

Videotaped Deposition of
Henry Houh
July 27, 2021

Hulu
vs.
SITO Mobile



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

3 -----X

4 HULU, LLC, :

5 Petitioner,: Review Nos.

6 v. : IPR2021-00158

7 SITO MOBILE R&D IP, LLC : IPR2021-00206

8 and SITO MOBILE, LTD.,: IPR2021-00219

9 Patent Owner.:

10 -----X

11

12 REMOTE VIDEOTAPED STENOGRAPHIC DEPOSITION OF

13 HENRY HOUH

14 Tuesday, July 27, 2021

15 11:03 a.m.

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23 STENOGRAPHICALLY REPORTED BY:

24 GISELLE MITCHELL-MARGERUM, RPR, CRI, CCR, LCR, CSR

25 Job No.: 10085962

1 Deposition of HENRY HOUH, held remotely, via
2 videoconference at:

3
4
5 VIA VIDEOCONFERENCE
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9 Pursuant to agreement, before Giselle
10 Mitchell-Margerum, Registered Professional Reporter,
11 Certified Reporting Instructor, Licensed Court Reporter
12 (TN), Certified Court Reporter (GA), Certified Court
13 Reporter (NJ), Certified Court Reporter (WA), Certified
14 Shorthand Reporter (OR), and Notary Public (Washington,
15 D.C.).
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A P P E A R A N C E S

ON BEHALF OF PETITIONER:

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ALSO PRESENT:

SPENCER BENVENISTE, Videographer

MITCHELL YANG

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W I T N E S S I N D E X

Witness

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HENRY HOUH (sworn)7

Cross-Examination by JASON CHARKOW7

Redirect Examination by BRAD BERG201

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E X H I B I T I N D E X

No.	Description	Page
Exhibit 1	Notice of Deposition (Henry Houh) - IPR2021-002658
Exhibit 2	Notice of Deposition (Henry Houh) - IPR2021-002989
Exhibit 3	Notice of Deposition (Henry Houh) - IPR2021-0030410
Exhibit 4	Notice of Deposition (Henry Houh) - IPR2021-0030811

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

2 THE VIDEOGRAPHER: Okay. We are now on
3 the record. Today's date is July 27th 2021, and
4 the time is 11:03 a.m. This is the remote video
5 recorded deposition of Dr. Henry Houh, via Zoom
6 videoconference. Being taken in the matter of Hulu,
7 LLC v. SITO Mobile R&D, LLC., et al.

8 My name is Spencer Benveniste, appearing
9 for Aptus Court Reporting, located at 600 West
10 Broadway, Suite 300, in San Diego, California 92101.
11 I'm the official videographer for this deposition,
12 and this recording is the only authorized video
13 recording of this deposition.

14 The audio and video recording will take
15 place at all times, unless all counsel agree to go
16 off the record.

17 Will counsel please identify yourselves
18 and state whom you represent?

19 MR. CHARKOW: Jason Charkow, of the
20 Daignault Iyer firm, on behalf of the SITO entities.
21 And with me today, I have Mitch Yang, from the
22 Carmichael IP firm.

23 MR. BERG: Brad Berg from the law firm,
24 O'Melveny & Myers, representing petitioner, Hulu
25 LLC.

1 THE VIDEOGRAPHER: The court reporter --

2 MR. CHARKOW: Good morning, Dr. Houh --

3 THE VIDEOGRAPHER: The court reporter

4 today --

5 THE WITNESS: Good morning.

6 THE VIDEOGRAPHER: I'm sorry. The court
7 reporter today is Giselle Mitchell, and she may now
8 swear in or affirm the deponent.

9 HENRY HOUH

10 Having been duly sworn testified as follows:

11 CROSS-EXAMINATION BY MR. CHARKOW:

12 Q. Good morning, Dr. Houh.

13 A. Good morning. How are you?

14 Q. Good. Please identify -- strike that.

15 Please introduce yourself.

16 A. Hi. My name is Henry H. Houh. "Houh" is
17 spelt H-O-U-H.

18 MR. CHARKOW: I'm going to ask the
19 videographer to hand you an exhibit. And this is --
20 Spencer, this is the Notice of Deposition for the
21 265 case.

22 THE VIDEOGRAPHER: This is Spencer, the
23 videographer. What exhibit number will this be
24 marked?

25 MR. CHARKOW: This will be Exhibit 1.

1 (Exhibit 1 marked for identification)

2 MR. CHARKOW: Dr. Houh, let me know when
3 you have access to that.

4 THE WITNESS: I have it open now.

5 BY MR. CHARKOW:

6 Q. Dr. Houh, have you seen this Exhibit 1
7 before?

8 A. No.

9 Q. Dr. Houh, this is -- Exhibit 1 is the --
10 is the Patent Owner's Notice of Deposition of
11 Dr. Henry Houh, in case number IPR2021-265.

12 You understand that you are here to
13 testify today, as an expert on behalf of Hulu.
14 Correct? In that matter.

15 A. I understand that I'm testifying about the
16 declarations I submitted in this case.

17 Q. Right. In the matter that I just
18 described, or stated, on behalf of Hulu. Correct?

19 A. In the IPR2021-265.

20 Q. On behalf of Hulu?

21 A. I mean, Hulu's the petitioner in this
22 case. I submitted a declaration on behalf of the
23 petitioner.

24 Q. Okay. You could put that exhibit aside.

25 MR. CHARKOW: Spencer, if you can provide

1 to Notice of Deposition ending in "298?" And we're
2 going to mark that as Exhibit 2.

3 (Exhibit 2 marked for identification)

4 MR. CHARKOW: And, Dr. Houh, if you could
5 let me know when you receive, or have access to that
6 exhibit?

7 THE WITNESS: Okay, I have it up now.

8 BY MR. CHARKOW:

9 Q. Dr. Houh, have you seen Exhibit 2 before?

10 A. No.

11 Q. And Exhibit 2 is the Patent Owner's Notice
12 of Deposition of Dr. Henry Houh, in IPR2021-00298.
13 Dr. Houh, you understand that you're here today,
14 testifying about your declaration in the IPR 298
15 case, on behalf of Hulu. Correct?

16 A. I understand that I'm here to testify
17 about the declaration I submitted in this case for
18 the petitioner.

19 Q. Who is Hulu. Correct?

20 A. The petitioner is Hulu.

21 Q. You could put that document aside,
22 Dr. Houh.

23 MR. CHARKOW: Spencer, if you could
24 provide Dr. Houh with exhibit -- well, sorry. It's
25 the IPR ending in "304." It's the Notice of

1 Deposition. And we're going to mark that as
2 Exhibit 3.

3 (Exhibit 3 marked for identification)

4 MR. CHARKOW: And, Dr. Houh, if you could
5 just let me know when you have access to that
6 document?

7 THE WITNESS: Okay. I have it up now.

8 BY MR. CHARKOW:

9 Q. Exhibit 3 is the Patent Owner's Notice of
10 Deposition of Dr. Henry Houh, in IPR2021-00304.
11 Dr. Houh, have you seen this document before?

12 A. No. I have not.

13 Q. Dr. Houh, you understand that you're here
14 today to testify in this IPR proceeding -- the 304
15 proceeding -- on behalf of petitioner, Hulu.
16 Correct?

17 A. I understand I'm here to testify with
18 respect to the declaration I've submitted in this
19 particular case, that was for the petitioner, which
20 is Hulu.

21 Q. Thank you, Dr. Houh. You can put that
22 Exhibit aside.

23 MR. CHARKOW: Spencer, can you please
24 provide Dr. Houh with the Notice of Deposition that
25 ends in "308," please? And we'll mark that as

1 Exhibit 4.

2 (Exhibit 4 marked for identification)

3 MR. CHARKOW: And, Dr. Houh, if you could
4 just let me know when you have access to that
5 document, please?

6 THE WITNESS: Okay. I have it open now.

7 BY MR. CHARKOW:

8 Q. Exhibit 4 is a document entitled, "Patent
9 Owner's Notice of Deposition of Dr. Henry Houh, in
10 IPR2021-00308."

11 Dr. Houh, have you seen this document
12 before?

13 A. No, I have not.

14 Q. Dr. Houh, you understand you're here today
15 to testify in the 308 IPR proceedings on behalf of
16 Hulu. Correct?

17 A. I understand that I'm here today to
18 testify about the declaration I submitted in this
19 particular case, for the petitioner, which is Hulu.

20 Q. Great. So, Dr. Houh, you can put aside
21 that exhibit as well. We're done with that.

22 Dr. Houh; you understand you're a
23 testifying expert in all four of these cases? That
24 is IPR2021-265; 298; 304; and 308?

25 A. Those sound like the right numbers to me.

1 Q. And you're testifying as an expert in each
2 of those cases. Correct?

3 A. That's my understanding. I'm testifying
4 about the declarations I submitted in each of those
5 cases.

6 Q. Right. But as an expert?

7 A. My opinions in the cases are from the
8 perspective of a person of ordinary skill. But I --
9 if you would ask me if I would consider myself
10 having at least that level of expertise, I do.

11 Q. But, just to be clear, you're an expert in
12 HCT related technologies. Correct?

13 A. Generally speaking, I would agree with
14 that statement.

15 Q. And you're an expert in streaming media.
16 Correct?

17 A. I generally would agree with that
18 statement.

19 Q. And you're an expert in websites and web
20 pages. Correct?

21 A. I generally would agree with that
22 statement.

23 Q. And you prepared a declaration in each of
24 the cases that we have discussed -- the IPR cases
25 ending in 265; 298; 304; and 308. Correct?

1 A. Yeah. I submitted declarations in that
2 case, which reflect my written opinions in each of
3 those cases, respectively.

4 Q. And each of those declarations in each of
5 those four cases reflect your opinions. Correct?

6 A. You know, I believe I just said that. But
7 the written declaration reflects my opinion in each
8 of the respective cases.

9 Q. And with regards to the references -- in
10 particular, the prior art references that you
11 analyzed in each of the declarations, you studied
12 those references carefully. Correct?

13 A. I've reviewed, thoroughly, the references
14 that were used as prior art.

15 Q. Okay. And there was a number of other
16 exhibits in the various declarations. Correct?

17 A. That's correct.

18 Q. And you reviewed each one of those
19 exhibits thoroughly, as well. Correct?

20 A. Well, I've reviewed them. Some of them
21 are rather lengthy, but I reviewed them and -- to
22 support the statements. For example, in the
23 background.

24 Q. So, is it correct that at least with
25 regards to some of the exhibits to your declarations

1 that are not the analyzed prior art, that you did
2 not review the entire exhibit?

3 A. For this particular case, when I submitted
4 the declaration, I mean, it's -- again, some of the
5 documents are rather lengthy. I definitely reviewed
6 them for what -- supporting the statements that I
7 made in the background.

8 It's possible that I reviewed them fully
9 in the past, at some point. But for purposes of the
10 declaration, there may have been a few documents
11 that I -- I didn't read, cover to cover, for the
12 purposes of citing specific portions from my
13 background section.

14 Q. Do you recall which documents -- which
15 exhibits you did not read thoroughly?

16 A. Well --

17 Q. Or completely?

18 A. Again, as I said, you know, if you want to
19 show me the list of documents in each particular
20 case cite, we can go through them one by one. But I
21 just can't recall something like that off the top of
22 my head.

23 And, furthermore, many of the documents
24 that I was generally already familiar with, that, at
25 some point in the past, I, you know, likely have

1 reviewed, cover to cover.

2 But, again, for the purpose of this case,
3 there are some in there that I may not have
4 reviewed, at the time I submitted my declaration,
5 cover to cover.

6 Although I searched for, and reviewed the
7 document to find things that supported my statements
8 in the background section. Some of my statements in
9 the background section.

10 **Q. When you say you reviewed some of the**
11 **documents in the past, when would -- when would**
12 **those have been in the past? Would those have been**
13 **in the last couple of months? Or years ago?**

14 A. Well --

15 **Q. You know, for the ones where you said you**
16 **don't believe you recently reviewed, cover to cover.**

17 A. Probably years ago. Generally, I was very
18 familiar with those particular types of documents.
19 I mean, if we can go through the list one by one,
20 I'd be happy to do that.

21 But I think I recall some, for example,
22 RSCs, which I'm generally familiar with. And
23 generally familiar with what's in them. And likely,
24 at some point in the past, years ago, I likely have
25 reviewed most, or all of those documents.

1 Q. Okay. So, when was the last time you
2 reviewed the RealNetworks Form S-1, cover to cover?

3 A. So --

4 Q. The September 26th 1997.

5 A. I mean, I've -- that particular document
6 has come up in numerous cases, starting years ago.
7 And I likely flipped through it. You know, the
8 S-1s -- I'm generally familiar with S-1s. I know
9 sometimes they contain charts and statements.

10 I recall flipping through the document. I
11 may not have read every single word in that S-1, but
12 I'm generally familiar with the structure and, you
13 know, things that are important to support my
14 statements, and things which I think I could just
15 quickly scan or skip over --

16 Q. Okay. And that --

17 A. -- in an S-1.

18 Q. Okay. And, just for the record, the
19 RealNetworks Form S-1, September 26th 1997, is
20 Exhibit 1013. And then, there is Exhibit 1014. It
21 says, "Portions of e-Video by H. Peter Alesso" --
22 A-L-E-S-S-O.

23 Did you review the entire video that's
24 that exhibit?

25 A. For that particular document, I can't

1 recall, specifically.

2 Q. Okay. Exhibit 1015, entitled,
3 "Synchronized Multimedia Integration Language (SMIL)
4 1.0 Specification," dated June 15th 1998.

5 When was the last time you read that
6 specification, cover to cover?

7 A. I can't recall, off the top of my head.

8 Q. Was it before you submitted your expert
9 report? Expert declaration. I'm sorry. Expert
10 declaration.

11 A. Yeah. I mean, I've dealt with -- with
12 that format before in other cases. So, I just can't
13 recall when the first time would have been, that I
14 saw that.

15 Q. Exhibit -- so, the SMIL specification, you
16 recall reviewing it, cover to cover, in the last
17 year?

18 A. I don't have a specific recollection of
19 that in the past year.

20 Q. You don't have a recollection of doing it
21 in the past year? Or you don't have a
22 recollection -- well, yeah. Let me ask you that.

23 Do you have a recollection of looking at
24 the SMIL specification, cover to cover, in the last
25 year?

1 A. I mean, if you provided me that document,
2 I might be able give you a better answer. But just
3 off the top of my head, I don't have a specific
4 recollection of -- of reading it, word -- cover to
5 cover, in the past year.

6 Q. Okay. Do you have a -- so now, I'm
7 looking at an Exhibit 1016. Do you have a
8 recollection of reading "RealNetworks Production
9 Guide for Real Systems G2," cover to cover, within
10 the last year?

11 A. I think I'm familiar with that -- that
12 Real document, I think, from other cases. I don't
13 think I read it cover to cover, in the last year.

14 Q. Did you read that RealNetworks Production
15 Guide within the last two years, cover to cover?

16 A. I mean, I can't tell you, specifically. I
17 mean, I'm generally familiar with that document.
18 I've seen it numerous times, and it's come up
19 numerous times in various cases.

20 I just can't tell you the first time I
21 would have looked at it, or read it cover to cover.
22 But I likely read, you know, large portions, or
23 most, if not all of that document.

24 I mean, if you want to show me, there are
25 probably a few things that I can tell you that, you

1 know -- I probably didn't read every word on that
2 page.

3 Q. Right. So in the last two years, do you
4 know if you reviewed the RealNetworks Production
5 Guide, from cover to cover, in the last two years?

6 A. Yeah. Again, I don't have a specific
7 recollection in the past years of reviewing, that
8 cover to cover.

9 Q. Okay. And with regards -- going back to
10 the SMIL specification that we were previously
11 talking about, do you have any recollection of
12 reading that specification, cover to cover, in the
13 last two years?

14 A. I mean, I can't recall specific instance,
15 sitting here right now, where I've done that.

16 Q. And if I go to -- this is an exhibit,
17 1018. And this is entitled, "Microsoft, 'Ad
18 Insertion.'" And it's from an archive.

19 Do you recall that document, Dr. Houh?

20 A. I mean, it sounds familiar. There's a
21 couple of Microsoft documents. I think if you could
22 show me the document, I could remember which --
23 which Microsoft document you're referring to.

24 Q. So, Exhibit 1020, it entitled, "Cisco
25 Systems, 'The Cisco Content Delivery Network

1 **Solution for the Enterprise.'**"

2 Do you recall reviewing that document,
3 **cover to cover, within the last two years?**

4 A. Yeah. I believe I have reviewed that
5 document within the last two years, from front to
6 back.

7 **Q. What about in the last year? Do you**
8 **recall reviewing that, front to back, within the**
9 **last two years, the Cisco systems document?**

10 A. I mean, if it's the one I'm thinking
11 about, I think that I have, in the last year.

12 **Q. And then, there is an Exhibit 1021, which**
13 is "Akamai Form S-1 (Amendment No. 6, October 28th
14 1999)." Do you recall if you reviewed that
15 document, cover to cover, in the last two years?
16 Within the last two years?

17 A. I don't have a specific recollection of
18 that, sitting here right now.

19 **Q. So you don't know, one way or the other?**

20 A. Yeah. I don't know, one way or the other.
21 I can't recall the specific document you're asking
22 me about. If you were to show me the document, I
23 might remember the document.

24 But at this -- at this point, just giving
25 me the title, you know, I haven't memorized all

1 these exhibits. So, I just -- I can't recall that
2 specific one. Which one that is.

3 Q. Exhibit 1025 -- and that's entitled --
4 it's "Hua et al. 2PSM: An efficient framework for
5 searching video information in a limited-bandwidth
6 environment."

7 Do you recall reviewing that document,
8 from cover to cover, within the last two years?

9 A. I think that's possible. I just -- I
10 don't -- I don't have a specific recollection. The
11 document sounds pretty familiar to me.

12 Again, I don't have all these documents
13 memorized, so if you were to show me the document, I
14 think I have a better chance of giving you a more
15 full answer.

16 Q. All right. What about Exhibit -- so,
17 Exhibit 1026, entitled, "Computer Networking by
18 J.F. Kurose -- K-U-R-O-S-E -- and K.W. Ross?"

19 Do you recall reviewing that document
20 within the last two years, cover to cover, from
21 front to back?

22 A. Yeah. I mean, if you were showing me the
23 document, I could tell you, with respect to that
24 exhibit, how much of it I've reviewed over the last
25 two years.

1 But sitting here right now, I don't -- I
2 don't recall that, specifically.

3 Q. Okay. What about -- so this is
4 Exhibit 1031. "RFC 1945 -- Hypertext Transfer
5 Protocol Version 1.0," dated 1996?

6 Do you recall reviewing that document,
7 cover to cover, within the last two years?

8 A. I don't recall -- that document, I'm very
9 familiar with, generally. And in the last two
10 years, I likely have not read it cover to cover.
11 But I think at some prior point, I did. But I don't
12 recall exactly when that is.

13 Q. Okay. And there is -- there is also
14 Exhibit 1032. And this is "RFC 959 -- File Transfer
15 Protocol (FTP)," dated October 1985.

16 Within the last two years, did you read
17 that document, cover to cover? Front and back. The
18 entire document.

19 A. Again, this is similar to my previous
20 answer. I don't think I read it, cover to cover, in
21 the past years, but I'm familiar with it. And I'm
22 pretty sure that I have read it, cover to cover, at
23 some point. But before two years ago.

24 Q. Okay. Exhibit 1033 is U.S. Patent
25 No. 5,774,670, to Montulli -- M-O-N-T-U-L-L-I. Have

1 you reviewed that document in its entirety, from
2 cover to cover, within the last two years?

3 A. I can't recall which patent that is. Is
4 that about cookies?

5 Q. It looks like it's a reference to content
6 delivery networks. It's "Content delivery networks
7 developed by the late 1990s provided content
8 including streaming media via distributed network
9 servers."

10 And it's that exhibit.

11 A. Yeah. I think I'd have to look at that
12 document to give you a better answer. I don't
13 recall which one it is, off the top of my head.

14 Q. Okay. Exhibit 1034 is "RFC 1866 --
15 Hypertext Markup Language 2.0," dated 1995. Within
16 the last two years, have you reviewed that exhibit,
17 cover to cover? Or the entire exhibit.

18 A. Probably not. But I'm pretty familiar
19 with that, and I likely have reviewed most, or all
20 of that in the past.

21 Q. With regards to -- this is Exhibit 1035,
22 "RFC 1738 -- Uniform Resource Locators (URL)," dated
23 1994.

24 Have you reviewed that document, cover to
25 cover, in its entirety in the last two years?

1 A. Probably not in the last two years. But I
2 have, at some point in the past. That's another
3 document I'm very familiar with.

4 Q. Have you -- Exhibit 1036. And it's
5 entitled -- it's by Katherine Gallagher and
6 Jeffrey Parsons. "A Framework for Targeting Banner
7 Advertisements on the Internet," dated 1997.

8 Have you reviewed that document in its
9 entirety, in the last two years?

10 A. It's possible that I have, but I don't --
11 I don't have that specific recollection. But that
12 -- that document does sound very familiar.

13 Q. Exhibit 1037 is a "PR Newswire
14 Association, 'The New York Times on the Web Creates
15 New Online Marketing Standard; Demographic Data from
16 1.7 million Registrants Enables Precise Advertiser
17 Targeting.'" Dated July 14th 1997.

18 Have you read and reviewed that document
19 in its entirety, from cover to cover, within the
20 past two years?

21 A. I think it's likely that I did. I just
22 don't have a specific recollection of when it was.

23 Q. All right. Exhibit 1038 is by Herhold --
24 H-E-R-H-O-L-D -- S. And the title, in quotes, "Web
25 Effort Aims at Tailoring Pitches to the Right

1 People." And it's from the Philadelphia Inquirer,
2 dated February 27th 1997.

3 Within the last two years, have you
4 reviewed that document, cover to cover, in its
5 entirety?

6 A. I mean, I can't say for sure. I don't --
7 I don't recall that specific document, at the
8 moment.

9 Q. Right. Exhibit 1043 is "RFC 1580 -- Guide
10 to Network Resource Tools," dated March 1994.
11 Within the last two years, have you read that
12 document, cover to cover, in its entirety?

13 A. I don't recall, one way or the other, for
14 that document.

15 Q. Exhibit 1054 is by Philip Greenspun --
16 G-R-E-E-N-S-P-U-N. And it's entitled, "Database
17 Backed Websites: The Thinking Person's Guide to Web
18 Publishing."

19 Within the last two years, have you read
20 that document in its entirety, cover to cover?

21 A. Likely not. But I've had that book since
22 he gave it to me. So I'm sure I read portions of
23 it. I can't recall sitting down, reading the book,
24 cover to cover, in one go.

25 Q. In the last two years?

1 A. Certainly not in the last two years, if I
2 did.

3 Q. Okay. Do you believe you've read that
4 book, you know, at different times in the last two
5 years, so the total -- you read the total book in
6 the last two years? This is the Philip -- the
7 Philip Greenspun book.

8 A. Probably not. No. It probably was before
9 two years ago.

10 Q. Right. Exhibit 1055 is entitled "Database
11 Management Systems, Third Edition." Within the last
12 two years, have you read that document, in its
13 entirety, cover to cover?

14 A. I don't recall about that, specifically.
15 But if it's like a thousand-page book, or something
16 like that, I probably wouldn't have read it, cover
17 to cover.

18 Q. Okay. And, just for the record, the --
19 what I was reading off of before -- the exhibits
20 that I was reading off of before, were in the
21 petition for IPR for the '887 case. The '887 Patent
22 case, which is the IPR 308.

23 Okay. Now, I'm reading off of the IPR
24 that's for the 360 patent; which is the IPR 265 --
25 ending in 265.

1 And there is an exhibit 1019, which is,
2 "Portions of Communication and Computing for
3 Distributed Multimedia Systems by Guojuin Lu."
4 G-U-O-J-U-N. New word, L-U.

5 I think the "portions" is probably you're
6 just saying -- Hulu's just saying its portion. So
7 the book is probably, "Communication and Computing
8 for Distributed Multimedia Systems."

9 Have you read that document in its
10 entirety, cover to cover, in the last two years?

11 A. I don't have a recollection, one way or
12 the other. I mean, if you show me that document, I
13 might be able to give you a better answer. But
14 that's -- that's sitting here, as I remember right
15 now.

16 Q. Okay. And if I go to -- Exhibit 1022, is
17 entitled "The Tech, 'MIT Students Read Profit from
18 soaring Akamai IPO.'" Dated November 2nd 1999.

19 Within the last two years, have you
20 reviewed that document in its entirety, from cover
21 to cover?

22 A. If you're referring to the whole issue of
23 The Tech, I -- probably not. But if you're
24 referring to that particular article, I -- it's
25 likely.

1 Q. Okay. Exhibit 1023 is, "Resource
2 ReSerVation Protocol (RSVP) -- Version 1 Functional
3 Specification." Dated September 1997.

