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

CASE IPR2021-00458/IPR2021-00465

NETNUT LTD.,	x :
Petitioner, v.	:
BRIGHT DATA LTD. (F/k/a Luminati	:
Networks Ltd.),	:
Patent Owner.	:
	x

Zoom Deposition of KEITH TERUYA Thursday, October 28, 2021 12:05 p.m.

Reported by: Cassandra E. Ellis, CSR-HI, CCR-WA, RPR, CRR, REALTIME SYSTEMS ADMINISTRATOR Job No.: 3483 A P P E A R A N C E S 1 2 ON BEHALF OF PETITIONER: 3 RONALD ABRAMSON, ESQUIRE 4 LISTON ABRAMSON, LLP 5 The Chrysler Building 405 Lexington Avenue 6 7 46th Floor New York, New York 10174 8 (212)257 - 16439 Ron.abramson@listonabramson.com 10 11 12 13 ON BEHALF OF PATENT OWNER: 14 TOM DUNHAM, ESQUIRE 15 ELIZABETH O'BRIEN, ESQUIRE 16 RUYAKCHERIAN LLP 17 1901 L Street, Northwest Suite 700 18 19 Washington, D.C. 20036 20 (202) 838-1567 21 Tomd@ruyakcherian.com 22 23 ALSO PRESENT: Joseph E. Ellis, CLVS 24 25

Page 4 1 CONTENTS 2 EXAMINATION OF KEITH TERUYA PAGE 3 By Mr. Dunham 7 4 5 EXHIBITS 6 (Attached to the Transcript) 7 KEITH TERUYA EXHIBIT DESCRIPTION PAGE 8 Exhibit 2014-00458 Patent Owner's 13 Notice of Deposition of Keith 9 10 J. Teruya Exhibit 2014-00465 Patent Owner's 11 13 12 Notice of Deposition of Keith 13 J. Teruya 14 Exhibit 1012 Book: Squid The 164 15 Definitive Guide by Duane Wessels 16 Exhibit 1014 Book: Web Proxy 122 17 Servers by Ari Luotonen Exhibit 1017 United States Patent 18 21 19 Application Publication 20 No. US2011/0087733 A1 21 Exhibit 1018 European Patent 89 Application No. EP 2 597 869 A1 22 23 Exhibit 1021 United States Patent 125 24 Application Publication 25 No. US2013/0080575 A1

PROCEEDINGS 1 2 THE VIDEOGRAPHER: Good 3 afternoon. This is the beginning of the deposition of Keith Teruya, 4 5 taken in the matter of Netnut LTD, 6 petitioner, versus Bright Data LTD, 7 formerly known as Luminati Networks 8 LTD, patent owner, held in the United States Patent and Trademark 9 Office before the Patent Trial and 10 Appeal Board. With Case Numbers 11 12 IPR2021-00458, as well as Case 13 Number IPR2021-00465. 14 Today's date is October 28th, 15 2021, and the time on the monitor is 16 approximately 12:05 p.m. My name is 17 Joseph Ellis, I am the certified 18 legal videographer, the court 19 reporter is Cassandra Ellis, and we 20 are here representing Transperfect 21 Legal Solutions. 22 Starting with the noticing 23 attorney, please state your 24 appearance, whom you represent, and 25 agree on the record that there's no

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Page 6 objection to this deposition officer 1 2 administering a binding oath to the 3 witness via Zoom conference. MR. DUNHAM: So this is Tom 4 5 Dunham, for patent owner, Bright Data Limited, I'm with RuyakCherian 6 7 LLP. With me today is Elizabeth 8 O'Brien, also of RuyakCherian. And 9 we have no objection to doing the 10 oath in the manner you described. 11 MR. ABRAMSON: This is 12 Ronald -- Ronald Abramson of the 13 firm of Liston Abramson, LLP, 14 representing the petitioner, Netnut 15 Limited, and the witness, and may be 16 joined from time to time by Michael 17 Lewis, of my firm. And we have no 18 objection to the matter of the administration of the oath. 19 20 THE VIDEOGRAPHER: Will the 21 court reporter please swear the 22 witness and then you may proceed. 23 (Witness sworn) 24 MR. ABRAMSON: So I take it 25 we're -- as we agreed, we're going

to stop any recording of this video 1 2 from this point forward. 3 MR. DUNHAM: Agreed. And from this point forward there will be 4 5 audio recording only, no video 6 recording. 7 MR. ABRAMSON: Very good. THE VIDEOGRAPHER: Can I 8 9 resume the audio recording? 10 MR. DUNHAM: Yes, please. 11 KEITH TERUYA 12 having been sworn, testified as follows: 13 EXAMINATION 14 BY MR. DUNHAM: 15 Okay. Mr. Teruya, good Q morning. 16 Good morning. 17 Α 18 I understand you wanted to make Q a very brief statement before we get 19 20 started on the record, so please feel 21 free to do so now. 22 Α Yes, I wanted to state that I'm 23 severely dyslexic, so I need additional 24 time if you ask me to read something on 25 screen or review a document or something

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1 like that, please afford me that time to 2 review things. 3 I -- you know, my reading is very slow, sometimes my process is slow, 4 5 and I want to make sure that I provide 6 appropriate context and accuracy. So 7 please afford me the time if I ask for it. 8 9 Q Thank you. 10 Sir, have you ever been deposed 11 before? 12 Α Yes, I have. 13 How many times? Q 14 Oh, I would say four or five Α 15 times. 16 Can you tell me, generally, the Ο nature of the different matters in which 17 18 you have been deposed? And by that I 19 mean were they district court cases, were 20 they patent office proceedings, just very 21 general. 22 Α Some of them were civil cases, 23 some of them were -- I imagine they were 24 patent cases, in one particular I was 25 deposed under Mr. Abramson for another

1 case.

±	case.
2	Q Was that for an IPR proceeding
3	or was that a district court proceeding?
4	THE WITNESS: I believe it was
5	an IPR, wasn't it, Ron?
6	MR. ABRAMSON: Well
7	MR. DUNHAM: You're not able
8	to confer with counsel during the
9	deposition.
10	THE WITNESS: Oh, okay. I'm
11	sorry.
12	MR. ABRAMSON: I'm happy to
13	supply the details, if you want.
14	But I'm not going to do that unless
15	Mr. Dunham asks me to.
16	MR. DUNHAM: No, I'd just like
17	to get the witness's recollection.
18	BY MR. DUNHAM:
19	Q Well, sir, then let me just
20	review for you the basics of the
21	deposition, sounds like you've done this
22	before, but I'll be asking you a series
23	of questions.
24	From time to time Mr. Abramson
25	may object. Unless he instructs you not

1 to answer please answer each of my 2 questions.

3 The court reporter is taking down everything that any of us say 4 5 today. So it is important that we try 6 to only speak one person at a time. 7 It makes a much cleaner record and 8 keeps the court reporter much happier 9 throughout the day if we only speak 10 one at a time. 11 So I will do my best, when I 12 ask you a question, to stop and wait 13 for your response. And I would ask 14 you to do the same for me, that when 15 I'm asking a question if you'll wait until I'm finished before you start 16 17 answering. 18 Do you agree with that 19 process? 20 Α Yes. 21 Thank you. We'll also be Q 22 taking breaks from time to time. I try 23 to take a break every hour. But if at 24 any point in time you need a break, 25 please ask me and we'll get you a break

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1 as quickly as we can.

2	Also, we are all in very
3	different time zones, so if there comes a
4	point when you need to take a more
5	extended break, for example, to eat or
6	something like that, please just let me
7	know and we'll work with you to
8	accommodate this.
9	I want this to be as easy
10	for you on your schedule as possible
11	today. Understood?
12	A All right. Thank you.
13	Q Great. Also, this question is
14	a little unusual, but I want to make sure
15	that we have a clear record: Is there
16	any reason today, such as medication or
17	illness, that you are unable to give
18	complete, truthful answers to my
19	questions?
20	A No.
21	Q You understand that you are
22	here today testifying as a technical
23	expert; is that right?
24	A Yes.
25	Q Have you ever been qualified by

a district court to testify as a 1 2 technical expert? 3 Α Not that I'm aware of. Okay. And how many times have 4 Ο 5 you testified, to your knowledge, as a technical expert in any sort of 6 7 proceeding? 8 Α I would say two or three times. 9 Tell me what you can, that you Ο 10 recall, about the two or three times that 11 you may have testified as a technical 12 expert previously. 13 Α I -- I was -- I was called upon to verify existence of prior art. 14 15 And what do you mean by: Ο То 16 verify existence of prior art? 17 Α I was called upon, in a couple 18 of cases, to verify that a product I 19 created actually did what was being 20 litigated in those cases. 21 Do you recall whether you were Ο 22 testifying as a technical expert about that product or as a fact witness 23 24 explaining what the product was and/or 25 how it worked?

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I don't know how to answer that 1 Α 2 question. 3 Q Okay. I want to get you familiar, briefly, with the AgileLaw 4 5 system, just to the extent we need to use 6 it today. 7 Α Okay. (Exhibit Nos. 2014-00458 and 8 2014-00465 were identified for the 9 10 record.) 11 BY MR. DUNHAM: 12 What I want to do is reveal to 0 13 you two documents that I have previously 14 marked. And you should see, now, the 15 ability to see two particular documents. 16 And the first document is Exhibit 2014, 17 and we've appended to that the IPR 18 number, so dash 00458, and that is the deposition notice that we served on you 19 20 for the IPR2021-00458, and the second 21 document is -- we've premarked as Exhibit 22 No. 2014-00465, which is our deposition notice for the IPR with the same number 23 2021-00465. 24 25 I would ask you just to take a

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moment, sir, first, let me know, are you 1 2 able to see those two documents? 3 Α I see the icons in the left-hand menu. I have not opened them 4 5 vet. Will you please open both of 6 Q 7 them? I just want to confirm that the 8 system is working and just get you 9 familiar with how it works, give you an 10 opportunity to flip through the pages of 11 the documents? 12 Α Okav. I was able to open them 13 successfully and navigate through the 14 pages. 15 Thank you. Ο Great. 16 Now, it's my understanding that 17 your counsel has already made available 18 to you, and by agreement with us, you 19 have the IPR petitions, the declarations 20 and the cited references, and the 21 institution decisions, that you have 22 those available to you today already; 23 correct? 24 Α Yes. 25 Okay. So I will not be placing Q

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those in the AgileLaw system.
 1
                                        This will
 2
       be for any supplemental materials that we
 3
       use.
                 Are you using, today,
 4
 5
       electronic copies of the patent office
       materials that have been made
 6
 7
       available to you or do you have hard
 8
       copies available to you at your -- at
 9
       your position?
                  I have both.
10
           Α
11
           Ο
                  Okay.
12
           Α
                  On some documents, not all
13
       documents.
14
           Ο
                  Fair enough.
15
                  As we proceed, I may ask you if
       you're looking at a paper copy of
16
17
       something, but with respect to the hard
18
       copy documents that you have, have you
19
       made any notations or highlighting or
20
       Post-Its or anything of that nature of
21
       those documents?
22
           Α
                  No, I have not.
23
                          And with respect to the
           Ο
                  Great.
24
       electronic copies of the documents that
25
       you have available to you today, have you
```

1	made any sort of electronic notations or
2	highlighting in any of those documents?
3	A I have not.
4	Q Great. Now, you submitted a
5	declaration in support of petitioner's
6	IPR in the proceeding that's numbered
7	IPR2021-00458; correct?
8	A I I don't refer them using
9	those numbers, so I would have to check
10	for you. But, you know, the answer is
11	probably yes. I I have generally
12	worked on these by the patent numbers.
13	Q Okay. So do you recall
14	submitting a declaration in support of
15	petitioner's IPR petition for the
16	petition directed to patent number
17	9,241,044?
18	A Yes.
19	Q Can you just tell me,
20	generally, the process by which you
21	prepared that declaration?
22	A I reviewed the material, had
23	discussions with Mr. Abram's staff,
24	Abramson's staff, giving them the
25	information, and they drafted a

declaration, and I went back and forth 1 2 and reviewed it until it accurately 3 represented what I conveyed to them as to what my opinion was. 4 Did you, yourself, search for 5 Ο prior art or was the prior art just 6 7 reflected in the declaration associated 8 with the '044 patent? Was that prior art 9 provided to you by Mr. Abramson and/or some of his staff? 10 11 I would say both. Α 12 Can you identify any of the Ο 13 specific prior art that you recall that 14 you brought to the picture, yourself? 15 I brought the Squid document to Α Mr. Abramson. You know, I -- I -- I 16 17 can't specifically tell you, you know, 18 accurately, unless I really kind of look 19 through my notes or something what I may 20 have brought, because we went through a 21 number of things that made it in and 22 things that didn't make it in. 23 Ο I see. And did you keep notes 24 throughout the process of preparing the 25 declarations?

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1	A Not as accurately as I should,
2	you know, some, perhaps.
3	Q Do you still have those notes
4	today?
5	A I don't have them with me
6	today.
7	Q Do they still exist?
8	A I I think so. I'm not sure.
9	Q If you
10	A This was, you know, over a year
11	ago. I tend to clean house fairly
12	regularly.
13	Q Was the process for preparing
14	the declaration associated with patent
15	number 9,742,866 much the same as the
16	process that you described for your
17	declaration in the '044 proceeding?
18	A Yes.
19	Q And with respect to the '866
20	patent, is there any specific prior art
21	that you brought to the discussion that
22	you can recall?
23	A No, because I think when we
24	began, things were discussed more
25	generally about the technology.

1	Q Can you tell me, generally,
2	what you did to prepare for the
3	deposition today?
4	A Do you mean today?
5	Q What you did in preparation to
6	be deposed today?
7	A Oh, I I reviewed my my
8	declarations and I, you know, briefly
9	read through some of the information that
10	I called out, wouldn't say I, you know,
11	combed through it in minute detail, but I
12	did review it, because, you know, it's
13	been it's been almost a year that this
14	declaration was prepared.
15	Q And how many hours, in total,
16	have you spent in connection with these
17	two IPR proceedings for the '044 and '866
18	patents?
19	A I would have to go back and
20	review the time in our accounting system
21	in order to give you an accurate answer.
22	Q And can you estimate for me how
23	many hours you have billed to these
24	particular matters?
25	A You know, I wouldn't want to

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1	guess. I I I would want to go back
2	and have our accounting people I
3	don't I don't keep totals around, I'm
4	not I don't do a lot of work on on
5	a time basis, so that's not a standard
6	process that I I employ every day.
7	I do for projects, but, you
8	know, I can't remember, you know, times I
9	spent a year ago. I I would have to
10	look it up.
11	Q And you were paid on an hourly
12	basis for the work you did in connection
13	with these proceedings; correct?
14	A Yes.
15	Q And what was your hourly rate
16	that you charged for the work you've
17	done?
18	A \$450 an hour.
19	Q What I'd like to do now is I'm
20	going to ask I'd like to ask you a
21	series of questions about the Shribman
22	'733 published patent application, which
23	is exhibit actually, I'm I don't
24	have the exhibit number in front of me,
25	I'll have to pull it up, but do you have

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the Shribman '733 application available
 1
 2
       to you?
 3
           Α
                 I'm sure I do. I will try to
       find it, here. There are two copies.
 4
 5
                  (Exhibit No 1017 was
           identified for the record.)
 6
 7
     BY MR. DUNHAM:
                 And that will be Exhibit 1017.
 8
           Ο
 9
           А
                 Okay. For the '866 or the
       044?
10
11
                 Well, I'm interested in
           Ο
12
       discussing that particular piece of prior
13
             So I -- it doesn't matter to me
       art.
14
       which proceeding you pull it from, I'm
15
       just specifically interested in Exhibit
16
       1017.
              It's in the '044, for example.
                 Okay. The -- the difference
17
           Α
       between the two are I believe one is much
18
19
       shorter than the other. Oh, no, I stand
20
       corrected.
                   They're both the same size.
21
                 All right.
22
           Ο
                 Okay. Do you have the Exhibit
23
       1017, the Shribman published patent
24
       application No. US 2011/0087733 available
25
       to you?
```

T do. 1 Α 2 You would agree that the focus Ο 3 of the Shribman application was on accelerating internet content retrieval; 4 5 right? 6 MR. ABRAMSON: Object to the 7 extent that's beyond the scope of this declaration. 8 9 BY MR. DUNHAM: 10 Sir, I need your answer to the 0 11 question. 12 Α From a context standpoint, 13 which is important to me, I didn't do an evaluation of Shribman as an evaluation 14 15 of the Shribman application, itself. My 16 analysis was to look at Shribman as a 17 source of appropriate application to 18 evaluating the '044, the '866 patent. 19 Q Well, sir, in paragraph 52 of 20 the declaration that you submitted in 21 support of the IPR petition for the '044 22 patent, and you say, quote, the focus of 23 Shribman was on accelerating internet 24 content retrieval, close quote. 25 Α Okay.

1 So is the statement that you 0 2 made in your declaration a statement that 3 you still stand behind today? I represented that position. 4 Α Ι 5 believe that that is the position of the abstract of that application. 6 7 Well, do you agree with the Ο 8 statement you included in your report 9 that says, quote, the focus of Shribman --10 11 А I do. I do. 12 Please allow me to Q Okay. 13 finish my question, sir, just so I have a 14 clear record, okay? 15 Okay. I'm sorry. Α 16 Thank you. No problem. Ο 17 Would you agree, then, that the focus of Shribman was on 18 19 accelerating internet content retrieval? 20 21 Α Yes. 22 Ο I'd like you to turn to 23 paragraph number 72 in the Shribman 24 reference, and I'm really pointing you 25 there mostly for context.

