

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CISCO SYSTEMS, INC.,

Petitioner

vs.

CENTRIPETAL NETWORKS, INC.

Patent Owner

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Case No.: IPR 2018-01512

U.S. Patent No. 9,565,213

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DEPOSITION OF KEVIN JEFFAY, PH.D.

- - -

Tuesday, October 22, 2019

9:29 a.m.

Rizzo Center Chapel Hill

150 Dubose Home Lane

Chapel Hill, North Carolina 27517

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ANN FORD

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<p style="text-align: right;">Page 2</p> <p>1 APPEARANCES:  2 JEFFREY D. BLAKE, ESQ.  Merchant &amp; Gould  3 191 Peachtree Street NE  Suite 3800  4 Atlanta, Georgia 30303</p> <p>5  6 On behalf of the Petitioner, Cisco  Systems, Inc.</p> <p>7  8 JONATHAN S. CAPLAN, ESQ.  Kramer Levin Neftalis &amp; Frankel, LLP  1177 Avenue of the Americas  9 New York, New York 10036</p> <p>10  11 On behalf of the Patent Owner,  Centripetal Networks, Inc.</p> <p>12  13 ---  14  15  16  17  18  19  20  21  22  23  24  25</p>	<p style="text-align: right;">Page 4</p> <p>1 PROCEEDINGS  2 ---  3 KEVIN JEFFAY, PH.D.,  4 being by me first duly sworn, as hereinafter  5 certified, testifies and says as follows:  6 EXAMINATION  7 BY MR. CAPLAN:  8 Q. Good morning, Dr. Jeffay. Is that the  9 right pronunciation?  10 A. Good morning. And, yes, that is the right  11 pronunciation.  12 Q. I'm Jonathan Caplan. I'm a partner at  13 Kramer Levin, here on behalf of the patent owner  14 today, Centripetal Networks.  15 I know you've been deposed before in this  16 matter. Is there any reason you cannot give full  17 complete testimony today?  18 A. No.  19 Q. Feeling well? Everything's okay?  20 A. Everything's good so far.  21 Q. Great. I'm not sure how many exhibits  22 we're going to get into. I suspect two of them are  23 going to be your most recent declaration --  24 A. Okay.  25 Q. -- and probably the '213 patent, so I'm</p>
<p style="text-align: right;">Page 3</p> <p>1 INDEX  2 ---  3 WITNESS PAGE  4 KEVIN JEFFAY, PH.D.  5 Examination 4  6 (By Mr. Caplan)  7 ---  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25</p>	<p style="text-align: right;">Page 5</p> <p>1 just going to get those two out.  2 MR. CAPLAN: The first exhibit we gave to  3 Dr. Jeffay is marked Cisco Exhibit 1020.  4 And the second exhibit I'm handing over is  5 marked as Cisco Exhibit 1001. It's a copy of U.S.  6 Patent 9,565,213.  7 THE WITNESS: Thank you.  8 BY MR. CAPLAN:  9 Q. I'm not sure exactly when we'll get to  10 either of these, but this way you'll have them.  11 A. Okay.  12 Q. Dr. Jeffay, in the course of your  13 testimony in this case, and the declarations that  14 you've put in, one of the terms that's been used --  15 and it's a claim term, I believe, that's been  16 construed -- is "packets."  17 Do you recall that?  18 A. Yes.  19 Q. Okay. And do you have an understanding of  20 "packets" as it's been used in this proceeding and as  21 the way you've been using it?  22 A. Yes.  23 Q. And what is that understanding?  24 A. So I think both parties agree that a  25 packet as used in the '213 patent is referring to</p>

<p style="text-align: right;">Page 6</p> <p>1 either a data link layer or a network layer packet.</p> <p>2 Q. And some of these topics have been hit</p> <p>3 before, but they've come up again in your declaration</p> <p>4 in support of the reply, so I apologize if we're</p> <p>5 going over some areas, but I do want to cover a few</p> <p>6 things related to that.</p> <p>7 A. Sure.</p> <p>8 Q. So you mentioned the meaning of packet,</p> <p>9 one is a data link layer and then the other is a</p> <p>10 network link layer.</p> <p>11 Is that how you referred to it?</p> <p>12 A. Just network layer, we call it.</p> <p>13 Q. Network layer. Okay.</p> <p>14 So just your understanding of -- what is</p> <p>15 the purpose and function of the data link layer?</p> <p>16 A. So I describe that in my original</p> <p>17 declaration, but the data link layer, also known as</p> <p>18 the link layer, also known as Layer 2, exists to</p> <p>19 allow computers on the same physical network, the</p> <p>20 same LAN, to communicate with one another.</p> <p>21 Q. And does it perform a routing function?</p> <p>22 Is that a fair way to characterize it?</p> <p>23 A. So "routing" is a term of art. And</p> <p>24 routing is typically, in the art, used to refer to</p> <p>25 the transmission process as it happens at Layer 3,</p>	<p style="text-align: right;">Page 8</p> <p>1 an underlying Layer 2.</p> <p>2 Q. You mentioned the five-layer Internet</p> <p>3 protocol stack. That's something you've talked about</p> <p>4 in your declaration; right?</p> <p>5 A. Correct.</p> <p>6 Q. And I understand that there's certain</p> <p>7 information that's put into these different layers,</p> <p>8 into Layer 2 and Layer 3, so I just want to walk</p> <p>9 through that briefly in terms of -- what kind of</p> <p>10 information goes into Layer 2?</p> <p>11 A. So the specifics of what goes into Layer 2</p> <p>12 depend on the Layer 2 technology at issue.</p> <p>13 Q. So what are the different options?</p> <p>14 A. Today, ethernet is what dominates.</p> <p>15 Virtually all Layer 2 networks in practice today are</p> <p>16 some form of ethernet.</p> <p>17 Q. What kind of content, then, goes into that</p> <p>18 Layer 2?</p> <p>19 A. So the things that have been focused on in</p> <p>20 this matter are the fact that a Layer 2 transmission</p> <p>21 unit, which is called a frame, will have a header,</p> <p>22 and that header will include a destination address</p> <p>23 and a source address, and those addresses are called</p> <p>24 media access control addresses, otherwise abbreviated</p> <p>25 as MAC. So it will have at least a destination MAC</p>
<p style="text-align: right;">Page 7</p> <p>1 which is the network layer.</p> <p>2 Q. Okay. So if the data -- the data link</p> <p>3 layer is -- it allows computers on the same LAN to</p> <p>4 communicate, how does it facilitate that?</p> <p>5 A. So the verb that gets used there is</p> <p>6 "forwarding," which is just the -- which just --</p> <p>7 that's the verb that's used to describe the</p> <p>8 transmission at Layer 2, at the link layer.</p> <p>9 Q. And you mentioned the network layer,</p> <p>10 Layer 3. What is the purpose and function of that?</p> <p>11 A. In today's world, where the Internet --</p> <p>12 the five-layer Internet protocol stack model</p> <p>13 dominates, the network layer exists to perform what</p> <p>14 we call internetworking, which is the communication</p> <p>15 of data between local area networks.</p> <p>16 Q. So would you describe that as being part</p> <p>17 of the routing operation?</p> <p>18 A. Yes. The transmission across local area</p> <p>19 networks, between one network to another network,</p> <p>20 that's referred to as routing.</p> <p>21 Q. So is it fair to say that Layer 2 and</p> <p>22 Layer 3 work together to route information from a --</p> <p>23 from an origination point to a destination point?</p> <p>24 A. Yes. Layer 3 -- a Layer 3 requires a</p> <p>25 Layer 2. So Layer 3 cannot do its functions without</p>	<p style="text-align: right;">Page 9</p> <p>1 address and a source MAC address.</p> <p>2 And there's many other things, but I think</p> <p>3 that's all we've really focused on in this case.</p> <p>4 Q. Does the Layer 2 message contain</p> <p>5 information from the Layer 3 that's above it?</p> <p>6 A. So Layer 2 is agnostic as to what's above</p> <p>7 it. So it does not know. And the Layer 2 message</p> <p>8 will have a payload in the five-layer Internet stack</p> <p>9 model. The payload will consist of a network layer</p> <p>10 datagram.</p> <p>11 Q. Just so I understand, a network</p> <p>12 data ram [sic] means what?</p> <p>13 A. Datagram.</p> <p>14 Q. I'm sorry.</p> <p>15 A. No, it's fine. Totally fine. So the</p> <p>16 datagram is the unit of transmission at Layer 3, at</p> <p>17 the network layer. So what the network layer</p> <p>18 transmits are called datagrams.</p> <p>19 Q. Were you done?</p> <p>20 A. No. I'm done.</p> <p>21 Q. So moving to Layer 3, let's talk briefly</p> <p>22 about what's in that Layer 3 messaging -- or in that</p> <p>23 layer.</p> <p>24 A. So a Layer 3 datagram also will consist of</p> <p>25 a header and a payload. The header will have many</p>