4 In the last two years, have you reviewed
5 that document, cover to cover, in its entirety?

6 A. I don't have a recollection of doing that.
7 I don't think that I did for that particular
8 document. But I was familiar with it, from before.

9 Q. Okay. Exhibit 1024 is entitled,
10 "Multimedia Servers" by D. Ditaram, and A. Dan. And
11 "Ditaram" is D-I-T-A-R-A-M; and then A, period, Dan.
12 Like D-A-N.

13 Do you recall that in the last two years,
14 you reviewed that document, cover to cover? In its
15 entirety.

16 A. I don't -- I don't recall that. I think
17 it's likely that I didn't, in the last two years.

18 Q. Exhibit 1039 is a document by D.P. -- as
19 in Peter -- Brutzman -- B-R-U-T-Z-M-A-N, et al.,
20 "'MBone" -- letter M, and then "bone" -- "Provides
21 Audio and Video Across the Internet,'" in IEEE
22 Computer Volume 27, No. 4." Dated April 1994.

23 Within the last two years, have you
24 reviewed that document in its entirety, from cover
25 to cover?

1 A. I mean it's possible that I have. I just
2 don't recall, sitting here right now.

3 Q. And then, there is a document,
4 Exhibit 1040, by K. Savetz -- K S-A-V-E-T-Z -- et
5 al., entitled, "MBone: "Multicasting Tomorrow's
6 Internet." And that was in the IDG Books Worldwide
7 Inc., dated 1996.

8 Within the last two years, did you review
9 that document, cover to cover, in its entirety?

10 A. I can't recall, specifically, what
11 document you're referring to. So it's hard for me
12 to answer. Unless you want to show me, then I could
13 probably give you a better answer.

14 Q. Exhibit 1041 is by S. Deering et al.,
15 entitled, "Host Groups: A Multicast Extension to
16 the Internet Protocol," in the IETF RFC 966, dated,
17 December 1985.

18 Within the last two years, have you
19 reviewed that document in its entirety, cover to
20 cover?

21 A. Probably not within the last two years,
22 but I'm generally pretty familiar with that. I
23 think I have reviewed it, cover to cover, before,
24 two years ago.

25 Q. Okay. Exhibit 1042, again by S. Deering,

1 entitled, "'Host Extensions for IP Multicasting,'
2 IETF RFC 1112 and STD0005," dated August 1989.

3 In the last two years, have you read this
4 document, or reviewed this document, in its
5 entirety, cover to cover?

6 A. I think you said "STD," as in -- the
7 letter "T." STU. But, yeah. I mean, that -- that
8 document, I'm generally familiar with. I probably
9 reviewed it before two years ago, though.

10 I don't think I would have reviewed it
11 within the last two years. Although it's possible.
12 Cover to cover, I mean. Yeah.

13 Q. Okay. Then I have Exhibit 1043, which is
14 "RFC 1580 -- Guide to Network Resource Tools," dated
15 March 1994. Within the last two years, have you
16 reviewed that document, cover to cover, in its
17 entirety?

18 A. Is that -- is that a duplicate of the one
19 you asked about? I just don't recall. I -- I can't
20 recall what I said. But that particular document, I
21 just don't recall which one it is right now.

22 Q. Okay. So RFC -- RFC 1580 -- Guide to
23 Network Resource Tools, that -- you don't have --
24 you don't recall that document right now?

25 A. I don't have -- if you want to show me the

1 document, I could probably narrow down my answer a
2 little bit. But I can't think of which one that is,
3 at the moment.

4 Q. And then, Exhibit 1056 is computer --
5 "Computer Hope, 'CDN.'" That's all I have. Do
6 you -- do you recall, within the last -- well,
7 within the last two years, have you reviewed that
8 document, cover to cover, in its entirety?

9 A. I mean, I can't recall which -- what
10 particular document that is. So, I can't -- I can't
11 say, one way or the other. But if you want to show
12 it to me, it would help me refresh my memory. I
13 could probably give you a better answer.

14 Q. Okay. 1057, Techopedia -- it's
15 "Techopedia, 'Content Delivery Network (CDN).'"
16 Dated November 27th 2012.

17 In the last -- in the last two years, have
18 you reviewed that document, cover to cover, in its
19 entirety?

20 A. You know, I can't recall which document
21 that is. If it's very short, then it's likely I may
22 have. But I -- again, I can't recall that
23 particular document. If you were to show me, I
24 think I could give you a better answer than that.

25 Q. Within the last two years, did you review

1 the Eyal Patent -- the '467 Patent that you opined
2 on, in your declarations? In its entirety, from
3 cover to cover?

4 A. Yes.

5 Q. All right. Within the -- within the last
6 two years, have you reviewed the Wiser Patent, which
7 is subject to your opinions, in its entirety, from
8 cover to cover?

9 A. Yes.

10 Q. What about in the last year?

11 A. Yes.

12 Q. And same question with Wiser -- Eyal. The
13 Eyal reference. The '467 Patent. Did you review it
14 from cover to cover, within the last year?

15 A. Yes.

16 Q. And then, there is U.S. Patent Publication
17 number, ending in seven -- publication number ending
18 in "703." And that's one of the Madison references
19 that you used in your reports.

20 Within the last year, have you reviewed
21 that reference, cover to cover, in its entirety?

22 A. There's a number of different Madisons. I
23 think if you're referring to one that I opined on,
24 then yes.

25 Q. Okay. You mean the one -- the one you

1 opined on within the context of these four IPRs that
2 we're discussing here today?

3 A. Well, there is a Madison -- I mean, if you
4 could show me, I could give you a better answer.
5 There's a number of different Madisons, including --
6 and then, other related Madisons, provisions, and
7 whatnot.

8 But, I mean, I believe I reviewed them
9 all, but I just -- I don't recall which specific one
10 this is you're asking about, off the top of my head.

11 Q. Right. So this is -- the Madison that I'm
12 talking about is the one that is the subject of your
13 opinions that you're here to testify to today. And
14 I believe there's only one Madison that you're here
15 to testify to, here today. There is no other.

16 A. There is a --

17 Q. No.

18 A. There is a Madison that's used as a
19 reference in one of the challenged grounds, or more
20 than one of the grounds. But that one, I would have
21 reviewed in full, in the past year.

22 MR. BERG: Counsel, just so we --

23 MR. CHARKOW: Yeah.

24 MR. BERG: -- are clear on the record.

25 Could you provide the whole -- the whole number for

1 that Madison reference you're referring to?

2 MR. CHARKOW: Yeah. Sure.

3 MR. BERG: I don't think -- one of the
4 Madison references, I don't think is an exhibit in
5 any of the IPRs at this -- that are at issue here.
6 So I just want to make sure that we're on the same
7 page.

8 MR. CHARKOW: Right. So one of the
9 Madison references is U.S. Patent Publication
10 No. 2004/0015703A1. That's one of them. And then
11 there's another Madison reference, which is
12 U.S. Patent Publication No. 2004/0083273A1.

13 That's another Madison. And --

14 MR. BERG: Okay. So I could -- I could be
15 wrong. I'm double-checking now. But I don't
16 believe that first one that you listed is actually
17 an exhibit in the IPRs for today.

18 MR. CHARKOW: It's listed as an Exhibit in
19 the IPR petition for the '360 Patent. Exhibit 1007.

20 THE WITNESS: Well, what's the exhibit
21 number?

22 MR. BERG: Okay. Yeah. Yeah. You're
23 correct about that. Thank you.

24 THE WITNESS: What's the exhibit number
25 for that?

1 MR. CHARKOW: So, the exhibit number is --
2 sorry. We're not -- I'm not marking anything. I'm
3 just going through a document that has these exhibit
4 numbers. So --

5 THE WITNESS: No. I know, but --

6 MR. CHARKOW: Yeah.

7 THE WITNESS: I know you're not marking
8 them. I'm asking you, you know -- some of these --
9 you referred to all -- a lot of the other ones by
10 exhibit number, like "1017;" "104;" whatever.

11 But the specific Madison. Doesn't that
12 have an exhibit number as well?

13 MR. CHARKOW: Yeah. I just said it.
14 1007.

15 THE WITNESS: 1007.

16 MR. CHARKOW: And that's the U.S. Patent
17 Publication number, ending in "703," which Hulu
18 refers to as the "Madison 703."

19 A. Well, I would have reviewed it in the past
20 year, but I believe a lot of the challenges are
21 based, I believe, on Exhibit 1053, which is another
22 Madison. Or 105-something.

23 Q. Yeah. There is a Madison 1051, which is
24 U.S. Patent Publication No. 2004/0083273. That's
25 another Madison that's listed.

1 A. Yeah. I mean, there's a number of
2 Madisons. So it's kind of confusing. But if you
3 were to show me which -- I mean, you know, I believe
4 I've reviewed all the Madisons. But, you know,
5 again, it's hard to keep them all straight.

6 Q. Well, let me ask you this question. If
7 there's only these two Madisons, have you reviewed
8 both those Madison references in their entirety,
9 cover to cover?

10 A. If 1051 is the one that the challenged
11 grounds are based on, then I have reviewed that.
12 And I have reviewed 107 in the last year.

13 Q. Okay. And what about the -- there's a
14 number of provisional applications. So, with
15 regards to the Madison that ends in "703," which is
16 Exhibit 1007 -- oh, no. I take that back. Just
17 give me one minute.

18 All right. So, with regards to the
19 Madison 273, that's the subject of your opinion in
20 these cases, there was a provisional application,
21 along with Madison.

22 Did you review that provisional
23 application, from which Madison claims priority,
24 cover to cover, within the last year?

25 A. Yes.

1 Q. Okay. So, U.S. Patent -- so, U.S. Patent
2 No. 6,760,916 -- this is the Holtz reference that
3 you opined on. Have you read that reference, cover
4 to cover, within the last year, in its entirety.

5 A. Yes. I believe I have.

6 Q. All right. You're aware that the patents
7 that you opined on in this case, claim priority to a
8 provisional application. Correct?

9 A. I believe -- well, I believe one of
10 them -- one of them -- so, in this case, you're
11 saying that the patent -- the challenged claims --
12 the patents, claim priority to a provisional?

13 Q. Yes.

14 A. You know, I'm -- I believe I am aware
15 that, you know, the face of the patent shows --
16 shows a number of documents, including a
17 provisional.

18 So, I believe that's true.

19 Q. Okay. And do you -- did you review that
20 provisional application, cover to cover? In the
21 last year? In its entirety?

22 A. I mean, it's possible I have. I don't
23 recall, specifically, which -- which particular
24 document that was.

25 Q. Okay. There's another reference that

1 you -- I don't think I did this one already, but
2 there was another reference that you relied on to
3 Wiser.

4 And this was U.S. Patent No. 6,385,596.
5 Have you reviewed that reference within the last
6 year, cover to cover?

7 A. Yes.

8 Q. Okay. There is another reference that you
9 relied on to Chang et al., which is U.S. Patent
10 No. 6,715,126. Have you read that -- reviewed that
11 patent, cover to cover, within the last year?

12 A. Yes. I believe I have.

13 Q. Is there a reason you think you may not
14 have?

15 A. No. It's just, I don't -- because it's
16 part of the case, I generally review all of the
17 documents that I rely on, cover to cover.

18 Q. All right. So -- so, in Exhibit --
19 Exhibit 1017 -- and this is a document referred to
20 as, "All about ASX files." Do you recall that
21 document?

22 A. Yes.

23 Q. Okay. And have you reviewed that
24 document, cover to cover, within the last year?

25 A. Yes.

1 Q. Okay. So, Exhibit 1044, it's to Wolfe et
2 al.. Wolfe is spelt W-O-L-F-E. U.S. Patent
3 No. 5,931,901.

4 Have you reviewed that document, cover to
5 cover, within the last year, in its entirety?

6 A. Yes.

7 Q. Okay. Another exhibit is 1045. And this
8 is to Angles -- A-N-G-L-E-S. U.S. Patent
9 No. 6,385,592.

10 Have you reviewed this document, cover to
11 cover, in its entirety, within the last year?

12 A. You know, that document, I'm familiar with
13 from the past. So, I have reviewed it, cover to
14 cover.

15 I don't recall if I did so, again, within
16 the last year.

17 Q. What about within the last two years?

18 A. Probably in the last two years. Yeah.

19 Q. Do you know if you reviewed the -- the
20 Angles Patent in preparing your declaration, and you
21 reviewed it, cover to cover, at that time?

22 A. Well --

23 Q. Your declaration --

24 A. Yeah. I don't -- I don't recall if I did,
25 but I had in the past. So I was generally quite

1 familiar with it.

2 So, I don't recall the last time I read
3 it, cover to cover. But again, I have. It's come
4 up in a number of cases that I worked on. And I'm
5 sure that I have done that in the past.

6 Q. Okay. Not in -- not in preparing your
7 expert declarations in these four cases. Correct?
8 You haven't read it, cover to cover, in that -- in
9 that context, in preparation of your declarations?

10 A. I mean, it's possible I didn't. I don't
11 have a specific recollection. But again, I was
12 generally familiar with -- with that particular
13 reference already.

14 Q. Well -- well, let me ask you this. I
15 mean, it's -- it's 26 pages long. Do you -- I mean,
16 you said in previous depositions, you don't have a
17 photographic memory.

18 I'm assuming you don't -- you know, you
19 don't have full recollection of every word in a
20 26-page patent. Correct?

21 A. Yeah. That's true. I certainly wouldn't.

22 Q. Okay. And I have the same -- let me ask
23 you a question, Dr. Houh. Any of the documents that
24 you said that you reviewed in the past, but you
25 don't believe you reviewed in the last -- in the

1 past two years, and that you're familiar with those
2 documents.

3 Again, you don't have a photographic
4 memory. You don't remember all the various portions
5 of those documents. Correct?

6 A. I think I've said that, numerous times.
7 But yeah. I don't -- I don't know, word for word,
8 the full document from memory. Any of those.

9 Q. So, even though you're -- sorry. You said
10 any of those? Or --

11 A. I mean, I -- there's probably not a
12 document in this case where I remember, word for
13 word, of just from my -- from memory.

14 Q. Okay. So you could have put a document in
15 your report that you hadn't reviewed in the last two
16 years, that you do not remember every word of that
17 document. Correct?

18 A. Well, I mean -- I mean, I don't know
19 anyone who probably could do that. But there are
20 human limits. And I think maybe there are people
21 that are gifted enough to do remember every word of
22 something they cite to, that they've seen in the
23 past.

24 I've yet to meet that person.

25 Q. Okay. But it's not you?

1 A. It's not me.

2 Q. So, Exhibit 1053 is a reference by
3 McCanne. And it's U.S. Patent No. 6,785,704. In
4 the last year, have you reviewed that document,
5 cover to cover?

6 A. Cane? I can't -- is that something I
7 relied on as a -- as a reference in the --

8 Q. Yeah.

9 A. I can't remember which one it is now.

10 Q. Yeah. The name --

11 A. I can't remember the document. Oh,
12 McCanne.

13 Q. Okay.

14 A. M-C-C-A-N-N-E. Okay. Yes. Yes, I have.
15 It didn't pronounce it that way. I didn't recognize
16 your pronunciation.

17 Q. Sorry about that. New Yorker. Okay.
18 But -- so, this is to McCanne, you said?

19 A. M-C-C-A-N-N-E? I --

20 Q. Yes.

21 A. Yeah. Yeah; McCanne. I definitely -- I
22 definitely have reviewed that in the last year. And
23 it's just that I --

24 Q. From cover to cover?

25 A. I heard "McCain," and I'm thinking

1 M-C-C-A-I-N. And I didn't recognize that.

2 Q. And you reviewed the McCanne reference,
3 '704 Patent, cover to cover, within the last year,
4 in its entirety. Correct?

5 A. Yes.

6 Q. And then, there is another reference to
7 Goldszmidt -- G-O-L-D-S-Z-M-I-D-T -- et al.
8 U.S. Patent No. 6,195,680.

9 Have you reviewed this document in its
10 entirety, cover to cover, within the last year?

11 A. Yes.

12 Q. All right. Dr. Houh, you're not an
13 attorney. Correct?

14 A. That's correct.

15 Q. And you're not a patent agent?

16 A. I'm not a patent agent.

17 Q. And you're not an expert in law, or patent
18 law, for that matter?

19 A. No. I'm not an expert in the law or
20 patent law.

21 Q. Okay. So, your understanding of the legal
22 standards to apply to this case is based solely on
23 the various legal standards sections set forth in
24 your various declarations. Correct?

25 A. I mean, that's generally true, as

1 applicable to the particular declarations.

2 Q. When you say it's generally true, what do
3 you mean?

4 A. Well, I mean, there are probably other
5 understandings of law that I don't think that are
6 written up, that don't apply to this -- these cases.
7 So, they wouldn't have been those legal sections.

8 But, for these particular cases, my
9 understanding of the law is -- is in the relevant
10 legal section -- legal -- legal sections in the
11 respective declarations.

12 Q. Right. So, if there is -- this section of
13 law that you put in your declarations, in these four
14 cases, that -- those standards of law are the only
15 thing you relied on for these particular
16 declarations. Correct?

17 A. Well, I hope that I would have -- I mean,
18 generally -- what's in my declaration should be my
19 understanding of the law, and what I would have
20 relied on.

21 Q. Okay. And your understanding with regard
22 to obviousness -- the legal standard for
23 obviousness -- whatever was set forth in your
24 declarations, that's the standard you used for your
25 analysis. Correct?

1 A. I mean, generally, that's true. I mean,
2 sometimes -- sometimes other -- like case law, I
3 refer to. And I don't know that I would have
4 reproduced those entire documents there.

5 But the general understanding is set forth
6 in the legal section, as I understood it from -- you
7 know, from the attorneys.

8 **Q. Right. But that -- the standards that's**
9 **set forth in your declarations is the standard that**
10 **you applied in your declarations, with regard to**
11 **obviousness? Correct?**

12 A. It would have been. That's correct.

13 MR. CHARKOW: So, why don't we take a
14 break? I just realized we've been going over an
15 hour now. So maybe it's a good time to take a
16 break.

17 Does that work for everybody?

18 MR. BERG: Yeah. That sounds good to me.

19 THE WITNESS: Sure. So --

20 MR. CHARKOW: Okay.

21 THE VIDEOGRAPHER: Okay. The time is
22 11:58 a.m.. We are off the record.

23 (Short break.)

24 THE VIDEOGRAPHER: Okay. We are back on
25 the record, and the time is 12:11 p.m..

1 BY MR. CHARKOW:

2 Q. Microsoft Windows Media Player was
3 publicly available and being used before July of
4 2000. Correct?

5 A. I believe that's generally correct.

6 Q. And Microsoft Windows Media Player was
7 publicly available and being used before
8 December 1999. Correct?

9 A. I believe that's true.

10 Q. Windows Media Player was publicly
11 available and being used by the mid-1990s. Correct?

12 A. I mean, that sounds about right. I don't
13 know -- I don't recall the exact date. Could have
14 been even earlier than that, but I don't recall for
15 sure.

16 Q. Well, latest, by the mid-1990s. Correct?

17 A. That sounds generally correct.

18 Q. In the 2000, 2001 time frame, not all
19 devices using Windows Media Player would receive an
20 ASX file. Correct?

21 A. I mean, I think there's a lot of
22 flexibility in Windows Media Player, as to what it's
23 receiving. So, I think it -- I think it's probably
24 the case that -- that there are ways to run Windows
25 Media Player without, you know, for example, by

1 opening an audio file directly, using Windows Media
2 Player.

3 Q. So, in the 2000, 2001 time frame, not all
4 devices using Windows Media Player would receive an
5 ASX file. Correct?

6 A. So, as I said, there's ways to use Windows
7 Media Player, by simply opening up audio files, like
8 one audio file directly. I believe that's totally
9 possible with Windows Media Player.

10 In which case, for that -- that instance
11 of playing the program, an ASX file -- ASX file
12 would not necessarily have been involved. But it's
13 possible to open an ASX file that has references
14 one -- one -- one --

15 Q. Dr. Houh, I'm going to strike that
16 response as -- I'm going to move to strike as
17 non-responsive. I asked you a very specific
18 question. Please listen to the question.

19 And I'm asking about -- I'm asking a
20 question about all devices. I just want an answer,
21 yes or no.

22 In the 2000, 2021 time frame, not all
23 devices using Windows Media Player would receive an
24 ASX file. Correct, or not correct?

25 MR. BERG: Objection to form.

1 A. I mean, I think it depends. Are you
2 thinking of specific devices? Can you be more
3 specific about which devices? Are you saying all
4 devices in the world, at the time?

5 **Q. Yes. All devices using Windows Media**
6 **Player.**

7 A. Was that a question?

8 **Q. Yeah. You asked me a question. And I**
9 **gave you an answer.**

10 A. Well, can you -- can you -- can you, you
11 know, repeat your question with that -- with that in
12 the question?

13 **Q. In the 2000, 2001 time frame, not all**
14 **devices that used Windows Media Player, in the**
15 **entire world, would receive an ASX file?**

16 MR. BERG: Objection to form.

17 A. Well, as I said before, you know, I think
18 it depends -- you know, if a particular user would
19 only use it to open one audio file at the time, and
20 play that audio file, then it's possible -- and
21 never -- never does otherwise.

22 You know, again, I can't give you a
23 definitive answer, because it's probabilistic. And
24 I could say probably, that there are likely people
25 who used Windows Media Player in that way. But, I

1 don't have a specific example.

2 But, I would say, probabilistically,
3 that's likely that some people used Windows Media
4 Player in a way that avoided the external opening of
5 an ASX file.

6 **Q. In other words, those people were using a**
7 **Windows Media Player without receiving an ASX file.**
8 **Correct?**

9 MR. BERG: Objection to form.

10 A. I mean, are you thinking of specific
11 "those people?" Or the hypothetical "those people"
12 that are probabilistically likely, that I -- I mean,
13 as I said, I don't know a specific -- that person,
14 that you're referring to.

15 It's only, you know, a hypothetical
16 probabilistic person.

17 **Q. Well, Dr. Houh, you're an expert in the**
18 **field of streaming media. Correct? I mean, you**
19 **testified to that before?**

20 A. Yeah. I mean, I don't like to toot my own
21 horn, generally, but, I mean, I would generally
22 agree to that.

23 **Q. Okay. So, and you were familiar with**
24 **Windows Media Player being used in the 2000, 2001**
25 **time frame. Correct?**

1 A. Yeah. I would say I generally am
2 familiar.

3 Q. All right. So, let me ask you in another
4 way.

5 Were all devices that used Windows Media
6 Player in the 2000, 2001 time frame, receiving ASX
7 files?

8 A. I mean, so, you know, in order to
9 accurately answer that question, I'd have to go and
10 inventory ever single computer with Windows Media
11 Player, and then examine the behavior of every
12 single one.

13 I think that's pretty much impossible to
14 do. But I could answer probabilistically, knowing
15 some features of Windows Media Player, as I said
16 before, that it does have a capability to simply
17 open up and direct -- directly open a -- an audio
18 file without -- without requiring that it open --
19 also use an ASX file to open that audio file.

20 But then, that -- that is just one
21 instance. And if the person -- if the hypothetical
22 person, or probabilistic person, never ever used
23 Windows Media Player in any other way, then -- and
24 then, that person would have avoided the use of --
25 of an ASX file in their use of Windows Media Player.

1 But, again, I mean, that's something -- to
2 actually answer accurately, I would have to -- at
3 least find some user that did that, or -- and that
4 could take a while to actually -- to find some user
5 who only used it in that way.

6 Q. Okay. Well, Dr. Houh, did you use them in
7 that way, during that time period? In meaning that,
8 did you use -- were you aware that you were using a
9 Windows Media Player in the 2000, 2001 time frame,
10 where you did not use an ASX file? Your computer
11 did not use an ASX file.

12 A. I mean -- I mean, I have -- I have used
13 Windows Media Player with respect to playlists
14 before. But, you know, I don't recall, offhand,
15 whether it was specifically used in an ASX file or
16 some other file format. I just -- I don't recall.

17 But, it had the capability. And, you
18 know, if I -- putting myself back in that time
19 frame, you know, I'm aware of the capabilities in
20 that time frame. But I don't have specific
21 instances that I can recall, where it was -- it was
22 one way.

23 I know, for sure, that I used Windows
24 Media Player to open an audio file directly. And
25 that was the case. So, I know that was the case.

1 But I can't say that that's the only way I ever used
2 it, because I used Windows Media Player in multiple
3 different ways.

4 And, of course, I can only -- I can only
5 give some estimates about what other people did,
6 because I actually, you know, haven't examined the
7 behavior of every person, and every device in the
8 world, that used Windows Media Player, to gauge or
9 log exactly how they used it over time.

10 Q. Right. Well, Dr. Houh, I'm not asking you
11 to -- while, I mean, it's kind of, not a reasonable
12 response to my answer, when I asked you, as an
13 expert in the field, if you -- you know, if you're
14 aware that Windows Media Players were being used
15 without ASX files. Or some did, or some didn't use
16 ASX files.

