

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AYLO FREESITES LTD and fuboTV MEDIA INC.

Petitioner

v.

DISH TECHNOLOGIES L.L.C.

Patent Owner

Case IPR2024-00043, IPR2024-00044, IPR2024-00045,
IPR2024-00046, IPR2024-00146

U.S. Patent No. 11,6777,798 B2, 11,470,138 B2,
10,469,554 B2, 10,951,680 B2, 10,469,555 B2

REPORTED BY:

DEBRA A. DIBBLE, FAPR, RDR, CRR, CRC, Notary Public

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1 ORAL DEPOSITION OF DAVID R. ERICSON, produced as
2 a witness at the instance of the Petitioner and duly
3 sworn, was taken in the above-styled and numbered
4 cause on the above-referenced date, from 9:04 a.m.
5 to 3:47 p.m. MDT, before Debra A. Dibble, CSR, CCR,
6 RDR, CRR, Fellow of the Academy of Professional
7 Reporters, Notary Public, reported by realtime
8 stenographic means at Ray, Quinney, Nebeker, 86 N.
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1 ALSO PRESENT:

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4 JOSEPH EDELL - In-house Counsel for DISH
5 (via Zoom)

6 VIDEOGRAPHER:

7 RYAN REVERMAN

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DEPOSITION EXHIBITS

NUMBER	DESCRIPTION	PAGE
Exhibit 1	VideoNuze, Fox Switches from Move to Flash; ABC Plans Transition Too	92
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REFERENCED EXHIBITS

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Exhibit 2013		130
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2

P R O C E E D I N G S

3

September 19, 2024, 9:04 a.m. MDT

4

5

THE VIDEOGRAPHER: We are now on the

6

record. The time is approximately 9:04 a.m.

7

Mountain Time. This is the video-recorded

8

deposition of David Ericson, in the matter of

9

Aylo Freesites LTD, et al., versus DISH

10

Technologies, being held at the office of Ray,

11

Quinney & Nebeker, located in Provo, Utah, on

12

September 19, 2024.

13

My name is Ryan Reverman. I am a

14

certified legal videographer, here with

15

certified court reporter, Debbie Dibble.

16

At this time, counsel in the room

17

will state their appearance for the record.

18

MR. ZIMMERMAN: Parker Zimmerman with

19

Venable LLP for petitioner Aylo Freesites.

20

With me is Philip Sheng, also with Venable.

21

MR. DHANANI: Ali Dhanani with Baker

22

Botts. And with me is my colleague, Zacharias

23

Shepard, with Baker Botts as well, and here

24

for patent owner and for the witness.

25

THE VIDEOGRAPHER: Counsel appearing

1 on Zoom will be noted for the stenographic
2 record.

3 At this time, our court reporter will
4 swear in the witness.

5 -----

6 DAVID R. ERICSON,
7 having been duly sworn,
8 testified as follows:

9 -----

10 EXAMINATION

11 -----

12 BY MR. ZIMMERMAN:

13 Q. Good morning, Mr. Ericson. Thank you for
14 being here today.

15 A. Thank you.

16 Q. Could you please state your full name and
17 address for the record.

18 A. David Ray Ericson, 4405 West Oxford
19 Street, Cedar Hills, Utah 80462.

20 Q. You've been deposed before, correct?

21 A. I have.

22 Q. How many times have you been deposed?
23 Around?

24 A. Three or four.

25 Q. Do you remember what matters that --

1 those were involved in?

2 A. Yeah. I have been deposed previously
3 for -- regarding the Move Networks patent, and I
4 have been deposed previously and appeared in
5 arbitration for a company called I-Link
6 Incorporated, New York.

7 Q. So one of those depositions was related
8 to the patents involved in this matter, correct?

9 A. Yes.

10 Q. Okay. So before we get started, I want
11 to go over a few ground rules. You understand that
12 I'll be asking you questions today and you'll be
13 answering. Correct?

14 A. Yes.

15 Q. If you don't understand a question,
16 please let me know. If you answer my question, I'll
17 assume you understood that question. Fair?

18 A. Yes.

19 Q. The court reporter is writing down
20 everything we're saying, so if we can stick to,
21 like, verbal answers, that would be great. Yes, no,
22 and as we mentioned earlier, sounds like uh-huh will
23 be fairly difficult. Is that fair to stick to yes,
24 no, answers?

25 A. Yes.

1 Q. And please speak as clearly as possible
2 for the court reporter. That will help get a clean
3 record for us.

4 And if you need to take a break at any
5 point, let me know. I'll just ask that I can finish
6 my line of questioning before we take a break. Is
7 that fair?

8 A. Yes.

9 Q. You understand you're under oath today,
10 correct?

11 A. Yes.

12 Q. Is there any reason you cannot provide
13 full and truthful testimony today?

14 A. No.

15 Q. Do you have an understanding of what an
16 inter partes review or IPR proceedings are?

17 A. Kind of. Based on what I've learned in
18 the last 24 hours.

19 Q. What is your understanding of what an IPR
20 proceeding is?

21 MR. DHANANI: And I'm going to
22 caution the witness not to disclose any
23 understanding based on attorney-client
24 information; but if you have a
25 separate-and-apart understanding of that, then

1 you can answer.

2 A. I don't have a separate-and-apart
3 understanding of that.

4 BY MR. ZIMMERMAN:

5 Q. As a factual matter, do you understand
6 that an IPR proceeding is a challenge to a patent at
7 the USPTO; is that correct?

8 A. Yes.

9 Q. What is your understanding of why you are
10 being deposed today?

11 MR. DHANANI: Again, same caution on
12 the attorney-client communication, but
13 separate and apart, you can answer.

14 A. Okay. It is to review prior testimony
15 and deposition that I gave regarding the patent.

16 BY MR. ZIMMERMAN:

17 Q. And you said patent. You understand that
18 you are testifying today regarding multiple IPRs
19 involving multiple patents, specifically
20 IPR202400043, 00044, 00045, 00046, and 00146? Do
21 you understand all of that --

22 A. I understand there's multiple patents. I
23 don't know -- I wouldn't recognize the patents by
24 the numbers.

25 Q. I'll represent to you that those are the

1 numbers we're dealing with today. Is that fair?

2 A. That's fair.

3 Q. You sub -- mentioned you submitted a
4 declaration in these IPRs; is that correct?

5 A. I did.

6 Q. Why did you submit a declaration in these
7 IPRs?

8 A. Because I was requested to do so.

9 Q. Around when did that request come in?
10 When were you requested to submit a declaration?

11 A. I don't know. Maybe a month or two ago.

12 Q. Early August, does that time frame sound
13 reasonable?

14 A. I think so. I don't remember exactly.

15 Q. Do you know if you were requested after
16 the patent owner response was submitted? So after
17 the filing that you reference in your declaration?

18 A. I don't know the timing of it. I do know
19 that I was contacted by the counsel here
20 representing me to -- if I'd be willing to submit a
21 declaration based on my previous testimony, and I
22 said, yes, I would.

23 Q. Why were you willing to submit a
24 declaration in this -- in these IPRs?

25 A. Because I was there and previously I'd

1 been subpoenaed to do that, so I wanted to represent
2 my testimony.

3 Q. Do you have an understanding of what the
4 purpose of your declaration is?

5 MR. DHANANI: I'm going to caution
6 you on attorney-client communication, but you
7 can answer separately from that.

8 A. Okay. My assumption is that there is
9 part of my declaration that you would like to
10 question.

11 BY MR. ZIMMERMAN:

12 Q. So your understanding is the reason you
13 were asked to submit a declaration is based on the
14 previous testimony you've provided, correct?

15 A. Yeah, it was to recount some portion of
16 that testimony in a new proceeding.

17 Q. Is it also because of your background?

18 A. Yeah. I would assume it was because of
19 my knowledge and experience at Move Networks.

20 Q. Anything other than your experience at
21 Move Networks as part of your background as -- as
22 the reason for your declaration?

23 A. Well, I was also employed subsequently by
24 EchoStar, and a JV that they had with DISH related
25 to the development and operations of Sling TV.

1 Q. I want to go back to some more specifics
2 about the petitions involved in this proceedings.

3 So do you understand in these IPRs,
4 petitioner, as we talked about, Aylo, is challenging
5 the patents owned by DISH; is that correct?

6 A. Yes, that's my understanding.

7 Q. For the record, I'm going to read out the
8 patent numbers for each of the patents challenged in
9 these IPRs.

10 So it's U.S. Patent Numbers 10469555,
11 10469554, 10951680, 11470138, and 11677798.

12 If I refer to these patents as the ABR
13 patent or adaptive bitrate, do you understand that
14 I'm referring to these patents?

15 A. I don't recognize the patent numbers,
16 but, yes. I would -- I know that they're related to
17 adaptive bitrate streaming of the IPR patents.

18 Q. And you are not an inventor on any of the
19 ABR patents --

20 A. I'm not listed as an inventor.

21 Q. But you are familiar with the ABR
22 patents, correct?

23 A. Yes.

24 Q. And you mentioned you were previously
25 employed by Move Networks, and you are familiar

1 with --

2 (Clarification by Reporter)

3 BY MR. ZIMMERMAN:

4 Q. Correct? That you're --

5 A. Yes.

6 Q. And if I refer to Move Networks as Move,
7 you'll understand I'm referring to Move Networks; is
8 that correct?

9 A. Yes.

10 Q. And you are familiar with DISH
11 Technologies LLC, correct?

12 A. Yes.

13 Q. And if I refer to them as DISH, will you
14 understand I'm referring to DISH Technologies?

15 A. Yes.

16 Q. Going back to the ABR patents and the ABR
17 technology, what is Move's adaptive bitrate
18 streaming technology?

19 A. Well, first, I would reference you to the
20 patents themselves. As a general description, it is
21 a way of streaming over HTTP that allows for
22 playback of video.

23 Q. Is it just a general -- or a way of
24 streaming over HTTP that allows for playback video,
25 or is there anything else specific about adaptive

1 bitrate?

2 A. Yeah. I mean, there's lots specific to
3 the invention. Again, I'd point to the patents
4 themselves. But I can provide general descriptions,
5 not probably inclusive to everything in the --

6 Q. How would you describe adaptive bitrate
7 to a layperson, someone not familiar with the
8 technology?

9 A. Again, there's multiple components, so
10 this is not an exclusive list, but I would say it is
11 the ability to play back video and to adapt based on
12 the constraints of the IP network or networks
13 delivering that video.

14 Q. Can you explain in a little more detail
15 that ability to adapt that you just mentioned?

16 A. Sure. So networks, especially the last
17 mile of network to somebody's home, varies,
18 dependent on what they pay their high speed for, as
19 well as constraints within the general backbone of
20 the internet.

21 And so the invention was to allow
22 continuous playback given those constraints. In
23 order to do that, a video file is separated into
24 different segments, or, under Move's description, it
25 would be, you know, streamlets or atoms or all sorts

1 of different names that we gave it at the time. But
2 it's basically segments of video that represent a
3 segment of time in that video, and it would be
4 encoded at various bit rates, both audio and video,
5 to allow -- get request to pull those files.

6 And then based on what the client knew
7 how to receive, it would request a video appropriate
8 for delivery over that network. So it would request
9 a file at one bitrate or at a higher bitrate or a
10 lower bitrate based on the real-time constraints of
11 that network and then resequence the video in time
12 so that it allowed continuous playback without
13 stalling or buffering, and start-up times.

14 Q. How would the client know the bitrate of
15 that file in order to be able to switch to it?

16 A. Can you rephrase what you just said?

17 Q. So you stated that -- I'm going to -- the
18 client would request a file at one bitrate or at a
19 higher bitrate or a lower bitrate based on the time
20 constraints of that network.

21 A. Sure.

22 Q. How would it know the bit rates of the
23 file in order to be --

24 A. The technology itself was a set of code
25 that was downloaded code as a browser plug-in or a

1 code extension to a browser. And the content itself
2 would be encoded and pushed to an origin server, and
3 referenced by a URL, like a web page.

4 And so somebody would select that URL to
5 play, like going to a web page. And the logic in
6 the Web browser at the time would be testing that
7 connection and would know which file to pull next to
8 achieve that continuous playback.

9 Q. And so it was your understanding that
10 this technology that you just described is disclosed
11 in the ABR patents?

12 A. That's my understanding.

13 Q. Where do you have that understanding
14 from?

15 A. From my work with software developers and
16 my role at Move Networks at the time.

17 Q. So your understanding is based on your
18 familiarity with the patents and familiarity with
19 Move Networks' technology, correct?

20 A. Yeah. My position and familiarity with
21 the technology and the way the technology worked in
22 practice.

23 Q. When was the last time you reviewed any
24 of the ABR patents?

25 A. When I was at Move, probably.

1 Q. So it's been 15 years?

2 A. 17 years, maybe.

3 Q. So prior to signing your declaration, you
4 did not review any of the ABR patents --

5 A. Correct.

6 Q. -- correct?

7 You stated earlier that you were not
8 listed as an inventor on any of the ABR patents.
9 Are you an inventor on any patents, any other
10 patents?

11 A. No.

12 Q. But throughout your career, have you had
13 exposure to patents? Have you read many patents?

14 A. I've had exposure to patents. I haven't
15 read them. My role, throughout my career, has been
16 the practical implementation of the technology, to
17 make things work.

18 Q. And just returning to the ABR patents, do
19 you understand that all of the ABR patents in these
20 proceedings, the ones we discussed earlier, they are
21 related, correct?

22 MR. DHANANI: Objection, form.

23 A. Can you repeat? Belated?

24 BY MR. ZIMMERMAN:

25 Q. Related.

1 A. Oh, related.

2 Q. Are the patents in these IPR proceedings,
3 all the ABR patents, are they related?

4 A. I believe so.

5 Q. Do you understand what it means for
6 patents to be related?

7 A. I can give you what I believe it means,
8 is that the technology is, as it was developed or as
9 it was defined, as new inventions were made, it was
10 addition onto the previous ideas.

11 Q. Okay.

12 A. That would be my assumption.

13 Q. Do you understand that all of the ABR
14 patents in these proceedings share a specification?

15 MR. DHANANI: Objection, form.

16 A. Can you repeat the question? Sorry.

17 BY MR. ZIMMERMAN:

18 Q. Do you understand that in a patent that
19 has multiple parts, there is the specification, and
20 then at the end, there are the claims?

21 A. Not directly, but, yes. I mean, I
22 haven't filed a patent myself.

23 Q. I'm going to move on from the ABR patents
24 and return to your declaration for a minute and
25 today's deposition.

1 In preparation for today's deposition,
2 did you review any of the filings in these IPRs?

3 MR. DHANANI: Objection, form.

4 But you can answer that question.

5 A. Did I review -- restate what I think I --
6 you asked. Did I review any of the documents
7 related to these proceedings?

8 BY MR. ZIMMERMAN:

9 Q. Yes.

10 A. The only document that I reviewed was
11 my -- the declaration that was prepared for me based
12 on my prior testimony.

13 Q. Okay.

14 A. Made a couple of minor modifications, and
15 that was it.

16 Q. So you did not draft the declaration
17 itself; is that correct?

18 A. No.

19 Q. You only made a few modifications to the
20 declaration; is that correct --

21 MR. DHANANI: Objection --

22 Oh, go ahead.

23 Finish your question.

24 BY MR. ZIMMERMAN:

25 Q. You only made a few modifications to the

1 declaration; is that correct?

2 MR. DHANANI: Objection, form,
3 mischaracterizes.

4 MR. ZIMMERMAN: What's your basis for
5 that?

6 MR. DHANANI: You're summarizing his
7 point that you only made a few modifications.
8 You're adding the word "only" to it, which is
9 a mischaracterization of what he did in his
10 review in preparation of the declaration.
11 That's the basis for the objection.

12 BY MR. ZIMMERMAN:

13 Q. Mr. Ericson, did you make any
14 contributions to your declaration other than a
15 couple of minor modifications?

16 MR. DHANANI: Objection, form.

17 MR. ZIMMERMAN: Sir, you can answer.

18 MR. DHANANI: You can answer.

19 A. That was it, just minor tweak to make it
20 read better, or -- but not to change anything.

21 BY MR. ZIMMERMAN:

22 Q. So someone else drafted the declaration
23 other than you, that is correct?

24 MR. DHANANI: Objection,
25 mischaracterizes.

1 A. I can answer?

2 MR. DHANANI: Yes, sir.

3 A. Yeah, it was basically an excerpt of my
4 previous deposition, and so all I did is review
5 that, that was provided to me. And from that, I
6 just corrected a couple of things that were kind of
7 just part of that initial declaration, but not in
8 substance in any way.

9 BY MR. ZIMMERMAN:

10 Q. Do you know who drafted your declaration?

11 A. Yeah, the attorneys here.

12 Q. So your attorneys drafted the
13 declaration, and you made minor modifications to it;
14 is that correct?

15 A. Correct.

16 MR. DHANANI: Objection, asked and
17 answered, form.

18 A. Yes, that was the limit of it.

19 BY MR. ZIMMERMAN:

20 Q. Do you recall what changes you made to
21 the declaration?

22 A. No. When I say minor, it was like a word
23 or a phrase or a -- but that was it. It wasn't like
24 a changing of the substance in any way.

25 Q. Sitting here today, are you able to give

1 me an example of a minor modification that you made?

2 A. No. I mean, it was -- I can't remember
3 the word I might have changed or the -- or -- I
4 mean, it's an excerpt from my previous. So you can
5 compare the -- I guess you could compare the
6 declaration against my -- the section of previous.

7 Q. So is it your understanding that your
8 declaration is a summary of your testimony in the
9 ITC investigation; is that correct?

10 MR. DHANANI: Objection, form, but go
11 ahead.

12 A. It is a portion of what I said in my
13 previous deposition. It's not an entire summary of
14 what I said before.

15 BY MR. ZIMMERMAN:

16 Q. Does your declaration address anything
17 that is not based on your ITC deposition transcript?

18 A. No.

19 Q. In preparing your declaration, did you
20 review anything other than your ITC deposition
21 transcript?

22 A. No.

23 MR. DHANANI: O -- oh, go ahead. No
24 objection.

25 A. No.

1 BY MR. ZIMMERMAN:

2 Q. Did you review any of the exhibits cited
3 in your declaration?

4 A. Did I review any of the -- in creating
5 the declaration? Like, what -- sorry, what are you
6 asking?

7 Q. After you were sent your declaration by
8 your attorneys --

9 A. Mm-hmm. (Witness nods.)

10 Q. -- correct?

11 When you were reviewing the declaration
12 to make your minor modifications.

13 A. Mm-hmm. (Witness nods.)

14 Q. Did you review any of the exhibits --

15 A. No.

16 Q. -- cited in the declaration?

17 A. Not at that time.

18 Q. Did you review any of the exhibits prior
19 to signing the declaration?

20 A. No.

21 Q. Did you review any of the exhibits prior
22 to today's deposition?

23 A. The --

24 MR. DHANANI: I'll caution you on
25 attorney-client communication.

1 But if you can rephrase that
2 question, I'll let him answer.

3 You can answer "yes" or "no" to that
4 question right now.

5 MR. ZIMMERMAN: And, Ali, can we keep
6 the speaking objections to a minimum?

7 MR. DHANANI: Sure. That was only
8 because that calls for a privileged answer.

9 MR. ZIMMERMAN: I understand.

10 MR. DHANANI: That was the only
11 reason I had to do that.

12 A. Okay. So --

13 BY MR. ZIMMERMAN:

14 Q. Would you like me to repeat the question?

15 A. Yes. Sorry.

16 Q. So I'll read it: Prior to today's
17 deposition, did you review any of the exhibits cited
18 in your declaration?

19 MR. DHANANI: Please just answer
20 "yes" or "no."

21 A. Yes.

22 MR. DHANANI: Okay.

23 BY MR. ZIMMERMAN:

24 Q. Did you review all of the exhibits cited
25 in your declaration?

1 Strike that.

2 Prior to today's deposition, did you
3 review all of the exhibits cited in your
4 declaration?

5 A. I don't know if it was all, but, yes, I
6 reviewed exhibits that were cited in my declaration.

7 Q. Do you know who Drew Major is?

8 A. Yes.

9 Q. Who is he?

10 A. Drew Major was the founder and financier
11 of Move Networks.

12 Q. Are you aware that Drew Major was deposed
13 in these IPRs a couple of days ago?

14 A. Yes.

15 Q. Did you speak to Mr. Major after his
16 deposition?

17 A. No.

18 Q. Did you receive a transcript of
19 Mr. Major's deposition?

20 A. No.

21 Q. Do you know who Dr. Kevin Jaffe is?

22 A. No.

23 Q. Returning to the IPRs, do you have any
24 familiarity with the petitioner in these IPRs, Aylo
25 Freesites?

1 A. No.

2 Q. Are you aware of a company formerly known
3 as MindGeek?

4 A. No.

5 Q. Do you have any understanding of who Aylo
6 Freesites is?

7 A. Not really. I mean -- no.

8 Q. Do you have any understanding of what
9 line of business Aylo Freesites is in?

10 A. Yes. Just based on -- well --

11 MR. DHANANI: I'll instruct the
12 witness not to answer if the information is
13 only based on communications with attorneys.