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		Page
1	Please let me know when you're	
2	there.	
3	A Paragraph 72?	
4	Q Yes, sir.	
5	A Okay.	
6	Q When initializer 222 of the	
7	communication device 200 starts up, it	
8	first communicates with the acceleration	
9	server 162 to, quote, sign up with the	
10	acceleration server; right?	
11	A Okay. Are you asking me if	
12	that's what's written there?	
13	Q I'm asking if that's how you	
14	understand the disclosure of Shribman.	
15	A The context of me answering	
16	that question should be related to what I	
17	represented in my declaration, that's how	
18	I evaluated each section of these	
19	documents as it pertained to the claims	
20	of the patent.	
21	So what specific paragraph are	
22	you relating this to in my declaration?	
23	Q Sir, you don't get to ask the	
24	questions. I'm sorry, the way this works	
25	is I ask the questions, and I'm just	

24

asking you to answer them honestly, 1 2 whether you know or don't know the 3 answer, and that's how the day will go. Okay. Can you refer, for my 4 Α 5 reference, so I can accurately answer the question, where in my declaration are you 6 7 relating this paragraph? 8 Q Sir, again, it doesn't work 9 that way. You've advanced the Shribman 10 reference as a reference in this case, 11 and I'm entitled to test your 12 understanding of the reference. 13 I'm going to --MR. ABRAMSON: 14 I'm going to object to the extent --15 this -- this deposition is limited 16 to the scope of Mr. Teruya's direct 17 testimony, which has been contained in his declaration. 18 So I think that is a 19 20 legitimate concern on his part, 21 Mr. Dunham. 22 MR. DUNHAM: And again, I 23 believe that this directly relates to his testimony of how Shribman 24 25 allegedly invalidates the claims.

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1	And so I'm just trying to ask
2	him if he agrees that when
3	initializer 222 of the communication
4	device 200 starts up it first
5	communicates with the acceleration
6	server 162 to sign up with the
7	acceleration server.
8	A In the paragraph here, of
9	Shribman, in their example, they are
10	indicating that this initializer 222
11	starts its first communication with the
12	acceleration server, which they number
13	162, to sign up with that acceleration
14	server, that's what it states.
15	Q Do you agree that's how
16	Shribman operates?
17	A I did not evaluate Shribman's
18	operational ability. I take I take
19	their example as an indicator that that
20	was what they were trying to to
21	document in their their process.
22	Q Sir, would you agree that to
23	obtain content from a web server 152
24	client 102 first registers with
25	acceleration server 162 providing

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3 Α Can you repeat the question, please? 4 5 Certainly. Would you agree Ο that to obtain content from a web server 6 7 152 client 102 first registers with 8 acceleration server 162 providing acceleration server 162 the IP address of 9 client 102? 10 11 And are you asking me, can I Α 12 infer that from paragraph 72? 13 I'm asking you if that's your Q understanding of Shribman. 14 15 I -- I -- I'm missing some Α context, here. There is no reference in 16 17 what you asked me to review here in 18 paragraph 72 for the web server. 19 Okay. So if you turn to page Ο 20 66 -- I'm sorry, paragraph 66 of your declaration, in support of the IPR of the 21 22 '044 patent, please. 23 Let me bring that up. Α Sorry, 24 what paragraph did you say? 25 66. Do you have paragraph 66 Q

acceleration server 162 the IP address of

1

2

client 102?

1	of your declaration for the '044 patent
2	in front of you?
3	A Yes, I do.
4	Q You'll probably see that the
5	question I asked you is verbatim of the
6	first sentence of paragraph 66.
7	So my question to you now is,
8	is it your testimony today that paragraph
9	72 of Shribman does not have any mention
10	of a web server?
11	A I'm sorry, repeat the question.
12	Q Is it your testimony that
13	paragraph 72 of Shribman does not in any
14	way reference a web server?
15	A Yes, it does not reference any
16	web server.
17	Q So in paragraph 66 of your
18	report, when you made the statement: To
19	obtain content from a web server 152
20	client 102 first registers with
21	acceleration server 162 providing
22	acceleration server 162 the IP address of
23	client 102, then you cite paragraph 72 of
24	Shribman.
25	Do you see that?
1	

1 Α Yes. 2 Ο So is it your testimony that 3 paragraph 72 of Shribman does not support the statement that you made in the first 4 5 sentence of paragraph 66? 6 Α Say that again, please. 7 Sure. Is it your testimony Ο 8 today that the paragraph of Shribman that 9 you cited after the first sentence of 10 paragraph 66 of your report does not 11 fully support the first sentence that you 12 got of paragraph 66 of your declaration? 13 That is not -- that is not the Α 14 appropriate context to my first answer to 15 the question in which I previously asked you to reference my declaration so I 16 17 could give you a more accurate answer. 18 When I gave you the response that, in paragraph 72, 152 is not 19 20 mentioned, the web server 152 is not 21 mentioned, that is what I provided to you 22 as an answer. 23 Sir, when initializer 222 of Ο the communication device 200 of Shribman 24 25 starts up, and signs up with the

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Page 30 acceleration server, does the device provide the acceleration server with all IP addresses and MAC addresses of the interfaces on communication device 200? Let me review this a minute, Okay. Can you ask me the question again, please? MR. DUNHAM: I'll ask the court reporter to read it back, THE WITNESS: Okay. (Question, "Sir, when initializer 222 of the communication device 200 of Shribman starts up, and signs up with the acceleration

15 server, does the device provide the 16 acceleration server with all IP 17 addresses and MAC addresses of the 18 interfaces on communication device 19 20 200, " read back by the reporter.) 21 MR. ABRAMSON: Objection, lack 22 of foundation.

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2

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8

9

10

11

12

13

14

Α

please.

please.

23 BY MR. DUNHAM: 24 Mr. Teruya, unless your counsel 0 25 instructs you not to answer, I would ask

1 you to answer, please.

2 Α Okay. 3 MR. ABRAMSON: You can answer. Α I'm going to answer the 4 I can. 5 question, but please let me read through the material that I used as the source 6 7 for this paragraph. I've asked you for 8 more time. I need to read through it. 9 Certainly. I was unaware if Ο 10 you knew I was expecting an answer, 11 that's all. 12 Α Oh, no, no, I'm perfectly aware 13 that you would like an answer. 14 I believe you asked "all" is in 15 your question, the word "all"? And I --16 I would not -- I don't know if it's all, but it will return a list of agents and 17 18 include IP addresses as an object. It --19 it, in likelihood, will include IP 20 addresses. 21 Q In paragraph 72 of Shribman, 22 that you cited in your declaration, do 23 you agree with the third sentence, that 24 states, quote: This is performed by 25 providing the acceleration server 162

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1 with the hostname, and all IP addresses 2 and media access control, MAC, addresses 3 of the interfaces on the communication device 200 having the initializer 222 4 5 thereon? 6 MR. ABRAMSON: Sorry, 7 Mr. Dunham, where are you reading from? I don't see this. 8 9 MR. DUNHAM: Paragraph 72 of 10 the Shribman reference, as cited in 11 Mr. Teruya's declaration. 12 MR. ABRAMSON: Oh, going back 13 to that? Okay. Can you have the 14 THE WITNESS: 15 court reporter read back the 16 original question, please? 17 MR. DUNHAM: Sir, I don't know 18 what you mean by the original 19 question. Do you mean --20 MR. ABRAMSON: Well, the 21 question she read back to me, which 22 was the question you asked her to 23 read back to me. 24 MR. DUNHAM: Well, sure, if 25 the court reporter could please read

1 Α Yes. 2 So why --Ο 3 Α Conditionally, conditionally, because if it's not logged in it won't 4 5 get the IP address. If what's not logged in? 6 Ο 7 А If all the initializer devices, 8 okay, that exist in the system do not 9 send a first element in the system for 10 the domain of the operation of the 11 system, it could not know what all the IP 12 addresses are. 13 Is it your understanding that Q the communication device 200 referenced 14 15 in paragraph 72 of Shribman is referring 16 to all devices in the domain? 17 Α I don't know that from that 18 sentence. 19 Again, if this helps you, with Ο 20 reference to paragraph 75 of the Shribman 21 application, would you agree the next 22 step disclosed in Shribman is that the initializer launches the client module of 23 communication device 200? 24 25 Are we still talking about the Α

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1

prior IP addresses?

2 Sir, I'm asking you about your Ο 3 understanding of the operation of Shribman, which you've read, you've 4 5 applied as a reference against the 6 challenged claims. 7 Α Yes. Would it -- can we resolve the first one about the "all"? 8 9 Sir, I've moved on to ask you Q 10 another question. 11 Α Okay. 12 My question is --Ο 13 I'm sorry, I'm sorry, I -- I Α 14 need -- I need you to segment the switch 15 in context, please. Sir, I referenced you to 16 Ο 17 paragraph 75 for your assistance, and I 18 asked you, would you agree, the next step disclosed in Shribman is that the 19 initializer launches the client module of 20 21 communication device 200? 22 Α Okay. I've reviewed that 23 paragraph, what is your comment --24 question again? 25 Would you My question is: Q

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1	agree that the next step disclosed in
2	Shribman is that the initializer launches
3	the client module of communication device
4	200?
5	MR. ABRAMSON: Objection, lack
6	of foundation.
7	A Are we talking about a
8	sequential process, here, or are we
9	with the example given here indicates
10	that that is the process flow, are we
11	logged in already?
12	Q Sir, I'm just asking you
13	questions about your understanding of the
14	disclosure of Shribman. In your
15	declaration you extensively discuss
16	different messages that flow to and from
17	different devices.
18	And I'm just getting your
19	understanding of how the Shribman
20	disclosure operates as related to the
21	various messaging flows. And I'm working
22	through those questions with you.
23	So please just answer my
24	questions as best you can, okay?
25	A Okay. From an operational
Page 37 context, assuming the obviousness of a 1 2 product that would have implemented this, 3 that is correct. Okay. And if it's helpful to 4 Q 5 you, sir, with respect to paragraph 76 of 6 Shribman, will you agree that after 7 launching the client module the 8 initializer also launches the agent 9 module and the peer module? 10 MR. ABRAMSON: Object to the 11 extent that's beyond the scope of 12 his declaration. You can answer. 13 Α Given the example and the explanation, I -- I would -- I would 14 15 assume that to be true in that context. So would you agree, then, that 16 Ο 17 in every embodiment in Shribman all three 18 modules, client, agent, and peer are launched in each communication device 19 20 that signs up? 21 Α Without more analysis of the 22 actual possible permutations and 23 fallbacks that would be necessarily built 24 into the architecture, I can't accurately 25 answer that question by just looking at

1 three paragraphs.

2 Q Do you know from your study of 3 the Shribman reference, as you discussed 4 extensively in your declaration, whether 5 in every embodiment in Shribman all three 6 modules, client, agent, and peer, are 7 launched in each communication device 8 that signs up?

9 A I would like to review my 10 declaration, because the approach that I 11 utilized in analyzing Shribman, relative 12 to the claim provided, did not go to 13 every single permutation and condition 14 that Shribman could possibly provide.

I -- I -- my analysis was based around the mechanics of what Shribman can provide relative to the claims of the '044 patent.

19 Q So did you then start with the 20 claim -- just so I understand what you're 21 explaining to me, sir, let me ask a 22 better question.

So in the analysis that you
performed, did you begin with the
claim and then look to Shribman to see

if you could find within Shribman 1 2 disclosure that corresponded to the 3 elements of the claims? For the most part, yes. 4 Α 5 Ο Okay. That's helpful. I -- I -- I found things 6 Α 7 that -- I found examples that were 8 analogous and evaluated their relevance. Okay. And just to help me 9 0 10 understand, then, the way you did that 11 was you would start with a claim, read 12 the elements of the claim, and then go 13 back to look at Shribman to see if you 14 could find either the exact disclosure or 15 something you felt was analogous; is that 16 fair? 17 Α Yes. 18 Okay. Let me ask you about Q paragraph 78 of Shribman, and just for 19 20 your context, you do cite this in a 21 number of places in your declaration, 22 including, for example, paragraph 69. 23 Please let me know when you have 24 paragraph 78 of Shribman available. 25 Α I have 78 available. Okay.

1 So would you agree, to make a Q 2 request for content an application 3 running on the client first initiates a request for a resource on a network? 4 5 Can you -- can you state that Α 6 question again, please? 7 Ο Absolutely. 8 Would you agree that to make a 9 request for content an application 10 running on the client first initiates a 11 request for a resource on a network? 12 Α I'm sorry, I need you to do 13 that again. 14 Sure. Would you agree to make 0 15 a request for content, an application 16 running on the client first initiates a 17 request for a resource on a network? 18 Α Are you asking: Is that the 19 first thing that it does or is that what 20 needs to take place in order for it to 21 request content? 22 0 Well, tell me your 23 understanding. How does that work? How does an application running on a client 24 25 make a request for content?

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Well, it has to connect first. 1 Α 2 Ο Okay. 3 Α It has -- it has to -- it has to establish a connection with a relevant 4 5 domain in which the content that it would like exists. 6 7 Okav. And with reference to Ο 8 paragraph 78, would you agree that to 9 make a request for content an application 10 running on the client first initiates the 11 request for a resource on a network? 12 Can you provide me some more Α 13 Because if you only look at context? paragraph 78, and I previously stated 14 15 that we need to know do we have a 16 connection, can we hit a DNS server? Are we in the right domain? 17 18 If those things line up, then, 19 yes, you could put out a GET request, as 20 it states. But those other things need 21 to have taken place first. Hence, 22 paragraph 78 has a lot of preconditions 23 before it that have taken place in order 24 for us to get the paragraph 78 and be 25 looking at block 352.

1 Would you agree, sir, that the Q 2 example shown in Shribman of the GET 3 request is the full GET HTTP://WWW.AOL.com/index.HTML HTTP/1.1? 4 5 That's the example in that Α 6 paragraph. 7 Are you aware of any other 0 8 examples shown in Shribman of a request for content? 9 10 By example of a -- of a GET? Α 11 My question is: Ο Are you aware 12 of any other example of a request for 13 content, that is disclosed in Shribman, 14 other than the particular request I 15 quoted to you from paragraph 78? 16 Oh, I -- I would have to Α review, you know, Shribman to -- to see. 17 There are contextual discussions of 18 19 requesting content, but I don't know -- I would have to look and review the 20 21 document again to see if there are any 22 specific requests that uses a formal, you 23 know, pneumonic like that. 24 Sir, and, again, if it's Ο 25 helpful to you, with reference to

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1	paragraph 79 of Shribman, which you also	
2	cite in your declaration, after the	
3	application initiates a request for	
4	content would you agree that the client	
5	module then looks up the IP address of	
6	the web server 152 that is the target of	
7	the request?	
8	A Applications don't usually do	
9	that process.	
10	Q So let me ask my question	
11	again, so you have it firmly in mind,	
12	sir. And I'm getting to it, to help you,	
13	I'm pointing you to paragraph 172.	
14	After the application	
15	initiates a request for content	
16	A I'm sorry, excuse me, 172 in	
17	which document?	
18	Q Oh, I said paragraph 79, sir.	
19	A Oh, paragraph 79.	
20	Q And my question is: After the	
21	application initiates a request for	
22	content would you agree that the client	
23	module then looks up the IP address of	
24	the web server 152 that is the target of	
25	the request?	

1 That is what is in paragraph Α 2 I know it is an example. I take it 179. 3 that that's what it's intended to do. But mechanically, you know, it just 4 5 doesn't happen that way. 6 Okay. So -- so -- and just so 0 7 the record is clear, you stated in 8 paragraph 179, did you mean to refer to 9 paragraph 79? 10 Α I'm sorry, 79. 11 Thank you. Oh, no problem, Ο 12 sir, I just want to make sure our record is clear. 13 14 So is it your testimony that 15 notwithstanding the language of paragraph 79, you believe that in reality the 16 17 system would operate differently; is that 18 a fair statement? 19 MR. ABRAMSON: Object to the 20 form. 21 Α IP addresses are -- although 22 they are physical, they're managed by 23 different mechanisms and processes within the client that can be a workstation, 24 25 laptop, phone, whatever, the mechanics of

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looking up the IP address is generally 1 2 not a process of client module of an 3 application, that's all that I'm saying. 4 So the -- so to accurately 5 answer your question, I have to 6 provide that as an augment to my -- to 7 the -- the -- the example, here, that 8 is being given, is very general in 9 that it's assuming that because we're 10 on the internet every address 11 resolution is going to be an IP 12 address, which is generally the case. 13 If I could ask you to look at Q the second sentence of paragraph 79 of 14 15 Shribman, and my question is going to be: Do you agree or disagree with this 16 17 sentence? 18 And the sentence reads, guote: The client module 224 then looks up the 19 20 IP address of the server 152 that is the 21 target of the resource request (e.g., the 22 IP address of the web server that is the 23 host of www.aol.com in the example 24 above); do you agree with that portion of 25 the second sentence?

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A Given my prior comment on
 appropriate context of how things work,
 yes, that example is valid.

4 Q Would you agree, then, that the 5 client module sends the IP address of the 6 web server to the acceleration server 7 162?

8 A Not unless I know exactly how 9 that application is constructed, because 10 generally, as I explained in my prior 11 answer, an application-level program 12 would generally not be manipulating IP 13 addresses.

