



Transcript of Zixiang Xiong, Ph.D.

Date: October 2, 2025

Case: Adobe Inc. -v- Jaffe (PTAB)

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WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ADOBE, INC.,

Petitioner,

v.

JONATHAN E. JAFFE,

Patent Owner.

Inter Partes Review No. IPR2024-01352

U.S. Patent No. 6,757,828

ORAL DEPOSITION of ZIXIANG XIONG, PH.D.

(VIA ZOOM VIDEOCONFERENCE)

Thursday, October 2, 2025

11:34 a.m. CST

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Pages: 1 - 59

Reported By: Linda Russell

1 Remote Oral Deposition of ZIXIANG XIONG, Ph.D.
2 produced as a witness at the instance of the
3 Patent Owner, and duly sworn, was taken in the
4 above-styled and numbered cause on October 2,
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6 Russell, CSR in and for the State of Texas,
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I N D E X

Page

ZIXIANG XIONG, Ph.D.

BY MR. ATKINSON

6

EXHIBITS MARKED

No.	Description	Page
Exhibit 1001	US Patent 6,757,828	10
Exhibit 1005	US Patent 6,332,193	30
Exhibit 1006	Article: "Digital Image Recording for Court-Related Purposes," by Bernd Rieger and Harry Rode	38
Exhibit 1029	Declaration of Zixiang Xiong, Ph.D. in Support of Petitioner's Reply to Patent Owner's Response	9

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(REPORTER'S NOTE: All quotations from
exhibits are reflected in the manner in which they
were read into the record and do not necessarily
denote an exact quote from the document.)

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

2 THE COURT REPORTER: I am Linda Russell,
3 Court Reporter representing Planet Depos. We are
4 going on the record at 11:34 a.m.

5 At this time, would counsel like to
6 identify themselves for the record.

7 MR. ATKINSON: Bryan Atkinson from Prince
8 Lobel, representing Patent Owner Jonathan Jaffe.

9 MR. LIAW: Winston Liaw of Farella Braun &
10 Martel, representing Petitioner and the witness.

11 ZIXIANG XIONG, Ph.D.,
12 having been first duly sworn, testified as
13 follows:

14 EXAMINATION

15 BY MR. ATKINSON:

16 Q Good morning, Dr. Xiong -- or, good
17 morning again.

18 Do you remember generally the instructions
19 I gave you at the last deposition we had in this
20 matter?

21 A Good morning, Mr. Atkinson. Nice seeing
22 you again on Zoom.

23 I don't, because last time it was, what,
24 three months ago or more than three months ago. I
25 don't remember all the details.

1 Q Okay.

2 A If you don't mind repeating those, I'd
3 appreciate it.

4 Q Sure.

5 So just when I ask you questions, I would
6 ask you to answer with "yes" or "no" rather
7 than -- you know, rather than stuff like "uh-huh"
8 or nodding your head so that the court reporter
9 can record your answers accurately. Is that okay?

10 A Yes. And now I remember. Sure,
11 definitely that's okay.

12 Q Okay. If you don't understand one of my
13 questions please let me know and I'll try to
14 rephrase the question. Is that okay?

15 A Sure, I'll do that. Yes, okay.

16 Q And if you don't say anything, then I'll
17 assume that you have understood my question.

18 A You can assume that, yes.

19 Q Okay. I'll try to take a break every hour
20 or so, but if you need to take a break please just
21 let me know and I'll try to find a time rather
22 expeditiously to take a break. Does that sound
23 acceptable?

24 A Definitely. Definitely acceptable, yes.

25 Q The only thing I would ask is that if

1 there's a question pending that you answer the
2 question before we go off the record for a break.
3 Does that sound fair?

4 A Sure, sure, that's very fair.

5 Q Is there anything that would prevent you
6 from testifying here today accurately?

7 A Not that I can think of, not off top of my
8 head right now, no.

9 Q Okay. Like no medical or personal issues
10 that would get in the way --

11 A That's correct.

12 Q -- that you're aware of?

13 A No.

14 MR. ATKINSON: All right. So can I pass
15 the witness the first exhibit, which is his reply
16 declaration.

17 THE WITNESS: Sure. Do you want me look
18 on the screen on the PDF, or I have a hard copy --

19 MR. ATKINSON: Either one is fine. Either
20 one is fine.

21 THE WITNESS: Okay. So --

22 MR. ATKINSON: If you have a hard copy, it
23 might be easier, because we may be able to --
24 like, I may be able to show you other exhibits on
25 the screen while you have the hard copy.

1 For clarity, the Declaration I'm referring
2 to is Exhibit 1029 to this proceeding, Declaration
3 of -- is it -- I don't want to butcher your
4 name -- Zixiang Xiong, Ph.D. in Support of
5 Petitioner's Reply to Patent Owner's Response.

6 THE WITNESS: That's correct. I have a
7 hard copy, so if you don't mind, I'll read this
8 hard copy instead.

9 MR. ATKINSON: Okay. Would you remind me
10 what your -- would you restate your name so that I
11 get it accurately?

12 THE WITNESS: You don't have to, just call
13 me "ZX" or Zixiang --

14 MR. ATKINSON: ZX?

15 THE WITNESS: -- Xiong, last name.
16 Zixiang Xiong.

17 MR. ATKINSON: Okay. I'm truly sorry.

18 THE WITNESS: Oh, you don't need to
19 pronounce my name. I know it's a hard one.

20 MR. ATKINSON: Okay. Dr. Xiong.

21 (Exhibit 1029 marked for identification.)

22 MR. ATKINSON: And can I pass -- or if you
23 have it available, could you open up the second
24 exhibit, which is the '828 Patent, Exhibit 1001,
25 US Patent 6,757,828.

1 THE WITNESS: Yes. Again, I have a hard
2 copy in front of me. If you don't mind --

3 MR. ATKINSON: Okay. Excellent.

4 THE WITNESS: -- I'll read the hard copy.

5 MR. ATKINSON: Okay.

6 (Exhibit 1001 marked for identification.)

7 BY MR. ATKINSON:

8 Q And would you turn to paragraph 4 of your
9 Declaration, please.

10 A Yes, I have it.

11 Q And in the third full sentence it says
12 that -- you say, "While the patent applies digital
13 security and authentication concepts, it does so
14 primarily in the context of a digital camera and
15 digital image processing."

16 A I see that --

17 Q Do you see that?

18 A I see that sentence.

19 Q When you say "primarily," that -- that --
20 you would agree that it isn't exclusively in the
21 context of digital camera and digital image
22 processing, correct?

23 A I'm sorry, I missed the first part. Can
24 you repeat the question?

25 Q When you say "primarily," you would agree

1 that "primarily" denotes that it is -- that the
2 patent doesn't apply exclusively to the context of
3 digital camera and digital image processing?

