control list that stores
7 both the IP address and the MAC address. Correct?

8 ATTORNEY AUCHTER: Objection. Form.

9 A. I think once again you're referring to
10 column 6 of Kwan, lines 28, where it says: "Once
11 learned IP address has been confirmed, then the IP
12 address/MAC address pair has been stored in the ACL
13 CAM."

14 So it talks about an IP address and MAC
15 address pair being stored in the ACL CAM.

16 Q. So is the answer to my question "correct"?
17 Is it "yes"?

18 ATTORNEY AUCHTER: Objection. Form.

19 A. Well, to the extent that you're referring
20 to an IP address and MAC address being stored in
21 the ACL CAM, Kwan discloses that.

22 Q. Doctor, it was known in the art for a
23 layer 2 network switch to have an access control
24 list stored in CAM that includes both the IP
25 address and the MAC address. Correct?

1 ATTORNEY AUCHTER: Objection. Form.

2 A. I believe I answered that several times.
3 Kwan talks about an IP address and MAC address pair
4 being stored in ACL CAM.

5 So, yes, Kwan talks about the IP address
6 and MAC address being stored in ACL CAM.

7 Q. For the record, what is CAM?

8 A. I think it's either Content or Context
9 Address Memory. I don't think I have that directly
10 in my report.

11 Q. Is it fair to say that you're not an
12 expert in CAM memory?

13 A. I mean, I understand the general concepts
14 of memory. But if you mean specific expertise and
15 exactly how it's implemented, configured, designed,
16 at a hardware level, no, I'm not an expert. But
17 you don't need that expertise to understand the
18 patents in the prior art.

19 Q. Do you understand that both Gai and Kwan
20 utilize CAM, and you're not an expert in it?

21 A. Once again, you're changing my question.
22 If you're talking about the actual circuit boards
23 of CAM and how those circuit boards were set up and
24 configured, no, I'm not an expert in that. But you
25 don't need to have that expertise.

1 In terms of memory and how CAM is used
2 within switches and routers, yes, I have expertise
3 in that area. But I guess it's what you mean by
4 CAM expertise. CAM is a physical memory component
5 that involves circuitry and circuit boards, which
6 that's hardware-based and I'm not an expert. But
7 the use and understanding of CAM within switches, I
8 have expertise in.

9 Q. Okay. So how is CAM used in switches?

10 A. It's memory that would store that
11 information. So it's an area of memory in the
12 switch that can store IP addresses or MAC addresses
13 or other information.

14 Q. And why would somebody use CAM in a
15 switch?

16 ATTORNEY AUCHTER: Objection to form.

17 A. It's why we use any memory. I mean,
18 memory is a storage of information that the system
19 can use. So you use memory to store information
20 that the switch needs.

21 Q. Why use CAM instead of some other kind of
22 memory?

23 A. Just different design decisions or how
24 the -- what the switch has. Some switches
25 primarily use CAM. Others do not.

1 **So it's really just based on what memory**
2 **is available in the switch.**

3 Q. What is the benefit of CAM memory?

4 ATTORNEY AUCHTER: Objection to form.

5 A. **It's just more of an efficient way to**
6 **store access control lists in switches.**

7 Q. How so?

8 A. **Because it just -- it's quicker and faster**
9 **and more efficient to look up and find that**
10 **information.**

11 Q. Did you ever implement an access control
12 list in CAM?

13 A. **I guess, once again, careful with terms**
14 **like "implement." I mean, I've used switches and**
15 **I've configured switches that have CAM. I actually**
16 **have not built a switch myself or physically**
17 **created CAM. But I have used switches, so I**
18 **understand how you set up a switch and how the**
19 **switches would use CAM.**

20 Q. And for the record, "CAM" stands for
21 content-addressable memory.

22 Does CAM allow for evaluating an access
23 control list at high speeds?

24 ATTORNEY AUCHTER: Objection to form.

25 A. **I mean, that could be -- like I said, it's**

1 just an efficient way to store information. So,
2 depending on what you mean by "high speeds," I
3 mean, CAM is an efficient way to be able to store
4 and search access control lists.

5 Q. Do you know if CAM allows for evaluating
6 access control lists at high speeds?

7 ATTORNEY AUCHTER: Same objection.

8 A. I mean, that could be one of its uses,
9 yes.

10 Q. Are you an expert in circuits?

11 A. If you mean physical designing and
12 building of hardware circuits, no. In terms of the
13 general use within switches or routers in terms of
14 how they generally operate, yes. But, no, I'm not
15 a hardware person.

16 Q. Do you have an understanding or did you
17 have an understanding of a circuit as of April 8,
18 2004?

19 A. Yes.

20 Q. And what is your understanding?

21 A. I mean, a circuit's a general piece of
22 hardware that's used within switches to do
23 processing.

24 Q. Do you know what an integrated circuit is?

25 A. Yes.

1 Q. And what is your understanding of an
2 integrated circuit?

3 A. **It's essentially a circuit that's**
4 **integrated into the operation of the hardware or**
5 **the switch.**

6 Q. What does the adjective "integrated" mean,
7 in "integrated circuit"?

8 ATTORNEY AUCHTER: Objection to form.

9 A. **It's typically putting multiple electronic**
10 **components together and sometimes called a chip.**
11 **So a chip as an integrated circuit has multiple**
12 **electronic components or transistors that are all**
13 **combined together.**

14 Q. Is a circuit made up of multiple
15 components?

16 ATTORNEY AUCHTER: Objection to form.

17 A. **I mean, a circuit is usually just a path**
18 **for which, like, electronic information flows.**

19 Q. So a circuit is a path, not the components
20 themselves?

21 ATTORNEY AUCHTER: Objection to form.

22 A. **Well, once again, it depends on how you're**
23 **using it. I mean, once again, generally a circuit**
24 **is a component, but then in the context of the**
25 **patent, a circuit -- one second.**

1 So as used, like, in the '518, I mean,
2 it's -- a circuit is a component that can implement
3 functions. So, for example, you have a network
4 switching component that comprises a forwarding
5 circuit operable to the tech-specific received
6 packet. So a circuit is a component that can
7 perform a function such as operating to the
8 tech-specific received packets or other
9 functionality.

10 Q. Is a circuit made up of multiple
11 components?

12 ATTORNEY AUCHTER: Objection to form.

13 A. I mean, usually a circuit is a component
14 that performs a certain function.

15 Q. Sir, I'm asking you, is a circuit made up
16 of multiple components? Yes or no.

17 ATTORNEY AUCHTER: Objection. Form.

18 A. And once again, it depends what you mean
19 by the word "components." I mean, a circuit
20 performs a function on the system. So using these
21 vague terms that are sort of outside the scope of
22 what's in my declaration.

23 So, I mean, a circuit performs a specific
24 function, and I think that's pretty clear. Like if
25 you look at paragraph 92 in my declaration, a

1 **POSITA** would not have understood that the four
2 different memory circuits or devices correspond to
3 a single memory circuit as recited in Claims 15 and
4 19 of the Challenged Patent.

5 So it's sort of performing a specific
6 function. You would not have understood that those
7 four different memory circuits would correspond to
8 a single memory circuit.

9 Q. Please turn to Figure 3 of the '518
10 patent.

11 A. Okay.

12 Q. Do the components in element 102 together
13 correspond to a circuit?

14 A. The patent is referring to 102 as a
15 switch, not a circuit. So I don't see where 102 is
16 described in the patent as a circuit. It's
17 described as a switch.

18 Q. Do the elements 306 -- strike that.

19 Do the elements 300, 302, 304, and 306
20 together represent a circuit?

21 A. That's not something I directly offered an
22 opinion on, so I don't know.

23 Q. Because you're not a hardware guy?

24 A. What?

25 Q. Because you're not a hardware guy?

1 **A. That wasn't something I was asked to**
2 **directly opine on in this case. So I didn't form**
3 **an opinion on that.**

4 Q. So you don't know standing right here
5 today whether or not the elements illustrated in
6 Figure 3 collectively correspond to a circuit:
7 300, 302, 304, and 306?

8 **A. I don't know. I don't have an opinion on**
9 **that.**

10 Q. You don't know.
11 Turn to Claim 15, please, in the '518
12 patent.

13 **A. Okay.**

14 Q. Do you see that it recites a network
15 switching circuit?

16 **A. I do.**

17 Q. Do you see that that network switching
18 circuit has multiple components, including a
19 forwarding circuit, a memory circuit, a processor?