<p style="text-align: right;">Page 10</p> <p>1 fields. The ones that we focused on mostly in this</p> <p>2 matter are the fact that it will also have a source</p> <p>3 address, a destination address, and the IP is the</p> <p>4 dominate network layer today. So those would be</p> <p>5 source and destination IP addresses.</p> <p>6 In addition, it will carry what are called</p> <p>7 port numbers. It will have a source port number and</p> <p>8 a destination port number.</p> <p>9 Q. Now, in the five layers -- so we've talked</p> <p>10 about Layer 2, Layer 3. I assume there's Layer 4 and</p> <p>11 Layer 5; is that right?</p> <p>12 A. Correct.</p> <p>13 Q. So what's in Layer 4?</p> <p>14 A. Layer 4 is called the transport layer.</p> <p>15 And on today's Internet, TCP, which stands for the</p> <p>16 transmission control protocol, TCP is the dominant</p> <p>17 Layer 4 protocol. And then Layer 5 is the</p> <p>18 application layer, and the protocol there is a</p> <p>19 function of the application.</p> <p>20 So if you're using the web, the</p> <p>21 application layer protocol is HTTP, the hypertext</p> <p>22 transfer protocol. If you're using e-mail, it's</p> <p>23 SMNP, the simple mail network protocol.</p> <p>24 Q. I want to relate some of these layers to</p> <p>25 things that you've been opining on in this case.</p>	<p style="text-align: right;">Page 12</p> <p>1 streaming was done over HTTP, ACNS will -- the</p> <p>2 requests and the responses for content will flow</p> <p>3 through ACNS, and ACNS will perform a variety of</p> <p>4 functions on those messages.</p> <p>5 So if an HTTP request is allowed as part</p> <p>6 of the security features of ACNS that allows you to</p> <p>7 contact Netflix and you do so over HTTP, then the</p> <p>8 responses that will come back will contain small</p> <p>9 fragments of the requested video.</p> <p>10 Q. So then ACNS operates on or processes the</p> <p>11 data contained in that Layer 5 messaging; is that</p> <p>12 right?</p> <p>13 MR. BLAKE: Objection. Form.</p> <p>14 A. No.</p> <p>15 Q. What's not right about that?</p> <p>16 Just so I understand, it sounded like you</p> <p>17 were saying that Layer 5 HTTP messaging would be</p> <p>18 operated on by ACNS to allow ultimately the user to</p> <p>19 receive the desired content, if they were allowed, in</p> <p>20 the context of that system; is that right?</p> <p>21 A. At a high level, that's right. It is</p> <p>22 involved with the messaging. It's not typically</p> <p>23 involved with the actual data of the messages.</p> <p>24 Q. So it just passes along the data, but it</p> <p>25 processes the messaging that's in front of the data?</p>
<p style="text-align: right;">Page 11</p> <p>1 I know the ACNS reference is something</p> <p>2 that's -- you've put in -- your declaration has</p> <p>3 addressed.</p> <p>4 Just in terms of the ACNS, I understand</p> <p>5 that that is a content delivery system; is that a</p> <p>6 fair description?</p> <p>7 A. It's -- ACNS, as I'm using here, is a</p> <p>8 confederation of devices, and one of its purposes is</p> <p>9 as a content delivery system.</p> <p>10 Q. So I believe I saw some examples in there</p> <p>11 that if people on the system using ACNS wanted to</p> <p>12 receive stream video, ACNS is the system that could</p> <p>13 control how it gets dispensed to them; is that right?</p> <p>14 A. At a high level, that's fine.</p> <p>15 Q. So relating that back to -- let's just</p> <p>16 kind of work back down the stack.</p> <p>17 So how does Layer 5 apply to the ACNS?</p> <p>18 A. Well, ACNS will process application layer</p> <p>19 protocol messages, for example, like HTTP.</p> <p>20 Q. So when someone, for example, wants to</p> <p>21 stream a Netflix movie, is the content of the movie</p> <p>22 itself something that would be contained in that</p> <p>23 Layer 5 messaging?</p> <p>24 MR. BLAKE: Objection to form.</p> <p>25 A. So if you were streaming, assuming the</p>	<p style="text-align: right;">Page 13</p> <p>1 A. It's primarily interested in the headers.</p> <p>2 Q. Okay. How about Layer 4, how does Layer 4</p> <p>3 interact with ACNS?</p> <p>4 MR. BLAKE: Objection to form.</p> <p>5 A. So Layer 4 is the transport layer, and</p> <p>6 every application layer protocol will require some</p> <p>7 transport protocol underneath it. And HTTP almost</p> <p>8 exclusively is always carried via the transport</p> <p>9 protocol TCP. So HTTP will use TCP.</p> <p>10 Q. So is Layer 4 a layer of the messaging</p> <p>11 that the ACNS server would process to get to the</p> <p>12 Layer 5 content?</p> <p>13 MR. BLAKE: Objection to form.</p> <p>14 A. So ACNS, like all computers, is going to</p> <p>15 have to -- itself will be using TCP. And when it</p> <p>16 comes to doing things like examining the header of an</p> <p>17 HTTP message, ACNS is going to have to know about the</p> <p>18 existence of TCP so that it can find the information</p> <p>19 in the HTTP header.</p> <p>20 Q. So the ACNS is going to examine the header</p> <p>21 in Layer 4, as you just said, to find the information</p> <p>22 in the HTTP header.</p> <p>23 But then what happens to that header in</p> <p>24 the Layer 4?</p> <p>25 MR. BLAKE: Objection to form.</p>

<p style="text-align: right;">Page 14</p> <p>1 A. Nothing really happens to it. I mean,  2 maybe I don't know what you're thinking of by  3 "happens." But ACNS is not really concerned with  4 transport layer processing.  5 Q. Okay. So once it uses the Layer 4 to get  6 whatever it needs to get to the Layer 5 information,  7 it doesn't have any need for Layer 4 at that point,  8 any of the Layer 4 data?  9 MR. BLAKE: Objection to form.  10 A. Well, I mean, it's always going to use  11 that Layer 4 data because ultimately, if -- for  12 example, as one of its security functions, if it  13 allows the packet, the HTTP message, to transit  14 through ACNS, it's going to need all of that TCP  15 information to route that -- to send that packet to  16 its destination. It's not that it ignores it.  17 Q. Once it reads whatever information it  18 needs from Layer 4, does it essentially discard that  19 information, having used it at that point?  20 MR. BLAKE: Objection.  21 A. So that's an implementation detail. And  22 the ACNS guide that's the reference in this case I  23 don't believe describes at that level of detail. But  24 I would doubt that it discards it.  25 Q. If it didn't discard it, do you have any</p>	<p style="text-align: right;">Page 16</p> <p>1 MR. BLAKE: Objection to form.  2 A. So, again, the ACNS guide I don't believe  3 goes into the details of Layers 2 and 3 because  4 they're not really -- they're not really central to  5 its function. They're used and they're important,  6 but it's just sort of like oxygen. I mean, they're  7 just there.  8 So generally functioning as a proxy, a  9 person of ordinary skill in the art would understand  10 that you need a Layer 3 protocol, and a Layer 3  11 protocol needs a Layer 2 protocol. So that ACNS  12 would support all of these protocols, just like every  13 Internet device supports all of these protocols, and  14 would use the network layer IP as the network layer  15 is intended to be used to transmit requests, for  16 example, to their ultimate destination.  17 And that would also, then, require a  18 Layer 2 protocol to actually do the physical  19 transmission of the packet containing all of the  20 higher layer protocol data units.  21 Q. So once Layers 2 and 3 work together to  22 help route messaging to ACNS, and you said that they  23 are used, are they used simply by ACNS to deliver  24 that messaging to ACNS?  25 A. Well, ACNS doesn't use it to deliver to</p>
<p style="text-align: right;">Page 15</p> <p>1 sense of what it would do with that information at  2 that point?  3 A. My sense is it keeps that information  4 around because it's going to need that information  5 to, for example, process a response to a request.  6 Q. You're saying it would save -- the ACNS  7 would save that Layer 4 header information that it  8 used to get to the Layer 5 content?  9 A. So, again, what ACNS actually does with  10 regard to TCP I don't believe is disclosed in the  11 guide. And so what I'm just simply describing is --  12 one of the functions of ACNS is as a proxy. And what  13 I'm describing is what a person of ordinary skill in  14 the art would understand is a common function of  15 proxies, that it will have to remember the TCP  16 information in order to process a request that it  17 receives.  18 Q. If it has to remember the TCP information,  19 where would it keep that, in general?  20 A. Anywhere. I mean, it could store it on  21 memory, it could store it in disk. It doesn't really  22 matter.  23 Q. So how about Layers 2 and 3, which we  24 talked about earlier work together, how are Layers 2  25 and 3 related to or used by the ACNS?</p>	<p style="text-align: right;">Page 17</p> <p>1 ACNS. ACNS is communicating with clients, other  2 entities within ACNS, and with content servers. And  3 so all the layers work together. So all the layers  4 are used together to do all of the communications  5 that are disclosed in the ACNS guide.  6 Q. Okay. But talking about Layers 2 and 3 in  7 particular, when content is sent to -- when content  8 is sent to an ACNS server, let's say via an HTTP  9 messaging, and Layers 2 and 3 are used to route the  10 information to that server, to that ACNS server, does  11 the ACNS server maintain the Layer 2 and Layer 3  12 information once the messaging has been delivered?  13 MR. BLAKE: Objection to form.  14 A. So I think it all depends on the specifics  15 of the scenario that you're describing. In the case  16 where ACNS receives a request, it's going to have --  17 it will remember Layer 2 and Layer 3 information  18 about that request so that it can respond to that  19 request, for example.  20 Q. So how would ACNS respond to that request?  21 A. It would -- if we're talking about HTTP,  22 it would respond ultimately with an HTTP message --  23 HTTP response message.  24 Q. And what kind of message would that be,  25 just confirming that something was received?</p>

<p style="text-align: right;">Page 18</p> <p>1 A. No. This would be the actual delivery of 2 the content. So you would have received an HTTP 3 request, and in response to that request, you would 4 generate an HTTP response message containing the 5 content that was requested. 6 Q. So if I understand your testimony, you're 7 saying that once Layer 2 and Layer 3 messaging is 8 received at the ACNS server, it's still maintained 9 somewhere in the ACNS server for later use? 10 MR. BLAKE: Objection to form. 11 Mischaracterizes testimony. 12 A. I'm saying it may be. 13 Q. Well, do you know or you don't know? 14 A. It depends on the specifics of the 15 situation. There are situations where it will not 16 be -- nothing will be retained, and there's 17 situations where it will. It depends on the 18 specifics of the messaging. 19 Q. How about in connection with the ACNS 20 system? 21 A. That doesn't help. ACNS may or may not 22 remember things about Layer 2 and Layer 3, depending 23 on the messages -- the types of messages that it's 24 processing. 25 Q. Do you recall, as you sit here today,</p>	<p style="text-align: right;">Page 20</p> <p>1 into Layer 2 and Layer 3 messaging; is that right? 2 A. No. 3 Q. What happens to those Layer 3 and Layer 4 4 segments in order to get to some destination using 5 Layer 2 and Layer 3? 6 A. Layer 2 will take as its payload a Layer 3 7 datagram. 8 Q. Okay. So then do the -- okay. 9 So Layer 3 datagrams become Layer 2 10 payload? 11 A. Correct. 12 Q. And then the Layer 2 payload gets carried 13 in some physical medium; is that correct? 14 A. Correct. 15 Q. They call it sometimes Layer 1 or just the 16 transport medium? 17 A. Layer 1 is the physical layer, yes. 18 Q. And when information gets to its 19 destination through the Layer 2 and Layer 3 routing, 20 it gets unpacked to get to the content at Layer 5; is 21 that correct? 22 MR. BLAKE: Objection to form. 23 A. If we're talking about -- so you say 24 Layer 2 and Layer 3 routing. It's Layer 2 25 forwarding, Layer 3 routing.</p>
<p style="text-align: right;">Page 19</p> <p>1 anything in ACNS where it describes how it would or 2 would not use the Layer 2 and Layer 3 messaging that 3 we've been discussing? 4 MR. BLAKE: Objection to form. 5 A. I don't believe the ACNS guide discusses 6 much about Layer 2 or Layer 3, as I recall. 7 Q. Do the Layer 5 -- can we call the 8 application layer Layer 5? Is that fair usage of the 9 term? 10 A. It's fair, and it's the correct usage. 11 Q. Are Layer 5 messages broken up and 12 transported in Layer 2 and Layer 3 messages? 13 MR. BLAKE: Objection to form. 14 A. That's not the way we think of it. 15 Q. How do you think of it? 16 A. Layer 5 messages are carried in Layer 4 17 transmission units. To the extent that Layer 5 18 messages are broken up, that's something that 19 happens -- that's a function that Layer 4 performs. 20 Q. But then Layer 4 messaging is packaged 21 into Layer 3 messaging; is that right? 22 A. Layer 3 protocol data units will contain 23 Layer 4 -- the term we use is "segments," as their 24 payloads. 25 Q. And those payloads at Layer 3 then get put</p>	<p style="text-align: right;">Page 21</p> <p>1 When it gets to the destination, what 2 happens at the destination is a function of what 3 specific transport layer protocol is used and what 4 the specific application layer protocol is used. So 5 it's all protocol -- what happens -- the processing 6 is all protocol-specific. 7 Q. But it's your understanding that when it 8 gets to the destination, and depending on the 9 particular protocol that's being used at the 10 destination, that the Layer 2 and Layer 3 information 11 still remains to be used post-delivery? 12 MR. BLAKE: Objection to form. 13 Mischaracterizes testimony. 14 A. So I don't know what you mean by 15 "post-delivery." But all of the information in an 16 arriving frame is used at the destination by the -- 17 all of the layers that exist at the sender in theory 18 exist at the receiver. So all of the layers that 19 exist embedded within an arriving frame will be 20 processed typically at the receiver. 21 Q. Okay. So I understand that all -- you 22 just said, all the layers that exist that are 23 embedded with an arriving frame will be processed at 24 the receiver. 25 And my question is, what happens to</p>