4 A Again, the last part you said the patent
5 does apply, is that what you said?

6 Q Does not apply exclusively.

7 A Does not. Okay.

8 MR. LIAW: I'll just object to the
9 question as vague.

10 A I stand by the sentence. If you want, I
11 can repeat it. This patent, it does so primarily
12 in the context of a digital camera and digital
13 image processing.

14 BY MR. ATKINSON:

15 Q "Primarily" doesn't mean exclusively,
16 correct?

17 MR. LIAW: Objection. Asked and answered.

18 A Again, I can repeat the sentence in my
19 Declaration, if you want me to.

20 BY MR. ATKINSON:

21 Q I'm just trying to find out if -- when you
22 say "primarily," do you mean exclusively or not?

23 A It is what it is. It's primarily in the
24 context of a digital camera and digital image
25 processing.

1 Q Okay. So if we replace the word
2 "primarily" with "exclusively," you would no
3 longer necessarily agree with this sentence?

4 A That's a hypothetical sort of scenario I
5 didn't consider --

6 Q Okay.

7 A -- to put "exclusively," you know, put the
8 word "exclusively" in the sentence.

9 Q Could you say, sitting here right now?

10 A I'm sorry?

11 Q Could you say whether it exclusively
12 applies right now, sitting here right now?

13 MR. LIAW: Objection. Vague.

14 A Again, I'll stay with what I have in my
15 report, which says the patent does so primarily in
16 the context of the digital camera and digital
17 image processing.

18 BY MR. ATKINSON:

19 Q That's not quite my question.

20 Let me ask this. Could you right now
21 testify whether the sentence would be accurate if
22 the word "primarily" was replaced with the word
23 "exclusively"?

24 A Again, sitting here, I -- first of all, I
25 stand by what I put in my original reply

1 declaration. You put up a hypothetical and I
2 don't have the answer. I don't know right now.

3 Q And if you'll turn to paragraph 5. And
4 you can refer to the second exhibit, the
5 Exhibit 1001, the patent, the '828 Patent. You'll
6 see around the fifth line you say, "Claim 2 states
7 that the memory is in a digital camera." Do you
8 see that?

9 A I checked claim 2 of the patent,
10 Exhibit 1, and I can read, it's a short claim. It
11 says, "The method of claim 1 wherein said memory
12 form a part of a digital camera." That's what I
13 stated in this sentence. It has memory and a
14 digital camera in claim 2 of the patent.

15 Q Is memory used in devices other than
16 digital cameras?

17 A Again, that depends on the context. Can
18 you be more specific?

19 Q Well, for example, a general purpose
20 computer would have memory, would it not?

21 A Again, without specifics I can only give
22 you a general answer that it would be, yes, in
23 general.

24 Q Then you say, "Claim 5 recites an
25 additional parameter added to the data file can

1 include a variety of parameters related to digital
2 photography." Do you see that?

3 A Yes, I do.

4 Q Okay. And if you'd turn to claim 5 of the
5 '828 Patent.

6 A Yes, I'm looking at it.

7 Q Is --

8 MR. ATKINSON: I'm sorry, go ahead.

9 ZOOM TECHNICIAN: This is the remote tech.

10 Would the witness mind, if you could lower
11 the camera a little bit. I just want to make sure
12 I can see your mouth when you're responding to
13 counsel's question. Sometimes when you're reading
14 the document it's a little -- thank you for that.
15 I appreciate it. Sorry to interrupt.

16 THE WITNESS: This work?

17 ZOOM TECHNICIAN: Yes. Thank you.

18 THE WITNESS: Okay. Okay.

19 BY MR. ATKINSON:

20 Q And if you look at claim 5, you'll see the
21 list of potential additional parameters in -- that
22 are listed in claim 5; do you see that?

23 A I do.

24 Q And the first one listed is GPS
25 coordinates. Do you see that?

1 A I do.

2 Q Are GPS coordinates values that are
3 associated with any devices besides digital
4 cameras?

5 A Can you repeat the question, please?

6 Q Sure. Would GPS coordinates be a value
7 that could be used by devices other than digital
8 cameras?

9 A Again, depending on the context. And this
10 is not something that I addressed in my
11 declaration.

12 Q Are you familiar with, like, old GPS
13 devices in the pre -- in pre-smartphone days that
14 used to be in cars that would be able to show you
15 like your map and your location?

16 A Again, depending on the timeframe, so...

17 Q Are those devices that you're familiar
18 with?

19 A Yes.

20 Q Would those devices have used GPS
21 coordinates?

22 MR. LIAW: Objection. Vague.

23 A Again, as I stated a minute ago, I don't
24 address this in my reply declaration. I feel I
25 don't have to answer the question, even though I

1 know what you're talking about. But, again, I
2 just repeat my answer, this is outside the scope
3 of my reply declaration.

4 BY MR. ATKINSON:

5 Q Do you know whether those devices -- you
6 don't know whether GPS -- those devices would have
7 used GPS coordinates, is that your testimony?

8 A That's not. All I'm saying that, you
9 know, my reply declaration does not address or
10 include GPS coordinates, so this is outside the
11 scope of my reply declaration.

12 Q But you would agree that GPS coordinates
13 are one of the items listed in claim 5, correct?

14 A Claim 5 lists actually quite a -- well, a
15 long set of additional parameters, and GPS is the
16 first of them. I can, you know, go on and read
17 the rest of them.

18 Q That's not the question. I was just
19 asking whether -- we don't have to answer
20 different questions. My question was just that
21 whether GPS coordinates are one of the things
22 listed in claim 5?

23 A It's the first coordinate -- or parameter
24 listed in a long set of parameters, yes.

25 Q Okay. And -- hold on. I'm sorry.

1 And in paragraph 5 of your declaration,
2 you're addressing claim 5 of the '828 Patent,
3 correct, in part?

4 A In part, yes.

5 Q And you'll see in claim 5, towards the end
6 of the claim you'll see "Seq." Do you see that?

7 A I see that. You mean S- -- well, here the
8 printed version is Seq or Scq? I think it's Seq.
9 I'll take that.

10 Q Okay. Do you know what Seq is?

11 A Again, I mean, I have to look at it. Off
12 top of my head, no.

13 Q Okay. So do you know whether Seq would be
14 used in devices other than digital cameras?

15 A Again, in my reply declaration,
16 paragraph 5, in terms of addressing claim 5, I
17 listed a subset of additional parameters and that
18 subset does not include either GPS coordinates or
19 Seq in the original claim file of the patent.