17 And for you to say you have to analyze
18 every product -- you know, every -- every customer's
19 device in the world, I'm asking you as an expert,
20 you have a general understanding of how Windows
21 Media was being used at the time.

22 So let me ask you this. You have a
23 general understanding, in the 2000, 2001 time frame,
24 of how Windows Media Player was being used.
25 Correct?

1 A. I have an understanding of how it could be
2 used. And, certainly, I think when you ask such a
3 broad question like that, without providing any more
4 specifics about which users, I can only answer
5 probabilistically, in terms of, you know, the
6 likelihood that that was -- that was true.

7 And, you know, it still is -- while it's
8 possible that it could be -- that a particular user
9 could, you know, use their Windows Media Player over
10 the life of their use of that computer, and avoid
11 using ASX files, I -- it's hard to gauge the
12 probability of that.

13 I certainly am aware that it's possible to
14 use Windows Media Player without opening an ASX file
15 directly. That is, by opening an audio file
16 directly. And I'm aware of that use case.

17 And now, you're asking me about every
18 other user, and every other computer, and all of
19 them. And I could only really answer
20 probabilistically.

21 You know, I don't have direct --

22 **Q. Right. So let's talk about --**

23 A. -- to every user in the world --

24 **Q. Right.**

25 A. -- and all the use cases. And I don't

1 know anyone that has, frankly -- that has that
2 knowledge.

3 Q. Right. So let's talk about the specific
4 use case that you referred to. That opening a media
5 file directly, using the Windows Media Player. You
6 said you, yourself, in that time frame, did that.

7 You opened -- you used the Windows Media
8 Player to open a media file directly. Correct?

9 A. Yeah. I mean -- only based on my
10 recollection. I don't have a direct memory, in that
11 time frame. I know that I used media player over --
12 over the years.

13 And I've opened media files and, you know,
14 audio files, typically by double-clicking the audio
15 file which is associated with Windows Media Player.
16 And then, Windows Media Player would open and play
17 the file.

18 I just can't recall if that's the only
19 thing I ever did. I think it's not the only thing I
20 ever did. I did have playlists. And then --

21 Q. Right. I didn't ask you for that,
22 Dr. Houh. I'm sorry. I didn't ask you about
23 playlist. I asked you very specifically, about the
24 specific use case that you mentioned.

25 And what we're talking about is opening a

1 media file directly. Yes or no -- strike that.

2 In the last 20 years, have you opened
3 media files directly, using Windows Media Player?

4 A. You know, probably, in almost -- most
5 likely, or almost certainly, I did in the last 20
6 years. I just don't have a direct recollection of a
7 specific instance. But I would say probably yes.

8 Q. Okay. And within the last 20 years, do
9 you think that others, based on your knowledge of
10 Windows Media Player and how it's used -- do you
11 believe others used Windows Media Player to open
12 media files, directly?

13 A. I would say most --

14 MR. BERG: Objection to form.

15 A. I would say, most likely, yes. You know,
16 almost -- almost with certainty. But it's -- again,
17 it's probabilistic.

18 Q. All right.

19 A. I can't answer the question, because I
20 don't have that direct knowledge. But I can -- I
21 can gauge the likelihood, and I think it's very,
22 very highly likely that that's the case, that at
23 least one user directly opened an audio file, using
24 Windows Media Player.

25 Q. Well, at least one? Or you believe,

1 probabilistically, many users used the Windows Media
2 Player in the last 20 years, to open media files
3 directly?

4 MR. BERG: Objection to form.

5 A. I mean, you know, the "probably" gets --
6 gets higher, the more users are included in that
7 probabilistic result. But, again, I don't have
8 direct knowledge of the -- what every possible user
9 of Windows Media Player is doing.

10 I'm only basing it on my knowledge of
11 Windows Media Player; its features; what happens
12 in -- in my experience; and some other factors.
13 But, basically, based on that, I'd say it's highly
14 likely that some people, at least once, have opened
15 an audio file directly, and played it using Windows
16 Media Player.

17 But the question you asked is slightly
18 different. Is that if they -- if they, through the
19 life of their use of Windows Media Player, in a
20 specific time frame, you know, is that the only way
21 they used it. And that's much harder to --

22 Q. I didn't say -- Dr. Houh, I never said
23 that. I never said "over the life." I just said
24 within the last 20 years, people have used Windows
25 Media Player to play media files directly, without

1 **using ASX files. Correct?**

2 A. You know, I mean, I think at least one
3 person has. And I think I probably have. So --
4 but, again, I don't have direct knowledge -- I don't
5 have a direct recollection -- direct recollection of
6 doing that, in the last 20 years.

7 **Q. Right. So, then --**

8 A. It probably -- and if people, like, have
9 probably done that at least once, and it's at least
10 one other person as well.

11 **Q. Okay.**

12 A. So, I mean, I think --

13 **Q. Okay. So you said probabilistically --**
14 **you said probabilistically, it depends on the**
15 **size of the -- the number of -- you know, the number**
16 **of people out there.**

17 You understand that millions and millions
18 of people use -- probably more than that; but
19 millions and millions of people use Windows Media
20 Player. Correct? Every year.

21 MR. BERG: Objection.

22 A. I mean, I -- it -- I mean, I don't have
23 direct knowledge of the numbers of people. But I
24 think, you know, it's probably likely, given my
25 knowledge of, you know, how to obtain Windows Media

1 Player. And -- and that it's -- I believe, still
2 default installed in most basic Windows systems.

3 I just haven't had -- I'm not a -- I'm
4 not, today, a regular user of Windows Media Player.
5 But I have used it in the past. So, I mean, it's
6 hard for me to say that it's still millions today.
7 I just can't say, one way or the other.

8 **Q. So, sitting here today, as an expert in**
9 **this industry, in this particular field of streaming**
10 **media, you have no clue whether there's millions of**
11 **people that use Windows Media Player every year, for**
12 **the last 20 years?**

13 A. Right.

14 **Q. You have no opinion, one way or the other,**
15 **on that. Is that what you're saying?**

16 MR. BERG: Objection to form.

17 A. I mean, it's probably pretty likely that
18 it's at least millions of people. But again, I
19 mean, I'm not -- I don't have privy to actual
20 numbers, and I haven't seen actual numbers or
21 reports.

22 And even reports that say there are
23 millions of people, they are based on estimates and
24 probabilistic sampling, and whatnot, as well.

25 So -- so, I mean, you're asking me to say,

1 with absolute certainty, which -- which I don't know
2 that anyone, except maybe, you know, people who can
3 directly access all the data of all those machines
4 can.

5 But, you know, it's -- I'm not denying
6 that it's -- that it's possible that it's still
7 millions of users today. But you asked about over
8 the 20 years, each year; you asked if it's millions
9 of users each year, over those 20 years?

10 I mean, I don't have direct knowledge of
11 that. I can only give you a probabilistic answer.

12 Q. Right. But that -- you said you're pretty
13 certain that at least one person used Windows Media
14 Player to play a media file directly, in the last 20
15 years.

16 Given the fact that you believe that it's
17 likely that there's millions of people, if you --
18 even if you just add it up across the last 20 years,
19 that have used Windows Media Player, you would have
20 to admit that it's more than one person used Windows
21 Media Player to play media files directly. Correct?

22 A. Yeah. But, actually, when you describe
23 adding up, you can't add probabilities, in that
24 instance. There's a way to do the probabilistics
25 analysis. It's not simply saying, you know, there

1 is an "X" percent chance that one user uses it.
2 That's "N" users. There's "N" times "X" is a
3 probability.

4 That's not correct -- that's incorrect
5 probabilistic analysis.

6 Q. Okay. So let's do it year by year. If
7 there's -- let's take one year. Let's take in 2001.
8 Do you have any reason to believe that there weren't
9 at least a million people using Windows Media
10 Player, in the year 2001?

11 MR. BERG: Objection to form.

12 A. Yeah. I -- again, I haven't seen the
13 numbers. But just based on my experience and -- I
14 don't doubt that there were at least a million
15 Windows Media Player users.

16 Q. So, out of all those Windows Media Player
17 users, based on your statistical analysis that you
18 keep talking about, how many users do you believe
19 were -- well, let me ask you this question.

20 Would there be more than one user, out of
21 that million-plus users, that would use Windows
22 Media Player to play media files directly?

23 A. Well, I would say that's quite likely, if
24 not near certain, that at least one person, at least
25 one time, opened a media audio file with Windows

1 Media Player.

2 Q. Right. And do you believe that thousands
3 of people may have done that?

4 A. I think it's -- it's quite likely --

5 MR. BERG: Objection to form.

6 THE WITNESS: -- that thousands of people
7 would have done that.

8 MR. BERG: Objection to form.

9 BY MR. CHARKOW:

10 Q. Do you think that tens of thousands -- do
11 you think that tens of thousands of people would
12 have done that, in the 2001 time frame?

13 MR. BERG: Objection to form.

14 A. Yeah. I mean, again, you know, I don't
15 have direct knowledge of tens of thousands. But
16 based on my -- my own use; and knowing that
17 sometimes, when Media Player is associated with
18 particular audio file types; and that when a user
19 double-clicks a particular file type that is
20 associated with Windows Media Player, that is an
21 audio type file, that Media Player -- Windows Media
22 Player would open, and then just start playing that
23 file.

24 That's -- that's my experience and my
25 understanding. And I think it's quite likely that

1 many people -- you know, tens of thousands of people
2 had those settings.

3 Again, I don't have direct knowledge. I
4 just think that, you know, based on my experience,
5 and the probability is almost near certain that it's
6 probably at least 10,000 people.

7 But, again, you know, you're asking for
8 absolute certainty answers. And I'm just saying
9 that -- I'm telling you what my opinion's based on.
10 That it's more probabilistic.

11 And I don't know that -- you know, I don't
12 have access to the data that could give me -- that
13 could -- where I could make a certain determination.

14 But I think that probabilistically, at
15 least for tens of thousands of users, it's
16 probably -- it's probably near certain that at least
17 10,000 users, each at least once, double-clicked an
18 audio file and had a play with Windows Media Player.

19 **Q. What about hundreds of thousands of users?**

20 A. Again, I think, you know, with hundreds of
21 thousands, I think it's probably pretty likely as
22 well. I just -- yeah. I mean, with hundreds of
23 thousands of users, I think that sounds reasonable
24 to say that it's still, you know, probably near
25 certain, probabilistically.

1 **Q. Millions of users?**

2 MR. BERG: Objection to form.

3 A. I mean, I think -- I think -- you know, I
4 think I'd have to think about that and pull numbers
5 for you, starting around this level.

6 Because it depends on the market share.
7 How many people installed some other player that
8 took over the file associations. You know, the
9 market share of different players.

10 And I -- you know, probably at that level,
11 I'd probably have to do some research to give you a
12 better, more accurate answer.

13 **Q. Okay. In the 2000, 2001 time frame, just**
14 **because a computer is using Windows Media Player**
15 **does not mean that the computer is using an ASX**
16 **file. Correct?**

17 MR. BERG: Objection to form.

18 A. Well, I mean -- I mean, certainly, Windows
19 Media Player has had the capability to open those
20 files and were used.

21 But just telling me that a user is using
22 Windows Media Player, without saying how a
23 particular user is using Windows Media Player, for
24 example, that they could just be double-clicking a
25 file that's associated with Windows Media Player,

1 and that file is an audio file, and that file just
2 plays.

3 I mean, I think you'd have to, you know,
4 be a little more specific as to what the users are
5 doing in their actions.

6 Q. Dr. Houh, I just asked a simple question.
7 Regardless of what the user is doing. So, I want
8 you to assume that it doesn't make a difference how
9 they are using. Just assume that the users are
10 using a Windows Media Player.

11 In the 2000, 2001 time frame, just because
12 a computer is using Windows Media Player, does not
13 mean that that computer is using an ASX file.
14 Correct? Or incorrect?

15 MR. BERG: Objection to form.

16 A. Well, I mean -- I mean, I think that same
17 statement could be applied to any feature of -- of
18 Windows Media Player.

19 So, the feature I just told you, where you
20 double-click and Windows Media Player plays that
21 audio file, I think it's -- it's true for all
22 features.

23 So, it's not specific to whether it's
24 using ASX files. It's because Windows Media Player
25 can be used in many different ways, that many of

1 these features, just because you tell me you're
2 using Windows Media Player, doesn't necessarily mean
3 that -- that any particular feature of Windows Media
4 Player is being used.

5 So, I think it's just as equally true for
6 the question you asked, as for the case where a
7 user -- users are using, you know, other features of
8 Windows Media Player.

9 **Q. Okay. I'm just curious about the -- I'm**
10 **not curious about any feature, Dr. Houh. I'm just**
11 **curious about ASX files. So, take every other**
12 **feature out of my answer. I'm not asking about any**
13 **other feature.**

14 Please answer the question of, in the
15 2000, 2001 time frame, just because a computer is
16 using Windows Media Player, does not mean that
17 computer is using an AS file --

18 MR. BERG: Objection.

19 A. I think I --

20 **Q. ASX file. Correct?**

21 A. I think I already gave you an example of
22 this, where a user that has an audio file that's
23 associated with Windows Media Player, and they
24 double-click that audio file and it plays Windows
25 Media Player. I think I already said --

1 Q. Dr. Houh -- that's not --

2 A. -- that user is not using the --

3 Q. That's not my question --

4 A. -- ASX feature of Windows Media Player for
5 that particular instance of their use of Windows
6 Media Player.

7 Q. Right. And, Dr. Houh, I would appreciate
8 it if you answer my question. It's a
9 straightforward question. It's really a "yes" or
10 "no" question.

11 In the 2000 and -- in the 2000, 2001 time
12 frame, just because a computer is using a Windows
13 Media Player does not mean that that computer is
14 using an ASX file?

15 Yes or no? Can you answer yes or no?

16 A. I mean, I --

17 MR. BERG: Objection to form.

18 A. I think I just gave you an example,
19 multiple times, of just --

20 Q. I don't want --

21 A. -- what I was talking about.

22 Q. -- an example, Dr. Houh.

23 A. Which is -- which is, in that particular
24 case --

25 Q. I just want an answer --

1 A. -- that instance use of Windows Media
2 Player, was not using ASX files. So I am not sure
3 why -- you know -- I'm trying to explain my answer.
4 And that's the explanation to my answer.

5 Q. Can you just answer my question with a
6 "yes" or "no"? And then explain your answer? I
7 just want to know if I'm saying a correct or
8 incorrect statement, Dr. Houh. That's all I want to
9 know.

10 So I'll ask it again. I'm happy for you
11 to expand upon your answer. I'd just like -- either
12 it's correct what I'm saying, or it's incorrect. If
13 it's correct what I'm saying, you know, please
14 expand. That's fine.

15 I just want to know, correct or incorrect.
16 And then you can expand upon it, all you want. In
17 the 2000 --

18 MR. BERG: Counsel, the witness can answer
19 the question as he sees --

20 MR. CHARKOW: No speaking objections. I'm
21 sorry. There's no speaking objections. That, I'm
22 not going to accept. You have "objection, form," go
23 ahead. You are definitely trying to lead the
24 witness here. Okay?

25 MR. BERG: No. Counsel, you're being

1 argumentative and trying to prevent the witness from
2 answering the question --

3 MR. CHARKOW: Sorry --

4 MR. BERG: -- which he's done multiple
5 times.

6 MR. CHARKOW: Counsel, objection to form,
7 and that's it. Okay? I'll call -- this, I will
8 call the Board on. Because you are way out of line.
9 So let's just continue.

10 BY MR. CHARKOW:

11 Q. In the 2000, 2001 time frame, just because
12 a computer is using Windows Media Player does not
13 mean that the computer is using an ASX file.
14 Correct? Or incorrect?

15 And then explain your answer after that,
16 please.

17 A. In the case -- in the case that I reviewed
18 multiple times, where, in that just one instance of
19 use, that the user double-clicks an ASX file, and --
20 and it's associated with Windows Media Player, and
21 it opens and it plays that Windows Media file.

22 For that one instance, it wasn't -- it
23 isn't using an ASX file. But, again, it's how much
24 harder to say for during that entire period, whether
25 that user might use ASX files. So, again, it's

1 probabilistic.

2 If you're asking for one instance of use,
3 I've already gave you -- given you at least one
4 instance of use, where a user doesn't, for that one
5 instance of use, use an ASX file.

6 But if you're asking for the behavior of
7 that user over -- over a period of a year, or two
8 years, in that time frame, and, you know, I think
9 that depends on other factors. So, it really
10 depends.

11 But at least for one instance of use, I've
12 already given the example where a particular user
13 isn't using the ASX file feature of Windows Media
14 Player.

15 **Q. All right. Are there any other instances**
16 **when a user is not using an ASX file, when using a**
17 **Windows Media Player? Other than the one example**
18 **you just gave?**

19 A. I believe a Windows Media Player has the
20 capability to scan your drive to find all the media.
21 Although I can't say exactly when I think that
22 feature was available in Windows Media Player. But
23 to kind of build up a library.

24 And if it's -- if it's -- if Windows Media
25 Player is scanning, I don't believe it's -- that the

1 user would be explicitly using some sort of ASX
2 file.

3 I think if the user simply got Windows
4 Media Player open, and is maybe clicking around and
5 changing the settings; doing various user interface
6 features, that don't involve an ASX file, then I
7 think there are numerous features that Windows Media
8 Player provides, that don't necessarily depend on
9 ASX files.

10 **Q. Any other examples?**

11 A. You know, I think Windows Media Player has
12 the capability to play video files as well. So I
13 think the same thing would apply to if the video
14 file association was with Windows Media Player, and
15 the user double-clicked a video file.

16 I think that's another case where for that
17 particular use instance, that one time, a user
18 wouldn't -- wouldn't have been using an ASX file.

19 **Q. Any other examples?**

20 A. I think Windows Media Player had the
21 capability to pull media from a url and play it. I
22 think that's -- I think that's correct. I don't
23 recall exactly what time frame that feature was
24 introduced.

25 But I think if -- if the url referred to a

1 direct audio file, or some sort of audio stream
2 file, that wasn't an ASX file, I think -- I think
3 that that case -- that's another potential case
4 where an ASX file isn't necessarily used in -- for
5 that feature, in that instance of use.

6 **Q. When you say "not necessarily used," you**
7 **mean not used in that instance?**

8 A. Well, I mean --

9 MR. BERG: Objection to form.

10 A. You know, I think it's possible to give it
11 a url that is an ASX file. So, I believe that was a
12 feature.

13 But -- but when I say that it's -- if it
14 were a url to direct audio or video file, then yeah.
15 It wouldn't have used ASX, explicitly, in that
16 instance.

17 **Q. Okay. Any other examples where Windows**
18 **Media Player wouldn't use an ASX file?**

19 A. You know, as I mentioned, these are
20 explicit external uses of accessing an ASX file.
21 You know, I'd have to do -- it's possible that those
22 internal representations are in some format that's
23 like ASX. I can't say that for sure.

24 But in terms of these answers, it's with
25 respect to the explicit type of file that the users

1 are accessing and opening, that I'm referring to.

2 And so, I mean, I'd have to think about
3 it. But at least right now, I've gone through a
4 number of features which I'm familiar with, and I
5 can't really think of any more right here.

6 Q. Okay. So you've now given about four
7 features, or so, where ASX files aren't used.
8 Correct?

9 A. Yeah. Sure. That sounds about right.

10 Q. Okay. So, isn't it true that, you know,
11 just because a computer is using a Windows Media
12 Player, does not mean that the computer is using an
13 ASX file. Correct?

14 MR. BERG: Objection to form.

15 Q. One doesn't follow after the other,
16 necessarily?

17 A. Sorry. What doesn't follow after what?
18 Could you repeat that, please?

19 Q. Sure. The fact that a computer is using a
20 Windows Media Player, it doesn't necessarily follow
21 that the computer is using an ASX file. Correct?

22 MR. BERG: Objection to form.

23 A. So, for specific instances of use, in
24 those situations, I mean, you know, they don't -- an
25 external ASX file is not explicitly being used. But

1 if you're asking about the aggregate behavior of
2 people over an extended time period, it then depends
3 on some other factors.

4 But for those specific instances of use --
5 the one time uses -- each time, invoking those
6 particular features that aren't specifically
7 referencing an ASX file, then, it's certainly --
8 it's certainly not using an ASX file, explicitly,
9 for those features. For those particular instances
10 of use.

11 Q. Okay. In the 2000, 2001 time frame,
12 Windows Media Player could operate without using an
13 ASX file. Correct?

14 A. Well, I mean, I think that depends how
15 intertwined ASX files are with the Windows Media
16 Player. And if the developers took out any support
17 for ASX files, what's remaining, you know, would, by
18 definition, not be using ASX files.

19 Q. Let me ask the question again. In the
20 2000, 2001 time frame, a Windows Media Player could
21 operate without using an ASX file. Correct?
22 Meaning that it could -- you didn't have to have an
23 ASX file coming to the Windows Media Player, in
24 order for the Windows Media Player to operate.
25 Correct?

1 A. In terms of the external -- external
2 access to the ASX file, it's possible to avoid
3 opening the ASX file, but still use Windows Media
4 Player, for example, in the cases I gave, where an
5 audio file is associated -- the audio file type is
6 associated with Windows Media Player, and the user
7 double-clicks that. And that's happened to me
8 before.

9 Then, Windows Media Player opens the file
10 and begins to play it. I believe that's how it
11 works. I believe that's my experience as well.

12 And certainly, for that instance of use,
13 if I -- because the file wasn't an ASX file; it was
14 an audio file; then that -- in that instance of
15 use -- and in those instances of use where the users
16 did that, then they weren't using the external ASX
17 file.

18 And Windows Media Player wasn't opening an
19 external ASX file, in those particular use cases.

20 Q. You're saying "external ASX file." I'm
21 sorry. Is there some other ASX file? Is there --
22 I'm just trying to figure it out. You keep using
23 "external ASX file." In these particular cases that
24 you're referring to, I'm just -- I just don't
25 understand.

1 If you could explain why you keep saying
2 **"external ASX file?"**

3 A. Sure. Sure. So --

4 Q. Actually, you know what? I withdraw the
5 question. You know what? I withdraw the question.
6 It doesn't make a difference.

7 Okay. So, the Windows Media Player was
8 publicly available and being used before ASX files.
9 Correct?

10 A. I mean, that sounds right. I just -- I
11 don't -- I don't recall every feature of -- or early
12 versions of Windows Media Player, and at what point
13 the support for ASX was introduced.

14 But, certainly, by the date of some of the
15 documents in this case, Windows Media Player did
16 have that capability.

17 Q. Right. But there was a time when Windows
18 Media Player did not have the capability to use ASX
19 files. Correct?

20 A. I don't have the whole road -- I don't
21 have the whole roadmap of Windows Media Player, and
22 the features that were introduced. But I think it's
23 probably likely at some point, early in its life.

24 But I am -- I think I refer you to kind of
25 the specifications of those early versions of

1 Windows Media Player. I just -- I just -- I don't
2 know when it was introduced.

3 **Q. All right.**

4 A. And I can't say for sure, one way or the
5 other.

6 **Q. A Windows Media Player works just fine**
7 **without using an ASX file. Correct?**

8 A. For the specific instances --

9 **Q. Like, it can function -- it can**
10 **function -- it can function without an ASX file.**
11 **Correct?**

12 A. I mean, it can function without externally
13 using and accessing an ASX file, such as in the
14 examples I gave you, where an audio file type is
15 associated with Windows Media Player, and the user
16 only is -- double-clicks the audio file, and it
17 opens.

18 Certainly, the user has not used ASX
19 file -- I guess, you know, that user has not used
20 externally, explicitly, an ASX file.

21 **Q. Right. And when you -- you've been**
22 **talking about users clicking on links, those -- in**
23 **your previous answers -- those links could be links**
24 **to streaming media. Correct?**

25 A. Well, what I've been referring to, when I

1 say "clicking" or "double-clicking," it's on files.
2 And there could be links, by the way. I mean, it
3 could be that there need to be a further association
4 that the -- an audio player associated with the
5 browser is Windows Media Player.

6 But, in that case, I believe if the user
7 clicks the link that's an audio file, that -- that
8 the browser has associated with an external player,
9 and that external player is Windows Media Player,
10 then I think in that case, when a user clicks the
11 link on a web page that refers to the specific audio
12 file type, then Windows Media Player would open and
13 then play -- play that file.

14 I believe that's the case.

15 Q. Okay. But Windows Media Player, you know,
16 in the 2000, 2001 time frame, didn't just have the
17 ability to play audio files. It also played video
18 files. Correct?

19 A. I mean, that's my understanding. I
20 believe that's correct.

21 Q. So your answers -- all your answers,
22 previously, when you talked about audio files, is
23 really not limited to audio files. It could be
24 audio or video files. Correct?