14 A. Correct.

15 BY MR. ZIMMERMAN:

16 Q. As a factual matter, are you -- as a
17 factual matter, what line of business is Aylo in?

18 MR. DHANANI: Same objection,
19 instruct the witness not to answer on the
20 basis of privilege.

21 If you have any separate
22 understanding outside of communications with
23 attorneys, then you can answer.

24 A. I do not.

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. Are you familiar with any of Aylo's
3 websites?

4 A. No.

5 Q. So you're not familiar with pornhub.com?

6 A. No.

7 Q. And you're not familiar with a website
8 called browsers.com?

9 A. No.

10 Q. Earlier today, you gave your address.
11 That was a Utah address, correct?

12 A. Correct.

13 Q. So you live in Utah?

14 A. I do.

15 Q. -- correct?

16 Are you familiar with Utah Senate Bill
17 287?

18 A. No.

19 Q. Are you aware that Aylo blocks Utah IP
20 addresses from accessing any of its websites?

21 MR. DHANANI: Objection, form,
22 outside of the scope, and this is getting way
23 beyond the deposition for why he's been
24 subpoenaed here.

25 You can answer, if you know.

1 A. No.

2 BY MR. ZIMMERMAN:

3 Q. So if someone with a Utah IP address
4 tries to access one of Aylo's adult content
5 websites, they wouldn't be able to --

6 MR. DHANANI: Objection, scope, form.
7 Again, way beyond the scope of the deposition.

8 MR. ZIMMERMAN: Can I finish the
9 question?

10 A. I have no -- I don't know that. I have
11 no knowledge of what Utah does or doesn't do
12 regarding Aylo.

13 BY MR. ZIMMERMAN:

14 Q. Are you aware that DISH and Aylo are
15 involved in litigation other than these IPRs?

16 MR. DHANANI: Caution on not
17 revealing attorney-client communication, but
18 otherwise you can answer.

19 A. I'm not.

20 BY MR. ZIMMERMAN:

21 Q. So you're not aware of the lawsuits
22 between DISH and Aylo related to these patents in
23 Utah?

24 MR. DHANANI: Objection, asked and
25 answered.

1 A. I'm not -- I'm only aware of the reason
2 I've been brought here today, which is the ABR
3 patents. That's it. That's all I'm aware of.

4 BY MR. ZIMMERMAN:

5 Q. And so you're not aware of a litigation
6 between DISH and Aylo involving these patents in
7 Delaware; is that correct?

8 MR. DHANANI: Same objections, form.

9 A. My assumption is it's -- it was -- it's
10 one case, so that's my -- I don't know anything else
11 about that.

12 BY MR. ZIMMERMAN:

13 Q. If DISH asked you to testify in these
14 related litigations in Delaware, would you be
15 willing to travel to Delaware?

16 A. I would hope not. It would be a major
17 inconvenience for me. I have a different job and
18 family and obligations here. Unless it was
19 absolutely required, but I would -- I wouldn't want
20 to do so.

21 Q. But you would be able to, correct?

22 MR. DHANANI: Objection, asked and
23 answered, form.

24 A. I mean, theoretically, yes, but I
25 wouldn't want to. I have family and a job and other

1 things that would be -- make it difficult. I don't
2 benefit anything from this.

3 BY MR. ZIMMERMAN:

4 Q. So returning to this deposition, what did
5 you do to prepare for this deposition?

6 A. I met briefly yesterday for an hour with
7 attorneys that are here.

8 Q. So you spent an hour preparing for this
9 deposition?

10 A. Yeah. Just approximately an hour, maybe
11 two hours.

12 Q. Did you spend any time outside of meeting
13 with your attorneys preparing for this deposition?

14 A. No.

15 Q. In preparing for this deposition, did you
16 review your declaration?

17 A. Yes.

18 Q. How many times did you read your
19 declaration cover to cover in preparation for this
20 deposition?

21 A. Twice.

22 Well, three times if you count when I
23 revised the very first time I saw the declaration.

24 Q. And then are you being compensated for
25 your testimony today?

1 A. No.

2 Q. Were you compensated in any way for your
3 declaration submitted in these IPRs?

4 A. No.

5 Q. If you're not being compensated, what's
6 your motivation for being here?

7 MR. DHANANI: Objection, form.

8 A. My only motivation was that I was
9 previously subpoenaed from my previous deposition
10 and I'm here representing what I said in my
11 declaration, because I was asked to be here.

12 BY MR. ZIMMERMAN:

13 Q. When you submitted your declaration in
14 these IPRs, were you aware that you would need to
15 sit for a deposition?

16 A. No. What I was told is -- what I was
17 hoping for is that the declaration would be
18 sufficient.

19 Q. Did it surprise you when you were asked
20 to sit for a deposition in these IPRs?

21 A. Yes.

22 Q. So did you submit your declaration out of
23 goodwill?

24 A. You could say that. I mean, I was there
25 and I -- and I don't -- I also didn't want to be

1 represented -- or misrepresented in any way, but it
2 would be -- I would say it was goodwill. I mean, I
3 spent a lot of time and effort working to make this
4 technology viable, so it would just be goodwill.

5 Q. Are you under any obligation to assist
6 DISH in these IPRs?

7 A. No.

8 Q. Did you sign any agreement when you were
9 at Move to assist in litigation relating to these
10 IPRs or --

11 A. No.

12 Q. -- or the ABR patents?

13 I'm handing you what has been marked
14 Exhibit 2089 in these IPRs right now.

15 A. Okay.

16 Can I put on my glasses?

17 Q. This appears to be a printout of your
18 LinkedIn profile; is that correct?

19 A. That's what it looks like, yes.

20 Q. And this appears to be the printout of
21 your LinkedIn profile that was submitted as part of
22 the ITC deposition; is that correct?

23 A. That's correct.

24 Q. If you look in the top right corner, it
25 has a stamp saying Exhibit 2 and is dated 1-6-21.

1 Is that correct?

2 A. Yep. Yes.

3 Q. So this printout of your LinkedIn profile
4 would have been accurate as of 1-6-2021; is that
5 correct?

6 A. To the best of my knowledge, yes.

7 Q. Is this LinkedIn profile still
8 up-to-date?

9 A. No. I haven't done anything subsequently
10 to it, that I'm aware of.

11 Q. And so I don't have to continue referring
12 to it as your -- the printout of your LinkedIn
13 profile, are you okay if I just refer to it as your
14 CV?

15 A. Sure.

16 Q. If you turn to page 10 of your CV --
17 that's the last page -- it says you were educated at
18 Brigham Young University; is that correct?

19 A. That is.

20 Q. And your degree was in broadcast media
21 management; is that correct?

22 A. Yes. Communications, which that's part
23 of the communications program.

24 Q. What does that degree entail?

25 A. So it is a -- actually, a BA. It was a

1 combination of business classes, communications
2 classes, and multimedia classes.

3 Q. So this is not a technical degree; is
4 that correct?

5 A. No.

6 Q. Do you have any formal education in
7 computer science?

8 A. No, not per se.

9 I have years of professional experience
10 in computer science and technology. Practical
11 experience, I guess I would say.

12 Q. So you don't claim to be an expert in
13 video streaming, correct?

14 MR. DHANANI: Objection, form.

15 A. I -- I would -- I mean, let me phrase
16 this in a way that makes sense.

17 I believe I understand video streaming
18 exceptionally well. My career is based on, in part,
19 my knowledge of video streaming and how to implement
20 that and how to manage developers that have written
21 lots of code and lots of technology around it. But
22 I have never written a line of code regarding this.
23 I've just -- I've implemented the code and the
24 systems that relate to streaming.

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. But you do not have any formal education
3 in computer science, correct?

4 A. Correct.

5 MR. DHANANI: Objection, asked and
6 answered, form.

7 BY MR. ZIMMERMAN:

8 Q. Can you please turn to page 9 of your CV?

9 A. Mm-hmm.

10 Q. Near the bottom, you list Brigham Young
11 University.

12 A. Mm-hmm.

13 Q. Did you begin at Brigham Young University
14 right after college?

15 A. During college, actually.

16 Q. So these positions listed there was
17 overlap in your time in college; is that correct?

18 A. Yes. I started working in full-time
19 technical jobs at BYU while I was doing my
20 undergraduate education in communications.

21 Q. And if you turn back to page 10, it
22 lists: Telecommunication Document Manager
23 1993-1995.

24 Is that correct?

25 A. Yes.

1 Q. What were your primary duties in that
2 position?

3 A. So I was responsible for documenting the
4 physical network and systems deployed across the
5 university campus.

6 So all cable and wiring jacks,
7 connections to the network, logical and physical
8 paths for IP distribution.

9 Q. And then next it lists: Application
10 Development Manager.

11 That was from 1995 to 1996, correct?

12 A. Yes.

13 Q. What were your primary duties in that
14 position?

15 A. I managed the development of an
16 INFORMIX-4GL database designed to manage the
17 business and technical systems related to
18 telecommunications services at BYU.

19 Q. And then if you turn back to page 9, you
20 were a Telecommunications Analyst from 1996-1997,
21 correct?

22 A. Yes.

23 Q. What were your primary duties in that
24 position?

25 A. The -- sorry, which one are you looking

1 at?

2 Q. Sorry, the telecommunication analyst,
3 what were your primary duties in that position?

4 A. Managing the roam digital PBX on campus,
5 so all of the -- basically the phone system on
6 campus. Programming the phone numbers and the
7 technical stations related to the telephone system
8 back then.

9 Q. And then from 1997 -- or in 1997 for less
10 than a year, you were a network analyst; is that
11 correct?

12 A. That's correct.

13 Q. What were your primary duties in that
14 position?

15 A. Managing the network LAN and WAN and IP
16 connectivity of the campus community. Routers and
17 switches and that type of thing.

18 Q. Now, if you turn to page 8, it listed
19 I-Link.

20 A. Mm-hmm.

21 Q. What is I-Link?

22 A. I-Link was a company that was developed
23 around IP telephony. So the distribution of
24 telephone calls and communications over an IP
25 network as opposed to a time division multiplexed

1 network. So a traditional TDM or analog network.

2 Q. Did you begin an I-Link right after BYU?

3 A. Yes. In fact, I was recruited to I-Link
4 from BYU.

5 Q. Then if you go back to page 9, you were a
6 Senior Product Manager, Product Line Manager at
7 I-Link from nine -- July 1997 to December 1998,
8 correct?

9 A. Mm-hmm.

10 Q. What were your primary duties in that
11 position?

12 A. I was responsible to help deploy I-Link's
13 technology to service unified communications, things
14 like one number and voicemail and long distance
15 calling and conference calling that was all
16 developed as a virtual PBX or an IP telephone
17 system.

18 Q. And then from December 1998 to December
19 of 2000, you were a VP of network engineering and
20 operations; is that correct?

21 A. Right.

22 Q. What were your primary duties in that
23 position?

24 A. It was an extension of my product
25 management duties. Basically what they did is they

1 promoted me to help build out the nationwide
2 network, or at the time we called it an IPBX, or a
3 soft switch, to deliver IP telephony throughout the
4 United States.

5 I-Link had several original patents
6 around IP telephony, fax over IP, voice over IP,
7 those type of things.

8 Q. Were you involved in any of those
9 patents?

10 A. No. Again, my primary duty was to make
11 the technology described in those patents
12 functional.

13 Q. You mentioned soft switch earlier. What
14 is a soft switch?

15 A. Soft switch is a logical designed
16 switching mechanism to connect two endpoints
17 together to communicate. So, for instance, a
18 traditional telephone and a SIP phone or session
19 initiated protocol telephone or a PC, piece of phone
20 software to a traditional telephone, or all of those
21 type of things, unified communication. So logical
22 defined. Voicemail, one number finding following me
23 type services from way back when.

24 Q. You also me -- strike that.

25 You also mentioned voice over IP.

1 A. Yes.

2 Q. What is your understanding of voice over
3 IP?

4 A. It is using a -- we used a 9.6 kilohertz
5 codec to take voice and convert it to a digital
6 signal and distribute that digital signal over
7 the -- over an IP network.

8 Q. So it was streaming audio over an IP
9 network, correct?

10 A. Well, there was no terminology of
11 streaming at the time. It was -- it was somewhat
12 related but not like -- as a fundamental technology,
13 while it used IP, it wasn't -- it wasn't similar, if
14 what you're trying to get at, it wasn't similar to
15 the distribution of like Move Networks did with
16 video. It was a different kind of underlying
17 technology. The only thing it had in common is IP,
18 and a codec.

19 Q. You distinguished streaming there. What
20 is your understanding of streaming?

21 A. My understanding of streaming would be to
22 deliver a sequence of data over a non-guaranteed
23 network, a non-guaranteed IP network.

24 Q. So at I-Link, were you delivering a
25 sequence of data over a non-guaranteed network?

1 A. Yes. I mean you could call it that, I
2 guess.

3 Q. So would you call what I-Link was doing
4 streaming audio data?

5 A. I'm trying to think in my mind how it
6 worked.

7 It's -- yeah. I mean, in some ways, it
8 would be similar to early attempts at streaming, I
9 guess.

10 Q. Because you were delivering data over a
11 non-guaranteed network at I-Link, was any of the
12 streaming adaptive?

13 A. No.

14 Q. So you delivered a single stream of bits
15 over the non-guaranteed network?

16 A. Yes. It was not adaptive. It was -- the
17 telephony files were so small it didn't matter, and
18 it used a totally different set of technologies.

19 Q. How would I-Link have handled hiccups in
20 the network, when streaming the data?

21 A. It probably would have resulted in a
22 dropped phone call.

23 Q. So I-Link did not do anything to address
24 dropped phone calls due to hiccups in the network?

25 A. Yeah, there's no way -- there was no way

1 at the time to heal a -- like a phone call. Like
2 if -- you were either connected or you were not
3 connected. But it also was dependent upon what you
4 were connected to, right? Because we were trying to
5 interface with non-IP technologies as well. So
6 there could have been all sorts of errors.

7 The primary purpose of the technology at
8 the time was there was a philosophy that by using an
9 IP network, it would reduce the cost over
10 traditional switching infrastructure. And at the
11 time, everyone was still paying for long distance;
12 and so it was to reduce the cost of people being
13 able to communicate.

14 Q. Are you aware of any other companies that
15 were performing the adaptive rate audio streaming?

16 A. I'm not aware of any company doing
17 adaptive rate audio streaming at that time. What I
18 am aware of is people using small kilobit encoders
19 to try to deliver voice over an IP network, or a fax
20 image over an IP network.

21 Q. So using your definition of streaming,
22 delivering a -- delivering data over a
23 non-guaranteed network, was streaming audio over the
24 internet well known by the late '90s?

25 A. No. Well, I -- no, it wasn't well known.

1 It was still an emerging technology, I would say.

2 Q. But I-Link was streaming audio over
3 the --

4 A. I-Link was. But again, it was an early
5 technology and proof of concept of being able to do
6 that.

7 Q. What was your role in the development of
8 this voice over IP product?

9 A. Well, add two facets, as I think I
10 explained before. One, my role was to product
11 manager, to be -- to help what the consumer
12 experience might be. Right?

13 So I cared about where people could make
14 phone calls for, at what cost they could make phone
15 calls for. How the system worked. The IVR system
16 of prompts, right? That were there.

17 The interface of the DTMF, like on your
18 telephone. So you push buttons, and it would do
19 specific actions, like hit three to join the
20 conference call, right? Or whatever. That was the
21 state of the technology at the time.

22 The second part of my job was to make the
23 technology practical. So it wasn't to just worry
24 about the consumer experience. It was to make sure
25 that the technology was deployed and functional such

1 that you could sell a service to a consumer.

2 Q. And then if you turn to page 8, it says
3 you were a VP Product and Strategic Development --
4 VP of Product and Strategic Development from
5 December 2000 to December 2002; is that correct?

6 A. Mm-hmm. (Witness nods.)

7 Yes.

8 Q. What were your primary duties under -- in
9 that role?

10 A. Same thing that I just -- basically what
11 I stated. It went from product manager to make
12 the -- make it practical to now we're starting to
13 potentially partner with others and connect other
14 technologies into the network. And so I was leading
15 some of those initiatives.

16 Q. And these technologies, it was all
17 happening over the internet; is that correct?

18 A. Yes.

19 Well, not all. I'll go back and rephrase
20 what I said before.

21 The I-Link technology was happening over
22 the internet. The -- because not everybody had
23 IP-enabled -- in fact practice nationally, nobody
24 had IP-enabled telephones. We had to translate IP
25 back into traditional telephony, so TDM. So we had

1 to turn it into PRI circuits or other types of
2 circuits that delivered the translated IP back into
3 analog or whatever the time division multiplex
4 system was of that receiving switch.

5 Q. So referring to the I-Link technology,
6 did that transmit the audio data using HTTP?

7 A. Oh, goll. Now you're making me go back.

8 No. Well, no. It was primarily using
9 UDP. I mean, it was over IP, but it wasn't the
10 same -- it wasn't like an HTTP package. It was more
11 of a UDP continuous type of communication.

12 Q. You said primarily.

13 A. Well, that's -- that's what I recall.

14 Q. Okay.

15 A. It's not because of -- that's me just
16 saying, as best as I can recall, that's the way it
17 was working. There were also other technologies
18 that we would say were a part of a telephone system.
19 One of the things, for instance, of note here is it
20 says ISDN and SS7. Those are traditional telephony
21 things to handle signaling. And so that wasn't
22 actually the IP data path or the audio files, that
23 was signalling between switches and communication to
24 control the way the call was set up or -- so it --
25 it wasn't -- it wasn't -- the IP was part of the

1 delivery path, but the communication of how that
2 happened and the communication switches were code,
3 but they weren't -- it had to translate into
4 traditional technologies to do the signaling path
5 right. So it wasn't in any way like 100% IP.

6 Q. And then, you were referring to that, I
7 believe the second to the last and the last line on
8 page 8. At the end of that last line, it says:
9 Other media control protocols.

10 Do you recall what those other media
11 control protocols were?

12 A. Yeah. As I said, there was PRI. There
13 was SIP, there was H.232. There was SIP which is
14 session initiated protocol of a phone. It had logic
15 in the phone and -- logic in the phone and you could
16 every -- could even try to communicate with two
17 phones without the need for a switch, but that
18 didn't scale very well. There were all sorts of
19 things that were going on at the time.

20 Q. Okay. And then if you turn to page 6 of
21 your CV. You later joined Move Networks; is that
22 correct?

23 A. That is correct.

24 I went back to BYU for a time and then
25 joined the Move Network.

1 Q. Do you recall what year you joined Move
2 Networks?

3 A. It would have been in March of 2006, I
4 believe.

5 Q. And so if you turn back to page 7, it
6 says you were a VP Operations from March 2006 to
7 December 2009; is that correct?

8 A. Yeah.

9 Q. And that was your first role at Move
10 Networks?

11 A. It was.

12 Q. What were your primary duties in that
13 role as VP operations?

14 A. In simple terms, to make the -- again,
15 the technology practical. To -- in some ways
16 similar to my previous roles, but to basically
17 figure out how to deliver video to consumers over an
18 IP network, as opposed to, you know, my previous
19 experience with voice. There were some analogous
20 things, there were somewhat, but not, you know, not
21 really other than, here's IP technology, here's
22 switchers, here's routers, here's networks, here's
23 code, here's -- right? It was a system, and the
24 system had to be deployed in such a way that you
25 could do video from end to end.