20 Q What about the last parameter, Security
21 Value, do you see that in claim 5?

22 A I do.

23 Q Do you know what Security Value is?

24 A Again, this is outside the scope of my
25 reply declaration.

1 Q So is that a yes or a no? Do you or do
2 you not know what Security Value listed in claim 5
3 is?

4 A Again, depending on the context. If it's
5 within the context of the patent, I have to look
6 at the patent. So in general, I would hesitate to
7 give you a yes-or-no answer.

8 Q Well, do you know what Security Value is
9 within the context of the -- of the '828 Patent?

10 MR. LIAW: Objection. This goes beyond
11 the scope of Mr. Xiong's reply declaration. I
12 instruct the witness not to answer.

13 BY MR. ATKINSON:

14 Q Dr. Xiong, in preparing your declaration
15 did you consider the Security Value parameter
16 listed in claim 5?

17 A You mean in preparing for my -- this reply
18 declaration whether I --

19 Q In preparing your reply declaration, was
20 the Security Value listed in claim 5 one of the
21 items that you considered in making your
22 declaration?

23 A No.

24 Q Okay. Have you previously considered what
25 Security Value is in this proceeding?

1 MR. LIAW: Objection. Scope. This goes
2 beyond the scope of Mr. Xiong's reply declaration.
3 I instruct the witness not to answer.

4 BY MR. ATKINSON:

5 Q Also in paragraph 5 you say that, "Claim 6
6 states that the 'data stream is a digital sample
7 of an environment' such as a digital image." Do
8 you see that?

9 A I see that.

10 Q What is a sample of an environment?

11 A Under what context?

12 Q Well, the context of claim 6.

13 MR. LIAW: I'm going to object. That's
14 beyond the scope of the reply declaration. I'm
15 going to instruct the witness not to answer.

16 BY MR. ATKINSON:

17 Q Did you consider what samples of an
18 environment were in reaching your opinions stated
19 in paragraph 5 as to claim 6?

20 A Mr. Atkinson, would you mind repeating
21 your question, please?

22 Q Did you consider what samples of an
23 environment would be in preparing your reply
24 declaration, specifically paragraph 5 in your
25 statement regarding claim 6?

1 A Yes, I did.

2 Q What was your conclusion as to what sample
3 of an environment was?

4 A And as I stated in this last sentence of
5 paragraph 5 of my reply declaration in the quote,
6 the last sentence, "The data stream is a digital
7 sample of an environment."

8 Q Okay.

9 A And then I follow with, "Such as a digital
10 image."

11 Q Okay. When you say "such as," does that
12 mean that one example is a digital image?

13 A Yes.

14 Q Does that also mean there are other
15 examples that are not digital images?

16 A As this last sentence states -- the first
17 part in the quote is very clear -- "a data stream
18 is a digital sample of an environment." As an
19 example of a data stream, the data stream can be a
20 digital image, as an example.

21 Q Would an audio recording through a
22 microphone be a digital -- would be -- let me
23 start again. Would an audio recording from a
24 microphone be a digital sample of an environment?

25 MR. LIAW: Objection. Scope. That goes

1 beyond the scope of Dr. Xiong's reply declaration,
2 so I'm going to instruct the witness not to
3 answer.

4 BY MR. ATKINSON:

5 Q In reaching your conclusions in
6 paragraph 5, did you consider whether any other
7 digital samples could be samples -- strike that.

8 In reaching your statement at the end of
9 paragraph 5, did you consider any other digital
10 streams other than a digital image as to whether
11 they could be digital samples of an environment?

12 A No.

13 Q Turn back to the '828 Patent.

14 A Okay.

15 Q Sorry. Hold on.

16 In paragraph 6 of your declaration --

17 A I'm sorry, you want --

18 Q I'm going -- before we go back to the
19 patent, in the first sentence of paragraph 6, you
20 say that the digital -- you say the -- you say, "a
21 digital camera including an optical sensor." Do
22 you see that?

23 A Are you talking about paragraph 6 of my
24 reply declaration?

25 Q Correct, yeah, second line.

1 A Yes.

2 Q Does the word "optical sensor" appear in
3 claim 1 of the '828 Patent? Or the phrase,
4 rather. Does the phrase "optical sensor" appear
5 in claim 1 of the '828 Patent?

6 A Would you mind repeating your question?

7 Q Does the phrase "optical sensor" appear
8 anywhere in claim 1 of the '828 Patent?

9 A Claim 1 of the '828 Patent mentions a
10 sensor several times. For example, in the
11 first -- well, for example, it says, "utilizing a
12 sensor," in the second part after the preamble.
13 And it also mentions a sensor a few times.

14 Q Does it ever refer to the sensor being an
15 optical sensor in claim 1?

16 A The optical sensor mentioned in
17 paragraph 6 of my reply declaration is just one
18 example of the sensor being the sensor of claim 1
19 of the patent.

20 Q I understand that you use the phrase
21 "optical sensor" in your declaration. I'm asking
22 if it's used in claim 1 other than the word
23 "sensor."

24 Let me put it another way. Do you see the
25 word "optical" anywhere in claim 1?

1 A As I mentioned, in my report I used -- I
2 mean, second line of paragraph 6, I used optical
3 sensor as an example. And in this sentence I
4 didn't mention claim 1 of the patent, so I don't
5 see any contradiction or any relation, you know,
6 in terms of what I said in this sentence of
7 paragraph 6, the first sentence, in terms of
8 contradicting what the claim 1 of the patent says.

9 Q Okay. And looking at your second
10 sentence, you would agree that the techniques
11 could be used for other types of data streams
12 besides image data streams, correct?

13 A I'm sorry, you said "the techniques" at
14 the beginning. Can you elaborate on --

15 Q You say, "While the patent states the
16 disclosed technique could be used for other types
17 of data streams," do you see that around lines
18 four and five of paragraph 6?

19 A I do.

20 Q So you would agree that the technique
21 you're referring to within the context of the
22 '828 Patent could be used for other types of data
23 streams?

24 (Technical issue)

25 MR. ATKINSON: I'm sorry, what happened?

1 MR. LIAW: This is counsel speaking. I
2 heard, "Recording stopped." So maybe we're having
3 a technical issue with the Zoom recording.

4 MR. ATKINSON: Yeah, can we take a break
5 maybe?

6 MR. LIAW: Sure.

7 THE COURT REPORTER: Let's go off the
8 record at 12:06 p.m.

9 (A break was taken from 12:06 p.m. to
10 12:17 p.m.)

11 THE COURT REPORTER: Back on the record at
12 12:17 p.m.

13 BY MR. ATKINSON:

14 Q Zixiang, would you mind turning to
15 paragraph 7 of your report, please.

16 A No, sure, I can look at it.

17 Q And specifically at the top of page 4 you
18 refer to "three different levels of authentication
19 and damaged-element recovery." Do you see that?

20 A Yes.

21 Q Are these three different levels of
22 authentication and damaged-element recovery
23 referenced anywhere in the claims of the
24 '828 Patent?