25 A. I mean -- I think I was giving examples.

1 Not limiting examples.

2 Q. Right.

3 A. So, and I believe I did talk about video
4 files also, later. But, certainly, if the video
5 file type was associated by the browser, with the
6 specific application being Windows Media Player,
7 then I believe that, you know, if a user goes to a
8 web page, clicks a link that is of that file type,
9 then it would open with Windows Media Player.

10 And that's my understanding of how most
11 browsers worked with external players. And, you
12 know, Windows Media Player was just another external
13 player.

14 And that -- but it would have to be
15 associated -- that file type would have to be
16 associated with the external player that was Windows
17 Media Player.

18 And in that case, then, then clicking on a
19 link that was a video, or audio, would open the
20 appropriate external player to play the file, which
21 would be, in cases, Windows Media Player.

22 Q. Okay. And prior to -- well, strike that.

23 Windows Media Player allowed users to play
24 playlists in early 2000's -- in early 1990s.

25 Correct?

1 A. Yeah. I mean, I believe that's true.

2 Q. Okay. And you're aware that ASX files
3 didn't exist until later. Correct?

4 A. Again, I don't recall the exact date.
5 But, as I said earlier, I don't recall the exact
6 date ASX file format was introduced.

7 Q. Well, let me ask you this. If Windows
8 Media Player allowed users to play playlists on
9 their devices in the early '90s, and ASX files
10 didn't exist until the mid- to late '90s, isn't it
11 true that Windows Media Player, that I just
12 described, worked to play playlists without an ASX
13 file?

14 A. I mean, certainly, you know, the logic is
15 correct there, in that, again, since I don't know
16 exactly when ASX files are -- were introduced, I
17 know that the prior art -- by the time of the prior
18 art, they were known.

19 But, in the case where ASX files were
20 introduced, you know, after playlists in Windows
21 Media Player were introduced, then, by definition,
22 you know, that early version of Windows Media Player
23 couldn't have used ASX files, unless it accidentally
24 used exactly what was going to be in the future,
25 become ASX files.

1 And that's certainly possible if
2 Microsoft, itself, drove the standardization of ASX
3 files, based on --

4 **Q. Dr. Houh, you are just speculating.**

5 A. Well, I'm --

6 **Q. You have no knowledge of that. You're**
7 **starting to speculate. You know, you don't know.**

8 A. I mean, with respect to other standards,
9 that's often the way it goes. Is that, you know, a
10 lot of early web users --

11 MR. CHARKOW: I'm going to -- I'm going to
12 move to strike as nonresponsive -- move to strike
13 that whole answer as nonresponsive.

14 BY MR. CHARKOW:

15 **Q. So let me ask you again -- let me ask you**
16 **another way, Dr. Houh.**

17 **So, you're testifying here today, you have**
18 **no knowledge of when ASX files were first being used**
19 **with Microsoft Windows Media Player. Correct?**

20 MR. BERG: Objection to form.

21 A. I mean, I don't recall -- I don't recall
22 if I've, you know, seen that somewhere. But
23 certainly, by the time the prior art references in
24 this case were there, ASX files were known and used,
25 and described.

1 And so, I think what I said was that, you
2 know, I don't know exactly when ASX files were
3 introduced. But I also -- it's possible -- and it
4 so happens with many standards, that people propose
5 a standard that's based on an existing
6 implementation.

7 And so --

8 **Q. Right. Dr. Houh --**

9 A. -- it could be possible that --

10 **Q. I didn't -- I didn't ask that question,**
11 **Dr. Houh. That's not the question I asked. You're**
12 **answering your own question. I did not ask that**
13 **question.**

14 MR. CHARKOW: I move to strike that answer
15 as nonresponsive.

16 BY MR. CHARKOW:

17 **Q. Dr. Houh, if Windows Media Player was**
18 **available in the early 1990s, as you said, and able**
19 **to allow users to play playlists on their devices,**
20 **and ASX files were not invented, or known at the**
21 **time, or created at the time, you would agree that**
22 **Windows media servers of the early 1990s worked just**
23 **fine, to provide users with the ability to play**
24 **playlists. Correct? Without an ASX file.**

25 MR. BERG: Objection to form.

1 A. I mean, you know, in that hypothetical,
2 where, by definition, what it was using was not the
3 format that would eventually become ASX files, then
4 I would agree that in that -- that hypothetical
5 situation, that that version of Windows Media
6 Player, which was -- which is not using anything
7 that even could become -- even would become ASX
8 files, wasn't using that.

9 Q. And, just to be clear, you have no
10 knowledge of whether or not those early versions of
11 Microsoft Windows Media Player was using ASX files?
12 You don't know, one way or the other?

13 A. I mean, I don't know, one way or the
14 other, specifically.

15 Q. Okay. Okay. So, in the 2000, 2001 time
16 frame, what was the website?

17 MR. BERG: Objection to form.

18 A. Well, I mean, you're asking -- are you --
19 you're not referring to any analysis I've done in
20 any of these -- these declarations; are you?

21 Q. You discussed websites in your
22 declaration. I'm asking you, in the 2000, 2001 time
23 frame, what was a website?

24 A. So, I'll refer you to my declaration. But
25 if you showed me, I could show you what I wrote

1 about websites in my declaration, in the background
2 section.

3 Q. Yeah. I -- Dr. Houh, you're an expert.
4 And particularly in that time frame, at the
5 beginning of the deposition, you said you're an
6 expert in websites and web pages.

7 And so, I'm asking you, just in the 2000,
8 2001 time frame, what was a website?

9 A. Well, I mean --

10 Q. To your knowledge.

11 A. -- if I wrote it in my declaration, that's
12 what I -- would certainly be a website. As relevant
13 to the background of these cases.

14 Q. I didn't --

15 A. You know, I do recall writing about it.
16 I'd like to look at that. It's not that I can't
17 tell you. It's just that what I wrote up was
18 thoughtful and deliberate. And, you know, I'd like
19 to look at that. But I can just refer you to it.

20 That's my opinions about the background
21 for websites. I do believe I have a section on that
22 in the background, and I'll just refer you there.

23 Q. Yeah. Dr. Houh, you don't define what a
24 website is. That's why I'm asking you the question.
25 In the 2000, 2001 time frame, what was a website?

1 A. You know, I mean, are you asking me about
2 something I wrote in my declaration?

3 Q. I don't believe you provided -- the
4 question -- the answer -- what I'm asking for right
5 now, I don't believe it's in any of your
6 declarations.

7 A. Well, I --

8 Q. So, is it relevant to your declarations?
9 Is it related to your declarations?

10 A. I mean, maybe you can show me --

11 Q. Yeah. I just don't understand, if you're
12 an expert in the field, that you can't -- you can't
13 give me why -- what a website is.

14 I mean, it's -- you would agree that a
15 website is a pretty fundamental concept of what
16 you're an expert in the field of. Correct?

17 MR. BERG: Objection to form.

18 A. So, you know, you say I didn't say what a
19 website is. I don't recall, one way or the other.
20 But if you show me, I can look at it and then, you
21 know, give you a better answer.

22 Because if I did say something about it,
23 maybe you misinterpreted it or something? I just
24 don't want to --

25 Q. Right. I don't want -- I don't want a

1 better answer, Dr. Houh. I just want the answer
2 that you're going to give right now. Whatever you
3 answer is, that's good enough for me.

4 In the 2000, 2001 time frame, what was a
5 website? I just want to know. Sitting here today.
6 That's all I want to know. Sitting here today.

7 A. Well, I mean, generally speaking, I think
8 a website, in that time frame -- you know, I don't
9 recall what I wrote in my declaration, but I don't
10 believe it's -- it would change anything.

11 If you look at a web page, a web page is
12 often served from a web server. And any references
13 to web page, or pages on a web server -- a
14 particular web server -- you know, generally would
15 be referred to as a website.

16 I mean, there are other -- there are other
17 examples such as, you know, sub-portions of large
18 websites. Sometimes people consider those websites.
19 So, I think it just -- it depends.

20 But, generally speaking, you know, one or
21 more web pages hosted by a web server, referred to
22 via a url, with its own domain name, typically, that
23 would be considered a website.

24 Q. So, it would --

25 A. And so, I mean, that's just generally

1 speaking. There are lots of examples. We can go
2 through them if you want. But all of them at least
3 have web pages that are served up through a web
4 server.

5 Q. All right. So, is it fair to say that in
6 the 2000, 2001 time frame, a website is a collection
7 of web pages and related content? Is that a fair
8 characterization?

9 A. Yeah. I mean, if web -- if web pages -- a
10 collection of web pages is one or more web pages, I
11 think zero web pages -- you know, the default in a
12 lot of web servers, if you have zero web pages
13 configured, it still gives you a website.

14 It just says -- sometimes it says, you
15 know, "This website has not been configured yet." I
16 wouldn't consider that a real website, because it's
17 just -- but some people may. I mean, it depends on
18 the situation.

19 But, generally speaking, the creator of a
20 website would have created some -- some of their own
21 content. Or the owner of a website. Which, at
22 least, would be on one web page.

23 And I would -- you know, again, it depends
24 on the situation. If we're talking about analyzing
25 some sort of patent, I think it would depend on what

1 the patent specification discussed.

2 But, generally speaking, I think a
3 collection of one or more web pages, running off of
4 a web server, hosted by a server, you know, accessed
5 over the internet, through standard web protocols.

6 I think that would at least be considered
7 a website by most people.

8 **Q. Okay. What about by you?**

9 A. Yeah. I would generally consider that a
10 website. You know, there are -- there could be more
11 complex websites, of course. With lots of extensive
12 features.

13 But I would think that, you know -- you
14 know, someone -- you know, people think they have,
15 you know, their own website if they at least have
16 one page. And they kind of created the content.

17 I mean, some -- again, there are other
18 situations, for example, like, you know --

19 **Q. Dr. Houh -- Dr. Houh, you answered the**
20 **question. I just asked what about you. With a**
21 **"yes" or "no." You are now going on.**

22 I don't know what you're answering now.
23 Because I just said, do you agree with what you just
24 said. You said some people may consider that a
25 website. And I said what about you. And it was

1 just yes or no. I don't know -- I don't know why it
2 can't be answered in a very simple yes or no.

3 I just asked, you know, do you agree with
4 what you just said, that some people believe that to
5 be a website. So, you know -- so let me ask the
6 question again.

7 Is it fair to say, based on what you said
8 so far, that a website is a collection of web pages,
9 assuming that it's, you know, at least one web page
10 and related content?

11 A. I would say if it's hosted on a web
12 server, and that's accessed through standard web
13 protocols or a web browser, then I would consider
14 that a website.

15 Q. Okay. Thank you.

16 A. Generally speaking.

17 Q. In the 2000 --

18 A. Generally speaking.

19 Q. Okay. Thank you. In the 2000, 2000 time
20 frame -- sorry. Strike that.

21 In the 2000, 2001 time frame, what was a
22 web page?

23 A. In the 2000, 2001 time frame, generally
24 speaking, a web page is something that is written in
25 hypertext markup language. And it specifies a

1 content.

2 And then it -- it is -- that page is
3 placed on a web server, either that serves up the
4 page directly, or it could be a -- a templated web
5 page with some variables that are preprocessed by
6 the web server.

7 But the result -- the resultant document
8 delivered from the web server to a requesting
9 browser, using the standard web protocols, would
10 generally be considered a web page.

11 **Q. Okay. So is it fair to say, in the 2000,**
12 **2001 time frame, a hypertext document provided by a**
13 **website and displayed to a user in a web browser**
14 **would be considered a web page?**

15 A. Well, I -- I think, generally speaking,
16 you would want to have that document served up,
17 using the hypertext transfer protocol, kind of
18 for -- and that's pretty much what all web servers
19 use. I mean, that's -- that is the protocol they
20 use.

21 So, I think, you know, additionally with
22 that document being transferred over HTTP, I think
23 that would generally be considered a web page. That
24 if the document were in HTML format.

25 **Q. Okay. In the 2000, 2000 time -- strike**

1 that.

2 In the 2000, 2001 time frame, what was a
3 home page?

4 A. Well, I think, you know -- so, I think
5 maybe it depends on the particular context. But,
6 for example, a company might have said they have a
7 home page, which is really their main -- their main
8 website, or the cover -- the cover -- the default
9 page when their website is -- is accessed.

10 So, a company might say that. An
11 individual might say that if they had a web page
12 they created, that either is hosted on their own
13 domain, which was probably not as likely. But, at
14 the time, you know, I think people considered, you
15 know, there are all sorts of content creation sites.

16 I don't recall, like when, at that time
17 frame, if a company like GeoCities was still around,
18 or MySpace. But some of these services allowed
19 users, you know, who registered with them to create
20 their own home pages. That's usually what they --
21 they called them.

22 And that the user could kind of create
23 their own home web page -- home page -- their own
24 web page, that they could give a url out. But the
25 url wouldn't necessarily be hosted in its own

1 domain. That it might be a sub-portion of that
2 domain.

3 Q. Okay.

4 A. So, for example, you know,
5 GeoCities.com/Henry Houh, you know, might have been
6 something I could set up. And I think many users
7 would have considered that their home page.

8 Q. Okay. And that -- in the 2000, 2001 time
9 frame, there were a lot of companies and businesses
10 that had home pages. Correct?

11 It was like landing pages, where you would
12 click on -- you would put the url of the company
13 into a web browser, and you would be provided with,
14 you know, the first page -- the landing page of that
15 company or entity. Correct?

16 A. Yeah. That's correct. I want to add one
17 more thing to home page. Kind of what they could
18 be. As oftentimes, people have a browser that there
19 is a home button, and they can associate a
20 particular -- any web page with that home button.

21 And some users might think of that as
22 their home page, which is the page they get when
23 they open their browser. But, again, I think
24 it's -- it depends, you know, on the context.

25 So, while some people might think it's

1 their own page, I could set the home page in a
2 browser to be any page. And that would be -- some
3 people might think of that as their home page too.

4 **Q. Okay.**

5 A. But yeah.

6 **Q. Okay. In the 2000, 2001 time frame, there**
7 **were advertisements on web pages themselves.**

8 **Correct? As you explained web pages.**

9 A. Yeah. You know, in that time frame,
10 certainly, there were many websites, that when the
11 browser rendered the web page document that was
12 delivered, that there would be advertisements
13 appearing on the rendered page, in the web browser.

14 **Q. Okay. And in the 2000, 2001 time frame,**
15 **there were advertisements on home pages. Correct?**

16 A. Yeah. For the example of --

17 **Q. Right.**

18 A. For example, the GeoCities type example.
19 Some of these hosting sites, they offer kind of a
20 free service, but one way they -- that some of those
21 services generate revenue is to put advertisements
22 on all of the user created pages. So, in that case,
23 that's certainly -- I'm aware of that situation in
24 that time frame.

25 And, certainly, today, if you -- if you

1 look at Facebook, I mean, that's all -- it's all
2 advertising supported.

3 But, going back, there were similar sites
4 where the user created their own sites, and the host
5 of the page would -- as part of the way they
6 collected -- you know, made money, is to put
7 advertisements on your page. Even though the
8 creator of the page doesn't necessarily explicitly
9 want them.

10 And there were some services where the
11 users could pay -- pay for the service, and then
12 have their page be created ad-free.

13 **Q. All right.**

14 A. So I'm aware of those situations, for
15 example.

16 **Q. So, in the 2000, 2001 time frame, when a**
17 **person went to a web page, the person may say**
18 **advertisements on the web page. Correct?**

19 A. I mean, I certainly, in that time frame --
20 there were some web pages that people would visit,
21 that did have ads. That's absolutely true.

22 **Q. Some of those ads were banner ads.**
23 **Correct?**

24 A. Banner ads was a form of ad used back
25 then. I think they were pretty common at that time.

1 That was one form of advertisements.

2 I mean, companies on their own websites,
3 you know, those home pages typically didn't have ads
4 unless you consider, you know, informational banners
5 and links to -- you know, to their own products be
6 advertisements.

7 But it's -- but these were common on media
8 sites and these other, like early social media
9 sites, and whatnot.

10 Q. Okay. And in 2000, 2001 time frame, many
11 websites did not provide access to music or video
12 content. Correct? There were a lot of websites out
13 of there, that are just -- you know, they are
14 informational websites that did not provide music or
15 video content. Correct?

16 A. I mean, I believe that's the case. I
17 mean, there were a lot of websites back then. And,
18 certainly, you know, again, probabilistically, it's
19 likely that some did not have any links to audio.

20 I mean, some of these home pages, I mean,
21 there were features where audio would load in the
22 background and play. And some people did use those
23 features.

24 But I think some people found them
25 annoying enough that they wouldn't have done it on

1 their own sites.

2 Q. Right. So, let me just -- I just want to
3 make it clear. In the 2000, 2001 time frame, there
4 were many websites that did not provide access to
5 music or video content. Correct? That did not
6 provide access.

7 A. I mean, I think that's likely true.
8 Again, I can't think of a specific example off the
9 top of my head.

10 Q. Well, what --

11 A. But, I mean, now I think we've talked
12 about probabilities, where, you know, because I
13 don't know every single website, that I think it's
14 probably likely that at least some site, you know,
15 was -- did not -- did not provide links to, or -- or
16 automatically load audio in the background to play.

17 I mean, it depends, really. You would
18 have to go look at this website.

19 Q. Right.

20 A. And then, it would be after one looks at a
21 particular website, it's easier to make that
22 determination.

23 But then, to say whether that's for all
24 the websites, I think it's likely the case that
25 there were at least some that did not have links to,

1 or embed audio or video content.

2 Q. Right. Well you, yourself, I'm sure, have
3 used websites in the 2000, 2001 time frame, that had
4 no -- that did not provide access to music or video
5 content. Correct? Or any audio content.

6 A. I mean, it's difficult for me to think of
7 specific instances from 20 years ago. But, I mean,
8 it's probably likely that I used websites that
9 didn't have any embedded audio or video. I just
10 don't have a recollection.

11 I mean, I have -- I have my own website,
12 that I do provide links in my website to -- to pages
13 that do provide audio and video. It's just that my
14 own website -- my own web page that I set up, I
15 don't believe that I actually embedded audio or
16 video.

17 So, you know -- you know, I could
18 certainly use my own -- you can call it "home page,"
19 if you want, and I didn't embed audio or video in
20 it. But I did provide links to sites. And I may
21 have provided links to audio files. I just don't
22 recall.

23 Q. Okay. But --

24 A. But, I know that I didn't embed audio or
25 video in my own -- in my own web page or pages.

1 Q. Right. In the 2000, 2001 time frame,
2 there were hundreds of thousands of websites that
3 did not provide any access to audio or video
4 content. Correct?

5 A. I mean, that -- you know, I'd have to
6 think about how many websites there were in that
7 time frame. Probably many, many more times than the
8 hundred thousands. But, I'd have to think about
9 that.

10 But I think, certainly, it's the case that
11 there are some websites that wouldn't have embedded
12 audio or video.

13 And then, you know, whether they provided
14 links to audio or video is a little harder, because
15 they don't control the content directly when they
16 link to some other website.

17 Q. All right.

18 A. They don't control the content on any
19 other website.

20 Q. Right.

21 A. But they could control the content on
22 their own website. And I think, you know, whether
23 it's hundreds of thousands, I can't say for sure.
24 I'd have to do a bunch of, you know, research. And
25 then -- and then the answer would probably be,

1 again, probabilistic.

2 But I think at least some websites not
3 having embedded audio and video is probably quite
4 likely, if not near certain.

5 **Q. Tens of thousands?**

6 A. Yeah. I mean, I think it's probably
7 pretty likely that tens of thousands didn't have
8 embedded audio or video on their web pages, that
9 were part of their website.

10 **Q. Is your answer the same with regard to,**
11 **instead of embedded streaming audio and video -- or**
12 **video?**

13 A. Well, I mean that, "embedded" being that
14 there's an audio -- audio or video incorporated into
15 the websites.

16 Much like if you visit a new site today,
17 like -- that there are videos that are part of the
18 web pages; that some begin to play when you visit
19 the page that the video's on.

20 **Q. Right.**

21 A. Some, you actually have to click to start.
22 But there are numerous examples today, where that's
23 the case. And that's what I mean. Is that what I'm
24 talking about is that, you know, there might be an
25 embedded player, that if you click to play, that it

1 plays the audio file.

2 But that player is actually part of the
3 particular web page, or a video player is part of
4 the particular web page. And it's loaded when the
5 web page is loaded.

6 And the video may or may not start; or the
7 audio may or may not start automatically, but
8 certainly, today, that's the case. And I still mean
9 the same thing when I'm thinking about 2000, 2001,
10 when I'm thinking about embedding audio or video on
11 a particular web page.

12 Q. Yeah. Put aside embedding audio and video
13 on a web page. So now, let's talk about a link on a
14 web page that would allow you to download audio or
15 video; or to stream audio or video.

16 There were tens of thousands of websites
17 in the 2000, 2001 time frame, that did not allow
18 users to do that. Did not have that capability, or
19 did not offer that service to users. Correct?

20 A. Well, I mean, I think it depends on what
21 you mean by "have the capability." I mean, people
22 who control the websites, they have the capability
23 to link -- you know, to download audio or video.

24 Q. Right.

25 A. It's just, if you mean that whether they

1 actually do it, that's a different question on
2 whether --

3 Q. Yeah.

4 A. -- they have the capability to do it.

5 Q. Yes. Whether they do it.

6 A. Whether they do it. Okay.

7 Q. All right. So --

8 A. So, I mean, I think it's likely that some
9 people can put together a website without, you know,
10 having any direct links to download or stream video.

11 You know, I -- I think that may be -- that
12 would have to be something -- you know, to give you
13 specific numbers, I don't think I could do that -- I
14 can't do that off the top of my head. Even
15 probabilistically, I don't think. I think that's --
16 it's more difficult.

17 You have to analyze every link on a
18 particular website and see what it points to.

19 Q. Right. In the 2000, 2001 time frame,
20 there were many websites that did not provide
21 streaming media content; whether that was audio or
22 video. Correct?

23 A. Yeah. I mean, that's quite likely to be
24 true. Because, you know -- yeah, I mean, I think
25 that's -- that's quite likely to be true.

1 Because -- there were at least some sites that
2 didn't provide the ability to stream audio or video.

3 Q. Would you put it at 10,000 sites that
4 didn't provide audio or video streaming
5 downloading --

6 A. I mean, it seems --

7 Q. -- in the 2000, 2001 time frame?

8 A. I mean, it seems pretty likely to me that
9 there are at least 10,000 sites that didn't have
10 that capability in that time frame. That seems
11 pretty reasonable.

12 Q. What about 50,000 sites?

13 A. If you're -- if you're asking if these
14 sites actually did it, or rather, that -- I mean,
15 the capability was there that they could do it. I
16 mean, there were --

17 Q. I did not --

18 A. -- there were numerous types of
19 streaming --

20 Q. Dr. Houh, I'm sorry. We were talking
21 about "did not." We said that in the 2000 and
22 2001 -- 2000 and 2001 time frame, many websites --
23 and I gave you the example of 50,000 websites, at
24 least -- did not provide either downloadable or
25 streaming audio or video content. Correct?

1 A. I mean, that seems quite likely to be
2 true. Again, it's all based on my -- you know, I
3 don't have the numbers. I haven't done, you know,
4 an inventory of exactly that.

5 But that number you said doesn't seem
6 unreasonable. It seems pretty reasonable that it's
7 at least that many that didn't provide those
8 capabilities.

9 **Q. In the 2000, 2001 time frame, there were**
10 **numerous ways to implement targeted advertising.**
11 **Correct?**

12 MR. BERG: Objection to form.

13 A. You know, I'm aware of several companies
14 and methods, at the time, to provide targeted
15 advertisement. So, I think, generally, it's true
16 that at that time frame, there wasn't only exactly
17 one way --

18 **Q. Right.**

19 A. -- to provide targeted advertisements.

20 **Q. How many ways, to your knowledge, do you**
21 **think there were to provide targeted advertising in**
22 **the 2000, 2001 time frame?**

23 A. I mean, I think it depends on how many --
24 what you mean. Like if -- you mean like -- like
25 slight variance on the method? Or, you know -- I

1 mean, generally speaking, there are some ways that
2 people do it. They share a lot of commonalities.
3 But the specifics may be very, very different.

4 So, if -- if you're counting each of the
5 ones where any of the specifics are slightly
6 different, I think there can be a lot of different
7 ways that are possible.

8 Q. When you say a lot of different ways, how
9 much different ways are you talking about? Dozens?
10 Hundreds? Thousands?

11 A. I mean, certainly, if you -- if you look
12 at permutations of specific things, that things
13 could be done slightly differently, permuting some
14 use of specific parameters in the process. Then,
15 mathematically, that does blow up.

16 But many people typically, you know,
17 use similar parameters. And, you know, in various
18 parts of the process, for generating and delivering
19 targeted advertisements.