<p style="text-align: right;">Page 22</p> <p>1 Layer 2 and Layer 3 messaging at the receiver once 2 it's been processed?</p> <p>3 MR. BLAKE: Objection to form.</p> <p>4 A. It depends on the receiver. For a typical 5 web server, for example, a web server receiving a 6 request will probably not make use of the Layer 2 7 information. It will remember certain aspects of the 8 Layer 3 information and aspects of the Layer 4 9 information, and then, of course, the web server 10 itself will use the Layer 5 information.</p> <p>11 Q. One of the terms I know you've talked 12 about in your declaration, and in prior deposition as 13 well, was the use in the claim of "packet-by-packet." 14 Do you recall that?</p> <p>15 A. Yes.</p> <p>16 Q. And feel free, if you want, to look at the 17 '213 patent. I'm not trying to be cute about 18 anything, but feel free to look at that.</p> <p>19 What's your understanding of that term 20 "packet-by-packet"?</p> <p>21 MR. BLAKE: Objection to form.</p> <p>22 A. So neither party construed the term 23 packet-by-packet or asked that it be construed.</p> <p>24 So my understanding is we're operating 25 under the plain and ordinary meaning that a person of</p>	<p style="text-align: right;">Page 24</p> <p>1 Q. I believe there's been some discussion in 2 your declaration, and deposition also, about 3 reassembly of packets.</p> <p>4 Do you recall that?</p> <p>5 A. I make reference to reassembly in this 6 reply declaration.</p> <p>7 Q. And, again, feel free -- if I have 8 something in particular I want to point you to, I 9 will. But if you want to point to something or look 10 at your document, that's absolutely fine.</p> <p>11 So as we sit here today, can you just 12 explain what is this concept of "reassembly"? What 13 is it, and when does it happen?</p> <p>14 A. So reassembly, as I'm using the term in 15 the reply declaration, is reference to a concept that 16 appears in Dr. Goodrich's declaration.</p> <p>17 So he's going to be the precise authority 18 as to what he means when he uses the word 19 "reassembly."</p> <p>20 Q. Do you have an understanding of it? I 21 think you've criticized it.</p> <p>22 A. I have criticized it, and I do have an 23 understanding of what I believe Dr. Goodrich is 24 referring to when he says "reassembly."</p> <p>25 Q. And so what is your understanding?</p>
<p style="text-align: right;">Page 23</p> <p>1 ordinary skill in the art would have had as of the 2 priority date of the '213 patent, which, I believe, 3 is, like, 2014. And so that's what I've used. I've 4 just simply taken the plain ordinary meaning of 5 packet-by-packet.</p> <p>6 Q. So that plain ordinary meaning, it would 7 encompass -- it would look at one packet, then you 8 look at another packet, then you look at another 9 packet; is that fair?</p> <p>10 MR. BLAKE: Objection to form.</p> <p>11 A. I think looking at one packet and then 12 looking at another packet and then looking at a third 13 packet would certainly be a form of packet-by-packet 14 analysis.</p> <p>15 Q. Okay. Is a Layer 2 packet the same as a 16 Layer 3 packet?</p> <p>17 MR. BLAKE: Objection to form.</p> <p>18 A. No.</p> <p>19 Q. And is a Layer 3 packet the same as a 20 Layer 4 packet?</p> <p>21 A. No.</p> <p>22 Q. And is a Layer 4 packet the same as a 23 Layer 5 packet?</p> <p>24 MR. BLAKE: Objection to form.</p> <p>25 A. No.</p>	<p style="text-align: right;">Page 25</p> <p>1 A. My understanding is that Dr. Goodrich is 2 using the term "reassembly" to mean that an HTTP 3 message -- an application layer protocol message that 4 gets segmented by lower layer protocols is -- at a 5 receiver is reconstructed. And his belief that -- so 6 that's what I think he means by reassembly, is that a 7 message that was previously segmented into multiple 8 parts is reassembled into its original form.</p> <p>9 Q. Isn't that, in fact, what happens, though, 10 when HTTP messaging is sent to a destination?</p> <p>11 MR. BLAKE: Objection to form.</p> <p>12 A. At the destination, when the application 13 layer receives the message, if that message had been 14 segmented, it will be reassembled at the receiver.</p> <p>15 Q. So just going back to our earlier Netflix 16 example -- it's easy for me to follow -- if HTTP 17 messaging is used to send or to stream a Netflix 18 movie to a user, I believe you testified before that 19 the transport of that movie would happen in chunks; 20 is that right?</p> <p>21 MR. BLAKE: Objection to form.</p> <p>22 A. More or less. It's going to be 23 transmitted in small pieces.</p> <p>24 Q. And at the receiving end, the user is not 25 going to view in chunks. It would have to be</p>

<p style="text-align: right;">Page 26</p> <p>1 reassembled so it could be displayed at the 2 destination; is that correct? 3 A. Actually, the user does view it in chunks. 4 So Netflix is probably a bad example to use here 5 because it's going to confuse a bunch of issues. But 6 just as a general matter, when you're watching 7 Netflix, you never have the entire movie. You do not 8 reassemble the entire movie at the receiver. That 9 never happens. 10 Q. Okay. But you agree that you reassemble 11 some portion of it so it can be viewed in what 12 appears to be a continuous fashion? 13 MR. BLAKE: Objection to form. 14 A. So I believe -- so Netflix will send a 15 movie typically as a series of, to use your word, 16 we'll call it "chunks," and to the extent that those 17 chunks are segmented when the movie is transmitted at 18 the receiver, at the -- your Netflix application will 19 receive reassembled chunks so that it receives 20 coherent chunks. 21 Q. So then would you agree that Layer 5 HTTP 22 information that's transmitted is reassembled at the 23 destination? 24 MR. BLAKE: Objection to form. 25 A. For the receiving application using the</p>	<p style="text-align: right;">Page 28</p> <p>1 MR. BLAKE: Objection to form. 2 A. So when it made it to the receiving 3 application, the receiving application would 4 receive -- it would just receive the entire HTTP 5 response. 6 Q. And as we were talking about before, in 7 the course of getting that Layer 5 information out, 8 those segments of the web page to the destination, 9 there would be Layers 2, 3, and 4 messaging involved 10 as well; right? 11 A. Yes. 12 Q. Okay. But what the destination is looking 13 for is the Layer 5 content and would not really have 14 any need for the Layer 2 or Layer 3 messaging once 15 it's been received at the destination? 16 MR. BLAKE: Objection to form. 17 A. So if by "destination" you're referring to 18 the destination computer, the destination computer 19 needs all of that information. If you're referring 20 to the application as the destination, the web 21 server, for example, the web server does not need the 22 Layer 2 and the Layer 3 information. 23 Q. We've been talking about ACNS a little 24 bit. I'm just going to put that out there if for any 25 reason we need it. I don't think it's going to be</p>
<p style="text-align: right;">Page 27</p> <p>1 traditional protocol stack, yes, what it's going to 2 receive are reassembled. To the extent reassembly 3 was required, it will receive reassembled messages. 4 Q. And picking a different example -- I don't 5 know -- let's just pick requesting a web page, 6 CNN.com, if a user is requesting that, the content of 7 that web page would also be sent as a Layer 5 8 messaging; is that right? 9 MR. BLAKE: Objection to form. 10 A. You would make an HTTP request that would 11 generate an HTTP response, and that HTTP response 12 would be an application layer message that contains 13 the content of what's called the base page for CNN. 14 Q. And is it right that that Layer 5 content 15 could be -- would be separated into multiple chunks 16 of transmission, or pieces of transmission, as 17 opposed to all going at once? 18 MR. BLAKE: Objection to form. 19 A. So if the CNN response, the base page, was 20 large enough, it would be segmented by the transport 21 layer at the sender and ultimately transmitted across 22 multiple lower layer packets. 23 Q. And when it got -- when those segments got 24 to the destination, they would be reassembled; is 25 that right?</p>	<p style="text-align: right;">Page 29</p> <p>1 the case. Just in case I ask you questions about it. 2 MR. CAPLAN: I'm sure you need another 3 copy of that. 4 MR. BLAKE: I'm dying to have one. 5 BY MR. CAPLAN: 6 Q. So we've been talking a little bit about 7 ACNS today, and I know you've opined on this before, 8 but generally what's the purpose of the ACNS system? 9 MR. BLAKE: Objection to form. 10 A. The ACNS system has multiple functions. 11 The one that I think is the focus of this matter is 12 its functions as a security device. 13 Q. But in addition to that, it also is a 14 content delivery system; is that right? 15 A. Yes, it can be used for content delivery. 16 Q. Do you know if that's its primary use? 17 A. I think that would be considered probably 18 its primary use. 19 Q. Do you know, is ACNS designed to inspect 20 the Layer 2 and Layer 3 packets? 21 MR. BLAKE: Objection to form. 22 A. I don't recall if there were disclosures 23 in here about Layer 2, but it certainly will inspect 24 Layer 3 packets. 25 Q. And why would it inspect Layer 3 packets?</p>

