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Transcript of Harley Myler

Date: September 9, 2021

Case: Netflix, Inc. -v- Avago Technologies International Sales PTE. Limited (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

Transcript of Harley Myler
Conducted on September 9, 2021

1 (1 to 4)

1	1	3
1	UNITED STATES PATENT AND TRADEMARK OFFICE	1
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3		3
4	BEFORE THE PATENT TRIAL AND APPEAL BOARD	4
5		5
6	NETFLIX, INC.,)	6
7	vs. Petitioner,) Patent No. 8,270,992 B2	7
8	AVAGO TECHNOLOGIES) Inter Partes Review No.	8
9	INTERNATIONAL SALES PTE.) IPR2021-00303	9
10	LIMITED,)	10
11	Patent Owner.)	11
12	-----	12
13	REPORTER'S TRANSCRIPT	13
14		14
15	DEPOSITION OF	15
16	HARLEY MYLER	16
17	THURSDAY, SEPTEMBER 9, 2021	17
18	REMOTE VIDEO TELECONFERENCE	18
19	7:03 a.m. PST	19
20	to	20
21	3:24 p.m. PST	21
22		22
23	Reported by: Burgundy B. Ryan, CSR, RPR	23
24	Certificate No. 11373	24
25	Planet Depos	25
	888.433.3767	
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1		1
2	A P P E A R A N C E S	2
3		3
4	FOR THE PETITIONER:	4
5	SHEPPARD, MULLIN, RICHTER & HAMPTON	5
6	By: CHRIS PONDER, Esquire	6
7	379 Lytton Avenue	7
8	Palo Alto, California 94301	8
9	650.815.2600	9
10	cponder@sheppardmullin.com	10
11		11
12	FOR THE PATENT OWNER:	12
13	ADSERO IP	13
14	By: DANIEL YOUNG, Esquire	14
15	CHAD KING, Esquire	15
16	8210 Southpark Terrace	16
17	Littleton, Colorado 80120	17
18	303.268.0066	18
19	dyoung@aderseroip.com	19
20	chad@aderseroip.com	20
21		21
22	ALSO PRESENT:	22
23	JUAN MARES, IT Technician	23
24	Planet Depos	24
25		25
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1	BE IT REMEMBERED that, pursuant to Notice	1
2	of Taking Deposition, and on Thursday, September 9,	2
3	2021, commencing at 7:03 a.m. PST thereof, via remote	3
4	video teleconference, before me, Burgundy B. Ryan, a	4
5	Certified Shorthand Reporter in and for the State of	5
6	California, personally appeared	6
7	HARLEY MYLER, Ph.D.,	7
8	a witness called on behalf of PATENT OWNER, who,	8
9	having been first duly sworn by me to testify to the	9
10	truth, was examined and testified as follows:	10
11	IT TECHNICIAN: Thank you to everyone for	11
12	attending this proceeding remotely, which we	12
13	anticipate will run smoothly.	13
14	Please remember to speak slowly, and do	14
15	your best not to talk over one another.	15
16	Please be aware that we are recording this	16
17	proceeding for backup purposes. Any off-the-record	17
18	discussions should be had away from the computer.	18
19	Please remember to mute your microphone for those	19
20	conversations.	20
21	Please have your video enabled to help the	21
22	reporter identify who is speaking. If you are unable	22
23	to connect with video and are connecting via phone,	23
24	please identify yourself each time before speaking.	24
25	We will provide a complimentary, unedited	25

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2 (5 to 8)

<p>5</p> <p>1 recording of this deposition with the purchase of a 2 transcript. 3 I apologize in advance for any 4 technical-related interruptions. Thank you. 5 COURT REPORTER: Good morning, Counsel. 6 Would you please state your name and whom 7 you represent? 8 MR. YOUNG: Yes. Dan Young and Chad King 9 from Adsero IP, representing Broadcom. 10 MR. PONDER: Chris Ponder from Sheppard, 11 Mullin, Richter & Hampton, representing Petitioner, 12 Netflix. 13 (Whereupon, the witness was sworn.) 14 COURT REPORTER: Counsel, you may proceed. 15 MR. YOUNG: Thank you. 16 EXAMINATION BY DAN YOUNG 17 Q Good morning, Dr. Myler. How are you? 18 A Good morning. I'm fine. Thank you. 19 Q Have you -- have you been deposed before? 20 A Yes. 21 Q How many times have you been deposed? 22 A Off the top of my head, I'm going to say 23 probably 20, 25 times. Maybe more. 24 Q Okay. Were those -- were the majority of 25 those in relations to -- relation to intellectual</p>	<p>7</p> <p>1 you on east coast time or Central Time? 2 A I'm on east coast time. 3 Q East coast time. So we'll try to take a 4 lunch break a little bit early in this deposition 5 than we would normally, because I'm on Mountain Time, 6 to give you a more normal lunch time. 7 Two other initial points: If you can 8 please confirm that you don't have any windows up on 9 your computer that have any information on them, 10 other than obviously the -- this -- this video 11 deposition itself. 12 A No, I have one application open, which is a 13 reader, and it has patents in it and stuff like that 14 in case I need to look at those. And I'm on full 15 screen right now with Zoom, so I'm not seeing -- I 16 don't have a floating window -- 17 Q Okay. 18 A -- on this laptop. 19 Q Those patents that you have or documents 20 that you have open in your reader are all exhibits to 21 the Petition that you have reviewed in preparation 22 for your declaration in this matter; is that 23 correct? 24 A That's correct. 25 Q Okay. And they don't have any markings or</p>
<p>6</p> <p>1 property matters? 2 A Some of them were and some were not. 3 Q Okay. Out of those roughly 25 or so 4 depositions, how many were related to patent 5 litigation matters? 6 A I'm thinking five to ten. 7 Q Okay. Great. Okay. Well, since you've 8 done this before, I will kind of be brief on these 9 initial instructions. 10 You know, the first instruction is 11 obviously listen to the question. If you have any -- 12 if you don't understand the question, please ask me 13 to repeat it or to clarify. 14 Before you provide an answer, give your 15 counsel a chance to object if -- if he wants to enter 16 an objection into the record. 17 As you know, if your counsel objects, you 18 still have to answer the question unless he instructs 19 you specifically not to answer based on 20 attorney-client privilege. 21 Do you understand all of those basic 22 instructions? 23 A Yes, I do. 24 Q Okay. We will try to take a break roughly 25 every hour. Just for my benefit, what -- what -- are</p>	<p>8</p> <p>1 notes on them? They're clean copies? 2 A I believe they're clean copies. However, I 3 have a paper copy that was sent to me by -- by 4 counsel, and it's clean and in a notebook. 5 Q Okay. And same question with respect to 6 that notebook: Those are all documents that have 7 been up submitted as part of the Petition in this 8 matter; is that right? 9 A That is correct. And then I have two 10 patents that I had to print out this morning, and 11 that is the Barnes and Shaw because they were not 12 included in the package. But I've printed those out 13 from my original files sent to me by the -- by -- by 14 counsel. 15 Q Okay. Great. 16 And then last instruction, with respect to 17 these matters in front of the patent trademark 18 office, with respect to depositions, you're not 19 allowed to speak to your counsel about the substance 20 of your deposition until the deposition is over. 21 Do you understand that? 22 A Yes, I do. 23 Q Okay. Great. And are you familiar with 24 the term "person of ordinary skill in the art"? 25 A Yes, I am.</p>

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3 (9 to 12)

<p>9</p> <p>1 Q Okay. When we refer to a "person of 2 ordinary skill in the art" during this deposition, if 3 we can agree that, unless we say otherwise, we're 4 going to assume that that's a person of ordinary 5 skill in the art in 2003, when the initial 6 provisional application for the Karaoguz '992 patent 7 was filed.</p> <p>8 Do you understand that convention?</p> <p>9 A Yes, I believe we agreed to that. And in 10 my report it discusses what is known as the POSITA.</p> <p>11 Q Okay. So when we refer to a POSITA, in 12 general, during this deposition, we'll be assuming 13 that's a person in 2003, okay. And then, obviously, 14 if you want to clarify otherwise, you can just say a 15 POSITA in 2020, or whatever you want to say; but 16 unless you clarify, we're going to say it's 2003. Is 17 that fair?</p> <p>18 A That is.</p> <p>19 Q Okay. Okay. So I'm going to get -- do 20 another housekeeping matter here. And just so that 21 we can avoid breaking up questions later on, I'm 22 going to introduce five exhibits. I would like you 23 to identify them for the record and then we'll have 24 them marked; okay?</p> <p>25 MR. YOUNG: Juan, the first one would be</p>	<p>11</p> <p>1 submitted.</p> <p>2 A Yes. That appears to be my declaration and 3 that -- could -- could we go to the last page? Okay. 4 That's -- that's my deposition -- excuse me -- 5 declaration.</p> <p>6 Q Okay. And your declaration is 119 pages, I 7 believe.</p> <p>8 MR. YOUNG: Okay. Juan, if you could then 9 pull up the Karaoguz '992 patent, which should be the 10 second in your exhibit list there, and do the same 11 thing as that one. Mark that as Myler 2, please.</p> <p>12 (Whereupon, Myler Exhibit 2 was marked for 13 identification.)</p> <p>14 By MR. YOUNG:</p> <p>15 Q Okay. Dr. Myler, if you could please 16 identify what's been marked as Exhibit Myler 2 for 17 the deposition, please.</p> <p>18 A Yes. That appears to be what I normally 19 call the '992 patent, and it is the patent under 20 scrutiny in this case.</p> <p>21 Q Okay. And I -- I might refer to it as the 22 Karaoguz -- I'll try to refer to it as the '992 23 patent -- but in either case, whether it's Karaoguz 24 or the '992, we'll be referring to what has been 25 marked as Exhibit 2; is that fair?</p>
<p>10</p> <p>1 Exhibit 1 of your -- on your list, which should be 2 Dr. Myler's declaration. If you could put that one 3 up on the screen, please, and mark that Myler 1, 4 please.</p> <p>5 IT TECHNICIAN: Sure thing. One moment.</p> <p>6 By MR. YOUNG:</p> <p>7 Q And Dr. Myler while -- while we're waiting 8 for this, during this deposition, I'm going to show 9 you things on the screen, but you're also free, 10 obviously, to look at your hard copy of the same 11 document, or your -- the same document on your -- on 12 your computer screen as well.</p> <p>13 A Thank you.</p> <p>14 MR. YOUNG: And, Juan, as we go through 15 this, if you could leave all of these exhibits up on 16 the screen as tabs, that would be -- that way we 17 could switch between them, that would be great.</p> <p>18 IT TECHNICIAN: Absolutely.</p> <p>19 (Whereupon, Myler Exhibit 1 was marked for 20 identification.)</p> <p>21 By MR. YOUNG:</p> <p>22 Q Okay. Dr. Myler, sorry for that delay. If 23 you could please identify what has been marked as 24 Myler 1? I'll represent to you that that's a 25 complete copy of the document that -- that was</p>	<p>12</p> <p>1 A Yes, it is.</p> <p>2 MR. YOUNG: Okay. Juan, if you could 3 please pull up Exhibit Number 3 on your exhibit list, 4 which should be the file history for the '992 patent.</p> <p>5 (Whereupon, Myler Exhibit 3 was marked for 6 identification.)</p> <p>7 THE WITNESS: Could we scroll down to the 8 next page?</p> <p>9 And that appears to be the file history of 10 the '992.</p> <p>11 By MR. YOUNG:</p> <p>12 Q Okay. And you have -- you reviewed that 13 file history as part of your opinions in this matter; 14 is that correct?</p> <p>15 A That is correct.</p> <p>16 Q Okay.</p> <p>17 MR. YOUNG: And Juan, if we could do the 18 next one? I'm not sure which one is on your list.</p> <p>19 It might be 4 or it might be 5, but it is the patent, 20 the '291 patent to Shaw, please, and mark that as 21 Exhibit 4.</p> <p>22 (Whereupon, Myler Exhibit 4 was marked for 23 identification.)</p> <p>24 By MR. YOUNG:</p> <p>25 Q Okay. Dr. Myler, if you can please</p>

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4 (13 to 16)

<p>13</p> <p>1 identify what has been marked as Exhibit 4 for the 2 record, please. 3 A Yes. This is -- is one of the two patents 4 in the "grounds," I believe is what you say. And I 5 normally refer to this as "Shaw." 6 Q Okay. All right. So we'll refer to this 7 as "Shaw," but I might also by accident refer to it 8 as the '291 patent. In either instance, you 9 understand that we're referring to Exhibit 4; is that 10 correct? 11 A That's correct. 12 Q Okay. 13 MR. YOUNG: And one more. Juan, if you 14 could please pull up the Barnes reference, which is 15 probably number 5 in your exhibit list, please. 16 (Whereupon, Myler Exhibit 5 was marked for 17 identification.) 18 By MR. YOUNG: 19 Q And Dr. Myler, if you could please identify 20 what has been marked as Exhibit 5 in this deposition, 21 please? 22 A Yes. That's the other patent, Fewell 23 (phonetic), and -- in the grounds, and I refer to it 24 as "Barnes." 25 Q Okay. And just to be clear, it appears</p>	<p>15</p> <p>1 MR. YOUNG: Can you -- do I have control of 2 the exhibits? 3 IT TECHNICIAN: Yeah, you already do. 4 MR. YOUNG: Okay, great. Thank you so 5 much. 6 By MR. YOUNG: 7 Q Okay. Okay. Dr. Myler, the first document 8 that I would like to talk about has been marked as 9 Exhibit 4. This is the Shaw patent that you've 10 identified for the record. And, again, just to 11 reset, you're familiar with this document; correct? 12 A Yes. 13 Q Okay. This document refers to, in a number 14 of places, an acronym, CDN. Could you please -- are 15 you familiar with that acronym? 16 A Yes. 17 Q And what does that stand for? 18 A If memory serves, I believe it's content 19 delivery network. It's in the patent what the -- 20 what the acronym means. 21 Q Okay. And again, I'm going to highlight 22 the things on the screen for you, but you're 23 obviously welcome to look at your own copy as well if 24 it's easier for you. 25 And you're familiar with the fact that</p>
<p>14</p> <p>1 that this is a published patent application for 2 Barnes, is that -- is that correct? 3 A Yes. 4 Q Okay. 5 A An application. 6 MR. YOUNG: Okay. And I apologize, there's 7 one more. Juan, if you could please pull up the 8 Petition in this matter? I think it's Number 6 in 9 your deposition, and mark that as Exhibit 6, please. 10 (Whereupon, Myler Exhibit 6 was marked for 11 identification.) 12 By MR. YOUNG: 13 Q Okay. All right. Last one for the time 14 being. Dr. Myler, if you could please identify 15 what's been marked as Exhibit 6, please. 16 A Yes. This is the Petition for inter partes 17 review, IPR, of the '992 patent. 18 Q Okay. And are you familiar with this 19 document? 20 A Yes. 21 MR. YOUNG: Okay. Great. Okay. Juan, if 22 you can please hand me over control to the exhibits, 23 that would be great. 24 IT TECHNICIAN: I'm sorry, can you come 25 again?</p>	<p>16</p> <p>1 patents have both columns and line numbers; is that 2 correct? 3 A That is correct. 4 Q Okay. So in this particular example I'm 5 looking at, you can see on the screen you have 6 Column 1 and Column 2 of Shaw. And then down the 7 middle of the screen, you see the row numbers? 8 You're familiar with that; correct? 9 A I am. 10 Q Okay. So we're looking at Column 2 11 starting at line 40. And it refers -- I apologize. 12 MR. YOUNG: Juan, how do I get the cursor 13 so I can highlight parts of the text? Never mind. I 14 got it. 15 By MR. YOUNG: 16 Okay. I highlighted a section which is 17 starting in Column 2, lines -- roughly lines 40 to 18 42. If you could read that to yourself, then I have 19 a couple of questions for you on that. And just the 20 sentence that starts, "A CDN is a network." 21 A I've read it. 22 Q Okay. It refers to a network of 23 geographically distributed content delivery nodes. 24 Do you see that part of the sentence? 25 A I do.</p>

<p>17</p> <p>1 Q Okay. Is there any significance in this</p> <p>2 patent to the fact that the -- there are nodes that</p> <p>3 are geographically distributed?</p> <p>4 A In -- in what sense?</p> <p>5 Q Is there any advantage of having a network</p> <p>6 where your -- your -- your nodes are geographically</p> <p>7 distributed?</p> <p>8 A Insofar as being able to move within the</p> <p>9 area of the nodes.</p> <p>10 Q Okay. This sentence seems to say that if</p> <p>11 you have a geographically distributed content</p> <p>12 delivery network or nodes, they are arranged for more</p> <p>13 efficient delivery. Do you see that?</p> <p>14 A Yes, I do.</p> <p>15 Q Okay. Why would they say that it's more</p> <p>16 efficient to deliver it -- delivery -- strike that</p> <p>17 question.</p> <p>18 Why would they say it's more efficient for</p> <p>19 delivery of content, digital content, by having a</p> <p>20 geographically distributed content delivery system?</p> <p>21 A Well, I -- I don't know if it says that.</p> <p>22 It just simply says that the nodes are geographically</p> <p>23 distributed and are arranged for efficient delivery.</p> <p>24 Q If the -- is there any teaching in the Shaw</p> <p>25 patent that if you are delivering content to a user</p>	<p>19</p> <p>1 Q All right.</p> <p>2 A It's a content delivery network system, so</p> <p>3 they're delivering content across a network.</p> <p>4 Q Okay. And why would they want to push a</p> <p>5 content to a variety of edge servers as opposed to</p> <p>6 just having the content come from a single central</p> <p>7 server?</p> <p>8 A I believe what they can do is take</p> <p>9 advantage of the distribution of servers to move the</p> <p>10 data possibly closer to a client.</p> <p>11 Q Okay. So proximity to a client is an</p> <p>12 important aspect of the CDN network described in the</p> <p>13 Shaw patent; is that correct?</p> <p>14 A Yes. In any network, I think that's an</p> <p>15 understood property.</p> <p>16 Q And why is that?</p> <p>17 A Again -- well, I'm sorry. Go ahead.</p> <p>18 Q I apologize. I messed that up. Why -- in</p> <p>19 your opinion or -- actually, I'll strike that</p> <p>20 question.</p> <p>21 Why would a POSITA understand that</p> <p>22 proximity to a client, with respect to the server</p> <p>23 delivering the content, is an important attribute or</p> <p>24 a desired attribute of a system?</p> <p>25 A Well, a POSITA would understand in a</p>
<p>18</p> <p>1 from a node that is closer in physical location to</p> <p>2 that person, it's a more efficient delivery?</p> <p>3 A Could you repeat that again?</p> <p>4 Q Okay. Is there any teaching in the Shaw</p> <p>5 patent that if you are delivering digital content to</p> <p>6 a user, it is more efficient if you are delivering</p> <p>7 that content from a node that is closer in physical</p> <p>8 proximity to the user?</p> <p>9 A I would say that that's in there as a</p> <p>10 consequence of possibly having higher -- a better</p> <p>11 signal, a stronger signal, and therefore, a higher</p> <p>12 bandwidth, less noise.</p> <p>13 Q Okay. And there is a teaching in the Shaw</p> <p>14 patent that you are trying to push content to what it</p> <p>15 refers to as "edge servers," is that true?</p> <p>16 A I'm trying -- I didn't get that part.</p> <p>17 MR. YOUNG: Brooke, if you can please</p> <p>18 repeat that question?</p> <p>19 (Whereupon, the question was read back as requested.)</p> <p>20 THE WITNESS: Oh. There is a teaching that</p> <p>21 they're pushing content to those servers, yes.</p> <p>22 By MR. YOUNG:</p> <p>23 Q All right. And why would they do that?</p> <p>24 A Because of the nature of the system that's</p> <p>25 being described.</p>	<p>20</p> <p>1 wireless system the closer you are to the -- the</p> <p>2 closer the receiver is to the transmitter, regardless</p> <p>3 of what the nature of the signal is, is going to give</p> <p>4 you an overall better result in terms, again, like I</p> <p>5 said, bandwidth, noise, signal strength primarily.</p> <p>6 Q Okay. The -- the Shaw reference is -- I'll</p> <p>7 backup a second.</p> <p>8 Is the -- did you -- I might have</p> <p>9 misunderstood.</p> <p>10 Did you say that the Shaw reference was</p> <p>11 a -- was a wireless network?</p> <p>12 A It's a content delivery network that can</p> <p>13 have wireless components.</p> <p>14 Q Okay. Are there any examples of wireless</p> <p>15 devices being used by the user in Shaw?</p> <p>16 A I don't -- off the top of my head, I don't</p> <p>17 recall if it's explicitly stated, but it certainly is</p> <p>18 obvious that that could be the case.</p> <p>19 Q Okay. But in the actual examples that are</p> <p>20 provided in Shaw, like, as an example, Figure 2, the</p> <p>21 user is on a -- on a PC, not a mobile device; is that</p> <p>22 correct?</p> <p>23 A Oh, could I see Figure 2?</p> <p>24 Q Sure. I apologize, there is always a</p> <p>25 little bit of lag here, so it's just a little bit</p>

<p>21</p> <p>1 clumsy.</p> <p>2 So I have on the screen there Figure 2.</p> <p>3 What I'm referring to is the top right of Figure 2.</p> <p>4 A Yes, that figure is actually quite</p> <p>5 interesting. That figure shows -- of course, you</p> <p>6 have to remember the time. We're back -- back in the</p> <p>7 day -- shows the little classic graphic of the IBM PC</p> <p>8 desktop, you know. And if you look at that</p> <p>9 connection from 206a, which is one of the server</p> <p>10 units, to the user's PC, there's -- there's nowhere</p> <p>11 in the patent, from my review, where it says that</p> <p>12 that has to be wired, or that could be wireless. It</p> <p>13 just says, you know, it's a connection.</p> <p>14 Q But the word -- I apologize.</p> <p>15 Are the words "mobile" or "wireless," do</p> <p>16 any of those words show up in the Shaw patent to your</p> <p>17 recollection?</p> <p>18 A Off the top of my head, I don't recall.</p> <p>19 Q Okay. And you didn't rely on any wireless</p> <p>20 teaching or mobile teaching from Shaw in your</p> <p>21 opinions in your declaration in this matter; correct?</p> <p>22 A Explicitly saying that Shaw was teaching</p> <p>23 mobile, I don't -- I don't believe I had any opinions</p> <p>24 that -- that stated anything like that.</p> <p>25 Q Okay. And on the first page of the Shaw</p>	<p>23</p> <p>1 back there based on looking at the patent.</p> <p>2 Q Okay. So they were -- they were -- they</p> <p>3 were -- they were a network company; right?</p> <p>4 MR. PONDER: Objection to form.</p> <p>5 By MR. YOUNG:</p> <p>6 Q The products were associated with network</p> <p>7 services; is that fair?</p> <p>8 A Content delivery of network services,</p> <p>9 yes.</p> <p>10 Q Okay. Perfect. Thank you. Sorry, your --</p> <p>11 your -- your description was more accurate.</p> <p>12 Okay. So Shaw has a number of figures in</p> <p>13 it; is that correct?</p> <p>14 A I believe it does. I think we're looking</p> <p>15 at a few of them.</p> <p>16 Q Right. Okay. So I have Figure 1 up on the</p> <p>17 screen here. In just a high-level synopsis, if you</p> <p>18 could describe for me what you're seeing as Figure 1,</p> <p>19 please.</p> <p>20 A Well, at a high level, we're looking at --</p> <p>21 I sort of want to say a block diagram. I mean, it's</p> <p>22 got some blocks in it with labels. Of course, in a</p> <p>23 patent figure everything is labeled. And if we</p> <p>24 wanted to have an accurate description, we need to go</p> <p>25 to the patent and see what it says about Figure 1.</p>
<p>22</p> <p>1 reference, it designates the assignee of the</p> <p>2 patent -- I'll highlight it on the screen for you --</p> <p>3 as Akamai Technologies Inc.; do you see that?</p> <p>4 A I do.</p> <p>5 Q Are you familiar with the company Akamai</p> <p>6 Technologies Inc.?</p> <p>7 A I am.</p> <p>8 Q Okay. In your opinion, what -- what kind</p> <p>9 of products and services do they offer? And in</p> <p>10 particular, products and services they were offering</p> <p>11 back in 2001, when this patent was -- the application</p> <p>12 for this patent was filed.</p> <p>13 A What they do is -- is they're sort of, I</p> <p>14 guess, the B to B between the content providers and</p> <p>15 the users. And what they do is provide networking</p> <p>16 content delivery services. In fact, this patent, as</p> <p>17 far as I recall -- actually, throughout the patent it</p> <p>18 describes the various specific Akamai Technologies</p> <p>19 devices so they were basically patenting their CDN.</p> <p>20 Q So would it be just -- just for -- in</p> <p>21 laymen's terms, Akamai as the conduit, if you will,</p> <p>22 between content -- content creators and content</p> <p>23 consumers; is that a fair -- fair summary?</p> <p>24 A I -- I think that's fair to say about the</p> <p>25 company, what they do, what -- what they were doing</p>	<p>24</p> <p>1 And then you see a couple of those little PC icons</p> <p>2 like we saw before down there in Figure 2 and it's</p> <p>3 got labels on it.</p> <p>4 And there is some -- some sort of</p> <p>5 boundaries that are drawn around the -- again, we</p> <p>6 would have to go and look and see what they're</p> <p>7 talking about from the description. I mean, there's</p> <p>8 a couple of sort of free-floating blocks labeled</p> <p>9 "origin server," "initiator," and "monitoring."</p> <p>10 Q Okay. And just to -- just to save some</p> <p>11 time, I won't go there, but if you go to it in your</p> <p>12 copy, to Column 4, lines 19 through 21, I'll read it.</p> <p>13 It just says:</p> <p>14 "Figure 1 is a block diagram of a known</p> <p>15 content delivery network in which the present</p> <p>16 invention may be implemented."</p> <p>17 Do you agree with that description of -- of</p> <p>18 Figure 1?</p> <p>19 A Wait. I have to get to it.</p> <p>20 Q Sure.</p> <p>21 A It was hiding under Barnes. Okay. Let's</p> <p>22 see. I'm sorry, what column now are we at?</p> <p>23 Q Column 4, line 19 through 21.</p> <p>24 A Yes.</p> <p>25 Q All right.</p>

<p>25</p> <p>1 A Yes. And I got that block diagram purely 2 from memory. 3 Q Okay. And then within -- within Figure 1, 4 you see what's labeled as "104 DNS." Do you know 5 what that -- what that -- what that represents? 6 A Just -- just looking at DNS as a -- as a 7 generally known acronym, I'm going to call that a 8 domain name server. But we'd have to look and see 9 what they -- what they say what 104 actually is. 10 Q Yeah. If you look at Column 5, line -- 11 A Yeah. Domain name service, uh-huh. 12 Sorry. 13 Q And what is a domain name service? 14 A Domain name servers, basically, what they 15 do is they, at the lower end, do a translation from 16 network addresses, which are numerical constructs or 17 data structures, and also they're -- so there's a -- 18 Internet addresses, which is like, examples, 19 192.168.03. And then there's Mac addresses, which 20 are complicated hexadecimal patterns, if you will, or 21 addresses. And what the domain name service does is 22 associate with those sort of obscure numbers an 23 actual name, which would be the name of -- like a -- 24 for instance, a domain name would be Myler.org for 25 example. And what the domain name service does is,</p>	<p>27</p> <p>1 are -- I believe are geographically distributed, 2 those are labeled 102a through generically 102n; is 3 that correct, in Figure 1? 4 MR. PONDER: Objection, form. 5 THE WITNESS: Oh, okay. There's 102a. And 6 let's see what is in Column 1 -- okay. A through N 7 content delivery server regions is what they're 8 calling 102n. 9 By MR. YOUNG: 10 Q Okay. So those are -- 102a through 102n 11 are a bunch of servers that are located in geographic 12 regions throughout the overall content delivery 13 network; is that right? 14 A I believe that to be correct with that -- 15 with that region, what the patent says. 16 Q Okay. I'm going to go back to Figure 2 in 17 a moment, but I wanted to get your opinion on a 18 particular set -- okay. Now we're in Column 2, 19 starting in line 27, and I'm going to highlight it 20 for you on the screen. Oh, I apologize. I 21 highlighted the wrong paragraph. Here we go. 22 A Okay. 23 Q So now, Column 2 starting at line 27, I'm 24 not going to read the whole thing for brevity's sake, 25 but it talks about a device known as a "splitter" or</p>
<p>26</p> <p>1 when you say who is Myler.org, you get the number 2 back. And I believe you can also give them the 3 number, and they'll tell you the domain. 4 Q Okay. So in laymen's terms, it's just a 5 service to help identify individual servers that may 6 have certain content on them; is that fair? 7 A I believe that can be part of the DNS. The 8 details of it, you know, escape me for right now 9 but -- 10 Q Sure. 11 A -- there's certainly more information than 12 just that translation, but the translation is the 13 primary thing that it does. And it needs to do that 14 very, very fast, and it does -- and it also does it 15 very, very fast. 16 Q Okay. And in Figure 1, when you look at 17 the bottom of Figure 1, it has labeled 100 18 underlined. That is referring to -- and I'm looking 19 now at Column 4, line 42 -- that's just a general 20 description of the content delivery network; is that 21 right? 22 A Yeah, they're saying -- let's see, 23 preferably global -- global CDN 100 of content 24 delivery server regions. 25 Q Okay. And those server regions, which</p>	<p>28</p> <p>1 "reflector." If you could read that paragraph to 2 yourself, and then once you're done, explain to me 3 what a POSITA would understand a splitter or a 4 reflector to do. 5 A Okay. I finished reading it. And if you 6 wouldn't mind just repeating the original question? 7 Q Okay. What would a POSITA understand a 8 splitter or a reflector to do or the purpose of a 9 reflector or splitter? 10 A They would understand a splitter, and they 11 also show repeater, reflector, or mirror. And those 12 are very common terms in telecommunications for, 13 particularly, repeaters. Because repeaters, for 14 example, they even have them in amateur radio, where 15 a person will set up a repeater station. And 16 basically, it's a receiver and a transmitter pair, 17 and the receiver receives on one frequency and then 18 transmits out, and often with a directional antenna 19 in order to extend range and to get -- to get a 20 larger range. 21 They can also be used to duplicate and 22 that's -- that's part of the splitter idea, where it 23 splits up and the same signal is split up and sent 24 in -- in multiple different directions. And so 25 that's what they're using this term for.</p>

<p>29</p> <p>1 Q Okay. And then at the end of the</p> <p>2 paragraph, and I'll highlight just that -- just these</p> <p>3 last two sentences, it says:</p> <p>4 "By cascading splitters in a tree-like</p> <p>5 fashion, a single source stream can be replicated</p> <p>6 into thousands or -- or more identical copies."</p> <p>7 Do you see that?</p> <p>8 A Yes.</p> <p>9 Q And then the next sentence says:</p> <p>10 "In this manner, a large number of viewers</p> <p>11 on an Internet can receive the same streaming signal</p> <p>12 simultaneously."</p> <p>13 Do you see that?</p> <p>14 A Yes.</p> <p>15 Q Okay. So as it relates to a CDN network,</p> <p>16 why would you want to cascade, or cascade splitters</p> <p>17 to have a single source stream be replicated into</p> <p>18 thousands or more identical copies?</p> <p>19 A Can you repeat the first part of that</p> <p>20 question? You said why, why would you want to do</p> <p>21 that?</p> <p>22 Q Correct.</p> <p>23 A Okay. Well, there may be a reason, and it</p> <p>24 could be geographic, that you -- that multiple users</p> <p>25 cannot receive the same signal from an original</p>	<p>31</p> <p>1 Why would the -- why would the content from</p> <p>2 the original source be sent to all of these</p> <p>3 reflectors labeled 204A through 204N?</p> <p>4 A Why would it be sent?</p> <p>5 Q Yeah. Why -- why -- why would you do that?</p> <p>6 Why set it up that way?</p> <p>7 A Oh, that's the nature of their product.</p> <p>8 Q Okay.</p> <p>9 A To distribute -- distribute some source</p> <p>10 video in this instance.</p> <p>11 Q Okay. And their -- their product is Akamai</p> <p>12 in this particular case; right?</p> <p>13 A It's this -- it's this CDN system that</p> <p>14 they're talking about.</p> <p>15 Q Okay. And then once the -- once the -- so</p> <p>16 I'll back up.</p> <p>17 So the -- the source -- the signal for the</p> <p>18 source, that signal, copies of it get sent to each of</p> <p>19 the reflectors; is that right?</p> <p>20 A That -- that's my understanding and -- and</p> <p>21 I think that's what the diagram is illustrating.</p> <p>22 Q Okay. And then once those copies get to</p> <p>23 the reflectors, where do they get sent next as shown</p> <p>24 in Figure 2?</p> <p>25 A After the signal from the entry point gets</p>
<p>30</p> <p>1 source, let's say. And so you split it and you send</p> <p>2 it out -- I think I had mentioned this a moment</p> <p>3 ago -- you send it out to different stations that may</p> <p>4 be in different directions from the original source</p> <p>5 and, say, use the splitter to achieve that end.</p> <p>6 Q Okay. All right. So with that background,</p> <p>7 let's go back to Figure 2. I have Figure 2 of the</p> <p>8 Shaw reference up on the screen. And I think you</p> <p>9 said -- you used the term "original source" in your</p> <p>10 last answer; is that correct?</p> <p>11 A Yeah, the origin of -- of the signal.</p> <p>12 Q All right. So in this particular example,</p> <p>13 we see a video camera and then a connection 200, and</p> <p>14 then an entry point 202 on the left part of the</p> <p>15 screen -- left -- left part of Figure 2; correct?</p> <p>16 A Yes, that's what we see in that figure.</p> <p>17 Q Okay. And that's where the content in this</p> <p>18 particular example is created; is that correct?</p> <p>19 A I believe that is -- is the case. I would</p> <p>20 have to go look in the spec and see what they're</p> <p>21 saying. But I think, from just seeing the video, and</p> <p>22 it's going into that entry point, which would imply</p> <p>23 source, before it's going out into reflectors.</p> <p>24 Q Okay. So that's my next question. So once</p> <p>25 the source gets sent to these -- well, I'll backup.</p>	<p>32</p> <p>1 to the reflector, the reflectors go to those boxes,</p> <p>2 those devices, 206a through n, which are labeled</p> <p>3 "Akamai region." I think they mean region servers.</p> <p>4 Q Okay. So then, as we said earlier, those</p> <p>5 are servers located in various regions in the -- in</p> <p>6 the geographical area of the network; is that</p> <p>7 right?</p> <p>8 A I believe that's how it was described.</p> <p>9 Q Okay. And then in each -- each one of</p> <p>10 those Akamai regions, then you have -- which are 206,</p> <p>11 then you have individual servers within each one of</p> <p>12 those regional areas; is that correct?</p> <p>13 And just for reference, I'm looking at</p> <p>14 Column 6, starting in line -- roughly line 13 through</p> <p>15 line 25.</p> <p>16 A Where -- where it starts "Each set</p> <p>17 reflector"?</p> <p>18 Q Correct.</p> <p>19 A Yes.</p> <p>20 Q Okay. And we had mentioned the term "edge</p> <p>21 server" earlier in this deposition. And an example</p> <p>22 of that would be what is shown there in 208A through</p> <p>23 208D and 208N; is that correct?</p> <p>24 A I believe we had talked about edge server,</p> <p>25 but we did not look at how it was defined.</p>

