

NETFLIX, INC., AND HULU, LLC,)
)
 Petitioners,) Case No.
) IPR2020-00558
 vs.)
) U.S. Patent
 DIVX, LLC,) 10,225,588
)
 Patent Owner.)
)

DEPOSITION OF PATRICK McDANIEL
VIA ZOOM
Monday, April 5, 2021

REPORTED BY:
NOELLE C. KRAWIEC
CSR NO. 14255

JOB NO.
704715

1 DEPOSITION OF PATRICK MCDANIEL, TAKEN VIA ZOOM ON
2 BEHALF OF THE PATENT OWNER, COMMENCING AT
3 7:04 A.M., ON MONDAY, APRIL 5, 2021, BEFORE NOELLE
4 C. KRAWIEC, CSR NO. 14255, A CERTIFIED SHORTHAND
5 REPORTER IN AND FOR THE COUNTY OF LOS ANGELES,
6 STATE OF CALIFORNIA.

7
8
9 APPEARANCES:

10 FOR PETITIONER:

11 SHEPPARD MULLIN RICHTER & HAMPTON LLP
12 BY: JEFFREY LIANG, ESQ.
(VIA ZOOM)
13 379 LYTTON AVENUE
PALO ALTO, CALIFORNIA 94301
14 (650) 815-2600
JLIANG@SHEPPARDMULLIN.COM

15
16 FOR PATENT OWNER:

17 LOWENSTEIN & WEATHERWAX LLP
BY: PARHAM HENDIFAR, ESQ.
18 (VIA ZOOM)
1880 CENTURY PARK EAST
19 SUITE 815
LOS ANGELES, CALIFORNIA 90067
20 (424) 302-4600
HENDIFAR@LOWENSTEINWEATHERWAX.COM

21
22 ALSO PRESENT (VIA ZOOM):

23 TOM MURRAY, TECHNICIAN
24
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INFORMATION TO BE SUPPLIED

(NONE)

QUESTIONS MARKED

(NONE)

INSTRUCTION NOT TO ANSWER

(NONE)

Monday; April 5, 2021

7:04 a.m.

PATRICK McDANIEL,

having declared under penalty of perjury to tell the
truth, was examined and testified as follows:

EXAMINATION

BY MR. HENDIFAR:

Q Good morning, Dr. McDaniel.

A Good morning.

Q Thank you for you time this morning. We are
here for your deposition IPR2020-00558.

So when I refer to this matter or this IPR,
that is the IPR I will be referring to.

Is that okay?

A That's fine.

Q Great.

And you sent me the reply declaration in
connection with this IPR; correct?

A I did.

Q Okay. And in preparing your reply declaration,
your declaration states that you reviewed the
declaration of Dr. Seth Nielson, which was submitted as
Exhibit 2012 of patent owner's response; is that

1 correct?

2 A That is correct.

3 Q Okay. Did you review and analyze all of the
4 declaration of Dr. Seth Nielson?

5 A Yes.

6 Q Okay. Now, did you determine which portions of
7 Dr. Nielson's report you will respond to in your reply
8 declaration?

9 A So, Jeff, there's --

10 MR. LIANG: Yeah. I caution the witness not to
11 reveal the contents of any discussions that he had with
12 counsel, which would be privileged. But to the extent
13 he can answer the question without disclosing the
14 details, any details of any of those privileged
15 conversations, then he is free to provide that
16 information.

17 MR. HENDIFAR: I can clarify the question.

18 Q The question is not asking what you and counsel
19 discussed. It's asking whether you decided something
20 and whether you decided something is not privileged. So
21 I will repeat the question for your convenience.

22 Dr. McDaniel, did you decide which portions of
23 Dr. Nielson's report you would respond to in your reply
24 declaration?