20 So, it's hard to say. Because, you know,
21 while the math -- the math shows that there can be a
22 lot more, it's probably likely that the actual
23 number of ways are actually fewer than the whole
24 possible universe of ways.

25 So, I mean, I think that's --

1 **Q. What --**

2 A. It's hard to say. I mean, if you -- if
3 you want to look at various different methods, you
4 know, we can probably agree as to whether they are
5 different enough. But I think it would take some
6 analysis of those particular methods.

7 **Q. All right. What is the possible universe**
8 **of ways? You just mentioned possible universe of**
9 **ways. How many would those be?**

10 A. Well, you know, for example -- you know,
11 so, there can be various number of factors that
12 people look at, to generate targeted advertisements.

13 I mean, commonly used and known things
14 were kind of, you know, age or age group; or gender;
15 or, you know, past viewing history; past purchase
16 history.

17 And each of those things can be very
18 complex. Right? So -- so, you know, if people want
19 to be specific about targeting, you know, a
20 30-year-old from a 31-year-old, that's a possible
21 difference.

22 But, you know, people may not -- they may
23 want to be that specific. They may not want to be
24 that specific. Right? If you're selling items for
25 a 31-year-old's birthday, then you might actually

1 want to be very specific.

2 And so, each of those possible parameters
3 leads to a myriad of different ways. So, if there
4 are "N" different parameters available, it depends
5 how many a particular system could choose.

6 They could choose all the way up to 'N."
7 They could choose half of them. They could choose
8 not to ignore the -- you know, the age -- year by
9 year age specific, in favor of broader age
10 categories.

11 So, I think there's a lot of
12 implementation choices. But, I mean, and there are
13 reasons -- there are good reasons to possibly use
14 some of these -- some of these implementations over
15 others.

16 So, I mean, mathematically, you know, if
17 you have "N -- "N" characteristics, that you want to
18 choose, you know, "A" out of, then, mathematically,
19 there's -- there's some number of different ways you
20 can choose three different things.

21 Don't quote me on this. I mean, I think
22 if you do "N choose A," that's about the right
23 number of different ways to pick three different --
24 or "A" different characteristics.

25 And then, of course, there's -- there is

1 the programming about how you actually use those age
2 chosen characteristics.

3 And so -- and so, again, what I'm saying
4 is that, you know, while the possible universe is
5 quite large, what people actually do, you know, they
6 do things based on their particular application and
7 their needs.

8 And so --

9 Q. Right.

10 A. Yeah.

11 Q. So, putting aside the specific
12 characteristics and using that -- you know, you're
13 using that in your, you know, calculations, or
14 your -- how many ways were there to use those
15 characteristics?

16 Meaning, you know, put the characteristics
17 in one group. And, to your knowledge, how many ways
18 were there to targeted -- implement targeted
19 advertising?

20 A. Actually, I'm not really sure what you
21 mean by that. I mean, if you --

22 Q. Let me -- sorry. Let me ask it a
23 different way.

24 So, I'm saying put the individual
25 characteristics aside. Because we say, if I do it

1 based on age; if I do it based on location; if I do
2 it based on, you know, previous history, or
3 something like that, that leads to a lot of
4 [Inaudible].

5 A. That's --

6 Q. So, what I'm saying is, put that aside for
7 a second. Right? Assume that we're just talking
8 about how to implement a targeted advertising system
9 for -- you know, for all the characteristics.

10 Or, just fundamentally, how to -- you
11 know, the targeted advertising system that could use
12 various characteristics to provide targeted
13 advertising.

14 So, I'm saying with regard to just the way
15 of implementing a system -- a targeted advertising
16 system -- in the 2000, 2001 time frame, there were
17 numerous ways to implement targeted advertising
18 systems.

19 A. Well, I guess that depends on what you
20 mean by "numerous," and what possible variations you
21 would consider, or not consider a variation. I
22 mean, can you be more specific, please?

23 Q. Well, do you believe there were numerous
24 ways to implement targeted advertising systems in
25 the 2000, 2001 time frame?

1 A. Well, I mean, I certainly reviewed a lot
2 of references in the targeted advertising space.
3 And, you know, I guess the question is, you know,
4 they all say -- they all have different words.

5 There might be some argument or debate
6 about whether, you know, reference "A" and reference
7 "B" are the same or different with respect to what
8 you're asking.

9 But -- but there were lots of different
10 proposed ways of doing targeted advertising. I
11 probably have reviewed hundreds of different
12 documents in this space. And that may be a small
13 part of the universe of documents proposing this.

14 And I think -- I think most of what I
15 reviewed was probably in, or around, or before that
16 time frame. So -- so, I guess it depends what you
17 mean, you know -- what will be considered different.
18 You know? Yeah.

19 I mean, there are a lot of -- there are
20 certainly lots of things proposed. And whether or
21 not you consider them different or not, I think we'd
22 have to go through the -- what you'd want to
23 compare, and we could maybe decide.

24 But, I mean, that kind of takes some time.
25 So if you have anything specific in mind, I'd be

1 happy to look at it.

2 Q. So, in the 2000, 2001 time frame, there
3 were numerous proposed ways to implement targeted
4 advertising systems. Correct?

5 A. Well, I mean, people wrote about these
6 ways. I suppose if you mean that when they write
7 about it, they are proposing it -- are you making a
8 distinction between actual working systems, at that
9 time, that were actually implemented?

10 Or are you -- is that the distinction when
11 the say something is proposed?

12 Q. I mean any proposal. Whether it's
13 implemented; or whether it's a university paper; a
14 research paper. I just mean, propose, you know,
15 generally.

16 A. Yeah. I mean, but a real system, I
17 wouldn't call "propose." If you are using a system,
18 I would call that -- I don't see why that's just --
19 I mean, in an abstract sense, they might be
20 proposing, that's how they do it. But that's the
21 way they're actually doing it.

22 So, you know, I --

23 Q. Okay. So, let's -- let's break it down.
24 Let's talk about proposed systems, versus actually
25 implemented systems.

1 In the 2000, 2001 time frame, there were
2 numerous proposed ways to implement targeted
3 advertising systems. Correct?

4 A. Yeah. I mean -- I mean, a lot of these
5 things are -- you know, were written up as -- and I
6 understand -- again, I'm not an expert on the law,
7 but my understanding is that a granted patent has a
8 presumption that it's enabled, which is that,
9 generally, like one could -- you know, a person of
10 ordinary skill in that field could build that.

11 So, that may be more than proposed. If
12 you're talking about proposed being like academic
13 paper, where someone writes up, you know, "Here's
14 how we think you should do something."

15 And maybe -- maybe they've done a series
16 of experiments. Maybe it doesn't become so proposed
17 if they've done some experiments, or they -- like,
18 you know, they've taken some data and run it through
19 it.

20 Maybe -- maybe that's still proposed. But
21 I guess it depends on what you mean -- what you mean
22 there -- the distinction between an academic paper
23 and a patent.

24 Q. By the 2000, 2001 time frame, there were
25 hundreds of thousands of articles, publications,

1 patents, and other writings, related to implementing
2 targeted advertising systems. Correct?

3 A. I can't tell you whether the number is
4 that large. I mean, I don't -- I mean, I don't know
5 where you're getting this number, but it could be
6 possible. But it could be also smaller than that,
7 realistically.

8 But I can't tell you off the top of my
9 head.

10 Q. Tens of thousands?

11 A. I mean, maybe it's possible at that level.
12 It's still hard to say. I mean, it depends which
13 tens of thousands. Like, do you mean 10 or 20,000?
14 Or do you mean 80 or 90,000?

15 Q. Ten thousand.

16 A. I mean, that seems reasonable. Again, I
17 don't -- I don't -- you know, I've seen, again,
18 hundreds of advertisement -- targeted advertising
19 references. It's probably, you know, a small subset
20 of everything that some people might consider
21 targeted advertising.

22 I mean, it's possible it could be 10,000.
23 It's hard to -- it's hard to say for sure.

24 Q. Could it be possible that it would be
25 5,000? So, by the -- by the 2000, 2001 time frame,

1 there was at least 5,000 papers, patents, articles
2 or other writings, related to ways to implement
3 targeted advertising systems?

4 A. I mean, I think that's more likely than
5 10,000. It's getting to be the realm of more
6 likely, perhaps. But it's still -- I mean, maybe
7 that feels about right.

8 It's still hard to say whether that's the
9 real number or not. I just can't say for sure.

10 Q. What about a thousand? A thousand
11 patents, papers, articles, or other publications or
12 writing, you know, that existed prior to the 2001,
13 2000 time frame, that discussed ways to implement
14 targeted advertising systems?

15 A. I mean, if you're considering like little
16 features of targeted advertise systems, and things
17 like that, I think at the level of a thousand, I
18 think it's quite likely that there were at least a
19 thousand, you know, different -- different papers,
20 or patents; or, you know, things like that, by that
21 time frame.

22 I think that's actually pretty likely.
23 But, again, I can't tell you the exact -- I can't
24 tell you the exact number. I just have to kind of
25 gauge its likeliness, and it's based on my -- my

1 experience, and what I -- what I believe I've, you
2 know, looked at, and things like that.

3 Q. How many systems that were in operation in
4 2000, 2001, were you aware of, that implemented
5 targeted advertising?

6 A. (No audible response.)

7 Q. So, I'm saying, sitting here today, your
8 knowledge of what was occurring in 2000, 2001.

9 A. You know, I think there were -- if we sat
10 here for enough time, I could probably come up with
11 a dozen or more.

12 But, I mean, I think that's probably about
13 what I could think of, or, you know, some number of
14 dozens, perhaps, that I could probably think of,
15 after giving it some thought.

16 You know, something around that. I
17 mean -- yeah.

18 Q. Okay. In the -- in the 2000, 2001 time
19 frame, there were numerous technologies that could
20 be used for inserting advertisements into a web
21 page. Correct?

22 MR. BERG: Objection to form.

23 A. I mean, I'm not sure what you mean by
24 "numerous technologies."

25 Q. Different ways of inserting advertisements

1 into a web page, in the 2000, 2001 time frame.

2 **Technical ways.**

3 A. Do you mean technical ways of generating
4 the advertisement that would be inserted? Or
5 actually -- actually, like actual ways of putting
6 the advertisement on a web page and rendering it?

7 **Q. Generating the advertisement for**
8 **insertion.**

9 A. Yeah. I mean, you know, as we were
10 talking earlier, there are -- I'm aware that there
11 are lots of different parameters that can go into
12 this generation.

13 Are you considering all -- you know, the
14 technical deduction from parameters to -- is that
15 one technology? Or is that many technologies.

16 **Q. Dr. Houh, I'm --**

17 A. What do you mean by the various --

18 **Q. I'm not considering each -- I'm not**
19 **considering each parameter -- each, you know, age;**
20 **and height; and, you know, location to be individual**
21 **parameters.**

22 I'm saying systems that will use that --
23 those characteristics to generate advertising that
24 are put on web pages.

25 A. You mean actual implemented systems?

1 Q. Let's start with implemented systems.

2 Yes.

3 A. Yeah. I'm still not sure what you would
4 consider "different." I mean, you know, once -- I
5 mean, I'm aware of different technologies. And
6 maybe we can, you know, go through them and I could
7 describe them, one by one.

8 And then, you could decide whether they
9 are different from each other, if that's what you
10 want to do.

11 Q. Well, just tell me how many you're aware
12 of. The numbers. Let's start with that, sitting
13 here right now. And, again, the 2000, 2001 time
14 frame.

15 A. Yeah. I mean, I'm not sure what you mean
16 by what's different. So I'm not -- I'm not really
17 sure how to -- how to, you know, give you an answer
18 to that. Even if I can think of, you know -- I
19 mean, I think I'd need to know more specifics about,
20 like what you think are different -- possible
21 differences.

22 Because the question's very abstract. I
23 don't -- I can't really think of how I would
24 approach that, just sitting here right now. I think
25 I'd need some time to think about it.

1 Q. Well let's go with what you would think
2 would be different. How many different approaches
3 were there?

4 A. Well, I mean, certainly, there's one
5 approach, is that the website itself, you know --

6 Q. Sorry, Dr. Houh. I didn't ask the -- I
7 didn't get specific. I just said, you know, how
8 many -- how many -- numbers. You know.

9 A. Well, you know, I kind of need to go
10 through the different ways I know to come up with a
11 number. I have to think about that. So --

12 Q. All right.

13 MR. CHARKOW: Well, let me -- we're going
14 to be taking a break. So, I think it's probably
15 time to take a break. I think we said we would stop
16 about 1:30.

17 So maybe this is a good point to take a
18 break, and you could think about it over the break,
19 and we'll come back. Is this a good time to take a
20 break for you, Dr. Houh?

21 THE WITNESS: Sure.

22 MR. CHARKOW: Okay. Counsel, does this
23 work?

24 MR. BERG: Yeah. This time -- this time's
25 great. So, do we want to take like 30 minutes? Is

1 that -- is that what you're thinking?

2 MR. CHARKOW: Yeah. Whatever works for
3 Dr. Houh. I mean, he is the witness. You know, I
4 want to make sure he has plenty of energy.

5 THE WITNESS: Sure. How about 2:10
6 Eastern Time, we come back? It's a little more than
7 30 minutes.

8 MR. CHARKOW: Okay.

9 THE VIDEOGRAPHER: Okay. The time is
10 1:39 p.m.. We are off the record.

11 (Luncheon break.)

12 THE VIDEOGRAPHER: Okay. We are back on
13 the record. And the time is 2:12 p.m..

14 MR. CHARKOW: Spencer, can you provide
15 Dr. Houh with Exhibit 1017, please?

16 BY MR. CHARKOW:

17 Q. Dr. Houh, you've been provided with what's
18 been previously marked as Exhibit 1017. This --
19 this is an Exhibit in all of the -- in all of the
20 IPRs that we've been discussing today, I believe.

21 Let me just double-check to make sure,
22 before I say that.

23 [Pause]

24 Sorry. I take that back. I think it's
25 just in the IPRs that are -- that are -- the IPRs

1 304 and 308.

2 And, Brad, if you could just confirm that
3 I got that right?

4 MR. BERG: Yeah. Let me double-check that
5 and confirm.

6 So, I think it's an exhibit in all the
7 IPRs we're discussing today. But it's only used in
8 the ground, in a subset -- as a reference in the
9 grounds, in the subset of them.

10 MR. CHARKOW: Okay. That's probably what
11 I had. Okay. So, I believe it is Exhibit 1017,
12 that's been previously marked in all of the IPRs
13 that we are discussing today, which is
14 IPR2021-00265; 298; 304; and 308.

15 And, Brad, if you just confirm that it's
16 across -- I'm just looking at it too. Just confirm
17 that it's across -- at least contained in all of the
18 reports.

19 MR. BERG: Yes.

20 MR. CHARKOW: Great.

21 MR. BERG: Yes. I can confirm that.

22 MR. CHARKOW: Okay.

23 BY MR. CHARKOW:

24 Q. All right. Dr. Houh, have you seen this
25 exhibit before?

1 A. Yes. I have.

2 Q. And Exhibit 1007 -- I'm sorry.

3 Exhibit 1017 is entitled, "All About ASX Files."

4 Correct?

5 A. I would agree with that. Yeah.

6 Q. And Exhibit 1017, entitled, "All About ASX
7 Files," discloses various functionalities that can
8 be incorporated into an ASX file. Correct?

9 A. I mean, I think, generally, I would agree.

10 Q. Exhibit 1017, entitled "All About ASX
11 Files," discloses various tags that can be
12 incorporated into an ASX file. Correct?

13 A. Do you have a -- what do you mean by
14 "tags?"

15 Q. So, if you go into the document, at page
16 six, there are -- there's a section on tags?

17 A. Yeah.

18 Q. Okay. So, I'm asking -- and I think that
19 section goes from page six to 11. And so, with that
20 in mind, Exhibit 1017, entitled "All About ASX
21 Files," discloses various tags that could be
22 incorporated into an ASX file. Correct?

23 A. Well, this section does list various
24 things -- the various tags. They are excerpts of
25 XML. You know, the examples.

1 Q. Right. And those various tags can be
2 incorporated into an ASX file. Correct?

3 A. I mean, generally, that's -- it's laying
4 out some examples of XML excerpts that can be
5 contained within an ASX file.

6 Q. And a programmer can use one, all, or some
7 of the functionalities disclosed in Exhibit 1017,
8 when creating an ASX file. Correct?

9 A. Well, I mean, I suppose a programmer can
10 choose which tags they can program to -- to be
11 returned in an ASX file, if the ASX file is
12 generated programmatically.

13 Q. Right. So, putting aside the tags for a
14 minute. So, the other sections -- and let's call --
15 I think we -- I called them "functionalities," and I
16 think you've agreed with that.

17 A programmer can use one, all, or some of
18 the functionalities disclosed in Exhibit 1017, when
19 creating an ASX file. Whether that programmer is a
20 person, or it's a computer.

21 A. I mean, a computer that's -- that has a
22 program, isn't -- isn't making a conscious choice.
23 But if you refer -- if you're referring to a
24 programmer, when they write code, for example, that
25 generates an ASX file, they can -- they can -- they

1 can -- or, you know, the product managers can
2 decide, you know, what -- what possible tags to use
3 in various circumstances are.

4 And, oftentimes, the programmers are
5 following, you know, product specifications, and
6 whatnot.

7 Q. So, Dr. Houh, I'd like to focus on what
8 I've called the functionalities. Not the tags. So,
9 the functionalities that I'm referring to are, "File
10 or Clip Properties; Custom Graphics in the Windows
11 Media Player; Ad Insertion; Playlists; Server or
12 Protocol Rollover."

13 So, I would like to assume that those are
14 the functionalities that I'm talking about right
15 now. So, can we just make that assumption? That
16 those are functionalities?

17 A. I mean, if you want me to assume that they
18 are functionalities, I'll assume that they are
19 functionalities.

20 Q. Well, let me ask you, what would you call
21 those? We can use your language.

22 A. You know, I -- we can use the word
23 "functionalities." I'll understand what you mean.

24 Q. Okay. Great. So, a programmer can use
25 one, all, or some of the functionalities disclosed

1 **in Exhibit 1017, when creating an ASX file.**

2 **Correct?**

3 A. I mean, to the extent some -- some don't
4 conflict with each other, they could -- they could
5 use, you know, a some; or all; or one.

6 I mean, there is flexibility in generation
7 of these ASX files. So, it's certainly possible, to
8 the extent they don't conflict, that -- or that they
9 preclude each other.

10 A lot of systems have features and
11 functions which aren't intended to be used in
12 combination. So, to the extent that they aren't,
13 then, some subset of these could be used together.

14 **Q. Right. One, all, or some.**

15 A. To the extent that the features don't
16 conflict in some way.

17 **Q. And the programmer can use one, all, or**
18 **some of the tags disclosed in Exhibit 1017, when**
19 **creating an ASX file. Correct?**

20 A. I think, generally speaking, the tags can
21 be used, to the extent they don't conflict with each
22 other.

23 **Q. So --**

24 A. Multiple tags can be used.

25 **Q. Right. Sorry. Let me just ask the**

1 **question again.**

2 A programmer can use one, all, or some of
3 the tags disclosed in Exhibit 1017, when creating an
4 ASX file. Correct?

5 MR. BERG: Objection to form.

6 A. Again, if the programmer is programming
7 the generation of the file according to some product
8 specification, and the product specification
9 specified either one, all or some, to the extent
10 that, you know, they don't conflict with each other,
11 you know, a programmer could program them. I mean,
12 they could program them if they did conflict, I
13 suppose.

14 But, the behavior wouldn't necessarily be
15 what was expected, depending on how the Media Player
16 handled it.

17 **Q. Okay. So -- thank you, Dr. Houh.**

18 MR. CHARKOW: Giselle, just one thing.
19 The ASX, I don't know how clearly I'm saying it. So
20 it's Apple, Sam, Xavier.

21 THE COURT REPORTER: Yes.

22 BY MR. CHARKOW:

23 **Q. An ASX file can be implemented with or**
24 **without clip properties. Correct? And I'm using**
25 **"clip properties" as used in the document,**

1 **Exhibit 1017.**

2 [Witness perused document.]

3 A. I mean, are you referring to what the
4 document says on page seven of 12, about the entry
5 tag?

6 Q. Sorry, doctor. Just give me a second. I
7 have lost the document. Oh, there it is. Can you
8 re-ask the question, so I answer it?

9 A. Are you referring to what the document
10 says on page seven to eight, with respect to the
11 entry tag?

12 Q. No. I'm talking about what's on page --
13 page two, where it says "File or Clip Properties."
14 Just that section.

15 A. Okay.

16 Q. It's page two to three. So let me ask the
17 question again.

18 An ASX file can be implemented with or
19 without clip properties, as shown in Exhibit 1017.
20 Correct?

21 A. So, you mean that the Media Player can be
22 implemented to not select properties to view file
23 information about the show or the clip that is
24 playing?

25 Q. Sure. Let's start there.

1 A. I mean, you know, the product people, or
2 the developers, can certainly code Windows Media
3 Player to -- to remove that -- that box of, you
4 know, select -- so, you know, it says here, "Select
5 properties to view file information about the show
6 or the clip that is playing."

7 I mean, I suppose that could be removed
8 from it. And there may be some functional elements
9 that still work fine, when that's removed. There
10 may be some other functional elements that are
11 becoming accessible.

12 But I think it would take, you know, more
13 detailed examination of Windows Media Player to
14 determine what -- what functions those might be, and
15 whether there are no other ways to access certain
16 properties.

17 **Q. Well, I'm not asking about what's**
18 **happening on Windows Media Player. I'm asking about**
19 **the ASX file, itself, and the formation and creation**
20 **of that ASX file.**

21 **An ASX file can be implemented with or**
22 **without clip properties, as that is -- as clip**
23 **properties is described in Exhibit 1017. Correct?**

24 A. Well, this -- this section does talk about
25 the clip properties, and it references individual

1 entry tags. And it gives an example here. But,
2 certainly, the entry tag was what I was asking about
3 in pages seven to eight.

4 But, you know, some of these elements, for
5 example, it might work fine without having a title,
6 but I'm not sure, without having a reference, what
7 might happen when there's no reference in the entry.

8 Doesn't think -- if that's the way to code
9 the -- where the content is, it doesn't seem like it
10 would be -- behave the way as expected, without that
11 information.

12 Q. Okay. Other than with regards to the
13 clip, could an ASX file be implemented with or
14 without clip properties? Other than the url of the
15 clip itself.

16 A. I mean, there's a way in the entry to have
17 an external reference. So, there is an alternative
18 way to describe an entry, without using the ref tag.

19 If you look at page eight, it shows the
20 entry rough tag. And with an entry that has no ref
21 element.

22 Q. Okay. So let me ask the question again.
23 An ASX file can be implemented, with or without clip
24 properties, as that term is used in Exhibit 1017.
25 Correct?

1 A. Without which -- which clip properties?
2 Are you referring to all of them as a whole?

3 **Q. Yes. Let's start there.**

4 [Witness perused document.]

5 A. I mean, if an entry tag is empty of any
6 additional information, I don't -- I don't think
7 this will result in any playback.

8 **Q. Okay. Assuming an entry tag is included,**
9 **can an ASX file be implemented, with or without clip**
10 **properties, other than an entry tag?**

11 A. I mean, it appears that other tags also
12 enable some sort of some action with respect to
13 external content. Besides the entry tag.

14 **Q. Does the ASX file require that property**
15 **to -- or tag, to be able to be used by Windows Media**
16 **Player?**

17 A. Which -- which property or tag you're
18 referring to now?

19 **Q. The one that you just referred to.**

20 A. Oh. I don't believe this is the document
21 that says either way. But, I think the intent is
22 that -- that this is -- this is not a statement that
23 all these tags must be used.

24 So, I think -- I think, generally, it's --
25 these tags don't all have to be used, in every ASX

1 file.

2 Q. An ASX file can be implemented with or
3 without file properties, as that term is used, in
4 Exhibit 1017. Correct?

5 A. Sorry. What was the question again,
6 please?

7 Q. Sure. An ASX file can be implemented with
8 or without file properties, as that term is used in
9 Exhibit 1017?

10 A. Well, the -- the file properties
11 referenced on page two, for example, the examples
12 given don't seem to necessarily be required. But
13 the document doesn't say, one way or the other,
14 whether it's required.

15 But, certainly, some of these examples
16 wouldn't seem to impact, you know, the playback.

17 Q. All right. So -- so, what you're saying
18 is that for an ASX file, some of those file
19 properties may be implemented. Some of them may not
20 be implemented. But it doesn't affect the ASX file?
21 It could be -- it could be implemented without --
22 sorry. Take that back. Strike that.

23 An ASX file can be implemented with or
24 without various file properties. Correct?

25 A. I mean, it may affect the way behaviors

1 with respect to these file properties listed behave,
2 but it may not affect the playback of the entries.

3 Q. So you could still -- you would still have
4 an ASX file that could be used and work with Windows
5 Media Player, and omit one or more of those file
6 properties. Correct?