14 Ο So when you analyzed the 15 Shribman reference, did you apply the 16 teachings of the reference as they 17 literally appeared within the four 18 corners of the document, or did you bring 19 to your analysis additional knowledge and 20 experience that you have gained over the 21 years?

A I analyzed it with the obviousness of a person working in this area, which is, as I explained to you, if you have just a basic understanding about

Page 47 the layers in which an application 1 2 operates on a network, especially on the 3 internet, you would know the responsible areas of address resolution. 4 5 And I can understand why 6 patents are written this way, because 7 they want to provide these examples. 8 But applications in the real world of 9 implementation and engineering operate 10 a little bit differently. 11 So were you including your Ο 12 knowledge of how applications in the real 13 world operate when you were reading the disclosure of Shribman 733? 14 15 MR. ABRAMSON: Object to the 16 form. 17 Α I -- I -- I applied in my 18 thinking the -- the -- the obvious notion 19 about what they were trying to 20 communicate. 21 Q Okay. 22 Α Not necessarily in the exact process explanation, saying using an IP 23 24 address, but there needed to be, in this 25 instance, and by example in my

declaration, address resolution taking 1 2 place. Sir, and then still with 3 Ο reference to paragraph 79 of Shribman, 4 5 would you agree that the client module does not send the GET request to the 6 7 acceleration server 162? I -- I would agree in the 8 Α 9 example -- in examples given in Shribman, 10 that it does not send that request to 11 that device. 12 MR. DUNHAM: Counsel, I always 13 promise the witness a break after an 14 hour, and I see we've gone just 15 about an hour, if this is a good 16 time we can take a short 10-minute 17 break. 18 MR. ABRAMSON: It's up to you. 19 How are you? 20 THE WITNESS: I'm fine. 21 MR. DUNHAM: Okay. Let's go a 22 little longer. 23 If you want, I MR. ABRAMSON: 24 don't object.

MR. DUNHAM: I mean, I'm happy

25

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1	to continue, but I always in	
2	fact, let's take 10. I'd like to.	
3	I want to reset a few things based	
4	on the testimony, and I'd like to	
5	give the witness just a short break,	
6	as well.	
7	MR. ABRAMSON: Sure.	
8	THE VIDEOGRAPHER: The time is	
9	1:03 p.m. We are off the record.	
10	(Recess.)	
11	THE VIDEOGRAPHER: The time is	
12	1:13 p.m. We're back on the record.	
13	Please proceed.	
14	BY MR. DUNHAM:	
15	Q Mr. Teruya, during the break	
16	did you have any interaction with	
17	Mr. Abramson or any member of his team?	
18	A No.	
19	Q If helpful to you, I'm going to	
20	ask you some questions that that, in	
21	part, refer to paragraph 80 of the	
22	Shribman reference. And my question,	
23	sir, is: In response to receiving the IP	
24	address of the web server from the client	
25	module would you agree that the	

acceleration server prepares a list of 1 2 agents that may be suitable to handle the 3 request for the particular IP address that was provided? 4 5 What is the question again? Α 6 My question, sir, is: In Ο 7 response to receiving the IP address of the web server from the client module 8 9 would you agree that the acceleration 10 server prepares a list of agents that may 11 be suitable to handle the request for the 12 particular IP address that was provided? 13 Object to the MR. ABRAMSON: 14 form. 15 That is not so stated in that Α paragraph, because it generically says: 16 17 Server 152. 18 So other than clarifying that Ο the server is 152, would you agree with 19 20 the remainder of that statement? 21 MR. ABRAMSON: Object to the 22 form. 23 I would agree that that's what Α 24 paragraph 80 states. 25 And I'm asking you for your Q

understanding, sir, of the Shribman 1 2 reference as you applied it in your 3 declaration. Α My application --4 5 Object to form. MR. ABRAMSON: 6 Α My application of Shribman is 7 taking their example and explanation of -- that supports their -- their 8 9 application for a patent, and apply it to 10 the claims of the '044 patent, that's 11 what I did in my evaluation. 12 So if we want to take a part of 13 Shribman, and look at it in context with 14 what I state in my declaration, we can go 15 through that. 16 But I did not do a 17 top-to-bottom analysis of all the -- the intricacies of Shribman to see what --18 19 what possible, you know, methods and 20 processes could be compounded in -- in 21 their application to provide, you know, 22 alternate examples of what I used. 23 Would you agree that in Ο 24 Shribman, in response to receiving a 25 request from the client module,

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acceleration server 162 sends a list of 1 2 agents to client 102? 3 Α That's what they state. Ι agree that that's what they state. 4 5 Do you agree that's what Ο Shribman teaches? 6 7 MR. ABRAMSON: Object to the 8 form. Withdrawn. You can answer 9 that. That -- that's -- that's what's 10 Α 11 written. I agree with what's written. 12 That's what they're indicating that that 13 process that they're -- that they're 14 trying to define, as an example, that's 15 what it states. 16 Would you agree that the list Ο 17 necessarily includes the IP address of 18 each agent? 19 Α I would -- I would say that 20 that is a dependency on the implementer, 21 because even in that paragraph it states 22 that, you know, that it could handle 23 requests from the IP address. You know, 24 people have designed things that don't 25 necessarily use IP addresses, sometimes.

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Page 53 1 Q So you --2 Α And that would not be a 3 limitation on the application of Shribman Δ So is it fair that the 5 I see. Ο way you reviewed Shribman, the reference 6 7 to the IP address in paragraph 80 is something you felt could be also read as 8 something different than an IP address? 9 10 Α The context of which I made my 11 evaluation was something operating on the internet, which is what '044 states. 12 So 13 in my thinking, and in answering or 14 documenting in my declaration, I made the 15 assumption in my evaluation that we were 16 always talking about the internet. 17 So I think that if you would like me to evaluate Shribman in its 18 19 entirety, which is kind of where we're 20 going with all these guestions, I would 21 need to look at the appropriate context 22 of evaluation of Shribman, because my 23 evaluation of Shribman was narrowly focused to -- to look at how it -- it 24 25 applied to the '044 patent.

	1	Q Sir, would you agree that
	2	according to Shribman the list of agents
	3	that acceleration server 162 sends to
	4	client 102 necessarily includes the IP
	5	address of each agent?
	6	A Are we what paragraph are
	7	you referring to?
	8	Q I'm asking for your
	9	understanding of Shribman.
	10	A Okay. In the context of a
	11	person applying Shribman to an actual
	12	developed product, I would say that would
	13	be a choice of the implementer, as an
	14	example, an implementer could choose to
	15	use a different entity as address
	16	resolution, it could choose to use an
	17	addressing scheme that did not use what
	18	we would know as an outside IP address.
	19	There are a number of things
	20	that that would change the answer to
	21	your question based on, is this an
	22	internal application, network application
	23	using IP addresses, is it an external
	24	outside firewall implementation?
	25	So generically speaking, you
1		

could apply that answer. It would work.
 But to get to an absolute, more context
 is needed.

Q So when you reviewed Shribman,
for purposes of your analysis in this
case, did you take into account these
other possibilities that you've just been
testifying about?

9 A No, because I only sought to 10 find an analogous reference to '044 to 11 provide example that existed previously 12 or in other implementations.

13 So if in your declaration you Q 14 stated, quote, this list necessarily 15 includes the IP address of each agent, close quote, do you now mean that that 16 17 statement had some conditionality associated with it? 18 That is what is stated in 19 Α No. 20 Shribman. You are asking me a 21 hypothetical about Shribman. 22 Ο I'm not asking you --I see that that could be 23 Α different. 24 25 I'm asking you about the Q

teachings of Shribman, sir. 1 I'm not 2 posing any hypotheticals. 3 I'm simply asking for your understanding of the disclosure and how 4 5 you applied it in your analysis. My analysis was, I quoted 6 Α 7 Shribman, understanding what that 8 particular instance could satisfy, and I 9 quoted him directly. 10 Would you agree, sir, that in 0 11 response to receiving the list of agents 12 from the acceleration server the client module of Shribman then sends a GET 13 14 request to all of the agents in the list? 15 What example are you pointing Α 16 me to, what paragraph? 17 I'm asking you, first, for your 0 18 understanding of the disclosure of Shribman, sir. 19 20 Possibly. Α 21 Under what circumstance is yes Q 22 and under what circumstance is no? 23 Α Did I provide an -- did I 24 provide this response in my declaration? 25 Sir, can you first try to Q

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answer my question, and then we'll work 1 2 from there, please? 3 Α Well, I believe the specificity of my answer requires some context. 4 5 However, you could have cache exhaustion 6 occurring to where one of the agents or 7 all of the agents no longer have current information, in which case the 8 9 response -- the request would not 10 necessarily occur that way. 11 So let me make sure you have my Ο 12 question squarely in mind, sir. And my 13 question is: In response to receiving the list of agents from the acceleration 14 15 server, would you agree that the client module then sends the GET request to each 16 17 of the agents in the list? 18 Α I'm not sure, without --19 without reviewing this, because I believe 20 there is a condition. I believe there is 21 a condition exists that that would not be 22 the case. 23 If you look at the first Ο 24 sentence of paragraph 67 of your 25 declaration, do you agree that the direct

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testimony you provided reads, quote: 1 2 Client 102 reaches out to each agent in 3 the receipt list, sending each agent the URL of the desired content, close quote. 4 5 Α All right. 6 Ο Would you agree that that --7 that I accurately read the sentence that 8 you included in your declaration? 9 Α That is an example of Shribman. 10 Is there any discussion in your 0 11 declaration of any other embodiment or 12 operation of Shribman with respect to 13 that issue? 14 Α No. 15 Would you agree that in Ο 16 Shribman, in response to receiving the 17 GET request from the client module, each 18 agent responds to the client 200 with 19 whether it has information regarding the 20 request? 21 Α If you are asking me to 22 specifically look at Shribman, without 23 the context of 404, I would have to review the document and see if that 24 25 scenario is true in all use cases.

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1	Q Sir, did you review the		
2	Shribman 733 reference prior to your		
3	deposition today?		
4	A Yes.		
5	Q Okay. If it helps you, let's		
6	look at paragraph 83 of Shribman, which		
7	you also cite in your declaration.		
8	Please let me know when you're there.		
9	A I'm here.		
10	Q In paragraph 83 would you agree		
11	with the second sentence, which reads:		
12	As shown by block 382, upon receiving the		
13	request from the client, each agent that		
14	received the request from the client		
15	responds to the client 200 with whether		
16	it has information regarding the request,		
17	which can help the client to download the		
18	requested information from peers in the		
19	network, close quote?		
20	MR. ABRAMSON: I'm going to		
21	object to all questions that ask if		
22	the witness agrees with literal		
23	disclosure in the document. I think		
24	the proper question in all these		
25	examples, and you've been doing it		

repeatedly today, the proper 1 2 question is: Do you see where the 3 document states X. He can -- he can answer, subject to that objection. 4 5 MR. DUNHAM: Well, counsel, 6 I'm going to ask you to not make 7 speaking objections. If you have a form objection, please make it. 8 I've asked the witness 9 10 initially his understanding of the 11 reference. And he has had some 12 difficulty with that, and he has 13 asked me repeatedly for context. 14 I've simply been trying to help the 15 witness by giving him that context. 16 BY MR. DUNHAM: 17 So with that, Mr. Teruya, let 0 18 me ask you a fresh question. 19 Would you agree that in 20 response to receiving the GET request 21 from the client module each agent 22 responds to the client with whether it 23 has information regarding the request? 24 Α Conditionally, yes. 25 Under what condition are you --Q

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do you believe an agent does not respond 1 2 with information regarding the request? 3 Α In the state where that information doesn't exist in any agent. 4 5 Would you agree that in the Ο disclosure of Shribman, in response to 6 7 receiving a request from a client, the 8 agent does not respond with the actual 9 content that the client has requested? 10 Α Can you state that again, 11 please? 12 Certainly. Would you agree 0 13 that in response to receiving a request 14 from a client, the agent does not respond 15 with the actual content that the client 16 has requested? Objection, 17 MR. ABRAMSON: 18 ambiquous. Where is that referenced in 19 Α Shribman? 20 21 Q Sir, I'm asking you, first, for 22 your understanding of Shribman. I would like to review where 23 Α 24 that discussion takes place in Shribman. 25 So are you asking me to point Q

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1	you to the portion of Shribman that you		
2	need to review, is that what you're		
3	asking for?		
4	A That's what I'm asking you to		
5	do.		
6	Q Well, in your report you cite		
7	paragraph 83 of Shribman for that		
8	proposition, so I'm really following your		
9	report.		
10	A Now, what is your question?		
11	Q My question is: In response to		
12	receiving a request from a client would		
13	you agree that the agent in Shribman does		
14	not respond with the actual content that		
15	the client has requested?		
16	MR. ABRAMSON: Objection, lack		
17	of foundation.		
18	A I can see that that is		
19	inferred.		
20	Q So is that your understanding		
21	of Shribman?		
22	MR. ABRAMSON: Objection,		
23	form.		
24	A I'll I'll state again, I		
25	believe that that is what is inferred.		

1	Q Would you agree that in
2	Shribman each agent sends to the client a
3	list of peers and checksums of chunks of
4	the desired content that the peers have?
5	A That is what is stated in
6	paragraph 83.
7	Q And is that your understanding
8	of what Shribman discloses with respect
9	to the agent's response to the client
10	upon receiving the request for
11	MR. ABRAMSON: Asked and
12	answered.
13	A I can only respond by saying:
14	This is the representation provided by
15	Shribman.
16	Q Do you have some disagreement
17	with that language from Shribman?
18	A No, my I I pass no
19	judgment on Shribman. Shribman was used
20	as a reference for me. My my I was
21	not paid to evaluate Shribman. I was
22	I was paid to evaluate my opinion as to
23	how Shribman could be applied, as well as
24	other documents that or instruments
25	that could apply to each patent.

1 Q And, sir, I'm only asking about 2 the way I've read your declaration and 3 how it appeared to me you may have 4 applied Shribman, that's all I'm trying 5 to work through with you.

6 Α I understand that. And if you 7 need more context from what I provided in 8 my declaration, I would be happy to 9 provide that to you if you would 10 reference the section of my declaration 11 that you would like to have a discussion 12 about.

Q Sir, unfortunately, in depositions the questioning attorney selects the order and manner of question. I'm trying to be very linear with you, and not jumping around, so let me continue my cross-examination, please.

19 If it's helpful to you, with 20 reference to Shribman paragraph 84, and 21 that's for your benefit, but would you 22 agree that after receiving responses from 23 each agent in the list the client then 24 decides which agent to use as its agent 25 for the particular information request?

A That is what is being stated by
 Shribman in that paragraph.

3 Ο Would you agree that after selecting an agent, according to 4 5 Shribman, the client notifies the selected agent that the client is going 6 7 to use that agent and notifies the other 8 agents that the client is not going to be 9 using them for a particular request? Is that relevant to a 10 Α 11 particular paragraph or in the teaching 12 in its entirety? Because I believe there 13 are conditions that could possibly introduce a different scenario based on a 14 15 use case, a specific use case. Sir, I'm just trying to gain 16 Ο 17 your understanding of Shribman. And 18 would you agree that --I -- I'm providing you an 19 Α 20 You asked me to something answer. 21 specific, I said it is conditional based 22 on whether or not we're looking at this 23 narrow example in this paragraph or are 24 we looking at Shribman in its entirety, 25 that introduce other examples in other

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1 paragraphs.

2	Q Sir, would you agree that
3	according to Shribman, after deciding
4	which agent to use, client 102 sends a
5	request for specific chunks of content to
6	the selected agent?
7	A Say that again, please.
8	Q Sure. Would you agree that,
9	according to Shribman, after deciding
10	which agent to use, client 102 sends a
11	request for specific chunks of content to
12	the selected agent?
13	A I I believe that Shribman
14	I believe that Shribman states that once
15	you have the agent that you're going to
16	use that the client does this specific
17	request to that agent.
18	Q And are those requests from the
19	client to that agent requests for
20	specific chunks of content, according to
21	Shribman?
22	A Ask that again, please.
23	Q Once the client has selected a
24	particular agent would you agree that the
25	client sends a request to that agent for

1

specific chunks of content?

2 Α I believe how it works is -- I 3 believe how it works, if I understand -if I remember correctly, is the response 4 5 for the request -- the -- the -- you 6 know, the chunk request or the media 7 request or whatever, from the client goes 8 out, and I believe the -- the agent needs 9 to determine whether or not it can 10 respond to the client, meaning, does it 11 have that information or doesn't it have 12 that information. 13 Q Would you agree that in 14 responding to the client each agent sends 15 to the client a list of peers and checksums of chunks of the desired 16 17 content that the peers have? 18 Object to the MR. ABRAMSON: 19 form. I don't have a -- I don't have 20 Α 21 a recollection of the exchange of 22 checksums. 23 So that's just not something Ο 24 you recall today, is that your testimony? 25 That's something I don't recall Α

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1 today.