25 MR. LIANG: The same caution.

1 THE WITNESS: After conversations with counsel.

2 BY MR. HENDIFAR:

3 Q Is that a "Yes," after conversation with
4 counsel?

5 A Yes. I had conversations in which it was
6 decided, and I agreed that these were the -- I feel like
7 I'm getting into the contents of the --

8 MR. LIANG: Yeah. Let's not -- I advise the
9 witness not to disclose any of the contents of our
10 conversation.

11 THE WITNESS: These are my opinions. How's
12 that? And these are the topics that are -- that I'm
13 responding to the factual statements made by Dr. Nielson
14 here.

15 BY MR. HENDIFAR:

16 Q Okay. What is the reason you did not respond
17 to all of the statements made by Dr. Nielson?

18 MR. LIANG: Same caution. I'd advise the
19 witness not to disclose any of our conversations, which
20 are privileged. But to the extent there are -- to the
21 extent the witness can answer beyond that, then he is
22 free to do so.

23 THE WITNESS: There were lots of things. These
24 seemed like factual issues that were important enough to
25 address in a reply.

1 BY MR. HENDIFAR:

2 Q Okay. Now, if I may please direct your
3 attention to paragraph 11 of the reply declaration.

4 Please let me know when you have it.

5 A I'm just reviewing it.

6 Q Please. Yes.

7 A I'm there.

8 Q Okay. So the last sentence of that paragraph
9 reads as follows, quotes: "Second, the FEC would not
10 work. The data would have been" -- "would have to be
11 decrypted first in order to apply the error correction.
12 But the lack of access to the ciphertext (because of
13 errors in packet loss) means that the data could not be
14 decrypted."

15 Do you see that sentence?

16 A As -- as written.

17 Q Yes.

18 Now, would you elaborate what you mean by that
19 sentence, please.

20 A Well, so if you apply an FEC order of
21 correction to a block of text and then you encrypt the
22 block of text in FEC, then you lose the ability to
23 correct because when it's received, if you've lost part
24 of that, you don't have all of the information,
25 theoretic data, in order to use the FEC to repair the

1 loss.

2 Q Are you able to explain why that is for a
3 layman who does not maybe have as much familiarity with
4 technology?

5 A Okay. So forward error correction uses -- you
6 have collection of data, and it uses mathematical
7 techniques to provide additional information across all
8 of the data, such that if you lose pieces -- to a
9 point -- of that data, you can reconstruct the original
10 data. And it uses techniques -- they're called
11 information techniques -- and some kind of replication
12 of the data.

13 Q Okay. So let's say in the example you've
14 provided, you have a text that -- or you have a piece of
15 data that you have created the FEC for, and you encrypt
16 them, and you send it over a network.

17 Why is it the case that if you lose a part of
18 that information, you're not able to apply error
19 correction? Maybe I'm not understanding your statement
20 properly.

21 A So -- so if you -- when you perform the
22 decryption on the encrypted data, the way that most
23 chain -- most algorithms work -- or many algorithms
24 work, you need to have the data from a previous block of
25 that encrypted data in order to encrypt the next block.

1 And, therefore, to reconstruct the forward
2 error correction, you have to have all of the data to
3 decrypt it, because you can't decrypt it if you only
4 have pieces.

5 Q Okay. So if the data is sent in ten packets,
6 and you lose one packet, you're not able to reconstruct
7 any of the data? I'm not --

8 A You're -- you're able to decrypt up to the lost
9 packet, and then there's a loss of continuity. These
10 are called initialization vectors for the next block of
11 data.

12 Q But isn't the purpose of having the FEC to
13 reconstruct the lost package?

14 A But -- yeah. So the problem is, is that the
15 FEC isn't recoverable until you have recovered all of
16 the decrypted data. So everything that happens from the
17 point of the lost packet forward in the decryption
18 stream is gone because it's dependent on the previous --
19 on the previous block.

20 So what happens is, is that essentially
21 everything from the first loss forward from the
22 decryption is lost. And so you can't -- there's nothing
23 to decrypt because you've lost continuity with the
24 initialization vector from the block.