7 A. For the examples given on page two of this
8 document, it would strike me as -- that the lack of
9 those -- those items wouldn't necessarily affect the
10 playback behavior of the Windows Media Player, for
11 example.

12 Q. Well, beyond the examples on page two,
13 would any other examples of file properties affect
14 the ASX file's ability to be used to play back media
15 on a Windows Media Player?

16 A. I mean, I think that depends on the more
17 detailed specification. But, from this document,
18 it's silent on any other file property examples,
19 other than what I see listed on page two.

20 So, I think one would have to refer to
21 kind of the overall specification file document.

22 Q. Right. Are there any examples of file
23 properties on page three?

24 A. Well, when you say "file properties," I
25 think the way the document is using it, is with

1 respect to the ASX file -- sorry, A -- ASX file
2 itself.

3 And that I don't see an example of the --
4 of the file properties, of the type given on page
5 two, on page three.

6 **Q. An ASX file can be implemented with or**
7 **without a playlist, as that term is used in**
8 **Exhibit 1017. Correct?**

9 [Witness perused document.]

10 A. You know, if you're referring to how it's
11 used on page four to five, where it's talking about
12 a really basic, simple playlist -- "the most simple
13 playlist," it says -- that, I mean, it doesn't seem
14 to say there, that there is a requirement that every
15 ASX file has at least one entry.

16 But, if an ASX file didn't have any
17 entries -- entry tags -- it would seem to not be
18 implementing a main feature of -- of an ASX file.

19 MR. CHARKOW: I'm -- I'm striking that as
20 nonresponsive.

21 BY MR. CHARKOW:

22 **Q. I didn't ask about main feature, Dr. Houh.**
23 **I just asked you very simply, an ASX file can be**
24 **implemented with or without a playlist. Correct?**
25 **Or incorrect?**

1 A. I mean, the spec may have more to say
2 about whether that would make it a valid ASX file,
3 or whether a valid ASX file could indeed have zero
4 entries. But --

5 Q. Dr. Houh, I'm not asking about zero
6 entries. I'm asking about -- I'm saying, can it
7 be -- can a -- can an ASX file be implemented in
8 other ways, that does not include a playlist?
9 Generally.

10 [Witness perused document.]

11 A. I mean, I'm not sure why it makes sense to
12 implement a playlist without -- without any entries.
13 I mean --

14 Q. Dr. Houh --

15 A. Certainly --

16 Q. Dr. Houh --

17 A. Certainly, it's --

18 Q. Dr. Houh, again, I didn't ask if you could
19 do a playlist without any entries. I did not ask
20 that question. Please listen to the question.

21 The question is, can an ASX file, in
22 general, be implemented without a playlist? Can you
23 have an ASX file that works, and is used by a
24 Windows Media server, and will play a file -- at
25 least one file -- without a playlist.

1 A. Well, I mean, that is -- that's a
2 different question than you asked before. But let
3 me think about that.

4 [Witness perused document.]

5 A. I mean, I think to answer that question, I
6 think I'd want to look at the behavior of the entry
7 tag, with respect to having no event tags. And see
8 if it's possible that there is some sort of playback
9 of content, when there are no entry tags in the ASX
10 file.

11 **Q. Dr. Houh, I didn't ask if you'd taken out**
12 **all entry tags. If there is an entry tag in an ASX**
13 **file, and it's not within a playlist -- it's just**
14 **not in the playlist format -- that is a valid ASX**
15 **file. Correct?**

16 A. I mean, your question doesn't seem to make
17 sense to me. Because the example of a playlist that
18 they give -- for example, looking on page -- both
19 page -- 10 refers to entries.

20 And when they talk about -- there's
21 another section that also talks about playlists, on
22 page four and five. And it's stating that these
23 examples of playlists, they all have entries. So
24 you --

25 **Q. Dr. Houh --**

1 A. I think you --

2 Q. -- I'm not asking about playlists -- I
3 don't know why you're not answering my question,
4 Dr. Houh.

5 I'm not asking about playlists, and their
6 properties, and playlist properties. I'm asking
7 about an ASX file. And I'm asking -- I'll ask it a
8 different way.

9 Must all ASX files be implemented with
10 playlists?

11 A. The playlist, as it's described in this
12 document, is given by example. And it's -- it says,
13 "The most simple playlists are created by adding
14 multiple entry tags."

15 So, if you look at the example of XML
16 given, it's an ASX file with entry tags. And my
17 point here is that, it appears there is the
18 possibility that with zero entry tags, but with an
19 event tag, there still could be some media playback.

20 I think that's what you're asking.

21 And so, the entry -- in the way that
22 "playlist" is being used in this particular
23 document, I think that you look at -- you look at
24 these examples, and these examples all have entries.

25 And you're saying that without a playlist,

1 can there be media playback. Well, the playlist
2 example here is, in a sense, that these entries
3 constitute the playlist.

4 And my point is that looking at the event
5 tag, it appears possible that there could be some
6 playback, even with no entry tags, or entry -- entry
7 XML tags in the ASX file.

8 MR. CHARKOW: Dr. Houh, you're not
9 answering -- I strike that -- I move to strike as
10 being nonresponsive.

11 BY MR. CHARKOW:

12 Q. You're not answering my question. Well,
13 let's walk through this slowly. In the second
14 paragraph, in the section entitled "Playlist," in
15 Exhibit 1017, page four, it says:

16 "The most simple playlists are created by
17 adding multiple entry tags to the ASX file."

18 Did I read that correctly?

19 A. Yes. I believe you read that correctly.

20 Q. Okay. So what it's saying is that even
21 the most simple playlist has more than one entry
22 tag. Correct?

23 A. I mean, I think you're -- you're reading
24 it overly literally. I think you'd have to look.
25 The spec itself may say that one entry is -- is

1 still valid to occur in a ASX file.

2 Q. But that's not a playlist, Dr. Houh.

3 A. Well --

4 Q. Is it a playlist?

5 A. I don't see why this document would say
6 one way or the other. Certainly, in mathematics --
7 in programming languages, a list can contain one
8 item. That's a very common occurrence.

9 A list can be empty as well. So --

10 Q. Right. Dr. Houh, that's not the example
11 shown. So let me ask you this question.

12 Can a ASX file be implemented without a
13 playlist containing two or more entries?

14 A. I mean, under your strict definition, I
15 don't see why an ASX file can be implemented with
16 just one or zero entries. And when I -- when I'm
17 referring to entries, and I say it that way, it's
18 not -- it's with respect to this entry tag that they
19 give an example of, and it's discussed further,
20 elsewhere in this document.

21 I don't see --

22 Q. Dr. Houh --

23 A. I don't see why it couldn't be a valid ASX
24 file.

25 Q. You're not answering my question again. I

1 move to strike as nonresponsive. Let me ask it one
2 more --

3 MR. BERG: Counsel, please let the witness
4 finish answering his question.

5 MR. CHARKOW: Objection --

6 MR. BERG: He was answering the question.

7 MR. CHARKOW: Okay. Thank you.

8 Objection. Form. Stick with that. Stop --

9 MR. BERG: I'm not making an objection,
10 counsel. I'm asking you to stop badgering the
11 witness and to let him finish his question -- his
12 answer.

13 MR. CHARKOW: If he -- if he -- listen.
14 This is a cross-examination. If he goes off -- if
15 he goes off on a tangent that has nothing to do with
16 the question, I'm going to cut him off. Okay?

17 This is not a regular deposition. This is
18 a cross-examination of a witness, tantamount to a
19 trial. And I will cut -- and if a witness -- and a
20 judge would cut the witness off. We don't have a
21 judge in front of us right now, so sorry.

22 MR. BERG: But you said -- if you cut him
23 off, I'll repeat my comment to you.

24 MR. CHARKOW: Well that -- unfortunately,
25 you're only limited to form. So, that's where we

1 are at. Because otherwise, it's going to be
2 considered coaching the witness.

3 If you want to go down that road with the
4 Board, then have at it.

5 MR. BERG: Counsel, I'm not coaching the
6 witness. I'm asking you to let him finish his
7 answer.

8 MR. CHARKOW: Well, I think you're
9 coaching the witness. So, we'll continue.

10 BY MR. CHARKOW:

11 Q. Dr. Houh, can a ASX file have a single
12 url, and a Windows Media Player will be able to use
13 that ASX file to deliver a file associated with the
14 url?

15 A. I mean, I don't see why that's precluded
16 by this document, even if you're reading it the way
17 you appear to be reading it.

18 Because, well, it says, "The most simple
19 playlists are created by adding multiple entry tags
20 to the ASX file." And the example shows multiple
21 entry tags.

22 I think consulting the spec as to what a
23 valid ASX file would be -- would be an easy way to
24 get a quick answer to this. But I don't see what's
25 precluding it, based on this document right now.

1 The fact that there could be one, or even zero
2 entries.

3 And with one entry, I don't see why some
4 content might not still be played, just because it
5 has one entry. It would seem like -- again, I
6 would -- I could also do a simple test, and could
7 just answer that, if I -- if I had the opportunity.

8 **Q. Dr. Houh, what sort of tests would you do**
9 **in the middle of a deposition?**

10 A. Well, I mean, if I was doing investigation
11 for -- and being asked this question, the kind of
12 test I would do is -- is to create, based on this
13 example, an example of -- of ASX file with one
14 entry.

15 I'd make sure that the content is
16 available at the proper url. And I'd see if opening
17 this ASX -- ASX file resulted in playback of
18 content. And it would be a rather straightforward
19 experiment to do, outside the context of the
20 deposition.

21 I wouldn't expect to kind of do
22 experiments during a deposition. But it's the kind
23 of thing that could be done, outside the context of
24 a deposition, if I were just doing some research,
25 and if I was interested in, for example, today's

1 version of Windows Media Player. That could be
2 done, quite readily.

3 But, if I wanted a different version, I'd
4 have to hunt down -- it would take a little more
5 time to get the answer to that question. So --
6 because I would need to find a different version of
7 Windows Media Player, for example.

8 **Q. And that --**

9 A. Or any player that properly played and
10 opened ASX files.

11 **Q. Right. Dr. Houh, sitting here -- you're**
12 **an expert. Correct? Sitting here today?**

13 A. I mean, I'm not an expert in everything.
14 I don't claim to be an expert in everything.

15 **Q. Right. But you have enough background to**
16 **understand what ASX files are, and how they work.**
17 **Correct?**

18 A. Yeah. I mean, in my previous question, I
19 meant all possible things in the world. You know,
20 that's clearly not the case.

21 But, you know, I have definitely a
22 sufficient background to understand this document
23 and ASX files, generally.

24 **Q. Okay. So, as an expert, what would you**
25 **expect to happen if you put a single entry into an**

1 ASX file -- a single entry pointing -- a single url
2 into an ASX file?

3 Would that ASX file -- or could that ASX
4 file be used by Windows Media Player, so that the
5 media associated with that url would be delivered to
6 the user device?

7 A. I mean, my expectation is that it would --
8 generally -- and this is just based on the fact
9 that -- that -- that I do think there is an overly
10 literal interpretation of the single statement here
11 that you're making. That I don't see why it would
12 necessarily be restricted to having two or more
13 entries in any valid ASX file.

14 The fact is, one could simply try it,
15 and -- and/or look at the spec to see if it says
16 that's valid or not. And then see, if in fact,
17 various players -- you know, if it said that, you
18 know, one -- a single entry in an ASX file is
19 completely -- renders it invalid, and you shouldn't
20 play anything.

21 If the spec says that, then I would still
22 want to see whether various players that implement,
23 using ASX files, would actually follow the spec or
24 not.

25 And if the spec doesn't say anything like

1 that, I would expect an ASX file with just one entry
2 to -- to play -- to play back the entry when it was
3 opened.

4 Just like as if an ASX file with multiple
5 entries is open, that the playback would be playing.
6 Whatever steps need to be taken to commence that
7 playback. If taken on an ASX file with just one
8 entry, would seem to me that -- I would kind of
9 expect that it would play something.

10 **Q. Okay. So, Dr. Houh, you would expect one**
11 **ASX file -- sorry. Strike that.**

12 **You would expect that an ASX file with a**
13 **single entry to a piece of media would result in**
14 **playing of that media on your Windows Media Player.**
15 **Correct?**

16 A. Yeah. I mean --

17 **Q. As an expert.**

18 A. If the user had to take steps to commence
19 the playback, you know, if there were multiple
20 entries, whether or not it'll start automatically,
21 or if there is an option set.

22 But whatever actions the user would take
23 to open the ASX file, and begin playback for an ASX
24 file with multiple entries, I would expect that the
25 user taking the same actions on an ASX file with

1 just one entry would be able to commence playback of
2 the first entry. The reference of the first entry,
3 or the -- the audio file that the first entry is
4 representing.

5 Q. So, Dr. Houh, I want you to assume that a
6 playlist has two or more entries. Okay? Just --
7 this is an assumption I'm asking you to make. Okay?

8 A. Okay.

9 Q. An ASX file could work and provide media
10 to Windows Media Player, and be used by Windows
11 Media Player, if it only had a -- well, strike that.

12 An ASX file does not have to have a
13 playlist, as I just defined it, in order for that
14 ASX file to be used by Windows Media Player, to
15 obtain media. Correct?

16 A. I mean, if, by definition, what you're
17 calling it -- are you saying that any ASX file must
18 have more than two -- two entries? Is that what
19 you're -- is that this hypothetical that you're
20 talking about?

21 Q. Well, where I started was saying that I
22 want you to assume, a playlist -- the definition of
23 a playlist is that it has two or more entries. Can
24 we just -- I would like to make that assumption to
25 start with. Okay?

1 A. Okay.

2 Q. Does an ASX file have to be implemented
3 with such a playlist, in order for it to be used to
4 deliver media? Or can it be implemented with less
5 than, or something other than a playlist?

6 A. Well, I mean, kind of by your definition,
7 a playlist -- you're calling something a playlist if
8 it has two or more entries. And, you know, in the
9 case that the ASX file has one entry, you're not
10 calling that a playlist, by definition.

11 So, in this hypothetical, you know, I
12 would expect it to play in most players that had
13 implemented ASX files. But I think, again,
14 that's -- that would be my expectation.

15 But I think it's a rather simple set of
16 tests to test today's easily accessible players, in
17 that situation.

18 So, I think you just happen not to be
19 calling this ASX file with one entry, a playlist, by
20 definition. But I expect that in that case, where
21 it's not a playlist, I would expect some -- some
22 playback.

23 Because it would be -- it would be
24 somewhat surprising to not do it. And that type of
25 bias -- you know, it might be a bias on the outcome

1 of the experiment, but there's no way for me to bias
2 it in that way.

3 That is, doing the simple experiment would
4 reveal what would actually happen. Whether I
5 believe that that's the expected behavior or not.
6 So --

7 Q. Right. Well, I mean, Dr. Houh, you're an
8 expert. I want to get your view on, you know,
9 whether or not you believe -- you believe that a ASX
10 file would -- could be implemented without the
11 playlist -- the type of playlist that I defined.

12 A. Well, I mean, by your definition, that
13 playlist has two entries. I don't see why an ASX
14 file with one entry would, I mean, under your
15 definition, be invalid, or rather, not a playlist.

16 But I don't see why that would preclude it
17 from working. And my expectation is that it
18 would -- it would probably work on most or all
19 players. But we could -- we could easily, you know,
20 test that, outside the confines of this deposition.

21 Q. Right.

22 A. But that's -- it's not -- it's not a task
23 that I have specifically really done before.

24 Although, I mean, I use plenty of media
25 players today. And when I first create a playlist,

1 it had zero items in it. And in the -- you know, in
2 the context of a specific application that I might
3 use, zero item playlists seem to be fine. And when
4 I add the first item, I can add it to the --

5 **Q. Dr. Houh, you're not answering the**
6 **question?**

7 [Indiscernible crosstalk]

8 A. When I add one item to that playlist --
9 it's a playlist of one item --

10 **Q. You're --**

11 A. And if I add more than one item to the
12 playlist, it becomes a playlist of more than one
13 item.

14 **Q. You're not --**

15 A. So I'm not sure why that renders it
16 invalid. But you're defining it to be invalid if it
17 doesn't have one.

18 So, under that assumption, it's not a
19 playlist. But I still would expect some media to
20 play when I -- when I play -- when I open an ASX
21 file with only one entry --

22 **Q. Right.**

23 A. -- based on my experience with lots of
24 other -- other players that seem to not define
25 "playlist" to be two or more items, as you've

1 defined for this hypothetical.

2 Q. Okay. So, Dr. Houh, I want you to assume
3 a playlist cannot have less than two entries. Okay?
4 That's the assumption I want you to make. Cannot
5 have less than two entries. That's just -- let's
6 just assume that.

7 For that definition, can an ASX file be
8 implemented without such a playlist? Yes or no?
9 Either it can or it cannot.

10 MR. BERG: Objection to form.

11 A. I mean, I don't see what's
12 precluding someone implementing an ASX file with
13 just one entry, which, by your definition, is not a
14 playlist.

15 Q. Okay.

16 A. And so, I mean --

17 Q. Dr. Houh --

18 A. -- that definition --

19 Q. Thank you. Dr. Houh, you gave me your
20 answer. Thank you.

21 All right. So, an ASX -- can an ASX file
22 be implemented with or without -- well, strike that.

23 An ASX file can be implemented with or
24 without graphics elements, as that term is used in
25 Exhibit 1017. Correct?

1 [Witness perused document.]

2 A. Was your question with respect to any
3 graphics at all? Or with respect to custom
4 graphics.

5 **Q. It's with respect to any graphics**
6 **elements, as set forth in the Exhibit 1017.**

7 [Witness perused document.]

8 A. I mean, are you -- are you asking with
9 respect to Windows Media Player? Or with respect to
10 any hypothetical player?

11 **Q. Windows Media Player.**

12 A. I mean, you know, Windows Media Player,
13 itself, has a number of graphics elements, you know,
14 all representing the overall application, and
15 various parts of the application.

16 So, if you're referring to those kinds of
17 graphic elements, also, then I don't see how Windows
18 Media Player would be used without all the various
19 graphic elements that are part of the user
20 interface. Like the Windows; and other various
21 icons and buttons in the Windows Media Player.

22 **Q. That's contained -- sorry. That's**
23 **contained in this section of the -- of the 1017? I**
24 **just don't understand what you're talking about,**
25 **because you seem to be going outside this document.**

1 I specifically said that the graphic
2 elements that I was referring to are the ones
3 disclosed in this -- in this Exhibit 1017. So, I'll
4 ask the question again.

5 An ASX file can be implemented with or
6 without graphic elements, as shown on page three to
7 four of Exhibit 1017. Correct?

8 A. Well, I asked -- I had asked you whether
9 or not you were referring to these custom graphics
10 in here. And you said no. I think you said no.
11 Just any graphics. And so, that was the context of
12 my previous answer.

13 But now, if you are actually referring me
14 to the custom graphics in the Windows Media Player,
15 as given on three -- pages three and four, it
16 doesn't appear that these -- these are required. It
17 only says that these -- there are four basic types
18 of graphics that you can add.

19 But that's not a requirement to add any,
20 one, or all of them, as given by this document.

21 Q. Okay. An ASX file can be implemented with
22 or without server rollover, as that term is used in
23 Exhibit 1017. Correct? Page five.

24 [Witness perused document.]

25 A. I mean, this document goes -- gives good

1 reasons to use it. But it doesn't say, in this
2 particular document, that it must be used in all ASX
3 files.

4 Q. Right. So it's -- so, server rollover is
5 an option that you can implement in an ASX file.
6 Correct?

7 A. It certainly is something that can be put
8 in an ASX file. But this document doesn't say that
9 it's either required or not.

10 Q. Well, that section starts off on page five
11 of Exhibit 1017. It says, if you want to set it up. So
12 that it automatically rolls over. It says if you
13 want to set it up.

14 That doesn't indicate to you that this is
15 optional?

16 A. Yeah. I mean, it's -- what I'm saying is
17 it's not saying that it's required. So, it -- it is
18 teaching what it says. And that -- that it can be
19 part of an ASX file. But this doesn't require it to
20 be. Or require --

21 Q. Right -- so, it's --

22 A. It doesn't require it to be --

23 Q. Right. So it's not required. Another way
24 of saying that is, it's optional. Correct?

25 A. I mean, that may be a fair

1 characterization, but this is giving good reasons
2 why one would -- might want to use this feature.

3 **Q. Right. "Want to use" doesn't mean "must**
4 **use." Correct?**

5 A. Right. I said that this document doesn't
6 require it to be used.

7 **Q. Okay. And an ASX file can be implemented**
8 **with or without protocol rollover. Correct?**

9 A. I mean, protocol and server rollover are
10 discussed together. So, I think all the same
11 answers apply to the protocol rollover.

12 **Q. Which is?**

13 A. Which is --

14 **Q. What does it --**

15 A. This document says that it could be used
16 to rollover to a different protocol if a failure
17 occurs.

18 And, you know, I think that means that it
19 could be rolled over to the -- a different protocol
20 on the same server, or rolled over to a different
21 protocol on a different server. But, either way,
22 it's still rolling over to a different protocol.

23 And this document does give some reasons
24 that people might want to use this feature. But it
25 doesn't require it to be used.

1 Q. In other words, it's optional?

2 A. It can be selected to be used. And there
3 are good reasons to do so, in various cases.

4 Q. Right. Dr. Houh, you would agree that if
5 you don't have to do something, it is optional.
6 Correct?

7 A. Well, I mean, the server -- the Windows
8 Media Player may implement it. That doesn't sound
9 like it's optional, whether it's -- the capability
10 is implemented in the player, that is -- that might
11 be used to open this.

12 But certainly, for any individual ASX
13 file, it can be present, or it may not be present.

14 Q. So, it's optional. Correct?

15 A. I mean, you might not consider it optional
16 if you're trying to write a Windows Media Player
17 that can handle all these cases.

18 Q. Right. But if you're not -- if you're
19 not -- if you're not trying to handle all these
20 cases. If you're just trying to write an ASX file,
21 period. A protocol rollover is optional. Correct?

22 A. Well, for ASX files, you know, this -- I
23 mean, the -- the refs [Phonetic] that indicate the
24 protocol or server rollover, don't necessarily have
25 to be present in any particular instance of an ASX

1 file.

2 Q. Right.

3 A. But the expectation is that if an ASX file
4 has -- has this rollover feature in it, that --

5 Q. That -- you've answered --

6 A. -- to do it.

7 Q. Yeah. You answered. You answered the
8 question, Dr. Houh.

9 In Exhibit 1017, entitled, "All About ASX
10 Files," there is no express disclosure of reserving
11 system resources. Correct?

12 A. Sorry. Could you repeat that question
13 again, please?

14 Q. In Exhibit 1017, which is entitled, "All
15 About ASX Files," there is no express disclosure of
16 reserving system resources. Correct?

17 [Witness perused document.]

18 A. Are you referring to any particular
19 resources that this -- this document mentions? Are
20 you --

21 Q. The question was, there is no express
22 disclosure of reserving system resources.

23 MR. BERG: Object to form.

24 [Witness perused document.]

25 A. Well, just taking a quick look at this

1 document right now, I don't see it using the word,
2 "reserve," or variations thereof; or the word,
3 "resources."

4 Q. Okay. In Exhibit 1017, entitled, "All
5 About ASX Files," there is no express disclosure of
6 using an identifier to reserve system resources.
7 Correct?

8 A. You know, as I said, I don't see the use
9 of the word, "reserve" or "resources." And, I mean,
10 there are examples of certain types of identifiers
11 here. But I don't see them as being discussed in
12 the context of -- in this document of -- with
13 respect to kind of reserve or resources --

14 Q. Okay. Thank you, Dr. --

15 A. -- using those words.

16 Q. Thank you, Dr. Houh.

17 MR. CHARKOW: I think this is a good place
18 to take a break, if that works for everybody. I
19 think we've been going for about, you know, a little
20 over an hour.

21 MR. BERG: Yeah. That works for -- works
22 for me.

23 THE WITNESS: Sure.

24 THE VIDEOGRAPHER: Okay.

25 MR. CHARKOW: Dr. Houh, so --

1 THE VIDEOGRAPHER: The time -- sorry. The
2 time is 3:23 p.m.. We are off the record.

3 (Short break.)

4 THE VIDEOGRAPHER: Okay. We are back on
5 the record, and the time is 3:36 p.m..

6 BY MR. CHARKOW:

7 Q. Dr. Houh, you've been provided with a
8 Exhibit that's been previously marked as
9 Exhibit 1044, in IPR numbers -- IPR2 -- sorry --
10 IPR2021-00298, 304, and 308.

11 A. I'll take your word that those are the
12 right ones. I don't know them all from memory.

13 Q. Okay. So -- but you have that document in
14 front of you? Exhibit 1044. Correct?

15 A. Yes.

16 Q. Okay. And Exhibit 1044 is a document --
17 it's a patent -- U.S. Patent No. 5,931,901, to Wolfe
18 et al. Did I read that correctly, Dr. Houh?