2	Q Do you know, according to
3	Shribman, whether the client, in order to
4	obtain content from a peer, do you know
5	whether the client sends the GET request
6	to the peer in order to obtain the
7	desired content?
8	MR. ABRAMSON: Object.
9	MR. DUNHAM: I didn't hear the
10	objection.
11	MR. ABRAMSON: Objection with
12	regard to the scope of direct. You
13	can answer.
14	A I don't recall whether or not
15	that request is from a client to an agent
16	necessarily has to be an HTTP GET.
17	Q Sir, would you agree that
18	Shribman discloses a primarily
19	peer-to-peer file sharing system and
20	method?
21	MR. ABRAMSON: Object to the
22	form, vague, ambiguous.
23	A I I don't know that I would
24	characterize Shribman to be that.
25	Q So do you

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,	
1	A It is a possible application.
2	However, I don't know that that was
3	the I don't believe that was the
4	entirely the implementation of Shribman.
5	Q So if you look at paragraph 65
6	of your declaration, do you disagree with
7	the first sentence, that says: Quote,
8	Shribman discloses a primarily
9	peer-to-peer file sharing system and
10	method, close quote?
11	A I'm sorry, what paragraph is
12	that again?
13	Q 65.
14	A Okay.
15	Q Well, sir, I'm sorry, my
16	question I'm trying to get to, is I
17	asked: Would you agree that Shribman
18	discloses a primarily peer-to-peer file
19	sharing system and method?
20	A I'll that's what I wrote.
21	I you know, I think there's a I
22	think the scope can be larger. However,
23	you know, that's a disclosure that they
24	made.
25	Q Well, do you agree with that

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1 characterization as it appears verbatim 2 in paragraph 65 of your declaration? 3 Α I'm -- you're asking me to agree at what I wrote there? 4 5 Well, I asked you --Ο It is -- it is a possible 6 Α 7 implementation. It is a possible implementation. 8 9 Ο Sir. Sir, I'm not going to 10 engage in a discussion with you, but when 11 I asked you the question the first time 12 you took issue with it, so to assist you 13 I pointed you to a specific paragraph of 14 your declaration. 15 Okay. What is the question? Α 16 Sir, would you agree that an Ο object of Shribman is to reduce the need 17 18 for any client to go directly to the 19 origin server to retrieve desired 20 content? 21 Α That wasn't your original 22 question. Are we moving to a different question? 23 24 Each question, sir, I ask you Ο 25 stands alone. So please, as I ask them,

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1	just do your best to answer. If you need
2	clarification I'm happy to, and I'm happy
3	to repeat that question if helpful to
4	you.
5	A Okay. I was not aware that we
6	were finished with the previous question.
7	I'm sorry.
8	Q So let me ask you a question,
9	sir.
10	Would you agree that an
11	object of Shribman is to reduce the
12	need for any client to go directly to
13	the origin server to retrieve desired
14	content?
15	MR. ABRAMSON: Object to the
16	extent that's beyond the scope of
17	his declaration.
18	A I believe that that is one of
19	the motivations. I don't know that it's
20	the primary tenet of the of the system
21	and methods. I believe they were trying
22	to create a more efficient methodology to
23	retrieve data.
24	So given that, given that
25	scenario, it's within the scope of the

objective. 1 2 I'm sorry, it's within the 0 3 scope of what? The object -- the overall 4 Α 5 objective. Objective? Yes, thank you, 6 0 7 sir. 8 Would you agree that 9 Shribman teaches getting cached 10 content from peers in order to reduce 11 the burden on the web server? 12 Α That is one of its -- that it 13 follows with the scope of their objective 14 of providing more efficient retrieval of 15 data. 16 I'm going to refer to paragraph Q 17 66 of your declaration for a moment. 18 You cited in paragraph 72 of 19 Shribman as support for client 102 20 sending its IP address to the 21 acceleration server; right? 22 Α That is Shribman's example, 23 yes. And this citation refers to the 24 Q 25 signup request shown in Figure 13 of

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Shribman; correct? 1 2 Α I believe so. 3 Q Now, you cite in paragraph 79, as support for client 102 sending the IP 4 address of the web server 152 to the 5 acceleration server 162 to obtain a list 6 7 of agents; correct? I -- I did. 8 Α 9 And this citation to paragraph 0 10 79 refers to the find agent request shown in Figure 13; correct? 11 12 Α I'm sorry, the what? 13 This citation refers to the Q 14 find agent request that is shown in 15 Figure 13; correct? 16 I believe so. Α 17 Do you agree that the Q 18 acceleration server 162 is then looking 19 for agents with an IP address that is numerically close to the IP address of 20 21 the web server 152? 22 Α I believe that is in the scope 23 of their discussion to look for, you 24 know, geographically geolocated IP 25 address for facilitation of efficient

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1 communication.

2	The address mechanism is,
3	you know, I don't recall all the
4	specifics, but I I did see that
5	discussion.
6	Q Sir, then do you agree that the
7	IP address of the client is, therefore,
8	not relevant to which agents will be in
9	the list?
10	A The client's IP address
11	MR. ABRAMSON: Object, beyond
12	the scope of the direct. You can
13	answer.
14	A The client's IP address is
15	independent of the process, other than to
16	respond to the client with regard to an
17	agent list.
18	Q Would you agree that the signup
19	request, as referenced in paragraph 72 of
20	Shribman and cited in your declarations,
21	paragraph let me start again, I want
22	to make this clearer for you. I don't
23	mean for that question to be confusing.
24	So with reference to
25	paragraph 66 of your report, and the
1	

1 citations therein to Shribman, would 2 you agree that the signup request and 3 the find agent request are two different types of requests? 4 5 Can you restate that question, Α 6 please? 7 0 With respect to Sure. 8 paragraph 66 of your declaration, and the 9 citations that you provide therein, would 10 you agree that the signup request and the 11 find agent request of Shribman are two 12 different types of requests? 13 I believe I referred to that as Α a registration, correct? Your term of 14 15 signup is that the client will register 16 with the acceleration server, and in that 17 context, that is a separate request than 18 requesting addresses of the agent from 19 the acceleration server. 20 Is it your understanding that Ο 21 Shribman refers to that communication 22 that you cite in paragraph 72 as a signup 23 request? I -- I don't recall that 24 Α 25 It -- it may -- it may be very language.

1 well the case, but I don't recall the 2 language. 3 Ο Would you agree that, according to Shribman, it is the agent, not the 4 5 client, that determines where to obtain 6 the requested content? 7 Α Conditionally. Under what condition does the 8 Ο 9 agent not determine where to obtain 10 content requested by a client? 11 Α When the agents don't have the 12 content. 13 And when an agent doesn't have Ο 14 the content, according to Shribman, what 15 happens? 16 Α I believe the content is 17 directly -- directly responded to by the -- the server that holds the data. 18 19 Following up on your answer, 0 20 when a -- when an agent does not have 21 information regarding the content, and the content needs to be obtained from a 22 23 server, according to Shribman what is 24 your understanding of how that process 25 works?

1 To be accurate, let me find and Α 2 review what I wrote about that scenario. 3 Ο That's fine. And just for the record, if you're looking at specific 4 5 passages in your report, I'll just ask you to please note those for us. 6 7 Α Okay. 8 Q Thank you. 9 Α Okay. Can you ask your 10 question again, please? Sure. I had asked you what is 11 Ο 12 your understanding of how Shrib- -- of 13 Shribman's disclosure when the agent determines that the requested information 14 15 sought by the client is not available? Is not available to the agent? 16 Α 17 Sure, let's take that case. 0 18 In that scenario the agent Α 19 makes the request to the server. 20 Okay. So -- and that's what I 0 21 was trying to get to. Is it your 22 understanding, then, that when an agent 23 receives a request for content from 24 client, and the agent does not have that 25 content available, the agent requests

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1 that content from the web server? 2 That is correct, that is stated Α 3 by Shribman. Could you refer, please, to 4 Q 5 paragraph 100 of your declaration? And please let me know when you're there. 6 7 Α I'm there. 8 Q In paragraph 100 you stated, 9 quote, selecting additional devices from 10 a group selection when one is already 11 selected would be obvious to a POSITA; do 12 you see that? 13 Yes. Α 14 How would it be obvious to use Ο 15 multiple devices given that Shribman expressly discloses the client selecting 16 17 a single agent? 18 It would be -- it's obvious by Α 19 use case, suppose the agent goes away? There is a discussion about deficiencies 20 21 based on geolocation. Suppose, you know, 22 that path has now become degraded? 23 You know, degradation, dynamic 24 degradation is probably the number one 25 example of -- in a use case to -- to have

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more than one connection.

2	Q Are you talking about a
3	specific disclosure that's in Shribman or
4	are you talking about your knowledge of
5	just how the internet works?
6	(Reporter clarification.)
7	MR. DUNHAM: I'm sorry, did
8	you get what you need.
9	THE REPORTER: I need the
10	answer.
11	BY MR. DUNHAM:
12	Q So Mr. Teruya, I think she
13	would like you to repeat your answer, if
14	possible.
15	A Wow. Okay. I don't know if I
16	can do that verbatim, but I would I
17	said: It's an obvious conclusion because
18	of the nature of the internet and the
19	the dynamic nature of the internet and
20	and path resolution. Paths degrade, you
21	know, with great frequency.
22	So if you're looking for an
23	efficient communication methodology in
24	order to provide faster delivery of data,
25	in a data communication scenario, it

Page 80 it's obvious that you would -- you would 1 2 put in the mechanics and the process to 3 be able to dynamically change your connections in order to have the 4 efficiencies of -- of transfer. 5 6 Ο Sir, would you agree that the 7 Shribman reference does not disclose 8 selecting more than one agent by the client device? 9 10 MR. ABRAMSON: Object to the 11 form. 12 Α I don't recall that it states -- it states: Simultaneous 13 14 connectivity. I -- I merely stated in 15 my -- my paragraph, there, that you have the ability to select additional devices, 16 17 whether that be static or dynamic, you 18 know, it's -- it's -- it -- it's an 19 obvious mechanism to how things work. 20 Please refer to paragraph 101 0 21 of your declaration. 22 Α Okay. 23 And to help with the context, Ο 24 paragraph 101 states: Claim 94 depends 25 from claim 89 and covers the second

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1	device being randomly selected from the
2	group. It would have been obvious to a
3	POSITA to have made this selection
4	randomly, especially in view of the fact
5	that dependent claims in Shribman
6	disclosed particular rules for selection.
7	Do you see that?
8	A Yes.
9	Q And my question I wanted to try
10	to understand is: Was there disclosure
11	in Shribman for making that selection of
12	the second device randomly from the
13	group?
14	A I I don't recall. However,
15	the mechanics of Shribman infers that
16	geolocation for for enhanced
17	communication delivery, was one of the
18	factors that it used in a selection
19	process. It would seem to reason that
20	if if that is your criteria, then
21	design of the pool would necessarily be
22	weighted with that attribute.
23	So the randomness of
24	connectivity is largely structured and
25	architected in a way that you would pick

Page 82 randomly, rather than specifically, from 1 2 a list that would -- would meet that 3 criteria, much like in -- in -- you know, in round robin DNS selection. 4 Was the round robin DNS 5 Ο selection disclosed in Shribman? 6 7 Α No, it's an obviousness of --8 it's an example of obviousness. 9 So when you're using Ο 10 obviousness, I just want to understand, do you mean obvious beyond what's 11 12 disclosed in Shribman, is that how I 13 should understand you? 14 Α Yes. Yes, in most cases, 15 that's true. Could you go to paragraph 115 16 Ο 17 of your declaration, please. 18 Α Okay. 19 Down near the bottom of page Ο 20 42, and spilling over to page 43, there's 21 a sentence that reads, quote, in 22 addition, a POSITA would understand that in the circumstances described in 23 24 Shribman the agent must be doing DNS 25 lookups in order to request the content

as described; do you see that sentence? 1 2 Α Yes. 3 Q Now, would you agree that in Shribman it is the client, not the agent, 4 that sends the IP address of the web 5 server to the acceleration server? 6 7 Α I'm sorry, state that again. 8 Q Would you agree that in Shribman it is the client device that --9 10 not the agent, that sends the IP address 11 of the web server to the acceleration 12 server? 13 I don't recall that, at this Α 14 time. 15 And in the sentence that we Ο just reviewed together, in paragraph 115 16 17 of your declaration, I just want you to 18 focus on the word: "Must be doing DNS 19 lookups." 20 Do you see that phrase? 21 Α Yes. 22 Q Why is it that you have 23 testified that the agent must be doing 24 DNS lookups? 25 Because one of the criteria of Α

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1 Shribman, that there was discussion, was 2 to geolocate IP addresses in order to 3 facilitate faster retrieval. You don't 4 want to present the server that an agent 5 that is in Hong Kong, when you're in LA, and there's another agent in LA. 6 7 You would want the agent for 8 that client, at the top of its list of selection, to be in LA. 9 The most 10 convenient way to order that list is by 11 doing a DNS lookup and getting geolocated 12 addresses. 13 And my question, sir, is: Q What 14 support do you have for your statement 15 that the agent must be doing the DNS 16 lookup in Shribman? 17 Ά I -- I don't know that there is 18 a specific methodology defined in 19 Shribman for that. I'm saying that it would be obvious that that would be 20 21 occurring. 22 0 Sir, could you look at 23 paragraph 79 of the Shribman reference, 24 and please let me know when you're there. 25 I'm there. Α

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1 In the second sentence of 0 2 paragraph 79, would you agree that 3 Shribman describes that the client module 224 then looks up the IP address of the 4 5 server 152 that is the target of the 6 resource request. 7 Do you see that? 8 Α Yes. 9 Are you aware of any disclosure 0 10 in Shribman that says that the agent looks up the IP address of the server 11 12 that is the target of the resource 13 request? 14 I don't recall, at this time. Α 15 I would have to review this more 16 carefully. 17 0 In your declaration, did you 18 cite any support for the notion that the 19 agent of Shribman does a DNS lookup in 20 order to request content sought by a 21 client device? 22 Α A DNS lookup is an address 23 translation in order to effectively do You know, it's -- it's an 24 things. 25 inherent process at using the internet.

It -- its use is generally inferred. 1 2 And my request, sir, is simple: Ο 3 I just was unable to find this, so I'm asking for your assistance. Is there any 4 5 place in your declaration where you 6 provide support for the statement that a 7 POSITA would understand that in the circumstances described in Shribman the 8 9 agent must be doing DNS lookups in order 10 to request the content as described? 11 I -- I believe that every Α 12 element that in using an IP address is 13 using some form of DNS lookup no matter what that device is. 14 15 Ts it --Ο 16 Because part of address Α 17 resolution on the internet is an inherent 18 process of address resolution, every device must do it. 19 So if a client device sends to 20 Ο 21 an agent the IP address for a domain 22 posted on the server, is it your 23 understanding that the agent that received that IP address from the client 24 25 device --

1 MR. ABRAMSON: Objection, lack 2 of foundation. 3 MR. DUNHAM: Sir, I haven't finished my question. Please allow 4 5 me to finish. I'm just trying to elucidate further from the witness's 6 7 explanation. 8 MR. ABRAMSON: You might want 9 to rephrase it, because it sounded like an incomplete question to me. 10 11 Lack of foundation. 12 MR. DUNHAM: Please allow me 13 to ask my questions, counsel. 14 MR. ABRAMSON: Go ahead. 15 BY MR. DUNHAM: 16 Mr. Teruya, is it your Ο 17 understanding that if a client device has 18 performed a DNS lookup and has the IP address for the location where a domain 19 20 is hosted on a server on the internet, 21 and the client device provides that IP 22 address to an agent, must the agent necessarily do another DNS lookup to 23 determine the IP address for that domain? 24 25 Objection, lack MR. ABRAMSON:

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of foundation.

1	of foundation.
2	A I don't know how to answer
3	that, because the connectivity chain you
4	just described would would not
5	would not map correctly in order to
6	provide an answer to that question.
7	MR. DUNHAM: Okay. We've been
8	going over a little bit over an
9	hour, so let's take another
10	10-minute break.
11	THE WITNESS: Okay.
12	MR. ABRAMSON: You good?
13	THE VIDEOGRAPHER: The time is
14	2:18 p.m. We are off the record.
15	(Recess.)
16	THE VIDEOGRAPHER: The time is
17	2:31 p.m. We're back on the record.
18	Please proceed.
19	BY MR. DUNHAM:
20	Q Mr. Teruya, just as a
21	housekeeping note, I believe you're in a
22	different time zone than me, so if it
23	comes to a point that you would like to
24	take a break for lunch, please do not
25	hesitate to let me know.

1 Α Okay. 2 Great. Ο 3 Α Thank you. (Exhibit No. 1018 was 4 5 identified for the record.) BY MR. DUNHAM: 6 7 I'd like to take -- you're 0 8 welcome. 9 I would like you to take out Exhibit 1018, the reference referred 10 11 to as Sharp KK. And please keep your 12 declaration available to you, as well. 13 Α Okay. Mr. Teruya, you would agree 14 Q 15 that Sharp KK discloses a content 16 delivery system; correct? 17 Α Yeah, that's -- yeah, that's 18 what they purport. 19 Do you agree that a POSITA Q 20 would understand the content delivery 21 system of Sharp KK to be a closed system? 22 MR. ABRAMSON: Object to the 23 form. I -- I would not agree with 24 Α 25 that.

Why not? 1 Q 2 I believe it could be applied Α 3 either publicly or privately. You know, it could be open or closed. I don't -- I 4 5 don't -- I don't find that specific 6 constraint. 7 Would you agree that all of the Ο desired content available within the 8 9 system disclosed in Sharp KK, must be 10 located within the system? 11 MR. ABRAMSON: Object to the 12 form. 13 Could you -- could you provide Α 14 that question again, please? 15 Sure. Would you agree that all Ο 16 of the content that is available within 17 the content delivery system disclosed in 18 Sharp KK, must exist within the system itself? 19 20 Ά As it is disclosed in Sharp, in 21 the embodiment that I reviewed, I 22 would -- I would say that would be true, 23 generally. 24 Why only generally, sir? Q 25 Because we don't know what Α

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connections are between the servers and 1 2 the proxy for those storage sections. 3 What is that, is it an internal network, is it a HSSI link, is it an ATM link to a Δ 5 data cluster? We don't know what those are, so we can't make a determination to 6 7 say they're all enclosed in this -- in this system. It could -- it could be 8 9 taking a hop across the river.