25 Q Okay. Now, is that problem unique to partial

1 encryption, or is it also the case with full encryption?

2 A It's -- in the case of both, yes, depending on
3 how you're --

4 (Simultaneous crosstalk.)

5 BY MR. HENDIFAR:

6 Q Okay.

7 A -- doing the partial encryption.

8 Q Okay.

9 A It's a function of doing FEC before partial --

10 Q So your opinion is that performing FEC before
11 encryption does not work regardless of whether or not
12 encryption is partial or full?

13 A Well, in its first fullest generality, no.

14 Q Okay. Then I'm a little bit confused.

15 So you provide an opinion in paragraph 11 of
16 your declaration that FEC would not work if it is
17 applied prior to encryption; correct?

18 A That's -- that's correct.

19 Q Okay. And you just explained to me that that
20 issue with FEC not working is not dependent on whether
21 the FEC is partial encryption -- I'm sorry. Strike
22 that.

23 And you just to explained to me that the issue
24 of FEC not working is not dependent on if encryption is
25 partial or full; is that correct?

1 A The problem with applying FEC before encryption
2 occurs when you apply encryption, whether it's partial
3 encryption or full encryption. Then it -- the part that
4 is encrypted will have this problem.

5 Q Okay. So it is your opinion, therefore, that
6 even a fully encrypted system, FEC cannot be applied
7 prior to encryption; otherwise, the system would not
8 work?

9 A The efficacy of the forward encryption would
10 be -- would be near useless.

11 Q Okay. Now, in your declaration, may I please
12 refer you to the figure that you have at the end of
13 paragraph 12 of your declaration.

14 A Yes.

15 Q Okay. In that figure on the right-hand side,
16 you have identified the known best practices or what you
17 opine to be the known best practices for partial
18 encryption of FEC.

19 Do you see that?

20 A Yes.

21 Q Okay. In your example or in your figure for
22 demonstrating the known best practices, are the FEC
23 information encrypted, or are they not encrypted because
24 they are created after the data is already encrypted?

25 A You would apply FEC to the encrypted data.

1 Q Okay. So is, therefore, the known best
2 practices for the data to be encrypted and the FEC being
3 created afterwards so it's not being encrypted?

4 A Yeah, generally. I would refer you to the
5 complement reference that I refer you to in paragraph
6 12, which talks about how you would use it.

7 Q Thank you.

8 Now, what does it mean to apply FEC on the
9 application layer?

10 A In what context?

11 Q The context of applying FEC to, for example, a
12 movie stream.

13 A So you're -- it would depend on what system
14 you're talking about. Is there something in mind
15 you're --

16 Q It's -- how so? I'm just trying to understand
17 the technical term first.

18 So is it the case that a POSITA wouldn't know
19 what it means to apply FEC on the application level in,
20 for example, a movie stream?

21 A One could hazard a guess that one would apply
22 for error correction to the layer above the network
23 stack, for example, would be an example.

24 Q Okay. And what is the network stack?

25 MR. LIANG: Objection to scope.

1 BY MR. HENDIFAR:

2 Q Okay. What is the network stack?

3 A The network stack is the implementation of the
4 network protocols on which, in your hypothetical, an
5 application would exist.

6 Q Okay. And is network stack the layer where the
7 transport packets are created to transport the movie to
8 the receiver?

9 A They could be.

10 Q Okay. Now, what is the application layer in
11 the system which has a network stack data and an
12 application layer?

13 MR. LIANG: Objection to form. Scope.

14 BY MR. HENDIFAR:

15 Q Well --

16 A Is there a specific system that you're
17 referring to?

18 Q I don't have the system in front of me. I'm
19 trying to -- I've done some research, and I've seen the
20 term "application layer" and "applying FEC" together.
21 And I'm trying to understand if a POSITA would know what
22 it means to apply FEC to the application layer.