25 A The short answer is that the claims of the

1 patent are high-level abstract of these specific,
2 for example, three different levels of
3 authentication and damaged-element recovery.

4 Q Where in the claims of the '828 Patent
5 does it refer to any of these three levels of
6 authentication?

7 A As I mentioned just a second ago, the
8 patent claims, for example claim 1, talks about
9 utilizing a signature protocol and comparing the
10 first signature and the second signature, all
11 these are abstract -- you know, high-level
12 abstract, these detailed levels -- three levels of
13 authentication and damaged-element recovery that I
14 cited in this paragraph 8 of my reply declaration.

15 Q Okay. So the -- when it talks about
16 using -- you're referring to the signature
17 protocol -- using -- utilizing, it says, signature
18 protocol elements, is that what you're referring
19 to?

20 MR. LIAW: Objection. Vague.

21 A If you look at claim 1, there are multiple
22 elements. So I view claim 1 as a kind of
23 high-level summary of these detailed embodiments
24 of authentication and damaged-element recovery
25 stated in my report listed as the three examples.

1 BY MR. ATKINSON:

2 Q Okay. So total image authentication, is
3 that -- is that referred to anywhere in claim 1?

4 MR. LIAW: Objection. Asked and answered.

5 A Again, in this paragraph I just stated the
6 fact that the spec of the patent provides all
7 these examples.

8 BY MR. ATKINSON:

9 Q Right. But claim 1, does it refer to the
10 total image authentication level?

11 A This paragraph does not say anything about
12 patent claims. All I'm just referring is just
13 these examples in the spec.

14 Q So you would agree that these levels
15 aren't cited in the claims?

16 A Again, as I mention, this is irrelevant to
17 this paragraph of my reply declaration.

18 Q So is that a yes or a no?

19 MR. LIAW: Objection. Asked and answered.

20 A As I mentioned here, the purpose of this
21 paragraph is to just provide the fact that the
22 patent specs provide all these detail examples and
23 it's all about, you know, image processing.

24 BY MR. ATKINSON:

25 Q So my question isn't about the

1 specification, my question is whether the claim
2 recites any of these three different levels of
3 authentication, any of the claims.

4 MR. LIAW: Objection. Asked and answered.

5 A I look at the claims. The claims, yeah,
6 doesn't specifically, you know, cite this one,
7 two, three, but they are in the specs. That's
8 what I'm stating here in paragraph 8 -- or 7 of my
9 reply declaration.

10 BY MR. ATKINSON:

11 Q Okay. And then in paragraph 8 you refer
12 to a Primary Image and a Backup Image?

13 A Yes, I did.

14 Q Are those referenced anywhere in the
15 claims of the '828 Patent?

16 A Again, if you read the citation at line 3,
17 and that's in column 12, in 2 through 8, I'm just
18 citing what is in the spec. I didn't say anything
19 about the claims of the patent in this paragraph.

20 Q Would you agree that the claims do not
21 explicitly refer to either "Primary Image" or
22 "Backup Image"?

23 MR. LIAW: Objection. Asked and answered.

24 A I mean, this is irrelevant to this
25 paragraph. All I'm, you know, citing, again, at

1 12:2-8, and that's what is in the spec.

2 BY MR. ATKINSON:

3 Q So sitting here right now, you couldn't
4 say whether "Primary Image" or "Backup Image" are
5 cited in the claims of the '828 Patent?

6 MR. LIAW: Objection. Asked and answered.

7 A Again, this -- what I'm citing here is
8 just a fact. I'm not saying anything about the
9 patent claims. So I don't see any relevance to
10 your question.

11 BY MR. ATKINSON:

12 Q Do you know whether the claims referred to
13 either "Primary Image" or "Backup Image"?

14 MR. LIAW: Objection. Asked and answered.

15 A Again, as I just answered, what I cite are
16 from the specs and it has nothing to do with
17 whether it's in the claims or not. That's not the
18 point of this paragraph.

19 BY MR. ATKINSON:

20 Q The next sentence you say -- you say that,
21 "Image compression/decompression and
22 encoding/decoding are fundamental concepts in
23 image processing."

24 A Yes, that's what the next sentence states,
25 yes.

1 Q Are any of those concepts recited anywhere
2 in the claims of the '828 Patent?

3 A I'm sorry, what concepts are you talking
4 about?

5 Q Image compression/decompression,
6 encoding/decoding.

7 A Well, if you go to the first sentence
8 where the spec mentions compression and
9 encoding --

10 Q Sorry, I'm talking about the claim.
11 Again, my question is whether any of those four
12 concepts, are they mentioned anywhere in the
13 claims, the claims of the '828 Patent?

14 A I see. Again, this is the same answer.
15 Whether the claim has compression/decompression,
16 encoding/decoding is irrelevant. All the point
17 I'm making in this paragraph is about the fact --
18 about image processing.

19 Q Okay. You also say that they're not
20 discussed in any detail in the specification?

21 A Can you repeat the question? I'm sorry.

22 Q You also state in the last sentence that
23 they are -- that these concepts aren't discussed
24 in the specification?

25 A Yeah, that's what I stated, yes.

1 Q Okay.

2 All right. Can you turn to paragraph 14
3 of your declaration, please.

4 A Yes.

5 Q Okay. And you also -- hold on.

6 MR. ATKINSON: If you'd also turn to the
7 third exhibit, Exhibit 1005, which is the Glass
8 reference, U.S. Patent 6,332,193.

9 (Exhibit 1005 marked for identification.)

10 THE WITNESS: Yes. Again, I have a hard
11 copy.

12 MR. ATKINSON: Okay. Excellent.

13 (A discussion was had off the record
14 between the Zoom Technician and counsel.)

15 MR. ATKINSON: Why don't we go off the
16 record for a second.

17 THE COURT REPORTER: Off the record at
18 12:30.

19 (A break was taken from 12:30 p.m. to
20 12:30 p.m.)

21 THE COURT REPORTER: Back on the record at
22 12:30.

23 BY MR. ATKINSON:

24 Q Zixiang, would you mind turning to
25 Figure 3 of the Glass reference, which I think is

1 on the fourth page of the patent.

2 A Yes, I'm looking at it.

3 Q You say about eight lines down that Glass
4 refers to two dimensional imager that creates a
5 digital image, and I think you're explaining that
6 those are integrated circuits. Is that right?

7 A So if you -- that's right. So if you look
8 at the fourth sentence of paragraph 14, I stated
9 that, "Glass states that the optical sensor can be
10 a CCD camera, a CMOS device or other two
11 dimensional imager which creates a digital image."

12 Q Okay.

13 A So when I mention the CMOS device and then
14 that's essentially what I talk about was a good
15 example of integrated circuits.