20 **A. I do.**

21 Q. Claim 15 is connected to Figure 3.
22 Correct?

23 **A. It does. But just to be clear, this is**
24 **referring to a network switching circuit, and your**
25 **question before was just a circuit in general.**

1 **So, to me, a network switching circuit**
2 **could comprise these different elements.**

3 Q. In the context of the '518 patent, the
4 term "circuit" includes multiple components.
5 Correct?

6 A. With the descriptor. So, yes, if you're
7 using, like, network switching circuit, and a
8 network switching circuit would comprise a
9 forwarding circuit, a memory circuit, and a
10 processor coupled to that forwarding circuit. So
11 if we're using the context of the patent, the
12 network switching circuit would comprise multiple
13 circuits.

14 Q. Let's go back to Figure 3. Let me know
15 when you're there.

16 A. Okay.

17 Q. So you'd agree with me that Figure 3
18 illustrates a circuit comprising Component 300,
19 302, 304, and 306. Correct?

20 ATTORNEY AUCHTER: Objection. Form.

21 A. Once again, Figure 3 is a more detailed
22 functional block diagram of the Ethernet switch.
23 So the figure is showing the Ethernet switch.

24 Q. This is not a circuit?

25 A. I don't see in the patent where it refers

1 to Figure 3 as a circuit. It's referring to it as
2 an Ethernet switch.

3 Q. Do you see any circuits in the '518 patent
4 illustrated?

5 A. I mean, the description of the figures are
6 talking about switches. The claims use the term
7 "circuit" with disclaimers in front of it.

8 So the claims talk about circuits and what
9 they compose, but it looks like the figures are
10 talking about switches.

11 Q. And a switch is not a circuit. Correct?

12 ATTORNEY AUCHTER: Objection to form.

13 A. I don't -- I'm just scanning through the
14 claim. I don't see where the patent says a switch
15 is a circuit.

16 Q. So it's not a circuit. Correct?

17 ATTORNEY AUCHTER: Objection. Form.

18 A. I don't see where the patent says a -- I
19 mean, it depends on the context. Like, Claim 15
20 talks about a network switching circuit that
21 includes -- so, I mean, it depends on the context.
22 They're talking about -- I mean, you can have a
23 network switching circuit which is a component of a
24 switch that has a circuit.

25 But I think you're trying to connect

1 something at indirect -- I mean, whether -- whether
2 a switch and a circuit is synonymous, I mean, you
3 have network switching circuits that comprise
4 certain components.

5 Q. The '518 patent does not disclose in the
6 specification a network switching circuit. Right?

7 ATTORNEY AUCHTER: Objection. Form.

8 A. The only place I see a network switching
9 circuit is in Claim 15. I don't see it in the
10 specification.

11 Q. So there's no support for that claim in
12 the specification. Right?

13 ATTORNEY AUCHTER: Objection. Form.

14 A. I wouldn't say no support. I mean, the
15 claims are the claims. I mean, to me, the claims
16 stand on their own. There doesn't necessarily have
17 to be specific mention in the specification. I
18 understand -- my technical understanding.

19 So, I mean, it's mentioned in the claim
20 and the claim talks about what it is. It's a
21 network switch that comprises. And it's showing
22 you what it comprises. So I don't see why you
23 would have to have it covered in the specification.

24 Q. Okay. Do you know how the '518 patent
25 stores selected packets?

1 A. I would have to go through the whole
2 patent. I don't have that memorized.

3 Q. Okay. Well, please do.

4 A. What was the specific question again?

5 Q. Do you know how the '518 patent stores
6 selected packets?

7 A. So it has a mapping state database where
8 it stores information associated with the packet.
9 So it's going to take information from the packet
10 and then store that in a mapping state database.

11 Q. And where are you reading that, so I
12 understand?

13 A. I think it's multiple spots. I mean, like
14 one spot is column 4, line 66, where the switch
15 stores this association as an entry or record of
16 the mapping state database, and then it's mentioned
17 multiple times through the specification.

18 Q. Sorry. Column 4 what?

19 A. So column 6 -- hold on. Column 4,
20 line 66.

21 Q. Please read into the record what you
22 believe supports your statement that you just made.

23 A. "The switch 102 stores this association as
24 an entry or record in a mapping state database with
25 the record containing a username and the MAC

1 address corresponding to the host the current --"
2 sorry -- "the user has currently used to access the
3 network."

4 Q. So this is how the '518 patent stores
5 selected packets?

6 A. It stores information from the packet.
7 So, I mean -- so you're looking at information from
8 the packet that's stored in the mapping database.

9 Q. Does the '518 patent actually store
10 packets?

11 A. Yeah. So if you look at sort of Claim 15,
12 you look at column 12, line 5: "The memory circuit
13 operable to store packets and operable to store an
14 enhanced access control list and dynamic access
15 control list."

16 So the memory circuit is operable to store
17 packets, so you can store packets in the memory
18 circuit.

19 Q. Okay. So where is support for that
20 statement in the specification?

21 A. I mean, the words "store packets" are only
22 used in the claim. I don't see the words "store
23 packets" used in the specification.

24 Q. Do you -- Doctor, do you know how the '518
25 patent teaches to store packets?

1 A. I just read it. It's from the claim
2 language. So the claim language talks about the
3 memory circuit is operable to store packets. So
4 you have a memory circuit that's operable to be
5 able to store the packets. The claim is teaching
6 that.

7 Q. Doctor, have you read this patent?

8 A. Yes, I have.

9 Q. So where in the specification does it
10 teach how to store selected packets?

11 A. It's my understanding that the claims work
12 for themselves. To me, a claim can teach. You
13 don't have to necessarily have it in the
14 specification. So, to me, a claim stands on its
15 own. So the claim is pretty clear that the memory
16 circuit is operable to store packets.

17 It's not my understanding that the
18 specification has to cover it again. I mean, my
19 understanding is the claims can stand by
20 themselves.

21 Q. Without support in the specification?

22 ATTORNEY AUCHTER: Objection to the form.

23 A. I mean, a specification generally supports
24 it. It doesn't have to specifically mention every
25 element in the claim. But, I mean, if you read the

1 **specification, I mean, it generally talks about how**
2 **think this works. And then the claim provides**
3 **specificity of how it's implemented.**

4 Q. Doctor, do you know any of the claim
5 limitations and how they're supported in the
6 specification?

7 ATTORNEY AUCHTER: Objection to form.

8 A. My focus was on understanding the claims
9 and knowing how the claims work and then seeing if
10 the prior art teaches those claims. I wasn't given
11 the assignment that I had to map every claim back
12 to specific language in the specification.

13 And we've been going an hour, so whenever
14 we're at a breaking point.

15 Q. We can take a break.

16 A. Okay.

17 Q. Would you like to come back in 10 minutes
18 or 15?

19 A. I guess the question is depending on how
20 long you're going, whether I need a lunch break or
21 not.

22 Q. You know, I couldn't tell. This is taking
23 longer than I anticipated. So --

24 A. Can we take, like, 40 minutes for a lunch
25 break, then?

1 Q. Sure. If that's what you would like.

2 A. Okay.

3 ATTORNEY HUH: Robert, what time would you
4 like to come back then?

5 ATTORNEY AUCHTER: I guess 40 minutes
6 would be 12:42?

7 THE WITNESS: I guess 12:15? Yeah, 12:15.

8 ATTORNEY HUH: All right. 12:15 it is.
9 Thank you.

10 THE REPORTER: Off the record at 11:33.

11 (Lunch recess taken from
12 11:33 a.m. to 12:19 p.m.)
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1 A F T E R N O O N S E S S I O N

2 THE REPORTER: Okay. Back on the record
3 at 12:19.

4 BY ATTORNEY HUH:

5 Q. Great.

6 Dr. Cole, welcome back from lunch.

7 A. **Welcome back. Thank you.**

8 Q. Sure.

9 Now, I'd like to get a bit more
10 understanding of your technical background, so
11 maybe we can turn to your CV where you list your
12 work experience, which is Exhibit 1004.

13 A. **I have Exhibit 2002.**

14 Q. Exhibit 2002. I apologize.

15 A. **You're testing me.**

16 Q. Yes. Thank you. 2002.

17 So if I look at the work you've listed as
18 part of your past experience, if I understand this
19 correctly, after -- or actually during the time
20 frame that you were obtaining a bachelor's and a
21 master's degree, you were also employed by the CIA.
22 Is that correct?