23 And my question is: Does a POSITA have an
24 understanding of what it means to apply FEC on the
25 application layer, for example, of a movie stream?

1 MR. LIANG: Objection to form and scope.

2 THE WITNESS: Yeah. I'm not sure that I'm
3 referring to any application of -- application of FEC
4 and application layer in my report here. So I feel like
5 we're kind of getting off in the weeds.

6 I would say that applying FEC at the
7 application level would make -- you know, would be
8 understandable to somebody skilled in the art in its --
9 in its complete generality.

10 BY MR. HENDIFAR:

11 Q Okay. So what does that -- what is that
12 understanding?

13 MR. LIANG: Objection to form and scope.

14 THE WITNESS: That would be applying the
15 forward error correction within the application layer
16 above the network stack.

17 BY MR. HENDIFAR:

18 Q Okay. Now, have you ever taught a course where
19 you taught what the application layer is in a system?

20 A Yeah. We -- that's a pretty standard -- we
21 refer to the OSI. I think the OSI stack, where we talk
22 about application level and all the other network
23 levels.

24 Q Okay. So if you were to explain for the Board
25 so they would have a layman understanding of what the

1 application layer is, would you be able to give a
2 thirty-second or a one-minute discussion of what an
3 application layer is for a layman?

4 A So can you point me to something in my --

5 I'm sorry. Jeff, you wanted to --

6 MR. LIANG: Yeah. Objection to scope.

7 THE WITNESS: I mean --

8 BY MR. HENDIFAR:

9 Q You still have to respond regardless of the
10 objections. So --

11 A I understand. I understand.

12 Q Thank you.

13 A So I feel like you're asking me for a
14 definition that's untethered to anything in my report.
15 I could provide you a definition. It's not a definition
16 that I've thought about much or prepared for today.

17 So can you ask -- given that caveat, you're
18 asking me to give a definition of what exactly?

19 Q Sure.

20 So you explained that you have taught courses
21 where you taught to your students what the application
22 layer is; correct?

23 A Yes. Fair enough.

24 Q So my question is: In order to provide the
25 Board with some background understanding of the

1 technology, would you be able to explain to them the
2 same way you explain to a class what the application
3 layer is?

4 MR. LIANG: Objection to scope.

5 And, Counsel, I would caution you that he is
6 here to provide testimony regarding his reply
7 declaration.

8 MR. HENDIFAR: Counsel, there's no objection.
9 You already made your scope objection, so let's move on.

10 Q So Mr. McDaniel, please --

11 MR. LIANG: Well, this is not just an
12 objection. I'm putting you on notice that if you
13 continue --

14 MR. HENDIFAR: There is no such thing, to put
15 me on notice.

16 MR. LIANG: I'm putting you on notice --

17 MR. HENDIFAR: Make your objection --

18 (Simultaneous crosstalk.)

19 MR. LIANG: -- if you continue --

20 MR. HENDIFAR: -- and we'll move on.

21 MR. LIANG: -- to ask questions that are not
22 tethered to his declaration, I will stop it at some
23 point.

24 MR. HENDIFAR: You don't get to stop the
25 deposition.

1 Q Dr. McDaniel, I already asked the question.
2 Would you be able to provide a response?

3 A The application level is the level of -- I'm
4 going to use another undefined term -- a service which
5 exists above the network layer which performs some
6 function for that service.

7 Q Okay. Now, in Chen's system, which Chen being
8 the reference you relied on as being valid to the
9 contention in your first declaration submitted as
10 Exhibit 1006 in this matter, what would the application
11 layer be in the Chen reference, Exhibit 1006?

12 MR. LIANG: Objection to scope.

13 Counsel, this is getting far afield. And the
14 Board did warn you that when they granted this
15 deposition, that the scope of it would be limited to
16 the -- to Dr. McDaniel's testimony in his reply
17 declaration.