1 Q. So when you brought in, based on your
2 experience, implementing these ideas?

3 A. Yes. So the CEO at the time of Move
4 Networks was John Edwards, and he had been the
5 previous CEO at I-Link, so he knew of my talents and
6 experience.

7 Q. Can you explain how you came to work at
8 Move Networks?

9 A. I think I just did. I mean, I had some
10 of the colleagues that I had known at I-Link had
11 started working for this new start-up called Move,
12 and they were looking for somebody with broad
13 technical know-how or implementing a product into
14 reality. And I went to lunch with John, and he
15 said, would you be interested in coming back to work
16 and working with me? We have this new idea. And
17 that's how I found out about Move Networks.

18 Q. So before you joined Move Networks, had
19 Move implemented its product into reality?

20 A. It's hard to say. I mean, they had
21 gotten to the point where they had deployed -- they
22 had deployed the plug-in in the IE browser only, so
23 Internet Explorer browser. And had done some kind
24 of, I would say, proof of concepts. So it was kind
25 of prototyping and proof of concepts that the

1 solution would work, but the technology was still
2 very early on. They were still developing the core
3 technology that I would refer to in the patents.

4 Q. So you said "they were still developing
5 the core technology that I would refer to in the
6 patents." What is that core technology?

7 A. It's what's outlined in the patents. So
8 when I say core technology, I think in previous
9 testimony given here today, I said that my
10 assumption was that patents build on each other, and
11 that was what was going on. So they were able to
12 demonstrate some portion of the technology, and that
13 led to another idea that developed part of the
14 technology. And so that process was still ongoing
15 when I joined Move.

16 So some facets were demonstrable; other
17 facets were still being designed and built.

18 Q. So what facets would you consider to be
19 core to the patents?

20 A. Again, I'd refer you to the entire
21 patent. I can't speak to it, but basically what I
22 described before is the ability to adapt and provide
23 quality streaming experience over a non-guaranteed
24 network. I mean, that's what the entire focus was.

25 Q. So was using HTTP a core part of the

1 technology?

2 MR. DHANANI: Objection, form.

3 A. Using HTTP or IP was part of the delivery
4 mechanism. I don't know that it -- it was the
5 practical way of doing it.

6 BY MR. ZIMMERMAN:

7 Q. Was segmenting the video into smaller
8 chunks, streamlets, a core part of the technology?

9 MR. DHANANI: Objection to form.

10 A. I would say, again, that was part of it.
11 It made -- it made it such that by creating multiple
12 different bit rates, the network then had the
13 ability to select the appropriate file for the
14 quality of the network.

15 BY MR. ZIMMERMAN:

16 Q. Was using TCP as opposed to UDP or RDP a
17 part of the core invention?

18 MR. DHANANI: Objection, form.

19 A. Yes. I mean, there were -- there were
20 attempts to look at all of the delivery potential,
21 but in general I would say, yes. It didn't exclude
22 the ability to use UDP or something else, but it was
23 part of it.

24 BY MR. ZIMMERMAN:

25 Q. And do you know the difference between a

1 push system and a pull system for streaming?

2 MR. DHANANI: Objection, foundation.

3 A. I mean, yes. Theoretically, yes. I
4 mean, a pull system is a get request against the
5 server where the client initiates it; and a push
6 server would be something that was driven by the
7 core of the network towards clients. Broadcast is a
8 push technology.

9 BY MR. ZIMMERMAN:

10 Q. So -- strike that.

11 Is the ABR technology, is that push or
12 pull?

13 MR. DHANANI: Objection, form.

14 Go ahead.

15 A. It's largely a pull technology.

16 BY MR. ZIMMERMAN:

17 Q. When you say largely a pull technology,
18 does it not have to be a pull technology?

19 A. Well, it depends on where you determine
20 the video is starting from.

21 So the video always has to be encoded,
22 and so, therefore, the video has to be pushed to an
23 encoder somewhere, right? It has to be delivered to
24 an encoder. Once the encoder has done its work to
25 prepare it in an ABR format, then it's -- the

1 technology puts those streamlets or segments in the
2 index to those files on a server, sometimes referred
3 to as an origin server, and that origin server is
4 connected to the internet and the client pulls,
5 makes a get request back to that through a CDN, and
6 that's how it scales and is done.

7 Q. And so was being a pull system a core
8 part of Move's technology?

9 MR. DHANANI: Objection, form.

10 A. It was -- it was the method of requesting
11 the video files.

12 BY MR. ZIMMERMAN:

13 Q. So would you agree that being a pulled
14 system versus a pushed system is not a core part of
15 Move's technology?

16 MR. DHANANI: Objection, form.

17 A. No, I would say it's -- it's integral to
18 being able to cache -- the cache ability to files.

19 So an explanation, if you have -- if you
20 and your colleague were watching the same video at
21 the same time, over the same network, it would
22 request -- at some point, you'd be requesting the
23 same files, and that file wouldn't have to come all
24 the way back to the origin. It would come to some
25 CDN cache somewhere to request that.

1 BY MR. ZIMMERMAN:

2 Q. I want to return to a few terms you used
3 earlier. So you stated, once the encoder has done
4 its work to prepare it in an ABR format, then the
5 technology puts those streamlets or segments in the
6 index to those files on a server.

7 A. Mm-hmm. (Witness nods.)

8 Q. What is that ABR format you're
9 describing?

10 A. So in general -- and there's different
11 ways of doing this.

12 In general, it is taking video, and based
13 on the GOP of video, or the segment of video,
14 usually segmented at iframe or a point in the video
15 where it makes sense, that video is, at some point
16 in the process, sliced into those segments and run
17 through a transcoder of some type to transcode it
18 into some type of audio video codec, like MP4 or
19 something.

20 And then it would be -- from there, those
21 files, based on the profile or the bit rates that
22 were predetermined for quality, would deliver those
23 bits and/or actually push those bits to the origin
24 server where the index file and those streamlets
25 would exist such that the client could then use that

1 URL and that index file to know how to request those
2 segments and in what sequence.

3 Q. So you just stated those -- the bit rates
4 that were predetermined for quality.

5 A. Mm-hmm.

6 Q. What do you mean by that?

7 A. So because networks vary in terms of --
8 going back to what I said previously, your ability
9 to receive it, let's say you're on a one megabit
10 internet connection and your colleague is on 100
11 megabit internet connection. We will have had
12 profiles that are smaller, using less audio and
13 fewer pixels for resolution. If it's -- it can only
14 sustain, because of other things happening on your
15 network, a very small file to be played to you.

16 So to prevent from stalling and
17 buffering, all the way up to a file that would be HD
18 or beyond in quality, those files would be larger,
19 because they would contain more data, from an audio
20 standpoint and from a video standpoint.

21 And so you predetermine the quality that
22 you want to scale based on what you believe a broad
23 range of consumers could potentially request.

24 Because you're not trying to serve just those with
25 big internet connections, you're trying to serve

1 those with bad internet connections, which is why
2 the technology worked as an invention at the time,
3 because most people didn't have broadband
4 connections to their home. So you were trying to
5 get consistent video over a potentially latent
6 network, a -- you know, a slow network or one with a
7 great deal of congestion or those type of things.
8 And so in order to do that, you had to, you know,
9 get the smaller files through, because you couldn't
10 get the bigger files through or it would pause and
11 buffer.

12 MR. DHANANI: We've been going about
13 an hour and a half. Should we take a break?

14 MR. ZIMMERMAN: Mr. Ericson, would
15 you like to take a break?

16 THE WITNESS: If that would be okay.

17 THE VIDEOGRAPHER: Going off the
18 record. The time is approximately 10:25 a.m.
19 Mountain Time.

20 (Recess taken, 10:25 a.m. to
21 10:39 a.m. MDT)

22 THE VIDEOGRAPHER: Returning on the
23 record. The time is approximately 10:39 a.m.
24 Mountain Time.

25 Counsel.

1 BY MR. ZIMMERMAN:

2 Q. So before we went off the record, you
3 were -- we were going back through a few statements
4 you made earlier. I want to return to one of those.

5 You described the process of segmenting
6 the video.

7 A. Okay.

8 Q. And you stated: Usually segmented at an
9 iframe or a point in the video. It makes sense that
10 video is at some point in the process sliced into
11 those segments and run through a transcoder of some
12 type to transcode it into some type of audio, video
13 codec like MP4 or something.

14 A. Mm-hmm. (Witness nods.)

15 Q. Is that process of transcoding the sliced
16 segments a core facet of Move's technology?

17 MR. DHANANI: Objection, foundation,
18 form.

19 A. Yeah. You have to prepare the video so
20 that it can be adapted. It can be done on-demand or
21 live.

22 BY MR. ZIMMERMAN:

23 Q. Is there any difference between preparing
24 it live and on-demand?

25 A. Yes. There are a couple of differences.

1 Live, you have to be running the transcoder while
2 you're publishing the segments to the origin server
3 so that people can watch them in near realtime;
4 whereas, in video on-demand, the file isn't
5 necessarily being watched in realtime, so you can
6 ingest a file that is, say, 60 minutes long or two
7 hours long in advance and have it already present on
8 the origin server before people start requesting the
9 data. So that's one way.

10 The other difference is the delivery of
11 the video itself to the encoder. So you need to
12 have a mechanism for live to get a live video signal
13 into the encoder. So you have to have an ability to
14 capture that video and segment it; whereas, on a VOD
15 asset, you can upload the video through a different
16 mechanism. You don't have to do a realtime capture
17 of that video.

18 Q. And just to clarify, by VOD, you mean
19 video on-demand; is that correct?

20 A. Video on-demand, yes.

21 So anything that would be prerecorded
22 video.

23 Q. And returning to your CV, under VP
24 Operations on page 7. It says: Executive
25 responsibility for designing, building, and

1 operating the first adaptive streaming and TV
2 anywhere platform in the world from the ground up.

3 A. Mm-hmm. (Witness nods.)

4 Q. What does TV anywhere mean?

5 A. As an industry term, it meant the ability
6 to watch TV without the constraint of a physical TV.

7 So to further explain, you know, most
8 people watch TV because they, at the time, would
9 gather in their living room or their bedroom or
10 wherever they had a TV and would watch it because it
11 would be connected to cable or a satellite settop
12 box or, you know, over the air signal. And TV
13 anywhere came to be because all of a sudden you
14 could watch a TV signal or a live signal or an
15 on-demand signal over your computer, or eventually
16 your mobile device, or things that were not
17 traditional television sets with receivers.

18 So you could -- you were disconnected
19 from having to be centered around a television. You
20 could watch it literally wherever you had internet
21 connection.

22 Q. And in that sentence, when you were
23 referring to the first adaptive streaming and TV
24 anywhere platform, are you referring to the Move
25 player?

1 A. I'm referring to the Move -- yeah, the
2 Move platform. The end-to-end system that made --
3 that made it such that Move could offer its services
4 to Fox and ABC and ESPN and Discovery and a whole
5 bunch of people at the time.

6 Q. And so is it your testimony today that
7 the Move platform was the first ever adaptive
8 streaming and TV anywhere platform in the world?

9 A. That's my belief, yes.

10 Q. And are you saying that the Move player
11 was the first adaptive streaming system in the
12 world?

13 A. Yes, that's my belief.

14 Q. And if you include both audio and video,
15 is it your testimony today that the Move player was
16 the first adaptive streaming system in the world?

17 A. I don't know what the distinction is
18 between video and audio and video, I mean,
19 television to me is audio and visual, so -- video,
20 so yeah. From an AV perspective, yes.

21 Q. Were there any adaptive audio streaming
22 systems prior to the Move product?

23 A. Not that I'm aware of.

24 MR. DHANANI: Objection, scope, form.
25 Go ahead.

1 A. Not that I'm aware of.

2 BY MR. ZIMMERMAN:

3 Q. So in your opinion, does -- from an AV
4 perspective, does streaming video require audio as
5 well?

6 A. It doesn't necessarily have to, but audio
7 is often used as the underlying timing mechanism for
8 video.

9 Q. So video streaming does not require audio
10 to be included as part of the same transmission; is
11 that correct?

12 MR. DHANANI: Objection, form.

13 A. Streaming video -- well, adaptive
14 streaming does require it because the image has both
15 the audio and video encoded in the same object.

16 So it -- I mean, it would be -- I mean, I
17 guess you could -- you could watch a silent movie,
18 but it's -- but you would have -- you would still
19 have to have some element of time tracking, and you
20 would -- if you were doing it for delivery, it
21 wouldn't make sense to have a separate audio file
22 when the audio and video can be in the same object.
23 It would create complications in the system.

24 BY MR. ZIMMERMAN:

25 Q. I just want to clarify, when you say

1 adaptive streaming earlier, then you said adaptive
2 streaming does not require it, because the image has
3 both the audio and video encoded in the same object,
4 you were referring to Move's product; is that
5 correct?

6 A. Yeah, I'm referring to the segment or the
7 object that was segmented, requested.

8 Q. But in other streaming implementations,
9 if the video and audio were not in the same object,
10 the audio would not be required to be part of the
11 video; is that correct?

12 MR. DHANANI: Objection, form, legal
13 conclusion and scope.

14 A. I don't know. There's lots of
15 different -- there were lots of different concepts
16 around how to do streaming. It -- I would say that
17 Move's technology was the first adaptive bitrate
18 streaming technology that allowed for consistent
19 delivery.

20 I mean, the first idea that was created
21 around that.

22 BY MR. ZIMMERMAN:

23 Q. And so you mentioned a silent movie
24 earlier. Do you agree that in a silent movie, you
25 would not need to transmit audio along with the

1 video file?

2 MR. DHANANI: Objection, calls for
3 speculation, form.

4 A. It -- again, you would have to have an
5 alternative timing mechanism to audio, and so I'm --
6 I'm not aware of -- personally aware of a technology
7 that would make -- I mean, I -- there's probably
8 technologies, but that wasn't ever the intent,
9 right? The intent was never to deliver silent
10 movies. It's kind of nonsensical in today's world.
11 So the intent was always to deliver full motion
12 audio and video. So I -- I mean, it's -- I don't
13 know how to answer the question because that wasn't
14 what the invention or our purpose was about.

15 And when I say "our" in that scenario,
16 talking about Move Networks or my employment at Move
17 Networks, right?

18 BY MR. ZIMMERMAN:

19 Q. So at Move Networks, what was your role
20 in that invention or "our purpose" that you just
21 discussed?

22 A. I would -- it's what I've explained
23 previously. It was to make the -- help make the
24 technology practical and functional as an end-to-end
25 service.

1 Q. And --

2 A. That's why I use the term "platform,"
3 because you had to have all components. You had to
4 have transcoding, you had to have a player, you had
5 to have the technology, you had to have
6 infrastructure or an origin server, you had to have
7 contract with CDNs. There was a lot of things you
8 had to do to make that practical.

9 Q. And you referred to each of those as
10 components. Would you consider them separate
11 components of the platform?

12 A. No. Well, I would -- ultimately, it's
13 one system, because -- but I would -- I would say
14 that as the industry's involved [sic], different
15 people have specialized in different areas, but that
16 wasn't what was needed at the time. At the time,
17 because literally no one had this, or no one had
18 done it, we had to effectively figure out how the
19 system would work from beginning to end. There was
20 no alternative technology to say, for instance,
21 encode an adaptive bitrate for a client in adaptive
22 bitrate. Right? We had to invent the entire system
23 from end to end to make it work.

24 Q. In the second paragraph under VP
25 Operations on page 7, you state you were:

1 Instrumental in helping Move become the primary
2 provider of streaming services for hundreds of
3 programmers including Disney (ABC, ESPN), CWTV,
4 Discovery, Fox, Televisa, ProSieben and Comcast
5 Xfinity and enterprise organizations like the
6 Democratic National Committee Convention.

7 A. Yep.

8 Q. And --

9 A. Yep.

10 Q. Listed a few --

11 A. Et cetera. Et cetera. Yep.

12 Q. You say that Move is the primary
13 provider. Were there other providers?

14 A. I can't speak to what they were doing
15 prior to coming to us, but I can tell you that Move
16 was the technology of choice, the provider of choice
17 for their premium consumer experience. So meaning
18 Disney didn't have -- ABC wasn't the ABC.com player,
19 and some other ABC player using another technology.
20 It was predicated on Move Networks technology.

21 Q. And earlier you had mentioned a plug-in
22 on the internet -- for the Internet Explorer?

23 A. Mm-hmm. (Witness nods.)

24 Q. Did these programmers, do they also
25 require that plug-in?

1 A. Yes. But, I mean, at the time, we also
2 were working on plug-ins for Safari and all the
3 known browsers at the time, right?

4 So I'm not sure -- you're making me go
5 back in time. Mozilla and whatever browsers were
6 available at the time. But it did require the Move
7 plug-in technology for it to work.

8 Q. And then the next paragraph, paragraph 3
9 under VP Operations, you state: Directed customer
10 on-boarding, encoding, production and distribution
11 of thousands of live streaming events, and so on.

12 Are these customers you're referring to
13 in directed customer on-boarding, is that the
14 programmers listed in the previous paragraph?

15 A. It's some of them, and others.

16 So, for instance, the Democratic National
17 Convention was a unique thing, right? It was a live
18 event. The Church of Jesus Christ did certain
19 things.

20 ESPN certainly did individual games, and
21 we developed ESPN 360, which is now ESPN.com.

22 But there were others as well. Don King
23 was doing boxing over at -- Oprah had a book club
24 event that we streamed live. There were all sorts
25 of things that are not listed here.

1 Q. Do you recall when those companies
2 started using Move's streaming platform?

3 A. No, but I can definitely say it was after
4 I started, so -- because I was helpful in doing
5 that.

6 Prior to me starting, again, it was just
7 a proof of concept. There was technology a few
8 places, but it kind of exploded around the same
9 time.

10 I can tell you the first core production
11 customers were Televisa, Fox, and Disney, in no
12 particular order. We were working on them all at
13 the same time.

14 Q. Do you recall roughly relative to when
15 you started that these companies became customers?
16 Was it a few years --

17 A. Months.

18 Q. -- after you started?

19 A few months?

20 A. And they were already talking. I mean,
21 at that point, Steamboat Ventures had invested in
22 us, which was Disney, or was in the round of funding
23 to invest in us, so it was being discussed.

24 And that opened some other doors. And
25 Televisa and Fox were also around the same time. In

1 fact, within two weeks of me starting, we were -- we
2 went on a trip down to Mexico to meet with Televisa
3 and demonstrate the live streaming.

4 Q. So within a few months from you starting,
5 Move went from a proof of concept to a functioning
6 player and brought on these customers you just
7 listed?

8 A. Yes. Within -- yeah, within several
9 months.

10 But it's important to note the technology
11 was still evolving, right? So there were certain
12 things that were practical at the time and there
13 were certain things that were still not practical,
14 right? But they -- because of -- the technology was
15 so advanced compared to anything else they had seen,
16 they were willing to ride with us, right? It was
17 something outside of anything they had seen, and so
18 they're like, okay, you guys are doing something
19 different here, and that's why it kind of exploded.

20 Q. So before you joined Move, there was only
21 the proof of concepts. And after you joined, Move
22 had a functioning product. Would you consider
23 yourself an inventor on any of the ABR patents?

24 MR. DHANANI: Objection, scope.

25 A. No.

1 MR. DHANANI: Form. Yeah.

2 A. No. I mean, my name is not listed.
3 Other people were writing the code. Other people
4 had ideas about it. So I wasn't -- the people who
5 worked on the patent actually reported to me. I
6 knew what they were working on. I knew how the
7 system needed to be implemented, of course, because
8 we had to have lots of discussions around what was
9 needed and what was missing and what we could do to
10 improve the system. And so I submitted ideas of
11 things we needed to do from a systems standpoint,
12 but I didn't -- I wouldn't consider myself to be the
13 inventor of the technology.

14 BY MR. ZIMMERMAN:

15 Q. Do you recall what ideas you submitted as
16 things you needed to do from a systems standpoint?

17 A. I --

18 MR. DHANANI: Objection, form.

19 A. I wouldn't say it was -- for lack of a
20 better term, it was a team effort, which is why I
21 didn't feel like I needed to join myself in any of
22 the patent -- like, it wasn't -- it wasn't my thing,
23 if that makes sense. It was the company's thing.
24 And so we would have discussions around things we
25 could do to improve and to scale and to do things,

1 and they would, like, yeah. And we'd work on it,
2 and then I was, like, oh, that's something that's
3 now really useful, and it's something that is
4 working in a way that has now unlocked another door.