16 Q The word "integrated circuit" in the quote
17 that you have from Glass in I guess the second
18 full sentence, there's nothing about integrated
19 circuits in that -- in that sentence, is there?

20 A Well, a POSITA would know the CMOS are the
21 sensors usually, you know, for the -- at least the
22 modern-day cameras. So each of the pixel is
23 sensed by a CMOS sensor.

24 And then in Figure 3, Glass also had the
25 Frame Store. And if you store large size memory

1 these days usually is put in the big memory and
2 built into a chip. Again, that leads to a POSITA
3 to think of a digital image can be created with
4 integrated circuits.

5 Q Glass never says that the CCD camera is an
6 integrated circuit, though, does it?

7 MR. LIAW: Objection. Asked and answered.

8 A Again, Glass mentions both CCD camera
9 or -- and CMOS devices.

10 BY MR. ATKINSON:

11 Q But it doesn't say -- that wasn't my
12 question. Where does Glass say that CCD camera or
13 CMOS devices, either one, must be integrated
14 circuits?

15 MR. LIAW: Objection. Asked and answered.

16 A As I mentioned -- right -- cameras can use
17 either CCD or CMOS devices. And CMOS device is,
18 as I mentioned, complementary metal-oxide
19 semiconductor devices, so you are talking about
20 integrated circuits, at least in the context of
21 CMOS.

22 BY MR. ATKINSON:

23 Q What about CCD?

24 A CCD could be.

25 Q It could be something else as well?

1 A Again, depend on the context.

2 Q Okay. Then if you'll turn to page 7 of
3 your declaration further into paragraph 14. You
4 see on about the seventh line you say, "The arrow
5 from the sensor to the memory in Figure 3
6 indicates that those components are electrically
7 connected." Do you see where you say that?

8 A I see that.

9 Q Where do you see any requirement in Glass
10 indicating that arrows mean electrical connection?

11 A I'm sorry, can you repeat the question?

12 Q Where in Glass does it describe the arrows
13 in the Figures as being electrical connections?

14 A If you look at the quote I have at the end
15 of the sentence, I said first -- again, this
16 paragraph, I said, "The arrow from the sensor to
17 the memory in Figure 3 indicates that those
18 components are electrically connected to that" --
19 "connected so that image data can flow from the
20 sensor to the memory." And I want to point to you
21 the sentence or the quote after that, and that's
22 from the Glass patent, it says "data paths are
23 shown in solid lines" in Figure 3 and all the
24 Figures.

25 So a POSITA looking at this Figure and

1 this line are the connection between the Image
2 Digitizer and the Frame Store, he or she will know
3 that, that that is flowing from the Image
4 Digitizer to the Frame Store and there needs to be
5 an electrical connection in such a small space,
6 here this is a tamper resistant or tamper
7 responsive packaging, it's very small packaging.
8 And that's how a POSITA will know that.

9 Q Is it your understanding that data paths
10 can only be through electrical connections?

11 MR. LIAW: Objection. Misstates prior
12 testimony.

13 A That's not what I said. I'm quoting what
14 Glass says: "Data paths are shown in solid
15 lines."

16 BY MR. ATKINSON:

17 Q Okay. So are data paths and electrical
18 connections the same thing?

19 MR. LIAW: Objection. Asked and answered.

20 A I didn't say that.

21 BY MR. ATKINSON:

22 Q Are they different?

23 MR. LIAW: Objection. Asked and answered.

24 A Again --

25 BY MR. ATKINSON:

1 Q Let me ask this. What differences, if
2 any, are there between electrical connections and
3 data paths?

4 A Again, it all depends. In this scenario
5 that I focus on -- again, if you focus on the
6 connection between the Image Digitizer and Frame
7 Store in Figure 3 of Glass, and that's what we're
8 talking about, that data path shows an electrical
9 connection.

10 Q So when it says "data paths" in the
11 context of Glass, you're interpreting that to mean
12 electrical connections?

13 MR. LIAW: Objection. Misstates prior
14 testimony.

15 A Again, I just stated a minute ago when a
16 POSITA looks at the data path, again in Figure 3,
17 between the Image Digitizer and Frame Store, he or
18 she will immediately know that that path is
19 electrical connection.

20 BY MR. ATKINSON:

21 Q In other contexts can a data path be a
22 connection other than an electrical connection,
23 such as a wireless connection?

24 MR. LIAW: Objection. This goes beyond
25 the scope of the reply declaration, so I'm going

1 to instruct the witness not to answer.

2 BY MR. ATKINSON:

3 Q In reaching your conclusions, did you
4 consider any other data paths -- in reaching your
5 conclusions in paragraph 14, did you consider any
6 data paths other than electrical connections, such
7 as wireless connections?

8 A Are you talking about Figure 3 of Glass?

9 Q No, I'm talking about your statement in
10 paragraph 14.

11 A Paragraph 14 is about Glass.

12 Q Right. So in reaching your conclusions in
13 paragraph 14, did you consider any data paths
14 other than electrical connections, such as
15 wireless connections?

16 A Again, in reaching my conclusion, I only
17 considered the data path between Image Digitizer
18 and Frame Store in Figure 3 of Glass.

19 Q So is that a yes or a no?

20 A Within that context, if I focus -- I only
21 focus on this connection, as I stated. So this
22 arrow indicates that those components are
23 electrically connected.

24 Q In reaching that conclusion did you
25 consider wireless data path connections?

1 MR. LIAW: Objection. Asked and answered.

2 A In this connection, because if you look at
3 Figure 3, it's within this Tamper
4 Resistant/Responsive Packaging, a POSITA will know
5 this connection is not a wireless connection.

6 BY MR. ATKINSON:

7 Q Dr. Xiong, that's not my question. My
8 question is whether in reaching your conclusion
9 you considered other types of connections such as
10 wireless connections. The answer is, "Yes, I did
11 consider them," or, "No, I did not consider them."

12 MR. LIAW: Objection. Asked and answered.

13 MR. ATKINSON: Well, I don't know the
14 answer, so...

15 A This connection has to be an electrical
16 connection, it cannot be a wireless connection.

17 BY MR. ATKINSON:

18 Q Did you consider wireless connections in
19 reaching your conclusion?

20 MR. LIAW: Objection. Same objection.
21 Asked and answered.

22 A I will just answer the same thing. A
23 POSITA looking at this figure in Figure 3 of
24 Glass, he or she will immediately know that this
25 is a wireline connection. It cannot be a wireless

1 connection, no.

2 BY MR. ATKINSON:

3 Q Why could it not be?

4 A I just mentioned, because this whole
5 thing -- you have two components. Right? One is
6 the Image Digitizer and the other is the Frame
7 Store. And they are within this small tamper
8 resistant and responsive packaging of a camera. A
9 POSITA will immediately know that, you know, this
10 has to be a wired connection.