18 And so I am --

19 MR. HENDIFAR: Counsel, no speaking objections.

20 And the Board did not grant us a deposition.
21 We have the right to depose Dr. McDaniel. The Board
22 rejected your attempt to limit the time.

23 So if you interrupt -- keeping interrupting the
24 deposition, I will call the Board. You get to do one
25 objection. You don't get to do speaking objections, and

1 this is your fourth time. Okay?

2 So, for the record, this is your fourth
3 speaking objection. I request that --

4 MR. LIANG: For the record --

5 MR. HENDIFAR: -- you --

6 (Simultaneous crosstalk.)

7 MR. LIANG: For the record, I am not making
8 speaking objections. I am cautioning --

9 MR. HENDIFAR: You are.

10 MR. LIANG: -- you --

11 MR. HENDIFAR: That is a speaking --

12 MR. LIANG: I'm cautioning --

13 MR. HENDIFAR: -- objection.

14 MR. LIANG: -- you that the Board -- about the
15 Board's warning that even though it granted you the full
16 time for the deposition, that the scope of it was
17 limited to his reply testimony.

18 And so, you know, you're asking questions that
19 we're unable to answer -- Mr. McDaniel, when he asked
20 you whether you were asking about an opinion in his
21 reply declaration. I would note that on the record.

22 He asked you if you were asking a question
23 about his reply declaration, and you did not give a
24 response.

25 MR. HENDIFAR: Counsel, you have so far talked

1 more than Dr. McDaniel has.

2 If you have a scope objection, you get to say
3 two words and two words only: "Objection. Scope."

4 The next speaking objection, I will call the
5 Board. Okay?

6 I have warned you. You have been making
7 sentence after sentence of objections. You have a scope
8 objection. There are two words for that. "Objection.
9 Scope." Not a word more. Okay?

10 Thank you.

11 Q So, Dr. McDaniel, in Exhibit 1006, Chen
12 reference, which you also cite in your reply declaration
13 in multiple places, what is the application layer?

14 A Let's see. So I'm referring to my reply
15 report, and I'm looking to the citations. Starting on
16 paragraph 5, where I'm talking about -- talking about
17 how Chen uses the 3GPP file format and some additional
18 information in paragraphs 119 and 165. I also refer to
19 it in paragraph 16, in paragraph 63, and 64.

20 So in none of those citations to these factual
21 issues do I actually identify -- have any need to
22 identify what an application is. So I'd have to go back
23 to Chen. I haven't really thought about it. I don't
24 really -- haven't given any thought before today about
25 how an application applies to any of the issues in the

1 reply brief.

2 So I feel like I'm getting pretty far away from
3 anything that I've prepared for. So any answer I could
4 give you at this point would just largely be a guess,
5 and I'm unprepared.

6 Q Okay. So is it correct that, sitting here now,
7 you are not able to opine on what the application layer
8 is in Exhibit 1006, the Chen reference?

9 A I have to go through, and -- I don't even know
10 what I would point to because there's several different
11 network diagrams -- yeah. I'd have to go through this
12 reference, and I don't think I can, without any
13 preparation, go through and identify anything in
14 particular which is the application layer.

15 Q Okay. So is it correct that in preparation of
16 your reply declaration, you did not analyze Chen to
17 determine what the application layer is?

18 MR. LIANG: Objection to form.

19 THE WITNESS: I'm --

20 (Simultaneous crosstalk.)

21 BY MR. HENDIFAR:

22 Q Are you trying to find something?

23 A Oh. I'm sorry. I'm -- I have the Chen
24 reference open, and I have my declaration open. I also
25 have a physical copy, and that's the only printout.

1 So, sorry, I should have -- so I reviewed all
2 of Chen. I don't believe that I went to the level of
3 looking at the Chen reference in specifically
4 identifying what parts of the Chen --

5 (Background noise.)

6 THE WITNESS: -- the Chen reference relate to
7 the application layer. I just need a little bit of
8 additional investigation.