5 And so it's kind of the -- just the
6 process of invention. And it would overcome
7 practical hurdles as we would do that, to keep it at
8 the forefront -- like, to keep solving the next
9 problem that nobody knew was there, because nobody
10 had encountered it previously, if that makes sense.

11 BY MR. ZIMMERMAN:

12 Q. So were you involved in these discussions
13 to overcome the practical hurdles?

14 A. Sure. That was my job was to make it
15 practical, right? To help run and, you know, deploy
16 the system.

17 Q. And was one of those practical hurdles
18 the scalability of the product?

19 A. Sure.

20 MR. DHANANI: Objection, form.

21 A. But in general, yeah. We had -- yeah, it
22 had to scale. We wanted customers. The people we
23 were serving were using it at large scale, so we had
24 to make sure that in order to service our customers,
25 we could service them in a way that a company like

1 Disney would expect.

2 BY MR. ZIMMERMAN:

3 Q. And what was your role in addressing the
4 hurdle of scalability?

5 MR. DHANANI: Objection,
6 mischaracterizes and scope.

7 A. Making sure we had enough technology
8 resources, servers, bandwidth, network,
9 relationships with CDNs. Systems, reporting, all
10 sorts of elements of the system that would scale in
11 parallel to demand, right?

12 So just like any service -- right? -- if
13 more people want it, you have to grow it. And if
14 you run into reasons why it can't grow or why all of
15 a sudden you've reached some theoretical or
16 practical limit, you have to design to overcome
17 that, which was what we constantly were doing. And
18 a lot of those solutions I believe ended up in the
19 patent. You can reference the patent for those. I
20 mean, you're not going to itemize those, because
21 they're -- I can't tell you exactly what and when,
22 but I can tell you in general, it was an
23 evolutionary thing, just like you would expect any
24 new invention to be.

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. And so these discussions on addressing
3 the hurdles, were those with Drew Major?

4 A. Some. Some with other developers inside
5 the company. Some were with my team. Some were
6 on -- some were -- when I say my team, I managed
7 developers, but I also managed guys helping -- be
8 system administrators or run servers or that type of
9 thing.

10 So we also had discussed around enhancing
11 software products. So ways to help people publish
12 content to websites more easily. Design their video
13 websites. Make it practical. Be able to insert
14 ads. All sorts of things that became customer ask
15 and requirements that we were able to fulfill.

16 I mean, it takes a lot to keep people
17 like Fox and Disney and -- happy, and they were
18 happy. They loved it.

19 Q. When they were giving you the customer
20 asks that you were referring to, were those customer
21 asks going directly to you?

22 MR. DHANANI: Objection, vague.

23 A. In some respects, yes. I was on direct
24 phone calls with the customers and I had
25 relationships with people in charge of technology

1 and some of these services. So yes.

2 But it wasn't exclusive. We had people
3 in the company that were responsible for business
4 development and sales and all sorts of things,
5 right?

6 BY MR. ZIMMERMAN:

7 Q. So what was the process of implementing
8 these customer asks into the software, into the
9 products?

10 MR. DHANANI: Objection, scope.

11 THE WITNESS: Do you want me to
12 answer?

13 MR. DHANANI: Please.

14 A. Okay. So the process was -- I'll give
15 you an example. So it was referenced previously.
16 The Democratic National Convention.

17 At the time, they got wind of what we
18 were doing. Other companies had been exposed to our
19 technology. I know people that talked to level
20 three and their capabilities of being a CDN. They
21 were trying to build out their own CDN. And we were
22 invited to participate as the core ABR technology,
23 to allow people to stream the Democratic National
24 Convention. In -- what has that been? July of --
25 when was Brock's first thing? 2008, maybe. Of July

1 in 2008, I guess, or June, or somewhere around
2 there. In the Pepsi Center in Colorado.

3 And there was a collaboration between
4 level three, Microsoft who had done some Silverlight
5 kind of design or website technology they were
6 trying to push at the time, a company that was hired
7 to design the experience for the DNCC, and then
8 Move, who provided the plug-in, the technology, and
9 everything else.

10 And that collaboration yielded the
11 results that they wanted, but it wouldn't have been
12 possible without Move to either use level three's
13 network or to let Silverlight do its thing or
14 whatever else.

15 In fact, my recollection is that
16 Microsoft was hopeful that because Move had so many
17 plug-ins out there because of doing some of these
18 early things with Fox and ABC, that it might have
19 been a vehicle to help them seed Silverlight in the
20 marketplace. Because, at the time, they hadn't even
21 invented an iPhone, so people weren't accustomed to
22 downloading anything, which seems really odd in
23 today's world, because everything is an app
24 download, and that was one of the friction points
25 when we talked to people is will people do this?

1 Well, to get to the video, they were definitely
2 willing to do the plug-in. And so it was a
3 mechanism where people are like, oh, you figured out
4 how to do this, could we potentially piggyback on
5 that. So that's just an example of how it evolved.
6 So they wanted to use other technologies to try to
7 play into that ecosystem. Or Fox wanted us to help
8 them design their web experience so that it could
9 look and feel a certain way.

10 And so those requests would come in, and
11 they would say, okay, what could we do? And we
12 would then help them either directly or indirectly,
13 build JavaScript and HTML pages and things to help
14 satisfy what they wanted in the marketplace, because
15 most broadcast companies aren't technology
16 companies, and so -- and because this was such new
17 technology, they would come to us as not only
18 providing the technology, but also as a professional
19 service organization to help them extend their brand
20 to the internet, to this new idea of streaming
21 content over the internet.

22 BY MR. ZIMMERMAN:

23 Q. You mentioned frictions earlier. What
24 are some examples of some of those frictions?

25 A. Well, friction, to me, in the context I

1 was using it, is where a consumer may not
2 understand, you know, what a browser was, or why
3 they had to download something. And they might have
4 been cautious of that. Wait, it's asking, I don't
5 know who this company Move Networks is. They
6 certainly knew who ABC was, but they didn't know
7 what we were doing. And so there was some degree of
8 education, either on the part of Fox or ABC or us;
9 and then ultimately people figured out that, oh,
10 this is the thing that's making my streaming work,
11 right? But initially, talking to those customers,
12 it was always like, well, will people do this,
13 right? Will they be willing to download plug-ins.
14 If they're not, then the technology isn't going to
15 satisfy our need.

16 But it became evident that people were
17 willing to do it to get to what they wanted to see.
18 Like, it didn't -- if I wanted to watch Prison Break
19 at the time on Fox, I'm willing to download the
20 plug-in. If wanted to watch -- what was the Pushing
21 Daisies or -- I don't know, all of these other shows
22 on ABC, they're willing to download the plug-in, or
23 ESPN to watch a football game. So it wasn't -- it
24 wasn't the -- friction was a concern, but it was
25 overcome in proof of concept and the success of

1 streaming for these entities, for these customers.

2 Q. Are any of those customers still using
3 Move's platform?

4 A. I don't know that. I know that Sling
5 certainly use's Move's platform, but that was an
6 internal thing.

7 I know that -- I know -- well, I would
8 suggest that they do indirectly, because Sling
9 offers television channels from all those companies
10 today. So it does in that sense, that ABC has their
11 channels on -- in fact, when I was at -- working for
12 Sling, or for EchoStar developing Sling, we -- there
13 was a point in time where we had to try to onboard
14 customers because, you know, the business of DISH
15 was being a multi video program distributor, NDPD --
16 right? -- a satellite distributor of content, so
17 they were an aggregator of all of this content.

18 And so in order to make it work
19 domestically, people had to say, yes, I'm willing to
20 sell you rights to my content, and then they all had
21 to understand how to do it.

22 And at that point, a lot of people still
23 weren't even streaming their own content. Because,
24 again, they weren't technology companies. And so we
25 had to make them comfortable.

1 Disney had progressed to the point where,
2 when Move was kind of acquired, they went down a
3 similar path, actually with people that worked with
4 Move, but --

5 So their technology guy that was still
6 there at the time, his name was Skarpi Hedinsson.

7 And he had worked at ABC when they
8 were -- in the early days of working with Move. And
9 so he -- so when it came time, we said, Skarpi, you
10 know who we are, you know what we're doing, we're
11 using this. And it became a much easier discussion
12 because he was already very familiar with the
13 technology, he knew who we were, he knew what we
14 were trying to accomplish, and he was very
15 comfortable. Even though it wasn't the business
16 that they were trying to go down, it was something
17 they were willing to support because of their
18 previous experience with working with me and others
19 and having an understanding of the technology
20 underneath the covers of Sling TV.

21 Q. So is your understanding of those other
22 companies' use of Move's technology is through Sling
23 TV?

24 A. Of them continuing? Yes. I don't
25 believe, and I don't know, but to my knowledge, I

1 don't believe DISH, or Sling, have the business
2 model that Move was operating under before, where we
3 were a B2B platform as opposed to a B2C, consumer
4 platform, right?

5 I think they exited that largely when
6 they acquired the rights to the Move technology, to
7 turn it into the business they already knew how to
8 operate.

9 I know that we were winding down Move
10 legacy customers when I was there, and I don't know
11 that they've reentered a wholesale platform
12 business. I don't think they have, but I don't
13 know.

14 Q. So you don't believe other companies are
15 using Move's technology since --

16 A. I didn't say that. I think -- I will
17 argue the entire industry is using Move's
18 technology, because every other technology that I'm
19 aware of that relates to ABR had knowledge of Move's
20 technology, and/or developed technologies around
21 that basis, the patents that we're discussing today.

22 So I would say everybody today that does
23 adaptive technology in some way is using Move's
24 invention. Whether it's Move selling that
25 technology to them or DISH selling that technology

1 to them, I can't speak to any of that, because I'm
2 not there and I don't know.

3 But what I do know is that the evolution
4 of the industry is -- has been predicated on the
5 same basic concepts that Move started and invented
6 in -- with ABR.

7 Q. What are those basic concepts that you
8 were just referring to, that Move started?

9 A. Again, it's in the patent. Like, that's
10 what -- that's what's there. But in general, what
11 I've described, right? The ability to transcode and
12 create adaptive technologies, a way to index those
13 files, a way to adapt over non-guaranteed networks.
14 The very idea of delivering video over -- over the
15 top is what we would call it today, right?

16 So video to your home that didn't have to
17 come from your home service provider. Right? Your
18 ISP. You know, that -- you might have had an ISP
19 connection, but your video all of the sudden was
20 dissociated from your telecom or your cable
21 provider. It made all of those things -- all of
22 those things possible in a practical world.
23 Starting up quickly, doing live.

24 The irony is we were able to do live
25 streaming as easily as VOD streaming in the early

1 days; but in the United States, the actual rights
2 were encumbered by programmers. They were all
3 locked up because they were already making money on
4 each other in other ways. And so Televisa actually
5 became a big proof point, because they were the
6 third largest, I think, at the time, content creator
7 in the world, and they actually owned their own
8 distributions. Like Channel 2, I think, was 50% of
9 the Mexican market.

10 And so they were actually able to live
11 stream their channels in Mexico; whereas, in the
12 United States, people weren't able to do that
13 because the channels had encumbered rights. And so
14 we were able to prove out that you can just deliver
15 a channel over the internet to a broad range of
16 people in a substandard network, because Mexico
17 network was not nearly as good as the United States
18 network, from the very early days.

19 Like I said, weeks and months after I
20 started, we were demonstrating this in Mexico. And
21 they're like, done. And let's put my channel on.
22 And let's do...

23 And so that's kind of how it involved.

24 And then later, the reason Sling was
25 actually kind of -- it was first to market,

1 ironically, as a virtual MVPD, but it was late to
2 market in terms of streaming, live streaming,
3 because they were the first ones that got the rights
4 unencumbered, that allowed Sling TV to be a domestic
5 product that was similar in nature to a cable or a
6 satellite package.

7 Q. So when you say that Sling was actually
8 kind of -- it was first to market, ironically as a
9 virtual MVPD --

10 A. It was first to market as a virtual MVPD,
11 but not as a -- like, it was using Move streaming
12 technology under the covers, right?

13 So it just couldn't -- it couldn't be a
14 product offering to the marketplace because the
15 programmers didn't have clearance for all their
16 programming. So, you know, what good is a linear
17 channel, say, for -- from Scripps, if only 50% of
18 their content is cleared for IP distribution.
19 Right? You can't have a channel that's like going
20 black or doesn't have content on it, and so they had
21 to go through the process of licensing or clearing
22 the content, because they didn't produce all of
23 their content. Right? No one does. They license
24 it from studios and all sorts of things.

25 So that was why it was slow to market,

1 not because of any technology encumbrance but
2 because of content market encumbrance.

3 Q. And is overcoming that market
4 encumbrance, is that what made Sling TV unique in
5 the industry?

6 MR. DHANANI: Objection, form.

7 A. No. It made -- again, it made it
8 practical. I think it won some of the awards it did
9 because it was -- because it was kind of first to
10 market. It was the first time somebody said, oh,
11 yeah, this makes sense to us.

12 But I would argue what made it unique is
13 that it worked and it was predicated on that
14 technology. Like, again, nobody that I'm aware of
15 that has created a working system today to deliver
16 video is not using fundamental concepts and ideas
17 that were foundational to the technology we created
18 at Move.

19 BY MR. ZIMMERMAN:

20 Q. And continuing to talk about Sling TV's
21 player and offerings, does Sling TV, did it just
22 repackage Move's player? Is that how the player was
23 implemented?

24 A. Did it repackage it? I don't understand
25 what you mean by that.

1 Q. Are they -- when Sling TV's player was
2 first implemented, was that just Move's player but
3 under Sling TV's name?

4 A. Well, yes, it was the underlying Move
5 technology that was acquired by EchoStar. But the
6 technology, you know, continued to evolve, as I
7 explained before. So -- and now we've gone from a
8 browser-based plug-in to be able to be a downloaded
9 app to working on other device -- like it -- it had
10 expanded beyond a browser plug-in, right? It had
11 had -- it had innovations of how to put in
12 advertising and sell advertising. And adding
13 innovations around how to package with digital
14 rights management.

15 When -- you know, in the early days, when
16 it was just ABC and Fox, they didn't as much -- they
17 cared about securing their content from piracy, but
18 they -- not as much as they cared about getting the
19 direct revenue from it, right? When it changes,
20 where somebody is licensing the content from them,
21 it's all about securing their contents, right? And
22 so there was all sorts of things that had to evolve
23 for Sling to be a viable service.

24 But the technology and the enhancement of
25 the technology was all of the system that had been

1 created and operated and originally deployed by Move
2 or extended with further technology.

3 Q. Do you know if all streaming through
4 Sling TV is done through that enhanced version of
5 Move's player, Move's technology?

6 A. I have -- I can't speak to what they're
7 doing today. I haven't been at DISH or Sling for,
8 you know, eight years or something like that. I'd
9 have to go do the math, but something like that.

10 So I can't speak to what they're doing
11 today. I can tell you when I was there, it was very
12 much -- and when it went to market in 2015, it was
13 predicated completely on Move's technology.

14 Q. Did Sling TV ever use the native player's
15 own devices?

16 A. I don't know that. I know that -- I know
17 that there was value in using the Move player
18 because, from the very beginning, we had analytics
19 that were being sent back to help understand the
20 quality of the user's experience, their bit rates,
21 if it buffered, how much delay it had, what they
22 were watching, how long content was streaming for.
23 So that was a -- kind of a core element of -- when I
24 say a core element, again, it was we build a player,
25 and one of the things you can do when you own the

1 player is to be able to get realtime or near
2 realtime data back to help you as a service person.
3 And that is important. Because people go, well, how
4 many people watched? And what was their quality of
5 experience?

6 And we made representations that we could
7 provide a good quality experience, and then we could
8 show it by data. So in that sense, I don't know if
9 they ever -- because player -- let me just say this:
10 Player is a very broad term. Okay? So there's the
11 player as it looks and feels to a consumer, there's
12 the player as it's requesting files underneath --
13 right? -- these index files or HLS manifest file or
14 M3U8 or whatever. It's all those type of things.

15 And then -- and the data underneath that,
16 you know, the segments that I referred to previously
17 and everything else.

18 So the point of it is that player is just
19 a loaded term, right? So when you say player, are
20 you talking about the design of the user experience?
21 Are you talking about the ability to push a button?
22 Are you talking about now a commodity kind of player
23 that's in the market using some technology that is,
24 again, in semblance to what Move created? Or are
25 you talking about the actual Move player with its

1 original components? Because it -- at this point,
2 some of the technologies have evolved a lot closer
3 and continue to evolve, because they do it. And so
4 it's like Move is not selling players anymore,
5 right?

6 So I would find it hard for people to be
7 using the actual Move player today, but they are
8 using a player that is likely completely predicated
9 on the things that Move invented, if that makes
10 sense.

11 Q. Do you have any knowledge of Sling TV, as
12 part of its streaming, using HLS?

13 A. Do I have what?

14 Q. Any knowledge of Sling TV as part of its
15 streaming using HLS?

16 A. Not to my recollection. I don't believe
17 we were using HLS at the time. We started -- so,
18 no. I mean, my answer is no.

19 Q. Would it surprise you if Sling TV was
20 using HLS to stream content?

21 A. Not particularly, because it's -- again,
22 it -- the reason for that, to be clear, is because
23 as it's evolved, it's -- it -- and it's become a
24 general use thing since they proposed their
25 standard, which, in my belief is largely predicated

1 on what Move had shown them in meetings. I would
2 say, now, that the industry has grown.

3 There's probably value in using some
4 standard things, using some standard components,
5 right? Because what has now become a broader
6 industry standard -- because Move stopped
7 distributing that kind of a thing, and so, as you
8 look for technologies that interface easier with
9 others, or DRM or other things, it -- that might
10 be -- that might be plausible today. It wasn't
11 plausible, you know, back when it originally
12 launched.

13 MR. DHANANI: We've been going for
14 another hour. Do you want to take a break?

15 THE WITNESS: Sure.

16 MR. DHANANI: Let's do it.

17 THE VIDEOGRAPHER: Going off the
18 record. The time is approximately 11:36 a.m.
19 Mountain Time.

20 (Recess taken, 11:36 a.m. to
21 11:51 a.m. MDT)

22 THE VIDEOGRAPHER: Returning on the
23 record. 11:51 a.m. Mountain Time is the time.
24 Counsel.

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. Mr. Ericson, did you speak with your
3 counsel during the break?

4 A. Just platitudes. We didn't talk about
5 this at all.

6 Q. You did not talk about your testimony
7 here today?

8 A. No.

9 Q. So before the break, you mentioned, I
10 think it was ABC and Fox as two of the early users
11 of Move's player during your time there; is that
12 correct?

13 A. Uh-huh. Yes.

14 Q. Did those two companies use Move's
15 players the entire time you were with Move?

16 A. Yes.

17 Q. So they did not stop using Move's player
18 at any time while you were there?

19 A. I can't be certain of that. And the
20 reason for that is because, from 2007 to '9, there
21 was, obviously the economic downturn. And at that
22 point in time, the cost of streaming over the
23 internet versus the revenue they were able to make,
24 the revenue diminished greatly. And so I can't
25 remember if they continued to move -- to use Move's

1 technology or if they kind of slowed down or
2 disconnected service for a while. But I know that,
3 to my recollection, neither of them had moved to a
4 different technology in that time frame.

5 Q. But it would not surprise you if, during
6 that 2009 to 20 -- or 2007 to 2009 time frame ABC
7 and Fox and potentially other companies stopped
8 using Move's player?

9 A. It won't. We kept several customers, but
10 I think it was more related to the downturn; and
11 some people, because of the way Move's business
12 model was set up, we would make revenue on the bits
13 streamed. They kind of referred to it as a Move
14 tax, because it was more than just the cost of the
15 CDN and the video. That was because the premium
16 video experience was costing them more than the
17 revenue they were bringing in. But I don't -- I
18 don't remember the timing of different customers
19 staying on or exiting.

20 I do know by the time Move was sold, we
21 had several customers that had exited because we
22 were moving a different direction.