<p style="text-align: right;">Page 30</p> <p>1 A. It needs to inspect Layer 3 in order to do</p> <p>2 its processing. But part of what it discloses is</p> <p>3 that it will work with IP addresses. And in order to</p> <p>4 work with IP addresses, it needs to be inspecting</p> <p>5 Layer 3.</p> <p>6 Q. When you say "inspecting," what do you</p> <p>7 mean by "inspecting"?</p> <p>8 A. Process; examine.</p> <p>9 Q. Does it have to read the contents of</p> <p>10 Layer 3?</p> <p>11 A. Yes.</p> <p>12 Q. Because that's the routing information?</p> <p>13 A. There is routing information in Layer 3,</p> <p>14 yes.</p> <p>15 Q. Does it do anything else with the Layer 3</p> <p>16 information once it's read it to get the routing</p> <p>17 information?</p> <p>18 MR. BLAKE: Objection to form.</p> <p>19 A. Well, it's going to process these -- the</p> <p>20 content of Layer 3 messages. So it's -- I'm not sure</p> <p>21 how to exactly answer your question. But, I mean,</p> <p>22 ACNS will do Layer 3 processing.</p> <p>23 Q. And what does it do to the Layer 3</p> <p>24 processing to accomplish?</p> <p>25 A. It accomplishes many, many, many functions</p>	<p style="text-align: right;">Page 32</p> <p>1 MR. BLAKE: Objection to form.</p> <p>2 A. ACNS -- its logging section -- they're</p> <p>3 just referred to as logs or transaction logs. And</p> <p>4 what ACNS guide discloses is that what it refers to</p> <p>5 as transactions are logged, and these transaction</p> <p>6 logging -- transaction logs can comprise packet logs.</p> <p>7 Q. You're making reference to, I believe,</p> <p>8 Chapter 19 of the ACNS, which, just for the record,</p> <p>9 is Cisco Exhibit 1008. But I believe it's</p> <p>10 Chapter 19, 19-1.</p> <p>11 Do you see that, 19-1, Chapter 19?</p> <p>12 A. I do.</p> <p>13 Q. You'd agree it says -- the heading of that</p> <p>14 chapter is "Using the transaction logs"; right?</p> <p>15 A. Correct.</p> <p>16 Q. It does not say using the packet logs;</p> <p>17 right?</p> <p>18 A. It says what it says.</p> <p>19 Q. Is it your position that the transaction</p> <p>20 log is a packet log?</p> <p>21 MR. BLAKE: Objection to form.</p> <p>22 A. My position is transaction logging, as</p> <p>23 described in Chapter 19, will comprise packet</p> <p>24 logging.</p> <p>25 Q. Okay. We already established that this</p>
<p style="text-align: right;">Page 31</p> <p>1 that it talks about. It talks about its content</p> <p>2 filtering. It talks about some of the security</p> <p>3 functions. It talks about acting as a proxy. I</p> <p>4 mean, all of these things will involve certain</p> <p>5 amounts of Layer 3 processing.</p> <p>6 Q. Are all those functions coming from the</p> <p>7 Layer 3 information?</p> <p>8 MR. BLAKE: Objection to form.</p> <p>9 A. There's -- certainly Layer 3 information</p> <p>10 is used in all of those functions.</p> <p>11 Q. Can you give me an example of how Layer 3</p> <p>12 information is used in those functions?</p> <p>13 MR. BLAKE: Objection to form.</p> <p>14 A. So when it's functioning, for example, as</p> <p>15 a security device and it's going to be logging</p> <p>16 information about packets, one of the things it will</p> <p>17 do is it will extract the IP address of packets and</p> <p>18 that will become part of its log entry.</p> <p>19 Q. Does the ACNS system talk about logging</p> <p>20 packets?</p> <p>21 A. It certainly teaches logging of packets to</p> <p>22 a person of ordinary skill in the art.</p> <p>23 Q. Is there any section -- feel free to look</p> <p>24 through -- is there any section of the ACNS document</p> <p>25 which is entitled packet logging?</p>	<p style="text-align: right;">Page 33</p> <p>1 chapter is about transaction logs as opposed to</p> <p>2 packet logs. You're saying that it covers packet</p> <p>3 logs, too.</p> <p>4 Does it talk about anywhere in here doing</p> <p>5 a series of packet logging?</p> <p>6 MR. BLAKE: Objection to form. Misstates</p> <p>7 the witness's testimony.</p> <p>8 A. I don't know what you mean by "a series of</p> <p>9 packet logging."</p> <p>10 Q. Well, before we talked about</p> <p>11 packet-by-packet.</p> <p>12 Do you recall that?</p> <p>13 A. I do.</p> <p>14 Q. And the claims talk about doing things</p> <p>15 packet-by-packet.</p> <p>16 A. Yes.</p> <p>17 Q. Does Chapter 19 talk about you doing</p> <p>18 anything packet-by-packet? I know it talks about</p> <p>19 logging transactions, but does it talk about logging</p> <p>20 packet and then another packet and then another</p> <p>21 packet?</p> <p>22 MR. BLAKE: Objection to form.</p> <p>23 A. So what Chapter 19 teaches a person of</p> <p>24 ordinary skill in the art is that the way it's</p> <p>25 describing logging, a person of ordinary skill in the</p>

<p style="text-align: right;">Page 34</p> <p>1 art would understand that it is capable of logging  2 packets by packet. And that comes from its -- all of  3 these disclosures, for example, of its squid style  4 logging.  5 Q. This squid style logging, you're talking  6 about what's referred to on page 19-1?  7 A. It starts on 19-1. That's correct.  8 Q. Why don't we step back a little bit.  9 What is a transaction or transaction log  10 as it's referred to here in the ACNS?  11 A. The transaction that's referred to here is  12 a -- in the case of the example that's shown in 19-1  13 is an HTTP request response exchange.  14 Q. So that's a Layer 5 communication, right,  15 HTTP request?  16 A. Correct.  17 Q. Okay. So this is logging that transaction  18 at Layer 5; right?  19 MR. BLAKE: Objection to form.  20 A. It's not log -- it's a log about that  21 transaction.  22 Q. And Layer 5 could ultimately -- whatever  23 is transmitted in Layer 5 could span a lot of packets  24 at Layer 2 and Layer 3; isn't that true?  25 MR. BLAKE: Objection to form.</p>	<p style="text-align: right;">Page 36</p> <p>1 Chapter 19, is an HTTP request response exchange.  2 So I asked, so that's a Layer 5  3 communication; right? And you said, Correct.  4 And then I asked, So this is logging that  5 transaction at Layer 5; right?  6 It's a log -- then you responded, It's a  7 log about that transaction.  8 Is that not your testimony?  9 A. The record's going to show what I  10 testified to. I'm just simply saying that the entry  11 here is about the Layer 5 transaction, and to  12 generate this log entry, it is also an entry that is  13 about Layer 2 and Layer 3 information.  14 Q. How is it about Layer 2 and Layer 3  15 information?  16 A. It contains, for example, an IP address,  17 which is Layer 3 information.  18 Q. Well, let's step back again. What is  19 logging as it's used at least in the context of the  20 '213 patent as you understand?  21 MR. BLAKE: Objection to form.  22 A. So the '213 patent in the claims doesn't  23 actually describe or require -- doesn't use the verb  24 "logging." It simply talks about a packet digest  25 logging function. And I think logging is just</p>
<p style="text-align: right;">Page 35</p> <p>1 A. A Layer 5 message could span multiple  2 Layer 2 and Layer 3 packets.  3 Q. What's described here in Chapter 19, and  4 this squid style transaction logging, is logging  5 information happening at the Layer 5 level; is that  6 right?  7 MR. BLAKE: Objection to form.  8 Mischaracterizes testimony.  9 A. It's describing a Layer 5 transaction, and  10 what it's logging are layer -- essentially Layer 2  11 and Layer 3 information as part of this transaction  12 log.  13 Q. Where is it logging Layer 2 and Layer 3?  14 We already established that this is logging the  15 Layer 5 information.  16 MR. BLAKE: Objection to form.  17 A. We did not establish that it's layering --  18 it's logging the Layer 5 information. I disagreed  19 with that assertion. So perhaps you could ask a  20 better question.  21 Q. So I'm just going to go back to what I  22 asked you a few minutes ago. And I said, What is a  23 transaction or a transaction log as it's referred to  24 here in the ACNS? The transaction that's referred to  25 here, and I'm referring to the Section 19-1, or</p>	<p style="text-align: right;">Page 37</p> <p>1 understood, just generally, as recording some  2 information.  3 Q. And do you have an understanding of packet  4 digest logging?  5 A. Packet digest -- the packet digest logging  6 function that's in the claim would just be understood  7 according to plain ordinary meaning, which it's a  8 function that's going to log a digest of one or more  9 packets.  10 Q. And you would agree that a packet is  11 different than a transaction as used in the context  12 of the '213 patent?  13 MR. BLAKE: Objection to form.  14 A. So transaction doesn't appear in the '213  15 patent. But generally a person of ordinary skill in  16 the art would understand that transactions in  17 networking are comprised of packets.  18 Q. But a transaction is comprised of a lot of  19 different packets; is that right?  20 MR. BLAKE: Objection to form.  21 A. It may or it may not be.  22 Q. Well, transaction is going to be -- if a  23 transaction were comprised of packets, it's going to  24 be packets at Layers 5, 4, 3, and 2; is that right?  25 A. No. All of that is contained in a single</p>