<p>33</p> <p>1 Q Right.</p> <p>2 A So --</p> <p>3 Q What -- I'm sorry, go ahead.</p> <p>4 A And I was going to say, I don't -- I don't</p> <p>5 recall using that terminology in my report, but I</p> <p>6 might have.</p> <p>7 Q Okay.</p> <p>8 A I think that seeing what we're looking at,</p> <p>9 it would be helpful.</p> <p>10 Q Sure. That's what I was -- I apologize --</p> <p>11 that's what I was trying to do. In Column 6, line</p> <p>12 21, it refers to them as an "edge node." Do you see</p> <p>13 that?</p> <p>14 A Typically, an edge node, e.g., node 208D.</p> <p>15 Right. And -- and I think that makes sense in terms</p> <p>16 of out of the edge or periphery of the network.</p> <p>17 Q Okay. So in this particular figure -- and</p> <p>18 I'm going to try to summarize it, and you can tell me</p> <p>19 if this is an accurate summary or not -- some media</p> <p>20 content is created; it goes to an entry point;</p> <p>21 copies -- identical copies of that media gets sent to</p> <p>22 the reflectors; the reflectors then send them to the</p> <p>23 individual regions; and then within each region,</p> <p>24 those copies get put on various edge servers.</p> <p>25 So the content from a single source gets</p>	<p>35</p> <p>1 Q Okay. Would it be any different for a --</p> <p>2 just a -- a movie as an example?</p> <p>3 A You mean a -- a stored movie?</p> <p>4 Q Correct.</p> <p>5 A An mpeg or something?</p> <p>6 Q Yes, exactly.</p> <p>7 A Not -- not at this high level. Not at this</p> <p>8 high level. Other than the -- the little graphic of</p> <p>9 the -- of the video camera would be replaced by a</p> <p>10 disk drive --</p> <p>11 Q Correct.</p> <p>12 A -- or a content server.</p> <p>13 Q Okay. Great. Are you familiar with the</p> <p>14 acronym RTSP?</p> <p>15 A I am.</p> <p>16 Q Okay. And what does that stand for?</p> <p>17 A Real-time streaming protocol.</p> <p>18 Q Okay. And just at a very high level, what</p> <p>19 is real-time -- real-time streaming protocol?</p> <p>20 A Real-time streaming protocol? Well, that</p> <p>21 is -- at a very, very high level, that is an</p> <p>22 international standard that establishes some</p> <p>23 protocols for the real-time streaming of data. So</p> <p>24 calls into play the notion of a real-time system, and</p> <p>25 then also into play of streaming, which implies</p>
<p>34</p> <p>1 distributed in identical copies throughout the</p> <p>2 network and end up on these various edge servers; is</p> <p>3 that a fair summary?</p> <p>4 MR. PONDER: Objection, form.</p> <p>5 THE WITNESS: I'm going to say that's a</p> <p>6 fair high-level summary of -- of what's happening</p> <p>7 here.</p> <p>8 By MR. YOUNG:</p> <p>9 Q Okay. And then if we look at the</p> <p>10 description of Figure 2, which shows up in Column 4,</p> <p>11 line 22 -- I'll highlight it on the screen for you --</p> <p>12 it says -- I'll just read it:</p> <p>13 "Figure 2 is a simplified diagram</p> <p>14 illustrating how live streaming can be further</p> <p>15 enhanced by having a CDN send multiple copies of the</p> <p>16 same stream over network over different routes from a</p> <p>17 CDN entry point to the optimal streaming server at</p> <p>18 the edge of the Internet."</p> <p>19 Do you see that?</p> <p>20 A I do.</p> <p>21 Q Okay. And would you agree that that's a --</p> <p>22 an accurate description of what you -- what we went</p> <p>23 over in Figure 2?</p> <p>24 A Yes. For the live streaming instance,</p> <p>25 yes.</p>	<p>36</p> <p>1 media.</p> <p>2 Q So like an example of where RTSP might be</p> <p>3 used would be for the broadcast of a sporting event,</p> <p>4 as an example, where the viewers are watching</p> <p>5 something in real-time?</p> <p>6 A Real-time streaming protocol could come</p> <p>7 into play for that, but the real-time doesn't</p> <p>8 necessarily mean your watch time, but is it -- are</p> <p>9 you delivering it and is it being received in the</p> <p>10 real-time of the event. So I'd say you -- you could</p> <p>11 say that how you described it.</p> <p>12 Q Okay. Okay. And one of the aspects of</p> <p>13 Shaw is this notion of switching between servers when</p> <p>14 you are -- when a user is looking at a media stream</p> <p>15 of -- a media stream; is that correct, at a high</p> <p>16 level?</p> <p>17 A Yes --</p> <p>18 Q Okay.</p> <p>19 A -- at a high level.</p> <p>20 Q And so I'm looking now at Column 6, going</p> <p>21 through -- starting, I guess, line 57. I'll</p> <p>22 highlight it on the screen. Actually, just a little</p> <p>23 bit before that.</p> <p>24 It says:</p> <p>25 "Thus, in many cases," quote, "the best,"</p>

<p>37</p> <p>1 end quote, "server for a given client player 2 receiving a given stream is likely to change before 3 the stream is finished." 4 Do you see that? 5 A Yes. But can we zoom out a little bit? 6 We're sort of wasting some screen real estate 7 there. 8 Q Can you make that better? 9 A I'm not getting any younger. 10 Q That's fine. 11 A Actually, none of us are. 12 Q That's true. 13 A Okay. Now, yeah. Oh. Much, much better. 14 Okay. 15 "Thus, in many cases, the "best" server for 16 a given client player receiving a given stream is 17 likely to change before the stream is finished." 18 Q Yeah. 19 A Yes, that's what that says. 20 Q Okay. So like, as an example -- just an 21 example -- if I was watching a football game and I'm 22 watching a stream of that game, the -- according to 23 this Shaw patent, the -- the best server to provide 24 me with that stream of media content may change 25 before the end of the game; is that a fair example of</p>	<p>39</p> <p>1 Q Okay. And so in this particular example, 2 you have this client player, this software, and it's 3 identifying a best server dynamically. 4 Do you see that? 5 A Yes. 6 Q So what would a POSITA understand that to 7 mean? 8 A The player itself is its -- is its -- as 9 it's streaming the data, let's say, that's playing, 10 the streamed data has the ability to detect that, 11 perhaps, the stream is not of -- not coming from the 12 best server and to go out and find a better server to 13 deliver the data. 14 Q Okay. So let's go back then to our example 15 in Figure 2. So in Figure 2 -- and I'm going to have 16 to shrink it a little bit just to get it all on the 17 screen. There we go. But in Figure 2, just as an 18 example, if I was watching this football game -- and 19 keeping our example the same -- and I was watching it 20 on -- from the edge server that's in 208A as an 21 example, if that -- if my network connection with 22 208A degrades in some way, the client player in the 23 Shaw reference could switch me to, let's just say, 24 server 208N, where I watch the same -- the same 25 football game but from a different server; is that a</p>
<p>38</p> <p>1 what that's referring to? 2 A I think that's a fair example. 3 Q Okay. And then the -- this paragraph goes 4 on to say -- and I'll highlight the next sentence. 5 It says: 6 "The present invention provides a method 7 for enabling a client player to identify a best 8 server dynamically and, in addition, to selectively 9 switch to that server to receive the stream or 10 portions thereof." 11 Do you see that? 12 A I do see that, yes. 13 Q Okay. So let's go through that in a little 14 bit of more detail. 15 When it uses the term "client player," what 16 does that mean? What would that mean to a POSITA? 17 A The client player would be, especially back 18 then, something like real player. Real player is a 19 client, and it plays streaming video -- or it played 20 video streaming. Actually, I think you can still get 21 them. 22 Q And is that like a piece of software you 23 would put on your PC, as an example? 24 A It -- it's typically implemented as 25 software, yes.</p>	<p>40</p> <p>1 good example? 2 A I believe that's what that passage may be 3 describing, like that -- this example that you're 4 talking about. 5 Q Okay. So I'm watching the same content, 6 but I'm watching it on a different server because the 7 client player switched me from a server where I had a 8 degraded connection to a server where I had a better 9 connection; is that correct? 10 MR. PONDER: Objection to form. 11 THE WITNESS: Who -- who's -- oh, you're 12 watching and -- 13 MR. YOUNG: I'll re-ask the question. 14 By MR. YOUNG: 15 Q In this example, I'm the -- I'm the user. 16 I'm at the user's PC. I am the -- I am consuming 17 the -- I'm watching the show. So in this case, I'm 18 watching a football game, and I'm watching it on a 19 network connection to the server in 208A in Figure 2. 20 And the client player on my computer detects that my 21 connection from my PC to the content server 208A 22 becomes degraded. So the client player then switches 23 me to, in this example, the edge server 208N. And I 24 continue to watch the same content, the same show, 25 but from a different server.</p>

<p>41</p> <p>1 Is that a good example of what we just 2 read?</p> <p>3 A I think that -- that that fits within the 4 description. In addition, it -- it may be, too, that 5 the client detects -- there's some quality level, you 6 know, of view, and it isn't necessarily a degraded 7 channel, but it's maybe a slower speed. And the 8 client detects that there's something better that 9 could be had with a different server and switches 10 over to that other server. I think that's -- that's 11 a fair characterization of that -- of what we just 12 read.</p> <p>13 Q Would it be switching to a better -- to a 14 server with a better network connection or for some 15 other reason?</p> <p>16 A Well, it -- I think it could be just the 17 fact that it -- because, you know, when we start 18 talking about quality and better, you know, what's 19 better? We're really talking about sort of a -- I 20 think, in fact, in -- in quality of service, they 21 call it dimensions of quality. And so there's a 22 number of different factors that affect quality. 23 And so I -- I get the impression from that 24 passage, especially from the standpoint of a POSITA 25 looking at it, that what they mean by "best" is some</p>	<p>43</p> <p>1 A Yes.</p> <p>2 Q So when it says "selectively switch," does 3 that mean that it was receiving the stream from one 4 server, it switches to receive the same stream from a 5 different server?</p> <p>6 A Well, if you look at the first part of that 7 sentence: 8 "The present invention provides a method 9 for enabling a client player to identify a best 10 server dynamically and, in addition, to selectively 11 switch."</p> <p>12 In other words, it selects and says that I 13 want to switch to this server to receive the stream 14 or portions thereof.</p> <p>15 Q So before, we had said that, within Figure 16 2, when the media content goes into the system at the 17 entry point, the reflectors then take copies of that 18 media stream, spread it out to the various regions, 19 and then the regions send those same copies to 20 various servers.</p> <p>21 Do you remember saying that?</p> <p>22 A I -- I believe it used that terminology.</p> <p>23 Q Okay.</p> <p>24 A We can go back and look at it.</p> <p>25 Q No, no. That's fine. My question is</p>
<p>42</p> <p>1 dimension of the connection that, whatever they're 2 looking at now, there's a better one available.</p> <p>3 Q And just -- just to make sure I understand, 4 when you say "connection," that's the network 5 connection in my example between the edge server 208A 6 and the user's PC as shown in Figure 2; right?</p> <p>7 A Well, 208 -- it's that -- it's that 8 unidentified line to that user's PC.</p> <p>9 Q Okay.</p> <p>10 A That we said, you know, could be a wire, 11 could be wireless. It's -- it's -- it's how the data 12 is getting to the client --</p> <p>13 Q Okay.</p> <p>14 A -- player.</p> <p>15 Q All right. And I -- I think you've already 16 answered this question, so I apologize, but I just 17 want to make sure that I'm -- I'm clearly 18 understanding you.</p> <p>19 So in this sentence that we just looked at, 20 which is in Column 6 starting at line 57, where it 21 says "the present invention," in that sentence, it 22 says -- the end of it, says: 23 "To selectively switch to that server to 24 receive the stream or portions thereof." 25 Do you see that?</p>	<p>44</p> <p>1 simply this: In this situation, the viewer is 2 receiving a stream of a copy of that media from one 3 server; and then, in this example, the client player 4 switches; and then you receive the same media, the 5 same stream from a different server.</p> <p>6 Is that a fair way of saying that?</p> <p>7 A Well, I don't know if it's the same stream, 8 but it's the same media. But we don't know what form 9 the media is in and some other details. But yes, in 10 general, I think that's a correct characterization.</p> <p>11 Q Okay. All right. And maybe this will give 12 another little bit of an example. And this is -- I'm 13 looking now at Column 9. And I'll -- I'll blow this 14 back up again so we can see it better.</p> <p>15 Okay. So now we're looking at Column 9, 16 line 63, and here it says -- I'll highlight it 17 first -- it says: 18 "As appropriate, the stream switch process 19 includes the capability to match data packets from a 20 first and second servers to enable a substantially 21 seamless switch to the new stream source." 22 Do you see that?</p> <p>23 A Yes.</p> <p>24 Q Okay. Can you describe to me what a POSITA 25 would understand that sentence to mean?</p>

<p>45</p> <p>1 A Well, it's -- it's basically saying that --</p> <p>2 and notice "as appropriate." In other words, you</p> <p>3 know, in order to accomplish some objective as</p> <p>4 appropriate, the stream switch process includes the</p> <p>5 capability to match data packets from the first and</p> <p>6 second server.</p> <p>7 So what it's saying is that you've got a</p> <p>8 first server and a second server, and you're getting</p> <p>9 ready to do this switch. And you're in the middle.</p> <p>10 You know, you're at some point in the stream. And</p> <p>11 the -- yeah, the process that's doing the switch</p> <p>12 takes a look forward and possibly backward, if it's</p> <p>13 mpeg, in order to match the data packets from the</p> <p>14 two -- in other words, it's sort of talking about</p> <p>15 some sort of synchronization thing and enable a</p> <p>16 substantially seamless switch to the new stream</p> <p>17 source.</p> <p>18 So as it's moving over, there is the time</p> <p>19 lag, and you could have dropped packets. But if --</p> <p>20 before it does that, it sort of works with what it</p> <p>21 has already received in order to do that</p> <p>22 synchronization process between the two. So you</p> <p>23 don't have any -- like I said, substantially seamless</p> <p>24 switch because they're -- the sort of thinking that</p> <p>25 might not be possible, but it is substantially</p>	<p>47</p> <p>1 different server; is that fair?</p> <p>2 MR. PONDER: Objection to form.</p> <p>3 THE WITNESS: Basically, I think that's</p> <p>4 what they were getting at with this.</p> <p>5 By MR. YOUNG:</p> <p>6 Q Okay. Great. Okay. Well, we've been on</p> <p>7 the record for an hour, and I have a new topic to go</p> <p>8 to. So let's take a quick 10-minute break. Is that</p> <p>9 okay, Dr. Myler?</p> <p>10 A Well --</p> <p>11 Q Or do you want to just keep going?</p> <p>12 A I think we can keep going a while longer.</p> <p>13 Q Okay. You just -- you just let me know</p> <p>14 when you'd like to take a break and we'll stop there.</p> <p>15 A Okay.</p> <p>16 Q Okay. Okay. So now what I have on the</p> <p>17 screen is Figure 3.</p> <p>18 Do you see that?</p> <p>19 A I do.</p> <p>20 Q Okay. And I can read it to you, but I'll</p> <p>21 let you get to it first before I start reading so</p> <p>22 we're not moving back and forth on the screen.</p> <p>23 A I'm sorry about this. I put -- for some</p> <p>24 reason, I put Barnes on top of Shaw and -- here we</p> <p>25 go. Sorry about that.</p>
<p>46</p> <p>1 seamless if you can do some presynchronization of</p> <p>2 packets between the two servers.</p> <p>3 Q And these are going to be some really kind</p> <p>4 of dumb general questions, but I want to make sure</p> <p>5 that I'm understanding.</p> <p>6 So when it says a "stream" -- a "stream" in</p> <p>7 Shaw, a "stream" is comprised of a bunch of packets</p> <p>8 which deliver the media content; is that correct?</p> <p>9 A We are basically talking digital</p> <p>10 telecommunications and, specifically, digital</p> <p>11 networking, since it's content delivery network,</p> <p>12 which implies a packetized network.</p> <p>13 Q Okay. So if you -- so I think in this</p> <p>14 example, if you had a copy of the media, digital</p> <p>15 media, Server A, and you had another copy of the same</p> <p>16 copy on Server B, and you were streaming on Server A,</p> <p>17 and the viewer was receiving the packets and watching</p> <p>18 the video, and the client player in Shaw decides to</p> <p>19 switch to the other server, Server B, using this</p> <p>20 stream switch process, it would switch from watching</p> <p>21 the copy on Server A to watching the same copy on</p> <p>22 Server B, and then it would do this process to match</p> <p>23 up the packets so that the viewer would have a</p> <p>24 rela -- a substantially seamless switch. And they --</p> <p>25 he or she would continue to watch the show but from a</p>	<p>48</p> <p>1 Q It's okay.</p> <p>2 A Okay. Let me get to Figure 3. I'm where</p> <p>3 you are at on the screen.</p> <p>4 Q Okay. So the description of Figure 3 of</p> <p>5 Shaw -- you can find it in Column 4, line 27. And</p> <p>6 I'll let you get there on your hard copy and then</p> <p>7 I'll read it.</p> <p>8 A I'm there.</p> <p>9 Q Okay. It says:</p> <p>10 "Figure 3 illustrates a representative</p> <p>11 client browser having a streaming media client player</p> <p>12 that is enhanced to include the functionality of the</p> <p>13 present invention."</p> <p>14 Do you see that?</p> <p>15 A Yes, I do.</p> <p>16 Q Okay. So now going back to Figure 3 that's</p> <p>17 on the screen, the client browser is labeled 300, I</p> <p>18 believe; is that correct?</p> <p>19 A Let's see. 300 -- I don't want to be</p> <p>20 incorrect.</p> <p>21 Q Column 7, line 4. I think you'll see it.</p> <p>22 A I'm almost there. Yeah, 300. Client</p> <p>23 browser, 300.</p> <p>24 Q Okay.</p> <p>25 A And -- right. It's what has the streaming</p>

<p>49</p> <p>1 media client player, and then they give some 2 examples. 3 Q Okay. And those -- that's labeled as 302; 4 correct? 5 A Yes. 6 Q Okay. And then what I think the reference 7 refers to as the, quote, "present invention" is 8 really what you see in the dashed box, which has four 9 boxes inside of it labeled 304, 306, 308, and 310; 10 correct? 11 MR. PONDER: Objection, form. 12 THE WITNESS: Are you -- are you saying is 13 the dotted line representing the current invention? 14 By MR. YOUNG: 15 Q Well, let's -- 16 A The Shaw invention? 17 Q Well, let's go back to the description of 18 Figure 3, and that's, again, in Column 4, line 27. 19 And it says: 20 "Figure 3 illustrates a representative 21 client browser having a streaming media client player 22 that is enhanced to include the functionality of the 23 present invention." 24 Correct? 25 A That's what that says.</p>	<p>51</p> <p>1 what this particular embodiment is, the one for a 2 browser. 3 Q Right. And going back to a description of 4 Figure 3, in Column 4, line 27, it says: 5 "Figure 3 illustrates a representative 6 client browser." 7 A Uh-huh. 8 Q So in this particular example -- and all I 9 really care about is the functionality. I don't care 10 where it's located. But the functionality of the 11 enhancement to the browser is what's in the dotted 12 line -- dotted box in this particular example; is 13 that correct? 14 A I believe that to be correct, given the 15 fact that -- that the boxes inside the dotted line 16 are decision process -- a decision process is taking 17 place. The stream switch, the switching part, 18 testing the server, seeing if it's better, and then 19 DNS look-up, which is the -- sort of handling some of 20 the overhead. 21 Q Okay. And we can go into some specific 22 questions later, but generally, at a high level, a 23 POSITA looking at Figure 3, what would that person 24 understand that figure to be showing, again, at a 25 high summary level?</p>
<p>50</p> <p>1 Q Okay. So my question to you is, then, is 2 the enhancement of the client browser, that is the -- 3 that includes the functionality of the present 4 invention, included within that dotted line or dotted 5 box that has within it boxes labeled 304, 306, 308, 6 and 310? 7 A Well, in this particular diagram, that's 8 what it appears to be, but I was -- while I was 9 looking through and it says, you know, later on in 10 Column 7, in one embodiment, the functions are built 11 into the software directly, and in another 12 embodiment, one or more of these functions built into 13 a plug-in to the browser; yet another embodiment, 14 they're in a standalone code or elsewhere on the 15 client. 16 Q Uh-huh. 17 A And so the particular limitation used is 18 not critical to the operation of the invention. So I 19 think, in this very general term, that's what we 20 could call that dotted line encompassing and because 21 300 is the browser. 22 Q Okay. 23 A So based on those descriptions in that 24 column, I sort of have to say it's in there in the 25 browser in this particular embodiment. Maybe that's</p>	<p>52</p> <p>1 A A POSITA just coming in and looking at the 2 figure would probably not be quite clear on what's 3 going on until they read the spec and saw what 300 4 was and so on. But they would interpret this after 5 looking at that and say, oh, okay, this is how 6 they're seeing the arrangement of the functional 7 blocks in this one particular embodiment, which is 8 the web browser. 9 Q Okay. And you can go back and forth. All 10 of this is listed in Column 7 of the patent, but I 11 wanted to keep the figure up on the screen. So with 12 your copy, you can look at figure -- you can look at 13 Column 7. 14 The first block is this DS -- DNS look-up, 15 which is labeled 304; is that correct? 16 A That's correct. 17 Q Okay. And what does -- what does that 18 block do? 19 A Once again, it's the domain name server 20 block. In other words, where it -- the unit can 21 figure out by mapping addresses back and forth 22 between their numerical representations and, 23 possibly, that's a URL since it's a web browser. 24 Q Okay. 25 A Typically, the web browser works with a</p>

<p style="text-align: right;">53</p> <p>1 URL, which -- universal resource locator -- which is 2 a text stream, and it's got some formatting 3 restrictions on it. And that's what it's working 4 with, but it needs to get the Internet address of -- 5 of -- of the server which -- which it wishes to 6 access. And so that's why that's there, to do those 7 look-ups for it. 8 Q Okay. Okay. As part of that look-up 9 process, it sends out -- and I'm looking specifically 10 now at -- I'll leave the figure up, but I'm looking 11 specifically at Column 7, starting at line 41. And 12 it says: 13 "The main server responds to the query." 14 That's the query from the -- from 304 -- with a set 15 of tokens, 315a through n. 16 Do you see that? 17 A Yes, the tokens as shown in that diagram, 18 Figure 3. 19 Q Okay. And what is -- what would a POSITA 20 understand the tokens in that description to mean? 21 A Well, tokens are employed to authenticate 22 and authorize, typically. And so -- and it's sort of 23 a handshaking kind of thing. And it's -- you utilize 24 the tokens to verify that you're connected to the -- 25 to the correct server, or the server is sending data</p>	<p style="text-align: right;">55</p> <p>1 Q Okay. And just because it's easier, I'm 2 going to now go down to Column 7. But please keep 3 the Figure 3 in front of you for -- for reference. 4 Okay. And now it gives an example of what 5 these tokens may look like. And I'm going to 6 highlight that on the screen here for you, but what 7 I'm highlighting is Column 7, starting at line 55. 8 And if you could take a -- if you could take a moment 9 to read that sentence, and then I would like you to 10 explain it for me as what a person of ordinary skill 11 in the art would understand that sentence to mean. 12 A Okay. It looks like what this is 13 explaining is how the Akamai system -- one of the 14 details in how it uses its internal main server 15 system. And basically, I mean, it is what it is. 16 To give an example, the first token may be 17 of the form Y5Q.kamai.net. And, of course, that's an 18 Internet address, a UR -- well, it's -- it's not a 19 complete URL, but it is definitely a domain name. 20 And I may even say that where the kamai.net domain 21 identifies the CDNSP domain main server. So it's a 22 main server within the CDNSP system to identify a set 23 of lower-level name servers in the specified CDN 24 Region Number 5. 25 So they're explaining that that's what that</p>
<p style="text-align: right;">54</p> <p>1 to the -- to be an authorized client, for example. 2 And the tokens can also be used to set up, you know, 3 coding schemes like Secure Shell and things of that 4 sort. 5 To use Secure Shell, a client has to have a 6 token from the server to let -- that they can then 7 send back different keys back and forth to show that 8 they're who they say they are. 9 And it -- it even says here in Column 7: 10 "Each token 315 provides a distinct answer 11 to the query and defines a machine, or, in the 12 preferred embodiment, equipment machines from which 13 the client could seek to obtain the -- the stream 14 identified by the URL." 15 Q Okay. So in this particular example then, 16 just to put it in high-level terms, 304 would send 17 out a query, and then the main server, which in this 18 particular example in Figure 3 shows up at -- in box 19 305 on the right, and then that main server comes 20 back and says, well, here are a series of tokens that 21 each represent a separate server from which you can 22 obtain the desired stream or desired media content; 23 is that a fair way of saying it? 24 A I -- I think that's one way to put it, 25 yes.</p>	<p style="text-align: right;">56</p> <p>1 Y5Q thing is in this particular example and 2 implementation. And -- and then it goes on to say, 3 "The lower level main servers would then be queried 4 to identify a particular best server." 5 So it's sort of putting -- putting the 6 system in the general area of a potential best 7 server. 8 Q Okay. So in this particular example, you 9 might get back -- you might get back three tokens, 10 and one of them might be from a server in Region 5. 11 Like in this case, one might be in Region 2 and one 12 might be in Region 7; correct, in that just 13 hypothetical example? 14 A I sort of get the impression, because it's 15 got that X in there between Y and Q. 16 Q Yeah. Okay. And then so I'll have a list 17 of three. I got three tokens. And then the system 18 will go on to figure out which one of those is, 19 quote, "the best" to deliver the media content from; 20 is that correct? 21 A I believe it has that option, yes. 22 Q Okay. And what does -- what does CDNSP 23 stand for? 24 A Oh, now I have to go look at it. It's 25 content domain -- content delivery network system</p>

<p>57</p> <p>1 process, maybe. I'd have to go -- to look it up. 2 Q Okay. 3 A Earlier in the patent, it's probably 4 described. They added that P on the end there. 5 Q Okay. That's fine. So now we've -- so 6 we've talked about what -- and again, I'm going back 7 now to Figure 3 -- we've talked about what the DS -- 8 DNS look-up 304 does. Now I want to talk about what 9 block server testing 306 does; okay? 10 A Okay. Right. 11 Q So now, if we go to figure -- I'm sorry -- 12 Column 8, starting at line 6, it talks about what 306 13 does. At a high level, if you could describe for me 14 what a POSITA's understanding of what Box 306 does, 15 that would be great. 16 A Oh, okay. So that testing process, that 17 server testing process, responds to the returned 18 token information. So this information that we were 19 talking about with these tokens, and -- as in the Y5Q 20 example described above -- and it can also look at 21 information from further processing of the token, if 22 the token contains information about the servers, and 23 may perform one or more tests to help identify a best 24 server. 25 So at that point, it could take a look at</p>	<p>59</p> <p>1 Do you see that? I have -- have it highlighted. 2 A Oh, there it is. Yes. 3 Q Okay. So in this particular example, where 4 it's using an RTSP, quote, "options" command, it does 5 this particular type of test. And it's a response 6 dash -- I'm sorry -- a request-response, and it's 7 timed, and then it determines the best server by the 8 one -- the server that provides the fastest response; 9 is that correct? 10 A Yes, this is sort of like a ping. 11 Q Okay. So in this -- in this case, the, 12 quote, "best" server is going to be the one that 13 responds the fastest? 14 A Well, it says, "Usually the one providing 15 the fastest response." 16 Q Okay. So just to make sure that I 17 understand, it would be a situation where the DNS 18 look-up, 304, sends out this query; the main server, 19 305, comes back with, in this example, three tokens. 20 In this particular example, the system has enough 21 bandwidth. It does this ping test or this RTSP 22 options command test, and the -- the -- of the three 23 servers, the one that responds the fastest is the one 24 that the client player is going to select to get the 25 content from; is that a fair example?</p>
<p>58</p> <p>1 those tokens and say, all right, there's some other 2 information and it relates to being better. And so I 3 could take that into -- into account as well. 4 Q Okay. And later on -- well, it also says 5 up here -- and I'm looking at Column 8, line 10 6 through 11, and it says, server -- "server testing is 7 not required although it's desirable." 8 Do you see that? 9 A Yes. 10 Q Okay. So would it be fair to say that, if 11 server testing is not required, the media client 12 could just pick one of the servers on the list and 13 just start using it, or, if it had enough bandwidth 14 to do the test, it would do the test and then select 15 the one that it would define as the best? 16 A I -- I think that's a fair characterization 17 of what it does. I mean, the system is up and 18 running. And you don't have to go test servers, but 19 if the system felt that it had enough bandwidth, it 20 could go do it. 21 Q Okay. Great. And then later on in this 22 same paragraph, it talks about this kind of 23 request-response. 24 Do you see that? 25 And I'm looking now at Column 8, line 23.</p>	<p>60</p> <p>1 A I think that's fair. 2 Q Okay. And this might be a really dumb 3 question, but just to make sure that I understand, 4 why would the server that responds the fastest be 5 identified as, quote, the "best" server? 6 MR. PONDER: Objection, form. 7 THE WITNESS: In this example? 8 MR. YOUNG: Correct. 9 THE WITNESS: It says, "Usually the one 10 providing the fastest response," or are you saying 11 why is that necessarily the best? 12 MR. YOUNG: Correct. Yes. 13 THE WITNESS: Oh, I think the right wording 14 is why might that be the best. That might be the 15 best because it has the fastest bandwidth. Again, in 16 this -- in this server testing, you know, there's 17 other factors that are -- that are considered. But 18 in this particular drill-down, you know, it's 19 probably going to be bandwidth. 20 MR. YOUNG: Okay. 21 (Court Reporter clarification.) 22 MR. PONDER: Objection, form. 23 By MR. YOUNG: 24 Q Okay. Are there any other examples that 25 you're aware of in Shaw, or in the Shaw reference,</p>