23 A. **So that the CIA was a co-op program. So**
24 **you went to a semester of school, and then you did**
25 **nine months working at the agency.**

1 **So my first two years of my bachelor's, I**
2 **went full-time to school and then did the last two**
3 **and a half -- I basically did a semester and then I**
4 **did nine months in Virginia working at the CIA.**

5 Q. Got it.

6 It appears that after you finished your
7 master degree, you continued to work at the CIA.
8 Is that correct?

9 A. **That is correct.**

10 Q. Okay. What was your responsibility in
11 that position?

12 A. **I mean, I guess the official public title**
13 **I could use is program manager and technical**
14 **director for the internet program team at the**
15 **Office of Technical Services.**

16 So I did some programming for them, some
17 **AI programming. I did some testing and**
18 **verification of operating systems. And I also**
19 **built and designed systems that run on the**
20 **internet.**

21 Q. Got it.

22 And that's about the time when the
23 internet was just taking off. Correct?

24 ATTORNEY AUCHTER: Objection to form.

25 A. **I'd say commercially viable. Because**

1 technically the internet was around in the '80s and
2 '90s, in universities. But to put it in context,
3 the World Wide Web wasn't actually created until
4 '92. And then companies like -- I think Google and
5 Amazon weren't actually founded until like '97-'98.
6 So in terms of sort of commercial use and
7 viability, I was in the very early stages of that.

8 Q. And as part of this work, did you provide
9 internet security for the CIA?

10 A. I focused a lot on sort of, like,
11 operate -- sorry -- offensive, like, general
12 hacking. So, I mean, I performed, like, pen
13 testing and things like that for some of their
14 servers and services, and other types of sort of
15 offensive-type operations.

16 Q. Did you as part of this work develop or
17 update access control lists for security purposes?

18 A. Yeah. So I -- I basically set up labs and
19 simulations for internet testing. So I configured
20 and set up routers and switches and access control
21 lists and that type of stuff, yes.

22 Q. So if you just focused on the switch
23 aspect, did the switches you utilized there have
24 access control lists?

25 A. Now, just to be clear, I'm using -- switch

1 is layer 2 and router is layer 3.

2 Q. Okay.

3 A. So the -- as far as I can recall, the
4 switches were not using access control lists. They
5 were just basically connecting devices using MAC
6 addresses.

7 Q. And were the layer 3 routers utilizing
8 access control lists?

9 A. I'd say basic, like, filtering on IP
10 addresses and layer 3 information.

11 Q. So, for example, if I understand your
12 statement, the access control lists in the routers
13 utilized IP information but perhaps not other type
14 of information. Is that correct?

15 A. To the best of my recollection.

16 Q. And then from that position at the CIA,
17 you went to Teligent. Correct?

18 A. That is correct.

19 Q. And what was your responsibility at
20 Teligent?

21 A. I was the director of security.
22 Essentially, I was the chief information security
23 officer before that title existed. That title
24 didn't exist in the mid to late '90s. So I was
25 basically responsible for information security.

1 Q. And there, did you develop systems,
2 whether switches or routers, that utilized access
3 control lists?

4 A. That, I was focused more on setting up the
5 security architecture. So I would have done more
6 with firewalls, which you've got to be careful
7 because you can essentially say a firewall is a
8 router with filtering technology that goes above --
9 once again, you've got to be careful with
10 terminology, because, you know, firewalls have
11 typically more rule sets. You don't really call
12 them access control lists at the time. An access
13 control list was really sort of something you put
14 on a layer 3 device to just do basic filtering of
15 IP addresses.

16 Q. So as your -- so your responsibilities at
17 Teligent, to the extent you utilized access control
18 lists, they were limited to IP addresses. Is that
19 correct?

20 A. If we're using the term that it was
21 defined to in that time frame, yes.

22 Q. And the access control lists that you
23 worked with at Teligent were implemented in
24 routers, not switches. Is that correct?

25 A. That would be correct.

1 Q. So up until Teligent, you had utilized
2 routers with access control lists that had IP but
3 not other type of information. Correct?

4 A. **Generally. To the best of my**
5 **recollection, correct.**

6 Q. And from Teligent, you moved over to Vista
7 Information Technologies. Correct?

8 A. **Correct.**

9 Q. And what was your title there?

10 A. **VP of enterprise security services.**

11 Q. And what was your responsibility at Vista
12 Information Technologies?

13 A. **That was setting up and helping to design**
14 **the NOC-SOC, Network Operations Center and Security**
15 **Operations Center. I also did a lot of sort of**
16 **public-facing marketing awareness.**

17 **So I actually -- we were a Cisco partner,**
18 **and I actually taught a lot of -- Cisco had like**
19 **two- to three-hour cybersecurity training on their**
20 **cybersecurity products and components. So I often**
21 **would publicly give those presentations on that**
22 **front, and then also worked with customers to**
23 **implement security solutions and help design out**
24 **security architectures.**

25 Q. Okay. And as part of your role at Vista

1 Information Technologies, did you ever develop or
2 utilize access control lists?

3 A. That was a little more of a strategic.
4 So, I mean, I -- I talked about access control
5 lists and sort of gave high-level recommendations
6 on how to design it, but I had engineers that
7 actually did the implementation.

8 So I was definitely familiar and
9 understood the technology in designing security
10 architectures, but I didn't necessarily do the
11 implementation.

12 Q. You personally oversaw engineers
13 implementing access control lists. Is that
14 correct?

15 A. That's correct.

16 Q. And in what context were the access
17 control lists implemented?

18 ATTORNEY AUCHTER: Objection to form.

19 A. So once again, if we're using sort of the
20 definition at the time of an access control list as
21 sort of a layer 3 list that you put on perimeter
22 routers to sort of filter out IP addresses, doing
23 basic IP address filtering, that would sort of be
24 the content where they sort of complemented
25 firewalls. So you had them doing the basic sort of

1 **filtering up front.**

2 Q. And had you ever implemented access
3 control lists in a switch at your tenure at Vista
4 Information Technologies?

5 A. Once again, if we're using the industry
6 terminology back then, a switch was layer 2, and
7 layer 2 just did MAC addresses.

8 So, no, I didn't do access control lists
9 on layer 2 devices.

10 Q. And the access control list at Vista
11 Information Technologies only utilized IP
12 addresses. Is that correct?

13 A. To the best of my recollection, yeah.

14 Q. And moving from that role, you went to
15 American Institutes of Research -- for Research.
16 Correct?

17 A. Yeah.

18 Q. And what was your role there?

19 A. So I had two roles. One is, I was the CIO
20 and I basically designed and built a whole new
21 infrastructure. So I went in and worked with
22 acquiring switches and routers, and then working
23 with the team to actually implement those switches
24 and routers across, I think it was a couple hundred
25 people, and set up an entire new network. So very

1 familiar with sort of switches and routers and the
2 functionality and technology on them, and built out
3 a new security architecture on top of that.

4 And I also had a dual hat where I was a
5 researcher, and along with a -- another PhD, we
6 built out an intrusion detection system and spun
7 that off into a company called Synapse that was
8 sort of later sold.

9 Q. And as part of your role at American
10 Institutes for Research, did you develop access
11 control lists?

12 A. On the routers as part of an architecture
13 with other security devices, yes.

14 Q. But not within switches. Correct?

15 A. Not layer 2 devices, correct.

16 Q. And what were the characteristics of those
17 access control lists that you had developed?

18 A. Typically, like I said, filtering out IP
19 addresses. So limiting IP addresses from certain
20 countries and certain locations that AIR didn't do
21 business with, to sort of cut down on traffic and
22 possible attacks.

23 Q. And transitioning from that position, you
24 went to GraceIC. Is that correct?

25 A. Correct.

1 Q. And what was your responsibility there?

2 A. The chief security officer. So basically
3 oversaw their internal security and then provided
4 consulting services for clients. Spent, I think,
5 six months or so in Hong Kong helping to design and
6 build out a financial -- global financial
7 infrastructure that had functionality and security
8 integrated into it.

9 Q. As part of your role there, did you ever
10 develop access control lists?

11 A. Yes. Typically on layer 3 devices, so
12 once again using IP addresses to filter.

13 Q. And did you ever implement an access
14 control list on a layer 2 switch at that time?

15 A. Like I said, I mean, we did filtering and
16 rules. They weren't at the time really called
17 access control lists. So I think we've just got to
18 be careful on terminology.

19 So, I mean, we did -- I mean, with all the
20 companies, just to be clear, on layer 2, I mean, we
21 weren't doing controls and checks on MAC addresses.
22 And checking and verifying MAC addresses typically
23 on a switch at the time wasn't called an access
24 control list, but, I mean, understanding MAC and
25 basic filtering.

1 Q. At your role at GraceIC, did you ever
2 implement a switch that filtered based on MAC
3 address and IP address?

4 A. Switches at the time were layer 2. So you
5 would only do MAC address filtering on a layer 2
6 switch at the time. Layer 3 was IP addresses, so
7 that would have been on the router.