<p style="text-align: right;">Page 38</p> <p>1 Layer 2 or single Layer 3 packet. So the fact that</p> <p>2 you have a Layer 5 message and a Layer 4 segment and</p> <p>3 Layer 3 datagram, all of that is one packet.</p> <p>4 Q. Would you agree that a transaction is</p> <p>5 referring to something other than just a packet?</p> <p>6 A. I'm sorry. Is referring to other than?</p> <p>7 Q. I'm sorry. I'll reask the question.</p> <p>8 A transaction is something different than</p> <p>9 just a packet?</p> <p>10 MR. BLAKE: Objection to form.</p> <p>11 A. It need not be. Transactions are</p> <p>12 comprised of one or more packets.</p> <p>13 Q. But ACNS logs transactions, at least as it</p> <p>14 describes it, as opposed to packets; is that right?</p> <p>15 MR. BLAKE: Objection to form.</p> <p>16 A. ACNS will log packets as part of what it</p> <p>17 describes is its transaction logging.</p> <p>18 MR. CAPLAN: I'm going to switch topics, a</p> <p>19 short break?</p> <p>20 MR. BLAKE: Sure.</p> <p>21 (Recess taken.)</p> <p>22 BY MR. CAPLAN:</p> <p>23 Q. So, Dr. Jeffay, we were talking about</p> <p>24 logging and ACNS system. If you turn to your reply</p> <p>25 declaration, that's Exhibit 1020, it says -- in the</p>	<p style="text-align: right;">Page 40</p> <p>1 Q. Now, if you just turn back in that same</p> <p>2 declaration to paragraph 33, in that paragraph, at</p> <p>3 the end of that paragraph, you say that "The ACNS</p> <p>4 guide does not mention the reassembly of packets in</p> <p>5 its discussion of the ACNS software."</p> <p>6 Do you see that?</p> <p>7 A. I see that.</p> <p>8 Q. Okay. You agree with that statement?</p> <p>9 A. Yes.</p> <p>10 Q. Okay. But the ACNS system does reassemble</p> <p>11 packets. We talked about that earlier; right?</p> <p>12 A. I don't believe we talked about that</p> <p>13 specifically for ACNS.</p> <p>14 Q. Well, we talked about the Layer 5</p> <p>15 information that could be transmitted in the ACNS</p> <p>16 system, right, and that information sometimes would</p> <p>17 be sent in multiple segments.</p> <p>18 Do you recall that?</p> <p>19 A. I recall that.</p> <p>20 Q. And then when that segment information</p> <p>21 arrives at its destination, it would need to be</p> <p>22 reassembled; is that right?</p> <p>23 A. That's correct. The important part there</p> <p>24 is the fact that we were discussing that in terms of</p> <p>25 the actual destination.</p>
<p style="text-align: right;">Page 39</p> <p>1 middle of paragraph 35 is what I'm going to be</p> <p>2 referring to. This is about ACNS and logging</p> <p>3 packets.</p> <p>4 A. Okay.</p> <p>5 Q. So you agree that ACNS does not describe</p> <p>6 logging packets identified by a rule with a dynamic</p> <p>7 policy; is that right?</p> <p>8 A. No. I think it does.</p> <p>9 Q. Well, in paragraph 35, it says, "While the</p> <p>10 ACNS guide does not explicitly teach logging, only</p> <p>11 those packets identified by a rule within a dynamic</p> <p>12 policy, Kjendal does so."</p> <p>13 Do you see that?</p> <p>14 A. I see that.</p> <p>15 Q. So you would agree, then, that the ACNS</p> <p>16 guide doesn't explicitly teach logging, only those</p> <p>17 packets identified by a rule within a dynamic policy;</p> <p>18 is that right?</p> <p>19 A. I didn't hear the word "only" in your</p> <p>20 original question.</p> <p>21 Yes, if you have the word "only" in there,</p> <p>22 then that's -- then, yes, I agree.</p> <p>23 Q. So ACNS didn't have that. You looked at</p> <p>24 Kjendal for that; is that right?</p> <p>25 A. Yes.</p>	<p style="text-align: right;">Page 41</p> <p>1 Q. Are you saying the destination is</p> <p>2 something different from the ACNS system?</p> <p>3 A. The ACNS system may not be the ultimate</p> <p>4 destination.</p> <p>5 Q. Does the ACNS system reassemble the HTTP</p> <p>6 layer information before it sends it on to its</p> <p>7 ultimate destination, assuming that would be some</p> <p>8 user?</p> <p>9 A. No. It's not disclosed. But ACNS does</p> <p>10 not describe that. The ACNS guide does not describe</p> <p>11 what you've just described.</p> <p>12 Q. So as you sit here today, what's your</p> <p>13 understanding of the scope of what the ACNS system</p> <p>14 does describe? In other words, what part of the</p> <p>15 process is it describing?</p> <p>16 MR. BLAKE: Objection to form.</p> <p>17 A. I don't know how to answer your question.</p> <p>18 ACNS is a huge system. I'm sitting in front of a</p> <p>19 multi-hundred page manual. It does a lot of things,</p> <p>20 but there's no disclosure in this guide of</p> <p>21 reassembling packets.</p> <p>22 Q. Well, for a user of the ACNS system to</p> <p>23 ultimately receive and experience the requested</p> <p>24 content, whether it's a web page or a Netflix movie,</p> <p>25 if that content is sent in segments, it would have to</p>

<p style="text-align: right;">Page 42</p> <p>1 be reassembled before someone could experience it; is</p> <p>2 that right?</p> <p>3 A. Not by ACNS. ACNS doesn't have to</p> <p>4 necessarily reassemble anything.</p> <p>5 Q. So if ACNS didn't reassemble anything,</p> <p>6 where would ACNS leave -- stop whatever it's doing in</p> <p>7 that situation?</p> <p>8 A. ACNS could, for example, forward the</p> <p>9 Layer 2, Layer 3 packets without doing any reassembly</p> <p>10 to an origin server for purposes of getting the</p> <p>11 content from the origin server.</p> <p>12 Q. Is that your understanding of how the ACNS</p> <p>13 system works?</p> <p>14 MR. BLAKE: Objection to form.</p> <p>15 A. ACNS is a large system. One of the things</p> <p>16 ACNS discloses that it can do is that it will forward</p> <p>17 requests for content to what I call origin servers,</p> <p>18 the servers that ultimately host the content that's</p> <p>19 requested.</p> <p>20 Q. And in that scenario, I assume the origin</p> <p>21 servers respond to ACNS; is that right?</p> <p>22 A. They will generate an HTTP response.</p> <p>23 Q. Because one of the functions of the ACNS</p> <p>24 system is as a content engine, I believe is the term;</p> <p>25 is that right?</p>	<p style="text-align: right;">Page 44</p> <p>1 frame.</p> <p>2 Q. Does ACNS start unpacking that Layer 2,</p> <p>3 Layer 3 information, or does it just pass it through</p> <p>4 to some other destination?</p> <p>5 A. So that's an implementation detail. And</p> <p>6 that level of detail is not described in the ACNS</p> <p>7 guide.</p> <p>8 Q. So is it your testimony that the ACNS</p> <p>9 system could essentially just receive Layer 2,</p> <p>10 Layer 3 messaging that encapsulates Layer 5 HTTP</p> <p>11 information and just passes along that Layer 2,</p> <p>12 Layer 3 information to another destination?</p> <p>13 MR. BLAKE: Objection to form.</p> <p>14 A. So I'm not opining on what the ACNS system</p> <p>15 does here. I'm opining on what's disclosed in this</p> <p>16 guide, and you're asking questions about</p> <p>17 implementation details of the ACNS system that are</p> <p>18 not discussed in the ACNS guide.</p> <p>19 Q. Okay. So just make sure I understand. So</p> <p>20 you don't know whether or not the ACNS system</p> <p>21 processes Layer 2, Layer 3 information that it</p> <p>22 receives and whether it just forwards it on as</p> <p>23 Layer 2 and Layer 3 information or actually unpacks</p> <p>24 that information to regenerate the Layer 5</p> <p>25 information?</p>
<p style="text-align: right;">Page 43</p> <p>1 A. It's called a content engine. But that's</p> <p>2 not to say that ACNS itself is the -- that ACNS</p> <p>3 itself hosts the content. The content will go</p> <p>4 through ACNS. But the content can come from, again,</p> <p>5 what we'll call the origin server, which is</p> <p>6 potentially something outside of ACNS.</p> <p>7 Q. Do you know whether the ACNS materials</p> <p>8 that you've been looking at in this matter mention</p> <p>9 reassembly of packets?</p> <p>10 MR. BLAKE: Objection to form.</p> <p>11 A. It's my belief that they don't mention --</p> <p>12 that these materials make no mention of reassembly.</p> <p>13 Q. If there's no mention of it, does that</p> <p>14 mean that it doesn't happen in the ACNS system?</p> <p>15 MR. BLAKE: Objection to form.</p> <p>16 A. Whether or not it happens or it doesn't</p> <p>17 happen in the ACNS system -- all we have to go on is</p> <p>18 what does this document teach. I'm relying on the</p> <p>19 ACNS guide as a document. And what this document --</p> <p>20 this document contains no teaching of reassembly of</p> <p>21 packets.</p> <p>22 Q. When the ACNS system receives Layer 5 HTTP</p> <p>23 information, it comes in at Layer 2 and Layer 3; is</p> <p>24 that right? We talked about that earlier.</p> <p>25 A. It will initially be received as a Layer 2</p>	<p style="text-align: right;">Page 45</p> <p>1 MR. BLAKE: Objection to form.</p> <p>2 Mischaracterizes testimony.</p> <p>3 A. That's an ill-framed question.</p> <p>4 Q. Okay. So before I asked you does the ACNS</p> <p>5 start unpacking at Layer 2, Layer 3 information, does</p> <p>6 it pass it through to some other destination, and you</p> <p>7 responded that that's a little detail that's not</p> <p>8 described in the guide.</p> <p>9 I just want to confirm that that's your</p> <p>10 understanding, that that level of detail is not</p> <p>11 described in the guide.</p> <p>12 A. That level of detail is not described in</p> <p>13 the ACNS guide.</p> <p>14 Q. If a transaction -- first of all, do you</p> <p>15 have an understanding of a transaction log as that</p> <p>16 term is used in the ACNS document?</p> <p>17 A. Yes.</p> <p>18 Q. Okay. So if an ACNS transaction log is</p> <p>19 sufficiently small to fit within one packet, is the</p> <p>20 information that comprises that transaction log still</p> <p>21 a transaction log even though it's small and fits</p> <p>22 within one packet?</p> <p>23 A. I'm sorry. That question makes no sense.</p> <p>24 Q. If a transaction log, as described in the</p> <p>25 ACNS document, fits -- is of a size that can fit</p>