<p>61</p> <p>1 that identified the best server as being a server 2 other than the one that provides the fastest response 3 time? 4 A Just off the top of my head? This is the 5 shorter -- shorter of the two patents? 6 Q Yeah. Even off the top of your head, or 7 identified in your declaration in this matter. 8 A Well, if you could point me to my 9 declaration of where I might have discussed an 10 example, but off the top of my head, there's some 11 other discussion in Shaw -- and I'm sure there's 12 probably more examples -- where it's looking at, you 13 know, other decisions on best. 14 Q And do you know what those decisions would 15 be? 16 A Not off the top of my head. Not without 17 looking at what I talked about in my report. If you 18 want to point me there, we can look at that. 19 Q I'm not familiar with any -- anywhere in 20 your report where you identified something in Shaw 21 that identifies a best server, other than the fastest 22 response time. I'm not aware of anything, but I'm 23 asking you if you're familiar with anything in your 24 declaration that would say that? 25 A Well, you know, in general, in</p>	<p>63</p> <p>1 that has to do with the technology of the channel. 2 You've just got to remember, this is when ethernet 3 was wired, and then we went into wireless. And so 4 you've got issues like that that come into play. 5 Q Oh, no -- 6 A There's -- there's certainly more than just 7 bandwidth is all I'm saying. 8 Q No. And I'm not trying to say that your 9 report doesn't talk about things other than 10 bandwidth, and so I apologize if I -- if you 11 misunderstood my question. My question is solely 12 focused solely on Shaw, just Shaw. 13 A Uh-huh. 14 Q With respect to just Shaw, are you aware of 15 anything in Shaw, or that you've relied on in your 16 report from Shaw, that says that the test to 17 determine the, quote, "best" server is something 18 other than fastest response? 19 A Well, now we've got fastest response to a 20 ping, and that's not the same as bandwidth. And we 21 were just talking about bandwidth. 22 Q Okay. 23 A And like he says in there, usually, the one 24 providing the fastest response. So I'm going to say 25 no, not off the top of my head. I don't have</p>
<p>62</p> <p>1 telecommunications, there's an old saying: Bandwidth 2 is everything. So it tends to get center stage. But 3 as you get more complicated in deciding quality 4 issues and what we mean by, you know, level of 5 quality and so on, as I said before, there are other 6 dimensions that get considered. But to point out a 7 particular example off the top of my head in the 8 patent, I don't have that. 9 Q Okay. And with respect to your opinions in 10 this matter, as you sit here today, you're not aware 11 of anything else in Shaw that you've relied on to 12 identify the, quote, "best" server, other than the 13 fastest, which I think you -- which I think you 14 associated with fastest with best bandwidth; is that 15 true? 16 A No. We're -- we're -- we've been talking 17 about this patent and examples in the patent, and I 18 certainly saw these examples in the patent. And 19 the -- but the extent and range of the examples, I 20 don't know if in my report I mentioned some other 21 example other than bandwidth. 22 But within the entire report, there are 23 other things that come into play to determine, you 24 know, higher quality. I think I mentioned noise. 25 There's -- there's a thing called channel integrity</p>	<p>64</p> <p>1 anything specific. 2 Q Okay. And just one last question before we 3 take a break, and I just want to make sure that I 4 understand what you're referring to. 5 What would a -- what would a POSITA -- 6 again, a person in 2003 reading Shaw, what would that 7 person understand bandwidth to be? 8 A Bandwidth to a POSITA at that time -- and 9 actually, a POSITA right now -- would look at the 10 bandwidth as a bitrate of the channel, what the 11 channel was capable in terms of bitrate. 12 Q Okay. And then what does the term -- what 13 would a POSITA understand the term "bitrate" to be? 14 A The bits per second. 15 Q Okay. 16 A And it's, you know, depending on the 17 network, gigabits per second, megabits per second. 18 Back when I was a grad student, one bit per second -- 19 no. It was probably faster than that. 20 Q Uh-huh. 21 A But -- 22 Q Okay. And just so that I understand, what 23 is the difference between -- or is there a difference 24 between, quote, "the fastest response" and "the best 25 bandwidth?"</p>

<p>65</p> <p>1 A The difference between the client response?</p> <p>2 Q I'll -- I'll re-ask the question.</p> <p>3 A Thank you.</p> <p>4 Q If you're looking on the your screen, you</p> <p>5 see I highlighted something that says -- and this is</p> <p>6 in column -- Column 8, line 24 -- and it says what</p> <p>7 I've highlighted:</p> <p>8 "Best server, e.g., usually the one</p> <p>9 providing the fastest response."</p> <p>10 Do you see that?</p> <p>11 A Yes.</p> <p>12 Q Okay. So is there a difference between</p> <p>13 the, quote, "one providing the fastest response" and</p> <p>14 the "one with the best bandwidth?"</p> <p>15 A Yes.</p> <p>16 Q Okay. And what is that difference?</p> <p>17 A Well, this is implying that -- it says the</p> <p>18 request response is timed. So the client sends a</p> <p>19 request and then the server responds. And one way to</p> <p>20 do this is to send out a request to multiple servers</p> <p>21 and see which one comes back the fastest. And, in</p> <p>22 fact, that's what happens if we've got a phone app</p> <p>23 that's like a speed test for the network. The first</p> <p>24 thing it does is send out a ping, that's why I</p> <p>25 mentioned "ping," and the server that comes back the</p>	<p>67</p> <p>1 Q Okay. So, Dr. Myler, welcome back. So</p> <p>2 we -- with respect to Figure 3 is where we left off,</p> <p>3 and we talked about Block 304. We talked about Block</p> <p>4 306. Now, I would like to talk about Block 308;</p> <p>5 okay?</p> <p>6 And what is your understanding -- or what</p> <p>7 would a person of ordinary skill in the art</p> <p>8 understand Block 308 in the Shaw patent to -- to do?</p> <p>9 A Well, looking at Figure 3, the diagram, you</p> <p>10 see the Block 308 is labeled "decision process."</p> <p>11 Q Okay. And what's --</p> <p>12 A Well, I would say -- it says, in general,</p> <p>13 if you look at the title of the -- of the Shaw client</p> <p>14 side method for identifying an optimal server, they</p> <p>15 might think, from just looking at this diagram 308,</p> <p>16 that that -- that was the decision process that was</p> <p>17 going on.</p> <p>18 MR. YOUNG: Okay. And if we look at</p> <p>19 column -- Juan, I'm not sure I have control over the</p> <p>20 exhibit. Can you give me control? Okay. Thank you.</p> <p>21 Sorry, I'm having some lag problems here.</p> <p>22 By MR. YOUNG:</p> <p>23 Q Okay. So this sentence I'm going to</p> <p>24 highlight is in Column 9, starting at line 14, and it</p> <p>25 says:</p>
<p>66</p> <p>1 fastest with the ping is the one that was, oh,</p> <p>2 they're paying attention. Let's use them.</p> <p>3 Q Okay. That's fair. So another example of</p> <p>4 that, I think, would be just below that in Column 8,</p> <p>5 line 29 through 30, where it says, "Once the fastest</p> <p>6 responding server is selected" -- so in other words,</p> <p>7 that's saying the server that gets back to the client</p> <p>8 browser the fastest is the one that's selected</p> <p>9 A Yes, it's saying the one that was the --</p> <p>10 whichever got back fastest is the one that's</p> <p>11 picked.</p> <p>12 MR. YOUNG: Okay. All right. So we've</p> <p>13 been on the record for just over an hour and a half.</p> <p>14 So let's -- let's take a 10-minute break. And then</p> <p>15 we'll come back at -- your time, Dr. Myler, that</p> <p>16 would be 11 -- 11:50.</p> <p>17 THE WITNESS: Right.</p> <p>18 MR. YOUNG: Okay.</p> <p>19 THE WITNESS: I'm just going to set a timer</p> <p>20 for 10 minutes. I'll be back in 10 minutes.</p> <p>21 MR. YOUNG: Okay. Sounds good.</p> <p>22 THE WITNESS: Okay. Thank you.</p> <p>23 MR. YOUNG: Thank you.</p> <p>24 (Recess.)</p> <p>25 By MR. YOUNG:</p>	<p>68</p> <p>1 "Another function provided by the present</p> <p>2 invention is the ability of the client player (mainly</p> <p>3 the code running in that player) to identify a,"</p> <p>4 quote, "better source for a stream being received and</p> <p>5 to switch to that source," quote, "on the fly, i.e.,</p> <p>6 while the stream is being received and rendered on</p> <p>7 the client."</p> <p>8 Do you see that sentence, Dr. Myler?</p> <p>9 A I do.</p> <p>10 Q Okay. What would a POSITA understand</p> <p>11 that -- that sentence to be conveying?</p> <p>12 A A POSITA would look at this and be looking</p> <p>13 at the -- a function provided by the invention, being</p> <p>14 the ability of this client player, and that's the</p> <p>15 code running in that player, to identify a better</p> <p>16 source for a stream being received and to switch that</p> <p>17 source on the fly. In other words, while the stream</p> <p>18 is being received and rendered on the client.</p> <p>19 But earlier, in Column 7 I was looking at</p> <p>20 earlier, it says:</p> <p>21 "These processes are known -- are shown as</p> <p>22 being discrete for illustrated purposes only, as the</p> <p>23 functionality described below for each of the</p> <p>24 processes can be integrated into one or more</p> <p>25 programs, processes, execution threads, applets, and</p>

<p>69</p> <p>1 the like." 2 So the way to understand this was just a -- 3 just an example, an embodiment. 4 Q Okay. And what does it -- what does it 5 mean where you're going to switch to a different 6 source, quote, "on the fly"? 7 A Oh, this goes back, I think, to what we 8 were talking about earlier, where an identification 9 process takes place and then a decision is made as to 10 a better source for a stream being received, and then 11 if there is something better, to switch to the 12 source, to the better source -- the presumably better 13 source on the fly. And what that means is, in other 14 words, while the stream is being received and 15 rendered on the client. 16 Q And that's where we talked about earlier, 17 where you would go and actually match the data 18 packets from the first -- from the streams from the 19 first and second servers so that when you switched, 20 it would be substantially seamless; is that 21 correct? 22 A Well, I think that's probably included in 23 this, but that's not talking about that particular 24 matching process. I thought that was to try to 25 minimize data drop bots and so on. I think that's</p>	<p>71</p> <p>1 MR. PONDER: Objection. Form. 2 THE WITNESS: Yeah -- yeah, I'm sorry. 3 What -- what was the first part of that? 4 By MR. YOUNG: 5 Q I think we -- I think we're -- I think 6 we're talking past each other. 7 A Yeah, you're referring to other discussions 8 that have nothing to do necessarily with this 9 particular discussion. 10 Q Right. But in your answer, you talked 11 about not having to do a test because of insufficient 12 bandwidth. And my point is that that has nothing to 13 do with what we're talking about here. So let me 14 re-ask the question for you, and let's get a new -- a 15 new set, okay? 16 Can you provide me an example of the 17 teaching in Shaw that would allow you to switch on 18 the fly from one server to another? How would you do 19 that? How does Shaw teach you how to do that? 20 A To switch from one server to another? 21 Q It's exactly what I've highlighted on the 22 screen for you. How do you do that? How does Shaw 23 teach you how to do that, what I've highlighted on 24 the screen, which is in Column 9, line 12 through 25 18?</p>
<p>70</p> <p>1 what we said about that, that -- that synchronization 2 thing. 3 Q I think that is a way to go from a stream 4 on one source from one server to the same stream on 5 another server and then do that switch on the fly so 6 that you and the viewer doesn't notice a difference 7 when you're switching sources; is that not correct? 8 A Well, that -- that's what you get by doing 9 that, but you -- they even said earlier that you 10 didn't have to do that if you thought it might eat up 11 too much resource. And in this paragraph, they're 12 just saying switch to that source on the fly, which 13 means you're receiving one source, you switch to 14 another to continue receiving it. 15 Now, if you have the -- for some reason, I 16 think you may drop some packets or something, then 17 you can do that. But you were just talking about 18 that part where he was talking about synchronizing 19 packets. 20 Q Let's make sure we back up a second. I 21 think when we talked about the server testing not 22 being required because of bandwidth, that was just to 23 set up an initial -- to get the initial source of the 24 stream going; correct? But it did not have to do 25 with this switching mechanism.</p>	<p>72</p> <p>1 A Well, you have this decision process that 2 has made a decision that there's a better server, and 3 the client is directed to switch to the better 4 server. 5 Q Okay. So my question is more specific now. 6 How does Shaw teach you to switch from 7 receiving a source from one server to receiving the 8 stream from another server? 9 A Oh, oh, okay. The switching process is -- 10 is built in. In other words, you're simply given a 11 different address, and you switch over to some other 12 server, and that address -- I think we were talking 13 about the DNS tokens and things of that sort. So by 14 those processes, Shaw has determined where there's a 15 better server, and then once it does, the client can 16 decide, okay, I want to switch over there. 17 Q Okay. So now what I was referring to is 18 right in the -- exactly the same column, starting on 19 line 36, going to line -- I'm sorry, Column 9, line 20 63 to 66, which I've highlighted on the screen. 21 Is this an example of how you can switch 22 receiving a stream from one source to receiving the 23 same stream from a different source once Block 308 24 decides to make the switch? 25 A This is part of the switching process as</p>

<p>73</p> <p>1 appropriate.</p> <p>2 Q Okay.</p> <p>3 A It's a capability. The stream-switch</p> <p>4 process includes the capability to do this matching</p> <p>5 as needed.</p> <p>6 Q Okay. How would you do the switch from</p> <p>7 receiving the stream from one source to receiving the</p> <p>8 stream from another source if you weren't doing this</p> <p>9 matching data packet process?</p> <p>10 A Oh, you would just start receiving on that</p> <p>11 other source.</p> <p>12 Q Okay. So you would -- you would stop</p> <p>13 receiving the stream from Source A and then you would</p> <p>14 just start receiving it again from -- from Server</p> <p>15 B?</p> <p>16 A The stream being played by the client,</p> <p>17 yes.</p> <p>18 Q Okay. So coming back up to where we were</p> <p>19 reviewing in Column 9, starting at line 19, it</p> <p>20 says -- I've highlighted this on the screen -- I'll</p> <p>21 make it a little bit bigger:</p> <p>22 "The decision process 308 is used to</p> <p>23 determine whether the player should switch servers</p> <p>24 midstream. Because it's likely that there will be</p> <p>25 some cost to switching, e.g., perhaps a short</p>	<p>75</p> <p>1 example, with respect to Figure 3. Block 304 of the</p> <p>2 DSN look-up, let's say, for example, sends out the</p> <p>3 query, comes back with three tokens from three</p> <p>4 different servers that have the stream that it wants.</p> <p>5 It selects the best, which, in this case, is the</p> <p>6 fastest response one. Then, during that process of</p> <p>7 watching the -- the video, whatever the stream is,</p> <p>8 there becomes some degradation in the network</p> <p>9 connection, and it's no longer an acceptable stream.</p> <p>10 Block 308 would then decide to potentially switch to</p> <p>11 get the same stream from a different server that has</p> <p>12 a better network connection.</p> <p>13 Is that a fair example of how the client</p> <p>14 browser functionality of Shaw works?</p> <p>15 MR. PONDER: Objection. Form.</p> <p>16 THE WITNESS: I -- I think that's how we</p> <p>17 interpret it on reading it.</p> <p>18 By MR. YOUNG:</p> <p>19 Q Okay. And then the next sentence in Shaw</p> <p>20 in Column 9, starting at line 24, says -- and I'll</p> <p>21 highlight it. It says:</p> <p>22 "The decision process 308 makes a decision</p> <p>23 regarding whether the stream being received is,</p> <p>24 quote, 'acceptable' e.g., a stream that is not</p> <p>25 currently being thinned by the server or some other</p>
<p>74</p> <p>1 interruption in service, a client should only switch</p> <p>2 servers if it's not getting an acceptable stream from</p> <p>3 a first server."</p> <p>4 Do you see that?</p> <p>5 A I do.</p> <p>6 Q Okay. What does -- what would a POSITA</p> <p>7 understand that sentence to mean?</p> <p>8 A It would understand that to say that,</p> <p>9 basically, Shaw is describing a point in the decision</p> <p>10 process that there's another sources available that</p> <p>11 is better and so you're going to switch over there,</p> <p>12 and in the switch -- in that switch, there's most</p> <p>13 likely going to be some cost to the switching. In</p> <p>14 other words, a short interruption in service. And</p> <p>15 Shaw is simply telling, you know, the -- the POSITA a</p> <p>16 client should only switch servers if it's not getting</p> <p>17 an acceptable stream from the first server.</p> <p>18 And so, of course, the POSITA can say,</p> <p>19 okay, I might be willing to accept that degradation,</p> <p>20 or I may be able to do some synchronizing to minimize</p> <p>21 it and I'm happy with that. But what's important</p> <p>22 here is that Shaw is describing a decision process</p> <p>23 that -- that you may want to do in order to get a</p> <p>24 better source.</p> <p>25 Q Okay. So going back to our original</p>	<p>76</p> <p>1 metric."</p> <p>2 Do you see that?</p> <p>3 A Yes.</p> <p>4 Q Okay. What does -- what does "thinned"</p> <p>5 mean?</p> <p>6 A Thinned is where the server decides that</p> <p>7 it's the -- the data is not being received fast</p> <p>8 enough, it's pushing too hard for the client, and so</p> <p>9 the server makes a decision to thin out the data.</p> <p>10 And it's sort of like a compression in a way. By</p> <p>11 dropping either packets, you can thin actually in the</p> <p>12 stream itself. The server could, on the fly, be less</p> <p>13 compression, or something of that sort. But that's</p> <p>14 what that implies.</p> <p>15 Q Okay. So it doesn't sound like there's any</p> <p>16 problem with the -- the -- necessarily, the media</p> <p>17 being sent, but it's not being received correctly.</p> <p>18 So the -- the server is just going to start dropping</p> <p>19 some of the information in order to -- for it to be</p> <p>20 received better; is that a fair way of saying that?</p> <p>21 A Thinning is usually decided on the server</p> <p>22 side.</p> <p>23 Q Okay.</p> <p>24 A And they also say, or some other metric.</p> <p>25 There are some other things that can happen.</p>

<p>77</p> <p>1 Q Right. But it's -- it's -- it's not like 2 there's a problem with the -- the content of a file 3 being sent, but it's -- rather, it's a problem with 4 the -- with the delivery process in the network. And 5 so the network or -- I'm sorry -- the server that's 6 sending the media decides to start dropping portions 7 of that stream so that it can be received better on 8 the client side; is that right?</p> <p>9 A Well, I -- I don't think we can separate 10 the content from the data. There is one example 11 where packets are dropped by the server in order to 12 get more real-time packets out there because that's 13 what -- that's what's going on here. But I also 14 mentioned that the content itself could be thinned.</p> <p>15 And what do we mean by thinning the 16 content? Well, you know, you save the JPEG image, 17 and you are asked what quality level you want, and 18 you notice if you pick high quality JPEG, which means 19 more pixels, then the file size is larger than the -- 20 well, I shouldn't say not more pixels, but you get 21 the idea of the example. The image quality when it's 22 presented at high quality is coming from a larger 23 file than one of low quality, and so it's conceivable 24 that a thinning could actually take place on the 25 digitization of the stream. And so -- and, in fact,</p>	<p>79</p> <p>1 it gives on line 26, it says: 2 "The stream that is not currently being 3 thinned by the server." 4 In that situation, that is a thinning based 5 on transmission; is that correct?</p> <p>6 A Well, that's -- that's what I'm saying. We 7 don't know how -- we don't know what the mechanism of 8 the thinning is. We just know the server's thinning 9 and that's not -- that's not good. The server has to 10 do what it has to do. The client, of course, has to 11 do what it has to do. And this is just simply 12 saying, for example, a stream that isn't being 13 thinned, the server is saying, hey, I'm thinning 14 because I'm not getting the bandwidth I need and -- 15 or the bitrate that I need, or whatever, and -- or 16 some other metric.</p> <p>17 Q Okay. And those other metrics, as an 18 example, are provided in the rest of this paragraph, 19 where it says: 20 "As used herein, acceptable does not 21 necessarily mean acceptable quality." 22 And then it goes on to say acceptable might 23 mean from a stream management point of view, where a 24 server is being taken down for maintenance, as an 25 example; is that right?</p>
<p>78</p> <p>1 you may have multiple streams at various levels of 2 rendition of -- of quality and -- and -- and that 3 could -- that might enter into this decision, let's 4 say, because we're sort of hypothetically saying how 5 is this working.</p> <p>6 Q Right. But in the sentence that I 7 highlighted for you in column --</p> <p>8 A This one that's highlighted now?</p> <p>9 Q Yeah. In Column 9, line -- line -- I 10 guess, line 24 through 26, that's a situation where 11 the server is just not transmitting the full stream 12 but, rather, is thinning the stream for some reason; 13 is that right?</p> <p>14 A Yes, and I'm saying it could be a thin 15 stream. In other words, a thin stream would be a 16 stream at a lower resolution of the same content --</p> <p>17 Q So --</p> <p>18 A -- but in the same -- in the same real-time 19 constraints.</p> <p>20 You were saying how would a POSITA look at 21 this. A POSITA would say, oh, okay, we're talking 22 about an acceptable stream. Oh, well, one example he 23 gives is not being thinned. Oh, what are different 24 ways a thinning can take place, you know.</p> <p>25 Q Right. But in this particular example that</p>	<p>80</p> <p>1 A Yes. And I think that, in general, the 2 thinning fits into that as well. You know, the 3 server's made some decisions about this, and, of 4 course, the client has to deal with it accordingly.</p> <p>5 Q How does thinning relate to a stream 6 management issue? In other words -- that was a bad 7 question. Let me re-ask the question.</p> <p>8 A Okay. Because I was going to say you came 9 in a little broken. The stream, maybe, got 10 thinned.</p> <p>11 Q Right. Okay. So I think you mentioned 12 that what is happening at the -- at the -- what is 13 being described in Column 9, lines 27 through 36, are 14 talking about other things that deal with what is, 15 quote, "acceptable." And one of them is a stream -- 16 from a stream management point of view, a client 17 might be taken down for service. And my question to 18 you is, how would that example relate, if at all, to 19 thinning?</p> <p>20 A Oh. Well, no. That's -- that's an 21 administrative kind of thing.</p> <p>22 Q Okay.</p> <p>23 A But the -- the -- the stream is going to be 24 thinned down to zero.</p> <p>25 Q Okay. Okay. So is it -- is it fair to say</p>

<p>81</p> <p>1 that thinning would be some type of a bandwidth 2 issue? The pipe's not big enough, so I've got to 3 thin the media content in order to get it to the 4 client in a way that the client can receive it?</p> <p>5 A Yes, but thinning is -- is more often that 6 there's enough bandwidth, it's just the client can't 7 handle the stream. You know, it may be just too much 8 data.</p> <p>9 Like, for example, a -- a phone might have 10 a smaller screen, display screen, for example, than a 11 laptop. The laptop can handle a higher resolution 12 video. The -- the -- the iPhone can't. And so -- 13 but you're sending the same stream to both. It's 14 just that the iPhone can't handle it so the server 15 may thin, and, of course, that thinning is going to 16 have an effect on quality. But it certainly is, you 17 know, within the realm of possibility from the 18 discussion of thinning</p> <p>19 Q So why would -- in this example that we're 20 talking about where the client device is the same, 21 why would it switch when -- from one server to, 22 quote, a "better" server, to get a non-thinned stream 23 if it couldn't handle the stream from the original 24 server?</p> <p>25 A Oh, I think -- I think the implication is</p>	<p>83</p> <p>1 in Figure 3, and it's called stream switch. 2 Do you see that?</p> <p>3 A Yes, Block 310, stream switch.</p> <p>4 Q Okay. So what is your understanding that a 5 person of ordinary skill would understand this 6 Block 310 to do?</p> <p>7 A Well, as it states there, this is the 8 process that makes the actual switch from one server 9 to another. So at some point, you've finally decided 10 you found a better server, you want -- you want to 11 make the switch, you're willing to accept any 12 accessory costs, or whatever, and now, this process 13 does the switching.</p> <p>14 Q Okay. And then it says that it's -- and, 15 again, I'm looking at Column 9, starting at line 40, 16 where it says -- I'll highlight on the screen: 17 "The particular technique used for 18 switching from a first server to a second server 19 typically is media-dependent -- media-type dependent, 20 and any convenient technique may be used."</p> <p>21 Do you see that?</p> <p>22 A Yes.</p> <p>23 Q All right. What would a person -- what 24 would a POSITA understand that sentence to mean?</p> <p>25 A Well, they'd say, okay, the media type is</p>
<p>82</p> <p>1 that it could, but the server was thinning, for 2 whatever reason, and it wanted a better -- it 3 wanted -- it wanted a source that had no thinning, 4 you know.</p> <p>5 We're talking about all kinds of different 6 hypotheticals here, but the -- what's important is 7 that the -- that the client has this ability to say: 8 I don't want that thinned stream; I'm going to go get 9 one that isn't being thinned. And it doesn't really 10 care what the server -- why the server is thinning, 11 only that it has come to know that it is.</p> <p>12 Q But in this case, when you have the same 13 client device to look at the content, the only time 14 that you would switch, from a thinning perspective, 15 would be where the network connection with the first 16 source wasn't good for some reason and had to be 17 thinned to then switch to another server with a 18 better network connection, where the source didn't 19 have to be thinned and could be communicated to the 20 client effectively?</p> <p>21 A Yes, assuming you're willing -- I think 22 they said you're willing to accept the switch-over 23 costs, and so on and so forth.</p> <p>24 Q Okay. Okay. Okay. So now the last block 25 of this client browser enhancement is Block 310 shown</p>	<p>84</p> <p>1 going to determine whether you can make the switch. 2 I mean, if you're streaming video and the other 3 stream is only streaming audio, and -- and actually, 4 that -- that sometimes occurs. They will sometimes 5 stream -- particularly, a live stream, they'll stream 6 the audio only for the low bandwidth channels.</p> <p>7 And so what they mean by this is, when the 8 switch takes place, the client needs to be interested 9 in that particular media and needs to be able to 10 decode it, and so on.</p> <p>11 So that's what they mean by media-type 12 dependent. And any convenient technique can be used. 13 I mean, it can -- it's as simple as you just -- you 14 switch the address, and it switches over and starts 15 pulling in data from the other -- other address, or 16 you may go through some synchronization that we were 17 talking about earlier with -- with the packets, and 18 so on.</p> <p>19 Q Okay. So -- and again, just -- just to tie 20 it back to what we talked about earlier, this would 21 be an example where we looked at, like in Figure 2 as 22 an example, where the -- the video gets put into the 23 system the video gets copied and sent to various 24 regions, it ends up on some edge servers, and now, 25 we're switching from one edge server to another to</p>

<p>85</p> <p>1 get the -- to get the media; right? That's what 2 this -- that's what this actual switch is referring 3 to; correct? 4 A Well, I don't know if it's referring 5 exactly to this one. This is an embodiment that 6 Akamai has, but the notion of switching servers was 7 well known prior to this patent. 8 Q Right. But the -- the system that we 9 referred to in Figure 2 is an Akamai C content 10 delivery network, and this invention that they have 11 with respect to this enhancement to the client 12 browser is one that could be used and says is used 13 within that system; right? 14 A That's right. 15 Q Okay. So within that system shown in 16 Figure 2, this client browser, when it's doing this 17 actual switch, for example, could switch from edge 18 server 208n to edge server 208d to -- to switch. So 19 you were getting the stream from 208a, now you're 20 getting the same stream from 208d; is that right? 21 A Yes, they're -- they're talking about their 22 product, but this -- this, again, is -- in general, 23 can take place. 24 Q Okay. 25 A It's well known.</p>	<p>87</p> <p>1 now that I've read it? 2 Q Yeah. In Column 9, starting around line 3 43, it gives an example of a stream being received 4 that has a length of five minutes, and that at minute 5 235, there's a decision to switch. And my question 6 is: How would that -- how would a POSITA reading 7 this paragraph understand that switch to happen? 8 A Oh. Well, he goes on to explain that. 9 Q Okay. 10 A He says the stream switch process 310 may 11 cause the second server to begin sending the stream 12 at an offset of 245 and, at the same time, send 13 appropriate instructions to terminate the stream from 14 the first server. So what he's describing is sort of 15 stream control from the client's side. 16 Q Okay. So what does stream control from the 17 client's side mean? 18 A Well, that sort of speaks to that RTSP 19 standard that we were talking about. And whenever 20 the client has the ability to go in -- well, first of 21 all, the client knows what the length of the 22 stream -- assuming it isn't a live stream. And I 23 think earlier -- well, we're talking live streams. 24 Now we're sort of talking streaming a fixed stream, 25 which has a length of five minutes, so that can be a</p>
<p>86</p> <p>1 Q Okay. And in this -- this same paragraph 2 that we're referring to in Column 9, starting at line 3 38 -- 37, it talks about giving examples of various 4 switching techniques. This first one talks about a 5 stream that is being received that has a length of 6 five minutes, and the client player is processing the 7 stream from a first server with an offset of 235, 8 when the decision is made to switch to a second 9 server. Do you see that? 10 A Yes. 11 Q Okay. How would that offset process work? 12 Like how would the -- how would the -- in this 13 particular example, how would the switch be 14 implemented? 15 A Let's see here. The stream is being 16 received has the length of five minutes and the 17 client player is processing -- 18 Q Dr. Myler, sorry to interrupt. Just -- 19 just for the court reporter's benefit, if you're 20 reading something -- 21 A Oh. 22 Q If you can read it to yourself or read it 23 slowly, either way is fine. 24 A Sorry. Let me read it to myself. 25 Okay. Can you repeat the question again</p>	<p>88</p> <p>1 little less -- I don't really want to put it that 2 way, but it's going to be different. 3 And here, in this case, the client knows 4 that it has that length of stream and the -- it's -- 5 it's accessing it at that moment at 235N. And, of 6 course, if you've ever used YouTube, you know when 7 you look at a -- at a video, you can get the URL of 8 the video at that particular time because you want to 9 point out to someone exactly where that's -- that 10 video is taking place that you had an interest in, 11 let's say. And so it can go off and say, let -- 12 let -- second server, I'm sort of in the middle of 13 this first one, but I want you now to start sending 14 at 245. Oh, and then also, tell the other one you 15 can now stop. 16 Q Okay. I think I understand. So in this -- 17 as we talked about earlier, you can have copies of 18 the same -- in this case, the same five-minute clip; 19 you have a copy on Server 1; you have a copy on 20 Server 2. The client device is using Server 1, 21 initially. It gets to 235 through the clip, decides 22 to switch, and then the new one, the new server, 23 second server then sends the same stream, same -- 24 same clip, but with an offset of 245 so that, when 25 the client device stops it from the first one to the</p>

<p style="text-align: right;">89</p> <p>1 second and then switches to the second one, the --</p> <p>2 the switch is at the same point in the video?</p> <p>3 A I got that interpretation from this.</p> <p>4 Q Okay. And then further down in the same</p> <p>5 paragraph in Column 9, starting like at line 52, it</p> <p>6 talks about an alternative. Do you see that?</p> <p>7 And I'll highlight "in another</p> <p>8 alternative." Do you see that language?</p> <p>9 A Yes.</p> <p>10 Q Okay. And there it talks about using a</p> <p>11 buffer system of some kind. Do you see that?</p> <p>12 A Yes.</p> <p>13 Q Okay. Can you describe for me how that</p> <p>14 buffering system would allow the client device to</p> <p>15 switch from one -- receiving the stream from one</p> <p>16 server to receiving the same stream from a second</p> <p>17 server?</p> <p>18 A So buffers are employed when -- you know,</p> <p>19 for timing purposes. And so, let's see, from this</p> <p>20 particular thing -- well, he says in another --</p> <p>21 another alternative, a different way to look at this</p> <p>22 using the buffers, once that decision is made, the</p> <p>23 system creates an internal buffer, and it tells the</p> <p>24 one stream to go ahead and fill it with advanced</p> <p>25 portions of the stream. And it could do that, for</p>	<p style="text-align: right;">91</p> <p>1 Is that a laymen's way of saying it?</p> <p>2 A I think that's a fair characterization of</p> <p>3 this process. And like I said, it's -- it's not</p> <p>4 unique to this.</p> <p>5 Q Okay. And then finally, towards the</p> <p>6 bottom, it talks about doing a switch when you have</p> <p>7 voice streams. And that's starting at line --</p> <p>8 Column 9, line 66. Do you see that? And I've</p> <p>9 highlighted the bottom of Column 9 on the screen.</p> <p>10 A I see it. Let me just -- right.</p> <p>11 Q Okay. And what does it mean in the context</p> <p>12 of voice streams that you -- that they can, quote,</p> <p>13 "be synced" before a switch by snipping out and</p> <p>14 putting in minutes -- minute bits of silence between</p> <p>15 words? And that last part I read was on the top of</p> <p>16 Column 10.</p> <p>17 A Right. What that means is that that is a</p> <p>18 common technique -- first of all, they're talking</p> <p>19 about synchronized. And so if you want to increase</p> <p>20 the amount of data required for a stream, you can add</p> <p>21 things to the stream, and in this case, they're</p> <p>22 adding minute bits of silence between the words.</p> <p>23 And you say, unique, minute bits of</p> <p>24 silence, well, that's a -- that's actually a</p> <p>25 technique used in film production. It's -- it's also</p>
<p style="text-align: right;">90</p> <p>1 example -- for example -- by instructing the first</p> <p>2 server to deliver packets faster than those packets</p> <p>3 can be rendered, which means that the client player</p> <p>4 is showing the video, dynamically, in real-time to</p> <p>5 the viewer, but the video is delayed, and it's</p> <p>6 allowing a buffer to be filled up faster than it can</p> <p>7 drain the buffer completely. And that sort of buys</p> <p>8 it time and could potentially buy it -- could buy it</p> <p>9 an improvement.</p> <p>10 It doesn't make -- it does say the</p> <p>11 statement above, "picking the server it likes least."</p> <p>12 So it's picking the server it likes best, picking the</p> <p>13 server it likes least, according to some criteria,</p> <p>14 and then it allows it -- buffering is one way that it</p> <p>15 can -- it can catch up, if you will.</p> <p>16 Q Okay. So --</p> <p>17 A Just some timing manipulations.</p> <p>18 Q To put it in laymen's terms, it would be</p> <p>19 storing up some of the stream it receives -- you</p> <p>20 know, it's playing at one rate. It's going to store</p> <p>21 it up at a faster rate. So then when it does the</p> <p>22 switch, it can continue to play out of memory until</p> <p>23 the new -- new connection to the new server is</p> <p>24 maintained or -- or established, and then it switches</p> <p>25 over to the second stream.</p>	<p style="text-align: right;">92</p> <p>1 used to some extent in compression. It can be used</p> <p>2 in voice synthesis, and so on. And the reason it's</p> <p>3 minute bits -- yeah, minute bits, it -- it means</p> <p>4 little tiny spaces of silence that no one is going to</p> <p>5 notice in -- in -- in the audio, in the voice. So --</p> <p>6 so right now, we -- we don't know if something in</p> <p>7 this channel is slipping in little -- little, you</p> <p>8 know, 15 milliseconds of silence in between the words</p> <p>9 that I'm saying.</p> <p>10 Because the delay between the words, you</p> <p>11 know, even in normal conversation, is very, very</p> <p>12 large. And this is just one way to make that data</p> <p>13 stream larger -- oh, and not affect the perceived</p> <p>14 quality.</p> <p>15 MR. YOUNG: Okay. So how would that be an</p> <p>16 example of -- like the sentence right before it,</p> <p>17 which says -- I'm sorry, Juan, can you -- can you</p> <p>18 give me control back, please?</p> <p>19 IT TECHNICIAN: We've reached the end of</p> <p>20 the tape.</p> <p>21 MR. YOUNG: Can we please go off the record</p> <p>22 for a second?</p> <p>23 (Break in proceedings.)</p> <p>24 By MR. YOUNG:</p> <p>25 Q Okay. So, Dr. Myler, we have been looking</p>