11 (Exhibit 1006 marked for identification.)

12 MR. ATKINSON: Can you open the fourth
13 exhibit, which is Exhibit 1006 in this proceeding,
14 which is an article, "Digital Image Recording for
15 Court-Related Purposes," by Bernd Rieger and Harry
16 Rode.

17 A Yeah, again, I have a copy of it in front
18 of me.

19 BY MR. ATKINSON:

20 Q Okay. Excellent.

21 Can you turn to Figure 3 of Rieger, which
22 is page 4, I think, of the exhibit. Yeah.

23 A Yes, I'm looking at it.

24 Q Okay. Now, you say that Figure 3 depicts
25 a CCD-sensor, RAM, and a CPU in the second

1 sentence of paragraph 15; is that right?

2 A Right. So that's the sentence you just
3 read, second sentence of paragraph 15 of my reply
4 declaration.

5 Q And in the last full sentence on page 7,
6 you say, "A high-speed RISC processor (CPU), CCD
7 chip, and RAM are integrated circuits commonly
8 interconnected by leads and traces on a circuit
9 board."

10 A That's right, that's the last sentence on
11 page 7 of my reply declaration.

12 Q Does Rieger specifically describe or
13 depict these components as being on a single
14 circuit board?

15 A Short answer is yes.

16 So you can look at Figure 3 around the
17 three components, namely the CCD-sensor and then
18 CPU and then the last one is RAM. They are all in
19 the small kind of potted sort of protected section
20 within the camera. And a CPU, a POSITA will know
21 is the processor, a kind of high-speed processor,
22 and because of the small -- in the small
23 compartment protected section, and that's how I
24 said they -- they should be -- they are commonly
25 interconnected by leads and traces on a circuit

1 board.

2 Q Commonly connected?

3 A They are commonly interconnected by leads
4 and traces on circuit boards within this protected
5 section of the camera.

6 Q Where does Rieger state that the protected
7 section is small?

8 A If you look at a camera, these days it
9 could be, you know, a smartphone or handheld
10 camera, it's all small size, very small. And
11 that's what I meant.

12 Q Is Rieger directed towards smartphones?

13 A I gave both smartphones and handheld
14 cameras as examples. And these are the most
15 widely used cameras.

16 Q So Rieger is a 1999 article, is it not?
17 Is that -- do I have the date of Rieger correct?

18 A Yes, on the bottom of the first page it
19 says, yeah, it's copyright 1999. Yes, so it was
20 copyrighted 1999.

21 Q 1999 was before smartphones were at least
22 commonplace; isn't that right?

23 A You can say that.

24 Q Well, would you say that?

25 A In general, I would, yes.

1 Q So is it fair to say that at the time it
2 was written Rieger was not directed toward
3 smartphones?

4 A I used an example. Another example is
5 handheld cameras. At that time I actually used
6 multiple handheld cameras around the time period
7 of 1999.

8 Q Were there also non-handheld cameras in
9 existence in 1999?

10 A Yeah. Yes.

11 Even now handheld cameras are relatively
12 small.

13 Q And where does Rieger state that it is
14 directed specifically to handheld cameras?

15 A I used handheld cameras as an example.

16 Q Okay. So it's not necessarily directed
17 towards handheld cameras?

18 A In general, you can say that. I mean,
19 most cameras are handheld. We're not talking
20 about camera like a room-size camera, no.

21 Q And is there anywhere that Rieger
22 specifically talks about circuit boards?

23 MR. LIAW: Objection. Asked and answered.

24 A Again, by looking at the Figure, as I
25 already mentioned, Figure 3 of Rieger, right,

1 inside this protected section of the camera there
2 is CPUs and then RAMs. Immediately a POSITA will
3 think of this is implemented, you know, through
4 circuit boards.

5 BY MR. ATKINSON:

6 Q Figure 3 doesn't specifically use the
7 words "circuit board" anywhere, does it?

8 A Does not have to use it, because the
9 POSITA, as I just mentioned, looking at the words,
10 "CPU," "RAM," immediately he or she will think
11 about circuit boards. And that's how, I mean, the
12 RAM, the memory chip and the CPU are mounted.

13 Q And does -- in the text of Rieger, does it
14 anywhere refer to circuit boards explicitly?

15 A Again, you know, if you want a yes-or-no
16 answer, I have to review the whole Rieger again
17 and give you, you know, an answer.

18 Q So sitting here right now, are you aware
19 of anywhere where Rieger in the text refers to
20 circuit boards explicitly?

21 A Again, without spending time reviewing the
22 Rieger reference again, I -- off the top of my
23 head, I don't have the answer.

24 Q Okay. And on page 8 around the fifth
25 line, you say that, "The arrows from the sensor to

1 the memory indicate that they are electrically
2 connected." Do you see that?

3 A Yes, I do.

4 Q Where does Rieger state that the use of
5 arrows in its Figures denote electrical
6 connections?

7 A This is very similar to the Glass case.
8 Again, I point to you the quoted sentence on
9 Rieger in the parentheses after the sentence you
10 just, you know, quoted in which I said -- well,
11 Rieger says, "After recording, the processor reads
12 the image data from the CCD sensor and saves these
13 to the RAM."

14 If a POSITA reads this sentence and looks
15 at Figure 3 of Rieger, the arrows from the
16 CCD-sensor through the CPU to the RAM, he or she
17 will know that these three components are
18 electrically connected through wires because they
19 are in this protected small section.

20 Q Where in the text of Rieger does it
21 describe what the arrows represent?

22 A A POSITA with the background in image
23 processing and image authentication, looking at
24 Figure 3 of Rieger will know, and especially after
25 reading the sentence I just stated. I can repeat

1 it. It says -- Rieger says, "After recording, the
2 processor reads image data from the CCD sensor and
3 saves these to the RAM."

4 In order for that data from the CCD sensor
5 to be saved to the RAM, there needs to be electric
6 connection in such a small space.

7 Q If you'll look back at Figure 3 of Rieger,
8 if you'll look at the top, do you see what appears
9 to be an antenna structure with a clock next to it
10 called "Radio-Controlled Clock," do you see that?

11 A I do.

12 Q Do you have any understanding as to what
13 the antenna represents in Figure 3?

14 MR. LIAW: Objection. It's well beyond
15 the scope of the reply declaration.

16 BY MR. ATKINSON:

17 Q I'm sorry, are you thinking or...

18 A I'm going to follow Counsel's --

19 MR. ATKINSON: Oh, I'm sorry, I didn't
20 hear. Was there an instruction not to answer?

21 MR. LIAW: Yeah, I objected that it's
22 beyond the scope of Dr. Xiong's reply declaration,
23 so I instruct him not to answer.

