

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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UNIFIED PATENTS, LLC)

Petitioner) IPR2022-01086

v.)

VL COLLECTIVE IP LLC)

Patent Owner)

-----)

U.S. Patent 8,605,794

PETITION FOR INTER PARTES REVIEW OF

U.S. PATENT 8,605,794

Oral sworn testimony of DR. IMMANUEL
FREEDMAN, taken stenographically before LISA
FORLANO, Certified Court Reporter, Certified
Realtime Reporter, Registered Merit Reporter and
Notary Public, at the Courtyard by Marriott
Philadelphia Lansdale, 1737 Sunneytown Pike, Board
Room, Lansdale, Pennsylvania, on Wednesday,
March 22, 2023, commencing at 8:10 a.m.

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1 I N D E X

2

3 WITNESS

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4 DR. IMMANUEL FREEDMAN

5 By Mr. Cardenas-Navia

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6 By Mr. Bowser

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13 PREVIOUSLY MARKED EXHIBITS

14 Exhibit 1001 Patent 8,605,794 16

15 Exhibit 1003 Sonohara Patent 5,627,656 16

16 Exhibit 1005 Declaration in support of the 19

17 petition for IPR for U.S. Patent 8,605,794

18

19

20

21

22

1 DR. IMMANUEL FREEDMAN, having been
2 duly sworn, was examined and testified as
3 follows:

4 BY MR. CARDENAS-NAVIA:

5 Q Could you please state your name
6 for the record?

7 A Immanuel Freedman.

8 Q And where do you currently work?

9 A I'm employed by Takeda
10 Pharmaceuticals, and I have a small consulting
11 company named Freedman Patents.

12 Q And have you had your deposition
13 taken before?

14 A Yes.

15 Q How many times?

16 A About ten, I think.

17 Q And you've probably heard this
18 before, but I'll quickly go over some of the
19 ground rules.

20 So that the court reporter can
21 make sure to take down all of your testimony,
22 can you please be sure to answer verbally

1 instead of by nodding your head or shaking your
2 head?

3 A Yes.

4 Q Thank you.

5 And again, so that it's easier for
6 the court reporter, could you please make sure
7 that we do not talk over one another?

8 A I'll ensure to do so.

9 Q Okay. And I'll do my best to do
10 the same.

11 If -- I'm going to be, of course,
12 asking you a series of questions today. If at
13 any point you don't understand a question,
14 please just ask me for a clarification, and
15 I'll do my best to clarify. Okay?

16 A Okay.

17 Q It's -- your attorney may object
18 to some of my questions. If he objects, you
19 still must answer my question, unless he
20 instructs you not to.

21 Do you understand?

22 A Yes.

1 Q And if at any time today you want
2 to take a break, just let me know. As long as
3 we're not in the middle of a question, we'll go
4 ahead and take a break.

5 A Okay.

6 Q Do you understand that you are
7 under a duty to provide testimony that is
8 truthful and complete?

9 A Yes.

10 Q Is there any reason why you cannot
11 give testimony that's truthful and complete
12 today?

13 A No.

14 Q Great.

15 How many IPR proceedings have you
16 been involved with?

17 A You're asking me to recall from
18 memory, so I think it is probably now of the
19 order of somewhere between 12 and 15, but
20 that's only an approximate recall.

21 Q Okay. And that's -- there I said
22 the word "IPR." You understand that I'm

1 referring to an inter partes review?

2 A Yes, I understand that.

3 Q How many IPR proceedings have you
4 been involved with on behalf of Unified
5 Patents?

6 A The majority of those total of 15
7 IPRs have been with Unified Patent; although I
8 can't give you an exact number from memory.

9 Q Okay. And which other parties
10 have you served as their expert for an IPR
11 proceeding?

12 A More recently there's a law firm
13 called PB Law.

14 And you're speaking about IPR
15 specifically?

16 Q Yes.

17 A I seem -- I think I have been
18 retained by Finnegan on a case for which I've
19 been retained but not yet provided a
20 declaration.

21 Q Okay. And just to make sure, you
22 know, I don't want to get into anyone's

1 confidential information. So I guess I'm only
2 asking about things that are sort of publicly
3 known where you've made an appearance of some
4 sort.

5 A Okay. And how far back are you
6 asking this question? Are you asking within
7 the scope of Rule 26? Is that what you're
8 asking about?

9 STENOGRAPHER: Of what 26?

10 THE WITNESS: Rule 26.

11 Is that what you're asking about?

12

13 BY MR. CARDENAS-NAVIA:

14 Q I don't know what you mean,
15 "Rule 26." IPR proceedings have been around
16 for about ten years or so --

17 A Oh.

18 Q -- so as far back as you can
19 remember.

20 A What I mean is the obligation to
21 disclose cases in which there has been expert
22 testimony, oral or by declaration, in the

1 previous five years. That's what I meant,
2 federal or --

3 Q I see. I'm asking for broader
4 than that. As far back as you can remember.

5 A Oh, goodness me. There have been
6 a lot of cases, but not -- not all IPRs. Most
7 of the IPR stuff started with Unified.

8 There was a previous case
9 involving a bank, and Mitek Systems versus I
10 think it was USAA also had an IPR in it.
11 Before that, there were other cases, but they
12 were not IPRs.

13 Q Okay. Have you ever testified at
14 trial?

15 A I've testified in public hearings,
16 but not formally at trial.

17 Q What public hearings have you
18 testified at?

19 A Okay. So the first case in which
20 I was retained, I was retained by the IRS in a
21 case involving the research tax credit. The
22 credit for increasing research --

1 STENOGRAPHER: Wait a minute.

2 Involving the research task?

3 THE WITNESS: Research -- research

4 tax credit.

5 STENOGRAPHER: Tax credit.

6 THE WITNESS: Yes, the credit for

7 increasing research.

8 And I participated in hearings

9 with the administrative judge, IRS

10 administrative judge, and the opposing

11 experts, and that's as close as I have

12 come to actually testifying in a trial.

13 BY MR. CARDENAS-NAVIA:

14 Q When did you first begin providing

15 expert consultant services for patent cases?

16 A For patent cases? It's in the

17 order of the 2001-2002 time frame. The actual

18 first patent case was ACTV and HyperTV versus

19 Disney, ABC, and ESPN. ACTV and HyperTV were

20 the plaintiffs and Disney, et al., you know,

21 were the counterclaim plaintiffs.

22 Q And which party were you providing

1 testimony on behalf of?

2 A Disney.

3 Q Have you ever been retained to
4 provide testimony or to provide expert
5 consulting services on behalf of a patent
6 owner?

7 A It's probably been about equal,
8 patent owners and -- you know, equal plaintiffs
9 and defendants. Sometimes, and very often, the
10 defendants are counterclaim plaintiffs, so you
11 tend to get both sides in the case.

12 Q Are you the named inventor on any
13 patents?

14 A Yes.

15 Q Approximately how many?

16 A So if we speak about patent
17 families rather than patents, I am the named
18 inventor on a granted patent for a dosing
19 regimen for a pharmaceutical compound, and I
20 applied for a patent in my own name on a
21 technical system for rapidly predicting the
22 outcome of clinical trials, which relates to

1 mathematical modeling and high-speed computers.

2 Apart from that, I'm not a named inventor on
3 any patent.

4 Q And you said you applied for a
5 patent in your own name. What do you mean by
6 that?

7 A Oh, what I -- what I mean is that
8 I applied pro se for a -- for a patent. I
9 filed the application, and based on the
10 examiner's response decided that I would
11 abandon the application. But I filed it in my
12 own name and -- but with the benefit of the
13 knowledge that I gained by studying for and
14 passing the patent bar exam.

15 Q Okay. Thank you.

16 I'm going to hand you a document
17 that will be marked as Exhibit A.

18 (Petition for Inter Partes Review
19 of U.S. Patent 8,605,794 was marked
20 Exhibit A for identification.)

21 BY MR. CARDENAS-NAVIA:

22 Q Do you recognize Exhibit A?

1 A I think I may have seen Exhibit A
2 before.

3 Q What is Exhibit A?

4 A Exhibit A is the Petition for
5 Inter Partes Review.

6 Q Have you reviewed this document
7 before?

8 A I very probably have. We're
9 speaking about events that happened months ago,
10 but I think I have seen the petition, and I
11 think I reviewed it in conjunction with the
12 development of my declaration.

13 Q So you're not completely sure if
14 you've reviewed the Exhibit A before?

15 A I'm sure I reviewed it. I'm being
16 naturally cautious because you're asking me to
17 recall events from memory.

18 Q Okay. Well, you understand that
19 we're here to get your testimony about your
20 declaration in support of this petition for
21 inter partes review, correct?

22 A Correct.

1 Q And so, did you review Exhibit A?

2 A Let's look at what Exhibit A is.

3 The answer is yes, I've reviewed Exhibit A.

4 Q Okay. Thank you.

5 And just to -- I think this is
6 probably clear, but this is the Petition for
7 Inter Partes Review of U.S. Patent 8,605,794;
8 is that right?

9 A That's right.

10 Q And it's for IPR2022-01086?

11 A Correct.

12 Q When was the last time you
13 reviewed Exhibit A?

14 A Well, since the declaration was
15 filed approximately nine months ago, I would
16 not have looked at this petition more recently
17 than that.