<p style="text-align: right;">93</p> <p>1 now at Column 9 of line 66 of the Shaw reference, and 2 we're talking about voice streams. 3 And in this case, it says that you're going 4 to sync them before a switch; correct? 5 A Yes. 6 Q Okay. 7 A And I think -- I think that's what I had 8 said earlier, too, was before the switching, some 9 singing was going on. I mean, the synchronization 10 can happen after the switch but that's pointless. 11 Q Okay. And I think you already answered 12 this already, but just to make sure we're clear on 13 the record because we had a disruption there, if you 14 could describe for me how the system would, in this 15 example, switch from one voice stream with -- to 16 another voice stream and do the synchronization 17 before the switch? Like, describe for me how that 18 would -- how that would work as described in this 19 example. 20 A Okay. You have two voice streams, and -- 21 and for the example I'm going to use, they're both at 22 the same rate, and you're trying to synchronize them 23 up, but they're -- let's say, they're offset in 24 time. And also, the zone is called padding. And so 25 you pad the one stream with these little bits of</p>	<p style="text-align: right;">95</p> <p>1 Figure 4 of the -- of the patent, of the Shaw patent, 2 and I'm going to pull that up on the screen here so 3 we can all see it. 4 A Oh, Figure 4. 5 Q And I'm going to have to make it a little 6 smaller just so I can get the whole thing on the 7 screen. 8 A I have got it here on paper. 9 Q Okay. Great. Okay. So I got figure -- 10 sorry. I'm having some -- some delay here. 11 I have Figure 4 on the screen. It has a 12 number of steps labeled 400 through 418. 13 Do you see that? 14 A I do. 15 Q Okay. Now, with the background that we've 16 discussed between all of the figures, and we've 17 discussed this morning, can you describe for me what 18 a POSITA would understand Figure -- the steps of 19 Figure 4 to be? 20 A In light of the hypothetical examples that 21 we talked about earlier? 22 Q I'll re-ask the question. 23 A Oh. 24 Q A POSITA looking at Shaw, what would that 25 person understand Figure 4 to say?</p>
<p style="text-align: right;">94</p> <p>1 silence, and it makes it longer. It makes the bit 2 stream longer between point A -- Time A and Time B, 3 and that gives -- that brings it up into 4 synchronization. 5 It's sort of like making -- slowing the 6 fast horse down so the slow horse can catch up. 7 And -- and it's, like I said, a synchronizing -- 8 synchronizing technique. And it's below perception, 9 so nobody notices that it's actually taking place. 10 And that's what he's talking about here. 11 Q Okay. So after that synchronization is 12 done, and it's before the switch and then the switch 13 happens, the -- the listener in this case, because 14 this is voice, the listener wouldn't know a 15 difference in the voice stream from one to the other 16 because that synchronization would have happened 17 ahead of time and allowed that switch to happen 18 without the listener noticing; is that true? 19 A That -- that's what is implied by this 20 example. You know, he says: 21 "The above are merely exemplaries and a 22 convenient switching technique may be implemented." 23 But that's one way you could do it, is what 24 they're saying. 25 Q Great. Okay. Let's -- let's turn now to</p>	<p style="text-align: right;">96</p> <p>1 A Oh, okay. Figure 4 -- of course, we have 2 to go to the description to find out what Figure 4 3 says. Figure 4's description. 4 Q Dr. Myler, just make sure that the -- the 5 court reporter has to translate everything that 6 you're saying. So if you're talking to yourself, 7 just -- just don't make any audible noise. Yeah, 8 thank you. 9 A Okay. Figure 4, I'm now looking on -- in 10 Column 10, line 4, thus, as summarized in the flow 11 chart of Figure 4, which is basically like what you 12 said we were talking about these other parts earlier. 13 The client player provision, according to the 14 invention, performs a query to a named server against 15 a CDNSP network map. So that's that first block. 16 Yeah, this step -- this is Step 400. So 17 that's that query that we were talking about earlier, 18 asking the main server for information. 19 And he goes on to say the query is made 20 asking for a particular service, for example, RTSP, 21 which we also talked about, and it would be familiar 22 to a POSITA -- he would know what that means -- via a 23 particular protocol, TCP. In this case, this is -- I 24 think, it's transport control protocol. This is one 25 of the fundamental digital networking protocols, TCP.</p>

<p style="text-align: right;">97</p> <p>1 You may have heard TCP IP, Internet protocol, in a 2 particular domain. 3 In response, at 402, the name server 4 returns a set of one or more tokens with each token 5 defining a machine, or, in the preferred embodiment, 6 a group of machines from which the player should seek 7 to obtain the stream. So that happens with those 8 tokens that we talked about. The player may then 9 optionally perform one or more tests to determine 10 which of a set of servers provides a best quality of 11 service for the stream. And as he said, this is the 12 test in 404. That server is then used to retrieve 13 the stream, which is Step 406. And at Step 408, a 14 test is performed to determine whether the client 15 player is still receiving this stream. 16 So 408 is sort of 17 a let's-see-if-we're-still-getting-it kind of thing, 18 and if not, then there's no point in going any 19 further. I mean, that's how I'd interpret it. If 20 not, the routine ends. If, however, the client 21 player is still receiving the stream, the routine 22 continues at Step 410 with the client player code 23 repeating the DNS serve query -- this is one of those 24 commands to RTSP -- during playback to determine 25 whether there was a better source for the stream.</p>	<p style="text-align: right;">99</p> <p>1 acceptable service from the existing source, and if 2 they are, then they continue receiving the stream. 3 They continue receiving -- if so, the routine returns 4 to Step 408 and repeats the process at a given 5 frequency, whatever that was. 6 If the outcome of the test at 412 indicates 7 that the stream is unacceptable, the routine 8 continues at Step 414 to initiate the switch to the 9 better stream source. As noted above, preferably the 10 switch is carried out on-the-fly as appropriate to 11 maintain and/or enhance quality of service. And that 12 was part of that earlier discussion of synchronizing 13 and dropped, and stuff like that. 14 Thereafter, at Step 416, the client player 15 continues to obtain the remainder of the stream from 16 the new source. Of course, the best source may be 17 changed again if the circumstances warrant. In a 18 preferred embodiment, and as indicated at Step 418, 19 the client player publishes data back to the CDNSP, 20 which is the network, identifying the tests it ran to 21 determine the best server. 22 So it's sort of giving back, paying 23 forward, kind of thing. Such data may then be used 24 to augment the network map that is used for 25 subsequent request routing determinations.</p>
<p style="text-align: right;">98</p> <p>1 So that's sort of the 410 is the better 2 source -- wait -- 410, yeah. But this was repeating 3 the query again that we had earlier. And let's see. 4 Ah. The period over which the query is repeated is 5 variable, and it's -- it's necessarily not going to 6 get that from looking at the diagram and is dependent 7 on the bandwidth available between the client and the 8 network. 9 And then he goes on to say, "For a live 10 stream, a query minute may be a desirable frequency." 11 In other words, at some point there's 12 the -- if you keep pestering the network looking for 13 a better -- you know, while you're trying to make 14 this decision, that -- that -- that may actually, you 15 know, sort of like Heisenberg's uncertainty thing, 16 might -- might affect things. 17 So -- and he's sort of just saying 18 query-per-minute may be a desirable frequency. And, 19 of course, that -- that's just back at the time. A 20 shorter frequency, for example, every few seconds, 21 may be desirable for a broadband connection. So, in 22 other words, that how often that's repeated is sort 23 of dependent on how things are going. 24 At Step 412, a test is performed to 25 determine whether the client player is receiving</p>	<p style="text-align: right;">100</p> <p>1 Q Okay. So to kind of summarize this, in the 2 examples we've been using before, like in Figure 2, 3 you -- the invention, the -- the enhancement to the 4 client browser, the 304 look-up, it does an initial 5 query. It gets -- in this example, we'll say it gets 6 back three tokens from three different servers. 7 Let's say it chooses Server A. It -- that one's the 8 fastest with the response time. It starts receiving 9 the stream from Server A. It's playing that stream. 10 It's doing a test to make sure that it's still 11 receiving it at an acceptable level; if it is, it 12 keeps receiving it from the same Server A. 13 If the service from Server A becomes 14 unacceptable, it determines that in 412 and then it 15 decides to switch, let's say, to Server B. And then 16 it continues to get the same stream that it got from 17 Server A to Server B and then it continues to play 18 that same stream from Server B. 19 Is that a fair summary? 20 MR. PONDER: Objection, form. 21 THE WITNESS: I'm not following the Server 22 A and B. He didn't mention Server A and B. 23 By MR. YOUNG: 24 Q Okay. I'll re-ask the question. So, 25 Dr. Myler, I'm trying to give an example so that we</p>

<p>101</p> <p>1 can summarize what's -- what you've just described in 2 Figure 4; okay? 3 A Oh, okay. I thought -- right. I thought 4 you were trying to rephrase -- 5 Q No, no, no. 6 A -- what Shaw said about Figure 4, which is 7 what I read. 8 Q Right. 9 A Because the original -- your original 10 question was what's happening in Figure 4. 11 Q I'll re-ask the question, and I apologize. 12 It's a long question, but I have to have -- I have to 13 go through the steps. 14 A I understand. 15 Q So this is an example -- an example. I 16 apologize. Sorry. Getting a little frustrated with 17 technology right here. 18 A Networking technology, no less. 19 Q Yes. Okay. So to reset, I'm going to give 20 you an example, a hypothetical, of how Figure 4 would 21 work, okay? 22 A Yes. 23 Q And you can tell me if this is a fair 24 example of how Figure 4 would work, okay? 25 A Okay.</p>	<p>103</p> <p>1 proceed. 2 Q And so, in this particular test, which 3 we've just talked about earlier today, it sends out a 4 ping, as you used the term. It comes back the 5 fastest one -- and let's say in this particular 6 hypothetical it's Server A is the fastest -- and then 7 that one is selected to receive the stream from, 8 which is Block 406. 9 So do you have it so far? 10 A Oh, okay. You're saying that, in this 11 example, the decision of best was based on bandwidth, 12 because that's not limiting in this -- in this 13 figure. But go ahead. And so which one has the 14 highest bandwidth? 15 Q In this example, my example, it's Server A. 16 A Okay. 17 Q Okay. It gets selected. Now, the -- the 18 viewer, the client, is receiving the stream from 19 Server A, okay? 20 A Okay. 21 Q All right. Then -- now we're at Step 22 408 -- and then it does a query, and it says, are we 23 still receiving the stream from Server A? And then 24 it gets to 412, and it says, is that stream still 25 acceptable? If the answer is yes, then it continues</p>
<p>102</p> <p>1 Q All right. The DSN look-up, Block 304 of 2 Figure 3, would send out a query. In this particular 3 example, the main server returns, in this example, 4 three tokens for three different servers where the 5 stream can be obtained. Okay. 6 Do you understand so far? 7 A Yes, I think we talked about that that was 8 that Y5Q thing. 9 Q Exactly. Okay. So now, Block 306 there in 10 Figure 3 does a test, and the fastest of the three 11 servers that the tokens were received from, the 12 fastest one gets selected. Let's say that's Server 13 A. 14 Do you understand so far? 15 A Okay. So you had servers A, B, and C -- 16 you have tokens for servers A, B, and C. 17 Q Correct. 18 A Which were a result of the query main 19 server processing 400, and the main server returned 20 A, B, and C tokens. 21 Q Correct. 22 A And now, you're testing the tokens with 23 404, and the 404 is the test -- let's see -- okay. 24 And that 404 does some tests on those -- those 25 tokens, and then -- and then, go ahead. Please</p>	<p>104</p> <p>1 to play the stream from Server A; is that correct? 2 A That's -- that's one way it could be, 3 yeah. 4 Q Okay. Now -- and let's say it continues to 5 do that. It continues to run these tests. The 6 server service is still acceptable. But all of a 7 sudden, they run the test and the service is no 8 longer acceptable. 9 A Well, just, if I might interrupt briefly, 10 since you're creating a hypothetical that I'm trying 11 desperately to follow. 410 is -- 410 is also a 12 query, not only to see if it's still doing the -- 13 the -- if it's still doing -- receiving the stream, 14 but it's also looking to see is it still the best one 15 out of the query set. 16 Q Okay. 17 A Yeah. It says here: 18 "At Step 410, with a client player code 19 repeating the data serve query during playback to 20 determine whether it is a better source for the 21 stream." 22 So it's not only to see if the original 23 stream was -- is still there, which is what -- is 24 what it sounded like you said that you said. That's 25 why I'm pointing out --</p>

<p>105</p> <p>1 Q Okay.</p> <p>2 A -- it's also looking to see, maybe, I want</p> <p>3 to switch streams.</p> <p>4 Q Okay. Then it gets to Step 412, and in</p> <p>5 Column 10 line 30, it says:</p> <p>6 "If the outcome of the test at 412</p> <p>7 indicates the stream source is unacceptable, the</p> <p>8 routine continues to Step 414;" correct?</p> <p>9 A Yes.</p> <p>10 Q Okay. So if the stream is -- is not</p> <p>11 acceptable, and you can see in Box 412 there's</p> <p>12 "stream acceptable question mark," and there's a yes</p> <p>13 and there's a no.</p> <p>14 Do you see that in Figure 4 on the</p> <p>15 screen?</p> <p>16 A Yes, that's a standard decision --</p> <p>17 Q Okay.</p> <p>18 A -- triangle.</p> <p>19 Q Okay.</p> <p>20 A Or trapezoid.</p> <p>21 Q So if the outcome of 412 in my example, the</p> <p>22 stream that the client player is receiving from</p> <p>23 Server A is no longer acceptable, then we go,</p> <p>24 continue to the flow chart, and we go to 414;</p> <p>25 correct?</p>	<p>107</p> <p>1 it was receiving from Server B; correct?</p> <p>2 A That's what it says, yes.</p> <p>3 MR. YOUNG: Okay. Okay. So now that I</p> <p>4 think we've gotten to a good stopping point, let's</p> <p>5 stop for lunch.</p> <p>6 Do we want to take, maybe, 45 minutes for</p> <p>7 lunch?</p> <p>8 COURT REPORTER: Are we off the record?</p> <p>9 MR. YOUNG: We are. I'm sorry, Brooke.</p> <p>10 We're off the record.</p> <p>11 (Lunch recess.)</p> <p>12 COURT REPORTER: Back on the record.</p> <p>13 By MR. YOUNG:</p> <p>14 Q All right. Dr. Myler, welcome back.</p> <p>15 A Thank you.</p> <p>16 Q In the Shaw patent that we've been</p> <p>17 discussing earlier this morning, it has certain</p> <p>18 claims in it towards the end. Are you familiar with</p> <p>19 those claims?</p> <p>20 A I've looked at those claims, yes.</p> <p>21 Q Okay. Okay. So I have Claim 1 at the</p> <p>22 bottom of Column 13, starting at line 45, highlighted</p> <p>23 on the screen. And it goes up to the top of</p> <p>24 Column 14. If you could take a minute to review that</p> <p>25 claim, and then I have some questions to ask you</p>
<p>106</p> <p>1 A Yeah, that's -- that's the decision block:</p> <p>2 Service acceptable, no; and then it goes to the 414</p> <p>3 switch.</p> <p>4 Q Okay. So then -- then it decides that I'm</p> <p>5 going to now get a better -- or I'm going to get the</p> <p>6 stream -- instead of -- because -- well, strike that.</p> <p>7 So now we've gotten to a point where the</p> <p>8 stream received from Server A is no longer</p> <p>9 acceptable. It -- the system then switches. In this</p> <p>10 case, let's say, to Server B. And now the -- instead</p> <p>11 of the viewer getting the stream from A, Server A, it</p> <p>12 gets the same stream from Server B; correct?</p> <p>13 A Yes, which might be a better stream source,</p> <p>14 like it says here on -- on 33 continues at Step 414</p> <p>15 to initiate the switch to the better stream source.</p> <p>16 So it's made a decision that it's found a</p> <p>17 better stream.</p> <p>18 Q Okay. And then in column -- right below</p> <p>19 that, in Column 10 -- sorry. I'm having lag problems</p> <p>20 again. In Column 10, line 34, it says:</p> <p>21 "Thereafter, at Step 416, the client -- the</p> <p>22 client player continues to obtain the remainder of</p> <p>23 the stream from the new source."</p> <p>24 So in this case, after it switches from A</p> <p>25 to B, it receives the remainder of the media source</p>	<p>108</p> <p>1 about it.</p> <p>2 A Okay. I've read through that.</p> <p>3 Q Okay. So at a high level, is -- does</p> <p>4 Claim 1, in general, reflect the process that we were</p> <p>5 discussing in Figure 4 of the Shaw patent in your</p> <p>6 opinion?</p> <p>7 A Well, Figure 4 wasn't to the detail of the</p> <p>8 claim, but I would say that, in general, Figure 4 --</p> <p>9 we could probably squeak out what's happening here in</p> <p>10 the claim by going through Figure 4.</p> <p>11 Q Okay. So just to --</p> <p>12 A Figure 4 was the flow chart, and yeah. So,</p> <p>13 I mean, I could look at it and apply it up to that --</p> <p>14 that and say is this Figure 4 or not. But I'm going</p> <p>15 to say, just looking at it, most likely, yes.</p> <p>16 Q Okay. So just kind of quickly, this is the</p> <p>17 apparatus claim, but then it talks about having a</p> <p>18 process to sort of carry out some method steps. And</p> <p>19 I've highlighted the term "method steps" in</p> <p>20 Column 13, line 51. Do you see that?</p> <p>21 A Yes.</p> <p>22 Q Okay. So the first -- the first step in</p> <p>23 this method is it's receiving a list of servers that</p> <p>24 are located within the content delivery network;</p> <p>25 right? There's a -- there's an identification</p>

<p>109</p> <p>1 process to identify the servers; is that right?</p> <p>2 A Yes, it gets that out of this CDN map</p> <p>3 generating process.</p> <p>4 Q Okay. And then -- then it issues a request</p> <p>5 from the set of servers and receives a response.</p> <p>6 That's similar to the -- where an -- an example of</p> <p>7 that step, the issuing step, is the tokens that we</p> <p>8 talked about earlier, the tokens, 315 in Figure 3</p> <p>9 that are received back from the Block 304; is that</p> <p>10 correct?</p> <p>11 A Well, let's see. I don't think it says</p> <p>12 tokens, but it does -- using the data associated with</p> <p>13 the response from each of the set of servers to</p> <p>14 identify -- so that -- that data might be those</p> <p>15 tokens.</p> <p>16 Q Okay. Okay. And then it talks about, in</p> <p>17 the next step, it says:</p> <p>18 "As each stream of media is being received</p> <p>19 from a first server."</p> <p>20 Do you see that?</p> <p>21 A Yes.</p> <p>22 Q Okay. So the media stream is being</p> <p>23 received from the first server and rendered on the</p> <p>24 media player; is that correct?</p> <p>25 A Yes, the media player is playing it.</p>	<p>111</p> <p>1 "Wherein the given indication is the first</p> <p>2 server will be unavailable."</p> <p>3 Correct?</p> <p>4 A This is a -- a dependent claim of a</p> <p>5 dependent claim. So this just says the indicators --</p> <p>6 and we talked about that, the first server is going</p> <p>7 down, or something like that.</p> <p>8 Q Yeah, and that's in Column 9, line 29,</p> <p>9 where it talks about acceptable can also mean from a</p> <p>10 stream management point of view. Do you remember</p> <p>11 that?</p> <p>12 A Yes. And that -- and that -- and this --</p> <p>13 this dependent claim is addressing that.</p> <p>14 Q Okay. Great. So then going back to</p> <p>15 Claim 1, now we go to the top of Column 10, and it</p> <p>16 says:</p> <p>17 "If the stream is not acceptable, and --"</p> <p>18 A At the top of Column 10? Excuse me. I</p> <p>19 didn't get that.</p> <p>20 Q I apologize. Strike that question.</p> <p>21 Now, we're going to go back to -- we'll</p> <p>22 reset. We're going to go back to Claim 1 of the Shaw</p> <p>23 patent, and we're going to go from the bottom of --</p> <p>24 of Column 13 to the top of Column 14.</p> <p>25 Are you with me?</p>
<p>110</p> <p>1 Q Okay. And then there's a determination,</p> <p>2 like we talked about in Block 308 of the Figure 3,</p> <p>3 where it's determining whether the media stream is</p> <p>4 acceptable according to a given metric. Do you see</p> <p>5 that?</p> <p>6 A Yes, that was that test, I believe.</p> <p>7 Q Okay. And that's -- if you skip ahead for</p> <p>8 a moment to the -- some of the dependent claims,</p> <p>9 Dependent Claim 4, as an example, that metric would</p> <p>10 be if the media stream is being thinned by the first</p> <p>11 server.</p> <p>12 Do you see that?</p> <p>13 A Yes. Number 4, let's see, the apparatus in</p> <p>14 Claim 1 where the media stream is not accessible is</p> <p>15 being thinned by a first server. So it's -- it's</p> <p>16 identifying in that dependent claim one of the</p> <p>17 reasons for rejecting it as acceptable.</p> <p>18 Q Okay. And then in -- in Claim 5, it will</p> <p>19 say -- it also says:</p> <p>20 "Wherein the media stream is not</p> <p>21 acceptable, if a given indication from the first</p> <p>22 server is received."</p> <p>23 Do you see that?</p> <p>24 A Yes.</p> <p>25 Q Okay. And then in Claim 6, it says:</p>	<p>112</p> <p>1 A Right.</p> <p>2 Q Thank you for that correction.</p> <p>3 On the top of Column 14, it says:</p> <p>4 "If the media stream is not acceptable, and</p> <p>5 as the media stream continues to be received, taking</p> <p>6 a given action to initiate delivery of the media</p> <p>7 stream from -- from the given server, wherein the</p> <p>8 given server includes the steps --" and it has a list</p> <p>9 of steps.</p> <p>10 Do you see that?</p> <p>11 A Yes. A, creating a buffer; B, receiving</p> <p>12 from the first server and caching in the buffer, et</p> <p>13 cetera.</p> <p>14 Q Okay. So this is an example of switching</p> <p>15 where you have the stream coming from a first server,</p> <p>16 that stream is not being -- that media stream is no</p> <p>17 longer acceptable for some reason, and then you're --</p> <p>18 and you switch to get the same stream from a</p> <p>19 different server; is that correct?</p> <p>20 A That does seem like what it reads to me,</p> <p>21 yes.</p> <p>22 Q Okay. And then if you go down to Dependent</p> <p>23 Claim 2, it says that you -- when you do this switch</p> <p>24 between servers, you -- you then cease transmission</p> <p>25 to the media stream before rendering the advanced</p>

<p>1 portions of the media stream. 2 Do you see that? 3 A Yes. 4 Q Okay. So what does that mean? 5 A Well, in this system, which is the 6 apparatus in 1, yeah. The code in one of those 7 modules executable by the process server, which is 8 mentioned in Claim 1, to initiate an instruction to 9 the first server to cease transmission of the media 10 stream. So it's -- so it -- it has an instruction 11 that can tell the server, you don't need to stream 12 anymore because we're not using you. Yeah, before 13 rendering the advanced portions of the media 14 stream. 15 Q Okay. And then, in the third -- the third 16 claim, the third dependent claim, it says that -- I 17 think we talked about this earlier, but it says that 18 the code is executable by the processor to match data 19 packets received from the first server and the given 20 server -- so those are the two servers -- such that 21 the media stream rendered in the media player appears 22 continuous. 23 Do you see that? 24 A Yes. 25 Q Okay. So what would a POSITA understand</p>	<p>113 115 1 that I'm understanding it right, and I'll highlight 2 it on the screen here it says: 3 "In other words, when a server detects that 4 there's an insufficient communication bandwidth 5 between the server and the client, the server may, 6 quote, 'thin' the stream by dropping information, 7 (example: Frames from the stream) so that the client 8 can keep up." 9 Do you see that? 10 A Yes. 11 Q Do you -- you do believe that that is an 12 accurate description of what thinning means when that 13 is used in the Shaw reference? 14 A I think it's accurate, yes. 15 Q Okay. All right. And in addition to Shaw, 16 you've also given opinions on the Barnes reference 17 that we marked as Exhibit 5 in this declaration. 18 Are you familiar with the Barnes reference? 19 A I am familiar with Barnes. 20 Q Okay. Okay. So I have Barnes up on the 21 screen. 22 A Let me get to Barnes here. 23 Q Are you ready? 24 A I am at Barnes, yes. 25 Q Okay. So I know Barnes has a lot of</p>
<p>114 1 that sentence to mean? 2 A Well, the POSITA, you know, would go back 3 to the spec and see that business about 4 synchronization that we were talking about, and 5 that's what this dependent claim is saying. It 6 can -- it can do that. 7 Q Okay. So when the switch happens, the 8 viewer on the media player wouldn't notice a 9 difference in the -- the stream because it would 10 be -- it would appear -- appear continuous to that -- 11 to that viewer; is that correct? 12 A That is the objective of that claim. 13 Q Okay. Great. And then quickly, in your 14 declaration, you give a description of what thinning 15 the stream means. Do you recall that? 16 A No, but I can pull that up real quick. 17 Q Yeah, let's pull that up on the screen. It 18 is on page 42 of your declaration. 19 A Are we talking about paragraph 72? 20 Q Yes, paragraph 72 on page 42 of your 21 declaration, which has been marked as Exhibit 1 in 22 this -- in this deposition. 23 A Yes. 24 Q Okay. So in this -- in this paragraph, 25 when you discuss thinning -- I just want to make sure</p>	<p>116 1 disclosure in it. But from the disclosure that you 2 rely on for your opinions in this matter, can you 3 give a high-level description of what a POSITA would 4 understand Barnes to disclose, again, with respect to 5 the functionality that you're relying on from Barnes 6 in your opinions in this case? 7 A Well, Barnes -- a POSITA looking at Barnes 8 would see it, of course, as the title -- of course, 9 this is an application. It doesn't mean they 10 actually did it. 11 "System method and computer program product 12 for providing location-based services and mobile 13 E-commerce." So the POSITA is going to look at this 14 and say, first of all, it's a mobile system, and 15 we're looking at location-based services, which can 16 be important when moving around in a network and when 17 moving, period, in E-commerce, which is very 18 complicated and involves a lot of different kinds of 19 data and media. 20 And if you look at the -- Figure 1 would 21 basically show them, okay, this is -- we've already 22 concluded that it's -- it's a portable system; it's 23 got memory, a CPU, and a processor and IOs, so it's a 24 little hand-held computer. It has a communications 25 module, which fits with the mobile E-commerce and</p>

<p>117</p> <p>1 location-based services. And it also includes a 2 location module, which would be some kind of GPS 3 thing, and, let's see, a recorder, data management 4 module, authentication module, which ties into the 5 networking idea. And without looking at the, you 6 know, going in and reading through their specific 7 description, an image module for displaying pictures 8 possibly, a commerce module, and application modules. 9 And this device has a display, user input 10 means, and then some sort of audio out, audio/visual 11 display. 12 Q Okay. And so Shaw was -- the invention in 13 Shaw, or the disclosure in Shaw, dealt with a client 14 media player with certain functionality; right? 15 A That was involved in Shaw, yes. 16 Q So is it your opinion that a POSITA would, 17 when they're looking to combine Barnes and Shaw, they 18 would take the Barnes mobile device and put the media 19 client player from Shaw onto that device; is that 20 your opinion? 21 A Certainly the aspects of that media player. 22 I think the -- what they would be mainly looking at 23 is the aspects of that media player that allow it to 24 seek out and find better sources from multiple 25 sources. And, of course, it wouldn't be just</p>	<p>119</p> <p>1 Q Okay. So in this case, where it says you 2 might -- you might -- you might route the media to 3 a -- a larger screen, as an example, to get better 4 quality because this -- this screen is larger, is 5 that a good example -- a good summary of that 6 sentence that I highlighted in paragraph 69? 7 A That might be a reason. You're on a small 8 screen device, i.e., this portable device, and the 9 portable device is aware of a remote device with the 10 potential for better quality. It could route. It 11 could shift over and send the data to the better 12 screen. 13 Q Okay. 14 A Because it says there: 15 "It may be large or of a better quality 16 than the display device." 17 In other words, sometimes larger is better. 18 And, of course, better quality could be a higher 19 resolution, even though it's the same size. 20 Q Yeah. But in -- in essence, it's a quality 21 metric of the -- of the screen that you're displaying 22 the -- the media on? 23 A Yes. 24 Q Okay. All right. So now, paragraph 70 you 25 also reviewed as part of your opinion in this matter;</p>
<p>118</p> <p>1 restricted to a media player, although that's the 2 primary example in Shaw. 3 Q Okay. Okay. Okay. Do you remember 4 reviewing -- I have on the screen now, paragraph 69 5 of the Barnes reference. Do you remember reviewing 6 that particular paragraph as part of your opinions in 7 this matter? 8 A Of course, I considered this entire patent. 9 And yes, I sort of remember 69. 10 Q Okay. So as part of this device in Barnes, 11 there's this communication module. I believe you 12 discussed that earlier, just a few minutes ago; is 13 that right? 14 A It was in that figure of the overall 15 system. 16 Q Okay. So this communication module can 17 route certain data to remote devices; do you see that 18 in the first sentence in paragraph 69? 19 A Yes. 20 Q Okay. So one of the things this 21 communication module can do is -- is route the 22 received media to -- to different displays. Do you 23 see that? And I'll highlight it -- I'll highlight 24 that on the -- on the screen. 25 A Right.</p>	<p>120</p> <p>1 right? 2 A Yes. 3 Q Okay. And here, it talks about 4 communicating with the device between two or more 5 communication networks. Do you see that? And I kind 6 of have that highlighted on the screen in 7 paragraph 70. 8 A Yes. 9 Q Okay. And then it kind of talks about 10 these -- what it calls "program rules" from -- to 11 determine which network to connect to. 12 Do you see that? 13 A I do. 14 Q Okay. What's your understanding, based on 15 Barnes -- your review of Barnes, as to what the 16 programmed rules are? What do those refer to? 17 A Oh, okay. So the program rules, the system 18 basically uses the program rules to help determine 19 which available network to establish communication 20 with, and those rules are stored in memory. As it 21 states here: 22 "Based on information of the available 23 networks with which the Device 101" -- which I'm 24 pretty sure is what we were just looking at -- yep, 25 101 -- "must determine the available networks with</p>