9 MR. HENDIFAR: Okay. Now, I'm going to
10 introduce an exhibit, and I was wondering -- if we can
11 talk to Jeff -- what's the best way to provide that
12 exhibit? I can put it in the chat Dropbox for both you
13 and Dr. McDaniel, if that works.

14 MR. LIANG: That's probably the easiest.

15 MR. HENDIFAR: Okay. I will do that. So it is
16 sent.

17 And for the Madam Court Reporter, I dropped the
18 document in the chat Dropbox, which we will mark as
19 Exhibit 2025.

20 THE STENOGRAPHER: So marked, Counsel.

21 (Exhibit 2025 was marked for identification by
22 the certified shorthand reporter.)

23 BY MR. HENDIFAR:

24 Q Okay. So, Dr. McDaniel, have you ever seen the
25 document that we have marked as Exhibit 2025?

1 MR. LIANG: One moment, please. Let me just
2 look at this.

3 (Background noise.)

4 THE WITNESS: I apologize for that dinging.
5 That's -- I don't know how to turn off my texting.

6 BY MR. HENDIFAR:

7 Q No worries. Not a problem.

8 MR. LIANG: I would object to this exhibit on
9 numerous grounds, including authentication. You know,
10 801, 802, 803, it's hearsay; and many other grounds.

11 But you may proceed.

12 MR. HENDIFAR: But if you have objections, you
13 need to make them, so what -- anyways...

14 Q So, Dr. McDaniel, have you ever seen the
15 document that is marked as Exhibit 2025?

16 A Probably.

17 Q Okay. What is the document --

18 (Simultaneous crosstalk.)

19 THE WITNESS: Yeah. I haven't -- if I've seen
20 this, it's probably been decades. I certainly haven't
21 prepared to -- for this document today, so...

22 BY MR. HENDIFAR:

23 Q Thank you.

24 What is the document marked as Exhibit 2025?

25 A It appears to be an IETF RFC, a request for

1 comments, which is a kind of standard.

2 Q Okay. So the title of the document on the
3 first page, it says, "An RTP Payload Format for Generic
4 Forward Error Correction."

5 So did I hear you correctly that this document
6 is a request for comments on an FEC standard form?

7 A The IETF, Internet Engineering Task Force,
8 which is the guiding organization which defines
9 standards for the internet protocols, for example.

10 Q Perfect.

11 And on the top right-hand side, the document
12 appears to say, "December 1999."

13 Do you see that?

14 A Yes.

15 Q Okay. Do you have any reason to doubt the date
16 of this document?

17 A I don't have any reason to doubt it.

18 Q Okay. Do you believe --

19 (Simultaneous crosstalk.)

20 THE WITNESS: I mean I don't have any, other
21 than what you're showing me, so...

22 BY MR. HENDIFAR:

23 Q Okay. Do you believe you may have seen this
24 document in the course of your career as an encryption
25 expert?

1 A I don't know what context I would have seen it.
2 It's one of thousands of RFCs. I may have seen it. It
3 seems like something that would be interesting. I just
4 have no idea.

5 Q Okay. Now, may I please refer you to the page
6 numbered 45 on the bottom right-side of this document.

7 A Okay.

8 Q And please let me know when you have it.

9 A Yeah. Give me a minute to review.

10 Q Sure.

11 A Okay.

12 Q Okay. You see the second paragraph that starts
13 with the sentence: "The first three of these would
14 require any application level signaling protocols to be
15 aware of the usage of FEC..."

16 Do you see that sentence?

17 A Yes.

18 Q So what does that sentence mean?

19 A Hazarding a guess, that would mean that the FEC
20 probably had to have its own header information or had
21 to be some implicit or explicit policy associated with
22 that stream to determine what kind of FEC was being
23 applied.