24 BY MR. ATKINSON:

25 Q So you don't have any opinion as to what

1 the antenna in Figure 3 represents?

2 MR. LIAW: Same instructions. Beyond the
3 scope of the reply declaration.

4 BY MR. ATKINSON:

5 Q In making your analysis that the arrows in
6 Figure 3 represent electrical connections, did you
7 consider the arrow from the -- from the antenna to
8 the protected section as depicted in Figure 3?

9 MR. LIAW: Same objection. Goes beyond
10 the scope of the reply declaration.

11 MR. ATKINSON: Well, I'm asking whether
12 he -- whether he considered it or not.

13 MR. LIAW: I think that's the same
14 question, Counsel.

15 MR. ATKINSON: Well, I -- okay. So you're
16 instructing him to not answer whether he
17 considered part of Figure 3 in reaching his
18 conclusions as to Figure 3, do I have that right,
19 Counsel?

20 MR. LIAW: No (inaudible). You can re-ask
21 the question.

22 THE COURT REPORTER: Counsel, could you
23 please speak up.

24 MR. LIAW: Sure.

25 MR. ATKINSON: I can't hear either. I

1 couldn't hear either.

2 MR. LIAW: Can you restate the question
3 or repeat the question?

4 BY MR. ATKINSON:

5 Q In reaching your conclusions regarding
6 Figure 3, did you consider the arrow depicted in
7 Figure 3 from the antenna to the protected
8 section?

9 MR. LIAW: I'm going to have the same
10 objection. You're asking about his opinions
11 regarding Figure 3 --

12 MR. ATKINSON: I'm asking whether he
13 considered that arrow in reaching his opinions or
14 not. If the answer is, "No, I didn't consider
15 it," that's fine.

16 MR. LIAW: Are you asking his opinions
17 regarding Figure 3 in general or limited to --

18 MR. ATKINSON: I'm asking whether he
19 considered that arrow in reaching his conclusions.

20 MR. LIAW: For the reply declaration?

21 MR. ATKINSON: Yes.

22 MR. LIAW: Do you understand the question?

23 THE WITNESS: Yeah.

24 A As I mentioned -- and this is very similar
25 to, you know, Figure 3 of Glass. Here in Rieger,

1 Figure 3, I only focused or addressed the arrows
2 in between the CCD-sensor and the CPU and the
3 arrow between CPU and RAM. That's all I focused
4 on.

5 BY MR. ATKINSON:

6 Q Did you consider the arrow from the
7 antenna the protected section in reaching your
8 conclusions?

9 A That's outside -- outside of these
10 protected section. All I'm looking at is what's
11 inside the protected section.

12 MR. ATKINSON: Actually, we're coming up
13 on about an hour. Do we want to take a break? I
14 think we're coming up on there, anyway.

15 THE WITNESS: Yeah, that's fine.

16 MR. LIAW: How long a break did you want,
17 Counsel?

18 MR. ATKINSON: Well, let's go off the
19 record and we can talk about it.

20 THE COURT REPORTER: Off the record at
21 1:00 o'clock.

22 (A break was taken from 1:00 p.m. to
23 1:22 p.m.)

24 THE COURT REPORTER: Back on the record at
25 1:22.

1 BY MR. ATKINSON:

2 Q Dr. Xiong, would you mind turning to
3 paragraph 20 of your reply declaration on page 10.

4 A I'm looking at that paragraph.

5 Q Okay. And in the third to fifth lines you
6 state, "the cited patent," which I assume you mean
7 the '853 patent, "does not disclose an electrical
8 cable connecting two components within the same
9 device." Do you see that?

10 A I do.

11 Q And would you turn back to Exhibit 1001,
12 the '828 Patent.

13 A Sure.

14 Q Where does the '828 Patent recite a
15 limitation that the -- that everything be within
16 the same device?

17 A Look at Figure 2A of the '828 Patent in
18 the description in the specs, that's in column 4,
19 starting from row 52.

20 Q I think maybe you misunderstood my
21 question. I'm asking in the '828 Patent, the
22 Exhibit 1001, the patent that, you know, that's
23 involved in this proceeding.

24 A Are you talking about the Figure 1 of
25 my -- I mean, the Figure 1 on page 11 of my reply

1 declaration?

2 Q No. Well, let me take you to -- so we're
3 at -- we're at paragraph 20 of your reply
4 declaration. I'm not talking about Figure 1.

5 A Right. I'm with you.

6 Q I'm asking -- I'm saying you talk about
7 components within the same device. Do you see
8 that language?

9 A I do.

10 Q And what I'm asking is, the '828 Patent,
11 the patent that you rendered invalidity opinions
12 against, where in the claims does it require that
13 components be within the same device?

14 A That's why earlier I refer you to column 4
15 of the '828 Patent, again, starting from line 52
16 in reference to Figure 2A of '828 Patent. Let me
17 read the first sentence. "A device model for a
18 single frame optical recorder, more commonly known
19 as a camera, is shown."

20 And that camera, again, if you go back to
21 Figure 2A, you have the sensor and the processor
22 and they are in one device, and that's the camera.
23 That's what I'm referring.

24 Q Right. In the preferred embodiment
25 they're in one device; is that -- is that right?

1 A This is -- yeah, Figure 2A is one of the
2 preferred embodiment, right.

3 Q Right. So what I'm asking is, when you go
4 to the claims which starts in column 20, at the
5 end of column 20, and you look at the limitations
6 of the claims --

7 A Yes, I'm looking at it.

8 Q -- where is there a limitation reciting
9 that everything be within a single device?

10 MR. LIAW: I'll object based on scope.
11 This was discussed at length in Dr. Xiong's
12 opening declaration and the opening deposition.
13 So this was already discussed at length, so it's
14 beyond the scope of the reply declaration and
15 deposition. I'll instruct the witness not to
16 answer.

17 BY MR. ATKINSON:

18 Q Okay. Well, turning back to your reply
19 declaration, when you talk about components within
20 the same device is it your understanding that --
21 in paragraph 20, is it your understanding that --
22 what is your understanding as to whether "within
23 the same device" is a limitation of the recited
24 claims of the '828 Patent?

25 MR. LIAW: Same objection. The "within

1 the same device" limitation has been discussed at
2 length in Dr. Xiong's opening declaration and
3 deposition, so I'll instruct the witness not to
4 answer.

5 BY MR. ATKINSON:

6 Q When you say that the -- in paragraph 20,
7 "But the cited patent" -- the '853 Patent -- "does
8 not disclose an electrical cable connecting two
9 components within the same device," how is that
10 relevant to the '828 Patent that we're discussing
11 here today?