8 So I think we've just got to be careful
9 with terminology at the time, where switches were
10 layer 2 MAC addresses and routers were layer 3 IP
11 addresses.

12 Q. Right.

13 So I'm asking at the time did you ever
14 implement a switch that performed filtering based
15 on MAC address and IP address?

16 A. I believe I answered that. At the time
17 switches were only layer 2, so they only did MAC
18 addresses. So at the time, a layer 2 switch, you
19 would not have visibility into the IP address. So
20 you wouldn't be able at the time to be filtering IP
21 addresses at that time frame.

22 Q. So, then, is the answer to my question
23 that you had not implemented a switch that
24 performed filtering based on MAC address and IP
25 address?

1 **A. That would be correct. A layer 2 switch.**

2 **Q. Just so I understand, is it your position**
3 **that the '518 patent is limited to layer 2 switches**
4 **as opposed to layer 3 switches?**

5 **A. The patent was filed in 2004, and I don't**
6 **believe it's limited to that. I'm just saying**
7 **prior -- you're asking me about 1999, 2000, 2001.**
8 **I'm just saying typically at that time, with my**
9 **experience, switches were only layer 2/layer 3.**

10 **Now, I believe the '814, that's what the**
11 **invention is: a dynamic access control list that**
12 **could go across those layers. So I'm just saying,**
13 **we're talking about before the patent and what the**
14 **patent does.**

15 **So I don't believe the patent is limited.**
16 **And that sort of meets a part of the invention of**
17 **the 2004 -- of the '518.**

18 **Q. You don't dispute that the Kwan reference**
19 **teaches a layer 2 switch that performs filtering**
20 **based on MAC address and IP address. Correct?**
21 **You've already testified to that.**

22 **ATTORNEY AUCHTER: Objection to form.**

23 **A. I believe we covered that earlier when we**
24 **looked at the Kwan.**

25 **Q. That was prior to the '518 patent.**

1 Correct?

2 A. Once again, I think we have to be careful
3 of language. To me, like if we look at paragraph
4 68 and we looked at the patent, I mean, it teaches
5 that it can do IP address and MAC addresses. I
6 think we have to be careful with -- I'll go back to
7 the Kwan specifically on the use of the word
8 "filtering."

9 Q. Doctor, my question was Kwan is a prior
10 art reference. Correct?

11 A. Kwan is a prior art reference.

12 Q. Thank you.

13 Now, from GraceIC you moved over to the
14 Sytex Group, Inc. Is that right?

15 A. Correct.

16 Q. And what was your role at Sytex Group,
17 Inc.?

18 A. Their chief technology officer.

19 Q. And as part of that, what was your
20 responsibility?

21 A. To basically perform research on new ideas
22 that we could use to provide a competitive
23 advantage for our government contractors. Helped
24 protect and build out our intellectual property
25 portfolio. Write research papers. And basically

1 show that Sytex was a leader in networking and
2 cybersecurity research.

3 Q. And while you were at Sytex Group, Inc.,
4 did you develop access control lists?

5 A. I mean, I performed research on routers
6 and switches and how they work and how their
7 functionality. So, yeah, I would have sort of
8 either researched or designed or helped perform
9 analysis on access control lists with routers.

10 Q. And what criteria do those access control
11 lists utilize?

12 A. Typically, IP addresses. And I think at
13 that time they could also do some port filtering.
14 So layer 3/layer 4 filtering on the routers.

15 Q. Do they also do MAC address filtering?

16 A. Typically not.

17 Q. Well, setting aside typically, were there
18 instances where they did perform MAC address
19 filtering?

20 A. Like I said, I mean, in the switch, you
21 could set up ARP rules that could sort of block
22 certain MAC addresses. I mean, you had 802.1x at
23 the time where you could go in and sort of block
24 and not allow certain MAC addresses. I mean, I
25 guess it's what you called filtering. But you

1 could go into a layer 2 switch and only allow
2 certain MAC addresses to connect to certain ports
3 in the switch. So I guess you could call that --
4 using the word "filtering," now you could do
5 filtering of MAC addresses and switches.

6 Q. So my question to you, Doctor, was whether
7 or not you developed access control lists.

8 Do you recall that?

9 A. I guess you're confusing or changing the
10 language in your question. So you asked filtering
11 was your last question, which I answered, and now
12 you're changing it to access control lists.

13 So the access control lists in that
14 terminology was layer 3. We did do filtering on
15 switches at layer 2. It just wasn't called access
16 control lists. It was called MAC address
17 filtering.

18 Q. Okay. So let's focus on access control
19 lists. I'll start again so there's no ambiguity.

20 Have you as part of your role at Sytex
21 Group developed access control lists?

22 ATTORNEY AUCHTER: Objection to form.

23 A. Yes.

24 Q. And did those access control lists utilize
25 IP address for filtering?

1 ATTORNEY AUCHTER: Objection to form.

2 **A. Yes, they did.**

3 Q. Did those access control lists utilize MAC
4 address for filtering?

5 ATTORNEY AUCHTER: Objection to form.

6 **A. Not on the routers, no, they did not.**

7 Q. Did you develop any access control lists
8 whether router or switch that utilized MAC address
9 for filtering?

10 ATTORNEY AUCHTER: Objection to form.

11 **A. Not as the term was used, and not an**
12 **access control list. As I said it before, MAC**
13 **address filtering on switches but not access**
14 **control lists that had MAC addresses.**

15 Q. Did you develop an access control list
16 that utilized username for filtering?

17 ATTORNEY AUCHTER: Objection to form.

18 **A. Not that I can recall, no.**

19 Q. Did you develop an access control list
20 that used DNS name for filtering?

21 **A. At that time it was still prior to the**
22 **patent. So, no.**

23 Q. So have you ever, prior to the patent,
24 prior to April 8, 2004, developed or worked with an
25 access control list that filtered on anything else

1 but IP address?

2 **A. Not that I can recall.**

3 Q. Have you ever implemented a system where
4 the access control IP address was updated based on
5 DHCP?

6 **A. I would say after the patent came out.**
7 **Like 2005 or later, I would have, but not before.**

8 Q. Why would it be desirable for the IP
9 address and access control list to be updated based
10 on DHCP?

11 ATTORNEY AUCHTER: Objection to form.

12 **A. So you could perform filtering on certain**
13 **systems. So if you add like a server or a client**
14 **system that you want to have access based on the IP**
15 **address that was assigned, you'd want to update the**
16 **access control list so it could perform proper**
17 **filtering or allowance for that computer.**

18 Q. Let's go back to the '518 patent, if you
19 would, please, and I'm going to direct your
20 attention to column 9, line 28.

21 Please let me know when you're there.

22 **A. I'm there.**

23 Q. And feel free to read -- I'm going to ask
24 you questions with respect to -- from line 28 to
25 about 40. But feel free to read as much as you

1 want.

2 **A. Okay.**

3 Q. So do you have an understanding now how
4 the '518 patent delivers selected packets?

5 **A. Yes.**

6 Q. And how does it do that?

7 **A. The selected packets are stored in the
8 packet memory for processing by the processor.**

9 Q. There's the packet memory 306. Correct?

10 **A. Correct.**

11 Q. And that 306 is illustrated in Figure 3.
12 Correct?

13 **A. It's one of the components in the Ethernet
14 switch.**

15 Q. Is the answer to my question "correct"?

16 **A. If you're asking is 306 one of the
17 components shown in Figure 3, yes.**

18 Q. And do you have an understanding based on
19 that paragraph how the enhanced access control list
20 may be stored?

21 **A. So also stored in the packet memory 306 or
22 memory in the processor of 302 is the enhanced
23 access control list at 108 shown in Figure 2.**

24 Q. But there are two options of how to store
25 the enhanced access control list 108. The first

1 option is in packet memory 306 and the second
2 option is in the memory of the processor 302.
3 Correct?

4 **A. That is correct.**

5 Q. Do you know whether packet memory 306
6 is -- what type of memory that would be?

7 **A. I don't see where the patent specifies**
8 **what -- like, the specific. It would just be**
9 **packet memory with the stored packets.**

10 Q. Would that be ROM?

11 ATTORNEY AUCHTER: Objection to form.

12 ATTORNEY HUH: Deanna, that word is "ROM,"
13 R-O-M, not "wrong."

14 THE REPORTER: Thank you.

15 **A. I mean, to me, the patent doesn't specify.**
16 **It just says packet memory doesn't specify what**
17 **type of memory.**

18 Q. Can you store packets in ROM?

19 **A. I mean, if you're talking outside the**
20 **scope of the patent, generally. Like I said, the**
21 **patent doesn't specify which type of memory.**

22 Q. Do you have an understanding of generally
23 how packets are stored?

24 **A. It's generally stored in memory. But,**
25 **like, it can be stored in different type -- I mean,**

1 the type of memory doesn't matter how it's stored.