10 Q Would you agree that within the 11 disclosure of Sharp KK all of the content 12 that -- that is available within the 13 system must be in -- must be on at least 14 one of the devices that are shown within 15 the system?

16 A I would agree that in order to 17 evaluate the structure being explained in 18 the embodiment, we can infer that that is 19 an architecture that could exist.

20 Q Are you aware of any disclosure 21 in Sharp KK that would permit one of the 22 client devices to make a request for 23 content that is not included on any of 24 the other devices that are disclosed in 25 the content delivery system?

1 I'm not absolutely sure about Α 2 that inference. Is there -- is there an 3 example in my declaration that -- that you are -- that you used in order to ask 4 5 that question? You've included various figures 6 Ο 7 and cited various paragraphs in Sharp KK in your declaration, and I've reviewed 8 9 all of them, and I'm just trying to 10 confirm if it's your understanding that 11 in the content delivery system of Sharp 12 KK all of the content that could be 13 requested by any of the clients must 14 already be within the system, itself. 15 As I stated before, my Α evaluation of Sharp KK, specifically 16 17 embodiment number three, is relevant to 18 finding analogous examples to the patent 19 in question. 20 So if you would like me to 21 provide additional content, context, to 22 what example I cited in Sharp KK, relevant to the claims we're talking 23 24 about in the patent, I would be happy to

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answer that.

1 But I didn't do an overall 2 evaluation of Sharp KK as a standalone 3 evaluation of what every single embodiment of Sharp defines. That was 4 5 not what I was paid to do. And my question -- thank you 6 Ο 7 for that, sir. 8 My question is: In your review 9 of Sharp KK did you identify any 10 disclosure that would permit a client 11 device within the system to obtain 12 content that was on a server that is not 13 part of the system? 14 MR. ABRAMSON: Object to form. 15 I don't recall at this time. Α 16 However, to give you a more 17 accurate answer, let me review the 18 section of my declaration where I 19 specifically go through Sharp KK, if you 20 would allow me to. 21 Certainly. Q 22 Α Okay. What was your question 23 again? 24 My question is: Q Are you aware 25 of any disclosure in Sharp KK that would

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Page 94 permit a client device to seek content 1 2 from a web server that is not within the 3 content delivery system of Sharp KK? I do not believe there is a --Ά 4 5 a specific disclosure. I believe its ability to exist is inferred. 6 7 Is there a particular portion 0 8 of Sharp KK you would point to, to 9 support your belief that such a use would be inferred? 10 11 Α I should say the possibility is 12 inferred. 13 With reference to paragraph 151 Ο of your declaration --14 15 Α Yes. -- if you could turn there, 16 Ο 17 please, let me know when you're there. I'm there. 18 Α 19 The second sentence of that Ο 20 paragraph states, quote, the proxies are 21 caching HTTP proxies, then you have a -some additional quoted language in the 22 23 citation. I'm interested in that phrase 24 caching HTTP -- strike that. 25 I'm interested in the phrase:

Caching HTTP proxies. Do you see that 1 2 phrase? 3 Α Yes. What did you mean by caching 4 Ο 5 HTTP proxies, as used in paragraph 151 of your declaration? 6 7 Α Sharp calls out a -- a cache methodology, which I guess because the 8 9 Japanese translation they misspelled 10 cache, but it's disclosed in the 11 embodiment that they have caching 12 It's -- it's -- it's spelled storage. 13 out below the proxies in the diagram. Ι 14 think it's 8B, or something. 15 I would agree that the caching Ο HTTP proxies disclosed in Sharp KK are 16 17 HTTP proxy servers. 18 I -- yeah, they could be, you Α 19 know, they could be proxy in function, 20 Proxy's a fairly generic term. you know? 21 So a proxy server within a specific 22 internet configuration may be different than the translation proxy, for instance. 23 24 Well, sir, my question is Ο 25 specifically about the caching HTTP

Page 96 proxies disclosed in Sharp KK. Would you 1 2 agree that those are HTTP proxy servers 3 that are disclosed? In what embodiment section that 4 Ά 5 I reviewed, I would -- I would consider those caching at HTTP proxies. 6 7 I'm sorry, I didn't understand 0 8 your answer. Could you repeat that, 9 please? I said: In the embodiment that 10 Α 11 I reviewed, they could be construed to be 12 HTTP proxies. But I believe somewhere in 13 there, not under the strict definition of something like SOCKS. Cache is a 14 15 relative term. You can cache a web page. 16 In paragraph 61 of your Ο 17 declaration --18 Α Yes. 19 -- do you understand that the Q 20 Sharp KK discloses proxies deployed for 21 load balancing; do you see that? 22 MR. ABRAMSON: Which 23 paragraph, Tom? 61. 24 MR. DUNHAM: 25 MR. ABRAMSON: Of his

declaration? 1 2 MR. DUNHAM: Yes, sir. 3 MR. ABRAMSON: On the '044 4 patent? 5 MR. DUNHAM: Yes, sir. 6 THE WITNESS: Okay. I'm 7 there. BY MR. DUNHAM: 8 9 When you reference the proxies, Ο 10 in the first sentence of paragraph 61, 11 were you referring to the HTTP proxy 12 servers that are disclosed in Sharp KK? 13 Α Not necessarily. 14 So what were you referring to, Ο 15 then, sir, when you referenced proxies 16 deployed for load balancing in paragraph 17 61 of your declaration? 18 Α Well, this -- I'd have to go 19 through -- I -- I don't -- I really don't 20 recall it, it's generally understood by 21 the -- by the -- by what sharp has 22 defined itself to be, that -- that these 23 multiple devices were attempting to load balance in delivering the content. 24 25 And because the information

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appears to be -- have some level of 1 2 redundancy, you know, that -- that was 3 my -- my definition and explanation. Would you agree that Figure 20 4 Q 5 of Sharp KK is the figure that corresponds to embodiment number three 6 7 that you referenced earlier? 8 Α Yes, I believe so. I can 9 double check that right now. Yes. 10 So can you put Figure 20 up on Ο your screen in front of you, sir? 11 12 Α I have it. 13 Would you agree that in Figure Q 20 there are two clients shown, and they 14 are labeled 4E and 4E? 15 16 Yes, that's correct. Α 17 And would you agree there are 0 two HTTP proxies shown, labeled 3a -- I'm 18 19 sorry, strike that. 20 Three HTTP proxies shown, 21 labeled 3a, 3b, and 3c? 22 Α There are three proxies 23 indicated in the figure. They did not 24 specifically state that they were HTTP 25 proxies.

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1 Would you agree that the three Q 2 proxies shown, 3a, 3b, and 3c are each 3 caching proxies? It would -- I would agree 4 Α 5 with -- I would agree that that could be 6 their designation. 7 Okay. Do you see corresponding Ο 8 to each of the three proxies, 3a, 3b, 3c, 9 do you see the associated cache storage section 6a, 6b, and 6c? 10 11 Α Yes. 12 Ο Taking proxy 3a as an example, 13 what is your understanding of the functionality provided by cache storage 14 15 section 6a of Sharp KK? Specifically? 16 Α 17 Yes, sir. 0 18 I -- I -- I would just -- my Α 19 analysis of Sharp KK, in my declaration, 20 didn't specifically break down the 21 structure of that particular proxy. 22 Ο Is that your answer, sir? Yes, it's a device that -- it's 23 Α 24 a device that provides a function in the 25 example provided by Sharp. I didn't -- I

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did not break down the specificity of 1 2 what -- how that proxy is constructed. 3 0 Just so my record is clear, sir, and I apologize if I asked you this 4 5 previously, you did review embodiment 3 of Sharp KK; correct? 6 7 Α I certainly did. 8 Ο Do you have an understanding of 9 the functionality provided by cache 10 storage section 6a as associated with 11 proxy 3a? 12 Α I'm sorry, what was that 13 question again? 14 0 Sure. Do you have an 15 understanding of the functionality provided by cache storage section 6a as 16 17 associated with proxy 3a and as shown in 18 Figure 20 of Sharp KK? Not with any specificity. 19 Α Ι 20 treat the proxy and the -- its caching 21 capability as a -- as an entity. I don't 22 know the specific mechanics. 23 In paragraph 61 of your Ο 24 declaration, you indicate that proxies 25 are assigned to users by a central

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1 server; correct? 2 Α Correct. 3 Q When you refer to the central server, in that particular statement of 4 5 your declaration, which component shown on Figure 20 were you referring to? 6 7 Α The -- I'm sorry, what 8 paragraph are you looking at, again? 9 61 of your declaration, sir. Q I believe that -- I 10 Α Yes. 11 believe I'm referring to the 12 communications server, if I'm correct. Ι 13 think the communications server, if I 14 accurately remember, is the one that 15 assigns the -- the connection. 16 Again, with reference --Ο 17 Α Let me -- let me review my --18 in my declaration, where I take that 19 apart. 20 What was the question Okay. 21 again? 22 Ο In paragraph 61 of your 23 declaration you stated that proxies are 24 assigned to users by a central server. 25 And my question is: Is that server 2

that's shown on Figure 20? 1 2 Α Yes. 3 Q With reference to paragraph 151 of your declaration, can you please let 4 5 me know when you're there. I'm here. I'm there. 6 Α 7 Q Sure. Thank you. 8 In the first sentence you state 9 Server 2 assigns one of a that: 10 plurality of proxy devices, 3a, 3b, 3c, 11 to handle requests for content, from 12 clients. And then the sentence goes on. 13 MR. ABRAMSON: Objection to form, misstates the document. 14 15 BY MR. DUNHAM: 16 Do you see that language in the Ο 17 first sentence of paragraph 151 of your 18 declaration? 19 Α You dropped out there, so can 20 you -- can you provide that question 21 again? 22 0 Absolutely. I'm just trying to 23 get you to look at particular language that is in the first sentence --24 25 Α Okay.

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1	Q of paragraph 151 of your
2	declaration. And the language I'm
3	interested in is: The server 2 assigns
4	one of a plurality of proxy devices, 3a,
5	3b, 3c, to handle requests for content
6	from clients.
7	Do you see that passage?
8	A Yes.
9	Q Is it your understanding
10	MR. ABRAMSON: Object to the
11	form. Objection to form, partial
12	quote.
13	MR. DUNHAM: The witness is
14	free to read the entire sentence to
15	himself.
16	MR. ABRAMSON: I know, Tom,
17	but you're quoting it, and then
18	you're quoting it incorrect. It's
19	usually I said: You are quoting
20	it in a in a confusing way, but
21	he can answer.
22	MR. DUNHAM: Counsel, I ask
23	you to limit your objections to
24	nonspeaking objections, please.
25	///
1	

1 BY MR. DUNHAM:

	2	Q Mr. Teruya, with reference to
	3	the first sentence of paragraph 151 of
	4	your declaration, will you agree that
	5	Sharp KK teaches that server 2 assigns a
	6	proxy device 3a, 3b, 3c to handle
	7	requests for content from clients?
	8	MR. ABRAMSON: Again, object
	9	to the form.
	10	A Let me review one thing. I
	11	believe that to be true, but let me
	12	review something to make sure that that's
	13	an accurate answer.
	14	Can you state your question
	15	again, please?
	16	Q Sure. So you would agree that
	17	Sharp KK teaches that server 2 assigns a
	18	proxy 3a, 3b, 3c to be used by client 4;
	19	correct?
	20	MR. ABRAMSON: Same objection.
	21	A Eventually.
	22	Q Is there another device within
	23	Sharp KK that assigns a proxy to be used
	24	by a client, other than server 2?
	25	A No, not not in the
I		

embodiment that I reviewed. 1 2 Are you aware of any disclosure Ο 3 in Sharp KK where a device other than server 2 assigns a proxy to be used by a 4 client? 5 I did not review in any detail 6 Α 7 or specificity any embodiment, aside from embodiment number three. 8 9 In paragraph 151 of your Ο 10 declaration, you use the phrase: Proxy 11 devices; do you see that? 12 Α Yes. 13 Q What do you mean by proxy 14 devices? 15 So as I stated before, I Α treated all the elements of what is in --16 17 in Figure 20, that indicates a proxy, 18 from the cache storage section to the 19 proxy communications section, to the 20 response requests extract execution 21 section, I treated those as a device that 22 provided functionality and -- and role as 23 a proxy. 24 Do you know whether the Sharp Q 25 reference, itself, ever uses the phrase,

quote, proxy device, close quote? 1 2 Α I -- I don't recall. 3 Q Would you agree that in Sharp KK the client 4 directly contacts the 4 5 server 2 to re -- make a request for 6 content? 7 Α I'm -- I'm sorry, what? Can 8 you repeat that again? 9 Certainly. Would you agree 0 10 that in Sharp KK the client 4 directly 11 contacts the server 2 to make a request 12 for content? 13 In order to give you an Α accurate answer, let me review a section 14 15 of my declaration that handles, I believe, the scenario of exhaustion. 16 17 Can you ask your question 18 again, please? 19 You agree that in Sharp KK the 0 20 client 4 directly contacts the server 2 21 to make a request for content; right? 22 MR. ABRAMSON: Object to the 23 form. 24 I think the difficulty in that Α 25 question, to be absolutely accurate,

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would be that are we treating server 2 in 1 2 that illustration of embodiment 3 as a 3 singular role as a server or are we parsing out the functionality of what, in 4 5 essence, is the acceleration server in 6 the context of the patent to assign an 7 agent address, which is the proxies, but it is a subset of server 2. 8 9 So with reference to Figure 20 Ο 10 of Sharp KK --11 Α Yes. 12 -- would you agree that client 0 13 4 directly contacts the box shown as server 2 to make a request for content? 14 15 Eventually. Α 16 In order to obtain content in Ο 17 sharp KK, does the client always have to 18 make a request for content of server 2? 19 MR. ABRAMSON: Object to the 20 form. 21 Α It -- in appropriate context, 22 it will, at some point. But in the 23 acceleration of the delivery, in the load 24 balancing delivery, that content will 25 come from the proxy caches.

1 So in order to get the 2 assignment, the answer would be yes. In 3 subsequent sessions, the answer would be So I don't really know how to answer 4 no. 5 that question with a singular answer. Sure. And I understand your 6 Ο 7 explanation. Let me -- let me try and 8 break it into two pieces, and I'm recognizing the difference between 9 10 requesting content and obtaining content. 11 So I just want to make sure 12 the record is clear in terms of how 13 you're applying the teachings of Sharp 14 KK in connection with your 15 declaration. 16 So my first question is: 17 You would agree that Sharp -- in Sharp 18 KK the client 4 directly contacts 19 server 2 to make a request for 20 content; correct? 21 Eventually. Again, eventually. Α 22 Ο Okay. Well, would you agree 23 that always has to happen at some point 24 in the process? That's all I'm trying to 25 establish.
· · · · ·	
1	A Let me review this again,
2	because I I don't know that that use
3	case is always the case.
4	Okay. There's multiple use
5	cases defined by Sharp. So there is the
6	case where Sharp discloses that either
7	the clients can fetch content from server
8	2 via the proxies. Okay?
9	The other use cases, server 2
10	may receive a request from the client,
11	which may transmit directly from the
12	client, so it would respond.
13	So technically, in that use
14	case, but not in every use case, that
15	statement could be true.
16	Q Can you identify for me any use
17	case in Sharp where the client does not
18	make a request for content of server 2 at
19	some point in that particular use case?
20	A That it does not I'm sorry,
21	can you repeat the question.
22	Q Sure. Can you identify for me
23	any use case in Sharp where the client
24	does not make a request of server 2 for
25	content at some part in the process of

1 the client requesting and obtaining 2 content?

Well, the use case would be 3 Α that the client fetches the content from 4 5 the proxy. Prior to a client fetching 6 Ο 7 content from a proxy, 3a and 3b shown in 8 Figure 20, would you agree that the 9 client previously had to contact server 2 10 in order to be assigned to one of the proxies? 11 12 Α Yes, that is stated by -- by 13 Sharp. 14 Q Would you agree that server 2 15 keeps track of each request for content 16 that's made by any of the clients in the 17 system? 18 Well, can you be more specific? Α 19 What is keep track? 20 My question is: Would you Ο 21 agree that server 2 keeps track of each 22 request for content that is made by any 23 clients within the system? 24 А Does that mean does it keep a 25 log or what -- what does that mean?