19 A. Yes. I believe you did.

20 Q. So, Dr. Houh, have you seen this document
21 before?

22 A. I have.

23 Q. Okay. And you've reviewed this document
24 when preparing your -- your various declarations,
25 for this is a part?

1 A. I did. Yes.

2 Q. Okay. If you could go to column one?

3 Line 43 to 48? And this is found in the background
4 of the invention section. And it starts with, "It
5 is desirable."

6 If you could just let me know when you get
7 there, when you see where I'm talking about?

8 A. I do see it.

9 Q. Can you read that paragraph into the
10 record, and then tell me what you think that means?

11 A. It says:

12 "It is desirable to provide an
13 internet-based system for the dissemination of
14 valuable preparatory information, free of charge.
15 Just as it is provided through network television
16 and radio stations, without any costs to the
17 ultimate user/subscriber, and with advertiser
18 sponsorship thereof, targeted to the subscriber."

19 Q. So -- yeah. Go ahead.

20 A. And I think, what it's generally saying
21 is, you know, some TV is broadcast over the air, and
22 radio stations as well. And the desire is to
23 provide an internet-based system to deliver, you
24 know, broadly, the same -- same information, or the
25 same type of information. But --

1 **Q. Right.**

2 A. But using -- using advertising, much like,
3 you know, broadcast and radio have advertising. But
4 also, the advertising of the internet system,
5 disseminating the information, is -- is targeted to
6 the subscriber.

7 **Q. Right. And -- and are you -- is that all?**
8 **Or you have more?**

9 A. Well, I think, you know, generally
10 speaking, that's -- that would be a summary of that;
11 what it would mean to me.

12 **Q. Okay. And it is saying that the**
13 **information is free of charge. Meaning that the --**
14 **the information is some sort of media being free of**
15 **charge. Correct?**

16 A. Well, I mean, I think it's free of charge
17 to the ultimate user, or subscriber. Even though
18 it's still saying it's kind of free. Much like
19 people don't pay to watch a broadcast TV channel.
20 They are not the people that pay. It's that the --
21 there's advertisers that are paying.

22 And in this case, there are advertisers --
23 advertisements that would be targeted to the
24 subscriber.

25 **Q. Right. So the way this works is a**

1 subscriber gets it for free, and the advertisement
2 covers the cost of the -- of putting up the media.
3 Correct?

4 A. I mean, generally speaking, that's what
5 it's saying in the background, of the desire. What
6 would be desirable is -- it's kind of laying the
7 background.

8 Q. Right. The background for what?

9 A. For this -- this patent. It's -- I'm just
10 pointing out that it's in the background of the
11 invention section.

12 Q. Right. And it's laying out the background
13 for what's to follow. Right? What the invention
14 is. Correct?

15 A. Yes. As broadly stating kind of a desire,
16 based on the background here, at the end of the
17 background section.

18 Q. Right. And in Wolfe, which is
19 Exhibit 1044, revenue is generated from
20 advertisements. Correct?

21 A. So, if you look at Wolfe, for example, at
22 column four, around line 45, it's talking about
23 billing information and prepaid advertising time
24 available for each advertiser, and arrange -- well,
25 skip that.

1 But, generally, it's talking about
2 generating payments for the advertising time. And
3 then, you know, that's how some of the revenue in
4 this example is being generated, for example.

5 And it's -- this is talking about for the
6 time, but it's understood that advertisements are
7 run, that use up the time. I think it would, you
8 know, be talking about that elsewhere as well.

9 **Q. In Wolfe, how is an advertisement inserted**
10 **into the music or video content?**

11 [Witness perused document.]

12 A. So, for example, the -- Wolfe talks about
13 these advertiser -- "advertiser dossiers that also
14 contain specification of desired consumer profiles
15 to be targeted." And, also:

16 "The specification of the category of
17 products or services to be advertised.
18 Specification of any territorial or local time
19 requirements or preferences. And a key to the
20 location of the audio advertising content."

21 And that's in column two, around line
22 nine, 13 through 17.

23 And then, it further goes on, if you look
24 at column three, lines 56 through 68; around there.

25 "As already explained, in accordance with

1 the present invention, the music being transmitted
2 off the internet to the subscribers is bundled with
3 targeted advertising material, in the form of audio
4 messages, tailored to the subscriber or musical
5 profile, paid for by the advertisers."

6 And it further goes on to talk about, I
7 think a database, if you look at column four, around
8 line 50 through 59.

9 "Most importantly, for the present
10 invention, this database also specifies for each
11 particular advertiser, the type, i.e., the profile
12 of the subscriber/listeners, with the particular
13 advertiser -- which -- sorry -- which the particular
14 advertiser would like to target, and the advertising
15 audio content code for each target.

16 It is not necessary to limit the
17 specification to a narrow class of individuals.
18 Several classes can be identified and prioritized.
19 Moreover, each advertiser may have different
20 renditions of audio advertising copy to be directed
21 to different audiences, i.e., classes of listeners."

22 Q. All right. I'm sorry, Dr. Houh. I said
23 "how." Not -- maybe this is part of how. I meant
24 like, literally, how it's put in there. Now the --
25 you know, that it's targeted, or not targeted. I

1 mean, like how it's put in there.

2 You know, is there a -- is there a reserve
3 space that you -- you put it in? Or, you know -- I
4 just -- sorry. I think I'm not sure -- maybe my
5 question was unclear, or --

6 A. Yeah. I thought that was the how, but now
7 that you're asking for a more specific how, maybe
8 it's a different how. I'm not sure.

9 Q. Maybe --

10 A. I think -- yeah. I did -- I did see
11 something directed to that. Let me -- let me -- let
12 me look again.

13 Q. Uh-huh.

14 [Witness perused document.]

15 A. So, for example, if you look at column
16 seven, starting around line 43, it talks about this
17 process about the subscriber selecting content,
18 which they want to receive. And that content is
19 placed in a queue.

20 And then:

21 "Based on the profile of the content, a
22 determination is made by the system as to which
23 advertising messages may be delivered. The system
24 determines which -- whether the permitted
25 advertising message has available allocation, and

1 whether other required parameters have been met.

2 And then, from the remaining filter, the
3 next available advertising message is selected. And
4 then, that selected advertising message is then
5 affixed to the next generic message in sequence, or
6 to the applicable identity audio message, and is
7 placed in a queue.

8 And the system automatically links the
9 advertising message, or the generic or identity
10 message, and the subscriber selected content into a
11 single data stream, along with other such streams,
12 pursuant to the subscriber's request.

13 In constructing the stream, the system
14 overlays the generic or identity message on to the
15 content, so that when delivered, the audio generic
16 or identity message, and the audio content can both
17 be heard by the subscriber simultaneously.

18 The completed data stream, including all
19 selections, is then delivered to the subscriber in a
20 single stream of packets over the internet or other
21 communication medium, permitting individualized
22 delivery."

23 And then -- and then, it does describe at
24 the end of the spec:

25 "Although the present invention has been

1 described in relation to particular embodiments
2 thereof --"

3 And that was an example from a particular
4 embodiment.

5 "-- many other variations, and
6 modifications, and other uses will become apparent
7 to those skilled in the art.

8 It is preferred, therefore, that the
9 present invention be limited not by the specific
10 disclosure herein, but only by the appended claims."

11 And then it shows the claims. But that's
12 an example of how, I think, the advertisement is
13 delivered.

14 MR. BERG: Counsel, are you still on?

15 MR. CHARKOW: Yeah. I'm here.

16 MR. BERG: Oh, okay.

17 MR. CHARKOW: Sorry.

18 BY MR. CHARKOW:

19 Q. Dr. Houh, did you answer my question, if
20 there's any other embodiments in the -- in the Wolfe
21 Patent, Exhibit 1044, that you could point to,
22 that's expressly stated? In terms of how ads are
23 inserted.

24 MR. BERG: I think we must have missed
25 that question, counsel.

1 MR. CHARKOW: Oh. All right. Sorry.

2 BY MR. CHARKOW:

3 Q. Dr. Houh, are there any other examples
4 that you can point to in the specification,
5 regarding how ads are inserted, in addition to the
6 one you just gave?

7 [Witness perused document.]

8 A. So, I don't see any explicit disclosure of
9 another method. But, certainly, it's the -- Wolfe
10 suggests numerous other ways to do it, including,
11 you know, that Wolfe also teaches about video.

12 And that kind of overlap makes less sense
13 for video than it does for audio. For example, on
14 radio --

15 Q. So, Dr. Houh --

16 A. -- you know, so --

17 Q. -- you answered the question --

18 A. -- over the advertisement --

19 Q. You answered the question, Dr. Houh.

20 A. You know, the --

21 Q. Sorry, Dr. Houh. You answered --

22 [Indiscernible crosstalk.]

23 A. The advertisements are delivered over the
24 end of music, say --

25 Q. Yeah. Dr. Houh --

1 A. -- and not necessarily --

2 Q. Dr. Houh, you answered. Dr. Houh, you
3 answered the question. I'm sorry. You already
4 answered the question, you know, a paragraph ago.

5 A. I'm trying to explain -- I'm trying to,
6 you know, more fully explain my answer.

7 Q. Dr. Houh, you're not trying to more fully
8 explain your answer. You're trying to bury your
9 answer. And the reality is that, you just answered
10 the question.

11 You said there was not -- you said there
12 was no other example that you can find. And that
13 was my only question. Is there -- so, let me ask
14 you again.

15 Is there another example of how targeted
16 ads are inserted? Yes or no? Either there is or
17 there isn't. I mean, is it in there or no?

18 A. Well, it's certainly teaching that there
19 are other -- other ways and modifications to this
20 thing that are apparent to those skilled in the art.
21 So, I think it is suggesting --

22 Q. Right. So is it --

23 A. -- that there are other ways --

24 Q. Is there anything in there?

25 A. -- that were suggested already.

1 **Q. All right.**

2 A. And, you know, I think it's in here -- I'm
3 trying to answer your question --

4 **Q. Yeah. I --**

5 A. -- that the specification certainly
6 suggests --

7 **Q. You answered --**

8 A. -- these modifications and variations.

9 **Q. Yeah. Dr. Houh --**

10 A. And that other uses will become apparent
11 to those skilled in the art.

12 **Q. Right.**

13 A. And I'm telling you that one obvious, you
14 know, variation and modification --

15 **Q. Yeah. I'm not --**

16 A. -- especially with video --

17 **Q. I move to strike --**

18 A. -- Wolfe also expressed that the --

19 **Q. -- so you can keep talking.**

20 A. -- is explicitly disclosing. It doesn't
21 make sense to overlay the two like that.

22 **Q. Yeah. Dr. Houh --**

23 A. And since Wolfe is -- about video --

24 **Q. I'm going to move to strike the answer.**

25 A. -- that it is suggesting --

1 Q. Move to strike the answer.

2 A. Wolfe is teaching --

3 Q. Okay. Move to strike.

4 A. -- these things to a person of ordinary
5 skill, because --

6 Q. Move to --

7 A. -- these are the things that a person of
8 ordinary skill would find --

9 Q. Right.

10 A. -- apparent.

11 Q. Move to strike. Yeah. It's not apparent,
12 Dr. Houh. I said explicit.

13 So let me ask you this quick. Is there
14 any express disclosure, in Wolfe, that discloses
15 other embodiments of how to insert advertisements?
16 Expressly.

17 A. As I'm looking at this now, I didn't see
18 another express disclosure, as similarly to -- you
19 know, as provided in detail there. And --

20 Q. Thank you Dr. Houh. Thank you.

21 MR. CHARKOW: All right. So, Spencer, if
22 you can provide Dr. Houh with Exhibit 1053.

23 BY MR. CHARKOW:

24 Q. And, Dr. Houh, if you could let me know
25 when you have access to Exhibit 1053. Exhibit 1053

1 is U.S. Patent No. 6,785,704. And that is
2 previously marked as Exhibit 1053, in IPR numbers
3 2021-00298 and 304.

4 And, Brad, if you could just confirm that
5 those are the two IPRs that use this reference.

6 MR. BERG: Yeah. Sorry. Just give me one
7 second, counsel, to confirm that.

8 MR. CHARKOW: Yep.

9 [Pause]

10 MR. BERG: Yes. That's correct.

11 BY MR. CHARKOW:

12 Q. Okay. Dr. Houh, have you seen
13 Exhibit 1053 before?

14 A. Yes. I have.

15 Q. Okay. Do you see the filing date on the
16 cover page of July 3rd 2000?

17 A. Yes.

18 Q. And do you see underneath that, two lines
19 down, it says "Provisional Application," and it says
20 "Filed on December 20th 1999?"

21 A. Yes.

22 Q. Okay. Windows Media Player was in use and
23 available publicly, before McCanne's earliest
24 priority date, shown on the face of the patent.
25 Correct?

1 A. Yeah. I believe -- I mean, you said
2 "McCain" again, but I'll -- I'll recognize what
3 you're talking about if you say "McCain," as this
4 reference.

5 But I believe -- yeah, it's true that
6 versions of Windows Media Player were available
7 before 1999.

8 **Q. Let me -- let me just clean that up.**
9 **Windows Media Player was available before**
10 **Exhibit 1053's earliest priority date, shown on the**
11 **face of the patent. Correct?**

12 A. I believe it's true that certain versions
13 of Windows Media Player were available before the
14 earliest priority date shown on the McCanne patent.

15 **Q. The discussion of Microsoft Net Show is**
16 **only contained in the background section of**
17 **Exhibit 1053. Correct?**

18 [Witness perused document.]

19 A. So, if you look at column 25, around line
20 46, it says:

21 "In current art, an application like a web
22 browser or streaming Media Player parses a url entry
23 server component and relative path component."

24 So it's not explicitly mentioning "Net
25 Show," but what you pointed me to in the background

1 is describing Net Show as a streaming type -- having
2 streaming data capabilities.

3 And it's not mentioning "Net Show"
4 specifically, but later, it does refer to general
5 classes of applications that can stream media.

6 Q. Okay. So, the summary of the invention
7 section of McCanne does not expressly mention using
8 Net Show. Correct?

9 [Witness perused document.]

10 A. I don't see the word "Net Show" used
11 explicitly in column six, lines 17 through 67,
12 which -- yeah -- which is -- which is the summary of
13 the invention section.

14 Q. The brief description of the drawing
15 section of McCanne does not expressly mention using
16 Net Show. Correct? I'm sorry. Strike that. I
17 think I may have asked that question wrong.

18 The brief description of the drawing
19 section of McCanne does not expressly mention using
20 Net Show. Correct?

21 A. I don't see the word "Net Show" being
22 explicitly used in column seven, lines one through
23 52, which is the brief description of the drawing
24 section.

25 Q. The description of the specification --

1 embodiment section of McCanne does not mention --
2 does not expressly mention using Net Show. Correct?

3 [Witness perused document.]

4 A. So, as I looked through McCanne just now
5 from -- in that section, which I think goes through
6 up to the claims -- I don't see the word "Net Show"
7 being explicitly used in that part of the
8 specification.

9 Q. Okay. And the claims of McCanne do not
10 expressly mention using Net Show. Correct?

11 [Witness perused document.]

12 A. I don't see the word, "Net Show," being
13 explicitly used in the claims anywhere.

14 Q. The figures of McCanne do not expressly
15 mention using Net Show. Correct?

16 [Witness perused document.]

17 A. So -- so, I don't see the word, net --
18 "Net Show" explicitly used in the figures, but I
19 note that there are abstract markings
20 for [Inaudible]. And the specification certainly
21 describes types of clients, as I discussed earlier.

22 Q. Okay. But you don't see any express
23 mention of "Net Show." Correct?

24 A. I didn't see the word, "Net Show" being
25 used in the -- in the figures. But in many cases,

1 it doesn't use the word "client" either. It
2 doesn't --

3 [Witness perused document.]

4 **Q. Again, Dr. Houh, I didn't ask that --**
5 **there is no question I asked about client, or**
6 **anything. I just asked about Net Show.**

7 **McCanne, which is Exhibit 1053, makes no**
8 **express mention of "ASX" or "ASX" file. Correct?**

9 [Witness perused document.]

10 A. So, I believe that if you're referring to
11 "ASX," as we've been talking about, I believe, in
12 Exhibit 1017, you know, I mean, there is the notion
13 of an autonomous system with a number here, and --
14 but I don't believe that's what you're talking about
15 when you asked about ASX.

16 But, with respect to the ASX, as it's
17 used, as a type of file extension, or file, I don't
18 see an explicit discussion of ASX files in the
19 specification -- in the -- in the McCanne patent.

20 **Q. Thank you, Dr. Houh. In McCanne, which is**
21 **Exhibit 1053, it makes no express mention of Windows**
22 **Media Player. Correct?**

23 [Witness perused document.]

24 A. So, while I don't see the three-word
25 phrase, "Windows Media Player," as I discussed

1 earlier, the description of the embodiments does
2 discuss streaming Media Players, which I think
3 Windows Media Player was known to do at the time.

4 Q. Right. So -- but you don't see any
5 express mention of Windows Media Player in McCanne.
6 Correct?

7 A. I did not see any use of the three-word
8 phrase, "Windows Media Player."

9 Q. Or you didn't see the word, "Windows
10 Player." Correct?

11 A. Yeah. I don't think I saw that either.
12 But "Media Player," I did see.

13 Q. Okay. McCanne, which is Exhibit 1053,
14 makes no express mention of a playlist, or a play
15 script. Correct?

16 [Witness perused document.]

17 A. So, as I looked through it just now, I
18 don't see any explicit use of the -- of the word or
19 phrase, play script, or playlist.

20 Q. Thank you, Dr. Houh.

21 A. You know --

22 MR. CHARKOW: So, it's a good time to take
23 a break for me, if it works for everybody else. I'm
24 on to my next section. So, if that works for you,
25 Dr. Houh, we can. And for Brad, we could take a

1 break.

2 THE WITNESS: Sure.

3 MR. BERG: Yep. That works fine for me.

4 MR. CHARKOW: All right. So, let's do --
5 how long do you -- would you like, Dr. Houh?

6 THE WITNESS: You know, maybe 10 minutes
7 is good.

8 MR. CHARKOW: Okay. So we'll do 4:44 --
9 4:45?

10 THE WITNESS: Yeah; 4:44 like 3:33. Not
11 like our last break. How's that? And we'll hope to
12 get started by 4:45.

13 MR. CHARKOW: Okay. Well now we'll take
14 another minute.

15 THE VIDEOGRAPHER: The --

16 MR. CHARKOW: Okay. Go ahead.

17 THE VIDEOGRAPHER: The time is four -- the
18 time is 4:35 p.m.. We are off the record.

19 (Short break.)

20 THE VIDEOGRAPHER: Back on the record.
21 The time is 4:46 p.m..

22 MR. CHARKOW: Dr. Houh, you've been
23 provided with Exhibit 1006, that's been previously
24 marked, in IPR2021-00265.

25 Brad, if you could just confirm that

1 that's the -- I believe that's the only IPR that
2 this is -- that this is cited in.

3 MR. BERG: Yeah. It's only in one of
4 them. Let me just confirm the number there.

5 Yeah. That's right.

6 MR. CHARKOW: Okay.

7 BY MR. CHARKOW:

8 Q. And this -- Exhibit 1006 is U.S. Patent
9 No. 6,385,596 to Wiser et al.

10 Dr. Houh, have you seen this exhibit
11 before?

12 A. Yes, I have.

13 Q. And have you considered this exhibit in
14 forming your opinion in the -- in this -- in IPR
15 265?

16 A. Yeah. In one of these cases, if that's
17 what the attorneys say, then it must be the one.

18 Q. Okay. Dr. Houh, let me ask you a
19 question. Have you talked with your -- or any
20 attorney throughout the whole day today, after the
21 deposition started?

22 A. No.

23 Q. And have you had any communications
24 through text, or email, or in any way, with any --
25 with any attorney, during the course of this

1 deposition?

2 A. I mean, other than you, no.

3 [Witness perused document.]

4 Q. Sorry. Dr. Houh, were you waiting for me?

5 Or are you looking at something?

6 A. Oh, I didn't think there was a pending
7 question.

8 Q. Oh. I asked if you received any
9 communications from any attorneys during the course
10 of the deposition.

11 A. Oh. I thought I answered that question.
12 But no, I hadn't -- I hadn't -- not received any
13 email, or text, or any other calls from any
14 attorneys during or breaks.

15 But I think I said earlier, I --
16 obviously, we've been going back and forth during
17 this deposition.

18 Q. Yeah. Other than me. So let's just say
19 that.

20 A. No.

21 Q. Sorry? No? You haven't talked to
22 anybody -- any other attorney, other than me, during
23 the course of this deposition?

24 A. That's true. I assume you don't mean, you
25 know, anything we say about breaks just before we go

1 on a break, and where Brad might be talking too.

2 Q. Okay. --

3 A. But no direct communication with any --
4 any other attorneys, aside from you, since the
5 deposition started.

6 Q. Okay. Thank you. And other than the
7 documents that you have in front of you, have you
8 been looking at any other documents, or at any other
9 documents in front of you; on your screen; on your
10 desk?

11 A. No.

12 Q. So, Dr. Houh, I'm going to ask some
13 questions about Wiser. The Wiser system uses a
14 voucher ID in order to determine whether to deliver
15 media to a user. Correct?

16 [Witness perused document.]

17 A. If you look at Wiser in column eight, one
18 thing Wiser says is that:

19 "The voucher ID limits the use of the
20 media voucher -- the media voucher to a single
21 purchase or preview transaction.

22 But Wiser also discloses other additional
23 uses of the voucher ID.

24 Q. So, the Wiser system uses a voucher ID in
25 order to determine whether to deliver media to a

1 **user. Correct?**

2 [Witness perused document.]

3 A. I think there are a lot of different
4 elements that participate in that ultimate decision.

5 For example, if you look at column eight,
6 it talks about this:

7 "The transaction ID preferably includes
8 the media voucher ID, the timestamp of the time of
9 delivery to the Media Player, 116, a certificate
10 serial number of the content manager, 112,
11 authorizing the delivery of the media data file,
12 200, and the certificate of the Media Player, 116,
13 receiving the media data file, 200.

14 And I think that's with respect to the
15 download portion of the capability disclosed in
16 Wiser.

17 **Q. Right. So, a voucher ID is used by the**
18 **Wiser system, in order to determine whether to**
19 **deliver media to a user. I think you're saying it's**
20 **one -- it's one thing, but it's one of several.**

21 A. Yeah. That was the point. Which is,
22 there are many things. And I pointed out some of
23 what the voucher ID was used for in the previous --
24 in the previous earlier question. And then this,
25 basically, to support that there are many things in

1 the authorization of the delivery of the media file
2 to a user.

3 **Q. Right. In Wiser, the voucher ID is used**
4 **to authenticate a user. Correct?**

5 [Witness perused document.]

6 A. Well, I mean, I think it's the consumer
7 certificate that's providing the authentication
8 credentials for particular users. Especially those
9 who purchase items in Wiser.

10 And, I mean, there's numerous things that
11 I can point you to, if you want me to do that.

12 **Q. No. So you're saying that the voucher ID**
13 **is not used to authenticate the user?**

14 A. Well, the main thing that's used to
15 authenticate the user is the consumer certificate.
16 For example, in column eight, line 60, "The consumer
17 certificate is used to authenticate the purchase --"
18 no, wait. That's not the one I'm looking at.

19 There is discussion that it's the consumer
20 certificate which provides the authentication
21 credentials that the user is, indeed, who they say
22 they are. Which would be the authentication part of
23 the system.

24 **Q. Are you saying --**

25 A. So, yeah. Column 11, line 29:

1 "A user registers to obtain a consumer
2 certificate that is used by the content manager to
3 authenticate the identity of a purchaser of a media
4 data file."

5 It says that in numerous places, as well.
6 That's just one that I see right now.

7 **Q. Right. Well, you say that's the main**
8 **thing that's used to authenticate. Is the voucher**
9 **ID used to authenticate? Or part of the data used**
10 **to authenticate a user?**

11 A. Well, I mean, the voucher ID is used in --
12 I mean, we can go through the different uses, if you
13 want to do it that way. But -- but in particular,
14 it's really this consumer certificate that provides
15 the authentication credentials.

16 And this is -- generally with respect to
17 the certificate, is a -- kind of a term used in
18 public/private key -- public/private key encryption.
19 And this does discuss public keys and private keys.

20 And, typically, a public key is -- can be
21 found in a consumer -- in a certificate belonging to
22 a particular person. So --

23 **Q. Right --**

24 A. So, I think it's really this consumer
25 certificate that's being used to authenticate the

1 identity of a purchaser, which would be a user in
2 the system.

3 Q. Yeah. So, can you go to -- let's go to
4 column five.

5 A. Okay.

6 Q. And if we can go to line eight? And it
7 reads:

8 "The delivery server validates the message
9 authentication data using the voucher ID and the
10 certificate chain from the packet, and the receipt
11 obtained from the content manager."