<p>121</p> <p>1 which to establish the communications." 2 So these are -- these are -- this is sort 3 of like a little tiny database that it can consult. 4 And they're stored in memory based on information on 5 available networks. It's designed to communicate and 6 may also be based on user activity or anticipated 7 user activity. The program rules may be designed to 8 provide any desirable results, such as increasing 9 efficiency, reducing costs and/or increasing 10 throughputs. 11 So there is this sort of information store 12 that the device has access to that says things about 13 the networks that it -- that it can connect to. 14 And -- and in this device, we're looking at Bluetooth 15 and personal area networks, wide area networks, 16 Internet, wireless, and so on and so forth. 17 Q Okay. So in that last sentence in 18 paragraph 70, and it talks about program rules, it 19 says "increasing efficiency." Do you see that? I'll 20 highlight that on the screen. 21 A Yes. 22 Q Okay. What does "increasing efficiency" 23 mean? 24 A In this instance, increasing efficiency 25 is -- well, efficiency has to do with how well a</p>	<p>123</p> <p>1 these, but just -- just real quick. 2 When it says "reducing costs," that's an 3 example that you gave; instead of using the cellular 4 network, you may want to use the Wifi network, as an 5 example? 6 A Yes, and it's -- and it's more efficient to 7 use that network than it is to use the cellular 8 network. 9 Q Okay. And when it says "increasing 10 throughput," is that a reference to -- well, I'll ask 11 the question to you: 12 What does -- what does "increasing 13 throughput" mean? 14 A Possibly a higher bandwidth channel. 15 Q Okay. 16 A More bitrate. 17 Q All right. Okay. 18 A Yeah. Throughput, I think, there was an 19 example somewhere where switching from headset to 20 laptop speakers, and that certainly would be an 21 increasing throughput kind of thing. 22 Q Okay. Now, in paragraph 71, there's a 23 determination. It appears to be choosing between one 24 or more -- one or more of the communication -- 25 withdraw that question.</p>
<p>122</p> <p>1 resource is utilized, and a desirable result may be 2 to minimize power drain. And if the Bluetooth 3 network -- I'm just tossing out an example -- if the 4 Bluetooth network was available and met everything 5 else, criteria, it's going to use less power than the 6 Internet, the wireless and -- or another example, 7 too, is to be on a portable device. 8 You could be tied into the cellular 9 network, and that, number one, is a slow network and 10 it's an expensive network. And if you could somehow 11 get what you need off of a less expensive network, 12 you would increase the overall efficiency of whatever 13 it is you're trying to do. 14 Q Okay. So it's essentially efficiency of 15 the mobile device 101 itself, which network allows 16 the mobile device 101 to act more efficiently; is 17 that a fair summary? 18 A That's what the program rules are. 19 Q Okay. 20 A And according to this discussion here. 21 Q Okay. 22 A It has to do -- and you also see reducing 23 costs and/or increasing throughput, which is also 24 tied to the efficiency. 25 Q Okay. And I think you've already answered</p>	<p>124</p> <p>1 In paragraph 71, he talks about making this 2 determination as to -- as to what network to connect 3 to based on the available bandwidth of each of the 4 available networks; is that correct? And I've 5 highlighted that language in paragraph 71 on the 6 screen. 7 A Yes. 8 Q Okay. And in the parenthetical, it says: 9 "I.e., the amount of data that can be 10 communicated over a given period of time." 11 Do you see that? 12 A Yes. 13 Q Do you believe that's an accurate 14 description of available bandwidth? 15 A I think bandwidth is pretty much directly 16 related to that, yes. 17 Q Okay. So the -- the point of paragraph 71, 18 to try to summarize it, would be choosing the network 19 that gives you the best bandwidth, or maybe, the -- 20 the best throughput as we discussed with respect to 21 paragraph 70; is that correct? 22 MR. PONDER: Objection, form. 23 THE WITNESS: Well, it's more than just 24 picking the highest bandwidth. Is that what you're 25 saying?</p>

<p>125</p> <p>1 By MR. YOUNG: 2 Q Well, maybe I'll -- I'll turn it over to 3 you then. In your -- in your own words, what does 4 paragraph 71 teach? 5 A What it teaches is the -- and, you know, I 6 can't really summarize it any better than it's 7 stated: 8 "The determination of the available network 9 with which to establish one" -- and this may be a 10 typo -- one or more communications that doesn't 11 make -- "one or more communications is based on one 12 or more of the available bandwidth of each available 13 network." 14 So bandwidth is -- is considered. The 15 anticipated bandwidth necessary, which is very 16 important. Because if the user has -- has said, I 17 want to watch this high definition movie, and the 18 bandwidth just isn't there for that, it's like, okay, 19 you can have a standard definition, but you can't 20 have high definition or ultra high definition. You 21 know, that's sort of where that's at -- anticipated 22 bandwidth, the available capacity, or relative 23 available capacity. So how full that network -- how 24 busy is that network. The historical or anticipated 25 availability of band worth -- bandwidth. And that</p>	<p>127</p> <p>1 number of different considerations or factors; 2 right? 3 A Yeah. This example, the determination of 4 the available network with which to establish 5 communications, and then it gives the list of things, 6 one or more of the available bandwidth and then some 7 other things. 8 Q Okay. And then the next paragraph, 72 of 9 Barnes, provides a specific example of how these 10 factors may play out; is that correct, in choosing -- 11 may play out in choosing what network to connect to? 12 Is that correct? 13 A Well, Barnes in 71 was talking about the 14 prior example and then in 72 says, for example, if 15 the available WLAN network has a maximum speed of 50 16 kilobytes per second, which is very slow, an 17 available 3G network would likely have greater 18 available bandwidth. If the user desires to download 19 and watch a movie, which may be -- and this is sort 20 of what I was saying earlier -- watch a movie, which 21 may be determined by a user input in response to a 22 prompt, or by the user opening an audio/video player 23 for external retrieval of the video file. Relatively 24 high bandwidth can be anticipated as being needed. 25 So this sort of like what -- what Shaw was</p>
<p>126</p> <p>1 can include some other things, which is use, knowing, 2 capacity and/or speed data for days of the week or 3 times of the day, the communication capabilities of 4 the device, which is also very important, and the 5 amount of data to be transmitted, and the cost of 6 using each network, in other words, the connection 7 time, the -- how much it costs per amount of data 8 transmitted. 9 Remember, earlier, I was saying how 10 cellular is very expensive compared to Wifi or 11 Internet. And so all of those factors come in -- 12 in -- in deciding -- 13 Q Okay. 14 A -- basically, saying that the determination 15 of the available network has to do with all of these 16 factors. 17 Q Okay. So, basically, the device 101 18 considers a bunch of factors, what type of -- for 19 example, what type of media is going to be shown, 20 things like that, all of these factors, and it 21 decides which network to connect to based on those 22 factors; is that a fair summary? 23 A Those factors influence the decision. 24 Q Okay. So this paragraph 71 is all about 25 figuring out what network to connect to based on a</p>	<p>128</p> <p>1 saying. This may prefer one over another, you know, 2 make the decision of better. Since the WLAN does not 3 provide enough bandwidth to receive the 4 communication, for example, movie data file, in a 5 desired manner without buffering, the higher speed 6 network is selected. So he's, basically, in this 7 example, showing how this decision process might take 8 place. 9 Q Okay. And, again, that's the decision -- 10 the decision we're talking about here is the decision 11 of what network to initially connect to, to -- to do 12 whatever you're planning on doing with the device 13 101; correct? 14 A In this particular example, they were 15 talking about the user making -- there's a prompt. 16 So it's -- the user has decided to do something and 17 so now we need to find a network to do what they 18 want. And we want to intelligently select the 19 network according to a number of, for lack of a 20 better term, quality dimensions, let's say, and 21 efficiencies in there as well, which also can be tied 22 to quality. 23 Q Okay. And so then paragraph 73, which I 24 have now on the screen, here, it's -- so in 25 paragraphs 71 and 72, it's determining what the user</p>

<p>129</p> <p>1 wants to do with device 101. And then in 73, it's 2 identifying available networks to communicate with; 3 is that a fair summary of paragraph 73? 4 A I think the core of 73 is it transmits a 5 request for communication. And with all of the 6 various networks of this particular device is able to 7 get to, and like he points out, communications with 8 some networks, e.g., always on networks may already 9 be established. 10 But like -- like Bluetooth, for example, 11 may be disconnected, and you need to go out and see 12 if there's anything on the other side of the 13 Bluetooth world to connect with and to establish the 14 desired communication and information relating to it, 15 for example, bandwidth data. And that can be 16 established during the requested communication. 17 Q Okay. All right. And then, paragraph 74, 18 it talks about that the device 101 includes some 19 programming for switching communication networks, and 20 I have that highlighted on the screen. 21 Do you see that. 22 A Yes, 74. 23 Q Okay. And here, it talks about 24 establishing a communication with a second network, 25 and then terminating the communication established in</p>	<p>131</p> <p>1 and/or high level of data being communicated and -- 2 or below a predetermined level, a threshold speed, 3 or -- which, of course, bitrates drop for some 4 reason, or increases in noise, which, of course, 5 would degrade the channel. 6 Q Okay. So, basically, they're just certain 7 type of network conditions that are changed, and 8 because of that change, it would want to switch for 9 whatever reason; is that a fair summary? 10 A Well, it's saying the -- the conditions to 11 switch are, Number One, changes in network 12 conditions. And then it gives some examples of 13 things that might -- might make the system want to 14 move to a -- another channel. 15 Q Okay. My only point was, within the first 16 example, Number One, that's just talking about change 17 in network conditions. And there's a variety of 18 examples? 19 A And it says, "Failure of the first network 20 or the first network slowing down." 21 So that -- that -- that's a network 22 condition change. 23 Q Okay. 24 A And it's talking about network, so 25 Bluetooth versus WLAN, versus whatever.</p>
<p>130</p> <p>1 the first network. That's in the second sentence. 2 Do you see that? 3 A I do. 4 Q Okay. And then it talks about certain 5 networks switching conditions in the third sentence 6 of paragraph 74. 7 Do you see that? 8 A Uh-huh. 9 Q Okay. 10 A Yes, I do. 11 Q Okay. And there's, in this case, eight 12 different conditions that are listed. 13 Do you see those? 14 A Yes. 15 Q Okay. So I would like to go through each 16 of those eight conditions. So I've highlighted the 17 first condition. 18 Can you describe for me what the first 19 condition of -- for the network switching conditions 20 in paragraph 74 of Barnes talks about? 21 A Oh, okay. So changes in network 22 conditions, and some of those conditions might 23 include failure of the network or slowing down of the 24 network. And that could be due to a number of 25 different things, high use, i.e., multiple users</p>	<p>132</p> <p>1 Q Okay. If you can describe for me what 2 Number 2, the second condition is referring to? 3 A Okay. Here, the user is making a request, 4 or attempting to make a request. So now, we have an 5 interruption. Users are always interrupting 6 operations, because they're always wanting more. 7 The user making a request, or attempting to 8 make the request to communicate data that is more 9 suitable for communication through a second network. 10 So the -- now, the user's hooked up 11 somewhere. Let's say, they're hooked up to an audio 12 channel that's working very nicely with the network. 13 But now, they want video or a video file or a movie, 14 in other words, a much larger volume of data. And 15 that larger volume of data is decided to be more 16 suitable to, let's say, a higher bandwidth network. 17 And so it would make that -- that would -- that would 18 cause a switch. That would be a re -- a condition 19 for switching. 20 Q Okay. 21 A Oh, and then it -- okay. I'm sorry. Go 22 ahead. I had a blurp there. 23 Q No, that's fine. Okay. Now, let's go 24 to -- 25 A For a moment, I thought I was controlling</p>

<p>133</p> <p>1 this screen.</p> <p>2 Q No, I think I've still got control. Okay.</p> <p>3 So let's -- let's go to 3. If you can, describe for</p> <p>4 me the third -- the third network switching condition</p> <p>5 disclosed in paragraph 74 of Barnes.</p> <p>6 A Okay. So here, we've got the anticipated</p> <p>7 requested use. So this is quite interesting. And</p> <p>8 now, we've got the user has started up a video</p> <p>9 player, like RealPlayer. And the system is saying,</p> <p>10 uh-oh, this is going to require a lot more bandwidth</p> <p>11 than we currently have. So this is another reason to</p> <p>12 switch.</p> <p>13 Q Okay. And the same question with</p> <p>14 related -- with relation to Condition 4.</p> <p>15 A Changes in network availability. So a new</p> <p>16 network shows up. You come into range of something,</p> <p>17 let's say, a device that you've previously paired</p> <p>18 with Bluetooth, and the pairing process is automatic</p> <p>19 and now that network is available. That might --</p> <p>20 that might prompt a switching to take place.</p> <p>21 Q And then how about Number 5, Condition 5?</p> <p>22 A Let's see. Changes in conditions of the</p> <p>23 second network, more bandwidth or less noise. So</p> <p>24 yeah, the second network makes a change, and all of a</p> <p>25 sudden, it has more bandwidth or less noise, which is</p>	<p>135</p> <p>1 Q Okay. How about Number 7?</p> <p>2 A Let's see. The communication capabilities</p> <p>3 of the device. So here we've got -- almost some</p> <p>4 redundancy there -- the communications capabilities</p> <p>5 of the device might imply what -- well, you would</p> <p>6 interpret that as either the device that we're</p> <p>7 talking about, the hand-held device, what are its</p> <p>8 various communications capabilities. And based on</p> <p>9 all of those different capabilities, make a</p> <p>10 selection, find a better server or source, and -- or</p> <p>11 find a better network -- because we're talking</p> <p>12 networks now -- find a better network, and then</p> <p>13 make -- and that would give you a reason for a</p> <p>14 switch.</p> <p>15 And I'm wondering, too, if that might also</p> <p>16 mean -- when they say "device," the -- the device may</p> <p>17 be -- I'm thinking in terms of -- it may -- it may</p> <p>18 use a network for an audio device, let's say, a</p> <p>19 Bluetooth speaker, or it could use a direct wire -- I</p> <p>20 probably shouldn't have used Bluetooth speaker.</p> <p>21 Let's say, a Wifi speaker. A Wifi speaker, and</p> <p>22 you've got a Bluetooth speaker also available. Those</p> <p>23 are two different devices, two different networks,</p> <p>24 which one is judged better, and so you may want to</p> <p>25 make the switch.</p>
<p>134</p> <p>1 basically another network, then that might be a</p> <p>2 reason for switch.</p> <p>3 Q Okay. So you might have selected the first</p> <p>4 network initially. The second network had -- didn't</p> <p>5 have a lot of bandwidth. But then, for some reason,</p> <p>6 the second network freed up and has more bandwidth</p> <p>7 now, and that might be a reason to switch?</p> <p>8 A Yeah, it could be interpreted as a reason</p> <p>9 not to switch. So when you're getting ready to</p> <p>10 switch and then all of a sudden the network is</p> <p>11 better.</p> <p>12 Q Okay.</p> <p>13 A I -- I think what's significant is changes</p> <p>14 in conditions of the second network.</p> <p>15 Q Okay. And is Number 6 similar to that, the</p> <p>16 sixth condition?</p> <p>17 A I think it's more similar to that</p> <p>18 earlier -- one of the earlier ones, where it had</p> <p>19 enough bandwidth. But yeah, the available capacity</p> <p>20 or relative capacity that -- that changes or that --</p> <p>21 the network becomes available with more capacity. In</p> <p>22 other words, you've got two -- let's say, you've two</p> <p>23 networks, and they're exactly the same in terms of</p> <p>24 technologies, and one is full and the other one</p> <p>25 isn't. You may want to switch.</p>	<p>136</p> <p>1 Q Okay. And then lastly, how about Condition</p> <p>2 8?</p> <p>3 A Let's see, the historical or anticipated</p> <p>4 availability. So this is back with -- looking at</p> <p>5 those -- that we talked about a little earlier, those</p> <p>6 rules.</p> <p>7 Historical or anticipated availability of</p> <p>8 bandwidth of networks, which may include, for</p> <p>9 example, use, volume, capacity and/or speed data for</p> <p>10 days of the week or times of the day.</p> <p>11 So this is almost a nod to, you know, where</p> <p>12 you -- you know, with your electric, you -- you can</p> <p>13 enter into a deal with the electric company and not</p> <p>14 use electricity during peak periods. And this is</p> <p>15 sort of alluding to that kind of decision, you know,</p> <p>16 how -- how -- how available is every -- are these</p> <p>17 networks, or what do I anticipate their availability</p> <p>18 to be. And that might go into the decision to</p> <p>19 switch.</p> <p>20 And I guess the -- the best way for me to</p> <p>21 put this is the system is -- is -- has got a</p> <p>22 particular network involved. And for whatever</p> <p>23 reason, it knows a network is coming online that</p> <p>24 wasn't online for some reason. And it's an</p> <p>25 participating that -- oh, and that network should</p>

<p>137</p> <p>1 provide better service, so it's anticipating the 2 switch to that.</p> <p>3 Q Okay. And in your opinions that you 4 provide in this matter, you've offered a number of 5 opinions about a person of ordinary skill in the art 6 combining the teachings of the Shaw patent that we 7 discussed earlier today and this Barnes reference; is 8 that correct?</p> <p>9 A I believe I gave a number of -- of opinions 10 in that regard of a POSITA saying look at Barnes, 11 look at Shaw, and combinations would lead us to a 12 better device.</p> <p>13 Q And as we discussed earlier today, Shaw has 14 various disclosures about network switching 15 capabilities; correct?</p> <p>16 A Shaw did discuss network switching 17 capabilities, yes.</p> <p>18 Q And as we just discussed in Barnes, 19 paragraph 74, it also talks about network switching 20 conditions; is that correct?</p> <p>21 A It did discuss network switching 22 conditions, reasons to switch.</p> <p>23 Q So is it your opinion that a POSITA would 24 take the teachings of Shaw with respect to its 25 network switching conditions and implement them in</p>	<p>139</p> <p>1 techniques could be used in making these decision 2 processes in Barnes as to -- the information gleaned 3 from those could come into these program criteria 4 that Barnes is talking about.</p> <p>5 Q Do you believe that the opinions or the -- 6 network switching conditions of Shaw are -- are 7 limited to RTSP?</p> <p>8 A No, I didn't see any specific limitations 9 in terms of the claims that you would -- it was just 10 RT -- what RTSP basically did for me with Shaw was it 11 placed Shaw in terms of the mind of the POSITA. And 12 at the time of Shaw, which we know was in the right 13 time frame, it allowed me to get into the mind of the 14 POSITA. And -- and being aware of how the access of 15 RTSP could deliver a better overall performance, 16 let's say, from Barnes and Barnes saying, okay, you 17 can look at this network and look at this network and 18 look at this network. It would be very clear to a 19 POSITA that that is very understandable how to do 20 that and -- but what probably is more important is 21 the negotiations that are taking place in the sense 22 of the device talking to the network, talking to the 23 server, and getting information back in order to make 24 a decision, and then being aware of what networks are 25 out there and what they can provide.</p>
<p>138</p> <p>1 the device 101 that is disclosed in Barnes? 2 MR. PONDER: Objection, form. 3 THE WITNESS: Well, there are things 4 happening in -- in Shaw that we might allude to in 5 Barnes, but they're very clearly delineated in Shaw 6 and -- so there are things happening in Shaw to 7 improve what's happening in Barnes. And I think I 8 talked about that in various paragraphs in my 9 report. 10 By MR. YOUNG: 11 Q So is it your opinion that a POSITA would 12 combine the network switching conditions of Shaw with 13 the network conditions -- network switching 14 conditions of Barnes, or would the network switching 15 conditions of Shaw be substituted in place of the 16 network switching conditions of Barnes? 17 A I don't think that the -- it's so much a 18 substitution as it is an enhancement. It's an 19 addition, an improvement. 20 Q So what would the improvement or the 21 enhancement of Shaw be to Barnes? 22 A Well, I think what -- if memory serves, 23 Barnes really doesn't talk about RTSP, which is a 24 mechanism by which the POSITA would know could be 25 used to enhance real-time streaming. And those</p>	<p>140</p> <p>1 And that -- that really is what it is, is 2 this re -- resource allocation and, to some extent, 3 completely independent of the user, although Barnes 4 clearly says in the switching the user might jump in 5 there and say, I want to do this. But I -- I think 6 that that -- that's sort of, in a nutshell, beyond 7 the more specific things that I said in my report. 8 Q Okay. Maybe, it would help if I got -- if 9 you can give me an example. Can you give me an 10 example of how the network switching conditions of 11 Barnes would be specifically improved using the 12 network switching conditions taught in Shaw? 13 A The network switching conditions of Barnes 14 being improved? 15 Q I think you said that the -- I'll back up. 16 I think you said that the network switching 17 conditions of Shaw would enhance -- I think you used 18 the word "enhance" -- the network switching 19 conditions of Barnes; is that correct? 20 A I believe I might have said that, yes, and 21 that's more or less what I meant. And that Barnes -- 22 Because Barnes is a -- is a patent that has to do 23 with resource allocation and content delivery in a 24 network, it illustrates a lot of the technology that 25 was available at the time that a POSITA could take</p>

<p>141</p> <p>1 advantage of in order to have a more robust switching 2 decision as described in Barnes. 3 Q Okay. So that's what I'm trying to get at. 4 If you can give me an example, or can you give me an 5 example of how Shaw would make -- the Shaw teachings 6 with respect to network switching would make the 7 network switching of Barnes more robust? 8 A Well, Barnes talks, especially in this 9 paragraph here, of network switching conditions when 10 they arise. And so how -- how does the system know 11 that network switching conditions have arose? Well, 12 the obvious one is the user. The user says I want to 13 do this, and it changes everything. 14 But then there are more subtle ones, where 15 the system is aware of the networks that are 16 available to it in terms of its hardware. In other 17 words, it -- if a Bluetooth network becomes available 18 and the system doesn't have a Bluetooth channel, it's 19 not going to be accessing the Bluetooth network. And 20 that's the Personal Area Network, PAN, I believe. 21 And so it's important for the system, from 22 Barnes' standpoint, to know what becomes available. 23 And I believe that that is shown in Barnes, 24 particularly with its system going out and looking 25 for better networks, because better networks come</p>	<p>143</p> <p>1 MR. YOUNG: Okay. Great. 2 By MR. YOUNG: 3 Q Dr. Myler, your opinions in this matter are 4 related to certain claims of the '992 patent; is that 5 correct? 6 A That is correct. 7 Q Okay. And if I use the term "challenged 8 claims," do you understand that to mean Claims 1 9 through 14 and 16 through 19 of the '992 patent? 10 A I -- I'm going to take your word for it. 11 That sounds correct. 12 Q Yeah, I mean, just to -- just to make sure 13 that we are certain of it, you can look at paragraph 14 14 of your declaration. 15 A Yeah. That is in the challenged claims, 1 16 to 14 and 16 to 19. 17 Q Okay. Great. And I have on the screen now 18 the -- the '992 patent that's been marked as Exhibit 19 2 in this declaration -- in this deposition. 20 Do you see that? 21 A Yes. 22 Q Okay. And now looking at Column 26, line 23 29, that's where Claim 1 of the '992 patent begins. 24 Do you see that? 25 A Yes.</p>
<p>142</p> <p>1 online and go offline, and so on and so forth, 2 whereas Barnes is more of a wandering around. And so 3 those techniques of looking at other net -- finding 4 networks and knowing the network's capabilities would 5 definitely, I think, be an improvement to Barnes. 6 And I think a POSITA would see that as well. 7 MR. YOUNG: Okay. I know we've been on the 8 record for almost exactly an hour. I think this 9 would be a convenient -- because I'm switching 10 topics -- be a convenient time to take a 10-minute 11 break. Is that okay with everybody? 12 THE WITNESS: Well, I could go a little 13 longer but... 14 MR. YOUNG: I just need -- I -- I just 15 needed to use the restroom. 16 So can I just take, let's say, a 10-minute 17 break? 18 MR. PONDER: Sure. Yes. 19 THE WITNESS: Yeah. Let's do it, 10 20 minutes. 21 MR. YOUNG: Okay. Great. 22 COURT REPORTER: Thank you off the record. 23 (Recess.) 24 COURT REPORTER: We are back on the 25 record.</p>	<p>144</p> <p>1 Q And in your -- well, back up. 2 Do you know what a preamble of claim is? 3 A A preamble on that claim, I believe, is in 4 a portable system, a method of digital media service 5 to a user, a method comprising. I believe that's -- 6 that's the preamble. And then what follows are the 7 elements of the claim. 8 Q Okay. And in this particular example, the 9 Petitioner has argued that the preamble of -- the 10 preamble of the challenged claims are limiting. 11 Do you understand what that means? 12 A I believe it means that what is discussed 13 in the preamble has to be present in the -- in the -- 14 in the infringing invention, let's say, or -- or in 15 something that's practicing the patent. 16 Q Got it. Okay. 17 So I've highlighted the term "a portable 18 system." Do you see that? 19 A Yes. 20 Q Okay. What's your understanding of a 21 portable system? 22 A My understanding is that that was a 23 construed term in the litigation. Yeah, here we go. 24 If you go to page 23 of my report, I talk about that, 25 a portable system.</p>

<p>145</p> <p>1 Q So can you answer the question? In your 2 opinion, what's -- 3 A Just give me one second. 4 Q Oh, I'm sorry. 5 A Remember, not getting any younger. 6 Yeah, basically, a portable system is an 7 essential structure to the challenged claims, which 8 goes with the lead-up of this question in talking 9 about this preamble. And -- and I've interpreted 10 that as the portable system, that there's two systems 11 that can be connected, and we're basically talking 12 about things to -- one system connecting to another 13 system overall. The portable system is one of those 14 systems, and the second system, which can be a large 15 number of things. 16 Q Okay. Would a reasonable description of a 17 portable system simply mean a system that can be 18 moved? 19 A I think that that -- you know, that brings 20 up a thing, what exactly is meant by "a portable 21 system." It's easy to say that system is portable. 22 It's hard to say that system is not portable. So, 23 you know, we're -- I think where we saw earlier in 24 Shaw, he had a little -- little diagram of a PC. And 25 we said that's, you know, this old fashioned graphic</p>	<p>147</p> <p>1 A Yes. Okay. There you see summary of the 2 inventions. This is the 30,000 foot view, the first 3 and second systems -- and we are throughout talking 4 about two systems. The first and the second may, for 5 example, be portable or stationary. But then, of 6 course, the preamble of the claim says, "A portable 7 system." 8 Q Okay. So maybe we can agree that a 9 portable system is just a system that is not a 10 stationary system; is that fair? 11 A A portable system is not a system that's 12 stationary. 13 Q Okay. 14 A I -- well, I -- it depends on the context. 15 Of course, if you've got a normally non -- normally 16 stationary system riding down the road in an RV with 17 everything connected, does that make it a portable 18 system? You know, this is now up for making a 19 decision. I'm simply interpreting the claims as I 20 see them. 21 Q Okay. And I'm just trying to figure out 22 what your interpretation of a portable system is. So 23 in -- 24 A I think -- yeah, I think the portable 25 system needs to be identified, and Barnes identifies</p>
<p>146</p> <p>1 for an IBM PC, which was a desktop computer. 2 And you might say, okay, that's not a 3 portable system. But then you have the thing, what 4 if it's in a car and it's -- or a mobile home -- not 5 a mobile home -- an RV, and it's plugged in, and it's 6 running down the highway? And it's got, you know, a 7 Wifi. You know, it's now moving around. 8 So it's a little bit nebulous, but I think 9 what's important here is, for the POSITA, is what -- 10 what prior art is talking about portable systems. 11 And if a portable system is a limitation of the 12 claims, then we have clearly a portable system being 13 discussed in Barnes. 14 Q Okay. And the '992 patent draws a 15 distinction between portable systems and stationary 16 systems; is that correct? 17 A I'd have to see where that is in the 18 patent. 19 Q Okay. So let's go up to Column 1 and, it 20 looks like, line 63. 21 A Well, I'm just going to -- because it's -- 22 I'd rather stay where I'm at. 23 Q I've highlighted now on the screen Column 1 24 of the '992 patent, starting at line 62 to go to 63. 25 Do you see that?</p>	<p>148</p> <p>1 a portable system. 2 Q Okay. So maybe it's fair to say that 3 you're not exactly sure what the meets and bounds of 4 the term "portable system" are, but you are sure that 5 Barnes is a portable system; is that a fair way of 6 saying it? 7 A I -- I don't know if I would put it that 8 way. I think what I'm saying is that a portable 9 system wasn't specifically described anywhere, other 10 than one of the things that it has to connect to, 11 i.e., the '992 has to connect to, is a portable 12 system, which, you know, in the common sense 13 standpoint to the POSITA, we're saying, oh, okay, 14 they're talking about like a hand-held, a smartphone, 15 et cetera, you know, a PDA. PDAs were popular back 16 then. And that would be the portable system. But 17 nowhere does anybody say, well, portable system is 18 characterized by battery power, for example. 19 And so that's why I think, if you're going 20 to read the claim, the claim says a portable system, 21 fine. Barnes says a portable system. So now we can 22 move on with whatever the specific definition of a 23 portable system happens to be. 24 Q Okay. So by way of example, in Figure 5 of 25 the '992 patent, it shows -- and I'll bring it up on</p>

<p>149</p> <p>1 the screen here in a moment -- it shows System A and 2 System B. 3 Do you see that? 4 A Yes. 5 Q So in this example, in Figure 5 of the '992 6 patent, I assume that System B is the portable 7 system; is that correct? 8 A I'd have to look and see what it's calling 9 515. But, really, just looking at this diagram, with 10 no other information and being told there's possibly 11 a stationary system, there's possibly a portable 12 system in this diagram? Probably choose the small 13 one, which might be a hand-held with headphones as 14 opposed to System A, which has speakers. That's -- 15 that's a speaker symbol there. 16 And that's also a disk drive. And, of 17 course, back then, POSITA would look at that and say, 18 oh, disk drive. I wonder if they'll ever have disk 19 drives in portable systems, you know, that kind of 20 thing. 21 So I think, realistically, we could say the 22 stationary system, if there is a stationary system 23 there, is System A; and the portable system is System 24 B. 25 However, in this discussion of portability,</p>	<p>151</p> <p>1 implies some sort of specifically formatted 2 information like images -- oh, digital media, images 3 like JPEGs and GIFs and so on, or video, digital 4 video, which you can have a thing called motion JPEG, 5 which is just the individual frames of the video are 6 JPEG images that are presented. And then you've 7 got -- you've actually got -- text is included with 8 digital media. You have, you know, e-books and 9 things like that. 10 And a digital media service would be coming 11 from a server, being served up and available to a 12 user for their -- the consumption of the media. I 13 think that term is actually used, "consumption of the 14 media." I'm talking about the POSITA would know what 15 that means. 16 Q Okay. So for -- I think I got this right, 17 but from -- from -- from the term "digital media 18 service," you have a digital media content portion, 19 like the JPEG as an example, and then you have the 20 server portion, which is like how that media content 21 is being delivered through a network, as an example; 22 is that fair? 23 A I think so. I think that's fair to say. 24 The digital media service is a server delivering 25 somehow digital media.</p>
<p>150</p> <p>1 there are portable systems -- even back then there 2 were portable systems that had all of the elements 3 that are shown in this diagram of System A. The 4 compact computer was intended to be a portable 5 computer, but you had to plug it into the wall. It 6 was not battery operated so... 7 Q So I'm not going to go there, but you can 8 go there on your copy, in Column 3, line 26 or 27, it 9 says that 515 is a personal digital assistant, PDA. 10 A Yes, and a POSITA would know that as a 11 portable device. 12 Q Okay. 13 A Personal sort of implies portable, 14 wearable. I think at one point Barnes said you could 15 wear it on your wrist; you could wear it on your 16 belt, I guess, you know, a beeper or something. 17 Q Okay. Okay. So going back to the preamble 18 of Claim 1, we talked about portable system. Then it 19 says: 20 "A method of providing a digital media 21 service to a user." 22 Do you see that? 23 A Yes. 24 Q What's a "digital media service"? 25 A It's media, which typically, "media"</p>	<p>152</p> <p>1 Q Okay. And in column -- never mind. I'm 2 sorry. Strike that. 3 Okay. So the next part of the preamble 4 says: 5 "To a user." 6 Do you see that? 7 A Right. 8 Q Okay. What's a "user"? 9 A It's typically a person, but it actually 10 could be a system that's using the media or using the 11 data. 12 Q In the -- in the patent, the '992 patent, 13 it talks about consumption options available to the 14 user. Do you recall that? 15 A Not immediately off the top of my head. 16 Q Okay. Okay. So looking at Column 4, lines 17 31 through 38, it talks about, in part -- I'll 18 highlight it on the screen -- a "Number of 19 information consumption openings available to a 20 user." 21 Do you see that? 22 A Oh, right, as part of the bigger 23 sentence. 24 Q Yeah. Okay. So does that -- would that 25 indicate to you, because it talks about information</p>