1	Q I'm simply asking for your
2	understanding of the disclosure, sir.
3	A Well, I'm I'm I'm trying
4	to I'm trying to understand the
5	specificity of the question. Keeping
6	track is is what what is keeping
7	track?
8	Q Are you aware of any
9	circumstances within Sharp KK where
10	server 2 is able to determine if content
11	requested by any client was previously
12	requested by another client?
13	A So the use case example that
14	you are stating is let's use the
15	example clients, which is 4 what is
16	it, 4e and "f"? Is that right? Clients
17	4e and 4f, the use case is: Does the
18	server know that 4e or 4f are are
19	making the same request?
20	Q Do you know if this ever
21	will have some way to determine if 4f,
22	for example, is requesting content that
23	had been previously requested by 4e?
24	A I I I'm not aware of a
25	scenario like that, since typically the

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Page 112 request will be coming to the proxy is --1 2 is what I would assume to be obvious, 3 since this is a load balancing network. It's going to make a request 4 5 for specific content. And the server will respond or the proxy will respond to 6 7 returning the requested content. 8 Now, the server or proxy may 9 have a process within it in order to log 10 that information so it can sequentially 11 be able to track at some later date. 12 But I don't know if that 13 exists in any specific architecture or design that I -- I see existing in --14 15 in the embodiment. 16 With reference to Figure 20 of Ο 17 Sharp KK, would you agree that client 4e 18 will not contact any of the proxies, 3a, 19 3b, or 3c for content until after client 20 4e has made a request to server 2? 21 А Can you ask that question 22 again, please? 23 Would you agree that Ο Sure. 24 embodiment 3, shown in Figure 20 of Sharp 25 KK, before client 4e goes out to proxy

3a, 3b, or 3c to obtain content, client 1 2 4e must have previously contacted server 3 2? I -- I would say that in most 4 Ά cases that would be true. 5 6 Are you able to point to any Ο 7 disclosure in Sharp KK showing a case where client 4e did not first have to 8 9 contact server 2 before being directed to 10 one of the proxies to obtain content? 11 Not without more analysis to Α 12 all the other embodiments in Sharp. 13 Well, with respect to the Q 14 embodiment you said you analyzed, are you 15 aware of any disclosure in Sharp KK where client 4e could be directed to proxies 16 3a, 3b, or 3c without first having 17 contacted server 2? 18 19 MR. ABRAMSON: I'm going to 20 object to this line of questioning 21 on the grounds that it's beyond the 22 scope of his direct examination. 23 I don't believe this relates 24 to anything he stated in his 25 declaration and I don't think this

1 is admissible.

2	MR. DUNHAM: Counsel, I
3	disagree completely. The analysis
4	that Mr. Teruya provided, for
5	example, in paragraph 152 through
6	163, specifically goes into the
7	messaging between the different
8	alleged elements of the network.
9	And I'm merely having the
10	witness explain to me his
11	understanding of the operation so I
12	can understand his analysis.
13	MR. ABRAMSON: Yeah, you're
14	asking him for his opinion on an
15	order of events. And I don't
16	believe that his declaration
17	addresses that, at all, but if you
18	can point to it?
19	MR. DUNHAM: I don't have to
20	justify that to you now, counsel.
21	I'm going to ask, if you have an
22	objection, please make it, and then
23	I'll ask the witness to answer the
24	question.
25	MR. ABRAMSON: I'll state my

Page 115 objection and then, you know, if and 1 2 when it's appropriate we'll argue 3 that that's not admissible. He can 4 answer. 5 Can you ask your THE WITNESS: 6 question again? I'm sorry. 7 BY MR. DUNHAM: 8 0 Sure. I just want to know, 9 within the embodiments that you reviewed 10 within Sharp KK, are you aware of any embodiment where client 4e would obtain 11 12 content from any of the proxies that are shown without first having made a 13 14 connection to server 2? 15 Not that I'm aware of. Α 16 Q Okay. 17 Α Not that I recall. 18 And if you look at paragraph Q 19 155 of your declaration, in the very 20 first sentence there's a quote that 21 Request executing section 33 of states: 22 client 4 receives a response message to 23 instruct the request executing section 33 24 to acquire content -- a content from a 25 designated proxy, close quote; do you see

that statement? 1 2 Α Yes. 3 Q And do you see the phrase: 4 Response message, that you -- the words, 5 response message, a response message that 6 are used in that paragraph? 7 Α Yes. 8 Q Would you agree that in order 9 for request executing section 33 of 10 client 4 to receive a response message, 11 something must have preceded that in 12 order for it to be a response, would you 13 agree with that? 14 Α Generically, yes. 15 So there is a sequence of the Ο flow of messages that you described in 16 17 your declaration, including your reference to a response message; correct? 18 19 Α Yes, I would assume that there 20 is a response to every request. Well, 21 generally, generally, there are 22 conditions where you won't receive a 23 response. 24 But with respect to paragraph Ο 25 155, you're specifically discussing the

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sequence of messaging that occurs as 1 2 you've analyzed Sharp KK; correct? 3 MR. ABRAMSON: Object to the form 4 5 As it's stated, as Sharp KK Α states that is what they are describing. 6 7 Now, in paragraph 159 of your 0 8 declaration, and I would ask you to turn to that -- strike that. 9 10 Let me just ask you to turn to 11 paragraph 159, and let me know when 12 you're there. I'm there. 13 Α 14 Q And please take a moment and 15 read paragraph 159 to yourself. I have questions about both of the sentences in 16 17 that paragraph. 18 Okay. Your question? Α 19 First, with respect to the Q 20 first sentence of paragraph 159, it 21 In the principal embodiment states: 22 shown in Sharp KK the functionality of the first and second servers are combined 23 24 into one unit. 25 Do you see that language?

A Yes.

1

2	Q Are you aware of any disclosure
3	in Sharp KK that shows the functionality
4	of the first and second servers being
5	separated and not combined into one unit?
6	A I I did not apply that
7	constraint to the entire the entire
8	Sharp document.
9	Q Okay. And again, I we'll
10	get to the second sentence, too, but I
11	just want to make sure I understood in
12	the first sentence, you used the word
13	principal embodiment.
14	So my question, sir, is: Are
15	you aware of any disclosure in Sharp KK
16	that shows the functionality of what
17	you're referring to as the first and
18	second servers, where they are not
19	combined into one unit?
20	A I can't answer that without
21	reviewing the entire document, which I
22	did not specifically do with the
23	specificity that I did for embodiment 3.
24	Q Okay. So with respect to
25	embodiment 3, are you aware of any

1	
1	disclosure within Sharp KK that the
2	functionality of what you're referring to
3	as the first and second servers, in the
4	first sentence of paragraph 159, are not
5	combined into one unit?
6	A Yeah, I I don't know that to
7	be true, either. I believe that I
8	believe Sharp is talking about
9	functionality and role more from a Meta
10	standpoint than a physical device, per
11	se.
12	It's much like a Window's
13	Microsoft Window's server having multiple
14	virtual roles in a physical server, it
15	could embody actual multiple physical
16	server, a physical server with multiple
17	virtual server instances.
18	So that the fact that Figure 20
19	was drawn like it was, I I cannot
20	assume that that is a physical unit as
21	opposed to a virtual unit, in which case
22	it could be singular or it could be
23	separated, you know, by the M function.
24	Q Is there any portion of the
25	disclosure that in Sharp KK that you

can point me to that would state that the 1 2 server could -- is virtual and could be 3 divided into more than one component? No, that -- I mean, this is 4 Α 5 pretty common knowledge about, you know, VMs and virtualization. Virtualization 6 7 is how -- how we have the cloud today. Virtualization is a basic tenet of 8 9 computing, you know, in this era, I mean, 10 going back 20 years. 11 Is it your testimony that in 0 12 preparing your declaration, with respect 13 to Sharp KK, the only embodiment that you 14 analyzed and are relying on for alleged 15 invalidity would be embodiment 3? That's the one that --16 Α 17 embodiment 3 represented the most, I 18 would say, compelling and analogous 19 example to the claims in the patent. 20 And my question, sir, is: In Ο 21 performing your analysis, as set forth in 22 your declaration, and in forming the 23 opinions that you formed regarding Sharp 24 KK, is embodiment 3 the only embodiment 25 that you are relying on to support your

1 opinions?

2	A I think that can be answered to
3	the principal extent, I believe I
4	referred to another embodiment, may not
5	be in the '044 patent, but I may have
6	done it in the other patent. I'm not
7	entirely sure. I have I would have to
8	review them both side-by-side as to
9	whether or not I did make a reference to
10	another embodiment.
11	MR. DUNHAM: And I see we've
12	been going a little bit over an
13	hour, so what I would propose is a
14	short lunch break. We can do, say,
15	30 minutes or 45, if that works for
16	you? But if you need more time,
17	that's perfectly fine, sir.
18	MR. ABRAMSON: It's up to the
19	witness. I've got very convenient
20	food. Keith, it's up to you.
21	THE WITNESS: How about 45
22	minutes?
23	MR. ABRAMSON: Sounds great.
24	MR. DUNHAM: That's perfect.
25	Thank you.

1 THE VIDEOGRAPHER: The time is 2 3:32 p.m. We are off the record. 3 (Recess.) THE VIDEOGRAPHER: The time is 4 5 4:16 p.m. We are back on the 6 record. Please proceed. 7 (Exhibit No. 1014 was identified for the record.) 8 BY MR. DUNHAM: 9 10 Mr. Teruya, I'd ask you to take 0 11 out a copy of the Luotonen reference, 12 which was Exhibit 1014 in the '866 IPR 13 proceeding. 14 Okay. Α 15 Please let me know when you Ο 16 have that available. 17 Α Okay. 18 So I'd like you to take a look Q 19 and, for yourself, review the terminology on page 20 of -- strike that. 20 Let me 21 start -- let me make this easier for you. 22 Would you please turn to the 23 page number 22 of the Luotonen reference. 24 25 MR. ABRAMSON: What do you

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mean by page 22? 1 2 MR. DUNHAM: The copy I have 3 says page 22 in the lower corner. MR. ABRAMSON: Okay. What's 4 5 the -- what's the first line in the 6 page? 7 MR. DUNHAM: Sure. It's the 8 page that says, at the top, I guess 9 it's chapter four, web proxy 10 servers, and then it says: 11 Terminology, in bold letters across 12 the page. 13 MR. ABRAMSON: Yeah. Yeah. 14 Okay. 15 THE WITNESS: Okay. 16 BY MR. DUNHAM: 17 Okay. So Mr. Teruya, do you 0 have page 22 of Luotonen available to 18 19 you? 20 А Yes. 21 What I'm going to ask you to do Q 22 is just read to yourself the terminology 23 that's down near the bottom of the page, 24 that says: Proxy (server). 25 I'm going to have some

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questions about specific language within 1 2 that, that terminology, but I would like 3 you to have an opportunity to read the whole statement that's in Luotonen. 4 5 Α Okay. 6 Ο So I'd like to direct your 7 attention to the portion of that 8 statement, it's the beginning of the 9 second sentence, and, again, feel free to 10 read as much of it as you need, but it's 11 the language that says: A proxy acts 12 both as a server as well as a client, and 13 then it goes on from there. 14 Do you see that terminology? 15 Α Yes. With your understanding --16 Ο 17 strike that. 18 Did you review the Luotonen reference in connection with the 19 20 preparation of your declaration and 21 the '866 IPR petition in this case? 22 Α Not the entire volume, only what is relevant to what I used as an 23 24 example in my declaration. 25 Well, do you believe that Q

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Page 125 Luotonen's discussion of proxy servers 1 2 would have been relevant to the 3 discussion of your declaration? Yes, it is relevant. 4 Α 5 Q Okay. So my question, sir, is: 6 When Luotonen states a proxy acts as both 7 a server as well as a client, was it your 8 understanding that the proxies disclosed 9 in Luotonen can simultaneously act as both a server and a client? 10 11 Α It could. 12 (Exhibit No. 1021 was identified for the record.) 13 BY MR. DUNHAM: 14 15 Could you also pull out the Ο Prince reference, sir? 16 17 Α Okay. Get that available to you. 18 Q 19 А Prince is from the '044 patent? 20 And that would be Exhibit 1021 0 21 yes, sir from the '044. 22 Α Okay. I have that open. 23 And if it's helpful to you in 0 24 your '044 declaration -- I mean, I'll 25 just generally reference you to the

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1	section starting at paragraph 172, and
2	again, that's just if that's a helpful
3	for you I'll note that's where you
4	discuss in Prince?
5	A Okay. I'm there.
6	MR. ABRAMSON: Sorry, what's
7	the declaration?
8	MR. DUNHAM: The '044
9	declaration, for Prince, starting at
10	paragraph 172.
11	MR. ABRAMSON: 172? Okay.
12	MR. DUNHAM: Yes, sir.
13	MR. ABRAMSON: Sorry.
14	BY MR. DUNHAM:
15	Q Mr. Teruya, do you have the
16	Prince reference available?
17	A Yes, I do.
18	Q Would you agree that Prince
19	discloses a cloud-based proxy service
20	provision through DNS?
21	A I I don't know what do
22	you want to provide me a definition of
23	cloud in in a in your context?
24	Q Well, do you have an
25	understanding of how a person of ordinary

1 skill in the art would understand the 2 word "cloud" in the context of the Prince 3 reference?

That a person of -- a POSITA 4 Ά 5 would ask me the same question. What is -- what are we talking about is a 6 7 specific cloud, are we talking an AWS cloud, meaning, you know, what Google and 8 Amazon runs as cloud service or are we 9 10 talking the internet as a cloud? 11 Well, if you look at paragraph 0 12 23 of Prince, sir, tell me when you're 13 there. 14 Α Paragraph 23? 15 Yes, sir. Ο 16 Okay. Let me read that. Α 17 Okay. I reviewed that section. 18 What is your view of how a Q POSITA would understand the third 19 20 sentence, that says: The cloud-based 21 proxy service is provisioned through DNS? 22 Α Today or when that document was -- or that book was written? Because 23 24 I think given the time this specific, you 25 know, time reference would -- you would

Page 128 interpret it differently. 1 2 Going in connection with your Ο 3 analysis and the opinions you formed in this case, what timeframe did you apply 4 5 when you read, for example, the Prince reference? 6 7 Α I used the time reference 8 relevant to the analysis of the patent, 9 which is, what, 2000 -- 2013 or something 10 like that? 11 Okay. So the question I asked 0 12 for you is a POSITA -- can we agree, 13 then, that a POSITA is a person of 14 ordinary skill in the art at the time of 15 the invention of the '044 and '866 16 patents? 17 Α Okay. Or before. 18 Pardon? Ο 19 Or before. I mean, you Α 20 could -- you could -- I mean, you could 21 be 50 years old, you know, but your 22 knowledge of the skill is not going to go 23 away, it travels with you. 24 Sure. And I'm just trying to Ο 25 get agreement with you that if I say

POSITA I mean as of the time of the 1 2 invention of the '044 and '866 patents, 3 so our questions can be clear and your answers can be clear; is that fair? 4 5 That's not accurate, because Α 6 you -- you -- it's, like, you can't 7 un-hear something. You know, if you have 8 the experience, you may apply -- you may 9 apply a point in time where things are naturally understood, as I am doing in 10 11 this case. 12 When you are talking about cloud-based service is when Luotonen was 13 written we didn't have AWS. We didn't 14 15 have Microsoft out there with Azure. We didn't have things like that that are 16 17 commonly used today as cloud-based

18 services. In that time, cloud was -19 it's on the internet.

20 Q So when you cite, in paragraph 21 23 of your declaration, what timeframe 22 did you apply for the perspective from 23 which you understood that paragraph? 24 MR. ABRAMSON: All right. 25 Which reference are you referring

Page 130 to? 1 2 I'm sorry? MR. DUNHAM: 3 MR. ABRAMSON: Which reference 4 is your question referring to. 5 Paragraph 23. MR. DUNHAM: MR. ABRAMSON: Of? 6 7 MR. DUNHAM: Prince reference. MR. ABRAMSON: Oh. 8 THE WITNESS: And -- and what 9 10 is my reference, time period 11 reference in my declaration? 12 MR. DUNHAM: That's what I'm 13 trying to ask you, is when you 14 say --15 MR. ABRAMSON: T don't know 16 that I introduced any time relevance 17 in my declaration. BY MR. DUNHAM: 18 19 So let me try to ask a clear Ο 20 question to you, sir. 21 What I'm asking you is, when 22 you cited the Prince reference and, for 23 example, paragraph 23, and described what you understood Prince to be disclosing, 24 25 was there a particular point in time that

Page 131 you were using as the date from which you 1 2 would interpret that particular 3 disclosure? Let me review my Prince 4 Α 5 response, here, because I don't recall quoting paragraph 23. 6 7 Okay. Can you ask your 8 question again, please? 9 Ο Sure. My question is -- it's a 10 straightforward question, I'm just trying 11 to understand -- what timeframe did you 12 utilize when you formed your 13 understanding and opinion about what the Prince reference disclosed, including, 14 15 for example, paragraph 23? My specific reference to 16 Α 17 paragraph 23 has no time reference based 18 on it, my comment was about records and 19 the DNS server are changed so it points 20 to proxy servers. 21 And -- and again, my question Q 22 is: Is your statement, for example, that 23 you're talking about in your report, is 24 that formed on your knowledge as of the 25 time you drafted your declaration or some

1 different point in time?

2 My comments in this particular Α 3 section are about the mechanics, what is trying to be explained as to how Prince 4 can be applied to the claims in the 5 6 patent for each particular section and 7 claim of the patent and how I can view the two and determine what their 8 9 references are, and if -- if there is in 10 any kind of analogous taxonomy between 11 the two. 12 And when you did that, 0 Sure. 13 were you bringing to bear the knowledge 14 that you have at the time you prepared 15 your declaration or the knowledge that you may have had at some other point in 16 17 time? I -- I don't understand the 18 Α 19 question. I brought -- I brought my

21 Q Sure. And with respect to the 22 experience that you brought -- maybe I'll 23 try to make it easier for you to see what 24 I'm asking.

experience to doing the analysis.