2 Q. Do you have an understanding of what type
3 of memory is used to store packets?

4 A. I mean, memory is an area on the computer.
5 I mean, you can have different types of memory, but
6 that wouldn't change the implementation. I mean,
7 the type of memory wouldn't change how the packets
8 are stored in memory.

9 Q. Can you store memory -- can you store
10 packets in ROM?

11 A. I mean, it would depend. That's outside
12 the scope. I'd have to look at specific details of
13 that whether you could or could not. I just know
14 the patent talks about storing in memory. It
15 doesn't talk about a specific type of memory.

16 Q. Is it possible -- can you implement the
17 '518 patent so that it stores patents in ROM?

18 A. I don't know that one since I didn't
19 directly opine on that. I'd have to look at that.

20 Q. Do you know what "ROM" stands for?

21 A. Read-only memory.

22 Q. Is it possible to store incoming packets
23 in read-only memory?

24 ATTORNEY AUCHTER: Objection to form.

25 A. I would have to -- like I said, you're

1 asking questions outside the scope. I'd have to
2 research that and look into it.

3 Q. So we already discussed how the '518
4 patent stores the enhanced access control list.
5 Do you recall that?

6 A. Yes.

7 Q. And it has two options: either in the
8 packet memory 306 or in the memory of the processor
9 302. Correct?

10 A. That's what the patent says.

11 Q. And how does the patent describe storing
12 the dynamic access control list?

13 A. It just says, "A set of rules ensures that
14 the processor receives all packets necessary for
15 the proper generation of the dynamic access control
16 list."

17 Q. So my question was how does the patent
18 describe storing the dynamic access control list?

19 A. I mean, it shows that there's a dynamic
20 access control list that's in the switch. I don't
21 believe it specifies specifically where in the
22 switch it's stored.

23 THE REPORTER: What's the first thing you
24 said?

25 THE WITNESS: Well --

1 THE REPORTER: I'm sorry. I totally did
2 not understand. It just kind of sounded like
3 one word.

4 THE WITNESS: Okay.

5 A. I mean, it talks about a dynamic access
6 control list that's created in the switch, but it
7 doesn't specify exactly where it's stored.

8 Q. It could be stored in any of the
9 components. Correct?

10 ATTORNEY AUCHTER: Objection to form.

11 A. I don't know if any -- i mean, it just
12 doesn't -- the patent doesn't specify where it's
13 actually stored.

14 Q. Is it stored --

15 A. It just says it's generated and stored in
16 the switch.

17 Q. Can the dynamic access control list be
18 stored in the processor 302 memory?

19 ATTORNEY AUCHTER: Objection to form.

20 A. Like I said, the patent doesn't specify.
21 So . . .

22 Q. Right.

23 So my question is a person skilled in the
24 art reading this specification of the '518 patent,
25 would that person skilled in the art understand

1 that the dynamic access control list can be stored
2 in the processor 302 memory?

3 A. I mean, they would -- a POSITA would
4 recognize that there's a dynamic access control
5 list stored. I mean, the patent doesn't go where
6 it's stored, so they wouldn't necessarily -- I
7 mean, you don't have to -- you're changing and
8 enhancing the patent. The patent doesn't cover it.

9 So a POSITA would know that it's stored
10 but wouldn't necessarily have to know where it's
11 stored.

12 Q. The patent is agnostic as to where the
13 dynamic access control list is stored. Correct?

14 ATTORNEY AUCHTER: Objection. Form.

15 A. If you look at Claim 15, I mean, Claim 15
16 talks about store the dynamic act -- sorry -- store
17 the dynamic access control list in the memory
18 circuit.

19 Q. Okay. Can you identify any embodiment in
20 the '518 specification, what that memory circuit
21 corresponds to?

22 ATTORNEY AUCHTER: Objection to form.

23 A. I mean, if you look at Figure 1, you can
24 see the dynamic access control list is stored in
25 the Ethernet switch. So it's a memory circuit

1 **within the Ethernet switch.**

2 Q. And so I understand, at Figure 1 you have
3 ethernet switch 102. Is that correct?

4 A. **Correct.**

5 Q. And this illustrates that ethernet switch
6 102 has a dynamic control list 104 and then
7 separately to the left, there is an enhanced access
8 control list 108. Correct?

9 A. **Okay. So 104 is a dynamic access control**
10 **list, and then 108 is the extended access control**
11 **list.**

12 Q. Those are on different boxes. Right?

13 A. **Correct.**

14 Q. And where in Figure 1 is the map -- the
15 memory for storing packets?

16 A. **The packet memory that stores the packets,**
17 **that's actually 306, which is shown in Figure 3.**

18 Q. Okay. So, then, with respect to Figure 1,
19 it doesn't show the packet memory for storing
20 packets, but it shows memory for storing dynamic
21 access control list 104 and then memory for storing
22 enhanced access control list 108. Correct?

23 A. **I mean, it shows an extended access**
24 **control list and a dynamic access control list. It**
25 **doesn't show exactly what memory it's stored in in**

1 **Figure 1.**

2 Q. Okay. So my question was, then, where in
3 the specification of the '518 patent does it
4 disclose the memory that stores a dynamic access
5 control list? You identified Figure 1 for that
6 purpose, and now you're walking that back.

7 ATTORNEY AUCHTER: Objection to form.

8 A. I mean, the patent -- the specification
9 talks about the dynamic access control list, and
10 then the claim talks about the specification. So,
11 I mean, the specification is talking about the
12 generation of it, and then the claim talks about
13 where it's located.

14 Q. So sitting here today, you can't identify
15 where the specification of the '518 patent teaches
16 how to store a dynamic access control list. Is
17 that right?

18 ATTORNEY AUCHTER: Objection to form.

19 A. No. We talked about it. I mean, column 9
20 talks about the generation of a dynamic access
21 control list and the components, and then the claim
22 provides for the details.

23 So, to me, that's how a patent works. You
24 have the general specifications, and then the claim
25 is the actual invention. And the specifications

1 support the claim, but the claim is the specific
2 invention. So I don't see why a claim can't have
3 more specificity than the specification.

4 Q. So is it your position, then, that the
5 specification of the '518 patent is silent as to
6 where the dynamic access control list is stored?

7 ATTORNEY AUCHTER: Objection. Form.

8 A. No, because, to me, you're -- to me, it's
9 a patent. You can't separate the pieces. I mean,
10 you look at the claim and the specification
11 together. So when you're looking at those
12 together, it clearly talks about a dynamic access
13 control list, and then the specification provides
14 the detail.

15 So, I mean, you're -- to me, you're -- the
16 way you're dissecting it is not my understanding of
17 how you analyze a patent.

18 Q. What is your understanding of how to
19 analyze a patent?

20 ATTORNEY AUCHTER: Objection to form.

21 A. That you look at the claims. The claims
22 are the specific invention. That's what has to be
23 met. If you meet the claim language, then it
24 either infringes, or if prior art meets every
25 single element in the claim language, then it could

1 potentially invalidate. Then if you need sort of
2 clarification or other factors, you can look back
3 at the specification. But when you're looking at
4 infringement or others, you're looking purely at
5 the claims.

6 Q. I want the record to be clear.

7 Where in the specification, if anywhere,
8 does it describe where the access -- dynamic access
9 control list is stored?

10 A. To me, it doesn't specifically provide
11 that, because that's in the claim.

12 And we've been going about an hour. So
13 whenever there's a good break point.

14 Q. Sure. We can take a break.

15 A. Okay.

16 Q. Come back in 10 minutes?

17 A. Yeah.

18 Q. Okay.

19 THE REPORTER: Off the record at 1:18 p.m.

20 (Recess taken from 1:18 p.m.
21 to 1:28 p.m.)

22 THE REPORTER: Okay. Back on the record
23 at 1:28.

24 BY ATTORNEY HUH:

25 Q. Welcome back, Dr. Cole.

1 During break did you speak with counsel
2 regarding the substance of your testimony?

3 **A. No, I did not.**

4 Q. Okay. Let's turn to your declaration at
5 paragraph 92, please.

6 **A. Okay.**

7 Q. And feel free to read it, paragraph 92, if
8 you would like. And I'll ask you some questions
9 about it.

10 **A. Okay.**

11 Q. So in this paragraph -- and correct me if
12 I'm wrong -- you appeared to assert that Claim 15
13 recites a single memory circuit operable to store
14 packets, enhanced control lists, and dynamic
15 control lists. Correct?