18 Q Okay. You did not look at it in
19 preparation for today's deposition?

20 A No. In preparation for today's
21 deposition I focused only on my declaration and
22 the patents-in-suit.

1 STENOGRAPHER: And the patent?

2 THE WITNESS: The patents in this
3 suit, the patents at issue.

4 BY MR. CARDENAS-NAVIA:

5 Q And by "patents at issue," do you
6 mean the U.S. Patent 8,605,794?

7 A 8,605,794 and the reference -- the
8 patents that form the reference grants.

9 Q Okay. You can go ahead and put
10 the petition to the side for one moment.

11 I'm going to hand you a document
12 that's marked as Exhibit 1005.

13 Do you recognize this document?

14 A Let's make sure what the document
15 is.

16 Q Of course.

17 A The document appears to be my
18 declaration in support of the petition for IPR
19 for U.S. Patent 8,605,794.

20 Q And when is the last time you
21 reviewed this document?

22 A Yesterday.

1 Q Let me go ahead and hand you two
2 additional exhibits.

3 I'm going to hand you what's been
4 previously marked as Exhibit 1001.

5 Do you recognize Exhibit 1001?

6 A Yes. This is a copy of the patent
7 8,605,794.

8 Q And I'm going to refer to this
9 document as the '794 patent. Is that okay?

10 A That is okay.

11 Q And when was the last time you
12 reviewed this document?

13 A Yesterday.

14 Q You can put that to the side for
15 one second.

16 I'm going to hand you a document
17 that's been previously marked as 1003.

18 Do you recognize Exhibit 1003?

19 A It appears to be a copy of a
20 patent to Sonohara, et al., at
21 Patent 5,627,656.

22 Q I'm going to refer to Exhibit 1003

1 as Sonohara. Is that okay?

2 A That is okay.

3 Q When was the last time you
4 reviewed Sonohara?

5 A Yesterday.

6 Q What did you do to prepare for
7 today's deposition?

8 A Jon and I worked together
9 yesterday to review my declaration and discuss
10 some positions that we have.

11 Q And just for the clarity, you said
12 "Jon." Who is Jon?

13 A Jon is Jonathan Bowser, retaining
14 counsel.

15 Q Did you meet with anyone else
16 yesterday to prepare for today's deposition?

17 A No.

18 Q Did you have any other meetings to
19 prepare for today's deposition?

20 A No, we didn't.

21 Q Besides --

22 A Oh, I should say -- you asked did

1 I meet with another person. Not in -- not in
2 person, but we did have a Zoom conference call
3 with Raghav Bajaj, who was the original
4 retaining counsel.

5 Q Okay. Did you speak with anyone
6 else in preparation for today's deposition?

7 A No.

8 Q Besides counsel, did you speak
9 with anyone from Unified Patents about your
10 work related to this IPR proceeding?

11 A No. I mean, I've spoken to
12 counsel, but I don't even think that any other
13 person from Unified was involved or that I had
14 ever discussed this one with them.

15 Q Are you familiar with the video
16 streaming company Netflix?

17 A Yes, I am.

18 Q Have you spoken with anyone
19 affiliated with Netflix in relation to this IPR
20 petition?

21 A No.

22 Q Are you familiar with the video

1 stream company -- video streaming company STARZ
2 Entertainment?

3 A Yes.

4 Q Have you spoken with anyone
5 affiliated with STARZ in relation to this IPR
6 proceeding?

7 A No.

8 Q Besides the exhibits we've already
9 discussed, are there any other documents you
10 reviewed in preparation for today?

11 A No.

12 Q Could you get your declaration,
13 Exhibit 1005, back in front of you.

14 A Yes.

15 Q Please turn to pages -- I think
16 you can open it so that you can see pages 2
17 and 3.

18 A Yes.

19 Q And you can see from the headings
20 that certain claims of the '794 patent are
21 identified and addressed in your declaration;
22 is that correct?

1 A Yes.

2 Q And certain claims of the '794
3 patent are not addressed in your declaration,
4 is that also correct?

5 A This appears to be correct.

6 Q Why is it that certain claims were
7 addressed in your declaration but not others?

8 A I would have to review those
9 claims to be absolutely sure, but one of the
10 kinds of reasons that suggests themselves to me
11 is that it is normal to review independent
12 claims before any dependent claims, but beyond
13 that I will have to look at the patent and try
14 to recall why we addressed some claims and not
15 others.

16 Q All right. Let's go ahead and do
17 that. If you would look at Exhibit 1001, which
18 is the '794 patent, and turn to the back where
19 the claims are. Let me know when you're there.

20 A Okay.

21 Q And, for example, do you see
22 claim 2 of the '794 patent?

1 A Yes.

2 Q And do you see that it's not
3 addressed in your declaration?

4 A I see that.

5 Q Do you know why that is?

6 A Well, firstly, it's a dependent
7 claim, and it depends from claim 1, and if
8 claim 1 is not valid, claim 2 won't be valid
9 either.

10 Q Is that your understanding that if
11 an independent claim is invalid, then the
12 dependent claims are also invalid?

13 A That's my general understanding.

14 Q All right. Could you take a look
15 at claim 16?

16 A Yes.

17 Q And do you see that claim 16 is a
18 claim that was -- that is in the '794 patent
19 but was not addressed by your declaration?

20 A I see that.

21 Q Do you know why that is?

22 A Again, it is -- again, it is a

1 dependent claim, and if claim 1 is not valid,
2 well, claim 16 won't be valid, either.

3 Q Is there any other reason why you
4 didn't address claim 16 in your declaration?

5 A I don't recall. You're asking me
6 about events more than nine months ago.

7 Q Have you ever analyzed claim 16 of
8 the '794 patent?

9 A Not that I can recall.

10 Q Again, looking at pages 2 and 3 of
11 your declaration, Exhibit 1005, you see that
12 you addressed the references Sonohara and
13 Abbott; is that right?

14 A That's right.

15 Q Did you assess any other
16 references in putting together your
17 declaration?

18 A No, I didn't.

19 Q If you can, turn to page 4 of your
20 declaration. Do you see in paragraph 1, the
21 second sentence, you say, "I am being
22 compensated at my usual and customary rate for

1 the time I spend in connection with this IPR."

2 A Yes.

3 Q What is your usual and customary
4 rate?

5 A Well, it actually has depended a
6 little bit on the case, but in this particular
7 case, this rate is \$250 an hour.

8 Q What has your rate been in other
9 cases?

10 A The highest rate in which I've
11 been retained is \$600 an hour. In some cases
12 I've been retained at \$400 an hour, and in
13 others 275 an hour.

14 Q And why is it that your rate for
15 this case is \$250 an hour?

16 A The primary reason is -- is to do
17 with the way that the Unified Patent
18 organization compensates experts. If I asked
19 for much more than that, or more than -- more
20 than the recent rate of 270, I may not have
21 been given the case.

22 Q I see.

1 So Unified Patent, to some degree,
2 set the -- set the rate?

3 A They set a maximum rate, yes.

4 Q Could you turn to page 21 of your
5 declaration, and specifically to paragraph 46?

6 A Yes.

7 Q And you say, "In order to construe
8 the claims, I've reviewed the entirety of the
9 '794 Patent along the prosecution history of
10 the '794 Patent."

11 A That's correct.

12 Q And I think it should say "along
13 with the prosecution history of the '794
14 patent"?

15 A Yes. So you asked about what I
16 reviewed, and I had forgotten I had already
17 also reviewed the prosecution history of the
18 '794 patent. It would be very unusual for me
19 to review the patent and its prosecution
20 history together.

21 STENOGRAPHER: Unusual or usual?

22 THE WITNESS: It would be usual

1 for me to do so.

2 BY MR. CARDENAS-NAVIA:

3 Q And did you review the entire
4 prosecution history of the '794 patent?

5 A These prosecution histories are
6 usually lengthy, but I try to review at least
7 what I believe to be the pertinent parts of the
8 prosecution history. There's a lot of
9 administrative detail in such prosecution
10 history, but there can be important information
11 in that.

12 Q So which parts of the prosecution
13 history did you review?

14 A Well, I reviewed the -- I reviewed
15 the whole file, but you're trying -- you're
16 asking me to recall what precisely I reviewed.
17 I will tell you what I would customary review
18 is examiner responses, applicant abandonments.
19 I would normally be concerned -- because I have
20 some background knowledge, I would normally be
21 concerned about definitions, constructions,
22 prosecution history, estoppel, the kinds of

1 things that might -- that might bear on the --
2 on the claim construction or understanding of
3 the claims.

4 Q When did you last review the
5 prosecution history of the '794 patent?

6 A Almost certainly more than -- more
7 than nine months ago. I did not review it
8 yesterday.

9 Q I want to look at the next
10 sentence in paragraph 46. It says, "Consistent
11 with the '794 Patent disclosure, I have
12 interpreted the terms in the Challenged Claims
13 according to their plain and ordinary meaning
14 as understood by a POSITA, and considered any
15 explicit definitions provided by the
16 specification of the '794 Patent, where
17 applicable."

18 Do you see that?

19 A Yes, I do.

20 Q Were there any explicit
21 definitions in the specification of the
22 '794 patent that you considered?

1 A Well, you're asking me to
2 construct -- reconstruct my -- my thought
3 processes from memory. And really -- really we
4 would need to go through the patent and see --
5 or my declaration and see exactly what was --
6 what was construed and why it -- and why it was
7 construed. I do not recall the precise details
8 of -- of those things. Any information that's
9 relevant is in my declaration.

10 Q Okay. It sounds like you would
11 need to review materials more, but I guess
12 right now, based on memory, you don't know if
13 there are any explicit definitions in the '794
14 patent?

15 A Just pulling it from memory alone,
16 I don't know.

17 Q Okay. And I'll note that where we
18 were reading from is Section VI of your
19 declaration titled "Claim Construction."

20 Do you see that back on page 20?

21 A Yes.

22 Q And in this section there are no

1 express claim constructions that you applied
2 that are identified, correct?

3 A That's correct. Yes.

4 Q Do you recall if you applied any
5 express claim constructions as part of your
6 analysis?

7 A I don't think so. If I stated
8 their plain and ordinary meaning, I really do
9 mean plain and ordinary meaning from the
10 perspective of the POSITA.

11 Q Okay. Could you look at the '794
12 patent, Exhibit 1001, and turn to column 2?

13 A Okay.

14 Q And I'll direct you specifically
15 to lines 43 through 46 of column 2. Let me
16 know when you're there. It says, "In this
17 context the term 'output' is understood to mean
18 that first and second data segments are, for
19 example, transmitted, stored together or passed
20 on to a processing unit."