<p style="text-align: right;">Page 46</p> <p>1 within a single packet, isn't it still a transaction</p> <p>2 log?</p> <p>3 MR. BLAKE: Objection to form.</p> <p>4 A. I'm not following you when you say "a</p> <p>5 transaction log fits into a single packet."</p> <p>6 Q. I believe in your declaration you talk</p> <p>7 about some transaction logs are small enough that</p> <p>8 they could fit or some requests could fit within a</p> <p>9 single packet.</p> <p>10 Do you recall that?</p> <p>11 A. There is no discussion in my declarations</p> <p>12 about transaction logs fitting in a single packet.</p> <p>13 Q. Okay. We talked about this a little bit</p> <p>14 earlier. I want to go back and make sure I</p> <p>15 understood it.</p> <p>16 Is the ACNS system looking for Layer 2 or</p> <p>17 Layer 3 packets to analyze, or is that a level of</p> <p>18 detail that isn't described in the document?</p> <p>19 A. I think what I described to you is that</p> <p>20 generally that detail is not described in the</p> <p>21 document, but a person of ordinary skill in the art</p> <p>22 would understand that to perform the functions that</p> <p>23 are disclosed in the ACNS guide, that the ACNS system</p> <p>24 would necessarily have to be processing Layer 2 and</p> <p>25 Layer 3 information in the packets that it receives.</p>	<p style="text-align: right;">Page 48</p> <p>1 a transaction log?</p> <p>2 A. What it discloses is -- in page 19-1 is</p> <p>3 that -- as an example, that transaction logs allow</p> <p>4 administrators to view the traffic that is passed</p> <p>5 through the content engine.</p> <p>6 Logs are generically -- most systems</p> <p>7 generically generate some form of logs. Logs --</p> <p>8 generation of logs is a very common aspect of most</p> <p>9 networking systems.</p> <p>10 Q. Why do systems keep logs?</p> <p>11 A. Typically, so that you can understand --</p> <p>12 in this case, you know, you can provide some</p> <p>13 visibility into the traffic that's flowing on your</p> <p>14 network.</p> <p>15 Q. And so is it, based on your experience,</p> <p>16 the case that these logs are kept at a very low level</p> <p>17 of detail, like a bit or byte level, or are they done</p> <p>18 at some higher level, in other words, transactions</p> <p>19 versus packets?</p> <p>20 MR. BLAKE: Objection to form.</p> <p>21 A. What's logged is a function of the system.</p> <p>22 So logging is a very generic function. The specifics</p> <p>23 of the logs depend on the specifics of the system.</p> <p>24 Q. Would you agree that in any given day of</p> <p>25 operation of an ACNS system it processes more packets</p>
<p style="text-align: right;">Page 47</p> <p>1 Q. But as now we just went over a couple of</p> <p>2 times, that's a level of detail that's not in the</p> <p>3 guide. That's based on just your understanding of</p> <p>4 how you think it would operate?</p> <p>5 A. No. That's not a fair characterization of</p> <p>6 my testimony.</p> <p>7 Q. I believe you just testified that the ACNS</p> <p>8 system would necessarily have to be processing</p> <p>9 Layer 2 and Layer 3 information in the packets it</p> <p>10 receives, but that's not described in the ACNS</p> <p>11 document itself; is that right?</p> <p>12 A. What I said was a person with ordinary</p> <p>13 skill in the art would understand that in order to</p> <p>14 perform the functions that are disclosed in the</p> <p>15 guide, that the ACNS system would necessarily have to</p> <p>16 process Layer 2 and Layer 3 information.</p> <p>17 Q. But you didn't see anything in the ACNS</p> <p>18 document itself that says that?</p> <p>19 MR. BLAKE: Objection to form.</p> <p>20 A. I gave you the example earlier, for</p> <p>21 example, of how, as part of the logging that's done,</p> <p>22 the logging includes an IP address, and the IP</p> <p>23 address can only be obtained by an analysis of the</p> <p>24 Layer 3 packet.</p> <p>25 Q. Do you know why the ACNS system maintains</p>	<p style="text-align: right;">Page 49</p> <p>1 than transactions?</p> <p>2 MR. BLAKE: Objection to form. Calls for</p> <p>3 speculation.</p> <p>4 A. I don't know. We have no evidence in this</p> <p>5 case about operations of actual ACNS systems.</p> <p>6 Q. But a given request -- let's talk about a</p> <p>7 request for a web page by a user in the context of</p> <p>8 the ACNS system. That request for a web page would</p> <p>9 generate -- or would likely generate a lot of packets</p> <p>10 in response coming through the ACNS system; is that</p> <p>11 true?</p> <p>12 A. You can't make generalized statements like</p> <p>13 that. The average request is going to be a single</p> <p>14 packet. Depending on the content requested, the</p> <p>15 response is going to be a single packet.</p> <p>16 Q. In the example we talked about before,</p> <p>17 like the CNN web page, would that response be a</p> <p>18 single packet coming back?</p> <p>19 A. I don't know. We would have to look at --</p> <p>20 we could easily do an experiment to figure that out.</p> <p>21 Q. In the Netflix example, which I understand</p> <p>22 you don't like, but I assume a request for a Netflix</p> <p>23 movie would -- one request for a movie would result</p> <p>24 in a lot of packets coming in response; is that fair?</p> <p>25 A. So I was answering your questions at a</p>

<p style="text-align: right;">Page 50</p> <p>1 very high level. What I will tell you is that</p> <p>2 Netflix, you do not request a movie. When you're</p> <p>3 watching a movie with Netflix -- and Netflix has</p> <p>4 nothing to do with this case -- but Netflix, you will</p> <p>5 make thousands of requests for content during the</p> <p>6 course of watching a movie.</p> <p>7 Q. The ACNS transaction log, is that</p> <p>8 different from what a packet log would look like in</p> <p>9 the ACNS system if the ACNS was going to log every</p> <p>10 packet?</p> <p>11 A. I can't answer that question. That's a --</p> <p>12 I can't speculate on what ACNS would do if it wanted</p> <p>13 to do something.</p> <p>14 Q. You mentioned that ACNS had a function</p> <p>15 related to security.</p> <p>16 Do you recall that?</p> <p>17 A. Yes.</p> <p>18 Q. Does the ACNS system receive automatic</p> <p>19 updates from outside of its system on security</p> <p>20 issues?</p> <p>21 A. What's "its system"?</p> <p>22 Q. The ACNS system, at least as reflected in</p> <p>23 that Exhibit 1008, is it receiving realtime,</p> <p>24 continuous, automatic security threat updates to be</p> <p>25 incorporated into the operation of the ACNS system?</p>	<p style="text-align: right;">Page 52</p> <p>1 "cyber threat intelligence."</p> <p>2 Q. Does the ACNS system come with or is it</p> <p>3 set up with a fixed set of rules that it operates</p> <p>4 with, at least in terms of security, let's say, what</p> <p>5 you're referring to as security or control?</p> <p>6 MR. BLAKE: Objection to form.</p> <p>7 A. No. I don't believe that's the case.</p> <p>8 Q. Does it have, kind of, realtime updating</p> <p>9 from some source of bad places on the web that it</p> <p>10 will add to its operations to make sure the users of</p> <p>11 the ACNS don't get involved with?</p> <p>12 A. What ACNS discloses is that you can update</p> <p>13 rules and policies. If you update them from -- if</p> <p>14 they're being updated from whatever sources you're</p> <p>15 referring to, then -- I mean, ACNS is generic. It</p> <p>16 doesn't care where the rules or policies come from.</p> <p>17 They could come from a third-party service. They</p> <p>18 could come from anywhere.</p> <p>19 Q. Is there anything in that Exhibit 1008</p> <p>20 which shows automatic, external third-party updates</p> <p>21 of security threats from outside the ACNS system?</p> <p>22 A. ACNS describes the mechanism by which it</p> <p>23 will receive updates, and a person of ordinary skill</p> <p>24 in the art would understand you could use this</p> <p>25 mechanism in any way you would like.</p>
<p style="text-align: right;">Page 51</p> <p>1 A. What the ACNS guide discloses is that it</p> <p>2 can receive updates. If those updates are generated</p> <p>3 in a realtime, continuous manner, then ACNS will</p> <p>4 receive those updates in a realtime, continuous</p> <p>5 matter -- manner.</p> <p>6 Q. But the ACNS guide describes having to</p> <p>7 enter in updates manually; is that right?</p> <p>8 A. The ACNS guide describes an interface</p> <p>9 where updates can be entered in manually.</p> <p>10 Q. And what are you referring to when you</p> <p>11 said "had a security function"?</p> <p>12 What was the feature of the ACNS guide</p> <p>13 that relates to security?</p> <p>14 A. So that's fully described in my original</p> <p>15 declaration, and I believe that the primary thing I</p> <p>16 was relying on for is the fact that ACNS will not</p> <p>17 allow certain HTTP request methods if it's been</p> <p>18 provisioned with rules and policies that forbid those</p> <p>19 request methods.</p> <p>20 Q. So is that a different kind of protection</p> <p>21 than, like, let's say, cyber threat intelligence,</p> <p>22 websites that are bad out on the web that are</p> <p>23 identified on a continuous basis?</p> <p>24 MR. BLAKE: Objection to form.</p> <p>25 A. You would have to tell me what you mean by</p>	<p style="text-align: right;">Page 53</p> <p>1 And one of the ways -- it's important to</p> <p>2 understand that the patent at issue here -- its</p> <p>3 priority date is 2014. The security field and</p> <p>4 industry was very well-established and mature by</p> <p>5 2014.</p> <p>6 So given the mechanisms that are disclosed</p> <p>7 in ACNS, the person of ordinary skill in the art</p> <p>8 using their ordinary skill would understand that you</p> <p>9 can take policies and rules from external sources and</p> <p>10 have them integrated into ACNS. It's just because</p> <p>11 that was common practice in 2014.</p> <p>12 Q. What part of the ACNS guide are you</p> <p>13 referring to with this updating on security in that</p> <p>14 matter?</p> <p>15 A. I'm referring to the portions that</p> <p>16 describe the content distribution management</p> <p>17 function.</p> <p>18 Q. Does the ACNS guide describe all of those</p> <p>19 systems you said were out there in 2014 being</p> <p>20 incorporated into the ACNS product?</p> <p>21 A. As I testified, I said that it's important</p> <p>22 to understand that the time frame in which we're</p> <p>23 understanding the teachings of the ACNS guide is</p> <p>24 2014.</p> <p>25 And a person of ordinary skill in the art</p>