16 **A. I mean, if you're looking just at 19, I'd
17 just say that --**

18 Q. I'm sorry. I'm saying paragraph 92,
19 Doctor.

20 **A. Yes.**

21 **I guess what's there is different than**
22 **what you said. What I say in 92 is a POSITA would**
23 **not have understood that the four different memory**
24 **circuits or devices corresponds to a single memory**
25 **circuit as cited in Claim 15 and 19 of the**

1 **Challenged Patent. A POSITA would have recognized**
2 **that the different types of memory in Gai --**
3 **non-volatile RAM, dynamic memory, and**
4 **content-addressable memory -- cannot be combined**
5 **into a single memory circuit operable to store**
6 **packets, enhanced control lists, and dynamic**
7 **control lists.**

8 Q. Okay. So let's take that one step at a
9 time.

10 Is it your position that Claim 15 recites
11 a single memory circuit?

12 A. **Claim 15 is a network switching circuit.**
13 **So it's a single circuit. And that network**
14 **switching circuit comprises a forwarding circuit to**
15 **the tech-specific packets, further operable -- I**
16 **mean, I could read a memory circuit. I mean, it**
17 **contains a couple things. But Claim 15 is reciting**
18 **a single network switching circuit.**

19 Q. Maybe you didn't follow my question.
20 Okay?

21 Paragraph 92 is discussing the memory
22 circuit in Claim 15. Correct?

23 A. **Okay.**

24 Q. And is it your position that Claim 15
25 recites a single memory circuit?

1 A. And in 15, 2.1 says "a memory circuit."
2 It doesn't say "memory circuits" or "multiple
3 circuits." So, to me, that would be referring to a
4 single memory circuit.

5 Q. So your reading of the claim is because it
6 says "a" -- quote/unquote -- "memory circuit," you
7 read that as a single memory circuit. Is that
8 correct?

9 A. That's how I'm reading it, yes.

10 Q. Can you identify any embodiment in the
11 '518 specification that discloses a single memory
12 circuit that stores the received packets, the
13 enhanced access control list, and the dynamic
14 access control list?

15 ATTORNEY AUCHTER: Objection to form.

16 A. First of all, as we talked about, to me,
17 the claims are the invention, and the claims
18 clearly discloses that. So the claim is clearly
19 disclosing a memory circuit coupled to the
20 forwarding circuit and the memory circuit operable
21 to store packets and operable to store an enhanced
22 access control list and a dynamic access control
23 list.

24 So, to me, the claims cover it. I could
25 see if the specifications do, but, to me, that's

1 **not the requirement. The claims are the invention.**

2 Q. Okay. So setting apart -- aside the
3 claim, Doctor, please identify in the '518
4 specification where it discloses a single memory
5 circuit that stores these three elements: the
6 received packets, the enhanced access control list,
7 and the dynamic access control list.

8 ATTORNEY AUCHTER: Objection to form.

9 Q. If you can.

10 ATTORNEY AUCHTER: Objection to form.

11 A. Once again, as I said before, is you look
12 at the entire patent and you start with the claims.

13 So I don't see where it specifically talks
14 about that, but to me, that's not necessary. If
15 the claim covers the invention, that's sufficient.
16 The specification could provide further details,
17 but the specification isn't the invention. The
18 claims are. So as long as it's in the claims, to
19 me, that's what drives the invention and
20 infringement or prior art.

21 So I don't see a specific mention of it,
22 but I don't believe that's a requirement. The
23 claims are sufficient to stand on their own.

24 Q. But you cannot identify a single
25 embodiment where it discloses a single memory

1 circuit that stores received packets, an enhanced
2 access control list, and a dynamic access control
3 list. Correct?

4 ATTORNEY AUCHTER: Objection to form.

5 A. As I said, the claim covers it. And to
6 me, the claim is the invention.

7 So, no, I can't find a specific reference
8 in the specification that has the exact claim, but
9 that's not to be my understanding. The claim is
10 the invention. The specification provides details.

11 So, no, the specification doesn't have the
12 specifics of the claim, but in my understanding,
13 that's not required. The claim speaks for itself.

14 Q. Doctor, I'm asking you to set apart the
15 claim. Do you understand that?

16 ATTORNEY AUCHTER: Objection to form.

17 A. I'm going to answer your question
18 completely. I don't believe the analysis you're
19 having me do is fair. So I'm going to fully answer
20 your question, and I believe I answered it.

21 Q. You're not answering my question because
22 I'm asking you to set apart the claim. When you
23 started the deposition, you testified that you
24 would answer my question, not the question that
25 you're trying to answer and ignoring what I'm

1 actually asking.

2 I'm asking you to set apart the claim
3 language. Do you understand that?

4 ATTORNEY AUCHTER: Objection to form.

5 **A. And I'm going to state for the record that**
6 **I don't believe that's proper and that I will**
7 **answer your question. So . . .**

8 Q. Understood. You don't have to believe
9 that is proper.

10 But you're here to answer my questions.
11 Do you understand that?

12 **A. And I can also answer fully because I'm**
13 **under oath. So I can -- I can answer your question**
14 **with disclaimers. So I'm giving accurate answers**
15 **under oath so you don't misquote me. So I believe**
16 **I can answer your question and provide**
17 **clarification around it.**

18 Q. So I'm asking you to set apart the claim
19 language and identify any embodiment in the
20 specification that supports your reading of the
21 claim where a single memory circuit stores three
22 items: the received packets, the enhanced access
23 control list, as well as the dynamic access control
24 list.

25 Can you do that, or no?

1 ATTORNEY AUCHTER: Object to the form.

2 A. I can, but because I'm under oath, I'm
3 going to give an accurate and correct answer.

4 So, as I stated, I don't believe that's
5 proper. But to answer your question, which I will,
6 the claim -- the specification doesn't specifically
7 lay out the exact details of the claim.

8 So that is answering your question. But
9 I'm giving the caveat that I don't believe that's
10 proper in how you analyze a patent.

11 Q. Do you think it's proper to exclude
12 embodiments from the specification in reading the
13 claims?

14 ATTORNEY AUCHTER: Objection. Form.

15 A. As I've said multiple times, the analysis
16 is based on the claims. The claim is the
17 invention. The claim stands on its own.

18 When I -- I testify and do infringement,
19 we use solely the claims. I don't have to prove
20 infringement with the embodiment. I prove
21 infringement with the claims. Then, if you need
22 additional details or information, you can go to
23 the specification. But infringement and analysis
24 of the invention is the claims.

25 Q. So sitting here today, you have not as of

1 yet identified in the specification any embodiment
2 that teaches a single memory circuit that stores
3 received packets, the enhanced access control list,
4 and the dynamic access control list.

5 I'm giving you one last chance to do that.

6 ATTORNEY AUCHTER: And I'm objecting.

7 Asked and answered. Mischaracterizes prior
8 testimony.

9 ATTORNEY HUH: Robert, please don't make
10 speaking objections.

11 A. As I said, my analysis was on the claims.
12 When I'm going in and doing my declaration and I am
13 determining whether the prior art teaches the
14 invention, it is looking at the claims. It is not
15 looking at the specification.

16 So, no, I haven't mapped every single
17 claim to exact language in the specification. But
18 that's not my requirement or my assignment.

19 So, no. Did I find every exact claim
20 element in the specification? No. But that wasn't
21 my assignment or something that I felt I was
22 required to do.

23 Q. Right.

24 So what I'm saying, Doctor, is the
25 specification provides embodiments where different

1 memory circuits, different pieces of memory, store
2 different information. Some store packets. Some
3 store enhanced access control lists.

4 For example, as we had discussed earlier
5 today, in the patent, it describes packet memory
6 306 that stores packets, and then it describes the
7 processor memory 302 that stores the enhanced
8 access control list.

9 And my question to you is have you
10 identified in the specification any embodiment that
11 supports your reading of the claim that there is a
12 single memory circuit that stores received packets,
13 the enhanced access control list, as well as the
14 dynamic access control list?

15 Can you do that? Yes or no.

16 ATTORNEY AUCHTER: Objection to form.

17 **A. There's nothing in the specification that**
18 **contradicts.**

19 **So does the specification cover every**
20 **embodiment and the exact language? So, no. The**
21 **claim language is not in the specification. The**
22 **claim language is separate. So, no.**

23 **Does the exact claim language appear in**
24 **the specification? No, but that's not a**
25 **requirement. There's nothing in the specification**

1 **that contradicts the claim or the reading of the**
2 **claim.**

3 Q. Okay. So your interpretation of the claim
4 is that there has to be only one memory circuit
5 that stores received packets, an enhanced access
6 control list, and a dynamic access control list.
7 Correct?