<p>153</p> <p>1 consumption options, that the term "user" would be a 2 person who would be either viewing or listening to 3 the -- to the various piece of information? 4 A Yes, it would be a person. I just threw 5 out it could be because, in general, a user to a 6 POSITA is whoever is receiving -- 7 Q Okay. 8 A -- the information. 9 Q And the term -- the term -- this 10 "information consumption options;" do you see that? 11 A Yes. 12 Q Is it your understanding that the '992 13 patent uses the term "information" to broadly include 14 digital media content, as well as other things? 15 A Well, just the state -- just the construct 16 information consumption. First of all, there is a 17 lot of different forms of information. And the term 18 "consumption of information," even though it implies 19 eating, is really talking about absorbing the 20 information in some way, i.e., listening to audio 21 information, watching video information, reading 22 textual information. Those are -- that's information 23 consumption taking place. So if there's information, 24 there is most likely an information consumption 25 option for it.</p>	<p>155</p> <p>1 Figure 5 is a diagram showing an exemplary 2 audio resource allocation scenario in accordance with 3 various aspects of the present invention. 4 Do you recall that? 5 A Let me -- I've got to get there first. 6 Okay. I'm sorry. Would you repeat what column we 7 were at? 8 Q Column 2, lines 67 -- 65 through 67. 9 Excuse me. 10 A Figure 5 is diagram showing exemplary audio 11 resource allocation scenario in accordance with 12 various aspects of the present invention. 13 Q Okay. So at a high level, the description 14 within Figure 5, talking about Figure 5 in the 15 system, give examples of where the user might be 16 listening to a song or some music from System B 17 directly through Communication Link 525, and then 18 under certain circumstances, switch to getting the 19 music from System A instead of System B; is that 20 correct, at a high level? 21 A Yes. In fact, it's sort of like they were 22 consuming something with chopsticks and saw a fork 23 laying on the table and grabbed it up and said, oh, I 24 think I'll use this instead. 25 Q Okay. Great. And then, when the '992</p>
<p>154</p> <p>1 Q Okay. So the term "digital media content" 2 would fall within the larger -- well, I'll strike 3 that. Withdraw that question. 4 Digital media content would be a form of 5 information as the term "information" is used in the 6 '992 patent; correct? 7 A Digital media content? 8 Q Correct. 9 A Such as like an mpeg file? 10 Q Correct. 11 A Yes, that's -- that's information. And if 12 you play it on a player and watch it, you're 13 consuming it. 14 Q Okay. So throughout the '992 patent, it 15 uses the -- the -- what is described in Figure 5 in a 16 number of different examples. 17 Do you remember that? 18 A There are examples in the patent, and some 19 of them refer, of course, to this diagram or imply 20 this diagram. And one example is when it's using 21 System A and System B, it's clearly talking about 22 this diagram. 23 Q Okay. So I won't go there, but I'll read 24 it to you. You can go there in your own copy. 25 Column 2, line 65 through 67 says:</p>	<p>156</p> <p>1 patent goes through examples from figures 1 through 2 3, at various places in those descriptions, it refers 3 back to the system in Figure 5 to provide examples of 4 what it's talking about; is that fair? 5 A I mean, I'd have to read the whole thing 6 and say yes or no, but I would not be surprised if 7 that's the case. 8 Q Okay. 9 A I think I can probably agree to that at 10 this point. 11 Q Okay. Just for reference, I'm going to 12 pull up Figure 1 of the '992 patent. I've got to 13 make it a little small so I can get it on the screen. 14 Are you generally familiar with Figure 1 of 15 the '992 patent? 16 A Yes. Yes. 17 Q Okay. 18 A I am. 19 Q Okay. 20 A I'm looking at the whole thing here. 21 Q Okay. Great. So if you can keep that copy 22 of Figure 1 available to you, I'm going to have some 23 questions for you related to the actual text 24 referring to Figure 1; is that okay? 25 A Yes. Yes, of course.</p>

<p>157</p> <p>1 Q Okay. So Step 110 of Figure 1 is simply to</p> <p>2 start, and then at Step 120, it says that a first</p> <p>3 system is providing a service to a user.</p> <p>4 Do you see that?</p> <p>5 A Yes.</p> <p>6 Q Okay. So then in Column 3, starting at</p> <p>7 line 25, it talks about:</p> <p>8 "A service is generally a function</p> <p>9 performed by a -- by the first system for the</p> <p>10 ultimate benefit of the user."</p> <p>11 Do you see that?</p> <p>12 A Okay. The first system, yes. It's</p> <p>13 identifying the first system as providing a service</p> <p>14 to the user.</p> <p>15 Q Okay.</p> <p>16 MR. PONDER: Mr. Young, you said line 25.</p> <p>17 I think you meant line 15.</p> <p>18 MR. YOUNG: I'm sorry. I can re-ask the</p> <p>19 question.</p> <p>20 MR. PONDER: No. I think the question is</p> <p>21 fine. It's just the reference because you read it to</p> <p>22 him. It's what you have shown.</p> <p>23 THE WITNESS: And then he highlighted it.</p> <p>24 Because I wondered -- and then he highlighted. And I</p> <p>25 thought, okay, I got it now.</p>	<p>159</p> <p>1 particular example, PDA 515, through the</p> <p>2 communication Link 525, is providing a song or music</p> <p>3 to the user from the -- from a first system, 510;</p> <p>4 correct?</p> <p>5 A Could you repeat that again, please?</p> <p>6 Q So in the next paragraph of the text in</p> <p>7 Column 3 of the '992 patent, it gives an example</p> <p>8 where, in Figure 5, the user is receiving music or</p> <p>9 listening to music from PDA 515 through the</p> <p>10 communication Link 525; correct?</p> <p>11 A Yes.</p> <p>12 Q Okay. Now, the next step in Figure 1 --</p> <p>13 actually, take that back. Withdraw that question.</p> <p>14 So in this example, where the user is</p> <p>15 listening to music from PDA 515 through the</p> <p>16 connection 525 to the headphones, there is no --</p> <p>17 there is no network connection with respect to that</p> <p>18 example; is that correct?</p> <p>19 A Well, in that same place, it says: "Which</p> <p>20 may be tethered or untethered," which is interesting</p> <p>21 that they said that about 525. So they're saying</p> <p>22 that 525, which is the link where the data is moving,</p> <p>23 it's also known as a channel to a POSITA. And we</p> <p>24 often forget the fact that a wire is a channel.</p> <p>25 Information can be transmitted over a wire. That's</p>
<p>158</p> <p>1 By MR. YOUNG:</p> <p>2 Q Okay. And then it provides some examples</p> <p>3 of what that service may be starting at line 18 of</p> <p>4 Column 3; is that correct? And I'll highlight that</p> <p>5 on the screen as well.</p> <p>6 A Yes.</p> <p>7 Q Okay. So as an example, we can assume that</p> <p>8 in Step 120 that the first system is providing</p> <p>9 some -- in this example -- digital media content to a</p> <p>10 user; is that fair?</p> <p>11 A Where does it say a "digital media content</p> <p>12 to a user"?</p> <p>13 Q Well, I'm just saying that -- we've already</p> <p>14 established that -- well, in this --</p> <p>15 A Oh -- if -- yeah, I think I can fix this.</p> <p>16 I think I see what you're saying. You're saying a</p> <p>17 digital media service is the service we're talking</p> <p>18 about here?</p> <p>19 Q Right. All I'm trying to establish is that</p> <p>20 in Step 120, digital media content is being provided</p> <p>21 to a user from a -- from a first system.</p> <p>22 A I think that's included in this, yes.</p> <p>23 Q All right. Great. And then this is an</p> <p>24 example where the -- the description then goes to</p> <p>25 Figure 5 and talks about a situation where, in this</p>	<p>160</p> <p>1 very well known. That greatly preceded. And, in</p> <p>2 fact, the whole idea of untethering is to remove the</p> <p>3 wire.</p> <p>4 So 525, no matter how you look at it, is a</p> <p>5 channel. And, of course, a wire typically -- I have</p> <p>6 to be careful -- typically has greater bandwidth,</p> <p>7 more efficiency, et cetera than the -- than the</p> <p>8 wireless equivalent, although that's not always the</p> <p>9 case. So a POSITA could see that 525 as a wireless</p> <p>10 connection.</p> <p>11 Q Yes, but I wasn't referring to a wireless</p> <p>12 connection. I was saying that there's no network</p> <p>13 connection in this example.</p> <p>14 A Well, if it's a wireless connection,</p> <p>15 what -- what -- what's providing the channel? And</p> <p>16 the answer is, the POSITA would say, well, the</p> <p>17 Bluetooth. The Bluetooth is the network. It's often</p> <p>18 said the Bluetooth network, personal area network.</p> <p>19 Bluetooth is now used -- well, it's astonishing what</p> <p>20 it's used for now. So that certainly could be a</p> <p>21 network connection. And a wired connection could</p> <p>22 also, as I just described, have attributes associated</p> <p>23 with it which would make it preferable to some other</p> <p>24 under certain circumstances. So that -- that's the</p> <p>25 only point I'm making.</p>

<p>161</p> <p>1 Q My only point is that, in this example, the</p> <p>2 user is listening to music off of the PDA initially,</p> <p>3 without any connection whatsoever to System A or any</p> <p>4 other system, other than strictly within System B; is</p> <p>5 that your understanding?</p> <p>6 A Okay. The headphones in this diagram --</p> <p>7 the headphones in this diagram have a connection to</p> <p>8 System B., And that's the 525, which we have just</p> <p>9 established could be a network. But it's also</p> <p>10 connected -- well, and we're just strictly going off</p> <p>11 this -- looking at this diagram without any other</p> <p>12 information, which we'll -- we can go to. It's also</p> <p>13 connected with 552, the headphones to System A.</p> <p>14 So we might ask what's 552? Is that a</p> <p>15 network connection or is that also a wire? And, of</p> <p>16 course, if it's a wire, the POSITA might get very</p> <p>17 confused if it's a wire. But what makes more sense</p> <p>18 is that we're talking about different methods of</p> <p>19 networks, and now we're getting into this idea of</p> <p>20 channels.</p> <p>21 So if we're starting to try to figure out</p> <p>22 what this system -- making decisions about switching,</p> <p>23 it can be done in the context of networks, is all I'm</p> <p>24 saying. I'm not -- I'm just saying I'm not willing</p> <p>25 to say 525 is a wire, first of all, and secondly,</p>	<p>163</p> <p>1 Q 551 is -- just to speed things up -- is in</p> <p>2 Column 4, line 23, and it's a wireless communication</p> <p>3 link between the first system and the second system.</p> <p>4 A Okay. So System B, then, is connected to a</p> <p>5 network.</p> <p>6 Q Dr. Myler, I'm not trying to confuse the</p> <p>7 issue. I'm just saying that we're not talking about</p> <p>8 switching yet. This has nothing to do with</p> <p>9 switching. This is just saying, initially -- and</p> <p>10 let's assume. Let's assume for the sake of argument,</p> <p>11 to help things out, system 515 or 515 is switched</p> <p>12 into airplane mode. It is not connecting to anything</p> <p>13 on the outside. It has a connection to the</p> <p>14 headphones that are plugged into the system, 515.</p> <p>15 The user is listening to music off of 515 without a</p> <p>16 network connection; correct?</p> <p>17 A I don't know if airplane mode was available</p> <p>18 to the POSITA of 2003. So what you're doing is</p> <p>19 you're adding things into this diagram that are not</p> <p>20 in the diagram and are not in the description that</p> <p>21 I'm understanding. I mean, that -- that's what I'm</p> <p>22 getting and -- and I can't go with that.</p> <p>23 Q Okay. Strike that.</p> <p>24 A I don't want you to think I'm not</p> <p>25 answering. I can't because I -- and I don't want to</p>
<p>162</p> <p>1 that a wire cannot be considered a selectable channel</p> <p>2 for information transfer.</p> <p>3 Q And I am talking -- I'm not asking you for</p> <p>4 any of that. I'm asking you this really, really,</p> <p>5 really, really simple question.</p> <p>6 A Oh, okay.</p> <p>7 Q It's verbatim right on the screen. I'm</p> <p>8 just trying to establish that initially -- and I'll</p> <p>9 highlight the word "initially" for you on the screen:</p> <p>10 Initially, the user is listening to music</p> <p>11 from the PDA 515 through the communication Link 525,</p> <p>12 and that is being done without a network connection.</p> <p>13 In other words, it's not connecting --</p> <p>14 System 510 is not connecting to anything else; do you</p> <p>15 agree with that?</p> <p>16 A No. I -- I don't understand this without a</p> <p>17 network connection.</p> <p>18 Q Okay.</p> <p>19 A Do you mean the -- that the -- that the</p> <p>20 System B is not logged into the Internet? Doesn't</p> <p>21 have an Internet Wifi? Is that what you are saying?</p> <p>22 Q Let's -- let's make that assumption.</p> <p>23 A Yeah, there's no -- we don't have -- well,</p> <p>24 of course, then we've got -- what is 551 anyway? Let</p> <p>25 me just see what 551 is. I'm curious about that.</p>	<p>164</p> <p>1 say what I say. I want to say this delicately. The</p> <p>2 question is not quite making sense to me from the</p> <p>3 standpoint of the POSITA.</p> <p>4 Q Okay. Let me make this really simple.</p> <p>5 A Uh-huh.</p> <p>6 Q Highlight the first sentence of this</p> <p>7 paragraph in Column 3, starting at line 25, okay? I</p> <p>8 would like to you read to yourself the first</p> <p>9 sentence, please.</p> <p>10 A Okay.</p> <p>11 Q Okay. Would you agree with me that the</p> <p>12 user is listening to music that comes from 515?</p> <p>13 MR. PONDER: Objection. Form.</p> <p>14 THE WITNESS: This says the music -- yes,</p> <p>15 to 520 from 515. It says that, initially providing</p> <p>16 music to a user through a headset communicatively</p> <p>17 coupled to the PDA. It doesn't clarify what that</p> <p>18 communication is. Of course, it does explain that</p> <p>19 Figure 5 is a network scenario, but yes, I think I</p> <p>20 can go with that.</p> <p>21 By MR. YOUNG:</p> <p>22 Q Okay.</p> <p>23 A But that's a correct reading of what's</p> <p>24 said.</p> <p>25 Q All right. Is there anything in the first</p>

<p>165</p> <p>1 sentence of the paragraph that starts in Column 3, 2 line 25, that talks about a network connection being 3 used to provide the music to the user from 515? 4 A Explicitly? 5 Q Yes. 6 A Nothing explicit in there, other than it's 7 a network scenario. 8 Q Okay. Thank you. 9 Okay. Now, in Step 130 of Figure 1 of the 10 '992 patent, it talks about doing a determination to 11 see if a second system is accessible. 12 Do you see that? 13 A Yes. 14 Q Okay. And by way of example only, it says, 15 starting in Column 3, line 65, that the user in the 16 first system, 510 -- so that's the PDA we've already 17 established -- may, for example, be mobile and move 18 within the boundaries of a wireless communication 19 network of which the second system, 550, is a member. 20 Do you see that? 21 A I do. 22 Q Okay. So in this case, the user -- let's 23 say the user is me, and I'm listening to music off of 24 my PDA, 515, and I move into a wireless network where 25 system 550 exists. Now I have a situation where a</p>	<p>167</p> <p>1 1? I'm just trying to avoid switching back and forth 2 because it takes a lot of time. 3 A Well, I know, but if I can't see it -- 4 Q So -- 5 A I haven't memorized it. 6 Q Let's -- let's do this. Please take the 7 hard copy of Figure 1 that you have that was provided 8 to you by counsel -- 9 A Yes. 10 Q -- and set it next to you so you can see 11 it, and then I want to ask you questions about the 12 text. And when we're doing that, I'm just trying to 13 avoid going back and forth so that we can speed 14 things up. That's it. But if you need me to go back 15 and forth each time, I will do that. It's just going 16 to take a long time. 17 A No, no, no. I think this is a good idea. 18 Now, I've got Figure 1, and you're going to go to -- 19 back to Figure 4; right? 20 Q We're -- 21 A I'm sorry, Figure 5. That was a different 22 patent. Okay. I'm now looking at Figure 1, Figure 23 23 5, and also what you've got on the display. 24 Q Great. And now we're talking about 25 Step 140 of Figure 1. Do you see that?</p>
<p>166</p> <p>1 second system, System 550, might be accessible; 2 correct? 3 A Yes. 4 Q Okay. 5 A If you're in range of the communications 6 Channel 551. 7 Q Okay. So now, in Step 140, it says, 8 "Establish communication between the first system," 9 which in this example is 510, "with the second 10 system," which in this example is 550. 11 Do you see that? 12 A What -- did you highlight it? 13 Q Well, are -- 14 A Oh, there it is. 15 The first system, 510, may move within 16 range to hear the -- is this when you're talking 17 about the advertising message and respond to the 18 second system, 550? 19 Q I'm just trying to discuss what's in step 20 140; right? 21 A Well, yes, but I'm not -- I'm looking at 22 the diagram and I'm looking at the top of columns 3 23 and 4 of the '992. 24 Q So just -- I'll withdraw the question. 25 Do you see step 140 in your copy of Figure</p>	<p>168</p> <p>1 A Yes. 2 Q Okay. So now what I'm saying is, in this 3 Step 140, you're establishing a communication between 4 the first system and the second system. That's what 5 it says; right? 6 A Yes. 7 Q Okay. So as an example of that, looking at 8 Figure 5, I'm establishing a connection between 9 System 510 and System 550; correct? 10 A Yes. Okay. There's -- it looks like 11 there's two connections, 551 and 552. But okay. 12 Q Okay. 13 A Because, you know, just to clarify this, 14 you've got 510, which is a system based on -- just 15 looking at the diagram -- of a set of headphones, and 16 System B, the PDA. I think we called it the PDA. 17 And those two together comprise the 510. And between 18 510 and 550 -- 550, of course, being all these 19 components and possibly a -- you know, it's got a 20 keyboard and large display so we'll call that a 21 desktop. You've got these two channels, 551 and 552. 22 So, yeah, go ahead. 23 Q Okay. And now we get to Step 150 in 24 Figure 1. Do you see that? 25 A Yes.</p>

<p>169</p> <p>1 Q And now it says: 2 "Determine whether utilizing second system 3 resources will produce higher quality service." 4 Do you see that? 5 A Yes. 6 Q Okay. And as we talked about earlier, the 7 digital -- a digital media service includes media 8 content aspects, and it includes communication or 9 server aspects; is that fair? Do you remember that? 10 A I -- I think that's fair. It sounds like 11 what we have established, yeah. 12 Q Okay. So if you look at Column 4, starting 13 at line 25, it says that it's going to do a 14 determination to see whether utilizing in the second 15 system, or various resources thereof, will increase 16 the quality at which the current service is being 17 provided to the user. 18 Do you see that? 19 A Yes. 20 Q Okay. So in this step, it's not 21 necessarily true that the digital media service being 22 provided by the first system is bad, but rather, we 23 just want to see if we can increase the quality of 24 the service; is that true? 25 A Yeah, this is a determining step, where</p>	<p>171</p> <p>1 quality of the media content itself. So as an 2 example, just as an example, a video that is stored 3 in an HD format would be of a higher quality than 4 media -- a media file stored in an SD or standard 5 definition file type; is that fair? 6 A Yes, that's what a POSITA would agree with 7 that, that HD is better than standard. And -- and 8 the name implies it. 9 Q Right. And then the second one of these 10 says: "Rate of response to user input." 11 Do you see that? 12 A Yes. 13 Q Okay. What would that mean to a POSITA? 14 A The rate of response to a user input. That 15 would be the same as -- I think we saw that in Shaw, 16 where the user is -- is stepping in and making a 17 change or, you know, opening up a video player, when 18 before they were -- they had an audio player kind of 19 thing. And so there is how fast can the system give 20 a user what the user wants that the user has 21 identified what they want? 22 I think we also talked about that in -- in 23 those -- those criteria. There was -- this is a 24 program criteria that were set up, and -- and that -- 25 that's the same thing right there. Rate of response</p>
<p>170</p> <p>1 you're trying to determine if you should make a 2 decision if you should do the switch. 3 Q Okay. 4 A And the criteria is, indeed, increase the 5 quality at which the current service is being 6 provided to the user. 7 Q Okay. And then in the same paragraph, it 8 talks about a large variety of quality metrics. 9 Do you see that? 10 A Yes. 11 Q Okay. And the first one it gives a example 12 of is audio vis -- audio/video output quality. Do 13 you see that? 14 A I do. 15 Q Okay. And what does that mean -- what 16 would that mean to a POSITA? 17 A Well, a POSITA would say -- let's see -- 18 quality in audio is often determined by sample rate. 19 So you've got a much higher sample rate of one audio 20 media component, your container file, and you've got 21 a lesser sample. And the one with the -- with the 22 greater sampling is going to be of higher quality 23 because more frequencies are going to be represented, 24 more nuances and beats and so on. 25 Q Okay. So this generally relates to the</p>	<p>172</p> <p>1 to user input, these are delays that you have to deal 2 with. 3 Q Okay. Would the processing capability of 4 the device that the user is looking at the media 5 content or consuming the media content with, would 6 that processing capabilities have an impact on the 7 rate of response to user input? 8 A The processing capabilities -- wait. Can 9 you can you repeat that? 10 Q Sure. I'm just trying to figure out what 11 "rate of response to user input" means, what we have 12 highlighted on the screen. 13 A Oh, well -- 14 Q I'm sorry. 15 A Rate of response is how long, how fast, how 16 fast to user input. So the user puts an input in, 17 and then how fast can I respond to that. The user -- 18 I gave an example. 19 The user says: I want to do video, and 20 they've been doing audio. What's the rate of 21 response to switching between those two? 22 Q Right. The rate of response-to-user input 23 doesn't necessarily talk about switching; correct? 24 A No. But since we are just making up 25 examples to explain what's going on, it could. It's</p>

<p>173</p> <p>1 certainly involved.</p> <p>2 Q Okay.</p> <p>3 A We've added other things to these diagrams</p> <p>4 that aren't here so...</p> <p>5 Q So your -- your point is the rate of</p> <p>6 response to user input is fairly broad. A lot of</p> <p>7 different things could be attributed to that;</p> <p>8 correct?</p> <p>9 A My -- well, my point is that I agree that</p> <p>10 rate of response to user input is certainly a quality</p> <p>11 metric in the big picture.</p> <p>12 Q Okay. And that would include things like</p> <p>13 how fast the network is and how fast the processor of</p> <p>14 the PDA that you're consuming media on in this</p> <p>15 example can process the instructions; correct?</p> <p>16 A Okay. Now, I see where you're going. So</p> <p>17 the -- now, we're talking about what does it take to</p> <p>18 process a user input. And, yes indeed, the -- a fast</p> <p>19 machine, in other words a machine with a higher clock</p> <p>20 speed, newer processor is going to respond to user</p> <p>21 input faster than a slower machine.</p> <p>22 Q Right.</p> <p>23 A I think that's what I'm -- I'm -- I'm</p> <p>24 hearing you say.</p> <p>25 Q That's exactly what I'm saying.</p>	<p>175</p> <p>1 Q Okay.</p> <p>2 A And so the question then is, what do we</p> <p>3 mean by "options"? Do we mean I can cause the media</p> <p>4 player to go at a higher resolution, which is going</p> <p>5 to draw more resources, but it's going to increase</p> <p>6 quality? I mean, that's what I see: Options.</p> <p>7 Option usually involves a selection.</p> <p>8 Q Okay. So as an example, could an example</p> <p>9 be if you wanted to see a movie that has closed</p> <p>10 captioning in it? That might be an option that's</p> <p>11 different than a version of the movie without closed</p> <p>12 captioning; is that a fair example?</p> <p>13 A I think so, yes. That would be a fair</p> <p>14 example. That's an option that you apply to a video.</p> <p>15 You turn it off and on with a little switch.</p> <p>16 Q Okay. Is -- when you're using closed</p> <p>17 captioning on a movie, does the movie need to be --</p> <p>18 the movie -- the copy that is being played, does that</p> <p>19 movie have to have the closed captioning included as</p> <p>20 part of that file?</p> <p>21 A No. That's only one to do closed</p> <p>22 captioning from. Closed captioning is literally --</p> <p>23 well, and you can't turn it off -- is literally</p> <p>24 recorded on the video when other closed captioning</p> <p>25 goes in a special stream, which is just text. And</p>
<p>174</p> <p>1 A And that is -- and that would be tied to</p> <p>2 rate of response to user input.</p> <p>3 Q Got it. Great.</p> <p>4 Okay. So the next one says:</p> <p>5 Duration over which the service may be</p> <p>6 provided.</p> <p>7 Do you see that?</p> <p>8 A Yes.</p> <p>9 Q Okay. What does -- what would that mean to</p> <p>10 a POSITA?</p> <p>11 A I have to think about that one for a</p> <p>12 minute. Duration over which the service may be</p> <p>13 provided, that's the time that the service is going</p> <p>14 to be provided. And that might have some impact on</p> <p>15 whether or not there's enough battery in the PDA to</p> <p>16 make it through the hour-long movie that the -- that</p> <p>17 the service is having to watch.</p> <p>18 Q Okay. The next one is, "number of</p> <p>19 information consumption options available to the</p> <p>20 user."</p> <p>21 Do you see that?</p> <p>22 A Yes.</p> <p>23 Q What does that one mean?</p> <p>24 A Well, how many different options are there</p> <p>25 for the information consumption process.</p>	<p>176</p> <p>1 it's along with the video, and it's -- it has some</p> <p>2 timing mechanisms and other things like that. And</p> <p>3 you get it whether you want it or not because it's</p> <p>4 encoded within the stream, but it's a separate</p> <p>5 stream. It's encoded within the audio and video</p> <p>6 streams, but it's a separate information stream of</p> <p>7 its own that you can say, I want to look at the</p> <p>8 closed captions. And then the player, if it has the</p> <p>9 ability to do those closed captions -- because</p> <p>10 there's many, many different kinds of closed</p> <p>11 captions. That's why I like that as an example</p> <p>12 because it's sort of an option -- optional thing.</p> <p>13 Q Uh-huh. Okay. So with respect to -- then,</p> <p>14 to this example of number of information consumption</p> <p>15 options available to the user, that all relates to</p> <p>16 the media content itself; is that fair?</p> <p>17 A Well, I think it's fair to say it can.</p> <p>18 It's not the only thing but it can.</p> <p>19 Q Okay. The next one says, "A variety of</p> <p>20 information that may be accessed."</p> <p>21 Do you see that?</p> <p>22 A Yes.</p> <p>23 Q So what does that mean -- what would that</p> <p>24 mean to a POSITA?</p> <p>25 A Well, we're talking about quality metrics.</p>

<p>177</p> <p>1 And so, if the quality -- if we're looking at a 2 variety of information -- so we said before -- I gave 3 examples of information and we can move on. So 4 there's -- different media has different kinds of 5 information. One media might have video, one media 6 audio. 7 So the variety of information would include 8 audio, video, text. And if you start talking about 9 that in terms of a quality metric, you might want to 10 relate that to what we mean by -- you might want to 11 relate that to making a decision of what's most 12 likely to -- what information out of this variety is 13 going to give the best quality, let's say. 14 Q Okay. So you might have -- using our 15 previous examples, you might have a movie that's 16 stored in a HD format and a movie that is stored in a 17 SD format, as an example; is that correct? 18 A That's right. And I think we also said the 19 unit may not be able to display HD. So if the user 20 forces that, the quality is most likely going to be 21 low. 22 Q Okay. And then -- and maybe I skipped 23 ahead a bit here, but the next one says a quality -- 24 quality of information to be accessed. Do you see 25 that?</p>	<p>179</p> <p>1 access that information, and if it's not -- we're 2 talking about a quality metric here. So, you know, 3 what -- what -- how does that impact the quality -- 4 the quality that we can -- that we can access. So 5 that -- that's the rate of which such information may 6 be accessed. 7 We were talking about dropping -- thinning 8 and dropping frames and things like that, that that 9 impacts the rate and ultimately will impact the 10 quality. 11 Q Okay. So in step -- again, we're talking 12 about Figure 1 of the '992 patent. In Figure 1, Step 13 150, it does a comparison between the current 14 service, that quality, the quality of the current 15 service, and compares that to the expected quality of 16 the service from the second source; is that right? 17 A Yes, that's -- I mean, that's what it 18 says. 19 Q Right. Okay. And so when you're doing 20 this comparison of the current service quality to the 21 expected service quality, you do a lot of different 22 comparisons. And you consider things with respect to 23 the digital media content quality and you consider 24 things in connection with the network quality or 25 the -- the network ability; is that correct, that we</p>
<p>178</p> <p>1 A Yes. 2 Q Okay. And what would that mean to a person 3 of ordinary skill? 4 A Well, since this is -- we're talking about 5 quality metrics, there may be -- the information, you 6 might have multiple video files of the exact same 7 material at the same resolution, same frame rates, 8 one of the media files was digitally mastered and the 9 other media file somebody snuck a camcorder into a 10 movie theater and recorded a movie, you know, to 11 bootleg, kind of thing. 12 Q Uh-huh. 13 A I think we can say the digitalization 14 scheme would affect the quality of the information 15 that can be accessed. So that would be one example 16 of this, you know, coming off of what would a POSITA 17 think of this metric. 18 Q Right. Okay. And the last one is just 19 rate at which such information can be accessed. Do 20 you see that? 21 A Yes. 22 Q So what would a person of ordinary skill in 23 the art view or understand that metric to be? 24 A Well, that metric could be -- could be is 25 the network speed fast enough, high enough rate to</p>	<p>180</p> <p>1 just went through? 2 A I'm sorry, you caught me thinking, and I 3 can only think of one thing at a time because I was 4 looking at this, and now I -- yes, this is the 5 determining and then the utilizing. 6 So could you please repeat that? I'm 7 ready. 8 Q Sure. Well, I'll reset it, reset the 9 table. 10 So in this Step 150, because of the 11 communication between the two systems, there's an 12 evaluation done of the current service quality, and 13 you compare that to the expected service quality that 14 you might get from the second system; is that right? 15 A Yes, I think implying some -- any one or a 16 combination or even ones that aren't listed, quality 17 metrics. 18 Q Okay. 19 A Some quality metric that can be applied to 20 the -- the first and second system resource to say, 21 oh, this one's better; this is going to produce a 22 better quality -- 23 Q Okay. 24 A -- a higher quality service according to 25 some metric.</p>

<p>181</p> <p>1 Q As we just discussed with respect to the</p> <p>2 seven metrics we just went through, those metrics</p> <p>3 include metrics related to the digital media content</p> <p>4 itself, and it also deals with metrics associated</p> <p>5 with the network; is that fair?</p> <p>6 A Yes.</p> <p>7 Q Okay. And as we also determined</p> <p>8 that another function or factor that deals with these</p> <p>9 two -- this comparison of current network quality to</p> <p>10 expected network quality also relates to the</p> <p>11 processing capability of the device in which the user</p> <p>12 is consuming the digital media content; is that</p> <p>13 correct?</p> <p>14 A I'm sorry. Were you reading off the</p> <p>15 patent?</p> <p>16 Q I was summarizing a section of the patent,</p> <p>17 yes.</p> <p>18 A Can you point me to that real quick? I --</p> <p>19 I thought you were -- I didn't know what you were</p> <p>20 reading. Okay, determining.</p> <p>21 Q So what I've highlighted for you is Column</p> <p>22 5, lines 2 through 7.</p> <p>23 A Yes, I -- I think that makes sense to me.</p> <p>24 Q Okay. So, for example, if I have a device,</p> <p>25 let's say a PDA, that only has -- I think you gave</p>	<p>183</p> <p>1 A Even though getting at the gems would</p> <p>2 increase your quality of life, let's say.</p> <p>3 Q Correct. And part of these processing</p> <p>4 capabilities that are exchanged between the first and</p> <p>5 second systems can relate to data -- data decoding</p> <p>6 functions like I've highlighted on the screen; is</p> <p>7 that correct?</p> <p>8 A Yes. That would refer to, you know, a lot</p> <p>9 of times you may click on a media file you've</p> <p>10 downloaded and your system says I don't have the</p> <p>11 codec to open that up.</p> <p>12 Q Right.</p> <p>13 A You know, I don't have --</p> <p>14 Q And the processing capabilities can also</p> <p>15 relate to available hardware and software resources</p> <p>16 like I've highlighted -- highlighted on the screen,</p> <p>17 which is in column -- Column 5, lines 10 and 11;</p> <p>18 correct?</p> <p>19 A Well, that's exactly it. There's some</p> <p>20 things you can do because of hardware; there are some</p> <p>21 things you can do because of software.</p> <p>22 Q Okay.</p> <p>23 A Of course, with hardware you're sort of</p> <p>24 stuck. Software you can, of course, go and download</p> <p>25 the codec that you need and you -- whatever. And a</p>
<p>182</p> <p>1 this example earlier -- only has the capability of</p> <p>2 showing a movie in SD format. Even though I could</p> <p>3 obtain an HD version of the movie through the network</p> <p>4 and from the second system, there would be no way to</p> <p>5 deliver that to the user because the user is looking</p> <p>6 at a screen that doesn't support that format, the HD</p> <p>7 format; is that correct?</p> <p>8 A That's correct. Whether it -- the second</p> <p>9 system has processing capability, which, if utilized,</p> <p>10 would result in the current service being provided to</p> <p>11 the user at a higher level of quality than the</p> <p>12 current quality level, yeah.</p> <p>13 Q Yeah. So even though I could obtain the</p> <p>14 higher quality content, I couldn't deliver it to the</p> <p>15 user because a user is using a device that doesn't</p> <p>16 have the correct processing capability; is that</p> <p>17 correct?</p> <p>18 A I think I called that the utilizing</p> <p>19 elements, you know, can you -- can you utilize it or</p> <p>20 not. Yeah, you may find it. You may have it in your</p> <p>21 hand. It's sort of like a little lockbox full of</p> <p>22 rare gems. Well, you're not going to have those rare</p> <p>23 gems unless you have the key, you know, that kind of</p> <p>24 thing.</p> <p>25 Q Right.</p>	<p>184</p> <p>1 lot of times, you're given that option.</p> <p>2 Q Okay. So when the first system and the</p> <p>3 second system are exchanging all of this information</p> <p>4 to make this determination between the current</p> <p>5 quality service and the expected quality service,</p> <p>6 there's kind of like a collaboration between the</p> <p>7 systems in sharing that information back and forth;</p> <p>8 is that a fair assessment?</p> <p>9 MR. PONDER: Objection. Form.</p> <p>10 THE WITNESS: Basically, it may be -- I'm</p> <p>11 not sure I completely understand what you were</p> <p>12 saying. Could -- maybe repeat it again.</p> <p>13 MR. YOUNG: Right.</p> <p>14 By MR. YOUNG:</p> <p>15 Q So when the System 1 and the System 2 are</p> <p>16 exchanging all of this information, that goes into</p> <p>17 the consideration of the current system quality and</p> <p>18 the expected system quality. There is a</p> <p>19 collaboration, if you will, between the first system</p> <p>20 and the second system in making this determination;</p> <p>21 is that correct?</p> <p>22 A Well, that's the -- there's a</p> <p>23 collaboration. So when you say collaboration to an</p> <p>24 engineer, especially telecommunications EE, it starts</p> <p>25 to sound like handshaking.</p>