23 Q. So I am handing you right now a document
24 that I would introduce as Ericson Exhibit 1.

25 (Ericson Deposition Exhibit 1

1 marked.)

2 BY MR. ZIMMERMAN:

3 Q. This appears to be a VideoNuze article
4 dated January 20th, 2010, correct?

5 A. Mm-hmm. (Witness nods.)

6 Q. Are you familiar with VideoNuze?

7 A. I don't follow it, but I'm guessing it's
8 a -- one of the rags that track video streaming and
9 stuff.

10 Q. Can you read the title of this article?

11 A. Sure.

12 Fox switches from Move to Flash; ABC
13 Plans Transition Too.

14 Q. Based on your prior testimony, do you
15 have any reason to believe that that statement was
16 not correct as of January 20th, 2010?

17 A. No. In fact, it was probably correct
18 because we were sold to EchoStar in December of
19 2010. So I think we were communicating to people
20 that we were moving in a different direction.

21 Q. Do you recall when Fox and ABC began
22 using Move's player?

23 You testified earlier that the certain
24 companies began using it in 2006. Did Fox and ABC
25 as well, or was that later?

1 A. Fox did. Fox was doing it for Fox.com in
2 their MySpace player in -- by October of 2006.

3 I know that because they preempted major
4 league baseball. The normal shows they would show
5 for major league baseball and directed people to
6 Fox.com. We helped implement that page for them,
7 and MySpace.com.

8 Q. And do you recall for ABC, when they
9 started?

10 A. ABC was working on it, but my
11 recollection is that ABC took longer to launch their
12 product, not because of the technology, but because
13 they did a lot of the in-house design work for their
14 user experience, with our assistance. But I don't
15 recall if it was late 2006 or early 2007 that they
16 actually publicly launched to consumers.

17 Q. So just to confirm, Fox began using
18 Move's player around October of 2006, and ABC began
19 using Move's player late 2006, early 2007; is that
20 correct?

21 A. Uh-huh. (Witness nods.)

22 Q. And so if I can do my math correctly,
23 that means that the two of them only used Move's
24 player for about three and a half years; is that
25 correct? A little longer than three and a half

1 years?

2 A. Yeah. But again, it was -- it was not so
3 much -- it was because of the, kind of the economic
4 turn and that Move, I think by January, had a new --
5 I don't know when she came, but had a new CEO that
6 came from DirectTV, and we had notified customers
7 that we were moving into the -- more towards a --
8 being a virtual MVPD. Move had aspirations to do
9 that itself and had started talking to content
10 publishers before Move was acquired by EchoStar,
11 that ended up using Move to build Sling. So it
12 ended up in the same point.

13 Q. So would you agree that Fox and ABC were
14 not using Move's player for very long?

15 MR. DHANANI: Objection, form,
16 mischaracterizes.

17 A. I don't know what very long means. Back
18 then, it was -- I mean, three years was kind of a
19 relatively long period of time, meaning it took --
20 it took a while for anything else to even become a
21 viable option, right?

22 BY MR. ZIMMERMAN:

23 Q. Would you agree that Fox could provide
24 the same or similar user experience as Move's
25 player?

1 Or strike that.

2 Would you agree that Flash could provide
3 the same or similar user experience as Move's
4 player?

5 MR. DHANANI: Objection, foundation,
6 scope.

7 THE WITNESS: Can I answer?

8 MR. DHANANI: Sure.

9 MR. ZIMMERMAN: Yes.

10 A. So I don't want to be argumentative, but
11 if I continue to read this paragraph that you
12 provided me: Separately, a Disney-ABC spokesman
13 told that ABC.com will also be transitioning from
14 Move to Flash in the coming weeks, though both will
15 be used temporarily.

16 So I think they viewed it as a
17 substandard solution. There was a company
18 subsequently formed by some Move Networks employees,
19 that was called Uplink, that continued to work with
20 Fox and Disney to provide them a similar publishing
21 system. They tried not to, in -- you know, take
22 trade secrets they knew, but by that time, there
23 were alternatives like HLS in the marketplace, and
24 so I think this was a gap move until they ultimately
25 both decided to go with Uplink.

1 BY MR. ZIMMERMAN:

2 Q. So would you agree that Uplink could
3 provide the same or similar user experience to the
4 Move player?

5 A. Not at that time, which is why they went
6 on to -- why they went to Flash as a quick interim,
7 so they didn't have to shut down their service. But
8 they ultimately did something similar to what Move
9 had been doing for them.

10 Move wasn't in the B2B business anymore,
11 and so they had to move somewhere. If they wanted
12 to keep their services running.

13 Q. So if Flash was a -- I think you said
14 substandard --

15 A. I think that's why they said that was why
16 they were -- qualified they were using it
17 temporarily. I don't know that. I'm just reading
18 what it says here.

19 Q. But if Flash was a substandard player,
20 offered a substandard user experience, why would Fox
21 and ABC and potentially others move to Flash even
22 temporarily?

23 A. Because there weren't many viable options
24 at the time that had -- that were working close to
25 as good as Move was working.

1 And Flash was -- Flash and Smooth and HLS
2 were all attempts to mirror the things that had
3 become public -- or become knowledge around what
4 Move was doing.

5 Q. Can you turn to page 2 of this article?

6 About halfway down the first paragraph,
7 it says: Last September, Move announced that Cable
8 & Wireless has partnered with it to roll out
9 IP-based TV services.

10 Would you agree, then, that Move was
11 seeking to continue to offer its player to other
12 customers then?

13 A. No. In fact, this is what I referred to
14 before. Move hired Roxanne Austin, former DirectTV
15 president COO -- new CEO, in turn brought in any
16 executives during operations strategy and business,
17 and they announced that cable and wireless had
18 partnered to roll out an IP-based television
19 services.

20 So I think what that's saying is what I
21 referred to before, is that Move was running down a
22 path of creating its own virtual MVPD service as
23 opposed to continuing to be a B -- a
24 business-to-business technology provider. Not
25 that -- so it changed its business model, not its

1 technology. Right?

2 So just because it wasn't selling
3 directly to consumers anymore didn't mean that the
4 streaming technology in some way was invalid or
5 whatever. They just stopped -- they wanted to
6 change business course.

7 In fact, it says that. Move has been --
8 "is now in the delicate process of shedding existing
9 customers as it migrates to its new model."

10 I hadn't read that, but now I did, and I
11 think that validates what I just said.

12 Q. Do you have an understanding as to why
13 Move was migrating to a new model?

14 A. Yeah, I do. I'll be really brief. As I
15 indicated, there was a market downturn in 2007 to
16 2009. There wasn't enough ad inventory to support
17 the revenue to offset the cost of over-the-top
18 streaming. There wasn't people creating a lot of
19 creative or ad inventory in the marketplace, because
20 it was still relatively new, so we had more consumer
21 demand for the streaming than they could monetize.
22 Does that make sense?

23 Q. Mm-hmm.

24 A. So business models started shifting back
25 to subscription business models; hence, the Netflix

1 and the Disney Pluses in the world, right?

2 And so Move realized that these companies
3 that were paying to a premium experience to
4 recapture ad revenue that was moving to the internet
5 wasn't going to be able to capture the ad revenue
6 that they thought it was because there wasn't enough
7 ad inventory being produced.

8 And so Move, recognizing that, and that
9 people weren't willing to pay the same way they were
10 paying before, said, well, we have enough experience
11 in doing what we're doing that let's start moving
12 towards a subscription service ourself to make use
13 of the technology.

14 And that's kind of why we started
15 shifting our business model. It didn't mean that we
16 were completely shutting the customers, but we
17 signaled to everybody that we were moving, to be
18 fair to the customers.

19 Q. So it was an issue at the time that --

20 A. It was economic. To be simple.

21 Q. So --

22 A. It was economic, both for Move and for
23 generally people that were streaming in the
24 industry. It was an unforeseen downturn.

25 The whole premise of the business model

1 initially was to -- I mean, you can develop a
2 technology or you can develop a technology to fit a
3 certain niche. Right?

4 And the -- it wasn't developing the
5 technology for technology's sake. We were
6 developing the technology to offer a service. And
7 the service we were offering was the ability for
8 program television providers to chase the revenue
9 that was leaving broadcast and cable television and
10 moving to the internet. So ads, you know, whereas,
11 it was -- where everyone saw advertising was on
12 television. Now we're becoming, you know, images
13 and ads and billboards and banners on websites. And
14 broadcasters had no way to monetize that revenue,
15 because the video wasn't working well enough on
16 those websites for anyone to watch to any long
17 period of time, and it was basically postage stamp
18 video without the invention of adaptive streaming,
19 so a buffer. And it wasn't an experience, and they
20 couldn't monetize it because it was a cruddy user
21 experience.

22 And so Move said, okay, we've invented
23 this technology. It allows consumers to actually
24 watch as if they were watching on television, it's
25 that good. And we went out to the marketplace,

1 which were the people that were the premium
2 providers and said we have a solution to let you
3 recapture ad revenue that you are losing to websites
4 by providing them a premium experience, and you can
5 build your own website and you can have your own
6 advertising and you can do everything else, and that
7 was the premise.

8 So when the market downturn happened, and
9 there was more consumer demand for streaming than
10 there was ad revenue, that model started breaking
11 down. Because they had the cost, but they didn't
12 have the offset in revenue.

13 So people had to evolve their business
14 models, including Move and including them.

15 So it wasn't a technology decision. It
16 was a business decision.

17 Q. So can you turn to page 1 of this
18 article, real quick?

19 A. Mm-hmm. (Witness nods.)

20 Q. Can you read the, kind of -- one, two --
21 the fourth paragraph to yourself?

22 A. Where it says unfortunately?

23 Q. Yes.

24 A. Unfortunately the company encountered a
25 perfect storm. First, as CDN prices fell, content

1 providers considered Move an increasingly
2 expensive-looking solution.

3 Which I referred to previously in my own
4 comments as the Move tax.

5 "Since" -- "then, since Move's customers
6 used a free, ad-supported model, as the recession
7 crimped ad spending their ability to afford a luxury
8 video player deteriorated. Meanwhile, both
9 Microsoft (with Smooth Streaming) and Adobe (with
10 FMS 3.5) both launched their own adaptive bitrate
11 alternatives."

12 Yep, they did. Predicated on what Move
13 invented.

14 And "between their ultra-competitive
15 pricing and large embedded customer bases, Move was
16 squeezed from all sides. Compounding matters, Move
17 also conveyed mixed messages about its strategy and
18 rumors about its disjointed product development
19 process were widespread."

20 And that was because Move was signaling
21 that it was going to -- if the industry didn't heal
22 itself, that Move would need to find other ways for
23 it to get revenue. And I think it -- I think that
24 paragraph pretty well matches what I just have been
25 telling you.

1 Q. And so that -- that second sentence, the
2 one where you after referred to the Move tax, that
3 states: --

4 A. "Content providers considered Move an
5 increasingly expensive-looking solution."

6 Q. And so it was part of the reason --

7 A. Well, actually, it says, here that "as
8 the recession" -- which I spoke to -- "crimped ad
9 spending their ability to afford a luxury video
10 player deteriorated."

11 Luxury meaning, in my view, best of
12 class.

13 Q. And so that luxury video players that
14 it's referring to --

15 A. That's the Move player.

16 Q. Is that the Move player?

17 A. Yep.

18 Q. And so --

19 A. Because this article is about the
20 transition from Move, right?

21 Q. Right. And so this paragraph is in part
22 referring to that these companies were switching
23 from, for example, Move to Flash, Move to some other
24 company's system, because at the time Move was --

25 A. It was economic.

1 Q. -- too expensive?

2 A. It was economic.

3 Q. It was economic?

4 A. It was economic decision. Like I said,
5 it wasn't a technology decision. It was an economic
6 decision. I think I explained it pretty well, and
7 it says it here: The recession crimped ad spending.

8 And so because there was more demand, as
9 I said before, than there was the ability to recover
10 ad revenue, then they couldn't afford a luxury
11 experience, so they went to a cheaper experience by
12 companies that were much bigger and had much bigger
13 investor portfolio than Move did at the time, that
14 had -- what did it say? "Both launched their own
15 adaptive bitrate alternatives."

16 But they didn't have adaptive bitrate
17 when Move started. No one had launched adaptive
18 bitrate when Move started. It's predicated on Move.

19 Q. Okay. You can set that aside for now. I
20 think we're going to return to your resumé, which --

21 A. And I hadn't even ever seen that article,
22 so...

23 Q. So let's move up to page 3 of your
24 resumé -- or your CV, okay?

25 A. Okay.

1 Q. And just below the middle, it says:
2 EchoStar Corporation.

3 A. Sorry. I'm a slow page turner. Okay.
4 EchoStar Corporation?

5 Q. Did you -- after Move, you were recruited
6 to work at EchoStar? Is that correct?

7 A. Yes. So as EchoStar acquired the assets
8 of Move Networks, I was one of a couple of two or
9 three -- I don't remember what Jason ended up
10 doing -- three executives that moved from Move
11 Networks into EchoStar.

12 The company had been downsized by the
13 time of its sale to really just the technology and a
14 few employees.

15 Q. And then if you turn back to page 6, it
16 says: DISH Digital VP Operations, July 2012 to
17 July 2014.

18 Was that your first position at EchoStar?

19 A. No. My first position was vice president
20 of operations at EchoStar. It was under what was
21 called the advanced technology group. Roger Lynch
22 was the executive vice president of it.

23 What this is saying is, in July 2012,
24 they formally created a DISH network EchoStar GV in
25 order to focus on launching Sling TV.

1 So EchoStar had the Move technology, and
2 what we were continuing to build, and DISH had its
3 content rights. And so as it evolved, there were
4 international channels that were put on the platform
5 first, and that was called -- I can't even remember
6 what it was called. DISHWorld.

7 And then, as rights came clear for the
8 domestic channels, it was rebranded as Sling TV.

9 So I was effectively working -- my
10 paycheck came from EchoStar the whole time. It was
11 just a JV between the two entities for that period
12 of time, designed to focus on creating this service.

13 Q. So just going back to the transition a
14 little bit, do you recall why Move sought to sell
15 the company?

16 MR. DHANANI: Objection, scope.

17 A. The reason for it was the initial
18 investors, at least one of the major investors,
19 was -- as I understand it. This is just my
20 recollection -- was struggling with multiple
21 investments and they wanted to recoup the revenue.
22 They didn't have an appetite to continue to invest
23 in Move.

24 And because of the downturn and because
25 it was taking a long time for Move to secure rights

1 to become its own MVP at a price that made sense,
2 Move effectively was put up for sale so that those
3 investors could recoup their investment, because
4 they didn't have an appetite for more money, and the
5 economic downturn had made it look like an uncertain
6 horizon. Right? Which is kind of what this article
7 referred to. So that's -- that's kind of why it
8 ended up where it did. And -- and then, with this
9 idea that we were already moving in that direction.

10 So ironically, or because of it, EchoStar
11 effectively ended up doing what Move was moving in
12 the direction of trying to do itself, but it had
13 obviously a lot bigger pocketbooks and could sustain
14 investing for that period of time that it took to
15 clear the rights. So that's kind of how it worked.

16 BY MR. ZIMMERMAN:

17 Q. You said that some of the investors did
18 not have an appetite for further investment.

19 A. Putting in more money, yeah, because of
20 the economic downturn. There was a recession from
21 2007 to 2009.

22 Q. Were there any other reasons beyond the
23 recession that investors may not have had an
24 appetite for further investments and Move Networks?

25 MR. DHANANI: Objection, speculation.

1 A. Again, I'm speculating. I don't know for
2 sure. My understanding was it was because of the
3 economy and the fact that Move was having to change
4 its business model or get more money so that it
5 could compete with bigger companies willing to
6 basically give away a similar technology in hunt for
7 customers. So -- or to keep customers, or to
8 provide an alternative to customers.

9 So it was -- again, it was just an
10 economic decision, like any small company, right?
11 That's trying to stay alive.

12 MR. ZIMMERMAN: It's a little before
13 12:30, but now might be a good time for --

14 MR. DHANANI: Sure.

15 MR. ZIMMERMAN: Does that work for
16 you?

17 MR. DHANANI: Sure. I was just going
18 to ask if I could stand up while I was
19 talking.

20 THE VIDEOGRAPHER: The time is
21 approximately 12:22 p.m.

22 (Recess taken, 12:22 p.m. to
23 1:20 p.m. MDT)

24 THE VIDEOGRAPHER: We are back on the
25 record. 1:20 p.m. is the time.

1 Counsel.

2 BY MR. ZIMMERMAN:

3 Q. So, Mr. Ericson, before we went on our
4 lunch break, you had mentioned that a few employees
5 of Move had left to start another company. I
6 believe it was -- was it Uplink or U Link?

7 A. Uplink.

8 Q. Can you describe what Uplink did?

9 MR. DHANANI: Objection, form.

10 MR. ZIMMERMAN: I'll rephrase that
11 question.

12 BY MR. ZIMMERMAN:

13 Q. Can you describe the technology Uplink
14 was implementing?

15 A. Yes. The -- in general, I wasn't part of
16 it, so I couldn't tell you what they did. They were
17 trying to fill the void left by Move, and so they
18 provided a content management, a rudimentary content
19 management system to store and organize video for
20 distribution or live video. Some metadata
21 associated with that. And a mechanism of using a --
22 and I believe they used HLS, I don't know, to stream
23 content for a consumer experience.

24 Q. So was Uplink's product a competing
25 product to what Move Networks had been offering?

1 MR. DHANANI: Objection, form.

2 A. It would have potentially been, but they
3 didn't have the product to offer until after Move
4 had decided to transition into another business.
5 Does that make sense?

6 So they filled the void of being a
7 potential B2B platform provider for companies like
8 ABC or Fox after Move started pivoting their
9 business model.

10 BY MR. ZIMMERMAN:

11 Q. And Uplink was, you said, started by
12 former employees of Move, correct?

13 A. Mm-hmm. (Witness nods.)

14 Q. Were these engineers that had been
15 working on the Move player?

16 A. Yes. Yeah, they were mostly engineers.

17 Q. Do you know if anyone at Move stayed in
18 contact with any of these engineers when they went
19 to Uplink?

20 MR. DHANANI: Objection, form.

21 A. I think obviously on an interpersonal
22 basis. They were friends.

23 I don't believe there was a lot of
24 professional overlap, meaning those that were left
25 at Move were doing something and those that were

1 trying to start Uplink were trying to do something
2 else. So, meaning, you know, fill this void that
3 Move had kind of left, because they had -- they knew
4 some of the same -- well, they were previous clients
5 of Move, right? So...

6 BY MR. ZIMMERMAN:

7 Q. Did anyone at Move have a concern that
8 Uplink was providing its services to former clients
9 of Move Networks?

10 MR. DHANANI: Objection, scope and
11 form.

12 A. I know there was a discussion about
13 whether it was competing and how it may or may not
14 have infringed, but we also knew that they started
15 with things that were readily available rather than
16 trying to rebuild Move's technology, if that makes
17 sense.

18 So they didn't go to say, I think I can
19 go build another ABR distribution platform. They
20 went and said, I think I can provide another
21 publishing and distribution platform but using,
22 at -- now at that point, a different ABR protocol.

23 BY MR. ZIMMERMAN:

24 Q. What do you mean by things that were
25 readily available?

1 A. Well, by that time, HLS had evolved.
2 Smooth Streaming had evolved. Those type of things.
3 I mean, I think that's why this previous
4 article that was cited mentions a couple of those
5 alternatives.

6 Q. And what do you mean by a different ABR
7 protocol?

8 A. What I mean is that -- so referencing
9 back to whatever this exhibit was, the protocols
10 that, you know, things that were mentioned in here
11 like -- I don't know what -- exactly what was
12 mentioned here.

13 They're transitioning to -- here they
14 were transitioning to Flash. They could have as
15 easily decided to try to use HLS or they could have
16 just as easily tried to use Smooth, although Smooth,
17 I think, at that point, was known to not be as good.

18 I mean, that's why it's not in the
19 marketplace now.

20 Q. And just to confirm, by "this exhibit,"
21 you were referring to the exhibit marked --

22 A. This Fox, yes.

23 Q. The exhibit marked Ericson Exhibit 1?

24 A. Yes.

25 Q. Okay. Perfect.

1 So you would agree that HLS, Flash, and
2 Smooth are different ABR protocols, correct?

3 MR. DHANANI: Objection,
4 mischaracterizes, form.

5 A. I would say that they are -- were
6 introduced into the marketplace as different
7 protocols, but I would say that the way they work is
8 substantially similar to the way Move's invention
9 worked.