8 A. **It's the claim. I mean, it's not my**
9 **interpretation of it. The claim says "a memory**
10 **circuit." It doesn't say "memory circuits." It**
11 **doesn't say "multiple memory circuits."**

12 So any POSITA reading this is a memory
13 circuit, which is showing there is one memory
14 circuit that performs that. It's not my
15 interpretation. It's the claim language.

16 Q. The word "single" is not in the claim.
17 Correct?

18 A. **"A memory circuit," singular, is in the**
19 **claim.**

20 Q. Understood.

21 Let's turn to the Gai reference,
22 Exhibit 1006.

23 A. **Okay.**

24 Q. What is your understanding of the Gai
25 reference?

1 ATTORNEY AUCHTER: Objection to form.

2 A. I mean, it's a method and apparatus for
3 organizing, storing, and evaluating access control
4 lists.

5 Q. Is it fair to say that Gai's invention is
6 an optimized access control list that is stored in
7 CAM and used to provide access control?

8 ATTORNEY AUCHTER: Objection to form.

9 A. I mean, the invention is laid out in the
10 claims. So, I mean, it's -- I could read Claim 1
11 for you if you like. But, I mean, the invention is
12 what's in the claims.

13 Q. Okay. Well, is it fair to say that Gai
14 discloses an access control list that is stored in
15 CAM and used to control access?

16 A. So, I mean, Claim 1 is an intermediate
17 network device having a plurality of ports for
18 forwarding messages between one or more network
19 entities across a computer network and memory
20 device and a method for optimizing one or more
21 access control lists that comprises certain steps.

22 Then if you want to get to Dependent Claim
23 4, it's a method wherein the network device is a
24 content addressable memory or a CAM.

25 So Claim 1 doesn't go in and talk about a

1 CAM. But if you use Dependent Claim 4, then that
2 talks about where a memory device is CAM.

3 Q. Have you read the specification of Gai?

4 A. Yes, I have.

5 Q. And in the specification, Gai discloses an
6 access control list that is stored in CAM and used
7 to provide access control. Correct?

8 A. If you want to point -- I don't have it
9 memorized. If you want to point me to a specific
10 section. But, once again, the specification is not
11 the invention. The invention is the claims.

12 So the specification can describe things,
13 but when you're ultimately looking at the
14 invention, you're looking at the claims.

15 Q. Did you not consider the specification of
16 Gai in rendering your opinion?

17 ATTORNEY AUCHTER: Objection to form.

18 A. I did, but you're asking me about the
19 invention and the invention is the claims.

20 Q. Sorry. I actually -- my question was Gai
21 discloses an access control list that is stored in
22 CAM and used to provide access control. Correct?

23 A. Is there a specific section you're
24 referring to? I don't have the specification
25 memorized. So I can spend 10 minutes reading it

1 and trying to find it, or you can show me where
2 you're reading from.

3 Q. You can read column 4 if you would like.
4 Maybe that will help you.

5 A. I mean, it talks about CAM, but I don't
6 see where it says that it stores all those elements
7 in CAM.

8 Q. What elements are you referring to,
9 Doctor?

10 A. In your question you asked about -- that
11 the CAM stores several different items. But I
12 don't see a list here.

13 Q. Let me repeat my question.

14 Gai discloses an access control list that
15 is stored in CAM and used to provide access
16 control. Correct?

17 A. So it shows an access control list that's
18 stored in CAM.

19 And what was the second part of the
20 question?

21 Q. Which is used to provide access control.

22 A. So, then, the second part -- so column 4,
23 29: In particular, upon receipt of a packet at
24 first interface of forwarding entity at the
25 intermediate network device tests the packet

1 **against a single unified access control list in the**
2 **corresponding portion of CAM.**

3 **So that access control list is performing**
4 **access control.**

5 Q. Okay. So just for clarity of record, so
6 that there's no ambiguity, is it fair to say that
7 Gai discloses an access control list that is stored
8 in CAM and it's used to provide access control?

9 ATTORNEY AUCHTER: Objection to form.

10 A. **Once again, the specification in Gai is**
11 **described in this. But that's not the actual claim**
12 **language of the invention.**

13 Q. Understood.

14 Now, if I understand your declaration
15 correctly, it's your position that Gai's invention
16 is limited to layer 3 devices. Is that correct?

17 A. **Is there a certain paragraph you're**
18 **referencing?**

19 Q. The paragraphs where you discuss the Gai
20 reference.

21 Let me identify it for you to help you
22 out. For example, paragraph 54.

23 A. **Right. If we were to go back to 53.**

24 Q. Sure.

25 A. **"Although Gai discusses layer 2 devices, a**

1 **POSITA would have understood that Gai's disclosure**
2 **was directed to layer 3 switching devices."**

3 **And then once again in paragraph 54: "As**
4 **taught by Gai, the term layer 3 intermediate device**
5 **as used [in Gai]." So it's referring to layer 3.**

6 **Q. Okay. Let's turn to Gai, column 5 at**
7 **lines 44 through 55.**

8 **And please read that in the record.**

9 **A. Sorry. What's the exhibit for Gai again?**

10 **Q. Exhibit 1006.**

11 **A. And where are you at again?**

12 **Q. So column 5, please, line 44. It begins**
13 **with "nonetheless."**

14 **A. Column what? Column 5, line 54?**

15 **Q. Line 44.**

16 **A. Line 44. Okay.**

17 **Q. It begins with "nonetheless." Read that**
18 **remaining part of that paragraph down at 55,**
19 **please, in the record.**

20 **A. "Nonetheless, it should be understood that**
21 **the present invention may also be utilized, in**
22 **whole or in part, with other intermediate network**
23 **devices such as switches and/or layer 2**
24 **intermediate devices which are also intended to**
25 **broadly cover any intermediate device, operating**

1 primarily at the data link layer including without
2 limitations devices that are fully or compliant
3 fully or partially compliant with IEEE 802.1d, NAT
4 bridges -- NAT bridge, standard and intermediate
5 devices that provide additional functionality such
6 as virtual local network (VLAN) support, IEEE
7 802.1q support and/or 802.11/802.1p support,
8 asynchronous transfer mode switches, frame relay
9 switches."

10 Q. So in that first part that you had just
11 read, Gai states that the invention may be utilized
12 in layer 2 intermediate devices. Correct?

13 A. It says that.

14 Q. And you believe Gai is lying about that?

15 ATTORNEY AUCHTER: Objection to form.

16 A. No. But I believe if you look at the
17 claims of Gai, it's referring to layer 3.

18 Q. So you're limiting your understanding of
19 Gai to what it claims. Is that correct?

20 ATTORNEY AUCHTER: Objection to form.

21 A. I mean, to me, the claims are the
22 invention. So the specification could talk about
23 sort of hypotheticals and things like that. But to
24 me, the invention is what's in the claims.

25 Q. Understood.

1 Let's go to column 7, please -- I'm sorry.
2 Column 6. I apologize -- in lines 62 through 65,
3 and read that in the record, please.

4 **A. "A suitable device for intermediate**
5 **network device on the Catalyst 85 series of switch**
6 **routers and/or the Catalyst 600 family of**
7 **multilayer switches, both from Cisco Systems."**

8 Q. And why did your declaration cite to this
9 paragraph?

10 **A. So, once again, sort to loop back since**
11 **we're back in the report now, I mean, if you look**
12 **at paragraph 45, it's clearly explaining that Gai's**
13 **boilerplate recitation of possible applicability to**
14 **switches or layer 2 intermediate devices would have**
15 **been considered by a POSITA in the context of Gai's**
16 **detailed disclosure of the layer 3 device and his**
17 **assertion that it could operate with other possibly**
18 **more complex network topologies. A POSITA would**
19 **not have considered a layer 2 device to be more**
20 **complex topologies. And then it's talking about**
21 **how Catalyst 500 switches and routers or layer 3**
22 **devices that it could work with that are more sort**
23 **of complex.**

24 **So it's basically showing that a POSITA**
25 **would understand Gai to be layer 3.**

1 Q. How does that answer my question that I
2 just asked you?

3 A. You asked why do I reference that in my
4 **declaration, and I just answered why I reference it**
5 **in my declaration.**

6 Q. Okay. So why do you reference the
7 Catalyst 8500 series switch routers and/or the
8 Catalyst 6000 multilayer switches?