<p>185</p> <p>1 Q Okay.</p> <p>2 A And -- and that, I don't think, is really</p> <p>3 needed. Basically, the one system can say, look what</p> <p>4 can you do, and the other system says, here, I can do</p> <p>5 all of these things. And then the other system might</p> <p>6 even say, hey, wait, can you do this? Oh, yeah, I</p> <p>7 can do that, too. And, you know, if that's what you</p> <p>8 want to call a collaboration, yeah. Okay.</p> <p>9 Q Okay. Fair enough. To make it simpler,</p> <p>10 there's a sharing of information between the two</p> <p>11 systems; both systems are sharing information with</p> <p>12 each other?</p> <p>13 A Yeah, one system is saying, this is what I</p> <p>14 could do; and the other system is coming back and</p> <p>15 saying, this is what I can do; and then the other</p> <p>16 system -- yeah, because now -- that's why I get --</p> <p>17 collaboration implies handshaking. And that's a very</p> <p>18 specific protocols on how that goes on.</p> <p>19 And then you start getting into, wait a</p> <p>20 minute, is this an AI system? Are they having a</p> <p>21 conversation, or are they really just querying each</p> <p>22 other to say, okay, what are you capable of doing and</p> <p>23 here's what I've got; and then, of course, the system</p> <p>24 that's trying to get better quality can say, okay,</p> <p>25 I'll take Door B.</p>	<p>187</p> <p>1 So just as an example, I'm looking now at</p> <p>2 Column 4, starting at line 49. And this is referring</p> <p>3 to the -- it's all within the context of Step 150,</p> <p>4 but it's using the Figure 5 as an example. And in</p> <p>5 this case, starting in the second sentence in that</p> <p>6 paragraph, it says:</p> <p>7 "The current service -- current service,</p> <p>8 e.g., the communication of ray -- of audio</p> <p>9 information to the user may, for example, utilize</p> <p>10 audio information obtained from 64 kilobytes per</p> <p>11 second, MP3 encoded information residing on the PDA,</p> <p>12 515."</p> <p>13 Do you see that?</p> <p>14 A I do. You've got it highlighted.</p> <p>15 Q So -- and in this case, it says that, in</p> <p>16 this particular example, the -- "the PDA 515 may have</p> <p>17 decided to store the MP3 information in a highly</p> <p>18 compressed state."</p> <p>19 Do you see that?</p> <p>20 A Yes.</p> <p>21 Q Okay. And then it says:</p> <p>22 "Thereby, trading audio quality for the</p> <p>23 ability to store music."</p> <p>24 Do you see that?</p> <p>25 A Yes. And a POSITA would know that that was</p>
<p>186</p> <p>1 Q Okay.</p> <p>2 THE WITNESS: Well, we are now getting to</p> <p>3 my limit.</p> <p>4 MR. YOUNG: Okay. Oh, this would be fine.</p> <p>5 All right. We'll take a break.</p> <p>6 THE WITNESS: Can we take a 10-minute</p> <p>7 break?</p> <p>8 MR. YOUNG: Ten-minute break. That sounds</p> <p>9 great.</p> <p>10 It is 4:14 or so, your time; is that right?</p> <p>11 THE WITNESS: Yes.</p> <p>12 MR. YOUNG: So let's get back at 4:20 --</p> <p>13 4:25, your time.</p> <p>14 THE WITNESS: Not a problem.</p> <p>15 MR. YOUNG: Okay. Great. Thank you.</p> <p>16 THE WITNESS: Thank you.</p> <p>17 COURT REPORTER: Off the record.</p> <p>18 (Recess.)</p> <p>19 COURT REPORTER: All right. Back on the</p> <p>20 record.</p> <p>21 By MR. YOUNG:</p> <p>22 Q Okay. So, Dr. Myler, I would like to</p> <p>23 hopefully go through some very quick examples of this</p> <p>24 kind of exchange of information that we were talking</p> <p>25 about. Hopefully, they're not too controversial.</p>	<p>188</p> <p>1 often done.</p> <p>2 Q Okay. And this just means that we're going</p> <p>3 to store music at a lower quality in order to store</p> <p>4 more of it on the device 115; is that right?</p> <p>5 A Yes, we're giving up quality, audio</p> <p>6 quality, for storage capacity.</p> <p>7 Q Okay.</p> <p>8 A For improved quality of storage capacity.</p> <p>9 Q Right. Yes, very good. Okay. So then, in</p> <p>10 this case, in this example, the whole purpose of this</p> <p>11 disclosure would be that, if the first system, the</p> <p>12 PDA 515, which is part of 510, can make a</p> <p>13 communication link or establish a communication link</p> <p>14 between itself and System A, there may be a better --</p> <p>15 a better quality of that music, maybe, a better</p> <p>16 quality of a particular song that -- that the system</p> <p>17 510 can get from 550, if it is in within the</p> <p>18 communication network of 550; is that a fair example</p> <p>19 of the system working?</p> <p>20 A So we're talking about 510 --</p> <p>21 Q Yes?</p> <p>22 A -- and 550; and between them, they have</p> <p>23 established a communication link, 551.</p> <p>24 Q Right.</p> <p>25 A And the PDA, which is playing a low quality</p>

<p>189</p> <p>1 audio file because -- presumably, because the user 2 was willing to sacrifice quality for storage space -- 3 has now come to find out that system 550 has the 4 higher quality audio file, i.e., -- well, let's just 5 say it's at twice the sampling and it's twice the 6 file size. It's -- it's the same media -- it's the 7 same song. It's just recorded at a higher quality.</p> <p>8 Q Right. And so this system would then make 9 a determination that, as long as it can obtain that 10 higher quality song from System A, it will play that 11 for the user instead of the lower quality version; is 12 that fair?</p> <p>13 A Yes, that's the -- what I call the 14 determining. It's determined that there's something 15 better out there on the network.</p> <p>16 Q Okay.</p> <p>17 A We didn't over -- we didn't go over it 18 further than that because it may be that the channel 19 is slow and would not allow streaming, you know, 20 those kinds of things. But yes, in general, that 21 sounds like the example they're talking about 22 there.</p> <p>23 Q That's why I said, assuming that system can 24 even get that song from System A, it would then play 25 it. Okay. So now, if we could go to Column 5. I</p>	<p>191</p> <p>1 Q Okay. And then, another thing that the 2 system has exchanged is shown in the same column, 3 Column 5, line 25, where it talks about the 4 communication information -- I'm sorry -- yeah, the 5 communication -- the communicating information of 6 communication capability.</p> <p>7 Do you see that?</p> <p>8 A Yes.</p> <p>9 Q So in this case, as an example of that, 10 it's talking about exchanging information between the 11 first and second systems about whether or not there's 12 a minimum communication bandwidth, as an example. 13 And I highlighted that on the screen, which is in 14 Column 5, lines 33 through 35.</p> <p>15 Do you see that?</p> <p>16 A Yes. What -- what this is -- this is 17 reminiscent -- I think Shaw talked about UDP and TCP. 18 And UDP is a -- a sort of a low bandwidth channel 19 versus TCP. But UDP tends to be less -- there's some 20 good things about UDP, and there's some good things 21 about TCP. And so that -- those differences might be 22 communicated between the systems. Like, look, all 23 I've got is UDP protocol, so I'm not going to be able 24 to handle this because what you're requesting is of 25 more complexity than my -- the channel that I've got</p>
<p>190</p> <p>1 think we've already addressed this, but I just want 2 to make sure. And -- and another piece of 3 information they may -- the two systems may share is 4 communicative information about audio decoding 5 capability in this example in Figure 5 when we're 6 talking about audio media; is that right?</p> <p>7 A Yes. I think we -- we talked about that in 8 terms of the media client, and what it was able to 9 do. And I said, you know, you could have a client 10 when you try to open some -- open a file say, I don't 11 have the codec to decode that for you.</p> <p>12 Q Right.</p> <p>13 A I could if I had the codec. In other 14 words, all other considerations assumed, if I had the 15 codec, I could give it. But I just don't have the 16 codec.</p> <p>17 Q Right. So this actually, the very next 18 sentence, talks about that. And it says like -- so, 19 for example, you might have better processing 20 capability on the desktop computing system 555 over 21 the PDA 515, and you may want to allocate some 22 resources from the computing system five -- 555 to -- 23 to use to play the, in this case, the better quality 24 music; is that right?</p> <p>25 A Yes, that's what that says.</p>	<p>192</p> <p>1 can handle, kind of thing.</p> <p>2 Q So in this sentence that I've highlighted 3 on the screen again, and it's Column 5, line 31 4 through 35, it says:</p> <p>5 "For example, providing the current service 6 to the user at a higher quality level than the 7 current quality level may require a communication 8 channel between the first and the second system to 9 have a minimum communication bandwidth."</p> <p>10 Do you see that?</p> <p>11 A Yes. And -- and that's true.</p> <p>12 Q Okay. So why is it -- why does it say a 13 minimum communication bandwidth?</p> <p>14 A Oh, because -- I'm sorry. Go ahead, 15 Chris.</p> <p>16 MR. PONDER: I just said objection, form.</p> <p>17 THE WITNESS: Oh. Yeah. So...</p> <p>18 By MR. YOUNG:</p> <p>19 Q Dr. Myler, if you're going to read, just 20 read it to yourself without communicating, because 21 then the court reporter doesn't have to write it 22 down.</p> <p>23 A Sorry. Sorry. Sorry to the court 24 reporter. Yes, okay. What we've got here is the 25 minimum communication -- I think your question went</p>

<p>193</p> <p>1 to, you know, is there -- is there a minimum 2 communication bandwidth. And now we start to -- we 3 start to get into that area of real-time streaming, 4 and the need to present the data at a certain rate. 5 And in order to do that -- and that certain rate that 6 you're -- that you're wanting to get the real-time 7 rate for that particular kind of media, that -- that 8 rate -- that rate is going to be the minimum 9 communication bandwidth that's needed. 10 Q Okay. 11 A Otherwise, you're not going to get the 12 higher quality. 13 Q Okay. I think this is going to just 14 summarize exactly what you said. But just to be 15 clear, if I have a song in -- in this example with 16 Figure 5, I have a song at -- of low quality. And 17 the second system has a song at a high quality. And 18 I have a communication bandwidth that is large 19 enough, or at least a minimum, a minimum level to get 20 that song onto my, in this case, PDA 515, then it 21 will go ahead and do that; is that fair? 22 A Yes, and it would have to know -- know what 23 that is. In fact, if you went -- because we actually 24 were using the example that on the larger system is 25 the -- the higher data density file, let's say, an</p>	<p>195</p> <p>1 established, when it says "information sources," 2 digital media content is a form of information; 3 correct? 4 A It's -- it's a source of information, yes. 5 It may be compressed but the information is there. 6 Q Okay. And then, as an example, it says: 7 "Higher quality information may include 8 information encoded utilizing -- utilizing a lower 9 loss and coding technique than is used to encode the 10 information in which the first system has access to." 11 Do you see that? 12 A Yes. 13 Q Okay. So if the first system has 14 information encoded at a high -- high loss rate and 15 the second system has information encoded at a lower 16 loss rate, that lower loss rate media would be 17 considered a higher quality than the higher loss rate 18 encoded version; is that correct? 19 A Yes, I think I used the example earlier of 20 a JPEG. And you can save the JPEG -- you know, 21 you're given a little slider and you can choose the 22 quality level that you want. And you can go fully 23 lossless encoding, which means you gain a compression 24 factor but you lose no data at all. And then this 25 sort of speaks a little bit to that slipping the --</p>
<p>194</p> <p>1 MP3 that's twice sampled over what's on the PDA. 2 And so the PDA going through, you know, is 3 determining and utilizing steps and everything, says, 4 yeah, I want that higher quality file which meets -- 5 meets one of the dimensions, which is the file -- the 6 data itself is higher quality. And then the bigger 7 system says, but we don't have a channel between us 8 that can handle the playing of that file, I think 9 that's basically -- I mean that's the way a POSITA 10 would look at this and say, yeah, that makes sense. 11 You've got to -- it's not just enough to want this 12 other thing. Other criteria have to be met. 13 Q Okay. 14 A Sometimes. 15 Q Okay. And we've already kind of gone over 16 this. But just by further example, in Column 6, 17 starting at line 7, they also communicate information 18 to the first and second system regarding the 19 information sources that the first and second system 20 have access to. And I've highlighted that. It's in 21 Column 6, starting in lines 7 to 10. 22 Do you see that? 23 A Yes, I see where you've highlighted it. 24 Okay, the determining step. 25 Q Okay. And I think we've already</p>	<p>196</p> <p>1 the small amount of blank sound into -- into the 2 audio that we were talking about, I think, this 3 morning. The -- all the way to a highly compressed, 4 where now we're lossy. 5 And it means that the compression technique 6 has thrown away information in order to achieve the 7 compression. And that information that gets thrown 8 away may or may not be detectable to the user and in 9 the mid-range of lossy, that's usually the case. In 10 fact, those compression schemes look at perception. 11 Just like I was saying, you would never hear five 12 milliseconds of -- of blank -- of empty time in an 13 audio, especially for voice versus this encoding 14 technique. So that's what they're talking about, 15 lower loss encoding. 16 Q Okay. 17 A And that, of course, is included in the 18 metadata of the files. 19 Q Right. So if I had a file with high loss 20 that I'm listening to, in this example, on my PDA 21 515, and then the second system, the computing system 22 five -- 555 has a zero loss version of the same song 23 and I can establish a minimum bandwidth between the 24 two, then the system will then choose to play the 25 zero loss or no loss version from computing system</p>

<p>197</p> <p>1 555, instead of the high loss version from PDA 515; 2 right?</p> <p>3 A Yes, that's one of those programmed rules 4 that we talked about. It was either Barnes or Shaw. 5 There's a -- there's information that's available 6 that says, okay, loss -- lossy, bad; no lossy, good, 7 you know, quality measure. And if you're listening 8 to a lossy recording, and you've got the same 9 recording available lossless, we can, at this point, 10 say most likely that's a higher quality.</p> <p>11 Q Okay.</p> <p>12 A Oh, and -- and I think in this example you 13 tied in the -- and you're able to send it over. 14 Because, as we've already discussed, lossless is 15 going to be significantly larger data than a lossy.</p> <p>16 Q Right. So like, as an example -- and the 17 patent talks about this, and I'll highlight it; it's 18 in -- starting in Column 6, line 27, it says: 19 "For example, access to high quality 20 information over a computer -- over a communication 21 network may be of little value in certain scenarios, 22 if the communication network is slow or unreliable;" 23 right?</p> <p>24 A That's correct. That's basically what I 25 just said.</p>	<p>199</p> <p>1 gives the resource of the network or the CD drive -- 2 it gives the System B access to those resources.</p> <p>3 Q Okay. Okay. Now, we're going to leave 4 Step 150 and go to Step 160 of Figure 1, which I hope 5 is still in front of you in hard copy form. If you 6 could describe for me, in general, what Step 160 7 talks about?</p> <p>8 A Oh, okay. Now, this is the utilizing step, 9 what I call "the utilizing." We're utilizing second 10 system resource resources to improve quality. So 11 now, that we've determined that the system has 12 potentially higher quality stuff, will using those 13 improve quality? And then we run into a problem with 14 this figure. The answer is, no. We go to this 15 cartouche with continue in it. And if memory serves, 16 I don't think it's described anywhere in the patent. 17 Can you point me to 170 in the patent?</p> <p>18 Q Well, one place it's listed is Column 7, 19 line 36.</p> <p>20 A Okay. Thank you. I don't know how I got 21 that. Maybe it's 195. I'm looking at that and 22 wondering about that. Okay. Sorry, about that 23 little segue there.</p> <p>24 Q Dr. Myler, are you waiting for a question, 25 or are you still reading?</p>
<p>198</p> <p>1 Q Right.</p> <p>2 A So you may have ax -- you may be able to 3 get at it; but when you get it, it's not going to -- 4 you're not going to get it, or it's going to be slow 5 and unreliable, and so the quality -- I mean, nobody 6 wants to listen to music that has drop-offs. I mean 7 that could just drive -- that could be used as a 8 torture technique, probably.</p> <p>9 Q Okay. And I think this is just another 10 example. So I -- but I want to make sure that we 11 agree. And it's a continuation of the earlier 12 example. And it's in Column 6. It's referring back 13 to Figure 5, starts at line 40, goes through line 50.</p> <p>14 And it's doing just that. It's comparing a 15 lower quality audio information on PDA 515 to a 16 higher quality CD quality music on 555 and making a 17 determination whether or not it has the resources to 18 utilize that higher quality information; is that 19 correct?</p> <p>20 A Let me read through it. It's got a lot of 21 numbers in it. Yes, I think -- I think this sort 22 of -- sort of sums up what we just said about these: 23 That the larger file, the higher quality. And the 24 fact that, if everything else was okay, System A 25 could supply that to System B. So, basically, it</p>	<p>200</p> <p>1 A No. No, I thought I answered it but --</p> <p>2 Q Okay. So in step -- in Step 160, it makes 3 a determination about whether or not to -- whether 4 utilizing the system -- the second system resources 5 will improve quality. If the answer is no, it goes 6 to 170 and continues to play the quality at the 7 current quality level from the first system; and if 8 it says "yes", then it goes to Step 180; is that 9 correct?</p> <p>10 A That is correct.</p> <p>11 Q Okay. And what's Step 180?</p> <p>12 A 180 is the allocation step, allocate second 13 system resources for providing service. So this is 14 the resources that were determined that could be 15 utilized. And now, this is the -- the actual 16 utilization. Well, yeah. The system has to get them 17 all set up and then -- then go to the next step, 18 which is the utilizing. So --</p> <p>19 Q And then -- and then, that was my next 20 question. What is -- what is Step 190?</p> <p>21 A 190 is now the -- the second system's 22 resources being used. It's providing the service.</p> <p>23 Q Okay. Now, I don't want to go into great 24 detail, so hopefully we can do this very quickly. 25 But what's described in Figure 2 is, for lack of a</p>

<p>201</p> <p>1 better description, a very similar process as to 2 what's disclosed in Figure 1; is that correct? 3 A Okay. I need to look at Figure 2. 4 Q And just to try to speed things up, I think 5 the -- the differences are really in the Step 180 6 compared to 280. 7 A Okay. We're providing service second 8 system -- 9 Q Dr. Myler, please, just read -- read it to 10 yourself. 11 A It's basically some wording difference. 12 Q Right. But it's generally -- generally, a 13 similar process, other than, maybe, the differences 14 between Step 180 and 280; is that correct? 15 A Well, in one, they're allocating; and in 16 the other, they're requesting allocation. 17 Q Okay. 18 A So -- 19 Q Okay. And then, similarly -- and this is a 20 little bit -- maybe, a little bit harder to answer, 21 but Figure 3 is also a similar process as what's 22 shown in Figure 1 and Figure 2, as far as the 23 determining between the first and second system, as 24 to whether to try to improve the quality of the -- of 25 the service; is that correct?</p>	<p>203</p> <p>1 Q Okay? 2 A I'm now on Figure 4. 3 Q At a high level, can you describe for me 4 what a POSITA would understand Figure 4 of the '992 5 patent to -- to depict? 6 A A POSITA looking at this would say, okay, 7 here's a block diagram. And if the POSITA had the 8 advantage of knowing how Figure 5 was laid out, they 9 would most likely say that the dotted lines, 410 and 10 450, define two systems. And -- and then there's a 11 dotted line between the communication modules, which 12 would indicate to a POSITA that that was a 13 communication channel. And the rest of it, the other 14 blocks in the dotted system areas, are just simply 15 various modules, processing modules, which, since 16 you've have got processing model in there, 17 immediately the POSITA would say, oh, okay, this is a 18 probably going to involve a distributed control 19 system; and I will move resources around and 20 distribute them. And then the user interface module 21 going to the user interface device indicates that 22 this is some sort of device for the user to utilize. 23 Q Okay. And then what do the quality control 24 modules 440 and 460 do? 25 A 440 -- wait a minute -- 440 and 462 --</p>
<p>202</p> <p>1 A Well, it's missing those decision loops, 2 but it establishes communication. It com -- it 3 communicates, first, to determine whether utilizing 4 resources -- here is the utilization step, improve 5 service quality. Then first system -- second system 6 receives an allocation request. And then the second 7 system resources are allocated, the providing 8 service, and then utilization. So it's -- it's just 9 a severe simplification of Figure 1. 10 Q Okay. Now, if we could go to Figure 4, 11 please. And I have some questions from the text, so 12 it would be better if you could you put the paper 13 copy of Exhibit 4 in front of you. That way I don't 14 have to switch between the two. 15 MR. PONDER: Mr. Young, you said Exhibit 4. 16 Did you mean Figure 4 or Exhibit 4? 17 MR. YOUNG: Sorry. Yes, Figure 4, please. 18 Figure 4 -- 19 THE WITNESS: I have Figure 4. 20 MR. YOUNG: Okay. 21 THE WITNESS: Do I need Figure 1 anymore? 22 MR. YOUNG: No. 23 THE WITNESS: Okay. Let's take Figure 1 24 and put it back where it belongs. My poor disorder. 25 Okay. Okay.</p>	<p>204</p> <p>1 Q 460. 2 A 460. Good grief. Why do they put them in 3 different places? Okay. Quality control modules, of 4 course, I don't want to use memory, but I'm going to 5 say at the 30,000 foot level, those are modules 6 within the systems that implement these decision 7 processes that communicate between them and -- and 8 make these decisions on whether switching to a better 9 system is -- is going to be prudent and so on. 10 Q Okay. 11 A Yeah. There you go: 12 The quality control modules 440, 460 may, 13 for example, determine the current quality level at 14 which the first system, 410, is providing the current 15 service to the user. One or both of the quality 16 control modules, 440 and 460, may, for example, 17 utilize such current quality level to compare with 18 the expected quality at which the current service may 19 be provided to the user by utilizing various 20 resources of the second system. 21 So they're both identical modules, and each 22 of them is responsible for doing this -- doing the 23 determining and the utilizing. In other words, they 24 will look at the resources that are there and -- and 25 examine those with respect to what -- what kind of</p>

<p>205</p> <p>1 service is being provided, and if a -- if a higher 2 level is out there somewhere. 3 Q Okay. So, maybe, put a -- a -- putting 4 this at a summary level, quality control modules 440 5 and 460 are doing the Step 150 that we talked about 6 with respect to Figure 1; is that fair? 7 A 150 -- and we put Figure 1 away. Figure 1, 8 I'm sorry. No. That was 150, right? 9 Q Right. 10 A Oh, the deter -- the determining step, 11 determine whether utilizing second system resources 12 will produce a higher quality service. That does 13 look like what that -- those modules do. Those -- 14 those are where -- where it takes place. 15 Q And then in Figure 4, the second system, 16 450, has a resource allocation module, 465. 17 Do you see that? 18 A Yes. 19 Q And what does -- what does that module do? 20 A Let's see. What does it say four -- well, 21 obviously, it's the resource allocation module. 22 Q Just to -- just to speed things up, it's -- 23 if you look at Column 25, lines 2 through 5. I'll 24 highlight that on the screen. 25 A Yeah, there you go. And that explains what</p>	<p>207</p> <p>1 Q Okay. So now, we get to the first element 2 of the claim. And it says: 3 "Delivering digital media content having a 4 current quality level to a user." 5 Do you see that? 6 A Yes. 7 Q Okay. And we talked about digital media 8 content having a certain quality level. As an 9 example, maybe, the movie being played in an SD 10 standard definition format; is that correct? 11 A We did. 12 Q Okay. And this first element doesn't talk 13 about a -- a network connection yet as part of the 14 first element; is that right? 15 A Just all by itself, no. It just says 16 delivering digital media content having a current 17 quality level to a user. It doesn't specify how the 18 delivering is taking place. 19 Q Right. Okay. And now we get to the second 20 limitation, which is the determining limitation. 21 Do you see that? 22 A Yes. 23 Q Okay. And the first thing it talks about 24 is determining a network connection with a second 25 system. Do you see that?</p>
<p>206</p> <p>1 it is. The resource allocation module may, for 2 example, allocate various resources of the second 3 system based on information obtained from the quality 4 control modules and/or the access control modules. 5 So it's apparently also talking with the 6 access control modules. 7 Q Okay. All right. So earlier in your 8 deposition today we started going through Claim 1 of 9 the '992 patent. 10 Do you recall that? 11 A I recall us going through that claim. 12 Q Okay. So I put the claim back on the 13 screen. 14 A And I have got some more follow-up 15 questions for you. 16 Q Okay. So now, we've talked about the 17 preamble already, and I'll highlight that on the 18 screen, which is in Column 26, line 29 through 30. 19 Do you see that? 20 A Yes. 21 Q Okay. Earlier we talked about portable 22 system; we talked about digital media service; we 23 talked about user. 24 Do you remember all that? 25 A I recall that, yes.</p>	<p>208</p> <p>1 A Yes. 2 Q So in this situation, as an example, where 3 we talked about Figure 5, it's System B having a 4 network connection with System A through, I think, it 5 was 551, as an example; do you remember that? 6 A Yes, I think we called 550 the second 7 system, and 510 the first system, even though it's 8 System B and System A. 9 Q Okay. And as part of this determining 10 step, it has to determine that that -- that network 11 connection with the second system has to be 12 available; correct? 13 A Yes, it says that is available. 14 Q And what does that mean "is available"? 15 A It's out there. It -- it can be accessed 16 in some way. 17 Q Okay. 18 A If you're -- if you're not available, you 19 can be in the next room, but you're not accessible. 20 Q Okay. So it's available or accessible, and 21 it has to be characterized by a communication 22 bandwidth that is high enough. 23 Do you see that? 24 A Yes. 25 Q So what does that mean?</p>

<p>209</p> <p>1 A Well, high enough is -- would be -- sort of 2 implies the minimum threshold: High enough. And it 3 means that, whatever that minimum threshold is, 4 that's defined as high enough is a characterization 5 of the communication channel bandwidth. 6 Q Okay. And that channel needs to be high 7 enough to provide the digital media content to a user 8 at a higher -- quality level higher than the current 9 quality level. 10 Do you see that? 11 A Yes. 12 Q And what does that mean? 13 A So the digital media content that -- that 14 we're -- that we're looking at, that's the digital 15 media content that has the -- a higher quality level 16 than the current digital media content. Yeah. 17 The digital media content of the user at a 18 quality level higher than the current quality level. 19 So whatever the current quality level is -- and, 20 again, it's whatever dimension we're using -- that 21 has to be -- the quality level has to be greater for 22 this second system's media content. 23 Q Right. So, as an example, going back to 24 the previous example, if the -- if the -- in the 25 first delivering step, the digital media content was</p>	<p>211</p> <p>1 type of media. 2 Q Okay. 3 A Same content. 4 Q And then, in that determining step, the 5 bandwidth of the communication network between the 6 first system and the second system has to be high 7 enough such that, in this example, the first system 8 can get the HD version of the movie from the second 9 system; correct? 10 A That's part of the determining step is 11 finding out if there's -- the communication bandwidth 12 by which the one system has to send to the other 13 system, whatever that is -- wire, network, 14 whatever -- has to be high enough in order to handle 15 the higher quality media. 16 Q Okay. And I think you mentioned this just 17 earlier, but when it says high enough, that relates 18 to some kind of, quote, "minimum threshold," I think 19 that is what you used, that terminology? 20 A Yes, because the current quality level -- 21 let's see -- yeah. The bandwidth has to be -- that's 22 going to be whatever the media requires. If the 23 media requires 100 bit per second channel, then 100 24 bit per second channel, a 101 bit per second channel, 25 a 500 bit per second channel is going to be fine. A</p>
<p>210</p> <p>1 in a standard definition format. And then, in the 2 second step, this determining step, it was determined 3 that the second system has digital media content in 4 HD as an example, that would be a -- for the same 5 movie -- that would be a situation where the digital 6 media content on the second system had a higher 7 quality level than the current quality level, 8 correct, in that example? 9 A I think we made that conclusion, and I 10 think a POSITA would make that conclusion. 11 Q Okay. 12 A Since looking at that -- that highlight, 13 the dental media content to the user at a quality 14 level higher than the current quality level. And, 15 certainly, a better sampled audio file, more samples 16 is going to be, in general, a higher quality than a 17 low sample file. 18 Q Okay. And where it says that -- where it 19 says "the digital media content," do you see that? I 20 have it highlighted. 21 A Yeah. Yes. 22 Q Okay. That refers to the same media 23 content that's disclosed in the first delivering 24 limitation; is that correct? 25 A Yes, I think we're talking about the same</p>	<p>212</p> <p>1 99 bit per second channel is not. 2 Q Okay. Great. 3 A I mean, that's one way to look at that. 4 Q Okay. Then the next limitation is this 5 using limitation, and I'll highlight that on the 6 screen. That's in Column 26, line 37 -- 38. It 7 says: 8 "Using the network connection to obtain the 9 digital media content at the higher quality level 10 from the second system." 11 Do you see that? 12 A Yes, I see the highlighted section. 13 Q So what does that -- what does that 14 limitation mean? 15 A Oh, the using is you go ahead and use it. 16 So use the network connection in the obtaining of the 17 digital media content that's at the higher quality 18 level from the second system. So the first system is 19 now going to use the network connection to get that 20 media. 21 Q Okay. So now that we -- now that we've 22 obtained the higher quality media content from the 23 second system, the last limitation says: 24 Delivering that digital media content at 25 the higher quality level to the user, instead of the</p>

<p>213</p> <p>1 digital media content at the current quality level. 2 Do you see that? 3 A Yes. And that's where the -- the switch is 4 made to the higher -- the presumed higher quality 5 media. 6 Q Right. And as part of that delivering, the 7 user has to be able to experience the higher quality 8 level. So, as an example, it has to have a -- in our 9 example, we went from an SD version of the movie to 10 an HD version of the movie; that user would have to 11 have a device that is HD compatible so that that 12 media content can be delivered to the user at that 13 higher quality level; is that correct? 14 MR. PONDER: Objection, form. 15 THE WITNESS: Yeah, I don't know if I'm 16 reading that into that element. It's -- delivering 17 just simply means here it is. Here's the media 18 you've decided on at the higher quality level. And 19 here, use this Instead of what you're currently 20 using. 21 By MR. YOUNG: 22 Q Right. But the term -- the delivering step 23 in the last limitation -- that term "delivering," is 24 also used in the first delivering step; is that 25 correct?</p>	<p>215</p> <p>1 Q Okay. Maybe -- 2 A And also -- I'm sorry -- we're also talking 3 about bandwidth, which implies a network. 4 Q Okay. Let's -- let's try to make this even 5 a little simpler. The first limitation starts with 6 the term "delivering" digital media content; correct? 7 A Yes. 8 Q Okay. And the last limitation says 9 delivering the digital media content; correct? 10 A Yes. 11 Q And I think we established that, where it 12 says the "digital media content" in the subsequent 13 elements, it's referring to the same digital media 14 content in the first element; is that correct? 15 A I think you said that. And that -- that 16 gets messy, because what do you mean by the same? Is 17 it -- is it the same content, which is a song, and 18 that same song is in two different places at two 19 different resolution -- by resolution, I mean 20 sampling -- different codecs, but it's still the same 21 song. 22 And, you know, I think you have to look at 23 this in terms of the entire claim, at least the 24 POSITA would look at it like that and say, okay, what 25 are we talking about here? We've already got some</p>
<p>214</p> <p>1 A Yes. Delivering simply means sending it 2 across the channel. Here it is; I'm delivering it. 3 Q Well, I think we've established in the 4 first limitation that delivering media content may 5 not even be going across a channel; right? 6 MR. PONDER: Objection, form. 7 THE WITNESS: I -- well, I -- I -- if 8 memory serves -- and maybe we could readback the 9 record -- we said delivering digital media content, 10 just pulling it out like that, delivering digital 11 media content may mean delivering it off of the hard 12 drive. 13 Q Right. 14 A Off the flash drive on the portable device. 15 But when we're talking about, let's see, within a 16 portable system -- okay. Digital media, the method 17 comprising, and then determining a network 18 connection. So when you take it in the context of 19 the entire claim, it sounds like the delivering is 20 taking place over the network. But now, I think 21 we're -- we might be getting into a, you know -- 22 Q Yeah, I think we're -- 23 A And just looking at it by itself, or 24 looking at it somewhere else, and not interpreting it 25 in terms of what the claim is hoping to achieve.</p>	<p>216</p> <p>1 digital media going on, and it's a particular quality 2 level. And now, we've applied some rules, or we've 3 done some decisions, and we found out, and we've 4 had -- and looked around, and we found a better way 5 to do this. And so now, let's go to this other 6 digital media content. 7 Q Okay. So maybe I'll ask it this way: In 8 the first limitation, the first delivering 9 limitation, it says: 10 "Digital media content having a current 11 quality level." 12 Do you see that? 13 A Yes. 14 Q Okay. And in the second, or the last 15 limitation, it says: 16 "The digital media content at a higher 17 quality level." 18 Correct? 19 A Right. This is now the digital media 20 content at the higher quality level. 21 Q Right. So -- 22 A Whatever that means. 23 Q Right. So my question is pretty simple: 24 In the first limitation and the second limitation, 25 it's the same digital media content; but, in the</p>