21 Do you see that?

22 A I see that.

1 Q Is that an express definition in
2 the '794 patent of the claim term?

3 A It appears to be.

4 Q Did you apply this definition in
5 putting together the analysis in your
6 declaration?

7 A Implicitly, yes.

8 Q What do you mean by "implicitly"?

9 A Well, I mean, it's -- when we
10 discuss what is -- what is output, I believe
11 that the analysis in my declaration is
12 consistent with this express definition.
13 However, that is a plain and ordinary meaning
14 of the term "output" as I would see it in
15 context as a POSITA.

16 STENOGRAPHER: In context?

17 THE WITNESS: In context as a
18 POSITA?

19 STENOGRAPHER: POSITA? Is that
20 what you said?

21 THE WITNESS: P-O-S-I-T-A.

22 BY MR. CARDENAS-NAVIA:

1 Q And just for clarity, the acronym
2 POSITA, as in paragraph 46 of your declaration,
3 what does POSITA stand for?

4 A Person of ordinary skill in the
5 art.

6 Q Thank you.

7 Could you now turn to column 4 of
8 the '794 patent, Exhibit 1001?

9 A Yes.

10 Q And specifically two lines, 14
11 through 22 of column 4.

12 A Okay.

13 Q It says, "The term
14 'content-related' is understood to mean that
15 first and second data segments have a
16 syntactical meaning within the respective file
17 such as e.g. a plurality of succeeding second
18 data segments represent the speech signal of a
19 specific speaker within a dialogue sequence.
20 Furthermore, sections of the data file can also
21 be understood thereby, such as e.g. individual
22 images of a video sequence. In the following

1 description data segments always refer to
2 content-based data segments."

3 Do you see that?

4 A Yes, I do.

5 Q Is that a definition in the '794
6 patent?

7 A It appears to be.

8 Q Did you apply this definition in
9 the analysis in your declaration?

10 A I think this definition is
11 consistent with the analysis in my declaration.

12 Q Well, why did you not identify
13 either of these definitions in your
14 declaration?

15 A They are consistent with the plain
16 and ordinary meaning of that -- of those terms.
17 There didn't seem to be anything special that
18 was expressed by those definitions that was
19 not -- did not have a clear, plain, and
20 ordinary meaning to a POSITA. It's not adding
21 anything to the POSITA's knowledge.

22 STENOGRAPHER: Adding anything to

1 the?

2 THE WITNESS: POSITA's knowledge.

3 BY MR. CARDENAS-NAVIA:

4 Q And I want to direct you to again
5 lines 14 through 17 of column 4, and I'll read
6 it and then kind of focus you on one particular
7 part of that.

8 It says, "The term
9 'content-related' is understood to mean that
10 first and second data segments have a
11 syntactical meaning within the respective data
12 file."

13 And my question is what is a
14 "syntactical meaning"?

15 A In the context of video coding
16 standards, the organization and arrangement of
17 content, including audio and video segments and
18 their encodings, is defined by a syntax which
19 determines what is allowed and what isn't
20 allowed, what order these elements of the
21 syntax are allowed.

22 In some standards, they are

1 referred to as NAL units. In other standards,
2 they're simply referred to as elements. But
3 the syntax of the standard is what -- is what
4 determines what order they're allowed to be in
5 and what element of the information they
6 represent.

7 STENOGRAPHER: Is it as null units
8 or --

9 THE WITNESS: NAL, Network
10 Abstraction Layer.

11 MR. CARDENAS-NAVIA: And I want to
12 make sure that gets on the record, so
13 I'll -- I'm not sure that it is;
14 otherwise, I'll ask the question.

15 STENOGRAPHER: I got it.

16 BY MR. CARDENAS-NAVIA:

17 Q You mentioned NAL. What is NAL?

18 A NAL is an abstraction that is
19 specifically used in H.264 and H.265 --

20 STENOGRAPHER: In what?

21 THE WITNESS: In H.264 and H.265
22 and it's referred to as the Network

1 Abstraction Layer. It's a kind of
2 theoretical layer of syntax that
3 describes the order of syntax elements,
4 such as segments in audio, video, and
5 their allowed sequences, and it -- and
6 it -- the elements are specified down to
7 a very fine level of detail, such as
8 I-frames, or P-frames, or various -- more
9 detailed syntaxes.

10 So it's -- it's an abstraction of
11 the layout and organization of the data.

12 BY MR. CARDENAS-NAVIA:

13 Q And this would be the organization
14 and layout of the video data or the audio data?

15 A Now it tends to refer primarily to
16 the video data, but it could also reasonably
17 refer to the audio data. There are -- there
18 are abstractions even above that layer called
19 the Packetized Elementary Stream, but we will
20 be getting into areas that are really not at
21 all relevant to the patent.

22 Q So then turning back to the '794

1 patent, it says, "First and second data
2 segments have a syntactical meaning within the
3 respective data file."

4 Could you give an example of that?

5 A So one may have some -- at one
6 level of abstraction one would have video
7 segments, such as groups of pictures, and one
8 may have segments of audio data or audio file.
9 It principally could be more finely subdivided
10 than that, but that's an example of information
11 that has a defined syntax according to the
12 various standards.

13 Q Do you understand -- you've spoken
14 of some of examples of syntactical meaning. Do
15 you understand the term as used in the '794
16 patent to encompass anything else, any other
17 requirements?

18 MR. BOWSER: Objection to form.

19 THE WITNESS: I construe
20 "syntactical meaning" to mean a meaning
21 defined by syntax, which is a plain
22 ordinary meaning.

1 BY MR. CARDENAS-NAVIA:

2 Q Any syntax?

3 A Specifically and usually the
4 syntax of the standard. The major video coding
5 standards define video and, if they also
6 encompass audio, define audio in terms of a
7 syntax that is agreed by a large number of
8 organizations and accepted as an international
9 standard.

10 Q Are you aware of any other express
11 definitions in the '794 patent?

12 A I don't recall any.

13 Q Could you turn to claim 1 of the
14 '794 patent? I'm directing you here just in
15 case the claim will be helpful, but as a
16 general question about the '794 patent, as used
17 in the '794 patent, what is your understanding
18 of an assignment rule?

19 A Well, I think I address this in my
20 declaration, so give me a moment. I'd like to
21 look.

22 So in the context of this patent,

1 and according to the claim, it's an assignment
2 rule for assigning each one of the
3 content-related second data segments to one of
4 the content-related first data segments.

5 STENOGRAPHER: First data?

6 THE WITNESS: First data segments.

7 BY MR. CARDENAS-NAVIA:

8 Q Are you done with your answer?

9 A I think that's the clearest answer
10 I can give.

11 Q And to make sure I understood, it
12 seems that you read from the end of claim 1?
13 That was your answer?

14 A Yeah. It seemed to be quite clear
15 to me that this is what was intended at the end
16 of claim 1.

17 Q Could you give me an example of an
18 assignment rule?

19 A Well, an assignment rule might be
20 something like two audio segments for one --
21 for one video segment, or vice versa.

22 Q Just to provide a little more

1 clarity, you say two audio segments for one
2 video segment. What do you mean by that?

3 A So one example would be for one
4 group of pictures interpreted as a video
5 segment, there might perhaps be two, or five,
6 or ten audio segments that correspond in
7 duration to the duration of that group of
8 pictures.

9 Q And so, then what would the
10 assignment rule be in that scenario?

11 A The assignment rule may be --
12 let's say there were five audio segments to one
13 group of pictures. Each group of pictures
14 would be associated with five audio segments in
15 duration.

16 Q And that would be the rule?

17 A That would be the rule, yes.

18 Q Audio data, does it typically have
19 time stamps associated with it?

20 A It depends on how the data are
21 organized. There's been an evolution of
22 techniques and technologies over the years from

1 MPEG-1 to the most currently advanced
2 standardized codecs.

3 Sometimes there are time stamps
4 associated with this, but very often the audio
5 data are simply -- have been historically
6 represented as the sequence of bytes in a file.
7 More sophisticated technologies can include
8 various kinds of time stamps, if needed, but
9 the most basic and most simple form, the time
10 stamp is not essential.

11 Q And I am asking you a little more
12 generally, and let me be clear about the time
13 frame. I want to ask about the time frame
14 around 2005-2006. Okay? And at that time
15 frame did most commercial deployments -- in
16 most commercial deployments would the audio
17 data have time stamps?

18 A I'm trying to recall. There was
19 certainly a lot of audio data available, for
20 instance WAV files, that did not have a time
21 stamp. They were simply representations of a
22 waveform stored as a sequence of bytes that

1 were played out as a constant duration per byte
2 and provided a good representation of the
3 audio.

4 There were beginning to be more
5 sophisticated encodings and representations for
6 audio data, but I don't recall in that time
7 frame whether the -- for example the WAV files
8 had completely disappeared.

9 Q And my question was in the
10 2005-2006 time frame did most commercial
11 deployments -- sorry. Let me ask that again.

12 In the 2005-2006 time frame would
13 the audio data have time stamps in most
14 commercial deployments?

15 A Commercial deployment is an
16 undefined term. Can you please define it more
17 clearly?

18 Q I guess I'm trying to get at --
19 well, let me just not use the word "commercial"
20 then.

21 In the 2005-2006 time frame did
22 most audio data use time stamps?

1 A Well, if you're speaking for the
2 perception, for example, of someone who had --
3 who listened to content available on the
4 Internet, there was still a very large number
5 of WAV files circulating on the Internet at
6 that time.

7 More sophisticated encoding
8 techniques slowly came into focus as media
9 began to be distributed in MPEG-1, and later
10 MPEG-2, form. The rise and development of the
11 MP3 format. The rise and development of the
12 Dolby encodings.