12 So, doesn't that indicate that the voucher
13 ID is used, at least part for identification?

14 A. Well, I mean, you asked about
15 authentication of the user. This is talking about
16 authenticating the messages.

17 So, I mean, there is one -- one use of
18 authentication is -- you know, is a person who they
19 say they are? And then, you know, one can be issued
20 credentials, like a certificate, that shows that you
21 are.

22 And then, there is another part about --
23 there is another concept of authenticating a
24 message, is that, is this message really the message
25 that was sent, and perhaps wasn't tampered with.

1 And it's possible to authenticate messages as well.

2 So, I think the part you're pointing me
3 to, is a message authenticating -- the Media Player
4 creates a message authentication of the receipt and
5 voucher ID from the media voucher, and the consumer
6 certificate from the passport.

7 So, it's -- it's really authenticating a
8 bunch of things. But it's different -- this is
9 different than the concept of authentication of a
10 user.

11 **Q. Okay. So, in Wiser, the voucher ID is**
12 **used to authorize a user. Correct? To access**
13 **content.**

14 [Witness perused document.]

15 A. I mean, if you look at column 18, line 11,
16 "The voucher ID is used in the process for that."
17 But, again, it's not the only thing. Line 12 --
18 well, maybe starting at line nine:

19 "Once the merchant server has received
20 payment authorization, it notifies the content
21 manager that the user has purchased the media
22 associated with the voucher ID.

23 This is done by providing the voucher ID
24 and authorization token previously sent to the
25 merchant server, and a flag indicating the new state

1 of the reservation is authorized for delivery.

2 The content manager updates the
3 transaction database to reflect that the voucher
4 packet for this voucher ID has been authorized for
5 purchase and download. This notification authorizes
6 the content manager to enable requested media data
7 file for delivery."

8 And so, that -- that really is discussing
9 a number of things that go into the process of
10 authorizing specific content for delivery to a
11 specific user. And the voucher ID is used in the
12 back and forth.

13 But, certainly, there are other -- other
14 things used, as well, in that process?

15 **Q. Right. So in Wiser, the voucher ID is**
16 **used in the authorization process, in order to**
17 **authorize the users to access content. Correct?**

18 A. Well, there are many things used. And the
19 voucher ID is used, as disclosed in this section, as
20 part of the back and forth between various elements
21 of the -- of the Wiser components.

22 **Q. So, the voucher ID is one of the elements**
23 **used to authorize a user to access content.**
24 **Correct?**

25 A. I mean, the voucher ID is one of the

1 elements used in the process of the back and forth
2 of -- but there are other elements, you know.

3 And, I mean, you know, as stated
4 elsewhere, the voucher ID is really used to track a
5 reservation. But I wouldn't -- I would say that the
6 identity of the reservation would be important. But
7 that the -- but that -- that doesn't encapsulate --
8 certainly, it doesn't encapsulate all the necessary
9 data for the authorization.

10 Simply knowing what specific reservation
11 doesn't mean there actually is authorization for
12 that reservation. You know, this section is
13 disclosing a separate authorization token.

14 **Q. Right.**

15 A. So, again, it's part of the process. It's
16 not -- it's used in the process of, as I just
17 referred you in Wiser.

18 **Q. Right. I'm --**

19 A. So, it's certainly part of the process.

20 MR. CHARKOW: Okay. I'm moving to strike
21 as non -- that answer as nonresponsive.

22 BY MR. CHARKOW:

23 **Q. All right. The voucher ID is used by the**
24 **Wiser system until the media is delivered. Correct?**

25 [Witness perused document.]

1 A. So, I think Wiser does describe using the
2 voucher ID in the process, up to the point of
3 downloading a purchase file, for example, in that
4 particular type of transaction, which is one of
5 several that Wiser discloses.

6 But it also discloses using the voucher ID
7 after the download of the -- of the file as well.

8 **Q. Can you turn to column 14, line 36?**

9 A. Okay.

10 **Q. And can you read from column 14, line 36,**
11 **through column 15, line nine? And the question that**
12 **I have is, there's no express mention of a voucher**
13 **or voucher ID. Correct?**

14 [Witness perused document.]

15 A. I mean, if you're asking about whether
16 voucher ID appears explicitly between the lines --
17 the section starting with "preview," at line 36 in
18 column 14, but ending at column 15, line nine, I
19 think you said.

20 I mean, the previous section does go on.
21 And while that section --

22 **Q. No. That's not what I asked.**

23 A. -- doesn't specifically mention voucher
24 ID. The media voucher, if you look further down, is
25 mentioned in --

1 Q. I didn't ask that, Dr. Houh.

2 A. -- and then, in paragraph --

3 Q. I mean, you've answered the question --

4 A. In column eight, line 19, it -- and the
5 section talking about --

6 Q. That's not --

7 [Indiscernible crosstalk.]

8 Q. I don't know why you're answering another
9 question --

10 A. -- include the voucher ID as part of the
11 media voucher.

12 Q. Right. And, Dr. Houh, I didn't ask you
13 anything other than those lines. So why did you --
14 why did you go beyond those lines?

15 I just asked you those lines. I'm just
16 asking you a question. I don't understand why
17 you're -- first of all, I'm striking as
18 nonresponsive. Moving to strike as nonresponsive,
19 your answer.

20 And I'll ask you again, in those lines
21 only, column 14, line 36, to column 15, line nine,
22 is there any express mention of the voucher, or
23 voucher ID? Yes or no? In those columns -- just
24 that section.

25 A. Well, I think there's lots of sections.

1 Voucher ID is not explicitly mentioned in many parts
2 of this specification. And, as I said, in those
3 lines --

4 Q. I'm not asking you about many parts,

5 Dr. Houh. That's not my question.

6 A. In that section --

7 Q. That's not my question, Dr. Houh.

8 A. -- you referred to, as I said -- as I
9 answered, I don't see the term "voucher ID" used,
10 but in the description --

11 Q. Thank you. You answered the question.

12 A. -- the whole part of the specification
13 mentioned --

14 Q. Don't get confused --

15 A. -- mentioned that the preview --

16 Q. Thank you, Dr. Houh.

17 A. -- and it does definitely mention media
18 voucher. And in the specification --

19 Q. Yeah. I'm --

20 A. -- the section describing media voucher,
21 it definitely mentions that it's used --

22 Q. Right.

23 A. -- in previews.

24 MR. CHARKOW: All right. I'm moving to
25 strike as nonresponsive. That is not a responsive

1 answer, Dr. Houh.

2 BY MR. CHARKOW:

3 Q. So, with regard to the voucher ID, once
4 the delivery of media is completed, the voucher ID
5 is -- one thing that the voucher ID is used for is
6 to log that the delivery was made. Correct?

7 [Witness perused document.]

8 A. So, if you look at column 19, starting at
9 line 44, it does say that:

10 "Once delivery is complete, the delivery
11 server 118 notifies line 62, the content manager
12 112, indicating the voucher ID, media ID, receipt
13 token, time duration of a download, and the
14 authorization token.

15 The content manager 112 updates its
16 transaction database to reflect that the media data
17 file has been delivered."

18 So that's -- that's one use of the voucher
19 ID as part of that process. Again, I wouldn't say
20 it's the only thing used for logging the delivery.
21 But, it's one of many things used to -- in the
22 logging of the delivery.

23 Q. Right. And then, the voucher ID, also, in
24 column 20, line 40 -- it also talks about using it
25 to -- the voucher ID to log delivery. Correct?

1 A. I think that section generally talks about
2 how the long entry contains a number of things. One
3 of which is the voucher ID. So, I think that's
4 consistent with the other section that I directed
5 you to in the previous column.

6 But I think, certainly, the voucher ID is
7 used as a part of that particular log entry, as
8 disclosed in that section.

9 **Q. Okay. And what happens to that voucher ID**
10 **after the media's been delivered and log in has**
11 **occurred?**

12 [Witness perused document.]

13 A. Well, I mean, once this data is added to a
14 log entry, it becomes part of the log. So, all
15 these -- all these -- all these items are -- become
16 part of a log entry.

17 **Q. Right. And does anything else happen with**
18 **the voucher ID?**

19 [Witness perused document.]

20 A. Well, if you look in this section, that
21 same column, column 20, it talks about the purpose
22 of the log. Which is, that it's a secure,
23 tamper-resistant log to be used for rights reporting
24 information.

25 And so, presumably, you know, the data in

1 the log, including the voucher ID, could be -- would
2 be used to generate these rights reports.

3 Q. Okay.

4 A. And so, I think -- I think that's --
5 that's one thing Wiser is disclosing, with respect
6 to use of the voucher ID, after it's logged.

7 Q. Okay.

8 MR. CHARKOW: Spencer, can you provide
9 Dr. Houh with -- let's see -- Exhibit 1051?

10 Dr. Houh, if you could let me know when
11 you have access to that?

12 And, for the record, Exhibit 1051 has been
13 previously marked in IPR numbers 2021-00265, 298,
14 304, and 308. Brad, if you just want to check my
15 accuracy, please?

16 MR. BERG: Yeah. That sounds accurate.

17 THE WITNESS: So, I have the document open
18 now.

19 BY MR. CHARKOW:

20 Q. Okay. So, in front of you, Dr. Houh, you
21 should have Exhibit -- what's been previously marked
22 as Exhibit 1051, which is a U.S. Patent Application
23 Publication, U.S. 2004/0083273, to Madison et al.

24 Do you have that document in front of you?

25 A. Yes.

1 Q. And have you seen this document before?

2 A. I have.

3 Q. And do you -- did you review this document
4 in relying on -- sorry. Strike that.

5 Did you review this document in forming
6 your opinions in these four IPRs?

7 A. Yes.

8 Q. Okay. Paragraph 32, in this Madison
9 reference, 273 publication, is the only disclosure
10 of advertisement in Madison. Correct?

11 MR. BERG: Objection to form.

12 [Witness perused document.]

13 Q. Actually, I withdraw the -- strike the
14 question.

15 Paragraph 32, in Madison, Exhibit 1051, is
16 the only -- is the only express disclosure of
17 advertisement in Madison. Correct?

18 MR. BERG: Object to form.

19 A. I mean, I -- I don't think I'd agree with
20 that. I mean, if you look at Figure 8D, it talks
21 about an ad tag. I would say that's disclosing an
22 advertisement.

23 If you look at paragraph 37, it also
24 refers to CG ad tag, which each record contains
25 the playlist details, including the CG ad tag.

1 I would say that that would be referring
2 to an advertisement.

3 [Witness perused document.]

4 **Q. Anything else?**

5 A. Well, 32 does say "in ad tag" -- it goes,
6 ad tag, paren, which specified where an
7 advertisement is to be inserted. So, at least those
8 are mentioned in 32, and the two other places I
9 mentioned, for example.

10 **Q. Anywhere else?**

11 [Witness perused document.]

12 A. I mean, I don't see -- just looking
13 through right now, I don't see any explicit
14 references, other than those three that I mentioned.

15 **Q. Okay. Thank you. In Madison, where the**
16 **advertisements are inserted is in the media stream.**
17 **Correct?**

18 [Witness perused document.]

19 A. By the way, I found another mention of
20 "ad" in Figure 2B.

21 **Q. Okay.**

22 [Witness perused document.]

23 A. By the way, I found another reference to
24 "ad tag" in Figure 8C, I think. Let me just --
25 yeah; 8C.

1 **Q. Okay.**

2 [Witness perused document.]

3 **A.**So, this Madison reference does talk
4 about -- at least in this section, paragraph 32,
5 you're talking about, that these ad tags kind of
6 specify where an advertisement is to be inserted.

7 And I think there's -- that would be
8 understood -- I mean, I think it's known that there
9 are multiple ways that ads can be inserted in these
10 things.

11 So, I don't think it says, specifically,
12 that it's inserting it into a specific stream, as
13 your question asks. But Madison discloses that the
14 stream IDs reference files of uploaded content.

15 And so, certainly, it's possible to insert
16 into the middle of a file. And it's also possible
17 to kind of sequence them in between files, or as a
18 separate expressly named file, where Madison does
19 disclose playlists, and items in a playlist that
20 some could refer to ads.

21 And, in fact, "ad tag" is mentioned in
22 some of these tables, in the items that are
23 contained in a playlist.

24 **Q.**Just to be clear, you're saying that the
25 ad tag, or the ads, are inserted in between streams,

1 or within a stream?

2 A. I mean, I think Madison is saying, you
3 know, that there's all sorts of -- you know, it has
4 this -- the scope of the present invention covers,
5 conventionally, known and future developed
6 variations and modifications to the system
7 components described herein, and would be -- as
8 would be understood by those skilled in the art.

9 And, you know, if you look at figure --
10 let me see which one.

11 Q. Okay. I just want to know what it
12 discloses. Not what you can -- you know, all the
13 things that you could potentially envision. I just
14 want to know what it actually discloses. Madison
15 that is.

16 That was my question.

17 [Witness perused document.]

18 A. So, if you look at figure -- sorry,
19 paragraph 36, it's describing one of Figure 2. --
20 and, in particular, the labels used are in Figure
21 2B. And it talks -- it says that:

22 "Also associated with each client account
23 identified in the CM accounts table 210 is client
24 playlist information.

25 Such playlist information is contained

1 within the CM playlist table 222, content group, CG
2 table 224, and CG streams table 226. In general,
3 the CM playlist table 222 includes records
4 identifying each client playlist, as identified by a
5 content group ID.

6 Each record further includes the CM
7 account ID and the sort order, which indicates the
8 ordering of the items of streaming content
9 associated with the particular playlist."

10 If you look at -- at Figure 2B, it shows
11 the content group and entry, which includes CG ad
12 tag. And, furthermore, it also includes, in the
13 streams entry, 214, streams two, keep by stream ID.
14 And ad tag there as well.

15 So, I think it's disclosing that
16 there's -- there's different associations with the
17 ad tags, and different elements of various playlists
18 and streams.

19 **Q. Right. But at the end of it all, it comes**
20 **down to streams? It comes down to the ads. If they**
21 **are part of a playlist, they are being inserted in**
22 **streams, or between streams. Correct?**

23 MR. BERG: Objection to form.

24 A. Yeah. I mean -- I mean, certainly, that's
25 one way it would be well-known to be done.

1 Q. Okay. There is no other disclosure that
2 it's done anywhere else -- any way else. Express
3 disclosure.

4 A. I mean, if you're saying a description of
5 "Hey, here we put the ad in," I mean, it's -- I
6 didn't quite see that.

7 But we already saw you pointing me to the
8 text about the insertion -- let's see -- in 32,
9 about which specified:

10 "An ad tag which specified where an
11 advertisement is to be inserted. And that these ad
12 tags are a part of the stream entries, as well as
13 the content group entries."

14 So, it's --

15 Q. It's related to the -- it's still related
16 to the stream, though. Correct?

17 A. Well, there's also a content group, which
18 it's also related to. In that same figure, the ad
19 tag appears twice. Different forms. One's a CG ad
20 tag. And for the stream, it says "ad tag."

21 Q. Right.

22 A. And so -- and so, yeah. I think -- I
23 think, you know -- but I don't think I saw express
24 disclosure about -- about it saying, "Well now we
25 have the playlist and here's where we'll put the ad

1 in the third position."

2 I mean, but I think if you look at those
3 disclosure, ads are certainly disclosed as being
4 parts of these playlists. The ad tags are. That
5 they are part of the data related to a playlist.

6 **Q. Well, it's not part of the data related to**
7 **the playlist. It's related to its insertion into**
8 **streams. Correct? Into streams or between streams.**
9 **Correct?**

10 A. Well, there are -- there are content
11 groups associated with the ad -- that are associated
12 with an ad tag, as well as stream IDs.

13 And so, I mean, there are multiple ways
14 to -- you know, to kind of -- that are known to put
15 ads into a list. So, I think -- I think -- and
16 Madison discusses that -- those well-known variants
17 are something -- would be understood by those
18 skilled in the art.

19 So, I think, you know --

20 **Q. Okay.**

21 A. -- it's -- I don't see a section right
22 here, that it's explicitly, you know, saying that
23 here's where you insert it. But I think those are
24 all variants that would be conventionally known, and
25 would have been understood by those skilled in the

1 art.

2 Q. Right. I'm not asking specifically how
3 it's done. I'm just saying that the ad insertion is
4 occurring in Madison, related to the streams.
5 Correct?

6 A. Well, so, with respect to listening to a
7 playlist, Madison is disclosing, in parts, that
8 there actually are various different files in
9 different stream IDs, that comprise a playlist.

10 And so, I think though each of those
11 stream table entries also has space for an ad tag.
12 So, it may look virtually like one -- one stream to
13 the user, playing a playlist. But I think,
14 certainly, Madison is disclosing that each different
15 file has its own stream ID.

16 And I can point you to that if you want me
17 to, but that's -- there are portions of Madison that
18 are talking about that type of association between a
19 stream ID and a particular file.

20 Q. Right. But what I'm -- I don't think
21 you're disagreeing with me. You're saying -- you
22 said "stream" many, many times over, every time you
23 talked about ads. An ad insertion.

24 All I'm saying is that the ad insertion is
25 related to the streams. It's inserted in or in

1 between the streams. That's the express disclosure.

2 There's nothing -- there's nothing else.

3 Correct?

4 A. Yeah. I mean, if you're trying to say the
5 overall stream of the whole -- of the whole play of
6 the playlist. But there are different stream IDs
7 that are being used in various portions of -- you
8 know, for the different files.

9 But, generally, if you're going to look at
10 "stream" as the kind of a whole session, then
11 certainly, yeah. What you said, which is, ads can
12 be inserted in between elements, or within elements,
13 is certainly -- there'd be known -- known ways to do
14 that insertion.

15 Q. Right. But there is -- there is no
16 disclosure of any other insertions, other than in or
17 between streams. Correct?

18 A. I didn't see any express disclosure,
19 otherwise. But --

20 Q. Thank you.

21 A. -- those are -- those are known methods.
22 And, certainly, another known method that -- that we
23 viewed --

24 Q. Yeah.

25 A. -- earlier, was mixing the audio together.

1 And that -- you know, was -- I mean, that would have
2 been known as well.

3 Q. Right. I understand. But you're still --
4 the advertisement is in or between streams. That's
5 the express disclosure. Correct? In Madison?

6 MR. BERG: Objection to form.

7 A. I mean, Madison does disclose other
8 well-known variants that -- that could be used.
9 And, certainly, putting them in between elements in
10 the playlist, or within an element. And, as we saw,
11 also, it was known to mix them together. But,
12 certainly, that's not precluded.

13 Q. Right.

14 A. So, I mean, there's flexibility because a
15 person of ordinary skill has -- can understand how
16 the variants might be -- how the future -- you know,
17 different variations and modifications to the system
18 components describe --

19 Q. Right --

20 A. -- as Madison describes.

21 Q. All right. I -- but again, the only
22 express disclosures are the ones you told me about
23 in Madison. Correct?

24 A. Yeah. I mean, the --

25 Q. That doesn't answer my question.

1 A. The figures --

2 Q. Okay. That doesn't answer my question.

3 A. The ad tags associated with both stream
4 entries and content group of entries. I mean --

5 Q. What? I didn't hear the last part?

6 A. Content group entries.

7 Q. Sorry. Say that again. I can't hear you.

8 A. Content group entries.

9 Q. I don't know what that is. I'm just going
10 to strike as nonresponsive.

11 MR. CHARKOW: Move to strike as
12 nonresponsive. You're just not answering the
13 question.

14 Okay. So let's take a break. I'm
15 almost -- I'm almost ready to wrap up, shortly, I
16 think. I've just got to talk to Mitchell and see
17 where we're at.

18 Is it -- can we take a break now, Dr. Houh
19 and Brad?

20 MR. BERG: Yeah. That works fine for me.

21 THE WITNESS: Yeah. Works for me.

22 MR. CHARKOW: Okay. 6:20? Can we do
23 6:20 Eastern?

24 THE WITNESS: Sure.

25 THE VIDEOGRAPHER: Okay. The time is

1 6:10 p.m.. We are off the record.

2 (Short break.)

3 THE VIDEOGRAPHER: Okay. Back on the
4 record, and the time is 6:21 p.m..

5 MR. CHARKOW: Dr. Houh, thank you very
6 much for your time today. I have no further
7 questions at this time.

8 THE WITNESS: Thank you.

9 MR. BERG: So, counsel, let's just take a
10 brief five-minute break, and come back. And I'll do
11 a short redirect.

12 MR. CHARKOW: Great. Okay.

13 THE VIDEOGRAPHER: Okay. The time is
14 6:21 p.m.. We are off the record.

15 (Short break.)

16 THE VIDEOGRAPHER: Back on the record.
17 And the time is 6:31 p.m..

18 REDIRECT EXAMINATION BY MR. BERG:

19 Q. Hi, Dr. Houh. Thank you so much for your
20 time today. I appreciate it.

21 A. Thank you.

22 Q. I just have a couple of brief questions
23 for you. You have not formed any opinions about
24 Hulu's systems in connection with this matter.
25 Correct?

1 A. That's correct. I have not.

2 Q. And you have not offered any opinions on
3 Hulu's systems here today. Correct?

4 A. That's correct.

5 MR. BERG: No further questions.

6 MR. CHARKOW: Well, I have all sorts of
7 re-cross based on that. I'm good.

8 So, Dr. Houh, I'll echo what Brad said.
9 Thank you very much for your time. We appreciate
10 it. I know it's been long days.

11 And I have no further questions, Brad. So
12 if you have no further questions, we can go off the
13 record.

14 MR. BERG: Yes. No further questions for
15 me either.

16 THE VIDEOGRAPHER: Okay. The time is
17 6:32 p.m.. This is the end of the videotaped
18 deposition of Dr. Henry Houh, Volume I. Dated
19 July 27th 2021. We have off the record.

20 (Whereupon, the deposition adjourned at
21 6:32 p.m.)

22

23

24

25

REPORTER'S CERTIFICATE

I, GISELLE MITCHELL-MARGERUM, the undersigned, a Registered Professional Reporter, Certified Reporting Instructor, Licensed Court Reporter, and Certified Court Reporter, do hereby certify:

That the witness, HENRY HOUH, before examination was remotely duly sworn to testify to the truth, the whole truth, and nothing but the truth.

That the foregoing deposition was taken remotely stenographically by me on Tuesday, July 27, 2021, and thereafter was transcribed by me, and that the deposition is a full, true, and complete transcript of the testimony, including questions and answers, and objections, motions and exceptions made by counsel.

That reading and signing was not requested; and that I am neither attorney nor counsel for, nor related to or employed by, any of the parties to the action in which this deposition was taken; and that I have no interest, financial or otherwise, in this case.

IN WITNESS WHEREOF, I have hereunto set my hand this 3rd day of August 2021.



GISELLE MITCHELL-MARGERUM, RPR, CRI, CCR, LCR, CSR

DECLARATION UNDER PENALTY OF PERJURY

Case Name: Hulu vs. SITO Mobile

Date of Deposition: 07/27/2021

Job No.: 10085962

I, HENRY HOUH, hereby certify
under penalty of perjury under the laws of the State of
_____ that the foregoing is true and correct.

Executed this _____ day of
_____, 2021, at _____.

HENRY HOUH

NOTARIZATION (If Required)

State of _____

County of _____

Subscribed and sworn to (or affirmed) before me on
this _____ day of _____, 20__,
by _____, proved to me on the
basis of satisfactory evidence to be the person
who appeared before me.

Signature: _____ (Seal)

1 DEPOSITION ERRATA SHEET

2 Case Name: Hulu vs. SITO Mobile
Name of Witness: Henry Houh
3 Date of Deposition: 07/27/2021
Job No.: 10085962

4 Reason Codes: 1. To clarify the record.
2. To conform to the facts.
5 3. To correct transcription errors.

6 Page _____ Line _____ Reason _____

7 From _____ to _____

8 Page _____ Line _____ Reason _____

9 From _____ to _____

10 Page _____ Line _____ Reason _____

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12 Page _____ Line _____ Reason _____

13 From _____ to _____

14 Page _____ Line _____ Reason _____

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16 Page _____ Line _____ Reason _____

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18 Page _____ Line _____ Reason _____

19 From _____ to _____

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21 From _____ to _____

22 Page _____ Line _____ Reason _____

23 From _____ to _____

24 Page _____ Line _____ Reason _____

25 From _____ to _____

1 DEPOSITION ERRATA SHEET

2 Page _____ Line _____ Reason _____

3 From _____ to _____

4 Page _____ Line _____ Reason _____

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6 Page _____ Line _____ Reason _____

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20 Page _____ Line _____ Reason _____

21 From _____ to _____

22 _____ Subject to the above changes, I certify that the
transcript is true and correct

23 _____ No changes have been made. I certify that the
transcript is true and correct.

24

25 _____
HENRY HOUH

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(CDN).'	1025 21:3	1112 30:2	1:30 116:16
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