<p style="text-align: right;">Page 54</p> <p>1 in 2014 would know -- and long before 2014 -- would</p> <p>2 know that there are a variety of third-party sources</p> <p>3 out there that compile and aggregate information</p> <p>4 about security threats, and information from those</p> <p>5 sites could be used to drive the provisioning of</p> <p>6 rules and policies in ACNS.</p> <p>7 Q. But that updating would have to be</p> <p>8 manually entered, isn't that right, in ACNS?</p> <p>9 A. ACNS describes that it can come in through</p> <p>10 a command line interface. A person of ordinary skill</p> <p>11 in the art would understand that that teaches that</p> <p>12 you could either do it manually if you wanted to or</p> <p>13 you could add your own function on top of that to do</p> <p>14 it automatically.</p> <p>15 Q. But the ACNS guide that you've been</p> <p>16 looking at doesn't have that feature to automatically</p> <p>17 go get security updates and have them flow into the</p> <p>18 system, does it?</p> <p>19 A. ACNS -- the issue is what does ACNS teach</p> <p>20 a person of ordinary skill in the art? And in 2014,</p> <p>21 all security systems had some tie to some source,</p> <p>22 whether it was a commercial source or a public</p> <p>23 domain, open source entity, to get security</p> <p>24 information.</p> <p>25 In my department, all of our security</p>	<p style="text-align: right;">Page 56</p> <p>1 believe I'm saying what the document teaches to a</p> <p>2 person of ordinary skill in the art, given their</p> <p>3 knowledge and expertise.</p> <p>4 Q. But a person would have to bring that</p> <p>5 understanding to the document because it's not</p> <p>6 present there expressly, is it?</p> <p>7 MR. BLAKE: Same objection.</p> <p>8 A. A person of -- my understanding is a</p> <p>9 person of ordinary skill in the art brings their</p> <p>10 ordinary skill as well as knowledge of all of the</p> <p>11 prior art with them.</p> <p>12 And so this is such a commonplace feature,</p> <p>13 that one wouldn't necessarily expect it to be</p> <p>14 disclosed explicitly in a document like the ACNS</p> <p>15 guide because it's just part of the knowledge of an</p> <p>16 entity that would be reading the ACNS guide.</p> <p>17 Q. Earlier today we were talking about</p> <p>18 Layer 2 and Layer 3, which together are used for</p> <p>19 routing and forwarding. And I believe you testified</p> <p>20 that once the Layer 2 and Layer 3 information would</p> <p>21 be used by the ACNS, it would still -- ACNS would</p> <p>22 still keep some of that information about Layer 2 and</p> <p>23 Layer 3.</p> <p>24 Do you recall that?</p> <p>25 MR. BLAKE: Objection to form.</p>
<p style="text-align: right;">Page 55</p> <p>1 appliances worked this way. We get our information</p> <p>2 from a public repository. So this is what a person</p> <p>3 of ordinary skill in the art knows.</p> <p>4 And given the description of how you can</p> <p>5 provision rules and policies in ACNS, a person of</p> <p>6 ordinary skill in the art would easily know that you</p> <p>7 could tie this mechanism to any source of security</p> <p>8 information that you would like, including some of</p> <p>9 the publicly available aggregation sources.</p> <p>10 Q. But, again, it's not described that way in</p> <p>11 the ACNS document; is it?</p> <p>12 MR. BLAKE: Objection to form.</p> <p>13 A. My answer to you is what -- my testimony</p> <p>14 is that what this teaches to a person of ordinary</p> <p>15 skill in the art is an interface. And a person of</p> <p>16 ordinary skill in the art, given this teaching and</p> <p>17 given their ordinary skill in 2014, would understand</p> <p>18 that you could put in -- you could tie the interface</p> <p>19 to these security risk aggregation sources.</p> <p>20 Q. Again, obviously, I'll ask one last time.</p> <p>21 That's your understanding of at least how you think</p> <p>22 you interpret, or it is how you interpret it, but</p> <p>23 that's nowhere said in the ACNS document, is it?</p> <p>24 MR. BLAKE: Objection to form.</p> <p>25 A. It's not how I interpret it. It's how I</p>	<p style="text-align: right;">Page 57</p> <p>1 A. I generally recall it. Yes.</p> <p>2 Q. But then you also testified that how ACNS</p> <p>3 deals with Layer 2 and Layer 3 is an implementation</p> <p>4 detail that's not described in that Exhibit 1008; is</p> <p>5 that right?</p> <p>6 A. So you've asked me several questions about</p> <p>7 Layer 2 and Layer 3. Some of them were generic</p> <p>8 questions. Some of them were very, very detailed</p> <p>9 questions.</p> <p>10 And for the very detailed questions, I</p> <p>11 believe I told you that given the detail of your</p> <p>12 question, it's not -- it's not described in the</p> <p>13 document, and a person of ordinary skill in the art</p> <p>14 would understand that it's an implementation detail</p> <p>15 that could be performed any number of ways.</p> <p>16 Other of your questions were not so</p> <p>17 detailed and were more generic, and as such, they</p> <p>18 could be answered given the understanding of a person</p> <p>19 of ordinary skill in the art.</p> <p>20 Q. So what does ACNS -- the ACNS guide</p> <p>21 describe about using the Layer 2 and Layer 3</p> <p>22 information once it's been processed to get to the</p> <p>23 Layer 5 information that's being transported?</p> <p>24 MR. BLAKE: Objection to form.</p> <p>25 A. So I've given you the example of one</p>

<p style="text-align: right;">Page 58</p> <p>1 specific processing where, as part of generating the</p> <p>2 log entries, it could extract IP addresses, which is</p> <p>3 Layer 3 information.</p> <p>4 Q. And do you have any other examples?</p> <p>5 A. It includes time stamps that would be</p> <p>6 understood as the start of -- essentially the time at</p> <p>7 which a packet or request, for example, arrives at</p> <p>8 the system. So that would be related to Layer 2</p> <p>9 packet information.</p> <p>10 Q. Any other examples?</p> <p>11 A. Those are two obvious ones that I can</p> <p>12 think of off the top of my head.</p> <p>13 Q. And where would those Layer 2 and Layer 3</p> <p>14 bits of information be used in the ACNS system once</p> <p>15 it's been decoded and the Layer 5 information made</p> <p>16 available?</p> <p>17 MR. BLAKE: Objection to form.</p> <p>18 A. So that's a compound question. You asked</p> <p>19 about where it's used, and then you tied that to the</p> <p>20 Layer 5 stuff.</p> <p>21 So just answering your question about</p> <p>22 where it's used, I've given you the example before</p> <p>23 that, for example, that's used as part of its packet</p> <p>24 logging function.</p> <p>25 Q. Which ACNS calls transaction log; right?</p>	<p style="text-align: right;">Page 60</p> <p>1 A. No.</p> <p>2 Q. Are you saying that a transaction in ACNS</p> <p>3 that fits within a single packet then becomes -- is</p> <p>4 no longer a transaction and is now just a packet?</p> <p>5 A. No.</p> <p>6 Q. So transaction and packet are something</p> <p>7 that are different?</p> <p>8 MR. BLAKE: Objection to form.</p> <p>9 A. A transaction is going to be comprised of</p> <p>10 one or more packets. A single packet as disclosed --</p> <p>11 in terms of how a transaction is disclosed in ACNS, a</p> <p>12 single packet can comprise a transaction.</p> <p>13 Q. Does the ACNS server have to analyze the</p> <p>14 Layer 2 and Layer 3 information in order to -- well,</p> <p>15 strike that.</p> <p>16 We mentioned the Kjendal reference briefly</p> <p>17 before. So I have a couple questions about that.</p> <p>18 What is dynamic mirroring?</p> <p>19 MR. BLAKE: Objection to form.</p> <p>20 A. If that phrase is used in Kjendal, can I</p> <p>21 get a copy of Kjendal to review the context?</p> <p>22 MR. CAPLAN: I think we can do that. All</p> <p>23 right. Just for the record, it's Cisco Exhibit 1009,</p> <p>24 and it's U.S. Patent 9,172,627, also referred to as</p> <p>25 the Kjendal packet.</p>
<p style="text-align: right;">Page 59</p> <p>1 A. Correct. But it has to log information</p> <p>2 about the packets to generate its log entries.</p> <p>3 Q. Does the ACNS system generate a</p> <p>4 transaction log for every packet that ACNS processes?</p> <p>5 MR. BLAKE: Objection to form.</p> <p>6 A. You can't answer that question. That's</p> <p>7 going to depend on the specifics of the packets that</p> <p>8 it processes.</p> <p>9 Q. Is it also because transactions are</p> <p>10 different than packets?</p> <p>11 A. No. That's not the issue.</p> <p>12 Q. Is a transaction the same as a packet?</p> <p>13 A. It absolutely can be. There are</p> <p>14 transactions that are single packets.</p> <p>15 Q. But is a transaction the same as a</p> <p>16 packet -- or let me just ask you that.</p> <p>17 Is a transaction the same as a packet?</p> <p>18 MR. BLAKE: Objection to form.</p> <p>19 A. A transaction -- a transaction can easily</p> <p>20 be comprised -- a transaction is going to be</p> <p>21 comprised of one or more packets.</p> <p>22 Q. But a transaction, as it's used at least</p> <p>23 in the context of ACNS, is referring to something</p> <p>24 different from a packet; is that right?</p> <p>25 MR. BLAKE: Objection to form.</p>	<p style="text-align: right;">Page 61</p> <p>1 THE WITNESS: Thank you.</p> <p>2 So Kjendal refers to, for example, a</p> <p>3 dynamic mirroring policy. And I'm looking here at</p> <p>4 column 10 in Exhibit 1009.</p> <p>5 And what it's referring to by dynamic</p> <p>6 mirroring policy is where the mirroring is tied to,</p> <p>7 for example, it says, line 3, the content of</p> <p>8 particular fields in a frame. And it gives other</p> <p>9 criteria on which it may be based.</p> <p>10 BY MR. CAPLAN:</p> <p>11 Q. Thank you for that.</p> <p>12 And mirroring refers to duplicating; is</p> <p>13 that right?</p> <p>14 A. Mirroring refers to transmitting a copy of</p> <p>15 a packet in a switching device out of a port other</p> <p>16 than the port to which the packet was nominally</p> <p>17 destined.</p> <p>18 Q. But that's -- when you say "a copy," that</p> <p>19 means it's an exact copy. It's not a digested or</p> <p>20 altered form of it. It's another copy, the same as</p> <p>21 the original; is that right?</p> <p>22 A. That is the default understanding of</p> <p>23 mirroring.</p> <p>24 Q. Is there anything different from that</p> <p>25 default understanding that reflects your</p>