13 STENOGRAPHER: Wait a second. The
14 rise and development of the MPEG-3
15 format?

16 THE WITNESS: Of MP3 format.

17 STENOGRAPHER: Go ahead.

18 THE WITNESS: It's an older
19 format. And other more sophisticated
20 audio encodings.

21 And I don't recall in that time
22 frame whether or not there were explicit

1 time stamps. Time stamps were beginning
2 to be incorporated formally into the
3 MPEG-2 system, and there was a concept
4 called normal play time that came from
5 DMCC, digital storage media commander
6 control, experiments with the DAVIC-1
7 standard, D-A-V -- Digital Audio Video
8 Council standards, and they gradually
9 became incorporated into the -- into the
10 MPEG standards.

11 So there could certainly have been
12 time stamps, but my understanding also is
13 that the time stamps are not essential to
14 the operation of this patent.

15 BY MR. CARDENAS-NAVIA:

16 Q Okay. Well, we'll get to this
17 patent. Let me ask you the same question but
18 for video.

19 In the 2005-2006 time frame, did
20 most video data use time stamps?

21 A It was likely that there were time
22 stamps in streaming media video, yes.

1 Q And going back to an assignment
2 rule, let's say we had a rule that said play
3 all audio data segments so that their time
4 stamps align with the time stamps in the
5 corresponding video data segments.

6 In your view, would that be an
7 assignment rule?

8 A It could be a type of assignment
9 rule.

10 Q And you say "it could be." Would
11 it depend on something?

12 A Well, there's -- you can make up
13 whatever rule you please, and there's a
14 question of whether that rule can be
15 effectively encoded, effectively implemented,
16 and therein lies all the questions.

17 Q So you're saying that might not be
18 a rule that could be workable in practice?

19 A I'm saying that it might be very
20 challenging and difficult to implement that, as
21 such, in practice.

22 Q And why would that be?

1 A Mostly to do with the complexity
2 of the firmware and software required to
3 implement such -- such correlations.

4 You mentioned the word "commercial
5 deployments." At that time, and I think it is
6 also still true, manufacturers, especially of
7 systems like set-top boxes, were under
8 tremendous constraints on cost, on memory, on
9 process of power. There were very powerful
10 commercial pressures to keep things as simple
11 as possible and to provide implementations that
12 could be -- while efficient, deliver the lowest
13 possible cost.

14 Q So you're saying that using time
15 stamps to align the audio and the video data
16 would be resource intensive?

17 A To align every time stamps in the
18 audio with every time stamps in the video would
19 be resource intensive.

20 THE WITNESS: Can we take a break?

21 I'd like to use the bathroom for a few
22 minutes.

1 MR. CARDENAS-NAVIA: Sure.

2 (Brief recess.)

3 BY MR. CARDENAS-NAVIA:

4 Q Welcome back.

5 I want to jump ahead a little. If
6 you could, turn to page 73 of your declaration,
7 Exhibit 1005.

8 A You said page 73?

9 Q Page 73, and specifically
10 paragraph 167.

11 And you say, [As read] In the
12 context of the '794 Patent, a timestamp or
13 'time code' would be understood to be an
14 absolute time or time range.

15 How did you come to that
16 understanding?

17 A I'd have to go back through the
18 logic of that, of the -- of the patent.

19 On the other hand, a time stamp is
20 normally an absolute time stamp in the sense
21 that it is relative to the start of the video
22 sequence.

1 This is the most -- this is the
2 most common way of implementing time stamps and
3 time codes in video coding. There's the SMT --
4 SMPTE time code concept, and these absolute
5 time stamps are implemented in -- so far as I
6 know -- the major video coding standards.

7 Q Are you done?

8 A I'm done.

9 Q Okay. Let's actually turn back to
10 page 53 of your declaration. Let me know when
11 you're there.

12 A Yes. I'm there.

13 Q And do you see the subheading B
14 that starts with "Ground 3 and Ground 4"?

15 A You said page 53? Am I on the
16 right page?

17 Q It should be about two-thirds of
18 the way down the page. It has the subheading
19 indented with the B, and then it starts with
20 "Ground 3 and Ground 4."

21 Do you see that?

22 A Oh, I see it. Yes.

1 Q Okay. And this is the section of
2 your declaration that addresses the Sonohara
3 reference; is that correct?

4 A Yes.

5 Q And could you now turn to page 55
6 of your declaration, Exhibit 1005?

7 A Yes.

8 Q And do you see the heading 2 and
9 then sub a)?

10 A Yes.

11 Q And this is your analysis of
12 claim 1 of the '794 patent with respect to
13 Sonohara; is that right?

14 A Yes.

15 Q And below that a) heading is -- is
16 the preamble of claim 1 of the '794 patent; is
17 that right?

18 A Yes.

19 Q In your declaration did you take a
20 position on whether the preamble of claim 1 is
21 limiting?

22 A It depends on what I -- what I

1 said. I don't recall that we made that
2 assessment. I'm looking here to see if we made
3 any statements about it at all.

4 It will be usual for me to conduct
5 the analysis in a way that's agnostic as to
6 whether it is or is not limited.

7 STENOGRAPHER: As to whether it is
8 or is not?

9 THE WITNESS: It is or is not
10 limited.

11 I don't see --

12 STENOGRAPHER: What's the last
13 word you said?

14 THE WITNESS: Limited.

15 STENOGRAPHER: Limited.

16 THE WITNESS: I do not see an
17 explicit statement about the preamble
18 being limited here in my declaration.

19 BY MR. CARDENAS-NAVIA:

20 Q Okay. And let me go ahead and
21 read the preamble. It says, "A method for
22 synchronizing content-related first data

1 segments of a first data file and
2 content-related second data segments of a
3 second data file."

4 Do you see that?

5 A Yes, I see that.

6 Q And what is your explanation --
7 well, I guess let me ask is it your contention
8 that Sonohara meets the limitations of the
9 preamble?

10 A Yes, it does, specifically with
11 respect to Figure 4 defined on page 58 of my
12 declaration, assuming that the preamble is
13 limiting.

14 Of course if the preamble is not
15 limiting, it lists them anyway. But figure 4
16 is a quite explicit illustration of -- that
17 meets the preamble.

18 Q Could you explain that?

19 A Because this particular
20 environment in Sonohara explicitly has two data
21 sources, one an image file, presumably
22 corresponding to the video segments depicted by

1 numeral 11, and a sound file, presumably
2 containing audio segments depicted by numeral
3 12.

4 Q And so, then how are you mapping
5 those two elements to the limitations of the
6 preamble?

7 A Well, if we interpret the preamble
8 at the face value, a natural interpretation is
9 that the image file corresponds to the first
10 data file and the audio file corresponds to the
11 second data file. So taking the preamble at
12 face value, it could, of course, be vice versa.

13 Q Okay. And in Figure 4 you see
14 that there's also -- well, actually, it's not
15 so much in Figure 4.

16 So in Sonohara you start with a
17 separate image file and a separate sound file
18 shown by elements 11 and 12 in Figure 4; is
19 that correct?

20 A In the embodiment described in
21 Figure 4.

22 Q Okay. And then part of what's

1 described in Sonohara is taking the image data
2 and the sound data and putting it into a
3 combined file; is that correct?

4 A Let me look at the -- Sonohara,
5 Figure 7, shows how data may be ordered for
6 outputting according to the chronological
7 sequence. And whether or not this takes place
8 by means of combining it into a single file or
9 streaming from these files separately, Sonohara
10 meets the -- meets the preamble, whether
11 limiting or not, because the embodiment
12 expressed in Figure 4 explicitly shows a first
13 data file and a second data file.

14 Q You didn't answer my question, but
15 let me -- let me see if I can kind of walk you
16 through this a little bit differently.

17 So let's go ahead and look at
18 Exhibit 1003, which is Sonohara.

19 Do you have that handy?

20 A Yes, I have it handy.

21 Q And could you turn to column 1?

22 A Okay.

1 Q And could you go ahead and read
2 column 1, lines 19 through 28, and let me know
3 when you're done?

4 A I'm done.

5 Q What's described in that part of
6 Sonohara?

7 A That part of Sonohara is
8 describing image data that has been digitized
9 and -- in an image file and simultaneously
10 sounds that are input are converted to -- to --
11 recorded in an audio file.

12 So it is referring to two separate
13 files, an image file and an audio file.

14 STENOGRAPHER: A what file?

15 THE WITNESS: An image file and an
16 audio file.

17 BY MR. CARDENAS-NAVIA:

18 Q And then can you continue reading
19 column 1, lines 29 through 35, and let me know
20 when you're done?

21 A I'm done.

22 Q What's described there?

1 A It's -- what's described is the
2 reproduction of image and sound in which the
3 image data per unit time is read out from the
4 image file, and in synchronism the image
5 data -- the audio data per unit time is also
6 read out from the audio file.

7 Q And so that's describing
8 reproducing the audio data and image data from
9 two separate files synchronistically, correct?

10 A Yes.

11 Q And keep reading lines 36 through
12 38. Actually I'll read it. "However, upon the
13 reproduction of the data, the file control is
14 intricate because the audio data and the image
15 data are read out independently from the two
16 files."

17 What does it mean when it says
18 "the file control is intricate"?

19 A Okay. Synchronization is -- is
20 not easy, because if you just reproduce the
21 video data and the audio data according to the
22 storage sequence or chronological sequence,

1 small variations in clock rate, the time that
2 it takes to retrieve the information from
3 storage, to unpack and decompress the data,
4 results in different latencies for the audio
5 and video data. And without some type of
6 synchronization, they would rapidly get so far
7 apart that they would no longer appear to be
8 synchronous to a -- to a viewer.

9 Q And to -- this is my attempt at
10 summarizing what you just said, so let me know
11 if I get it wrong, but I -- what I understood
12 you to be saying was that if you have an image
13 data file and an audio data file, and you're
14 trying to play them both at the same time and
15 provide synchronous content, it -- certainly at
16 that time, if you don't have some kind of
17 technique to do it well, your audio and your
18 images are going to end up out of sync?