10 BY MR. ZIMMERMAN:

11 Q. What do you mean by substantially
12 similar?

13 A. Again, deciding how to break up content
14 into segments for audio/video, being able to request
15 that content as get requests, being able to encode
16 the content in different roams of quality or types
17 of quality, the ability to have a timeline index to
18 those files, among other things. There's lots of
19 other things that the Move -- that Move was doing
20 that are referenced in the patent.

21 Patents, I guess I should say.

22 Q. And so is "substantially similar" not the
23 same?

24 MR. DHANANI: Objection, form.

25 A. Well, I mean, it depends on how you

1 determine "the same," right? Is it enough to rename
2 manifest files? Enough to say these are segments
3 versus chunks versus streamlets? I mean, it's -- at
4 some point, you're defining a methodology to do
5 something similar to allow the network to adapt to
6 the conditions of the internet, or the last mile, or
7 who -- you know, the consumer's experience at that
8 time.

9 So in that sense, they're substantially
10 similar. Like, that wasn't anything adapting prior
11 to Move, and the solution that they -- that Apple
12 proposed as HLS was, I believe, a direct
13 relationship to discussion that is -- took place
14 between Disney as an investor and Apple, and things
15 that were disclosed at that time. But -- and so
16 they decided to release it as a potential solution
17 to the problem as opposed to trying to directly
18 infringe on what Move had invented.

19 Microsoft became exposed to Move just
20 before or prior to the Democratic National
21 Convention and things. They recognized what Move
22 was doing. They couldn't do it at the time, which
23 is why it used the Move player, because they didn't
24 have a method of doing that. And so -- but then,
25 surprisingly, you know, I don't know what the exact

1 time frame was, eight, nine, ten months later, they
2 release their own adaptive thing that's
3 substantially similar to what they discovered about
4 the Move protocol in relation to having a
5 relationship with Move.

6 BY MR. ZIMMERMAN:

7 Q. So turning back to Uplink, you said that
8 there was a discussion about whether they infringed;
9 is that correct?

10 A. We were -- not -- not in particular. So
11 let me rephrase.

12 We knew that they were trying to fill the
13 void. We knew that they were trying to, you know,
14 deliver a new solution from the ground up. We also
15 knew that they were hypersensitive to the fact that
16 Move had filed patents. So they wanted to not
17 directly use code or things that they used at Move,
18 which is why they turned to things that had been
19 largely developed now in the industry as potential
20 alternatives to the Move player, if you will. But
21 not -- but because it was so close, they knew how to
22 use those things, if that makes sense.

23 Q. So at that time, did you develop an
24 opinion of whether their product infringed --

25 A. No.

1 Q. -- Move's patents?

2 A. No.

3 MR. DHANANI: Objection --

4 A. Sorry.

5 MR. DHANANI: Just give me a minute
6 to object.

7 Objection, form, scope, and calls for
8 expert opinion.

9 A. So in my understanding and from my
10 perspective, we didn't develop an opinion, but we
11 also didn't take any action. It was kind of a -- it
12 was a concern, but it was a nonconcern, meaning if
13 they hadn't tried to fill the void for Fox or ABC,
14 somebody else would have come along and tried to
15 fill that void using something similar.

16 So we basically said, we're not going to
17 stop them from trying to fill a need, and we didn't
18 have an opinion on whether or not we should help
19 them, because we weren't -- at that point, we had
20 made a decision not to be a competitor, right?
21 Because we'd moved into this MVPD, try to be your
22 own content distributor space.

23 BY MR. ZIMMERMAN:

24 Q. So is it your testimony that an MVPD is
25 not a competitor to a product like Uplink?

1 MR. DHANANI: Objection,
2 mischaracterizes.

3 A. It depends on what you're talking about.
4 If you're talking about using competitive
5 technologies or something that is a technology that
6 was similar foundational based on what Move had
7 invented, then in that sense, they were potentially
8 technological competitors, but not from a business
9 standpoint.

10 The business itself was not in the
11 business of providing B2B streaming for other
12 providers. So if Disney wanted to continue
13 delivering their channel, they could continue to
14 deliver their channel directly to a consumer. And
15 if Sling or some MVPD wanted to create a product
16 that looked like a satellite or cable package, they
17 could do that, which was basically taking somebody's
18 channel and repackaging along with others.

19 From a marketplace standpoint, yes, a
20 consumer might choose one channel versus many
21 channels, but they're all using what I believe was
22 the basis of technology that Move invented
23 underneath, and so it depends on where you want to
24 define what a competitor is, I guess.

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. So at the market level, would an MVPD
3 system be a competitor to a system like Uplink?

4 MR. DHANANI: Objection, asked and
5 answered.

6 A. Again, I don't know all the business
7 Uplink was in. Theoretically, the platform could
8 have allowed somebody to create a competitive
9 service offering similar to what Move and Sling were
10 trying to create. But to my knowledge, Uplink was
11 providing a platform to allow others to stream
12 content directly, their content directly to
13 consumers.

14 So Uplink wasn't the one that owned the
15 service. Disney or Fox did. Right? Whereas, Sling
16 was a service directed towards a consumer, to give
17 them a different product offering.

18 Q. Do you have any belief as to whether HLS
19 or Smooth infringes the ABR patents?

20 A. My personal opinion is they do, based on
21 knowing -- is they do. I'll just leave it at that.

22 Q. Has Drew Major ever told you that HLS
23 infringes the ABR patents?

24 MR. DHANANI: Hang on one second.

25 Let me just read that question again.

1 [Document review.]

2 Objection, foundation.

3 A. In simplistic terms, Drew didn't need to
4 tell me. I know how the system works. I helped
5 make it practical, and I know how people are
6 implementing HLS, or DASH, or Smooth, or anything
7 else; and from my perspective, they are -- those
8 other protocols wouldn't have been developed without
9 the knowledge of what Move had tried to invent and
10 did invent.

11 BY MR. ZIMMERMAN:

12 Q. I want to return to your CV for a little
13 bit, if that's okay. Exhibit 2089.

14 And so at the bottom of page 5, top of
15 page 6, it says from July 2012 to November 2015, you
16 were a Founding Executive, VP Operations.

17 Is that correct?

18 A. Do you mean page 4 and 5?

19 Q. Bottom of page 5, top of page 6.

20 A. Mine is page 4. It says: Sling TV 4
21 years 10 months Founding Executive, VP...

22 Q. The bottom of the next page.

23 A. Oh, Founding Executive, VP of Operations.

24 Okay. I've got ya.

25 Okay. Yep.

1 Q. What were your duties in this role?

2 MR. DHANANI: Objection, asked and
3 answered.

4 A. I do believe I've answered the question
5 before, and I think it's what it states here.

6 But I continued to be responsible for the
7 platform that was already in operation, to continue
8 to make improvements to that platform, to continue
9 to oversee the people that were operating that
10 platform, and continuing to help release new code
11 and inventions and things related to the platform
12 and the service that EchoStar and Sling were
13 attempting to develop.

14 BY MR. ZIMMERMAN:

15 Q. So I just want to clarify that earlier we
16 were talking about your position as VP operations
17 for DISH Digital.

18 A. Mm-hmm.

19 Q. Did your duties under this new role
20 change at all?

21 A. No. Basically the -- it's -- if you see,
22 the dates overlap. It's semantics, because I was
23 still employed by EchoStar, even though I was
24 working for the JV. So -- and the JV was the one
25 responsible within EchoStar and DISH to try to pull

1 together a service offering that became Sling TV.

2 Q. And then if you turn to page 4, the
3 bottom of page 4.

4 A. Mm-hmm. (Witness nods.)

5 Q. It says from: November 2015 to April of
6 2017, Founding Executive, VP Technology &
7 Architecture.

8 A. Mm-hmm. (Witness nods.)

9 Q. What were your duties under this role?

10 A. So founding executive is the same role,
11 as I was still doing the same thing; but the
12 difference was I had moved out of just being
13 responsible for operations of the platform and was
14 helping to direct the implementation and some of the
15 architecture for Sling TV specifically, right?

16 So enhancing the platform, releasing
17 things that related to the future offering, user
18 experience, those type of things of what was Sling
19 TV.

20 Q. And then on page 3, just over halfway
21 down, it lists: VP Technology Architecture &
22 Business Development, Executive GM from
23 November 2015 to August 2017.

24 A. Same role. The difference was a lot of
25 the Sling development operation took place in

1 American Fork, Utah, and I became the -- basically
2 the general manager for the office. Right? I was
3 functioning in that role and continued to function
4 in that role. They needed somebody. And I was
5 largely responsible for the employees, so it just
6 made sense that I continued to do what I was doing
7 and kind of just run the office, if you will, making
8 sure that employees got hired and employees got
9 fired, and da, da, da.

10 Q. And below that, it lists: VP Operations,
11 Executive GM, December 2010 to November 2015. Just
12 to clarify, that was one of the overlapping
13 positions?

14 A. It's all overlapping, yeah. It's just --
15 it's -- the whole reason for this is to try to
16 delineate between EchoStar as the technology company
17 and the work within EchoStar as part of DISH to
18 develop and release Sling TV. Right?

19 So the reason I tried to delineate it is
20 because work was sometimes associated to my larger
21 role at EchoStar and sometimes specifically related
22 to the nature of getting ready to launch Sling TV.

23 Q. Do you still hold any positions at
24 EchoStar?

25 A. No. Well, let me qualify. Positions in

1 terms of employment position?

2 Q. We'll start with that, yes. Do you hold
3 any employment position at EchoStar?

4 A. No, I don't.

5 Q. At the top of page 3, it looks to say
6 that you are an "Executive Technology, Media,
7 Telecom, and SaaS Consultant."

8 A. Mm-hmm.

9 Q. Is that related at all to EchoStar, Sling
10 TV?

11 A. No. So -- hold on a second.

12 [Document review.]

13 A. Yes, in the line above it, it says senior
14 Exec/VP at Sling, EchoStar, Move is just a reference
15 to the experience below. That Telecom SaaS product
16 consultant is the role. I was open to consult to
17 people, but I was not consulting and have not
18 consulted for Sling TV or EchoStar since I left.

19 BY MR. ZIMMERMAN:

20 Q. Okay. You can put your CV aside. We're
21 going to move on.

22 Now I'm handing you a document that has
23 been premarked as Exhibit 2090.

24 [Document review.]

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. There is your declaration of the IPRs,
3 correct?

4 A. I believe so. It looks like.

5 Q. And if you turn --

6 A. Yep. I signed it, yep.

7 Q. That was my next question --

8 A. I anticipated it, so I looked at the back
9 page. Sorry.

10 Q. Just to confirm, on page 8, that is your
11 signature, correct?

12 A. Yes, it is.

13 Q. And you signed this declaration under
14 penalty of perjury, correct?

15 A. Yes.

16 Q. And so your signature on the last page is
17 affirming that all statements are true and correct?

18 A. To the best of my knowledge, yes.

19 Q. We've discussed earlier that you did not
20 personally draft this declaration; is that correct?

21 A. Correct.

22 Q. But this declaration is the declaration
23 you provided in support of DISH's patent owner
24 response in each of these IPR proceedings; is that
25 correct?

1 A. Yes.

2 Q. And if you look back at the last page of
3 this declaration on page 8, you executed your
4 declaration on August 6, 2024; is that correct?

5 A. Yes.

6 Q. Do you recall how far in advance of
7 executing this declaration you were first contacted
8 about providing a declaration?

9 A. Not exactly, no, but it was within days.
10 I mean, I don't know exactly.

11 It was basically I got a phone call that
12 said are you willing to provide a declaration based
13 on your prior thing, and I said, I guess. If you
14 want -- like, if I need to, then I'll do that. And
15 that's how I was contacted.

16 Q. Do you remember who contacted you?

17 A. Ari and Zach. Ali and Zach, I mean.
18 Sorry.

19 Q. So if you look to page 2 of your
20 declaration?

21 A. Mm-hmm.

22 Q. Paragraph 2 states: I am not being
23 compensated for providing this declaration, and I
24 have no financial interest in the resolution of this
25 matter.

1 Previously, you testified that you were
2 not being compensated for the declaration or your
3 testimony today; is that correct?

4 A. Yes.

5 Q. Do you have any financial interest in any
6 of the ABR patents?

7 A. No.

8 Q. Do you have any stock in any of the DISH
9 companies?

10 A. Only that which I invested in the
11 retirement fund while I was there.

12 So my own personal investment into the
13 401(k) .

14 Q. And if you go down to paragraph 4, you
15 stated: I have previously provided sworn deposition
16 testimony regarding the development, testing, and
17 use of MOVE's adaptive-bitrate streaming technology
18 between 2005 and 2007 in In Re Certain Fitness
19 Devices, Streaming Components Thereof, and Systems
20 Containing Same, investigation No. 337-TA -1265.

21 That's talking about the prior
22 investigation against Peloton, iFit, and Lululemon;
23 is that correct?

24 A. I believe that was who the responses
25 were. I don't know exactly.

1 Q. What was your role in that ITC
2 investigation?

3 A. Just being deposed. That was it.

4 Q. Do you recall why you were being deposed?

5 A. I was being deposed so that I could
6 testify to some of the same things that I'm being
7 asked today.

8 Q. Do you remember why you were asked to
9 testify as to those topics?

10 A. Presumably because I knew, based on my
11 career experience, kind of where things -- the
12 timeline and things that took place as part of the
13 development of the -- Move's platform.

14 Q. Do you remember who won in the ITC
15 investigation?

16 A. Yes. My assumption is that DISH won in
17 that proceeding, whatever winning means in that.

18 Q. Do you recall when you had heard that
19 DISH won in the ITC investigation?

20 A. I do not, but I did hear that.

21 Q. Do you remember how you felt when you
22 heard the news that DISH had won in the ITC
23 investigation?

24 A. Yeah. I felt that the hard work that
25 we'd done -- I had done was justified. I mean, that

1 it was what I perceived it was, which was a
2 technology that substantially changed the media
3 industry.

4 It feels good to be part of that.

5 Q. And in paragraph 5 of your declaration,
6 you state: I understand that DISH submitted an
7 excerpt of my deposition testimony in this
8 proceeding as Exhibit 2063. I have reviewed
9 Exhibit 2063 and certify that it is accurate. I
10 incorporate those statements fully into this
11 declaration.

12 Do you remember how many times you
13 have -- you reviewed Exhibit 2063?

14 A. That's my previous -- to clarify, that's
15 my previous deposition?

16 Q. Yes, that is your -- Exhibit 2063 is your
17 previous deposition testimony.

18 A. Okay. So I've -- I read it once for
19 accuracy after the proceeding, and I've read it once
20 subsequently.

21 Notwithstanding rereading this a couple
22 of times, right? Because this is an excerpt from
23 it.

24 "This" meaning, for you, the declaration.

25 Q. In paragraph 5, what do you mean by

1 "accurate"?

2 MR. DHANANI: Objection to form.

3 A. For me, accurate means true to my
4 recollection.

5 BY MR. ZIMMERMAN:

6 Q. So you're certifying that the transcript
7 of what you said was accurate; is that correct?

8 A. Yes, that was true to my recollection.

9 Q. And Exhibit 2063 is a -- an excerpt of
10 your deposition transcript. Did you review your
11 full deposition transcript from the ITC
12 investigation?

13 A. When?

14 Q. Did you review the full deposition
15 transcript from the ITC investigation prior to
16 executing this declaration?

17 A. No.

18 Q. Did you review the full transcript prior
19 to today's deposition?

20 A. Yes.

21 I read it just to make sure I knew what I
22 had said.

23 Q. And then if you turn to paragraph 6 of
24 your declaration. You said you have 18 years of
25 experience in video streaming.

1 A. Mm-hmm.

2 Q. And in paragraph 7 on the next page, you
3 state: Of my decades of experience in the streaming
4 field.

5 Can you clarify that?

6 A. Yeah. I probably misspoke. Decades
7 meaning one plus decade, I guess. Close to two
8 decades. 18 years is, in my mind, close to two
9 decades.

10 And by this time, it's certainly that
11 way.

12 Q. And then in paragraph 8, you mention an
13 Emmy that Sling received.

14 A. Uh-huh.

15 Q. You mention the Sling Emmy, citing
16 Exhibit 2013; is that correct?

17 A. Yes.

18 Q. Right now I am handing you an exhibit
19 premarked Exhibit 2013.

20 Did you review Exhibit 2013 prior to
21 signing your declaration?

22 A. I was aware of the press release. I
23 wrapped -- prior to my declaration, that's why I
24 included it on my CV dating back to 2021, because I
25 had people still at Sling, and it was kind of big

1 news when they won the Emmy for adaptive streaming.

2 Q. Did you review this press release between
3 receiving the draft of your declaration and
4 executing your declaration?

5 A. Yes, I reviewed it yesterday.

6 Q. Yesterday was not before executing your
7 declaration, correct?

8 A. Oh. Sorry. No, I did not review it
9 before that. Sorry, I apologize.

10 Q. That's okay.

11 A. I'm getting tired.

12 Q. Understandable.

13 Do you recall when this Emmy was awarded
14 to Sling?

15 A. Just what it says, in the 21st annual
16 Emmy. So I guess this is right, 2020.

17 Q. And the ABR patents were first filed by
18 Move in 2005; is that correct?

19 A. Yes. I took -- I believe so.

20 Q. And Move did not receive an Emmy related
21 to the ABR patents; is that correct?

22 A. Yes. I don't recall Move ever even
23 trying to submit for an Emmy.

24 Q. And Move was not awarded an Emmy when it
25 began providing services for companies like ABC and

1 Fox; is that correct?

2 A. Move, no, we didn't -- again, I don't
3 recall Move ever doing that.

4 However, I do believe -- I recall that
5 ABC won an Emmy -- I can't remember what exactly it
6 was for, but it was related to their product. I
7 think it was the ABC.com that was obviously using
8 Move's technology -- underlying technology at the
9 time they won the Emmy. But I don't remember what
10 the actual award was. I did see that Emmy when I
11 was in Burbank.

12 Q. So Sling's Emmy that was awarded in 2020
13 was not awarded for the Move player; is that
14 correct?

15 MR. DHANANI: Objection, form.

16 A. So my understanding is it was. And the
17 reason for me saying that is Sling launched in
18 February 2015, but...

19 As previously discussed, all of the
20 technology underneath that made Sling possible was
21 Move's technology. And so what it did is they just
22 named it. I think it says in paragraph one, two,
23 three, four: A pioneer in adaptive bitrate
24 streaming, Sling TV launched February 2015 as the
25 first streaming service to deliver live television

1 over the top.

2 I believe that is stating Sling, as a
3 service, was the first to launch; but the pioneer in
4 adaptive bitrate streaming came through the Move
5 acquisition.

6 BY MR. ZIMMERMAN:

7 Q. So if that's the case, why wasn't Move
8 awarded an Emmy in 2005?

9 A. Move didn't apply for an Emmy. Move
10 didn't -- like, Move wasn't asking for an Emmy. And
11 I -- like, we weren't -- we were a -- largely seen
12 as a video distribution technology. We -- my
13 understanding is we weren't -- like, we never tried
14 to go out and do that.

15 In fact -- yeah, we were basically
16 helping other people's products, but we -- I can't
17 answer it other than I don't recall ever even trying
18 to apply to win an Emmy.

19 Q. So is it your understanding that you
20 needed to apply for an Emmy in order to get one?

21 A. Yeah, that's my -- my experience would be
22 that they take consideration for content and other
23 things, and they consider the viability of those and
24 they provide awards. That's why things are
25 nominated but not awarded.

1 So it's a nomination process. Somebody
2 has to decide what gets nominated; and in most
3 cases, people submit for nomination, that I
4 understand.