9 A. **Because those are examples of intermediate**
10 **devices that run at layer 3.**

11 Q. Do you see that the Catalyst 8500 is a
12 switch router?

13 A. **Yes.**

14 Q. Do you see that the Catalyst 6000 is a
15 multilayer switch, not a router?

16 A. **Well, a multilayer switch is a router.**
17 **That's what makes it multilayer.**

18 So when you're saying multilayer switches,
19 it means it's operating on layers 2 and 3, which
20 means it's a router. It's basically routing added
21 onto the switch functionality, which essentially
22 makes it multilayer.

23 Q. I'm sorry. Explain to me. Why is it
24 multilayer?

25 A. **Well, I mean, the device -- it clearly**

1 **says Catalyst 600 is a family of multilayer**
2 **switches. Multilayer means it's operating at**
3 **multiple layers, layer 2 and layer 3, which makes**
4 **it a router.**

5 Q. Do you know if these -- if the Catalyst
6 6000 multilayer switch was available for sale at
7 the time?

8 A. **I don't know that offhand.**

9 Q. Have you ever utilized a Catalyst 6000
10 multilayer switch?

11 ATTORNEY AUCHTER: Objection to form.

12 A. **I've used Catalyst multilayer -- I don't**
13 **remember the exact models. I'm guessing -- I mean,**
14 **it might have been the 6 or 85. I just don't**
15 **remember offhand. But I know I've used Cisco's**
16 **Catalyst switch routers.**

17 Q. Did you do any research regarding Cisco
18 Systems' Catalyst 6000 multilayer switch to inform
19 you in rendering your opinion?

20 A. **That was not something I was asked to**
21 **opine on. I was opining on the four prior art**
22 **references. I'm just referencing that as an**
23 **example. But I was not asked to go in and**
24 **determine if those were prior art or not.**
25 **That's -- I was rebutting your expert focusing on**

1 **those four pieces of prior art.**

2 **So, no, I did not -- that was not a**
3 **requirement or something I was asked to do.**

4 Q. In this paragraph at column 6, lines 62 to
5 65, Gai discloses that the intermediate network
6 device 316 may be implemented as a Catalyst 6000
7 family multilayer switch. Correct?

8 A. **So it says a suitable platform for an**
9 **intermediate network device of the Catalyst 8500**
10 **family switches and/or the Catalyst 6000.**

11 Q. So a platform for intermediate network
12 device 316 would be Catalyst 6000 multilayer
13 switch. Correct?

14 A. **I missed the first part of the question.**

15 Q. So a platform for intermediate network
16 device 316 would be a Catalyst 6000 multilayer
17 switch. Correct?

18 A. **So that -- once again, this is**
19 **specification, so that could just be an example.**
20 **That's not the actual claim language.**

21 Q. Understood.

22 But as one example, that's correct.
23 Right?

24 A. **So that the specification does say a**
25 **suitable platform for intermediate network device**

1 **316 are the Catalyst 8500 series of switch routers**
2 **and/or the Catalyst 6000 family of multilayer**
3 **switches, both from Cisco Systems.**

4 **That, once again, is the specification of**
5 **Gai, but that is not the claim you mentioned.**

6 Q. Do you dispute that one example in Gai for
7 intermediate network device 316 is a Catalyst 6000
8 multilayer switch?

9 ATTORNEY AUCHTER: Objection to form.

10 A. **I am not disputing what's in the**
11 **specification. The specification is what it is,**
12 **and it says that's a suitable platform. But that's**
13 **not the actual claims of the invention.**

14 Q. You mean of the Gai -- of Gai's invention?

15 A. **Correct.**

16 Q. And the back of the patent, it doesn't
17 claim specifically a 6000 multilayer switch. Is
18 that what your argument is?

19 ATTORNEY AUCHTER: Objection to form.

20 A. **Generally, yes.**

21 Q. When you wrote your declaration, did you
22 know whether or not Cisco's Catalyst 6000
23 multilayer switch has capabilities to perform layer
24 2 ACL filtering?

25 A. **That was not something I was asked to**

1 opine on or rebut.

2 Q. You don't think it was important to
3 understand whether or not the Catalyst 6000
4 multilayer switch actually can perform layer 2 ACL
5 filtering?

6 ATTORNEY AUCHTER: Objection to form.

7 A. No, because you're -- your expert
8 declaration wasn't claiming that as prior art. So
9 I was going in and looking at the prior art to show
10 that I don't believe it meets the claim elements of
11 the patent.

12 So, no, that was not something you guys
13 were claiming as prior art. So, no, I didn't need
14 to do that analysis.

15 Q. Did you know when you wrote your
16 declaration that, in fact, Cisco's Catalyst 6000
17 multilayer switch, in fact, can perform layer 2 ACL
18 filtering?

19 ATTORNEY AUCHTER: Objection to form.

20 A. Once again, you're changing -- I was
21 rebutting your expert's analysis and declaration,
22 and he does not cover that in his declaration. So,
23 no, I didn't need to consider that. I was looking
24 at the prior art that he claimed invalidates the
25 patent, and that's what I looked at.

1 **So, no, you're changing your declaration**
2 **and your analysis. So, no, I didn't have to do**
3 **that.**

4 Q. Okay. That wasn't my question. That
5 answer is nonresponsive, Doctor.

6 My question is did you know -- your state
7 of mind -- did you know when you wrote your
8 declaration that Cisco's Catalyst 6000 multilayer
9 switch, in fact, is capable to perform layer 2 ACL
10 filtering?

11 ATTORNEY AUCHTER: Objection to form.

12 **A. As I stated, I did not know because that**
13 **was not an analysis I was asked to perform. That's**
14 **outside the scope.**

15 ATTORNEY HUH: I'd like to take a break
16 and go through my notes, and we'll resume maybe
17 in 10 minutes.

18 THE WITNESS: Okay. Perfect.

19 ATTORNEY AUCHTER: Okay.

20 ATTORNEY HUH: Thank you.

21 THE REPORTER: Off the record at 2:07 p.m.

22 (Recess taken from 2:07 p.m.
23 to 2:17 p.m.)

24 THE REPORTER: Okay. Back on the record
25 at 2:17 p.m.

1 BY ATTORNEY HUH:

2 Q. Dr. Cole, during any of the breaks today,
3 did you discuss with counsel for patent owner the
4 substance of your testimony?

5 A. No, I did not.

6 Q. Okay. And during the -- during the
7 breaks, did you review any documents other than the
8 documents filed in this proceeding?

9 A. No, I did not.

10 ATTORNEY HUH: Okay. That's the only
11 questions we had. We pass the witness.

12 Thank you.

13 ATTORNEY AUCHTER: I just have one
14 question.

15 EXAMINATION

16 BY ATTORNEY AUCHTER:

17 Q. Did you review the petition as part of the
18 process of preparing your declaration?

19 A. Yes, I did.

20 ATTORNEY AUCHTER: No further questions on
21 my part. Thank you.

22 ATTORNEY HUH: Thank you very much.
23 That's all we have.

24 THE REPORTER: Off the record at 2:18 p.m.
25 (Deposition concluded at 2:18 p.m. EDT.)

1 J U R A T

2

3 I, Dr. Eric Cole, DPS, do hereby certify
4 that I have read the foregoing transcript of my
5 testimony, and it is an accurate record of said
6 testimony (except for the following corrections
7 listed below):

8 Page Line Correction

9

10

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14

15

16

17

18 Dr. Eric Cole, DPS

19

20 Sworn to and subscribed before me this _____

21 day of _____, 2025.

22

23

24 Notary Public/Justice of the Peace

25 My commission expires:

1 CERTIFICATE OF REPORTER

2

3 I, Deanna J. Dean, Registered Diplomate
4 Reporter, Certified Realtime Reporter, and New
5 Hampshire licensed court reporter, the officer
6 before whom the proceedings were taken, do hereby
7 certify that the foregoing transcript is a true and
8 accurate record of these proceedings; that said
9 proceedings were taken in Stenotype note by me on
10 Thursday, April 3, 2025 , commencing at 9:00 a.m.
11 and ending at 2:18 p.m. (EDT).

12 I further certify that present on behalf of
13 Party Cisco Systems Inc. was Gregory Huh of Haynes
14 Boone, LLP and on behalf of Party Lionra
15 Technologies, Ltd. was Robert A. Auchter of Auchter
16 PLLC.

17 I further certify that I am not related to, nor
18 associated with any of the parties or their
19 attorneys, nor do I have any disqualifying
20 interest, personal or financial, in the actions
21 within.

22 Dated this 4th day of April, 2025, at Hillsborough
23 County in the State of New Hampshire.

24 
25

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