19 A That's a good summary.

20 Q Thank you. Every now and then I
21 get it right.

22 So let's keep reading then,

1 starting at lines 40 through 43. It says,
2 "Namely, it is necessary to adjust timings for
3 synchronism between the video data and audio
4 data. Also, a load imposed on the
5 microprocessor is increased. In addition, the
6 formation of programs for controlling the two
7 files is intricate."

8 What is Sonohara saying there?

9 A He's saying what I was also trying
10 to say some minutes ago, that if you're trying
11 to precisely synchronize the audio and the
12 video data, you're going to -- it's going to be
13 resource intensive, and you're going to have a
14 very complicated program that might be
15 difficult to implement in practice.

16 Q And then column 1 continues at
17 lines 44 through 48. "In view of the foregoing
18 defects inherent in the prior art, an object of
19 the present invention is to provide a motion
20 picture reproducing apparatus in synchronism
21 with the sound, which apparatus is capable of
22 reproducing the video data and audio data

1 contained in the file in synchronism."

2 Do you see that?

3 A I see that.

4 Q And so, what is Sonohara proposing
5 there?

6 A It is proposing to provide an
7 apparatus that can produce the images or videos
8 in synchronism with the sound. However, I
9 think that he is only proposing a solution that
10 is good enough by standards of the perception
11 of viewers and engineering standards. He's not
12 proposing --

13 STENOGRAPHER: And what standards?

14 THE WITNESS: By engineering
15 standards, rather than proposing an
16 absolutely perfect synchronism, which
17 he's already said is resource intensive
18 and requires intricate programming.

19 BY MR. CARDENAS-NAVIA:

20 Q And is part of what Sonohara's
21 proposal includes is that instead of trying to
22 reproduce from two separate data files, you

1 instead produce -- reproduce from a single data
2 file?

3 MR. BOWSER: Objection. Form.

4 THE WITNESS: Let me read Sonohara
5 for a few moments to make sure that our
6 understanding is the same.

7 Among other things, he proposes
8 one embodiment in which there's a file
9 compiling section -- I'm reading from
10 column 2, 57 --

11 STENOGRAPHER: From 22?

12 THE WITNESS: Column 2, lines 57
13 through 65.

14 Wherein the image and sound are
15 replaced by new image data and new sound
16 data and the file compiling section
17 commands the track identifying means and
18 the data identifying means. So the
19 tracking and data identifying numbers
20 which have been given to the old image or
21 sound data are imparted to the new image
22 data or the new sound data.

1 So he does -- he does appear to
2 propose one possible embodiment in which
3 the image data and the -- and the sound
4 data, which were input from data -- image
5 files and sound files, can be combined in
6 a sequence. He's proposing one
7 embodiment in which they are compiled to
8 a combined file, but it's only one
9 embodiment of his invention.

10 BY MR. CARDENAS-NAVIA:

11 Q Are any embodiments disclosed in
12 Sonohara of his proposed invention and
13 improvement in which there's still two separate
14 data files that are -- that are synchronized?

15 A It's one -- it's one
16 implementation. Of course, from an engineering
17 standpoint there are tradeoffs; tradeoffs
18 between writing storage; tradeoffs between use
19 of memory; tradeoffs with the use of the
20 microprocessor to write things into a file that
21 read from them afterwards; to output them
22 sequentially or in chronological sequence on

1 the fly. That's an implementation decision.

2 It depends on the system you're
3 working with what his resources are.

4 Q You did not answer my question, so
5 let me ask it again.

6 A I thought I had.

7 Q Let me ask it again.

8 Are any embodiments in Sonohara
9 disclosed in which there are two separate data
10 files and the data is synchronized from those
11 two separate data files?

12 A Well, the source of -- the source
13 of the data are those two separate data files.
14 As to what's -- how Sonohara wants to implement
15 the synchronism is a question of choice. So I
16 do not understand this relevance to the claims
17 of the '794 patent.

18 Q Can you please answer my question?

19 A Sonohara appears to propose, among
20 others, an embodiment in which the image and --
21 data from the image file and the sound file are
22 combined into one file as a result of

1 processing.

2 Q You said "among others." Are
3 there any others in which they're not -- that
4 it's not just a single data file?

5 A It says explicitly, "The apparatus
6 may further compromise a file compiling
7 section."

8 STENOGRAPHER: Wait a minute. I'm
9 sorry. How do I say this? I have to get
10 every word, so when you read it, it's a
11 little hard.

12 It says explicitly?

13 THE WITNESS: It says in -- in
14 column 2 -- through 65, "The apparatus
15 may further comprise a file compiling
16 section for compiling and processing the
17 file."

18 It speaks about a memory means in
19 column 2, 53 through 56, with a main
20 memory and a buffer memory that can store
21 therein image and sound data for at least
22 several seconds.

1 So there you have at least two
2 embodiments; one where the image and
3 sound data are written together to a file
4 after being sourced from a separate image
5 file and a sound file, and another in
6 which the image and sound data are stored
7 in a memory means that may comprise a
8 main memory, a buffer memory. So you can
9 store them in memory or you could write
10 them to a file, and that's two -- to me
11 that's two embodiments.

12 BY MR. CARDENAS-NAVIA:

13 Q I'm sorry. Where were you reading
14 from?

15 A I was reading from column 2, 53
16 through 56; and then column 2, 57 through 65.

17 I consider that to be two separate
18 embodiments; one where the information is
19 written together to a file, another where it is
20 stored in memory.

21 Q Let me just try asking this
22 question again, because I've asked it many

1 times, and I have yet to get an answer.

2 But do you think that Sonohara
3 discloses an embodiment of the patented -- its
4 patented invention in which the data that's
5 being synchronized, the audio data and the
6 image data, are part of two separate data
7 files?

8 MR. BOWSER: Objection. Asked and
9 answered.

10 THE WITNESS: I think -- I think
11 the truth is it has been asked and
12 answered.

13 We know that Sonohara describes an
14 embodiment in which the information is
15 sourced from an image file, sourced from
16 a data file. It can then be placed in
17 memory, synchronized, and read out from
18 the memory, or it can be written to a
19 file in a combined form and read from
20 that file.

21 But, nonetheless, the information
22 in one of the embodiments can be sourced

1 from a separate image file and a separate
2 audio file, and I believe that represents
3 a clear answer to your question.

4 BY MR. CARDENAS-NAVIA:

5 Q It is not. I'm talking not about
6 the sourcing of the image and audio data. I'm
7 talking about the data that is synchronized.

8 Does Sonohara ever disclose an
9 embodiment in which the data -- the audio and
10 video data that is synchronized is stored in
11 two separate data files before it is at the
12 moment of synchronization?

13 A In simple terms, I think the
14 answer is yes, because it is sourced from an
15 image file -- it can be sourced from an image
16 file, sourced from a sound file, and it's
17 stored in memory, main memory and buffer
18 memory, where it can be synchronized in memory.
19 That's what I think is one of the embodiments
20 of Sonohara.

21 Q And show me in your declaration
22 where you describe that.

1 A I'm not sure that this was
2 explicitly discussed in the declaration where
3 the information was reproduced from a single
4 file or was reproduced from the information
5 stored in memory. I don't think we addressed
6 that.

7 Q Can you turn to column 3 of
8 Sonohara, lines 21 through 24? It says,
9 "Namely, since the image and sound data are
10 reproduced in synchronism on a single file 1.
11 the number of the file to be controlled may be
12 one to simplify the file control and facilitate
13 the program formation."

14 Do you see that?

15 A Yes.

16 Q So Sonohara is describing the
17 benefits of having the audio and image data in
18 a single file instead of two separate data
19 files, correct?

20 A He's describing the advantage of
21 one embodiment, but he hasn't excluded
22 reproducing from memory, because this is in the

1 context of column 2, 57 through 65, which
2 essentially describes the way in which the file
3 is produced as optional. It says "may further
4 comprise." It doesn't say "must comprise." It
5 doesn't say "does comprise." It speaks about
6 memory means in the previous paragraph.

7 So my interpretation of this is
8 while this may be a desire or preferred
9 embodiment, it is not the only embodiment.

10 Q And you've pointed to column 2,
11 lines 52 through 56, of Sonohara; is that
12 correct?

13 A Yes.

14 Q Okay. Do you -- I don't think we
15 disagree here, but do you think there's any
16 other embodiments in Sonohara -- or are there
17 any other embodiments in Sonohara that do not
18 require reading -- that, in your view, do not
19 require synchronizing the audio and video that
20 are stored in a single data file?

21 A I think -- my interpretation of
22 column 2, 52 through 56, is that this

1 synchronization could take place from
2 information that is stored in a memory and may
3 not have been explicitly written to a file.

4 Q I see. So you're saying lines 52
5 through 56 is describing data that's stored in
6 memory, not necessarily two distinct files?

7 A The key here is what we mean by a
8 file, and data that is stored in blocks of
9 memory may or may not be considered to be
10 stored in a file. So you have two regions of
11 memory. It could be considered to be two files
12 that are written to memory, depending on how
13 the memory is accessed.

14 An embodiment typically in which
15 the information is written to the file
16 typically would suggest that the information is
17 written to some external media from which it is
18 read. The subtly here is in what or -- is not
19 a file and what is or is not a region of
20 memory.

21 Q In lines 52 through 56 it talks
22 about storing image and sound data for at least

1 several seconds.

2 Do you see that?

3 A Yes, I do.

4 Q And it talks about a main memory
5 and a buffer memory that would store that data.

6 Do you see that?

7 A Yes, I do.

8 Q And so, what would be stored would
9 be a portion of the image data and the sound
10 data, correct?

11 A This says at least several
12 seconds, depending on how much memory and how
13 much buffer memory are available. It could be
14 more than several seconds, but it says at least
15 several seconds. That could comprise quite a
16 lot of groups of pages.

17 Q Does it describe it comprising the
18 entire image data file and the entire audio
19 data file?

20 A It doesn't appear to be limited
21 that way. If an enormous amount of memory were
22 available -- and over the course of time the

1 cost of memory has dropped, of course. Clearly
2 a hypothetical set-top box with gigabytes of
3 memory could very easily store the whole image
4 and audio data of a typical movie, 120-minute
5 movie, in memory. But at that time it's highly
6 unlikely. A few seconds is probably what was
7 achievable.