5 Q. But another company could -- or strike
6 that.

7 Another company or individual could
8 nominate someone for an Emmy; is that correct?

9 MR. DHANANI: Objection, speculation.

10 A. I don't know that for sure. I'm not --
11 I'm not in that world directly.

12 I would -- never mind. I would be
13 speculating, so I'm not going to say anything.

14 BY MR. ZIMMERMAN:

15 Q. Okay. I want to return to your
16 declaration --

17 A. Okay.

18 Q. -- for a minute.

19 In paragraph 9 on page 3 still.

20 A. Mm-hmm.

21 Q. You state that you: Helped MOVE develop
22 the first adaptive streaming Online Video Platform
23 ("OVP") and OTT content distribution platform, which
24 laid the foundation for programmers such as ABC,
25 ESPN, FOX, CWTV, Discover -- Discovery, Televisa,

1 and more to be able to offer videos via streaming.

2 A. Mm-hmm.

3 Q. To clarify, by "programmers" here, do you
4 mean the content providers, not software
5 programmers; is that correct?

6 A. That's correct.

7 Q. And what do you mean by laid the
8 foundation?

9 A. Provided the platform. They had the
10 content. They were the programmer, right? The
11 content owner. But they didn't have a way to stream
12 content reliably to consumers without the Move
13 platform and technology.

14 Q. By the early --

15 A. So that's what I mean by the foundation.

16 Q. By the early 2000s, there were other
17 types of video streaming than an online video
18 platform, correct?

19 MR. DHANANI: Objection, foundation.

20 A. There were people that were trying to
21 figure out how to stream content and other solutions
22 in the marketplace, yeah.

23 BY MR. ZIMMERMAN:

24 Q. So not all video streaming is online
25 video platform or OVP; is that correct?

1 A. So OVP is a term that was created later
2 that kind of meant the system of streaming. There
3 were other people that had tried to create streaming
4 systems, or streaming technologies, but they weren't
5 adaptive in nature. And it's why there was so much
6 buffering and why videos were post guard and why
7 there was delays in starting videos, which is why
8 they were ultimately not successful.

9 Q. If videos were streamed locally over, for
10 example, a local area network, a LAN, rather than
11 the internet, would that be an OVP streaming?

12 MR. DHANANI: Objection, incomplete
13 hypothetical.

14 A. It's not a -- so it's -- it's -- I'm not
15 aware of an OVP or provider that has built a
16 localized system to run over a LAN, right?

17 There are other technologies that allow
18 video to be streamed over a LAN, or to be delivered
19 over a LAN; but, to my knowledge, none of them were
20 doing so using adaptive technology. You know, they
21 were -- they were using other technologies. They
22 might have been trying to use UDP or they might have
23 been trying to use other things, but they were not
24 using adaptive technology within those networks.

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. And then moving to page 4, in
3 paragraph 11, you state: Through my decades of
4 experience in the field, I also have substantial
5 familiarity with the industry, including the
6 technical and operational features of other products
7 services.

8 What do you mean by industry here?

9 A. I think I mean potentially two things.
10 The first is just technological innovation. Kind
11 just like the tech industry in general.

12 And then I think in this context, I was
13 talking about kind of the evolution of video over
14 the top, or over-the-top streaming.

15 Q. And how did you develop this substantial
16 familiarity? Was it through your experience in the
17 field? Anything else?

18 A. It was -- yeah, it was joining a company
19 that was trying to -- trying to deliver video this
20 way. Helping to figure out how that happened.
21 Helping to figure out why other technologies had
22 limitations. Selling the ideas of using Move's
23 technology to potential partners like ABC and Fox,
24 demonstrating it, explaining how it worked. All of
25 those things led to why I could say this is better

1 than that, or this is why you want to do Move or
2 this is how it's working, and then it was just
3 demonstrable. It was easy to go in, like I said
4 earlier, to someone like Televisa and show them, on
5 a Mexico -- a network in Mexico, how their content
6 was playing out live. And that's pretty
7 awe-dropping, at the time, experience for these
8 people, because they hadn't ever seen any technology
9 being able to do that.

10 Q. And when you say the technical and
11 operational features of other product services, what
12 are those other product services?

13 A. Things that I mentioned here, like what
14 eventually became HLS or DASH. Things that were
15 tried before, like QuickTime and RTP delivery and
16 other attempts at progressive download, other
17 attempts at trying to figure out how to deliver
18 video.

19 Q. During what time periods are you
20 referring to in this sentence?

21 A. My practical experience with the
22 streaming industry began when I moved from
23 telecommunication and IP to what Move was doing,
24 right? Then I -- like anybody, I had experience
25 trying to watch a video over the internet, or

1 things, and so it naturally became apparent what was
2 working and what wasn't working and why Move.
3 That's one of the things that drew me to the
4 company, right? Is that I had had the pausing,
5 buffering, stalling experience that most consumers
6 were having at the time, and Move provided an
7 anecdote to that experience.

8 Q. Given your familiarity with the industry,
9 were you familiar with a product developed by IBM
10 called the Bomba Media streaming system?

11 A. No.

12 MR. DHANANI: Objection, scope.

13 A. I wasn't, no.

14 BY MR. ZIMMERMAN:

15 Q. And then later in that paragraph --

16 A. Which paragraph?

17 Q. Paragraph 11 still.

18 A. Mm-hmm. (Witness nods.)

19 Q. You state: For example, while I was the
20 Vice President of Operations at EchoStar, I oversaw
21 all of the company's technical operations and
22 productions processes, including the encoding of
23 content, the packaging of transport streams into
24 formats compatible with various streaming standards
25 (e.g., HLS, MPEG-DASH, MOVE's QVT/QMX, DRM), the

1 distributing of content, the changing/releasing of
2 any software, and more.

3 Are you stating that each of those is a
4 different technical operation and production
5 process?

6 A. I'm saying -- I guess what I'm trying to
7 say here, and I saw compatible and should have been
8 comparable, but it doesn't matter.

9 What I...

10 Let me just read it again.

11 [Document review.]

12 A. So basically I was just referring to what
13 I described previously as understanding how to
14 deploy, make operationally -- operational end-to-end
15 system to deliver streaming.

16 BY MR. ZIMMERMAN:

17 Q. Okay. And in this sentence, what do you
18 mean by the encoding of content?

19 A. Two meanings. It probably should have
20 said transcoding. But basically the process that I
21 described previously, of receiving content, encoding
22 it, using some type of encoding algorithm,
23 compressed -- compression algorithm, AC audio or
24 MPEG-4 or whatever.

25 We started out with VP6, I think.

1 Anyway, the point is, that wasn't as
2 germane to it as being able to define the quality
3 profiles, if you will, of what we wanted to deliver
4 and the -- creating the video segments, its objects,
5 and publishing those to the origin server. So it's
6 largely what I described before, and packaging,
7 creating index files. And sometimes they needed to
8 be wrapped in digital rights management. So,
9 because we were protecting content, those type of
10 things.

11 Q. So you mentioned being able to define the
12 quality profiles. What do you mean by defining
13 quality profiles?

14 A. I think I answered that previously, but
15 what I mean by that is determining the size of the
16 objects that need to be requested. So defining how
17 many -- how much data would be assigned to audio,
18 how much data would be assigned to video, so,
19 therefore, how large or small the files might be.
20 In any number -- range of profiles, quality. So
21 smallest to biggest. For a certain amount of time.
22 That would allow the client to request files
23 appropriate for the network that it was trying to
24 play over.

25 Q. So determining the size of the objects

1 that needed to be requested, you said that was --
2 previously, you had explained that the encoding was
3 germane. So is the determining the size of the
4 objects that need to be requested germane?

5 MR. DHANANI: Objection, form.

6 A. Yeah. I mean, so let me -- maybe I'll
7 try to be more coherent.

8 There's no limitation to the number of
9 profiles you could create or the size of the
10 profiles outside of being able to create new bits
11 that don't exist, right?

12 So I can't create something greater than
13 HD if all I have is HD to work with as an input.
14 Okay?

15 But knowing that I'm trying to get to HD
16 quality, I can define something as a 16-by-9 aspect
17 ratio, and HD in terms of number of pixels, and AAC
18 audio or AC3 audio in terms of surround, or
19 whatever.

20 So you would have something that was
21 premium experience and then you recognize that
22 somebody in their home only has one megabit of
23 bandwidth, and overtaxed computer, and there's ten
24 other devices competing to bandwidth on their ISP
25 connection, and so you create profiles that are

1 less -- much less defined in terms of resolution and
2 audio quality, because the purpose -- the
3 overarching purpose of AVR is to deliver a
4 continuous video experience without stalling and
5 buffering.

6 So even if a frame looks a little more
7 fuzzy -- or segment than the other segment, people
8 can still follow the audio track, they can still
9 visually follow the video. It will adapt up and
10 down as necessary, but they can still watch the
11 content in its entirety.

12 BY MR. ZIMMERMAN:

13 Q. And then when you state: The packaging
14 of transport streams into formats compatible with
15 various streaming standards (e.g., HLS, MPEG-DASH,
16 MOVE's QVT/QMX, DRM), why would Sling TV need to
17 package its transport streams into formats such as
18 those?

19 A. And that's, I guess -- and this is true.
20 I don't know if I meant comparable or compatible.
21 But either way, it doesn't matter.

22 When I say packaging of transport streams
23 into formats compatible with those standards, it was
24 to be able to potentially package to other emerging
25 standards.

1 So Move had its QSS file. A TS file is
2 analogous to a QSS file. Transport stream,
3 segmented transport stream, and so all it -- all I
4 was trying to speak to is the fact that they're
5 substantially similar enough that a different player
6 could be used in a similar way to how Sling TV and
7 Move was using their players, if that makes sense.

8 I don't think it's that they have to. I
9 think you asked me earlier -- sorry.

10 I think you asked me earlier if I was
11 surprised or something to the thing of they were
12 using HLS or something, and I think my answer was,
13 no, it's evolved, just like the Uplink people. So
14 why they choose to use what they chose to use, I
15 don't know now, but I can tell you that at the time
16 I was there, they were using Move because that was
17 the only thing mature enough to use.

18 MR. DHANANI: We've been going
19 another hour. Do you need a break? A short
20 one?

21 A. I don't know. How long are we going to
22 keep going?

23 MR. ZIMMERMAN: Can I finish my line
24 of questions on this paragraph?

25 THE WITNESS: Sure.

1 MR. ZIMMERMAN: I believe I might
2 have just pulled off your microphone.

3 THE WITNESS: Okay. Sorry.

4 Okay. At what point do you think
5 it -- I hope people are able to hear me.

6 MR. ZIMMERMAN: I think you just then
7 pulled it off, so...

8 BY MR. ZIMMERMAN:

9 Q. And then, what do you mean by the
10 distributing of content in that paragraph?

11 A. Simple. Letting people from all over
12 watch a show, a program.

13 So at some point, a consumer need --
14 wants to be able to watch a show, and delivering
15 that experience to them is what I mean by
16 distribution.

17 Q. And at the end of that paragraph, you
18 state "and more."

19 What else did you oversee other than
20 what's listed in that paragraph?"

21 MR. DHANANI: Objection, form, asked
22 and answered.

23 A. I mean, I think I've described what my
24 responsibilities were from everything from general
25 managing the office to whatever, but there's other

1 technology components. There was the -- managing
2 all the mass data that came in from the clients
3 around the quality of experience, and data, and data
4 mining. There was -- there's just lots of things to
5 run a service, and I was responsible for running the
6 service.

7 MR. ZIMMERMAN: I think that's good
8 time to stop for a break.

9 THE WITNESS: Okay.

10 THE VIDEOGRAPHER: Going off the
11 record. The time is approximately 2:24 p.m.

12 (Recess taken, 2:24 p.m. to
13 2:41 p.m. MDT)

14 THE VIDEOGRAPHER: We are back on the
15 record. The time is approximately 2:41 p.m.

16 Mountain Time.

17 Counsel.

18 BY MR. ZIMMERMAN:

19 Q. So returning to your declaration, I want
20 to look at paragraph 14 for a moment. That's the
21 bottom of page 4, top of page 5.

22 At the top of page 5, you state: Move
23 also sought to ensure that tens of thousands of
24 people could pull the same files at the same time to
25 watch the same event.

1 A. Mm-hmm. (Witness nods.)

2 Yes.

3 Q. Was this -- were you discussing at the
4 time you joined Move in March of 2006?

5 A. Yes, that was -- yeah. March 2006. Like
6 I said, at that same time or later. I don't
7 exactly --

8 So yeah, but it was around that time.

9 Q. And so at the time you joined in
10 March 2006 or a little later, Move had not yet
11 figured out how to ensure that tens of thousands of
12 people could pull the same files at the same time to
13 watch the same event, correct?

14 MR. DHANANI: Objection, form.

15 A. No, I don't think it said that we hadn't
16 designed it that way. I think what I was alluding
17 to here was Move also sought to ensure, and we
18 didn't have, based on the prototypes that we had
19 been doing before that, any mechanism to test its
20 scale, right? There wasn't -- there wasn't an event
21 large enough, there wasn't a customer broad enough
22 that we had as an official customer to let us test
23 the theoretical solution at scale at that time.

24 BY MR. ZIMMERMAN:

25 Q. So was scaling to that extent of tens of

1 thousands of people, was that a key feature to Move?

2 A. Yeah. I mean, I think I said earlier
3 that if we hadn't been able to scale, Disney and
4 ESPN wouldn't have liked our solution.

5 Q. When seeking to ensure that tens of
6 thousands of people could pull the same files at the
7 same time to watch the same event, what problems
8 were you facing?

9 A. Well, some of it was the state of the
10 internet at the time. Some of it was the state of
11 CDNs at the time. CDNs were largely set up to try
12 to do -- you know, they were good at downloading
13 files for like updating your operating system. They
14 were good at storing and doing some, you know, other
15 things related to payload and those type of things.
16 And a lot of them were designed to do some caching.

17 But one of the things that it was
18 challenging, and the reason why we went to people
19 like Limelight and the Level 3 was to be able to
20 ensure that the technology would perform the way we
21 expected it to in their caching infrastructure, and
22 that their caching infrastructure would not be
23 negatively impacted by the nature of our solution.

24 Q. What did you mean by negatively impacted
25 when you said: Their caching infrastructure would

1 not be negatively impacted by the nature of our
2 solution?

3 A. So you're requesting lots of video files.
4 Of these small files. They would in some ways may
5 have be optimized to deliver larger files, or they
6 might have been able to -- they might be optimized
7 to deliver a bunch of little files. But we're
8 providing a spectrum of files that needed to be
9 delivered as -- you know, as close to the request as
10 possible. And so understanding how the caching
11 tiers worked, making sure they had the right time to
12 loose settings. Sometimes a TTL on the caching, so
13 you want the video to stay propagated, right? And
14 so it's there and available.

15 And scale from the solution comes because
16 the more popular the video is, the more closely the
17 video gets cached to the user or the consumer of
18 that file.

19 So if we have a lot of the same video,
20 let's say a football game, going to the same market,
21 the likelihood is that that market is going to have
22 a lot of demand for the same content at near the
23 same time, and so it's going to be cached locally as
24 opposed to having to transport the entire network
25 back to some other layer of caching, and back for

1 some origin server.

2 (Audio technicalities.)

3 A. So I was mid sentence. What was I
4 saying?

5 Oh, I know. So I was -- so the caching
6 all the way back to the origin server. So when you
7 have to request the file from the same server back,
8 it's having to use bandwidth all throughout the
9 network, right?

10 But if you can cache that file closer to
11 the user for a longer period of time, then it
12 reduces the traffic over the backbone, and it
13 increases the ability to somebody to get that file
14 quicker.

15 BY MR. ZIMMERMAN:

16 Q. And did you help find any solutions to
17 these problems that Move was facing?

18 A. That was part of my job. So part of my
19 job was to work with Limelight and Level 3 and talk
20 about those things and figure out what the right TTL
21 settings were on the caching, and to figure out how
22 big an origin server needed to be or the optimal
23 size for caching.

24 One of the things that was done initially
25 is there had been a lot of testing around how big --

1 what was the optimal size for video segment. Right?
2 Was it two seconds, four seconds, eight seconds,
3 three seconds, whatever? And given a lot of
4 testing, we decided there was a reasonableness in a
5 smaller segment of time than others. It seemed to
6 perform better than larger segments.

7 Because it could adapt more quickly, and
8 it could get files more quickly.

9 Q. And then if you look down to
10 paragraph 16, declaration states: MOVE's
11 adaptive-bitrate streaming technology proved to be
12 commercially successful as well.

13 Did you write that sentence?

14 (Sotto voce document review by the
15 witness.)

16 A. I honestly don't recall. I think I -- in
17 fact -- yeah. I mean, I can see me saying that. I
18 don't exactly remember, but in my -- to clarify, in
19 my estimation, Move's adapting streaming technology
20 proved highly commercial. I mean, given who our
21 customers were and what they were using us for, very
22 high-profile products. The first of their type in
23 the industry.

24 BY MR. ZIMMERMAN:

25 Q. And then do you recall in or around 2010,

1 Move laid off nearly its entire workforce?

2 A. Mm-hmm. (Witness nods.)

3 Q. I believe I stated earlier that you were
4 one of a few employees left around 2010?

5 A. Mm-hmm. (Witness nods.)

6 Q. Is that correct?

7 So Move laid off around 150 or so of its
8 180 employees in 2010. Does that sound right?

9 MR. DHANANI: Objection, asked and
10 answered, form.

11 A. The answer is there were tranches,
12 layoffs, as Move was trying to figure out what to
13 do; and then, ultimately, the board decided that it
14 was going to -- its best move was to sell the assets
15 of the company, which, if you're selling the assets
16 of the company, we just had a skeleton crew, didn't
17 maintain the customers that were still using the
18 technology. But we didn't need as many people
19 continuing to develop technology or sell technology,
20 because we were in the -- in transition. So that
21 would be what any normal company would do in trying
22 to get sold, I think.

23 BY MR. ZIMMERMAN:

24 Q. Okay. And then if you turn to
25 paragraph 18 of your declaration.

1 A. Mm-hmm.

2 Q. At the bottom of page 5, top of page 6.

3 A. Okay.

4 Q. At the top of page 6, the end of that
5 sentence, you state: And adapting the quality of a
6 video stream during a presentation based upon an end
7 user's network connection with server
8 infrastructure.

9 What do you mean by "adapting the quality
10 of a video stream during a presentation"?

11 A. Can I read the whole sentence here?

12 So give me one second.

13 (Sotto voce document review by the
14 witness.)

15 A. So the sentence is comparing Move's
16 solution to Smooth streaming. And so what I mean by
17 that sentence is that they were attempting to do
18 something similar to what Move had been doing.

19 BY MR. ZIMMERMAN:

20 Q. And so at the end of that sentence, by
21 presentation, you mean a video presentation.
22 Correct?

23 (Sotto voce document review by the
24 witness.)

25 A. Yes. Of a video presentation, yep.

1 BY MR. ZIMMERMAN:

2 Q. Video presentation could be a movie,
3 correct?

4 MR. DHANANI: Objection, form.

5 A. Video could be, as I taught before, I
6 would characterize it as two large categories, live
7 or linear playback, and VOD. I think the length
8 of -- the duration with the VOD asset or the live
9 event is not really relative to the type of input.
10 But it could be a movie. It could be an episode.
11 It could be a commercial. It could be a two-day
12 conference. It could be anything.

13 BY MR. ZIMMERMAN:

14 Q. And then if you turn to -- look to the
15 next paragraph, paragraph 19. You state: This
16 proposed standard became known as HTTP Live
17 Streaming or "HLS," and it reflected Apple's attempt
18 to embrace the strong market demand for
19 adaptive-bitrate streaming.

20 Have you reviewed the HLS protocol?

21 A. Way back, yes.

22 Q. And "way back," did you --

23 A. Meaning -- I've been around and I've seen
24 it implemented. It's not like I go back and read
25 the documents all the time.

1 Q. But when you were first exposed to it,
2 did you read the HLS protocol, the specification
3 cover to cover?

4 A. Yes, I believe I did once.

5 Q. Do you remember around when that was?

6 A. When it was first proposed. I think at
7 the time that I read it, they were talking about
8 recommending 10-second segments. They may have at
9 that point moved to 8-second segments. They were
10 talking about M3U8 index file. They were talking
11 about things like that in the proposed standard.

12 And so it wasn't a solution that Apple
13 was providing. It was a proposed standard that was
14 largely, I believe, what they learned being exposed
15 to Move network's technology.