<p style="text-align: right;">Page 62</p> <p>1 understanding of what's in Kjendal?</p> <p>2 A. We would just have to look at specific</p> <p>3 disclosures of mirroring in Kjendal. There's a lot</p> <p>4 of disclosures of mirroring in Kjendal.</p> <p>5 Q. But as you sit here today, it sounds like</p> <p>6 your understanding is that when you mirror something,</p> <p>7 you're duplicating it and sending it to an additional</p> <p>8 destination; is that right?</p> <p>9 MR. BLAKE: Objection to form.</p> <p>10 A. As I say, the general understanding of</p> <p>11 mirroring is that a copy of a packet is sent out of</p> <p>12 an additional port out of a switch.</p> <p>13 Q. So mirroring -- obviously, mirroring is a</p> <p>14 different word than logging, but it has a different</p> <p>15 meaning than logging as we've been talking about it</p> <p>16 today; is that fair?</p> <p>17 MR. BLAKE: Objection to form.</p> <p>18 A. Mirroring -- mirroring can certainly be</p> <p>19 used as part of a logging function. But mirroring is</p> <p>20 a different word than logging.</p> <p>21 Q. Okay. Then you agree that mirroring is</p> <p>22 different than logging; right?</p> <p>23 A. Just mirroring by itself is different than</p> <p>24 logging. But, as I say, mirroring can be used as</p> <p>25 part of a logging function.</p>	<p style="text-align: right;">Page 64</p> <p>1 it talks about policy-based mirroring, and then it</p> <p>2 has a reference to allowing networks to set network</p> <p>3 mirror policies for various network monitors,</p> <p>4 including, and then it says, network loggers, that is</p> <p>5 something different from packet digest logging; is</p> <p>6 that right?</p> <p>7 A. So packet digest logging is not -- has not</p> <p>8 been construed and the claims do not describe what</p> <p>9 packet -- the claims only refer to packet digest</p> <p>10 logging function.</p> <p>11 And so to the extent that a packet digest</p> <p>12 logging function can be satisfied by recording a copy</p> <p>13 of the packet, then this discloses a packet digest</p> <p>14 logging function.</p> <p>15 Q. Okay. Just so I'm clear, then, that</p> <p>16 what's described in Kjendal in this policy-based</p> <p>17 mirroring, even for something that's sent to a</p> <p>18 network logger, is sending copies of whatever the</p> <p>19 appropriate packet -- whatever the packets are just</p> <p>20 as an exact copy. They're not modified copies of</p> <p>21 packets that are sent to the network logger; is that</p> <p>22 right?</p> <p>23 MR. BLAKE: Objection to form.</p> <p>24 A. No. It does disclose -- Kjendal does</p> <p>25 disclose that what is mirrored may not be an entire</p>
<p style="text-align: right;">Page 63</p> <p>1 Q. Is dynamic mirroring different from</p> <p>2 logging?</p> <p>3 A. Dynamic mirroring, as used in Kjendal, is</p> <p>4 just referring to ways in which you can mirror a</p> <p>5 subset of the traffic and can also be used as part of</p> <p>6 a logging function.</p> <p>7 Q. Does Kjendal describe dynamic mirroring as</p> <p>8 part of a logging function?</p> <p>9 A. Yes.</p> <p>10 Q. Where does it describe dynamic mirroring</p> <p>11 as a logging function?</p> <p>12 A. It's described in column 10 of Kjendal.</p> <p>13 The dynamic mirroring is disclosed at the top of</p> <p>14 column 10, and the use of mirroring, or what it</p> <p>15 refers to as policy-based mirroring, is disclosed</p> <p>16 starting in around line 46 of column 10.</p> <p>17 Q. And is that policy -- just so we're on the</p> <p>18 same page. So column 10 of Kjendal, starting around</p> <p>19 line 46, where it refers to policy-based mirroring,</p> <p>20 that is different from packet digest logging; is that</p> <p>21 correct?</p> <p>22 MR. BLAKE: Objection to form.</p> <p>23 BY MR. CAPLAN:</p> <p>24 Q. Let me rephrase that.</p> <p>25 In column 10, starting at line 46, where</p>	<p style="text-align: right;">Page 65</p> <p>1 copy. So in column 8, at the bottom, it describes</p> <p>2 that the dynamic traffic mirroring function can do at</p> <p>3 least one or more of, and it certainly says it can</p> <p>4 mirror portions of the flows, and it also says that</p> <p>5 it can mirror, for example, the first L bytes of --</p> <p>6 first L bytes, selected fields, and I think those</p> <p>7 two -- those two would indicate that what can be</p> <p>8 mirrored can be something other than just the entire</p> <p>9 packet.</p> <p>10 MR. CAPLAN: Want to take a short break</p> <p>11 here?</p> <p>12 MR. BLAKE: Sure.</p> <p>13 (Recess taken.)</p> <p>14 BY MR. CAPLAN:</p> <p>15 Q. I just have a couple of questions, and I</p> <p>16 think we'll probably be wrapped up.</p> <p>17 Dr. Jeffay, in your reply declaration,</p> <p>18 it's Exhibit 1020, in paragraph 8, you talk about</p> <p>19 reassembly, and we addressed this a little bit</p> <p>20 earlier.</p> <p>21 If you could turn to paragraph 8 of your</p> <p>22 declaration.</p> <p>23 A. Sure. Okay. I'm there.</p> <p>24 Q. It's on the top of page 4, it says, In my</p> <p>25 opinion -- "It is my opinion that reassembly is</p>

<p style="text-align: right;">Page 66</p> <p>1 irrelevant to the technology claim in the '213</p> <p>2 patent."</p> <p>3 Do you see that?</p> <p>4 A. I do.</p> <p>5 Q. What's the basis for your saying that</p> <p>6 reassembly is irrelevant in the context of the '213</p> <p>7 patent?</p> <p>8 A. Because the '213 patent makes no</p> <p>9 statements about reassembly. And I think a person of</p> <p>10 skill in the art would understand reading the '213</p> <p>11 that reassembly just is not an issue when it comes to</p> <p>12 understanding the claims. There's no requirement for</p> <p>13 reassembly. There's no prohibition against</p> <p>14 reassembly. It's just a concept that's not part of</p> <p>15 the '213 patent.</p> <p>16 Q. But in the context of the ACNS guide and</p> <p>17 system we've been talking about, reassembly does take</p> <p>18 place.</p> <p>19 Would you agree with that?</p> <p>20 MR. BLAKE: Objection to form.</p> <p>21 A. As I think I've testified, there's no</p> <p>22 discussion of reassembly in the ACNS guide.</p> <p>23 Q. Would you describe the ACNS, I guess,</p> <p>24 system as an application level proxy?</p> <p>25 MR. BLAKE: Objection to form.</p>	<p style="text-align: right;">Page 68</p> <p>1 which refer to Layer 2 and Layer 3 packets; right?</p> <p>2 MR. BLAKE: Objection to form.</p> <p>3 A. So to the extent the reference is talking</p> <p>4 about HTTP packets, I would say that those are</p> <p>5 probably better understood as HTTP messages, and the</p> <p>6 '213 patent, its reference to packets are understood</p> <p>7 as Layer 2 or Layer 3 packets.</p> <p>8 MR. CAPLAN: I don't have anything</p> <p>9 further. Appreciate it.</p> <p>10 MR. BLAKE: I have nothing further.</p> <p>11 MR. CAPLAN: Thank you very much.</p> <p>12 THE COURT REPORTER: Do you want a rough</p> <p>13 tonight?</p> <p>14 MR. CAPLAN: Yeah, rough.</p> <p>15 THE COURT REPORTER: Would you like a</p> <p>16 rough?</p> <p>17 MR. BLAKE: I do not want a rough. I do</p> <p>18 want a final.</p> <p>19 THE COURT REPORTER: Regular delivery?</p> <p>20 MR. BLAKE: Regular delivery is fine.</p> <p>21 (Signature not waived.)</p> <p>22 - - -</p> <p>23 And, thereupon, the deposition was</p> <p>24 concluded at approximately 11:30 a.m.</p> <p>25 - - -</p>
<p style="text-align: right;">Page 67</p> <p>1 A. So the ACNS guide, I believe, discloses</p> <p>2 that one of the functions of the content engines can</p> <p>3 be as an application layer proxy.</p> <p>4 Q. And an application layer proxy processes</p> <p>5 HTTP requests; is that right?</p> <p>6 A. If it's proxying HTTP, yes.</p> <p>7 Q. And that would be Layer 5 information;</p> <p>8 right?</p> <p>9 A. What would be Layer 5 information?</p> <p>10 Q. The HTTP requests and messaging would be</p> <p>11 Layer 5 content.</p> <p>12 A. Yes.</p> <p>13 Q. Do they call the -- the messaging at</p> <p>14 Layer 5, do they refer to those as packets? Are</p> <p>15 those HTTP packets?</p> <p>16 A. So as I described in my initial</p> <p>17 declaration, "packet" is a term that does get bandied</p> <p>18 about quite loosely. And so to understand the</p> <p>19 appropriate meaning of packets, you always have to</p> <p>20 look at the context at which it's used. So it's</p> <p>21 certainly the case that you can find references that</p> <p>22 will talk about things like HTTP packets.</p> <p>23 Q. But those HTTP packets, talking about</p> <p>24 Layer 5 packets, are different than the packets we're</p> <p>25 talking about in the context of the '213 patent,</p>	<p style="text-align: right;">Page 69</p> <p>1 State of _____)</p> <p>2 ) SS.</p> <p>3 County of _____)</p> <p>4</p> <p>5 I, the undersigned, declare under penalty of</p> <p>6 perjury:</p> <p>7 That I have read the foregoing transcript;</p> <p>8 That I have made any corrections, additions</p> <p>9 or deletions that I was desirous of making;</p> <p>10 That the foregoing is a true and correct</p> <p>11 transcript of my testimony contained herein.</p> <p>12 EXECUTED this _____ day of _____,</p> <p>13 20_____, at _____, _____.</p> <p>14 (City) (State)</p> <p>15</p> <p>16</p> <p>17 _____</p> <p>18 KEVIN JEFFAY, PH.D.</p> <p>19</p> <p>20 Subscribed and sworn to before me</p> <p>21 this _____ day of _____.</p> <p>22</p> <p>23 _____</p> <p>24 Notary Public</p> <p>25 My commission expires _____</p>

<div style="text-align: right;">Page 70</div> <div> <div>1 DEPOSITION ERRATA SHEET</div> <div>2 Page No. _____ Line No. _____ Change to: _____</div> <div>3 _____</div> <div>4 Reason for change: _____</div> <div>5 Page No. _____ Line No. _____ Change to: _____</div> <div>6 _____</div> <div>7 Reason for change: _____</div> <div>8 Page No. _____ Line No. _____ Change to: _____</div> <div>9 _____</div> <div>10 Reason for change: _____</div> <div>11 Page No. _____ Line No. _____ Change to: _____</div> <div>12 _____</div> <div>13 Reason for change: _____</div> <div>14 Page No. _____ Line No. _____ Change to: _____</div> <div>15 _____</div> <div>16 Reason for change: _____</div> <div>17 Page No. _____ Line No. _____ Change to: _____</div> <div>18 _____</div> <div>19 Reason for change: _____</div> <div>20 Page No. _____ Line No. _____ Change to: _____</div> <div>21 _____</div> <div>22 Reason for change: _____</div> <div>23 _____</div> <div>24 SIGNATURE _____ DATE: _____</div> <div>25 KEVIN JEFFAY, PH.D.</div> </div>	
<div style="text-align: right;">Page 71</div> <div> <div>1 CERTIFICATE</div> <div>2 State of North Carolina :</div> <div>3 SS:</div> <div>4 County of Hoke :</div> <div>5 I, Ann Ford, Notary Public in and for the</div> <div>6 State of North Carolina, duly commissioned and</div> <div>7 qualified, certify that the within named witness was</div> <div>8 by me duly sworn to testify to the whole truth in the</div> <div>9 cause aforesaid; that the testimony was taken down by</div> <div>10 me in stenotypy in the presence of said witness,</div> <div>11 afterwards transcribed upon a computer; that the</div> <div>12 foregoing is a true and correct transcript of the</div> <div>13 testimony given by said witness taken at the time and</div> <div>14 place in the foregoing caption specified.</div> <div>15 I certify that I am not a relative,</div> <div>16 employee, or attorney of any of the parties hereto,</div> <div>17 or of any attorney or counsel employed by the</div> <div>18 parties, or financially interested in the action.</div> <div>19 IN WITNESS WHEREOF, I have set my hand and</div> <div>20 affixed my seal of office at Raeford, North Carolina,</div> <div>21 on this 28th day of October, 2019.</div> <div>22 _____</div> <div>23 ANN FORD, Notary Public in and</div> <div>24 for the State of North Carolina</div> <div>25 Registered Professional Reporter</div> <div>My Commission expires: October 10, 2021.</div> </div>	

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