8 Q Okay. I think you probably saw
9 where I was going, which is that Sonohara's
10 priority date goes back to 1993, correct?

11 A Yes.

12 Q And so, then you would not have
13 been storing a full audio and data file on a
14 buffer memory, right?

15 A In the practical context of a
16 manufacturer's implementation, the cost of
17 memory was a premium, and anything and
18 everything would have been done to reduce the
19 use of memory.

20 Q You did not answer my question.
21 I'll ask it again in hopes that I'll get an
22 answer.

1 A More specifically, you would have
2 been lucky to store a few seconds of data with
3 what was available at that time.

4 Q The role of the memory that's
5 described in lines 52 through 56 is to store
6 just part of the data, correct? It's a
7 processing step. The complete audio and image
8 data would be stored originally in the source
9 files, and then eventually into the single
10 combined file, correct?

11 A That's kind of a compound
12 question. The image and sound data in one
13 embodiment would have been stored in separate
14 image and sound files. It could be read into
15 the memory with appropriate buffering for a few
16 seconds' worth to perform an information
17 processing step.

18 It mentions a CPU here. It does
19 not preclude the synchronization taking place
20 on the basis of the information stored in
21 memory, since a few seconds can comprise quite
22 a few groups of pictures for the -- and video

1 and audio segments.

2 So I see nothing that precludes
3 the synchronization taking place from the
4 information stored in memory and with no
5 absolute requirement that one must implement
6 the embodiment of first storing the combined
7 information to identify before performing the
8 synchronization.

9 Of course Sonohara discusses that
10 embodiment, but I do not see it as an absolute
11 requirement from the standpoint of the POSITA.

12 Q Can you turn to column 8 of
13 Sonohara, to lines 23 through 26? It says,
14 "Therefore, the number of the files to be
15 controlled may be one to simplify the file
16 control and in addition to facilitate the
17 program formation."

18 Do you see that?

19 A Yes. It's repeating information
20 that was disclosed earlier.

21 Q Okay. And do you see that the
22 start of the paragraph, line 19, says,

1 "According to the present invention, when the
2 image data and sound data are recorded in the
3 file, the track identifying number and the data
4 identifying number are imparted to the
5 respective data, and the image and sound data
6 recorded in a single file may be synchronously
7 reproduced"?

8 A Yes. It's described in the
9 embodiment of the invention, and of course the
10 question there is whether the invention is
11 limited to that embodiment, and I do not see
12 that it is.

13 Q Okay. And that sentence I just
14 read began with "according to the present
15 invention"?

16 A Which is why I'm -- which is why
17 I'm stating that the invention to me appears to
18 comprise more than one embodiment, and I do not
19 believe it is limited to a single embodiment.

20 Q Okay. I think we've gone
21 through -- are there any other embodiments in
22 Sonohara of the invention that involve more

1 than -- well, let me ask that again.

2 Other than what we've already
3 discussed, are there any embodiments in
4 Sonohara that describe using two data files
5 instead of a single data file?

6 A From what I've read so far, I
7 don't immediately see any. However, that
8 doesn't preclude that a more detailed and
9 in-depth reading might reveal additional
10 embodiments.

11 Q Okay. And you didn't disclose any
12 of those other embodiments in your declaration,
13 did you?

14 A No.

15 Q Again let's look at your
16 declaration and turn back to page 55. Let me
17 know when you're there.

18 A I'm there.

19 Q And let me know if I'm
20 misunderstanding, but what is disclosed in your
21 declaration is that the first data file and
22 second data file claim limitations in the

1 preamble of claim 1 are met by the sourcing
2 image file and sound file that are, for
3 example, disclosed in Figure 4 of Sonohara; is
4 that right?

5 A Yes.

6 Q And so, in your view, the fact
7 that the audio and image data was previously
8 stored in separate data files is sufficient to
9 meet the first data file and second data file
10 limitations of claim 1?

11 A Well, that's kind of a trick
12 question, because you mentioned that there are
13 limitations. It certainly meets the statements
14 that are made in the preamble. The question of
15 whether the preamble is or is not limiting is a
16 separate question, but it certainly meets the
17 statement about first data file and a second
18 data file.

19 Q Okay. I wasn't trying to
20 implicitly force you to accept -- take a
21 position on whether the preamble was limiting
22 or not, but fair enough.

1 What do you contend is the
2 assignment rule in Sonohara?

3 A Let me see if I explicitly opined
4 as to exactly what the assignment rule was.

5 So in paragraph 148 of my
6 declaration, page 66, [As read] Sonohara
7 further discloses that this is done on the
8 basis of an assignment rule for assigning each
9 one of the content-related data segments to one
10 of the content-related first data segments.
11 Specifically, the system of Sonohara outputs
12 the data based on the control information in
13 the header (an assignment rule), where the
14 header "includ[es] control information for
15 controlling transfer of said image data and
16 said sound data . . . said control information
17 indicating a relationship between said image
18 data and said sound data . . ." Sonohara,
19 claim 1.

20 And there's other information on
21 page 67 and page 68 through paragraphs 152 in
22 my declaration.

1 Q So I'll ask the question again.

2 What do you contend is the
3 assignment rule in Sonohara?

4 A The assignment rule is expressed
5 by the control information in the header. In
6 other words, the header expresses information
7 required to indicate a relationship between the
8 image data and the sound data. A relationship
9 between image data and the sound data, however
10 it is expressed, however it is informative, is
11 a rule, and it is a rule of assigning -- a rule
12 of assignment to assign the relationship
13 between them, thus an assignment rule.

14 Q And is there a specific embodiment
15 in Sonohara that you can point me to?

16 A Paragraph 149 of my declaration
17 refers to Figure 6 of Sonohara.

18 STENOGRAPHER: Figure 6?

19 THE WITNESS: Figure 6.

20 So let's look at Figure 6, which
21 is a flow chart. And particularly we've
22 called out step 112, "Read sound data

1 corresponding to a unit time, form sound
2 data block" --

3 STENOGRAPHER: Wait a minute.

4 Wait a minute.

5 Read sound data corresponding to?

6 THE WITNESS: -- "a unit time,
7 form sound data block and couple the
8 sound data with the image data."

9 The coupling of the sound data
10 with the image data is an assignment, and
11 expressed in terms of the header this
12 represents an assignment rule. It either
13 discloses it or renders it obvious
14 because it's information that controls
15 the synchronization process. However, it
16 is expressed in whatever form it is
17 expressed.

18 BY MR. CARDENAS-NAVIA:

19 Q So anything that couples sound
20 data with image data, in your view, meets the
21 assignment rule limitation?

22 A Within the context of video and --

1 video and sound coding, yes.

2 THE WITNESS: I'm wondering if it
3 would be appropriate to take a short
4 break.

5 MR. CARDENAS-NAVIA: Sure. Let's
6 go off the record.

7 (Brief recess.)

8 BY MR. CARDENAS-NAVIA:

9 Q Welcome back again.

10 Could you turn to page 64 of your
11 declaration, Exhibit 1005? I want to start
12 asking you some questions about that
13 subheading. It looks like it starts with 1.2.

14 Do you see that?

15 A I see that.

16 Q And this is a limitation of
17 claim 1 of the '794 patent. It says, "In such
18 a way that each of the content-related second
19 data segments is output together with an
20 associated one of the content-related first
21 data segments on the basis of an assignment
22 rule for assigning each one of the

1 content-related second data segments to one of
2 the content-related first data segments."

3 Do you see that?

4 A Yes.

5 Q And what is your theory for how
6 Sonohara discloses that limitation?

7 A So the explanation is somewhat
8 involved and --

9 STENOGRAPHER: What's somewhat
10 involved?

11 THE WITNESS: I said the
12 explanation is somewhat involved and
13 spans pages 64 through 68 of my
14 declaration. And according to the
15 declaration, starting in paragraph 142,
16 Sonohara starts in with the flow chart in
17 Figure 9, and this flow chart refers
18 specifically to the embodiment in which
19 there is a single file of Figure 8.

20 Though I think we need to bear in
21 mind that this is not the only possible
22 embodiment in Sonohara. This information

1 could be stored in memory and not in a
2 file. So, for the moment, considering
3 this particular embodiment, the
4 information is placed in a chronological
5 or sequential form, embodies presumably
6 in a -- in a contiguous format, so that
7 the audio and video may be adequately
8 synchronized.

9 In other words, the header
10 information for the image and header
11 information for the sound -- the sound
12 data and the image data have been read
13 out. Here it suggests from a file, but
14 could also, in my view, be from memory in
15 a way that their reproduction is
16 adequately synchronized, and the -- and
17 this reproduction is controlled by an
18 assignment rule expressed in terms of the
19 information stored in those headers.

20 STENOGRAPHER: The information
21 what?

22 THE WITNESS: Stored in those

1 headers.

2 BY MR. CARDENAS-NAVIA:

3 Q And so, how would that work in
4 progress? Figure 8 might be helpful. How
5 would the -- well, you see in Figure 8 that
6 there is an image header and a sound header at
7 the front of the file shown there?

8 A Yes.

9 Q And then you see that there's
10 various sound data and image data parts as
11 well?

12 A Yes. I see it.

13 Q And so, how -- in practice, how
14 would this work out? How would the sequential
15 outputting occur?

16 A Well, the image information and
17 the sound information have identifying numbers
18 that have been assigned or matched up by the
19 implementation of the assignment rule. They
20 are then being assembled. The information
21 corresponds to those identifying numbers. The
22 various image and data segments are then

1 being -- I'm using the term loosely here --
2 assembled into a contiguous form for sequential
3 output so that the sequential outputting of
4 this information now stored in contiguous form
5 corresponds to an adequate level of
6 synchronization for the image and sound data.