16 Q. And, previously, you said I've been
17 around and I've seen it implemented. By it, you're
18 referring to HLS, correct --

19 A. Yeah.

20 Q. -- in that sentence?

21 And so with those implementations, do you
22 understand that HLS can be implemented in different
23 ways?

24 A. Yes. But, I mean, demonstrably, it --
25 yes, it has some degree of flexibility. But to

1 work, there has to be components that are universal.

2 Q. So one streaming company could implement
3 HLS in one way and another streaming company could
4 implement HLS in a different way?

5 MR. DHANANI: Objection, form.

6 A. So the way I would speak to that is what
7 I tried to describe earlier. So it doesn't -- Move
8 technology allows for variability. It always did,
9 in adaptive streaming. So, like I said, the size of
10 the files, the profiles, the way the content was
11 encoded, if you wanted to use segments of two
12 seconds, three seconds, eight seconds, whatever,
13 those were all optional. They were variable.

14 But the mechanism to manage adaptive
15 streaming remains the same. The choices you are
16 making is how long the -- how big the file is, how
17 long it takes to request that file, do you -- is it
18 one file or is it many files stitched together?

19 Does it have one manifest file or does it
20 have a master manifest file? In that case, it would
21 be analogous to Move's -- how would we call it?
22 MXF -- or now I can't even remember.

23 The QVT would be the same as the master
24 QMX and QBT. The QMX would be associated with the
25 first index file, if you will, or -- and then the

1 master index would be something similar to embed
2 multiple manifest files together, stitch them
3 together.

4 So in scope, it was a very -- it was, in
5 my mind, a very similar invention. In practice,
6 like I said, you tuned for different environments,
7 and people make decisions relative to costs and all
8 sorts of things. But it doesn't change, in my
9 estimation, the underlying technology or what you
10 might find in the patents.

11 BY MR. ZIMMERMAN:

12 Q. So previously we had discussed your
13 statement that -- when you stated in paragraph 11
14 that: The packaging of transport streams into
15 formats compatible with various streaming standards,
16 you had said that Move and Sling were using Move's
17 QVT and QMX files rather than the other formats; is
18 that correct?

19 A. They certainly were when we first
20 developed Sling TV on the Move platform. I can't
21 speak to how that's evolved since that time, but,
22 yes.

23 Q. And then, in -- if you turn back to
24 page 6. In paragraph 20, you state: In particular,
25 my duties included ensuring that video programs

1 offered on customer platforms could be delivered to
2 end users, which required us to convert video
3 programs to conform to non-MOVE standards such as
4 HLS.

5 What do you mean by that, if --

6 A. You mean -- one second? And let me walk
7 this through. Okay?

8 (Sotto voce document review by the
9 witness.)

10 A. I'm trying to remember what the basis of
11 that comment was.

12 BY MR. ZIMMERMAN:

13 Q. So is it your sworn statement that Sling
14 TV had to convert video programs to conform to
15 non-Move standards such as HLS?

16 A. I think what I was referring to here is
17 that we had to be able to map the protocol to HLS
18 specifically to get on a device like iPhone.
19 Because an iPhone didn't support a Move plug-in or
20 playback. And so in order to -- so we created the
21 app with the player, but we had to use the
22 underlying rendering agent or HLS, because that's
23 what they needed to do to render to the screen.

24 So it's my recollection that we were
25 solving some of those problems as end devices

1 continued to hit the market, but that was simply to
2 use -- to translate the delivery of the adaptive
3 into the protocol that that device required to
4 display the information, if that makes sense.

5 So Apple didn't come and say, hey, we're
6 going to put Move on all of our phones. What Apple
7 said was we're using HLS as the standard for our
8 devices, and so, therefore, to get video to that
9 device, it had to go through the adaptive -- it
10 still worked, the adaptive proc -- that's why it's
11 so close, the adaptive process to Move to then get
12 it -- those segments as transport stream to render
13 on that particular device in the way that that
14 device required.

15 Q. Do you recall about what time period this
16 was when Sling TV was having to convert video
17 programs to conform?

18 A. It would have been -- it would have
19 been -- it would have been around the time we
20 launched Sling TV. Was mobile was part of it? I
21 don't exactly remember the state -- I know that
22 Android was kind of a mess, and we had -- and it was
23 kinds of all over the place at the time.

24 I know that Apple had -- iPhone was
25 there, and I think that's why maybe the statement,

1 was largely because of that. And other devices were
2 hitting the market, like Roku and things.

3 And so Move had to -- in order to use
4 what those devices chose to implement, it had to be
5 able to map its protocol into one of the industry
6 protocols at that time, that that device
7 manufacturer chose to use. Because Move wasn't
8 seeding their client into the industry like it had
9 been doing before.

10 That's why if Sling had stayed in the
11 business that it was before, probably would have
12 gone out and said, hey, adopt our plug-in, adopt our
13 application. But we didn't stay in that business.
14 We chose to Move into an MVPD business, and so we
15 needed to be able to deliver to that specific device
16 in the way that device needed to receive that data.

17 Q. Was delivering content to mobile devices
18 a large portion of Sling's streaming?

19 A. No.

20 MR. DHANANI: Objection, scope and
21 form.

22 A. It -- no. A lot of people thought a lot
23 of people were going to watch video and full-length
24 programs over mobile. Mobile was used more for
25 people to just catch up or in other places. They

1 didn't use it as a proxy for their television.
2 Right? So their industry began to use terms like
3 10-foot experience or lean-back experience versus
4 mobile experience, because the consumer choice of
5 how long they want to stay and what was acceptable
6 was based on the nature of the content they were
7 choosing to watch.

8 BY MR. ZIMMERMAN:

9 Q. And then if you turn to -- or look to
10 paragraph 22 of your declaration, at the bottom of
11 page 6.

12 The end of that paragraph, you state:
13 Provides the highest supportable-quality segments of
14 the video program.

15 What do you mean by "the highest
16 supportable-quality"?

17 A. I think what I've described before. I
18 mean, here again, it's comparing like Move's
19 adaptive HLS purports to offer.

20 And so I'm just drawing a comparison that
21 they are trying to be able to provide high-quality
22 segments of video program in the same way Move was.
23 So from small objects to large objects.

24 Which is why ultimately you -- it maps in
25 so well, because it's very similar to almost --

1 very, very similar to what Move invented.

2 MR. ZIMMERMAN: We are approaching
3 the end of my outline. Do you mind if we take
4 a few minutes for me to review this and see
5 how much more we need to go through?

6 THE WITNESS: Fine.

7 MR. ZIMMERMAN: Perfect.

8 THE VIDEOGRAPHER: Going off the
9 record. The time is approximately 3:12 p.m.
10 Mountain Time.

11 (Recess taken, 3:12 p.m. to
12 3:26 p.m. MDT)

13 THE VIDEOGRAPHER: Returning on the
14 record. The time is approximately 3:26 p.m.
15 Mountain Time.

16 Counsel.

17 THE WITNESS: Can I ask a question?
18 Can I amend something I said before, slightly?

19 You asked me specifically around why
20 does -- why did Sling need to potentially use
21 these other protocols. And I think I
22 explained it, but I want to make sure.

23 Because now that I'm remembering and
24 why I did all of this, it was entirely because
25 of DRM and standards that were required on

1 those boxes.

2 So as the technology evolved and
3 there were more distribution places for people
4 to get TV, we had to package the content in a
5 way that could be distributed on those devices
6 in the way that those devices were designed.

7 Does that make sense?

8 So whether it was mobile or a
9 connected device or a smart TV, that's why.
10 Because of content protection more than
11 anything. For instance, you couldn't deliver
12 a stream to a Mac without it being HLS,
13 because of security concerns.

14 And so they had FairPlay as the DRM
15 that you had to use. To do Microsoft, you had
16 to use a specific DRM to do that. So it
17 changed what was required of Sling TV to
18 deliver their service based on the security
19 requirements on the devices we wanted to
20 distribute to.

21 So I just wanted to make sure that
22 was really clear.

23 BY MR. ZIMMERMAN:

24 Q. Alright.

25 And do you remember about the time that

1 these security measures were implemented? Was that
2 around the same time we were discussing earlier,
3 around 2015?

4 A. Yeah, it was around the same time,
5 because they all required a little bit different.
6 Some were willing to say, okay, when you get the DRM
7 in place. Some were worried about what is
8 classified as copy output protection, right? So the
9 pipeline of the video from receiving it to the
10 player within the device, and securing that.

11 So you had to kind of conform to what the
12 content owner wanted you to do. And so we spent a
13 lot of time working with Disney and Warner Brothers
14 and things and making sure they felt comfortable
15 with the video path for their content and nowhere in
16 that chain would it be compromised. So that's why
17 it made it of particular concern to use whatever
18 they felt was most secure on their device.

19 BY MR. ZIMMERMAN:

20 Q. So you listed, I believe it was Mac and
21 you said Microsoft?

22 A. Well, those are just easy ones to speak
23 to.

24 Q. Do you remember what other devices would
25 have had these DRM requirements?

1 A. Any device had the requirements, because
2 the content providers were interested in securing
3 their content, right? Nobody wants their content
4 pirated or stolen. Right? That's how they make
5 money, so...

6 MR. ZIMMERMAN: Before my next
7 question, I believe the Zoom may be on mute.

8 (Discussion off the record.)

9 BY MR. ZIMMERMAN:

10 Q. And, just going back to the examples of
11 Mac and Microsoft, when you say Microsoft, are you
12 meaning Windows -- Microsoft Windows devices?

13 A. At the time, they would have been Windows
14 devices, or potentially -- I don't remember when IE
15 was replaced by whatever.

16 But in general, Microsoft provided a DRM
17 that was acceptable for studio use called PlayReady.
18 And so if you used -- if they chose to use a
19 protocol like M -- like HLS or, I guess even
20 MPEG-DASH, there were specific DRMs that were more
21 standard, I guess, to work with a particular
22 protocol based on the requirements of that
23 manufacturer and what they did. So the studios
24 basically recommended it.

25 So there were -- there was Widevine,

1 there was PlayReady, there was FairPlay, and you had
2 to use and package the content in the right DRM for
3 the right target device.

4 Q. And so could you stream content to any of
5 those devices that had the DRM requirements without
6 packaging the content in their format?

7 A. When we used to -- yeah, you could
8 deliver it -- we could deliver it to the devices in
9 most cases fine; but when that became the
10 requirement, that's what changed the requirement of
11 what and the protocol had to be translated. So the
12 core of the system was still working exactly the way
13 Move was, but the content had to be packaged
14 on-demand for the target device. So we created
15 something called a dynamic package that allowed us
16 to do that. And that's why I think I said convert
17 in my previous statement. Whatever I said.

18 [Document review.]

19 A. "Formats compatible with various
20 streaming standards" in paragraph 11. And it's that
21 compatibility that we had to meet in order to let
22 consumers watch on that device.

23 BY MR. ZIMMERMAN:

24 Q. So I just want to return to your time at
25 Move quickly.

1 A. Okay.

2 Q. Do you remember a time when Netflix was
3 deciding between using Move's technology and
4 Microsoft's technology?

5 MR. DHANANI: Objection, scope,
6 foundation.

7 A. I know we had talked to Netflix, and I
8 know that they were considering Move. And I don't
9 know what other technologies they were considering
10 at the time.

11 BY MR. ZIMMERMAN:

12 Q. But didn't -- Netflix ultimately chose
13 Microsoft's technology; is that correct?

14 MR. DHANANI: Objection, foundation,
15 scope.

16 A. I don't know what they chose, to be
17 honest with you, but I know that they didn't
18 ultimately go with Move.

19 BY MR. ZIMMERMAN:

20 Q. And do you have a recollection that
21 Netflix's choice to use another technology almost
22 put Move out of business?

23 MR. DHANANI: Objection, foundation,
24 scope.

25 A. I do not recall that was a -- one of the

1 driving factors of Move changing its direction or
2 going out of business.

3 I do know that Microsoft -- sorry, that
4 Microsoft, because they were trying to win the
5 market, was essentially giving, you know, a free
6 alternative to what we previously -- I previously
7 mentioned as a Move tax, which gave them a
8 competitive advantage simply because of the size of
9 their war chest.

10 BY MR. ZIMMERMAN:

11 Q. So if Microsoft was, as you said, trying
12 to win the market, why didn't Move sue Microsoft for
13 patent infringement?

14 MR. DHANANI: Objection, speculation
15 and privilege to the extent it calls for
16 attorney-client communication.

17 If you have a separate answer outside
18 of attorneys, you can answer.

19 A. I don't know what decisions other
20 companies made and why. I mean, that would be my
21 response.

22 I can only add that ultimately the market
23 has proven that it wasn't a great solution, because
24 it's not in high-demand use today.

25 * * *

1 BY MR. ZIMMERMAN:

2 Q. Then, if you turn to paragraph 21 of your
3 declaration, you state that: I found that HLS is,
4 as a proposed standard, very similar to the
5 technology MOVE had already developed and
6 implemented.

7 Apart from -- separate and apart from any
8 understanding you have from your lawyers, do you
9 have an understanding as to why Move never sued
10 Apple?

11 MR. DHANANI: Objection, scope.

12 A. I do not. Again, my -- well, my
13 assumption is that had Move continued to grow and be
14 successful as it was without the market downturn,
15 I'm guessing it would have come to the conclusion to
16 do so, but it's kind of hard to -- this is just my
17 conjecture. I want to be clear on that. It's kind
18 of hard to sue somebody with much deeper pockets
19 than you have as a start-up company.

20 BY MR. ZIMMERMAN:

21 Q. Did you and Drew Major ever discuss suing
22 Apple?

23 A. No. I never discussed suing Apple with
24 anybody.

25 MR. ZIMMERMAN: I think that is it

1 Mr. Ericson, what has been marked as Exhibit 2.

2 It's a printout from the Emmy's website, and
3 reference is to the 2006 58th Emmy awards.

4 Do you see that?

5 A. Yes.

6 Q. Above the top, it mentions: Outstanding
7 Achievement in Enhanced Or Interactive Television
8 Delivery (New Delivery Platforms) from 2006.
9 Correct?

10 A. Yes.

11 Q. And underneath, it has: ABC.com Full
12 Episodes Streaming Player.

13 A. That's what I was referring to.

14 Q. So is this the ABC.com full episode
15 streaming player, is that the one that incorporated
16 the Move technology?

17 A. Yes. Move was --

18 MR. ZIMMERMAN: Objection, leading.

19 MR. DHANANI: Go ahead.

20 BY MR. DHANANI:

21 Q. Which player did the ABC.com full episode
22 streaming player incorporate and use as its
23 technology?

24 A. Move Networks. Absolutely unequivocally.

25 MR. DHANANI: All right. That's it.

1 No more questions.

2 (Off-the-record discussion.)

3 THE WITNESS: That's the one that
4 Skarpi showed me in his office.

5 -----

6 EXAMINATION

7 -----

8 BY MR. ZIMMERMAN:

9 Q. Mr. Ericson, I want to clarify a few
10 things about this --

11 A. Sure.

12 Q. -- document, if that's okay.

13 So you just said that's the one that
14 Skarpi showed me in his office. Correct?

15 A. Mm-hmm. (Witness nods.)

16 Q. By "the one," you are referring to the
17 Emmy, not this document?

18 A. The actual Emmy award.

19 Q. Have you ever seen this document before?

20 A. No. I said I -- I think even in my
21 testimony today, I said I don't know exactly what it
22 was designated for, but I know that it was related
23 to ABC, Disney, and that's -- that would be what the
24 award was. And the timing is also correct, in 2006,
25 or '7.

1 Q. And so this document, Ericson Exhibit 2,
2 is not referenced in your declaration; is that
3 correct?

4 A. It wasn't -- no, it wasn't referenced in
5 my prior declaration.

6 Q. Is today the first time you have seen
7 this document?

8 A. You saw it as soon as I did. I've never
9 seen this.

10 Q. And the 2006 Emmy, that is also not
11 discussed in your declaration; is that correct?

12 A. That's correct. I wasn't asked about
13 Emmy awards until you did today.

14 MR. ZIMMERMAN: Okay. So given the
15 witness's testimony that he has never seen
16 this document, I just, for the record, want to
17 make sure to note that we object to this
18 document being introduced as an exhibit in
19 these IPRs, or --

20 MR. DHANANI: Go ahead. Finish.

21 MR. ZIMMERMAN: That's it.

22 MR. DHANANI: Counsel, you directly
23 asked about whether Move had received Emmys as
24 part of the time frame, so you clearly opened
25 the door, and you raised the issue, and this

1 document demonstrates that Move's technology
2 did in fact receive an Emmy around -- right
3 after the technology was developed and
4 introduced in the market, so it's directly
5 responsive.

6 MR. ZIMMERMAN: We disagree.

7 MR. DHANANI: Just waiting for him to
8 pass the witness.

9 Are you done?

10 MR. ZIMMERMAN: I pass the witness.

11 -----

12 EXAMINATION

13 -----

14 BY MR. DHANANI:

15 Q. Mr. Ericson, can you affirm --

16 MR. SHENG: Sorry, Ali. Do we get
17 the recross --

18 MR. DHANANI: It's one question on
19 the accuracy of the declaration.

20 BY MR. DHANANI:

21 Q. Can you affirm that everything in your
22 declaration is accurate?

23 A. Yes.

24 MR. DHANANI: That's it.

25 MR. ZIMMERMAN: Nothing for me.

1 That's it.

2 THE VIDEOGRAPHER: Before we go off
3 the record, we've been asked to take orders on
4 the record, so, Madam Court Reporter, would
5 you like to start, or would you like me to
6 start?

7 THE COURT REPORTER: Does anybody
8 need a rough tonight?

9 MR. DHANANI: No rough tonight for
10 us.

11 THE COURT REPORTER: For you,
12 Mr. Zimmerman?

13 MR. ZIMMERMAN: Getting the rough
14 would be great. But we don't need to -- in
15 terms of like a final, I think what's the
16 normal turnaround?

17 THE COURT REPORTER: I think somebody
18 has a four-day expedited on this, so it'll be
19 like --

20 MR. DHANANI: Four-day expedited is
21 fine.

22 MR. ZIMMERMAN: We'll do the
23 four-day.

24 MR. DHANANI: And I'm fine. We would
25 like a rough, but I don't need it tonight is

1 what I mean. So send it tonight, fine, but if
2 you send it tomorrow, that's okay as well.

3 MR. ZIMMERMAN: Same for us.

4 THE VIDEOGRAPHER: Counsel, video
5 copy for you?

6 MR. ZIMMERMAN: I don't think we need
7 the video copy for now. As long as you guys
8 hold on to it in the future.

9 THE VIDEOGRAPHER: Absolutely, we
10 can.

11 MR. DHANANI: Same for us, hold.

12 THE VIDEOGRAPHER: Thank you very
13 much.

14 We are off the record. The time is
15 approximately 3:47 p.m. Mountain Time.

16 (Time noted: 3:47 p.m. MDT)

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

2

3 I, DEBRA A. DIBBLE, RDR, CRR, CRC, Notary
4 Public, do hereby certify:

5 That DAVID R. ERICSON, the witness
6 whose deposition is hereinbefore set forth, was duly
7 sworn by me and that such deposition is a true
8 record of the testimony given by such witness;

9 That pursuant to FRCP Rule 30, signature of
10 the witness was not requested by the witness or
11 other party before the conclusion of the deposition;

12 I further certify that I am not related to any
13 of the parties to this action by blood or marriage,
14 and that I am in no way interested in the outcome of
15 this matter.

16 IN WITNESS WHEREOF, I have hereunto set my
17 hand on the 25th of September, 2024.

18

19

Debra A. Dibble

20 Fellow of the Academy of Professional Reporters
Registered Diplomate Reporter

21 Certified Realtime Reporter

Notary Public 11/17/2027

22 UT 108869-7801

23

24

25

1 I HEREBY CERTIFY that I have read
2 this transcript of my deposition, and that
3 this transcript accurately states the testimony
4 given by me, with the changes or corrections, if
5 any, as noted.

6

7

8

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10 X _____

11 DAVID R. ERICSON

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1 ERRATA SHEET FOR THE TRANSCRIPT OF:

2 CASE NAME: Aylo v DISH

3 DEP DATE: September 19, 2024

4 DEPONENT: DAVID R. ERICSON

5	Pg.	Ln.	Now Reads	Should Read	Reason
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21 X _____

22 DAVID R. ERICSON

23

24

25

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