25

20

So you said you brought your

experience to do your analysis; is that 1 2 correct? 3 Α You know, this is a very confusing line of questioning. You asked 4 5 me originally about section 23, and we were having a conversation about what 6 7 cloud-based -- what -- what cloud means, 8 okay? 9 And I said, it has time relevance as to what a cloud is at the 10 11 time Luotonen was written as opposed to 12 what a cloud is now. 13 Now you're talking about my 14 time reference in using my experience in 15 explaining the relevance of these two 16 documents that I was asked to reference 17 with each other. 18 And my question, sir, is the Ο 19 same question. I'm just trying to 20 understand that when you read Prince what 21 experience base were you drawing on, your 22 experience as of the time you drafted the 23 declaration or your experience as of some other time? 24 25 Α My experience.

Page 134 1 As of what point in time, sir? Q 2 Α As of the moment that I'm 3 reading and trying to do the analysis. Okay. And that's all I'm 4 Q 5 trying to understand. So you were drawing on and reading Prince from the 6 7 experience you had at the time you read Prince to do your analysis; is that 8 9 correct? 10 MR. ABRAMSON: Object to the 11 form. 12 Α You know, I -- I'm not 13 understanding what you're saying. I'm --14 I'm really sorry, but I'm -- I'm not 15 getting it. 16 No, and I'm just trying to make Ο it a clear understanding that -- let me 17 break it down in a few --18 (Reporter clarification). 19 20 MR. ABRAMSON: Apologies, just 21 commenting on Mr. Dunham, he's 22 trying to confuse the record. 23 MR. DUNHAM: Counsel, I am not 24 trying to confuse the record. I am 25 giving the witness every opportunity

1	to explain the analysis he's
2	performed, and I'm actually trying
3	to assist him.
4	So please, if you have an
5	objection, state it, and please do
6	not disrupt my examination further.
7	BY MR. DUNHAM:
8	Q So Mr. Teruya, when you
9	reviewed the strike that.
10	What year did you review the
11	Prince reference in connection with
12	your work in this case?
13	A 2020.
14	Q Okay. So when you read the
15	Prince reference in 2020, did you bring
16	to that review and your understanding of
17	Prince the knowledge and experience that
18	you had acquired up through 2020?
19	A I would assume so.
20	Q Okay. That's all I was trying
21	to understand, sir, so thank you.
22	So if we go back now to
23	paragraph 23 of Prince, and in
24	particular this sentence, the third
25	sentence, that says: The cloud-based

1 proxy service is provisioned through 2 DNS. 3 When you reviewed Prince, what was your understanding of what 4 5 the cloud-based proxy service was? Isn't paragraph 23 in Luotonen? 6 Α 7 I'm referring to the Prince Ο 8 patent application publication, this is 9 the exhibit that I asked you to bring 10 out. 11 Okay. You also asked me to Α 12 bring out Luotonen. You asked me about 13 paragraph 23 of Luotonen. 14 Q I asked you about page 22 of 15 Luotonen, and then I asked you to bring out Prince. So let's make sure you have 16 17 the right document. 18 MR. ABRAMSON: Can we please 19 get on the same page, gentlemen. 20 THE WITNESS: Sorry. 21 BY MR. DUNHAM: 22 Ο As I begin each line of 23 questioning, sir, do you have available 24 to you the Prince reference? And this 25 would be Exhibit 1021.

,		Page 137
1	A Oh, I'm looking at the Prince	
2	reference, and you're asking me about	
3	paragraph 23, now, correct?	
4	Q Yes, sir.	
5	A Okay.	
6	Q So my question is the third	
7	sentence says: The cloud-based proxy	
8	service is provisioned through DNS; do	
9	you see that?	
10	A Yes.	
11	Q So what is your understanding	
12	of how you interpreted cloud-based proxy	
13	service as used in paragraph 23 of Prince	
14	when you reviewed it in this matter?	
15	A I do not believe that I used	
16	I do not believe that I gave any weight	
17	to the fact that it was cloud-based. I	
18	do not believe that in my thinking at the	
19	time that whether it was cloud-based or	
20	internet-based factored into my analysis	
21	because, frankly, don't think there's	
22	there is difference, but there's not that	
23	much difference in in referencing what	
24	we needed to show.	
25	Q If you could look at paragraph	
1		

172 of your '044 declaration, please. 1 2 Α Okay. 3 Q And do you see Figure 1 from Prince's replicated in your declaration? 4 5 Α Yes. 6 Ο Again, do what you like, sir, 7 but, again, I'm just trying to help you. 8 You may find it easier to look at the 9 first page of the Prince patent, because 10 that same figure appears but it's a whole 11 lot bigger and easier to read. But I 12 leave it to you. I'm just trying to help 13 you. 14 So can you tell me when you 15 have Figure 1 so you can take a look at 16 it? 17 Α Okay. Let me see if I can 18 rotate it. Okay. I have it. 19 0 Perfect. Would you agree that, 20 according to Prince, the customers, 135A 21 through L, can register for the 22 cloud-based proxy service 185 using the 23 service server 125? 24 А Can you repeat the question? 25 Would you agree that Q Sure.

<i>x</i>	
1	according to Prince the customers, 135A
2	through L, can register for the
3	cloud-based proxy service 185 using the
4	service server 125?
5	A I'm I'm sorry, let me parse
6	your question again. Can you can you
7	ask me again, please?
8	Q Sure. Would you agree that the
9	customers, 135A through L, can register
10	for the cloud-based proxy service 185 of
11	Prince, using the service server 125?
12	A I'm having difficult with the
13	use of the word cloud-based service.
14	Q Do you see the title of Prince,
15	at the top of the page, of the first page
16	of the Prince patent, the patent
17	application, more correctly.
18	Are you able to see the title,
19	sir?
20	A Yes.
21	Q Would you agree that Prince is
22	directed to distributing transmission of
23	requests across multiple IP addresses of
24	a proxy server in a cloud-based proxy
25	service?

1 MR. ABRAMSON: Object to the 2 question, it's beyond the scope of 3 the direct. Go ahead, you can 4 answer.

5 A Again, whenever this document 6 is claiming to be a cloud-based proxy 7 service, all right, may not -- I may not 8 share the same definition of cloud-based 9 proxy, and I have treated it as a proxy 10 server.

11 Now, the diagram that you gave 12 me makes no specific reference for that service server 125 to be cloud-based. 13 14 The assumption is made, however, but the 15 specificity of cloud-based isn't provided That is not how -- that was not 16 to me. 17 part of my analysis to break down cloud-based service. 18

19 Sir, would you agree that, Ο 20 again, with reference to Figure 1, that 21 the customer's 135A through L, register 22 for service 185 using the service server 23 125? 24 Yes, I can -- I can state that Α 25 that is -- that is represented there.

		Pa
1	Q Okay. And would you agree that	
2	the customers in Prince are the owners of	
3	domains?	
4	A I don't know that. I don't	
5	have that information.	
6	Q So you don't know whether in	
7	Prince the customers that are discussed	
8	in the patent are actually the owners of	
9	the domains; is that your testimony?	
10	A I don't have information to	
11	answer that. Do you need do you need	
12	me to further my answer?	
13	Q If you have more to say, please	
14	say it.	
15	A A client could be a customer	
16	that has their own domain name, right?	
17	In that case, do they own their domain	
18	name? We don't really know, in the	
19	application, how the customers are being	
20	identified. If the customer is	
21	identified using their e-mail address	
22	they may be using a domain identifier	
23	that doesn't even belong to them.	
24	So there isn't enough	
25	information for me to give you a very	

specific answer of what you're asking. 1 2 Do you know whether, according 0 3 to the disclosure of Prince, the customers 135A through L own or control 4 5 domains that are hosted on the origin 6 servers? 7 Α I don't know. Let me review 8 the record here and I will -- give me a few minutes, and I will see what -- and 9 10 refresh my memory if -- if I did come 11 across that. 12 MR. ABRAMSON: Objection. 13 What was your question again? 14 BY MR. DUNHAM: 15 Would you agree that, according Ο to Prince, the customers, 135A through L, 16 17 own or control domains that are hosted on 18 the origin servers? 19 Α With respect to domain names, I have -- I don't have sufficient 20 21 information to answer one way or the 22 other. 23 MR. ABRAMSON: Hang on. 24 Objection. This is way beyond the 25 scope of his declaration,

Mr. Dunham.

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2	MR. DUNHAM: Counsel, you can
3	make your objection. The witness
4	testified in his deposition
5	extensively about the message flow
6	in the nodes and the network. And
7	I'm working through with him I'm
8	trying to work through with him his
9	understanding of the nodes and what
10	messages flow. I'm barely started
11	with my examination.
12	This is directly relevant to
13	his declaration. I'm actually using
14	the figure right out of his report.
15	So I disagree with you completely,
16	counsel. But in the future just
17	please state your objection and let
18	me continue my examination.
19	MR. ABRAMSON: Go ahead.
20	BY MR. DUNHAM:
21	Q Mr. Teruya, would you agree
22	that according to Prince a customer 135
23	can change DNS records such that the
24	domain of that customer is mapped to one
25	or more IP addresses of the proxy servers

1 120.

24

2 Α Repeat the question, please. 3 Q Sure. Would you agree that according to Prince a customer 135 can 4 5 change DNS records such that the domain 6 of that customer is mapped to one or more 7 IP addresses of proxy servers 120? I don't know that I can answer 8 Α

9 that question, as presented, because the 10 address resolution using DNS, we have no 11 presumption on what the origin of those 12 domains are and the mechanism by which 13 the claim is being made that the customer 14 is changing that DNS address.

Q Sir, would you agree that a DNS query from a client for a particular domain, according to Prince, will resolve to an IP address of the proxy server 120 and not the IP address of the origin server that hosts that domain?

A It would depend on the
architecture.
Q Well, I'm asking you if,

25 A In the example that Prince is

according to Prince, do you --
1 giving, that I stated in my declaration, 2 following each step that they were 3 given -- giving in their in -- in their 4 documentation, that I referenced, that 5 that's accurate in that regard.

6 Q Okay. Would you agree that 7 within Prince the customer 135 selects 8 which IP address or addresses of proxy 9 server are included in the DNS records?

10 A Say that again. Ask me again,11 please.

12 Q Sure. Would you agree that the 13 customer 135 within Prince selects which 14 IP address or addresses of proxy server 15 120 are included in the DNS records?

16 A I'm -- I'm really sorry, but I 17 need to hear that again.

18 Q Sure. Would you agree that the 19 customer 135 selects which IP address or 20 addresses of proxy server 120 are 21 included in the DNS records?

A Given -- there are some givens here -- given that the client is able in -- in the deployment of -- of this example is able to make a selection, that

1 could be accurate.

2	Q Would you agree that customer
3	135, changing the DNS records, according
4	to Prince, alters the flow of traffic to
5	the origin server 130 130 by directing
6	it through proxy server 120?
7	MR. ABRAMSON: Objection.
8	A You know, I I need your I
9	need to review my declaration here,
10	because you are asking me, if I get your
11	question correctly, that the client is
12	changing the DNS record; correct.
13	Q No, I said the customer?
14	A The customer? Customer,
15	client, synonymous, to me. So 135 is
16	changing the DNS record?
17	Q Yes, is that your
18	understanding?
19	A No, I'm asking you, is that
20	your question?
21	Q Sorry, what I'm asking you, is:
22	Do you agree that the customer 135
23	changing the DNS record alters the flow
24	of traffic going to the origin server
25	from the client by redirecting that flow

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through the proxy servers 120? Α In the manner in which the question was asked, no, I do not agree. And is that because you feel 0 that the customer doesn't change the DNS record? Α That isn't -- it's an interaction issue as to a customer could change a DNS record given the authority to do so, and the mechanics to do so. But in the manner in which the question was asked, with appropriate context, no, I can't agree, unless we define more specificity to what you're asking. Would you agree that, according Ο to Prince, the DNS record for any given domain is changed such that the IP address that is returned when that particular domain is resolved will be the IP address of a proxy server rather than the IP address of an origin server that hosts that domain?

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A Present that question to meagain.

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1	Q Will you agree that, according
2	to Prince, the DNS records are changed
3	such that the IP address that is returned
4	to a DNS resolved request for any given
5	domain is changed to be the IP address of
6	the proxy server rather than the IP
7	address of the origin server on which
8	that domain resides?
9	A The mechanics for that to
10	happen are documented in Prince for that
11	to occur. So in that context, I agree
12	that that is what has been defined.
13	Q And still with reference to
14	Figure 1 from paragraph 172 of your
15	report, will you agree that according to
16	Prince there is no direct flow of traffic
17	between the client devices 110 and the
18	origin servers 130?
19	MR. ABRAMSON: Object, beyond
20	the scope.
21	A I will have to look at that for
22	a little bit before I can give you an
23	answer.
24	MR. DUNHAM: And counsel, in
25	response to your request, I'm loathe

to do this, I would just invite you 1 2 to read paragraphs 173 and 174 of 3 Mr. Teruya's deck, which directly discuss exactly the flow of messages 4 5 and the routing of messages that I 6 am currently questioning him about. 7 MR. ABRAMSON: That doesn't --8 yeah, I am fully aware of those 9 paragraphs, believe me. But that 10 does not -- that's not your 11 question. 12 You're fishing for information 13 to support amendment, Mr. Dunham, that's what this deposition has been 14 15 about so far, so let's get that on the table. But go ahead ask your 16 17 questions. You have my objections 18 not that -- I'm not going to tell 19 him not to answer. Just go ahead 20 and let's get this done. 21 MR. DUNHAM: Motion to strike 22 in an absolutely improper objection, which we will call to the attention 23 24 the board, sir. 25 MR. ABRAMSON: It's -- it's

		F
1	really beyond you're using this	
2	deposition as a as an opportunity	
3	to fish for information to support a	
4	motion to amend.	
5	MR. DUNHAM: I am directly	
6	questioning the witness about his	
7	understanding of Prince and how he	
8	has applied it. It's coming	
9	directly from his report.	
10	MR. ABRAMSON: Proceed.	
11	THE WITNESS: Can you ask your	
12	question, again?	
13	MR. DUNHAM: Certainly, sir.	
14	BY MR. DUNHAM:	
15	Q Would you agree that, according	
16	to Prince, there's no direct flow of	
17	traffic between the client devices 110	
18	and the origin servers 130?	
19	MR. ABRAMSON: Objection. You	
20	can answer.	
21	A I don't know that that's the	
22	case in that I applied the examples	
23	relevant to the claim and method being	
24	used in the patent.	
25	So to look at models outside of	

what I defined here, in the flow in 173 1 2 and 174, beyond the scope of that answer 3 on how that interchange is documented there, I don't know that I -- I -- I'm 4 5 not in a position to agree with that unless I'm given the opportunity to -- to 6 7 do that analysis. 8 Q Well, sir, in paragraph 174, do 9 you state, quote, records in DNS server 10 140 are changed so as to point to proxy 11 servers 120? 12 Α Yes. 13 And then, in my -- in the next Q 14 sentence of paragraph 174 of your 15 declaration, which states: When client 110 requests content from origin server 16 17 130 client 110 is instead directed to 18 proxy server 120. 19 Do you see that? 20 Α Yes. 21 And my question to you, sir, Q 22 I'll ask it again, is: Are you aware of 23 any disclosure of Prince where when 24 client 110 requests content from origin 25 server 130 client 110 contacts origin

Page 152 server 130? 1 2 MR. ABRAMSON: Same objection. 3 You can answer. I never made that 4 Α 5 investigation. 6 Q So is it your testimony you 7 just don't know whether Prince discloses 8 that functionality? 9 MR. ABRAMSON: Same objection. Yeah, I -- I -- I'm -- I 10 Α 11 can't -- the -- the way in which you pose 12 the question is, do I agree. I can't 13 agree, at this time. I don't have sufficient information. 14 15 Would you agree, according to Ο Prince, it is the client device 110 that 16 17 performs the DNS query and not the proxy server 120? 18 I -- I -- I can't agree to that 19 Α 20 absolute. 21 Q Why not? 22 Α Because there are address 23 translations that are occurring that --24 that may not necessarily be seen, in 25 which case that would not be an accurate

1 answer.

2 Q Is there anything in the Prince 3 reference you can point to that would 4 show that proxy server 120 performs a DNS 5 query?

6 A It's a given. Mr. Dunham, it's 7 a given that that has to take place.

8 Q Okay. So when -- when you read 9 Prince did you just assume that these 10 things that you feel are given were part 11 of the disclosure of the reference?

12 A Yeah, you know, there are a lot 13 of things in here that you -- you don't 14 need to specify. That's the mechanics of 15 how things work.

Would you agree that, according 16 Ο 17 to Prince, a client device 110 will not 18 know that the DNS response that it 19 received provides the IP address of a 20 proxy server instead of the IP address of 21 the origin server? 22 Α Can you -- can you give me that 23 question again?

24 Q Certainly. Would you agree25 that, according to Prince, a client

1 device 110 will not know that the DNS 2 response that it received would be the IP 3 address of the proxy server instead of the IP address of the origin server? 4 5 The analysis of that would Α require that I know what the -- what the 6 7 specific state and process of 110 wants 8 to see and does it matter. If it's doing a content retrieval, it doesn't matter. 9 10 But if it's used for some other purpose, 11 it may matter. 12 So I -- I don't know how to answer that. I -- I -- I don't know how 13 14 to agree, and your question is if I 15 agree, I don't know how to agree without 16 knowing more. 17 Sir, with respect to the Ο 18 disclosure of Prince will you agree that the client device 110 is unaware that a 19 20 proxy server is being used in -- in 21 connection with obtaining responses to 22 requests? 23 MR. ABRAMSON: Object to form. 24 Α I think you asked me the same 25 question.