7 Q I just want to see if I
8 understand.

9 So what's shown in Figure 8, it's
10 your view that this is -- that this is the
11 outputting? This is the result of the
12 sequential outputting?

13 A This is the -- and I'm using the
14 word "assembly" loosely here, because I'm not
15 implying that there is an assembly in the sense
16 of the traditional computer science use of the
17 term assembly. Just that the information is
18 being organized -- maybe that's the better
19 term -- organized into a contiguous form
20 appropriate for sequential output of -- of the
21 image and video data in such a way as to
22 provide an adequate level of synchronization.

1 So this is -- this is the
2 organization information from which the result
3 or the sequential output comes.

4 Q I see. So what's shown in
5 Figure 8 would -- the image and sound data from
6 what's shown in Figure 8, it's now been
7 organized so that it can be sequentially
8 outputted?

9 A Yes.

10 Q Okay. And just walk me through
11 that process of that sequential outputting.

12 A So let me understand. You're
13 asking a question about how the sequential
14 outputting takes place after the information
15 has been organized?

16 Q Yes.

17 A Okay. So this information would,
18 therefore, be read from this intermediate data
19 structure, if I may use the term, and could be
20 sequentially output rendered by any one of the
21 means available to a decoder. That would
22 typically involve reading the information

1 sequentially according to some -- according to
2 some method or some software or firmware that
3 would do that reading byte by byte or block by
4 block and rendering it and outputting it in a
5 way that the reproduced output of the sound and
6 the video are adequately synchronized with each
7 other.

8 I'm trying to avoid specific --
9 specific embodiments. They are all special
10 terms, such as character sequential, file
11 drivers, and things like this, which are
12 implementation details inside set-top boxes,
13 and so on. Just that there's a way of reading
14 out the information in a sequential form, byte
15 by byte or block by block.

16 Q And would the process you just
17 described involve the use of header
18 information?

19 A The header information helps
20 specify the organization, the data structure
21 from which it is read, the way that the sound
22 data and the image data are matched up with

1 each other in terms of their identifying
2 numbers.

3 Q And so, how would that process
4 occur, for example, in the embodiment shown in
5 Figure 8?

6 A So I think this is explained in
7 quite a lot of depth from paragraphs 144
8 through 154 of my declaration. I'm happy to
9 read it out, if you'd like.

10 Q I'll get -- I would like you to
11 explain how that process occurs, the sequential
12 outputting process occurs, in the embodiment
13 shown in Figure 8.

14 A Well, you're speaking of the
15 sequential output after the information has
16 been organized according to the information in
17 the headers.

18 Okay. So paragraph 146, "Sonohara
19 discloses outputting . . ."

20 So each of the image -- each of
21 these segments are -- so the -- for example,
22 after the segments of the "01" identifier,

1 segments 2, so some -- 2 and image data
2 segment 2 are output together at the same time,
3 meaning that they are rendered at the same time
4 by -- by the system.

5 So it says here specifically that
6 the system of output -- Sonohara outputs the
7 data based on control information on the
8 header, where the header includes control
9 information for the transfer of image data and
10 sound data, indicating a relationship between
11 the said image data and said sound data.

12 In Figure 6 it -- in Figure 6 it
13 speaks about the formation process of the file,
14 but let's remember --

15 STENOGRAPHER: The formation and?

16 THE WITNESS: The formation
17 process of the file. But let's remember
18 that this also could refer to an
19 organization of data structure stored in
20 memory where there's a flow chart which
21 points out, at step 12, the sound data,
22 image data are coupled with each other.

1 So in paragraph 151 I point out
2 that control information in the header
3 assigns sound data, number 2-01, to image
4 data 1-01, so that they can be output
5 synchronously at time t1.

6 Likewise, the control information
7 in the header assigns sound data
8 dash 2 -- sorry -- sound data number 2-02
9 to image data number 1-02 so they output
10 synchronously at time t2.

11 Therefore, this information that
12 has been organized into what I would call
13 a data structure enables the sequential
14 reading of the information and the
15 rendering of the sound and image data in
16 such a way as to provide an adequate
17 level of synchronization with the sound
18 data segments and image data segments
19 identified by identifying numbers that
20 have been matched up according to the
21 headers and the assignment rule in the
22 headers.

1 BY MR. CARDENAS-NAVIA:

2 Q So let me see if I understand what
3 you said there. So, for example, using
4 Figure 8, is it the case that -- well, let me
5 back up a little bit.

6 In Sonohara it talks about having
7 an audio track and an image track; is that
8 right?

9 A Yes.

10 Q And the image track is track
11 number 1 and the soundtrack is track number 2;
12 is that right?

13 A That's one embodiment that's
14 mentioned.

15 Q Okay. Let's go with that
16 embodiment then.

17 And then, in that embodiment each
18 portion of image data and sound data are given
19 identifying numbers, correct?

20 A Yes.

21 Q And then, is it the case that in
22 Sonohara it talks about synchronizing so that

1 sound data with identifying number 1 is
2 synchronized with image data with identifying
3 number 1?

4 A Yes. However, we should be aware
5 that -- of what -- of what the synchronization
6 means. In a sense, that sound data with
7 identifying number 1 -- there's not only one
8 identifying number. There's identifying
9 number 1 and this, if you like -- and segment
10 identifying number or segment relative
11 information as well. So that, for example,
12 segment 1-02 would also correspond to image
13 data 1-02 and sound data number 1-01 would
14 correspond to sound data 1-01 at whatever level
15 of granularity of the segment has been chosen.

16 Q I think you might have misspoke.
17 You said -- I think you said something like
18 image data 1-02 would correspond to image data
19 1-02 and sound data 1-01 would correspond to
20 sound data 1-01.

21 A I mean that image data with the
22 same designation, such as 1-02, would

1 correspond to sound data 1-02.

2 Q Okay. So let me know if this is a
3 fair summary of how Sonohara does its
4 synchronizing, is that your image data will be
5 synchronized with your sound data, if they have
6 the same identifying numbers?

7 A The segments will be synchronized
8 adequately if they have the same identifying
9 numbers.

10 Q Does Sonohara disclose any
11 techniques other than synchronizing based on
12 data having the same identifying numbers?

13 A I do not recall that it does.

14 Q Okay. Did you identify any other
15 techniques in your declaration?

16 A Not with respect to Sonohara.

17 Q In Sonohara -- in Sonohara for
18 each -- what you contend is a data segment, for
19 each one of those, do they always need to be
20 the same length of time?

21 A Are you speaking about whether or
22 not that is a limitation expressed in Sonohara

1 or as a question of the general knowledge of a
2 POSITA?

3 Q Well, I'm always asking about what
4 Sonohara discloses, not what other people might
5 know or think. But let me actually ask -- let
6 me actually try to clarify my question. This
7 might be -- maybe this will be helpful for you.
8 So let me narrow it down to just the image
9 data.

10 A Okay.

11 Q For just the image data, do all
12 the segments of image data in Sonohara need to
13 be the same length of time?

14 A Let me read this closely to give
15 you a good answer.

16 Q And let me ask a better question.
17 Does Sonohara disclose that the
18 image data segments are always the same length
19 of time?

20 A Well, it certainly describes an
21 embodiment in which the image data are
22 organized into segments, each of which have the

1 same duration.

2 Q Does --

3 A So, for example, column 5, 57
4 through 65, states, [As read] On the other
5 hand, the image data of the file reading region
6 are read by the image/sound data formation
7 renewal section 13 for a unit time (one second)
8 to carry out the image data block formation
9 process.

10 So it's certainly -- it's
11 described an embodiment, and it refers
12 frequently to unit time such as track
13 identifying number 2 to the sound data for
14 every unit in time, in column 6, lines 34
15 through 40. So the terms "unit time" are used
16 frequently.

17 It will require a more fine
18 reading of Sonohara to see if there are any
19 other embodiments that are disclosed that do
20 not require a specific unit of time for each of
21 the audio segments in each of the video
22 segments.

1 MR. BOWSER: May I just interject
2 for one second?

3 When you're reading -- I'm
4 watching your face. Sometimes you read a
5 little bit fast. So maybe slow down a
6 little bit. Just for the transcript.
7 Sorry, I apologize.

8 THE WITNESS: Sure. I'm happy to
9 do so.

10 BY MR. CARDENAS-NAVIA:

11 Q Okay. So you're not currently
12 aware of any disclosures in Sonohara of
13 embodiments where the identified audio segments
14 are not the same length of time?

15 A Correct.

16 Q Are you aware of any embodiments
17 disclosed in Sonohara where the identified
18 image segments are not the same length of time?

19 A Not right now.

20 Q Could you turn to page 59 of your
21 declaration, and let me know when you're there?

22 A I'm there.

1 Q And I want to point to this
2 heading that starts with 1.1 "sequentially
3 outputting."

4 Do you see that?

5 A I see that.

6 Q And this is -- what's bolded and
7 italicized right there is a portion of claim 1
8 of the '794 patent, correct?

9 A Correct.

10 Q And what is your understanding of
11 what "sequentially outputting" means in this
12 claim?

13 A Well, this is stated in
14 paragraph 135 of my declaration on page 60.
15 [As read] The output is sequential because, for
16 example, the image data portion number 1-02 and
17 the sound data portions number 2-02 are shown
18 as being output together after the output of
19 image data portion number 1-01 and sound data
20 portion 2-01, Figure 8. Further, Sonohara
21 explains that, in production of the file -- and
22 we're speaking here about the embodiment in

1 which the information has been organized into a
2 file, not forgetting that an embodiment is
3 possible in which it's organized in memory --
4 data identifying section 3 gives data
5 identifying numbers 01, 02, 03 . . . for
6 representing the order of the data within the
7 image track 22 or the sound track 23 to the
8 image data and the sound data per unit time.
9 In the apparatus, the same data identifying
10 numbers are given to the image data and the
11 sound data to be synchronized with the image
12 data.

13 So the data identifying numbers
14 are representative of an order of data with the
15 image track and the sound track at sequential
16 output -- outputting.