<p>217</p> <p>1 first limitation, it has a current quality level, and 2 in the second limitation it has a higher quality 3 level; correct? 4 A Not exactly. Because now you're -- what do 5 you mean by "it's the same"? Is it the same song? 6 Q Well, as -- in an example, yes? 7 A Is it the same codec? 8 Q Well, I -- I'll ask you that. 9 A If it's a different codec, then it's a 10 different digital media content. It's a digital 11 media content that has been sampled -- well, 12 compressed in a different way. That's why I said 13 this -- this sort of same is -- is -- is tricky 14 here. 15 Q But I think -- 16 A Because there's different parameters 17 that -- that determine the digital media content. 18 And I -- and I gave one. I said, is it the same 19 song? And is -- is it the same song? Is it the same 20 song with the same codec? In other words, is 21 everything the same; then okay, yes, that's the same 22 digital media content. 23 Does it have to be the same? No. It could 24 be different digital media content, because it has a 25 different codec, or it has a higher -- it has an</p>	<p>219</p> <p>1 Do you see that? 2 A Yes. 3 Q Okay. So in that example, it's the same 4 media content in the first delivering limitation and 5 the second delivery limitation; however, in the first 6 delivering limitation, that digital media content has 7 a current quality level. And in the second 8 delivering limitation, that same song, has a higher 9 quality level? 10 A Yes. And -- and that particular example is 11 included. They can be the same, but they don't need 12 to be the same. 13 Q Okay. 14 A Because then you use my example, where it's 15 two different codecs. In other words, what is giving 16 the higher quality level. That's the question. And 17 it may not have anything to do with the content. 18 Q Okay. Are you familiar with the legal term 19 for -- in patent law, that talks about antecedent 20 basis? 21 A Antecedent basis. If that is not in the 22 section of my report where I was informed of the law, 23 then probably not. 24 Q Okay. Let's use a simple example. In the 25 second limitation, the determining limitation, it</p>
<p>218</p> <p>1 inherent higher quality. 2 Q Wouldn't that inherent higher quality fall 3 within the description of a current quality level and 4 a higher quality level? 5 A Oh, absolutely. The -- 6 Q All right. 7 A -- digital media content one has a current 8 quality level, and the other one has a higher quality 9 level under all of the constraints of the 10 determining, and the using, and the quality 11 control -- we talked about all of those different 12 parameters, and so on. So to say they're both the 13 same, I -- I -- I think is misinformed, frankly, in 14 my opinion. 15 Q I think -- think we're talking past each 16 other. I think this is very simple. 17 In the first limitation, the first 18 limitation, let's use your example. It's delivering 19 a song and that song has a current quality level; 20 okay? 21 A Yes. 22 Q And then, in the second -- within the last 23 limitation, the last delivering limitation, it says, 24 "the digital media content, let's say, the same song, 25 but it has a higher quality level."</p>	<p>220</p> <p>1 defines a term, "a network connection." 2 Do you see that? 3 A Right. 4 Q Okay. Now, it refers to the network 5 connection in the using limitation. 6 Do you see that? 7 A Yes. 8 Q Okay. So is it your understanding that 9 where it says "the network connection" in the using 10 limitation, that is the same network connection that 11 is first defined in the determining limitation? 12 A Yes. In that limitation, it says, 13 "determining a network connection. And then after 14 that's been determined, then using that network 15 connection." 16 Q Okay. So I'll represent to you that that's 17 the concept of antecedent basis. So now, my question 18 is, the first time the term "digital media content" 19 is used in Claim 1 shows up in the first delivering 20 limitation as I've highlighted on the screen; is that 21 right? 22 A Yes. 23 Q Okay. So now, later in the -- let's say, 24 we use the second limitation, the determining 25 limitation -- it talks the digital media content.</p>

<p style="text-align: right;">221</p> <p>1 I'm not talking about quality levels. Those are 2 different limitations. With respect to the digital 3 media content in the determining limitation, is that 4 referring to the same digital media content first 5 defined in the first delivering limitation? 6 A Well, yes, because we're talking about 7 delivering digital media content. 8 Q Okay. 9 A But then we were saying is it the same. 10 And now, we're talking about -- that's like saying: 11 We delivered a baby. And then the baby was given to 12 the user, but they were two different babies. 13 They're both babies, but they're different babies. 14 Sorry, that's a weird thing, but I'm thinking about 15 my grandson. Anyway, so -- I mean, do you see what 16 I'm saying about this? 17 Q No. 18 A I don't think you can use that 19 antecedent -- maybe, that's a legal issue. I don't 20 know -- legal question. I'm not interpreting it like 21 that. You're saying to me, is that how you see this? 22 No. 23 Q Okay. So it's your opinion then that, in 24 the second limitation, the second delivering 25 limitation, which is the last limitation of Claim 1,</p>	<p style="text-align: right;">223</p> <p>1 better quality a higher level of quality. I think 2 that's what I'm trying to get to here. And so I -- 3 that's why I'm hesitant to say that it's both the 4 same. 5 Q We just saw an example, and I can go back 6 to it if we need to, but it's in Column 6, line 40 7 through 49 -- 8 A Oh, we're going to have to go back to it. 9 Q All right. 10 A I have to see it. 11 Q Let's go back to it. 12 A Or can I find it here, whichever one you 13 want. 14 Q Okay. I have it highlighted on the screen. 15 Okay. 16 So my question to you is this: In this 17 example, which I've highlighted on the screen, which 18 is line -- Column 6, line 40 through 49, it talks 19 about MP3 audio information being provided to a user, 20 and then -- from the PDA 515 -- but then realizing 21 that there's actually CD quality music, same -- same 22 music information but different format, stored on the 23 second device; correct? 24 A Yes. 25 Q Okay. So this -- and this is a question,</p>
<p style="text-align: right;">222</p> <p>1 where it says the "digital media content," that could 2 be the same digital media content first defined in 3 the first delivery limitation, but it doesn't have to 4 be; is that your opinion? 5 A That's -- it -- it doesn't have to be 6 identically the same. And I'm talking about, like I 7 said, the -- there can be features of it that are the 8 same. Like, the song that it contains is the same, 9 but the codecs inside are different. And that may be 10 one of the factors. And, in fact, we talked about 11 that as one of the factors that makes them different, 12 the higher quality digital media content different. 13 Q Right. So my question to you is, in this 14 codec example, is it your opinion that that codec is 15 part of the digital media content, or is it part of 16 the quality level of the content? 17 A It's a characteristic of the content. 18 Q Okay. So it's your opinion that the codec 19 doesn't relate to the quality. It's just part of the 20 content? 21 A Well, you could have the digital media 22 content in the first element is a song in MP3 format, 23 and we find out that there is digital media content 24 in WAV format that is the same song, but everything 25 else is different. And the WAV format song produces</p>	<p style="text-align: right;">224</p> <p>1 so is this an example of where you have digital media 2 content at a first quality level, MP3, and then the 3 same digital media content, but at a higher quality 4 level with the CD quality formatting? 5 A Yes. 6 Q Okay. So it's the same music, but in two 7 different quality formats, for lack of a better 8 description? 9 A It's not the same digital media content. 10 It's the same song and -- but it has different 11 quality, and it has different encoding. They are not 12 the same they are from a different place. 13 I mean, that makes perfect sense to me. 14 Q So my -- what I'm trying to figure out is, 15 is the MP3 format of one and the CD quality of the 16 other, does that fall into the current and higher 17 quality limitations, or does it fall into the digital 18 media content limitations? 19 A If the -- if the MP3 is the current one 20 being played -- 21 Q Correct? 22 A -- that's the current quality level. And 23 if the CD quality music -- we're making the 24 assumption CD is better than MP3 -- is the higher 25 quality. So, yes, we switched to the higher quality.</p>

<p style="text-align: right;">225</p> <p>1 And you have a higher quality, but the media content 2 is not the same. It's the same song. As far as the 3 user is concerned, it's the same; but as far as the 4 system is concerned, it's a different media content 5 that has to be dealt with. And, of course, it 6 influences everything, again, going to these rules, 7 in determining what's a high -- a so-called higher 8 quality level. 9 Q What's your understanding of the term 10 "digital media content"? 11 A I think we talked about this earlier, but 12 digital media content is media. And we have examples 13 of media, which are video, audio, even text. And 14 digital implies that it's digitized, and content 15 implies that it has some sort of information content. 16 So digital media content can be something like an MP3 17 file, or it can be an MPeg. It could be a Word 18 document. 19 Q Okay. And what does it mean when it says: 20 "You're delivering digital media content to a user?" 21 A Well, delivering -- I think I talked about 22 that in my report. Delivering business -- delivering 23 means that you are providing that content in a form 24 that the user can use. 25 Q Okay. As part of your analysis in this</p>	<p style="text-align: right;">227</p> <p>1 we will go ahead with this -- with this line of 2 questioning. 3 THE WITNESS: Okay. 4 MR. YOUNG: So let's be back on the record 5 at 5:41, your time. 6 COURT REPORTER: Off the record. 7 (Recess.) 8 COURT REPORTER: Back on the record. 9 By MR. YOUNG: 10 Q Okay. Dr. Myler, welcome back. 11 Just to reset, I have the filed history of 12 the '992 patent on the screen, and that file history 13 is marked as Exhibit 3 of this deposition; is that 14 correct? 15 A That is correct. 16 Q Okay. And you know that the file history 17 is the written record of the communications between 18 the Applicant and the examiner -- patent 19 examiner within the process of obtaining the patent 20 from the patent office; is that fair? 21 Do you understand that? 22 A That is my understanding. 23 Q Okay. Great. And do you understand that 24 claims can be amended during the file history of a 25 patent?</p>
<p style="text-align: right;">226</p> <p>1 case, you considered, I believe, the file history of 2 the '992 patent; is that correct? 3 A That is correct. 4 Q Okay. I'm going to pull up the file 5 history on the screen. This has been marked as 6 Exhibit 3 of your deposition; is that correct? 7 A Let me make sure I have it organized here. 8 I'm going to put this away for now. 9 Q While you're looking that up, Doctor -- 10 A Here it is. It's Exhibit 2. 11 Q It's -- yes. 12 A Unless there's a typo here. 13 Q No, there's no typo. What you're looking 14 at is exhibit 1002 of the Petition, but that same 15 exhibit has been marked as Exhibit 3 of your 16 deposition. Do you understand that? 17 A Yes, I do now that you've pointed it out. 18 We are getting long in the day. But yes, and I've 19 got it in front of me. Please proceed. 20 MR. PONDER: Mr. Young, I don't know if 21 you're -- if this is the start of a new line of 22 questioning on this exhibit but, maybe, we can take a 23 break? 24 MR. YOUNG: I think that's fine. Let's 25 take a very quick break. And then we'll -- we'll --</p>	<p style="text-align: right;">228</p> <p>1 A Yes, that -- that often happens. 2 Q Right. It also happens that claim numbers 3 change from -- in the file history to when they're 4 actually issued in a patent. They actually get 5 re-numbered oftentimes; do you understand that? 6 A Yes. I think I've seen that before. 7 Sometimes that causes confusion. 8 Q Right. So that's what I'm going to try to 9 eliminate now. So what I have here is page 43 of the 10 file history on the '992 patent. And this is a 11 amendment to the claims, and it shows that Claims 1 12 through 37 have been canceled. 13 Do you see that? 14 A Let me get to page 43, please. 15 Yes, 1 to 37 were canceled -- 16 Q Okay. 17 A -- according to this. 18 Q And you see that these claim -- Claim 38 19 has been amended to include what is now the final 20 Claim 1 that we've just been discussing. 21 Do you see that? 22 A Yes. 23 Q Okay. So when the file history is 24 referring to Claim 38, it's actually referring to 25 what has been issued as Claim 1.</p>

<p>229</p> <p>1 Do you understand that?</p> <p>2 A We're saying now that the currently amended</p> <p>3 Claim 38, because we started off with Claims 1 to 37</p> <p>4 that got canceled, is now Claim 1.</p> <p>5 Q Is that your -- so you understand that;</p> <p>6 correct?</p> <p>7 A Yes. I'm just -- I'm just making sure that</p> <p>8 that's how -- what I understand.</p> <p>9 Q Yes.</p> <p>10 A It's the same.</p> <p>11 Q Exactly. Okay. So now I am looking at</p> <p>12 page 50 of the file history, and this is a response</p> <p>13 to an office action from the Applicant. So this is</p> <p>14 written by the Applicant, and it's in a response</p> <p>15 dated March 16th of 2012.</p> <p>16 Do you see that?</p> <p>17 A Yes.</p> <p>18 Q Okay. So in this argument from the</p> <p>19 Applicant, it's discussing a reference called</p> <p>20 Jagadeesan.</p> <p>21 Do you see that?</p> <p>22 A Yes, the Jagadeesan patent.</p> <p>23 Q Okay.</p> <p>24 A I think it was a patent. It might have</p> <p>25 been an application.</p>	<p>231</p> <p>1 Q Correct. That's your understanding of that</p> <p>2 argument?</p> <p>3 A Yes.</p> <p>4 Q Okay. And then down below -- I'll</p> <p>5 highlight the last two. I'll highlight these next</p> <p>6 two sentences, where it says -- and I'll read them.</p> <p>7 I think we're still on page 50 of the file history.</p> <p>8 But it says:</p> <p>9 "That is, in Jagadeesan, prior to the</p> <p>10 transmission by either the WLAN, or the cellular</p> <p>11 network, the voice data is the same. And as a whole,</p> <p>12 Jagadeesan fails to disclose, let alone obtaining</p> <p>13 digital media content at a higher quality level from</p> <p>14 the second system as recited in Claim 38."</p> <p>15 Do you see those two sentences?</p> <p>16 A Yes, I do.</p> <p>17 Q Okay. So what the Applicant is saying is</p> <p>18 that, with respect to limitations in Claim 38, which</p> <p>19 we've established is Claim 1 of the patent, '992</p> <p>20 patent, there is -- Jagadeesan doesn't disclose</p> <p>21 obtaining digital media content from a higher quality</p> <p>22 level of the second system. That's what the</p> <p>23 Applicant argues; correct?</p> <p>24 MR. PONDER: Objection. Form.</p> <p>25 THE WITNESS: That's what it states,</p>
<p>230</p> <p>1 Q Okay.</p> <p>2 (Court Reporter clarification.)</p> <p>3 MR. YOUNG: Yes. I'll -- I can actually</p> <p>4 blow it up for you. And I'll highlight it on the</p> <p>5 screen.</p> <p>6 THE WITNESS: Yeah, there -- there it is.</p> <p>7 By MR. YOUNG:</p> <p>8 Q So the Applicant argues that -- and I'll</p> <p>9 highlight on the screen -- "though Jagadeesan may</p> <p>10 disclose a mobile station switching between</p> <p>11 communication links based on link quality, the source</p> <p>12 of the content transmitted across the links, i.e.,</p> <p>13 the voice data remains the same."</p> <p>14 Do you see that?</p> <p>15 A Yes.</p> <p>16 Q Okay. So the Applicant here is making a</p> <p>17 distinction between media content and network</p> <p>18 communication, correct, or network connection?</p> <p>19 MR. PONDER: Objection. Form.</p> <p>20 THE WITNESS: Oh, right. Yes, okay. So --</p> <p>21 so the media content, it's the same file, let's say,</p> <p>22 and it's coming -- and Jagadeesan is saying you're</p> <p>23 switching between communication links picking the</p> <p>24 better link quality to get the same data.</p> <p>25 By MR. YOUNG:</p>	<p>232</p> <p>1 yeah.</p> <p>2 By MR. YOUNG:</p> <p>3 Q Okay.</p> <p>4 A There is that little -- little snag of the</p> <p>5 voice data.</p> <p>6 Is that dynamic voice data, like in a cell</p> <p>7 phone?</p> <p>8 Q Are you -- are you familiar with the</p> <p>9 Jagadeesan reference?</p> <p>10 A Well, yes. But it's -- it's huge. I mean,</p> <p>11 I don't know about every item. I mean, if you want</p> <p>12 to talk about the determining claim in my report and</p> <p>13 my opinion there, but now you're throwing this up and</p> <p>14 saying, you know, how you are interpreting this, or</p> <p>15 do you agree with this. And I do; however, the voice</p> <p>16 data is the same. Are we talking about voice data or</p> <p>17 are we talking about media content? And they say --</p> <p>18 let alone media content. I guess I'm not getting to</p> <p>19 what your question is.</p> <p>20 Q I'll make it -- I'll make it very simple.</p> <p>21 In this argument, in this paragraph that</p> <p>22 we've been discussing, the Applicant is making a</p> <p>23 distinction between link quality, in other words,</p> <p>24 network connection, and digital media content</p> <p>25 quality; is that correct?</p>

<p>233</p> <p>1 A Yes. In fact, the way I see this is the</p> <p>2 patent office was saying Jagadeesan is basically</p> <p>3 saying you've got two links -- and I get the</p> <p>4 impression that it's a cell phone voice data link --</p> <p>5 and so Jagadeesan is saying you can switch over to a</p> <p>6 different channel and get better voice quality. And,</p> <p>7 of course, it's the same voice because it's the same</p> <p>8 person on the other side, as opposed to digital media</p> <p>9 content, which we've been discussing all along as</p> <p>10 things like MP3 files, and video, and so on that have</p> <p>11 to be done with the client player. And I simply want</p> <p>12 to point that out.</p> <p>13 Q Okay. And the other reference that the</p> <p>14 examiner talked about is this Kamaya reference, which</p> <p>15 I'm highlighting here at the last paragraph in</p> <p>16 paragraph 50.</p> <p>17 Do you see that?</p> <p>18 A I think that's Kamaya.</p> <p>19 Q Kayama, okay.</p> <p>20 A Or Kayama.</p> <p>21 Q Kayama, that's fine. However you want to</p> <p>22 pronounce it, it doesn't matter.</p> <p>23 Do you see that?</p> <p>24 A Yes.</p> <p>25 Q Okay. And in Kayama, the Applicant is also</p>	<p>235</p> <p>1 Q That's fine. Do you know what a Notice of</p> <p>2 Allowance is from the patent office?</p> <p>3 A Isn't that where they come back and say we</p> <p>4 are -- like, we're going to allow this, we agree.</p> <p>5 Is that where they agree?</p> <p>6 Q That's right. Okay. Yes, you are correct.</p> <p>7 So what I'll show you now is on page 21 of</p> <p>8 the file history, and this is a part of page 2 of the</p> <p>9 Notice of Allowance. Do you see that?</p> <p>10 A Well, you don't know what the Bates number</p> <p>11 is, do you?</p> <p>12 Q Yes, twenty -- 21.</p> <p>13 A Oh, we're going backwards.</p> <p>14 Q Usually, you read a file history from back</p> <p>15 to front.</p> <p>16 A And that's correct.</p> <p>17 Q And just to show you on the screen, the</p> <p>18 previous page, page 20, says, "Notice of</p> <p>19 Allowability."</p> <p>20 A Okay.</p> <p>21 Q Okay. And this is where you are allowing</p> <p>22 Claims 38 through 57.</p> <p>23 Do you see that highlighted on the screen</p> <p>24 there on page 20?</p> <p>25 A Yes, and I'm -- and it also says, "Claims</p>
<p>234</p> <p>1 saying that, like Jagadeesan, it doesn't disclose</p> <p>2 obtaining digital media content at a higher quality</p> <p>3 level from a second system.</p> <p>4 Do you see that?</p> <p>5 A Yes.</p> <p>6 Q Okay. Now --</p> <p>7 A And I -- and I just want to point out</p> <p>8 "relates to selection of a communication medium and</p> <p>9 not the content of the medium." In other words, two</p> <p>10 channels, or multiple channels, and picking the best</p> <p>11 one.</p> <p>12 Q Right. So it's making a distinction</p> <p>13 between channels and digital media content.</p> <p>14 A That's how I'm interpreting this. It's --</p> <p>15 it's sort of like how many bars do you have? Well,</p> <p>16 if I'm over here, I've got this many, but if I stand</p> <p>17 over here, I've got more. And oh, on this channel,</p> <p>18 I've got a certain, you know, quality level bandwidth</p> <p>19 zone; but on this other one I have, it's better. And</p> <p>20 I get that impression that that's what they are</p> <p>21 talking about.</p> <p>22 Q Right. Okay. And then, do you know what a</p> <p>23 Notice of Allowance is from the patent office?</p> <p>24 A I'm sorry. When you said that, there was a</p> <p>25 break up.</p>	<p>236</p> <p>1 38 to 57 are allowed for the reasons as set forth in</p> <p>2 Applicant's response."</p> <p>3 Q Right. So that's what I wanted to</p> <p>4 highlight for you.</p> <p>5 So in -- on page 21, as you just said, it</p> <p>6 says, "Claims 38 through 57 are allowed for the</p> <p>7 reasons set forth in Applicant's response filed on</p> <p>8 March 16th, 2012."</p> <p>9 Do you see that?</p> <p>10 A Yes.</p> <p>11 Q So it's your -- is it your understanding</p> <p>12 that this is saying that the examiner is agreeing</p> <p>13 with the arguments that the Applicant set forth in</p> <p>14 its March 16th, 2012, response?</p> <p>15 A I do believe that's what it says, "Are</p> <p>16 allowed for the reasons as set forth in Applicant's</p> <p>17 response filed," and then the date.</p> <p>18 Q Okay. Great. And as part of this -- part</p> <p>19 of this -- your opinions in this matter, you provided</p> <p>20 opinions as to the qualifications of a POSITA;</p> <p>21 correct?</p> <p>22 A Yes, that -- let's see.</p> <p>23 Where is that?</p> <p>24 Q I think it's on page 21 of your</p> <p>25 declaration.</p>

<p>237</p> <p>1 A Yes, starts with paragraph 31.</p> <p>2 Q Okay. And just at a high-level summary,</p> <p>3 can you describe for me what you -- your opinion is</p> <p>4 as to the qualifications of a POSITA?</p> <p>5 A Typically, in devices of the sort that</p> <p>6 we've been talking about, PDAs, and so on and so</p> <p>7 forth, those -- that -- that falls under electrical</p> <p>8 engineering. However, there is also a computer</p> <p>9 science aspect to it because we've talked about</p> <p>10 software and we've said "modules." Those modules can</p> <p>11 be in hardware, but often, the early design and</p> <p>12 development is done completely in software, so</p> <p>13 computer science is involved.</p> <p>14 And, of course, computer engineering sort</p> <p>15 of straddles the fence between electrical and</p> <p>16 computer science. And so you want one of those</p> <p>17 degrees, also included a similar field, you know,</p> <p>18 sometimes you have lately, and there's been</p> <p>19 electrical and computer engineering degrees, and then</p> <p>20 about two years' experience in multimedia</p> <p>21 communications and systems. In other words, working</p> <p>22 in these things.</p> <p>23 Because, you know, the course work and that</p> <p>24 varies from university to university, but you really</p> <p>25 want to have some experience, or you could jump that</p>	<p>239</p> <p>1 and I went and took them, and then quickly realized</p> <p>2 that, at the very high level, the communications and</p> <p>3 control -- and sometimes communications and control</p> <p>4 are talked about in that way -- start -- start to</p> <p>5 converge. And so my foundational background is in</p> <p>6 the technical details that a POSITA would use.</p> <p>7 And then later, when I became a professor,</p> <p>8 I taught digital telecommunications. I taught</p> <p>9 digital video, compression schemes, which we have</p> <p>10 also been talking about because it related to the</p> <p>11 quality. I have had a number of Master's thesis, and</p> <p>12 I believe a couple of dissertations that have been</p> <p>13 involved -- directed -- have been involved in -- in</p> <p>14 the type of technologies that we've been talking</p> <p>15 about.</p> <p>16 Q Okay. And please don't tell me anything</p> <p>17 that you -- any of your communications with your</p> <p>18 counsel. I don't want any of that.</p> <p>19 But leaving that out, can you describe for</p> <p>20 me the work that you did in this matter leading up to</p> <p>21 your preparation of your declaration?</p> <p>22 A Oh, oh, oh, yes. The big thing in a -- in</p> <p>23 a -- in a litigation like this is put yourself in the</p> <p>24 mind of the POSITA. And, of course, read the '992,</p> <p>25 looked at a large amount of prior art and, certainly,</p>
<p>238</p> <p>1 with a Master's degree, because at the Master's level</p> <p>2 is where you'd get into -- at least, in terms of</p> <p>3 telecommunications -- you'd get into the higher level</p> <p>4 systems and so on. And it's just a higher level.</p> <p>5 Q Okay. And at a high level, if you could</p> <p>6 describe for me the qualifications that you possess</p> <p>7 to demonstrate that you are, at least -- I'm sure you</p> <p>8 have a lot more qualifications -- but at least, you</p> <p>9 have the qualifications as a POSITA as you have</p> <p>10 outlined them in paragraph 31 of your declaration?</p> <p>11 A Well, my -- my degrees are all in</p> <p>12 electrical engineering. I have a Ph.D in electrical</p> <p>13 engineering. I have a significant amount of</p> <p>14 experience in working with digital media, which goes</p> <p>15 back to graduate school days. My area of focus, if</p> <p>16 you will, in graduate school for the Master's of the</p> <p>17 doctorate was control systems. And, of course, we</p> <p>18 have been talking about elements of a distributed</p> <p>19 control system, where there's resources scattered</p> <p>20 around in a system and -- and pathways are being</p> <p>21 chosen and decided on for distributed control.</p> <p>22 But also, when I was a grad student, my</p> <p>23 advisor had indicated that I should take the graduate</p> <p>24 communications theory courses, which I didn't quite</p> <p>25 understand, because I was a young and naive student,</p>	<p>240</p> <p>1 looked at the two that were cited by the -- by -- by</p> <p>2 the patent office.</p> <p>3 And then working with counsel, we, you</p> <p>4 know, said, okay, this is good for this, this is good</p> <p>5 for this. Because, of course, at some point, it's --</p> <p>6 it's not just the technical expertise, it's the</p> <p>7 legal. And you just can't say, okay, I found 30</p> <p>8 patents that address this and if you weed through</p> <p>9 them all they -- they anticipate everything. You</p> <p>10 know, that's -- that's not -- I don't think it's a</p> <p>11 lot. And -- and so came down to the Barnes and the</p> <p>12 Shaw.</p> <p>13 Q Okay.</p> <p>14 A And then from the Barnes and the Shaw I</p> <p>15 was -- I think I mentioned this earlier, that the</p> <p>16 moment you look at -- there's two indicate -- two</p> <p>17 interesting indicators, and that's the RealNetworks</p> <p>18 RealPlayer, and that was mentioned in both Barnes and</p> <p>19 Shaw. And that very neatly identifies in the</p> <p>20 timeline the POSITA and understanding -- and -- and</p> <p>21 RealNetworks was one of the very, very first for</p> <p>22 streaming. And I believe they started out with</p> <p>23 RealAudio, which was audio streaming, and -- and</p> <p>24 compression schemes and such as audio, and then moved</p> <p>25 to video. And so that sort of put the timeline in</p>

<p>241</p> <p>1 perspective.</p> <p>2 And then, as I said before, the RTSP</p> <p>3 real-time. Of course, in real-time now my personal</p> <p>4 expertise is working extensively with real-time</p> <p>5 systems. And that was mainly a long time ago at</p> <p>6 Martin Marietta. If you look on my vitae, I was at</p> <p>7 Martin -- Lockheed Martin now -- but at the time, it</p> <p>8 was Martin Marietta Orlando Aerospace. And I was</p> <p>9 working with real-time systems back then, so that was</p> <p>10 nineteen -- I was only there for a year -- so that</p> <p>11 was 1985 and '86.</p> <p>12 Again, puts us in where is the POSITA at</p> <p>13 with this kind of thing and -- and what's meant by</p> <p>14 real-time. And those -- those are not only</p> <p>15 establishing the technical expertise on what a POSITA</p> <p>16 might perceive from looking at prior art and making</p> <p>17 combinations, but also what was the technology</p> <p>18 available back then for this.</p> <p>19 Q Okay. But then, again, without telling</p> <p>20 me -- I don't want any attorney-client protected</p> <p>21 information, but how -- how did your -- how did your</p> <p>22 declaration come into existence?</p> <p>23 Please describe that process for me.</p> <p>24 A Oh, my declaration?</p> <p>25 Q Correct.</p>	<p>243</p> <p>1 Q Okay. So I'm assuming you get -- you have</p> <p>2 a billable hour -- billable rate; is that correct?</p> <p>3 A Yes.</p> <p>4 Q And what's your billing rate?</p> <p>5 A That rate is 450 an hour. It has not</p> <p>6 changed in, I'm going to say, probably 10 years,</p> <p>7 maybe longer. And it typically is the time I spend</p> <p>8 working on the project. I don't charge them for,</p> <p>9 like, travel and things, unless I'm sitting on the</p> <p>10 plane reading a patent.</p> <p>11 Q Correct. And how many hours roughly, just</p> <p>12 roughly, have you -- do you think you've worked on</p> <p>13 this matter?</p> <p>14 A Oh, this thing has gone on so long. Off</p> <p>15 the top of my head -- and, of course, you know, it's</p> <p>16 non-linear -- I'm going to say it may be getting up</p> <p>17 to 30 hours.</p> <p>18 Q Okay. Including -- including today's</p> <p>19 time?</p> <p>20 A Yes. Yes, this, the deposition, prep, and</p> <p>21 everything.</p> <p>22 Q Okay. And how much time did you spend</p> <p>23 preparing for this deposition today?</p> <p>24 A Oh, today?</p> <p>25 Q Like -- I'm sorry.</p>
<p>242</p> <p>1 A I started writing it. I started putting</p> <p>2 things together. I was looking at -- of course, at</p> <p>3 that point we had narrowed down the scope, if you</p> <p>4 will, and started coming up with my opinions with</p> <p>5 respect to how a POSITA would view this information,</p> <p>6 particularly, of the Barnes and Shaw prior art, and</p> <p>7 then the other things that came out of that.</p> <p>8 And I worked with counsel. They were very</p> <p>9 helpful in the draft. They -- you know, they knew</p> <p>10 the, what I call, "the boilerplate" -- probably</p> <p>11 shouldn't in a deposition of -- you know, I -- I've</p> <p>12 come to understand that, you know, they tell me,</p> <p>13 okay, this is what this means, this is what that</p> <p>14 means, you know, the legal portions of it, and so</p> <p>15 on.</p> <p>16 Q Okay. And I'm assuming you're getting</p> <p>17 compensated for your work in this matter?</p> <p>18 A Yes.</p> <p>19 Q Okay. And how are you -- how are you</p> <p>20 getting compensated?</p> <p>21 A I submit the amount of time that I spend on</p> <p>22 the -- on the -- on the project. You can call it the</p> <p>23 project -- on the litigation. And I submit that to</p> <p>24 them once a month, and they -- and they send me</p> <p>25 however much it is.</p>	<p>244</p> <p>1 How much time did you prepare for your</p> <p>2 deposition?</p> <p>3 A Oh, from the moment I was told about -- we</p> <p>4 were doing the deposition, we had a couple of tele --</p> <p>5 teleconferences, I'm thinking, maybe, three or four.</p> <p>6 Oh, you know, and they say, you do the -- what --</p> <p>7 what about this and what about that, you know, that</p> <p>8 kind of thing. And then we reviewed the stuff. So</p> <p>9 probably preparation total, maybe six, seven, or</p> <p>10 eight hours.</p> <p>11 MR. YOUNG: Okay. All right. Subject to</p> <p>12 any questions your counsel may have, I'm done with my</p> <p>13 questions on the -- this deposition.</p> <p>14 MR. PONDER: Let's just take a 15-minute</p> <p>15 break.</p> <p>16 MR. YOUNG: Okay.</p> <p>17 COURT REPORTER: Off the record.</p> <p>18 (Recess.)</p> <p>19 COURT REPORTER: Back on the record.</p> <p>20 MR. PONDER: All right. You can mark this</p> <p>21 as closed.</p> <p>22 (Proceedings concluded.)</p> <p>23 ---o0o---</p> <p>24</p> <p>25</p>

Transcript of Harley Myler
Conducted on September 9, 2021

62 (245 to 248)

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CERTIFICATE OF STENOGRAPHIC REPORTER

I, BURGUNDY B. RYAN, a Certified Shorthand
Reporter, hereby certify that the witness in the
foregoing deposition,

HARLEY MYLER,
was by me duly sworn to tell the truth, the whole
truth, and nothing but the truth, in the
within-entitled cause; that said deposition was taken
at the time and place therein named; that the
testimony of said witness was stenographically
reported by me, a disinterested person, and was
thereafter transcribed into typewriting.

I further certify that I am not of counsel
or attorney for either or any of the parties to said
deposition, nor in any way interested in the outcome
of the cause named in said caption.

DATED: Friday, September 10, 2021.



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