1	Q I'm just asking for your
2	understanding of how you interpreted the
3	Prince reference and how you applied it.
4	A The method at which I applied
5	Prince is, as I explained before, is to
6	go back, look at the claim in the patent,
7	and ascertain whether or not there are
8	analogous taxonomies between Prince and
9	the '404 patent. That was my mission.
10	My mission was not to dissect
11	and take apart and know all the nuances
12	of Prince. I only looked at things that
13	were relevant to look for analogous
14	taxonomies between these two examples,
15	one from the patent, one from Prince.
16	Q Well, when you reviewed the
17	Prince reference did you read all of the
18	reference?
19	A Not in its entirety.
20	Q Would you agree, then, that,
21	according to Prince, the client device
22	110 transmits an IP packet with an HTTP
23	request to the IP address of the proxy
24	server 120?
25	A At some point.

Page 156 1 What does the proxy server do Q 2 to your understanding, when it receives 3 an HTTP request from one of the client devices? 4 5 In -- in -- in what context? Α 6 Q When the proxy server receives 7 an HTTP request from a client device. 8 Α A content request? 9 Pardon? Ο 10 A content request? Α 11 Yes, sir. What does the proxy Ο 12 server then do? 13 It generally fulfills the Α content request in -- in -- in the manner 14 15 in which the -- the flow takes place to return and satisfy that request in its 16 17 reply structure. 18 Would you agree that upon Q 19 receiving the requests the proxy server 20 120 forwards the request to the origin 21 server? 22 MR. ABRAMSON: Object to the 23 form. I -- I would -- I would -- I 24 Α 25 would assume that the conditions exist

that that would take place based on 1 2 whether or not the information was 3 available where that step was not 4 necessary. 5 I mean, paragraph 174 of your Ο declaration on the '044 patent, in the 6 7 fourth sentence you stated: Upon 8 receiving this request proxy server 120 9 forwards the request to origin server 10 130; do you see that?

11 A Yes.

12 Q What does the proxy server 120 13 need to do in order to forward the 14 request to the origin server 130?

15 A It makes that request, in order 16 to return to -- to satisfy -- to fulfill 17 the chain of events for the request for 18 data.

19 Q According to your understanding 20 of Prince, does the proxy server have to 21 do anything with the IP header of the 22 request? 23 A Proxies always do something

24 with the IP header.

25 Q And I'm asking for your

understanding of how this process works
according to the sentence you cited in
your declaration. What does the proxy of
Prince need to do in order to forward the
request to the origin server?
A I'm sorry, ask your question
again.

8 Q Sure. I'm asking for your 9 understanding, specifically, of how 10 Prince achieves the proxy server 120 11 forwarding the request to the origin 12 server 130 as you have stated in 13 paragraph 174 of your declaration?

A It -- it -- it's kind of clearly written there, the client 110 sends a request to resource request to the proxy server. And then it says: Upon receiving this request a proxy server forwards the request to the origin server.

Q Does the proxy server have to change anything in the request in order to forward it to the origin server? A That would depend on the chain of events that occurred before, in what

1	was pointed where, with DNS, with the DNS	
2	servers.	
3	Q Well, I'm asking you according	
4	to Prince, sir, does the proxy server	
5	A I am quoting Prince.	
6	Q Okay. Where are you quoting	
7	from, sir?	
8	A It in the beginning of my	
9	of 174 I say: Records in the DNS server	
10	are changed to point to the proxy	
11	servers. And it says: If the client	
12	requests contact from the from the	
13	origin server, client 110, instead,	
14	directs to the proxy server. Those are	
15	all defined in DNS.	
16	Q Sir, my question is about the	
17	proxy server 120 forwarding the request	
18	to the origin server. And let me ask you	
19	specifically.	
20	Does the proxy server in	
21	forwarding the request to the origin	
22	server need to change the source IP	
23	address of the packets?	
24	A I don't have enough information	
25	to know how the internal mapping is	

1 working.

2	Q In connection with preparing
3	your declaration and forming your
4	opinions, did you seek to determine the
5	information at that level of detail or
6	not?
7	A I did not.
8	Q In the next sentence of
9	paragraph 174 of your declaration, you
10	state that: Origin server 130 responds
11	to this request sending the requesting
12	information to proxy 120; do you see
13	that?
14	A I'm sorry, where are you
15	where are you at?
16	Q Still in paragraph 174 of your
17	declaration, and now I'm
18	A Okay.
19	Q moving to the next sentence,
20	and I'm just going to ask you about it,
21	so I'm only quoting it to you to make it
22	clear what I'm referring to, in paragraph
23	174 you state: Origin server 130
24	responds to this request sending the
25	requested information to proxy 120.

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	1	Do you see that?
	2	A Yes.
	3	Q What destination address,
	4	according to Prince, goes in the packets
	5	that the origin server is sending as that
	6	response?
	7	A I don't know. I will have to
	8	review that, because it doesn't it
	9	doesn't necessarily need something
	10	specific because the request chain has
	11	the return address. It's responding to a
12 request.		request.
	13	So if there is special
	14	handling, that is managed by Prince, that
	15	isn't relevant to this claim or method,
	16	that I didn't apply here, I would have to
	17	look that up and answer that for you.
	18	Q So as you testify today, do you
	19	know specifically whether Prince
	20	discloses any sort of special handling,
	21	to use your phrase, regarding how the
	22	origin server 130 responds to the request
	23	from the proxy server 120?
	24	A I can you ask that again?
	25	Q Sure. I'm just trying to

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understand that, sitting here today, as 1 2 you testified, do you know whether the 3 origin server invokes any sort of special handling, just to use the phrase you 4 used, in responding to the request from 5 6 the proxy server 120? 7 Α Not without further 8 investigation. 9 Is that an investigation that 0 10 you previously performed or not? 11 Likely not. Α 12 And then the last sentence --Ο and strike that, I'm sorry. 13 14 The next sentence in paragraph 15 174 of your declaration, says: Proxy 120 then forwards this response to client 16 17 device 110. 18 Do you see that? 19 Α Yes. 20 Is there anything that you're 0 21 aware of, according to Prince, that proxy 22 120 has to do to the packets in order to 23 forward the response to client device 110? 24 25 Other than a classic handoff in Α

1 special use case? 2 I'm just asking you for your Ο 3 understanding of the disclosure of Prince, that's all, sir. 4 The disclosure of Prince that I 5 Α used is a straightforward example, it is 6 7 not all encompassing. 8 If you would like me to give --9 to make a statement to you that I agreed 10 with something Prince is doing, that I 11 haven't investigated, I can't do that. 12 Well, I'm just asking you, sir, 0 13 if you have an understanding of whether 14 proxy 120 needs to make any changes to 15 the packets that it received from origin 16 server 130 in order to forward the 17 response to client device 110? 18 Α I have no investigation on what 19 the packet manipulation that a real life 20 implementation of Prince would use that 21 just from a process level of what is 22 stated here, that proxy 120 forwards the 23 response to the client device, whether 24 there are any secondary use cases, 25 abnormal use cases, recovery, any of that

1 kind of stuff, I don't know. 2 I don't know how to answer 3 that. I didn't investigate it. What I 4 do know is what -- what Prince says 5 happens between proxy 120 forwarding the response back to the client. 6 7 Any other manipulations in 8 that path is not obvious to me, not with the information that I've been 9 10 provided in order to answer the 11 question. 12 (Exhibit No. 1012 was identified for the record.) 13 14 BY MR. DUNHAM: 15 I'd like you to turn -- to take Ο 16 out Exhibit 1012, which is the Squid 17 reference, please. 18 Sorry, I didn't MR. ABRAMSON: 19 hear the reference there. 20 MR. DUNHAM: It's Squid, 21 Exhibit 1012. 22 MR. ABRAMSON: Squid? Okay. 23 Squid? 24 THE WITNESS: Okay. 25 ///

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1 BY MR. DUNHAM:

2 And feel free to refer to any Ο 3 portion of the reference, of course, that's helpful. But by way of example, I 4 5 would direct you to page 24, PDF page 24 of Squid, and it has a picture at the top 6 7 showing a client device, a Squid server, and then three different servers. 8 9 Α I'm sorry, what page was that, 10 PDF page? PDF page 24, sir. 11 Ο 12 Okay. Okay. I'm on page 24. Α And if it's helpful to you, 13 Q 14 I'll also reference you to your '044 15 declaration, starting at approximately page 46 -- I'm sorry -- paragraph 46. 16 17 MR. ABRAMSON: 4-6. 18 4-6, yes. MR. DUNHAM: 19 BY MR. DUNHAM: 20 Just to give you context. Ο 21 Α Okay. 22 Q Sir, and I'm pointing to page 23 24 of the PDF Figure 1-1 on Squid, as 24 just a convenient way to ask the 25 questions, but please, I'm asking you for

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your knowledge and understanding of
Squid.

3 So would you agree that Squid teaches having an HTTP proxy 4 5 server in between a client and some other type of server, such as an HTTP 6 7 serve, an FTP server and a gopher 8 server, as examples. 9 Α Yeah, that's a basic example. 10 Okay. Would you agree that Ο 11 according to Squid, the Squid server in 12 the middle, can simultaneously act as 13 both a server to the requesting client 14 and as a client to the web servers shown 15 off to the right? 16 That's a classic definition, Α 17 yes. 18 Now, if you could turn to Q 19 paragraph 116 of your declaration, in the 20 '044. And please let me know when you're 21 there. 22 Α Okay. I'm there. 23 And please read paragraph 116 Q 24 to yourself, if would you, because I have 25 questions about portions of the paragraph

Page 167 1 but I certainly want you to have an 2 opportunity to review the whole 3 paragraph. Okay. Okay. What is your 4 Α 5 question? 6 Q Do you see the quoted language 7 included at the very end of paragraph 116 of your declaration, that states: Squid 8 9 uses a pool of external processes to make 10 queries in parallel; do you see that 11 language? 12 Α Yes. 13 Q And that's citing to page 14 Exhibit 112 (sic) at page 46; right, PDF 15 page 46? 16 Let me make sure that that's Α 17 accurate. Okay. What's your question? 18 If you could, please, Ο Sure. 19 take a look at the disabled-internal-DNS 20 discussion that appears on PDF page 46 of 21 Squid. And I ask you to read that to 22 yourself and let me know when you've had a chance to review it. 23 24 Α Okay. 25 Okay. Can we agree that the Q

last clause, which is the quotation in 1 2 the last sentence of paragraph 116 of 3 your declaration, which reads: Squid uses a pool of external processes to make 4 5 queries in parallel, can we agree that 6 that quote comes out of this 7 disable-internal-DNS section of the Squid 8 reference on page PDF page 46? 9 Α For the disabled-ident lookups. 10 No, the disable-internal-DNS? 0 11 Α Oh, I'm sorry. Read the wrong 12 section. 13 Okay. Please, then, let me Q make sure the record is clear. Please 14 15 take a moment to read the 16 disable-internal-DNS section that appears 17 on PDF page 46 of Squid. 18 Okay. What is your question? Α 19 I'm trying to make sure I have Ο 20 the right citation, first. So if you 21 look at the last clause of paragraph 116 22 of your declaration and, in particular, the quote about Squid using a pool of 23 24 external processes, I want to make sure 25 that the citation that you provided in

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		Page
1	your declaration is to that same language	
2	2 that appears in the disable-internal-DNS	
3	section of Squid on PDF page 46?	
4	A Yes.	
5	Q Would you agree, then, that the	
6	disable-internal-DNS section of Squid is	
7	referring to the resolution of DNS	
8	queries?	
9	A Say that again? Ask me again,	
10	please.	
11	Q Sure. Would you agree that the	
12 disable-internal-DNS section of Squid, on		
13	13 PDF page 46, and, in particular, the	
14	14 quote that Squid uses a pool of external	
15	processes to make queries in parallel, is	
16	16 referring to making DNS queries in	
17	parallel?	
18	A I would say that the statement	
19	of Squid using pools for external	
20	processes to make parallel queries is	
21	accurate.	
22	Q And would you agree, though,	
23	that according to this disclosure of	
24	Squid that you cited, this is describing	
25	DNS queries?	

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1 What I quoted here was the Α 2 process by which Squid uses parallel 3 queries. This option is a daemon option within basically UNIX to, in the function 4 5 of this module of DNS to run, this is a -- this is a -- an option, a command 6 7 line option in the launch of -- of the DNS service. 8 9 And if this option is enabled 0 10 then is it fair to say that what it 11 permits is doing DNS queries in parallel? 12 Α No, this -- this option has 13 nothing to do with the parallel or 14 This is a -- this is an nonparallel use. 15 option that controls internal and external functionality. 16 17 So does this particular option 0 18 bear on making requests for content from 19 a web server in parallel? 20 No, this is a DNS process. Α 21 Okay. And that's what I'm Q 22 trying to understand. So this is a DNS 23 process? 24 Α This is a DNS process, and the 25 one option is using one mechanism, the

other is using the C library, and the
other is avoiding the use of the C
library.

But the fact that it's stating 4 5 that it's giving you the -- the reasoning on why you would -- may want to choose 6 7 one or the other -- other, basically from 8 a load standpoint in these early servers, 9 that issues like this today they don't 10 matter anymore. We have plenty of 11 resource in machines in order to make it 12 happen, not at the time of the invention 13 of Squid, where people would pay attention to this kind of stuff. 14

15 Now you would not be impacted by parallel queries as what was being 16 17 concerned about then, this was a very 18 novel thing at this point in time, to be 19 doing parallel queries. It was very 20 early in the day to be doing parallel 21 queries. 22 MR. DUNHAM: Mr. Abramson, if

22 we take a break, and I'm -- I'm sure 24 I can be ready by quarter of, I'm 25 very close to wrapping up. I would

Page 172 like to confer with my colleague, 1 2 just check my final notes, and I 3 think we will only have to go a few minutes beyond that. 4 5 MR. ABRAMSON: Okay. That's 6 great. How much time do you want? 7 MR. DUNHAM: 'Til quarter of the hour, how is that? So it's 8 about 13 minutes or so. 9 10 MR. ABRAMSON: I'm good. 11 THE VIDEOGRAPHER: The time is 12 5:32 p.m. We are off the record. 13 (Recess.) 14 THE VIDEOGRAPHER: The time is 15 5:47 p.m. We are back on the record please proceed. 16 17 BY MR. DUNHAM: 18 Mr. Teruya, when we were just Q 19 coming back on you said you wanted to say 20 something; is that correct? 21 Α Yes, I -- I -- I misstated in 22 my last answer to you that the switch, 23 configuration switch for Squid, which was 24 for the application, and in reality in 25 that time of use these were compiler

1	options because in order to configure
2	these applications these switches needed
3	to have been passed and the application
4	would compile with these configurations.
5	So I was inaccurate in
6	stating that it was a an option for
7	the operation. It was a compiler
8	switch.
9	Q Thank you. With that,
10	Mr. Teruya, I have nothing further for
11	you today, and I pass the witness to
12	Mr. Abramson.
13	MR. ABRAMSON: We have no
14	questions. I think we're done.
15	MR. DUNHAM: We would ask that
16	the witness read and sign the
17	transcript for standard procedure.
18	MR. ABRAMSON: Yes, we shall.
19	We shall we reserve the right to
20	read and sign thank you.
21	MR. DUNHAM: Thank you.
22	MR. ABRAMSON: Mr. Teruya,
23	thank you again. I appreciate your
24	time today.
25	Go off the record.

1	THE VIDEOGRAPHER: One second,
2	please.
3	The time is 5:49 p.m. We are
4	off the record.
5	THE REPORTER: Mr. Dunham, I
6	understand you have a standing
7	order?
8	MR. DUNHAM: Yes, we would
9	like a rough today and a rush
10	tomorrow.
11	THE REPORTER: And
12	Mr. Abramson, when do you want your
13	сору?
14	MR. ABRAMSON: We will take
15	a if we could, we would like a
16	rush to that no, a rough, a rough
17	today, a rough today, and on the
18	on the other one, just standard
19	delivery.
20	(Signature having not been
21	waived, the deposition of Keith
22	Teruya was concluded at 5:49 p.m.)
23	
24	
25	

· · · · ·		
1	ACKNOWLEDGI	MENT OF DEPONENT
2	I, Keith Teruya	a, do hereby acknowledge
3	that I have read and	d examined the foregoing
4	testimony, and the s	same is a true, correct
5	and complete transc:	ription of the testimony
6	given by me and any	corrections appear on
7	the attached Errata	sheet signed by me.
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1	CERTIFICATE OF SHORTHAND REPORTER
2	I, Cassandra E. Ellis, Registered
3	Professional Reporter, the officer before
4	whom the foregoing proceedings were taken,
5	do hereby certify that the foregoing
6	transcript is a true and correct record of
7	the proceedings; that said proceedings were
8	taken by me stenographically and thereafter
9	reduced to typewriting under my supervision;
10	and that I am neither counsel for, related
11	to, nor employed by any of the parties to
12	this case and have no interest, financial or
13	otherwise, in its outcome.
14	IN WITNESS WHEREOF, I have hereunto set
15	my hand this 29th day of October 2021.
16	
17	
18	
19	
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21	
22	CASSANDRA E. ELLIS, CSR-HI, CCR-WA, RPR, CRR
23	REALTIME SYSTEMS ADMINISTRATOR
24	NOTARY PUBLIC
25	

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