17 In terms of the order of the
18 identifying numbers, that is according to their
19 chronological sequence.

20 Q Thank you.

21 Could you turn to Sonohara,
22 Exhibit 1003, and specifically to column 5?

1 Let me know when you're there.

2 A I'm there.

3 Q And do you see about maybe
4 two-thirds of the way down there's a heading,
5 "Formation Processing Flow for File 1"?

6 A I see it.

7 Q And what's described under this
8 heading is the process of creating the file
9 that's labeled with a number 1; is that
10 correct?

11 A That's correct, for that
12 embodiment.

13 Q And can we look at column 5,
14 lines 60 through 65?

15 A Yes.

16 Q And it says, "At this time, the
17 track identifying section 2 imparts the track
18 identifying number #1 to the image data for
19 every unit time."

20 Do you see that?

21 A Yes.

22 Q What does it mean to impart a

1 track identifying number onto image data?

2 A In this context I mean -- I think
3 it means that the track identifier number 1 is
4 used to label the image -- all the image data
5 for every unit time for that track.

6 However, the data identifying
7 section 3 -- and we're reading now from
8 column 5, 62 through 65 -- gives 01 in order of
9 the data as the data identifying numbers.
10 That's the data primary file 18 as produced.

11 So the segments of information are
12 identified by a track, identifying number, and
13 a data identifying number. Essentially for
14 each track there are separate identifying
15 numbers for each segment within that track.

16 Q And so, as part of this process is
17 the -- I guess in this case it would be the
18 image data, is it then modified to hold that
19 label of the track number and the identifying
20 number?

21 A So you're asking whether the data
22 themselves are modified? I don't see a

1 requirement for the data themselves to be
2 modified; rather, for the locations in storage
3 or in a file to be labeled with that label.
4 That doesn't preclude that the data couldn't be
5 modified, but it doesn't specifically -- I
6 don't think this specifically requires -- the
7 term in part is not a usual -- usual term of
8 art.

9 I see this more as a label that is
10 being attached. Of course the label could be
11 included in the data structure for the image or
12 sound segment, but it really may not be, and
13 the information can be stored in the header
14 instead. For example, track 1-01 could
15 correspond to a certain region of memory or a
16 certain byte range in a file.

17 Q So I believe you're saying the
18 track number and the identifying number could
19 be, but could also not be, stored within the
20 image or audio data itself?

21 A Yes.

22 Q And if that information was stored

1 in the header, then the header would then need
2 to also have some kind of location information
3 stored along with it so that it could identify
4 the corresponding image data or video data?

5 A It depends how this is
6 implemented. If all the video segments have
7 equal duration, and all the audio segments have
8 equal duration, this information may be
9 implicit and not required to be explicitly
10 stored. In other words, these offsets, these
11 ranges, can be calculated rather than
12 explicitly stored.

13 Q In that instance would it at least
14 need a starting point for where the data is
15 stored?

16 A I believe that the starting point
17 is intended to be -- well, there's two types of
18 starting point, the starting point relative to
19 the beginning of all video and audio data, the
20 start of the video coding --

21 STENOGRAPHER: Video?

22 THE WITNESS: -- coding, and there

1 is the offset relative to the start of
2 the track.

3 But if all the tracks have equal
4 duration, whether audio or video, and if
5 all the segments have equal duration, the
6 track -- the offset is easily calculated
7 from the track and data identifying
8 number and would not require further
9 explicit storage.

10

11 BY MR. CARDENAS-NAVIA:

12 Q I see. And in that instance,
13 then, would you also need to store the audio
14 and video segments in a specific ordering so
15 that you knew you were getting audio and not
16 video?

17 A This appears to be the purpose
18 of -- in that embodiment. They are stored for
19 the purpose of the file component -- the
20 purpose of the flow chart, which is in --
21 explained in Figure 6, to produce a result
22 exemplified by Figure 7.

1 Q And if I'm understanding you,
2 you're saying that in Figure 7 the sound data
3 and image data are shown as all stored
4 sequentially, one after the other, and in a
5 specific order?

6 A They're stored or they're read --
7 or they're read from memory. However they are
8 stored, this is an organization of information.
9 There may be more implementation details than
10 that, but that is a representation of how the
11 information is stored.

12 Q Okay. But if the -- if the track
13 number and identifying numbers were not stored
14 in the data itself, there would need to be some
15 mechanism, and it sounds like we've discussed a
16 couple, to then go and find the specific sound
17 data or image data you're searching for during
18 the reproduction process?

19 A I think that's a reasonable
20 statement. The purpose of the flow chart in
21 Figure 6 is to organize the data in that form
22 exemplified by Figure 7.

1 Q And do you view Figure 7 as
2 necessarily a -- like physical storage, like
3 the data would physically be stored in order,
4 or more as a logical storage where the data
5 could be stored in various locations, but their
6 logical relationships are all recorded?

7 MR. BOWSER: Objection. Form.

8 THE WITNESS: Both types of
9 organization are possible. One may be
10 more efficient than the other. It
11 depends on the implementation details.

12 MR. CARDENAS-NAVIA: Can we go
13 ahead and take a short break?

14 THE WITNESS: Sure.

15 (Brief recess.)

16

17 BY MR. CARDENAS-NAVIA:

18 Q Dr. Freedman, is there any of your
19 testimony today that you would like to correct
20 in any way?

21 A I would need to see the transcript
22 to make sure there are no errors, but otherwise

1 I see no need to make substantial corrections
2 of fact.

3 Q Okay. And I just wanted to give
4 you a chance in case there was anything on your
5 mind.

6 A Thank you for that.

7 MR. CARDENAS-NAVIA: I have no
8 further questions.

9 MR. BOWSER: Okay. I have just
10 one set of questions here, and just for
11 clarification, something that you
12 testified on.

13 THE WITNESS: Sure.

14 BY MR. BOWSER:

15 Q This is about Sonohara.

16 A Okay.

17 Q Okay. And can I have you please
18 turn to Sonohara at column 2? I'll give you a
19 quick cite.

20 Do you recall testifying earlier
21 about the portions in column 2 starting at
22 line 52, where it says "the memory means"?

1 A Yes.

2 Q And can you please turn to
3 paragraph 134 of your declaration? Let me know
4 when you're there.

5 A I'm here.

6 Q In paragraph 134, what portions of
7 Sonohara do you reference?

8 A I reference column 2, 40 through
9 51, and column 8 --

10 STENOGRAPHER: Wait. Column 2 or
11 2 --

12 THE WITNESS: Column 2, lines 40
13 through 51, and also column 8, lines 53
14 through 62.

15 BY MR. BOWSER:

16 Q Okay. What is your understanding
17 of the portions of column 2, lines 40 to 51, in
18 Sonohara, as you reference in paragraph 134?

19 A It describes an embodiment in
20 which a data synchronizing means --

21 STENOGRAPHER: A data
22 synchronizing?

1 THE WITNESS: [As read] Data
2 synchronizing means may comprise a
3 reading section for reading the image
4 data and the sound data from the file 1
5 and a memory means for storing the image
6 data, the sound data, which had been read
7 out by the reading section. The data
8 synchronizing means may synchronizing --
9 synchronously reproduce the image data
10 and sound data by using a controller for
11 outputting the data by reading
12 synchronously the image and sound data to
13 which the same data identifying numbers
14 have been given with reference to the
15 track identifying number and the data
16 identifying number stored in the memory
17 means.

18 So the image and sound data have
19 been read and can be synchronously
20 reproduced with respect to track
21 identifying number and data identifying
22 numbers that are stored in the memory

1 means.

2 BY MR. BOWSER:

3 Q So that portion of the -- that you
4 just read references the memory means 42.

5 Do you see that?

6 A Yes, I see that.

7 Q And then, can you please read
8 column 2, lines 52 to 56, which describe the
9 memory means?

10 A [As read] The memory means 42 may
11 comprise, for example -- and it is only an
12 example -- a memory -- main memory and a buffer
13 memory that can store therein image and sound
14 data for at least several seconds. The
15 controller may comprise a central processing
16 unit and microprocessor.

17 Q Do you see the phrase "for at
18 least several seconds"?

19 A Yes.

20 Q Okay. Is that a lower limit, or
21 is that an upper limit?

22 A It's a lower limit.

1 Q It's a lower limit?

2 A Yes.

3 Q So there's just a minimum of
4 several seconds?

5 A Yes.

6 Q Does it place an upper limit in
7 terms of how many seconds can be recorded in
8 the memory?

9 A Not according to the statements in
10 that paragraph.

11 MR. BOWSER: Okay. That's all I
12 have.

13 MR. CARDENAS-NAVIA: Just one or
14 two questions.

15 THE WITNESS: Sorry. I'll switch
16 my telephone off. I did not mean it to
17 be . . .

18 MR. CARDENAS-NAVIA: Give me just
19 one minute here.

20 Actually, I have no further
21 questions.

22 THE WITNESS: Thank you, Counsel.

1 (The deposition is concluded

2 11:14 a.m.)

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1 C E R T I F I C A T I O N

2

3 I, LISA FORLANO, a Certified
4 Realtime Reporter, Certified Court
5 Reporter and Notary Public, do hereby
6 certify that I reported the deposition in
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8 witness was duly sworn by me; that the
9 foregoing is a true and correct
10 transcript of the stenographic notes of
11 testimony taken by me in the
12 above-captioned matter.

13 I further certify that I am not an
14 attorney or counsel for any of the
15 parties, not a relative or employee of
16 any attorney or counsel connected with
17 the action, nor financially interested in
18 the action.

15

16

17

18

19

20 LISA FORLANO, CRR, CCR #XI01143

21

22 DATED: March 24, 2023

1 Dr. Immanuel Freedman, c/o
HAYES AND BOONE, LLP
2 800 17th STREET NW, Suite 500
Washington, DC 20006

3
4 Case: Unified Patents, LLC v. VL Collective IP LLC
Date of deposition: March 22, 2023
5 Deponent: Dr. Immanuel Freedman

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12

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