24 Q And why is that?

25 MR. LIANG: Objection to form.

1 THE WITNESS: Again, I would assume it's
2 because if you're going to use FEC, you have to
3 communicate that you're using the FEC.

4 BY MR. HENDIFAR:

5 Q Now, so is Exhibit 2025 the standard or draft
6 of the standard before comment by the industry?

7 A I'm sorry.

8 Q Sure.

9 A You switched gears on me. Exhibit 2025?

10 Q Yes. It's the same document we've been looking
11 at momentarily. It's the same one that you've been
12 looking at.

13 A Oh, the RFC. Okay. I got you. I got
14 confused.

15 Q Yes.

16 So is this exhibit -- I'm trying to understand
17 what request for comments means.

18 Is the document in 2025 the first draft or a
19 draft of the standard subject to comment by the
20 industry? Is that what it means?

21 A There are -- there are different -- different
22 stages of maturity, but I think that's a fair thing to
23 say that a request for comments is a request for
24 comments.

25 Q Okay. Looking at this document, are you able

1 to state the stage of maturity of the standard in
2 Exhibit 2025?

3 A Category --

4 Q Please let me know where you are in the
5 document --

6 A I'm on -- on page 1 there's a paragraph that
7 says the status.

8 Q Thank you.

9 A Yeah. There's a different document that
10 apparently is defined as where -- what the status of
11 this is.

12 So I'm not -- I'm not entirely sure what the
13 status of this is, at least this stage, because this
14 goes through many, many incarnations.

15 MR. HENDIFAR: Okay. We have no further
16 questions for the witness.

17 THE WITNESS: Okay.

18 MR. LIANG: Can you give me -- at all? You're
19 done?

20 MR. HENDIFAR: I'm sorry?

21 MR. LIANG: Oh, no. I'm sorry. So you're
22 done?

23 MR. HENDIFAR: Yes. I told you we decided last
24 time not to go through all the 10 exhibits. We were
25 going back and forth on that. We decided against it.

1 But we have no further questions for the
2 witness.

3 MR. LIANG: Okay. I don't have any questions
4 either.

5 MR. HENDIFAR: Okay. Well, thank you for your
6 time, Doctor. I'm sorry about the issue with --

7 So we're off the record, Madam Reporter.

8 THE STENOGRAPHER: Counsel Liang, do you need a
9 copy of this transcript?

10 MR. LIANG: No.

11 THE STENOGRAPHER: Off the record?

12 MR. HENDIFAR: Yes.

13 MR. LIANG: Yes.

14

15 ***

16 (Ending time: 7:38 a.m.)

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WITNESS'S CERTIFICATE

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I am the witness in the foregoing deposition.
I have read the foregoing deposition and having made
such changes and corrections as I desire, I certify that
the same is true of my own knowledge, except as to those
matters which are therein stated upon my information or
belief, and as to those matters, I believe it to be
true.

I declare under penalty of perjury under the
laws of the state of California that the foregoing is
true and correct.

Executed on _____,
at _____.

PATRICK McDANIEL

1 STATE OF CALIFORNIA)
2 COUNTY OF LOS ANGELES) ss.

3
4

5 I, NOELLE C. KRAWIEC, CSR No. 14255, in and for
6 the State of California, do hereby certify:

7 That prior to being examined, the witness named
8 in the foregoing deposition was by me duly sworn to
9 testify to the truth, the whole truth, and nothing but
10 the truth;

11 That said deposition was taken down by me in
12 shorthand at the time and place therein named and
13 thereafter reduced to typewriting under my direction,
14 and the same is a true, correct, and complete transcript
15 of said proceedings;

16 That if the foregoing pertains to the original
17 transcript of a deposition in a Federal Case, before
18 completion of the proceedings, review of the transcript
19 { } was { } was not required.

20 I further certify that I am not interested in
21 the event of this action.

22 Witness my hand this day of , 2021.

23

Certified Shorthand Reporter
for the State of California

24
25

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