12 A So, again, in line 3 towards the end --
13 right -- of paragraph 20 of my reply declaration,
14 when I say "the cited patent," that's the cited
15 patent by Mr. Davis, Patent Number 5,486,853. I
16 want to make sure that's the patent I'm referring
17 to here, the cited patent.

18 Q Okay.

19 A Earlier I mentioned Figure 1 on the next
20 page, page 11, and that's from the '853 Patent.
21 That's what I'm talking about.

22 This patent, if you look at Figure 1,
23 again, on page 11 of my reply declaration, it does
24 not disclose an electrical cable connecting two
25 components within the same device, let alone an

1 optical sensor connected to a processor/memory
2 within the same device as is illustrated in Glass
3 and Rieger.

4 Q Does the '828 Patent, the subject of this
5 proceeding, do the claims require that the
6 components be within the same device?

7 MR. LIAW: Same objection, Counsel. It's
8 beyond the scope of the reply declaration. This
9 was discussed at length in Dr. Xiong's opening
10 declaration and deposition, so I'll instruct the
11 witness not to answer.

12 BY MR. ATKINSON:

13 Q If you'll turn to paragraph 21. You refer
14 to a coaxial cable. If you deleted -- well,
15 strike that.

16 Are cables used to connect components
17 within digital cameras generally regardless of
18 whether they're coaxial or other types of cables?

19 A Again, here in paragraph 21 here, I'm
20 talking about the coaxial cable. If you, again,
21 refer back to Figure 1, that's unit 13, and that's
22 the cable, which is a coaxial cable mentioned in
23 Patent '853 cited by Mr. Davis, and that's what
24 I'm saying.

25 Q Right. So I'm asking -- so you're saying

1 that coaxial cables would be -- would take up too
2 much space. But what I'm asking is whether
3 digital cameras typically use cables to connect
4 components, regardless of whether they're coaxial
5 or otherwise?

6 A Here I'm addressing, again, what
7 Mr. Davis' cited patent is talking about. And,
8 again, I'll just repeat what I just -- you know,
9 you just mentioned. Right? In paragraph 3 -- I
10 mean line three of paragraph 21, I said "Using
11 coaxial cable would require unnecessary additional
12 space, would increase the cost, and would
13 introduce additional points of potential failure,"
14 et cetera, et cetera.

15 Q Do digital cameras utilize any type of
16 cables to connect components?

17 MR. LIAW: Objection. Vague.

18 Sorry, Counsel, what's the question?

19 BY MR. ATKINSON:

20 Q Do digital cameras utilize any type of
21 cables to connect components?

22 A What -- are you talking -- what components
23 are you talking about?

24 Q Any components within the digital camera.

25 MR. LIAW: I'm going to object to scope.

1 I think that this was covered at length in
2 Dr. Xiong's deposition regarding the opening
3 declaration, so I think this is beyond the scope
4 of the reply declaration and instruct the witness
5 not to answer.

6 BY MR. ATKINSON:

7 Q All right. Would you turn to paragraph 28
8 of your report, please. Let me know when you're
9 there.

10 A Yes, I am here.

11 Q Okay. And about seven lines down you --
12 or seven to eight lines -- or -- yeah, about that.
13 About maybe six or seven lines down you talk
14 about, "Serret-Avila specifically discusses
15 problems with authenticating streaming video."

16 A I see that sentence.

17 Q Are video cameras and digital cameras
18 typically different devices?

19 MR. LIAW: Objection. Vague.

20 A That's a very general question. Can you
21 be more specific?

22 BY MR. ATKINSON:

23 Q So are there -- are there some devices
24 that are designed for taking digital pictures and
25 are there other devices that are designed to take

1 digital video?

2 MR. LIAW: Objection. Vague.

3 A Again, that's a general question.

4 BY MR. ATKINSON:

5 Q Can you answer, or no?

6 A If you can be more specific, yeah, I can
7 answer your question. You're making some general
8 sort of statements.

9 Q Okay. Why can you not answer the general
10 question?

11 A Can you repeat your question again?

12 Q Are there different devices that take
13 digital pictures and other devices that take
14 digital videos?

15 A So when you --

16 MR. LIAW: Objection. Vague.

17 A -- when you say devices taking pictures,
18 do you mean devices only take pictures and other
19 device only take video, or devices taking both
20 images -- pictures and video? That's my
21 confusion.

22 BY MR. ATKINSON:

23 Q Are there types of devices that are
24 designed to only take digital pictures and are
25 there other types of devices that are designed to

1 only take digital videos?

2 MR. LIAW: Objection. Vague.

3 A In general, there are devices designed to
4 take pictures only and there are devices, in
5 general, designed to take video only. And there
6 are devices that are designed to take both images
7 and video.

8 BY MR. ATKINSON:

9 Q In Serret-Avila, as you note, that's
10 directed towards video streaming, -- is that
11 right -- or video streams?

12 A So in the sentence earlier you cited or
13 stated, I can repeat the same sentence again in
14 paragraph 28 of my reply declaration, line 6. I
15 stated that, "Serret-Avila specifically discusses
16 problems with authenticating streaming video."

17 Q So it's a, yes, it's directed towards
18 video as opposed to images?

19 MR. LIAW: Objection. Misstates prior
20 testimony.

21 A Again, I'll repeat the same things which I
22 said in my report, paragraph 28, "Serret-Avila
23 specifically discusses problems with
24 authenticating streaming video."

25 MR. ATKINSON: Actually, we -- we may be

1 able to get done before lunch. We'll see.

2 I'm going to pass the witness.

3 MR. LIAW: We don't have any questions on
4 our end.

5 MR. ATKINSON: Okay.

6 THE WITNESS: Thank you, Mr. Atkinson.

7 THE COURT REPORTER: Off the record at
8 1:39.

9 (Time Noted: 1:39 p.m.)

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1 CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2

3 I, Linda Russell, Certified Shorthand
4 Reporter in and for the State of Texas, do hereby
5 certify:

6

7 That ZIXIANG XIONG, Ph.D., the witness whose
8 deposition is hereinbefore set forth, was duly
9 sworn by me before the commencement of such
10 deposition and that such deposition was taken
11 before me and is a true record of the testimony
12 given by such witness.

13

14 I further certify that the adverse party,
15 JONATHAN JAFFE, was represented by counsel at
16 the deposition.

17

18 I further certify that the deposition of
19 ZIXIANG XIONG, Ph.D., occurred remotely on
20 THURSDAY, OCTOBER 2ND, 2025, commencing at
21 11:34 A.M. to 1:39 P.M.

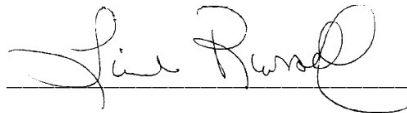
22

23 I further certify the inspection, reading
24 and signing of said deposition was not waived
25 on the record by agreement of all parties.

1 I further certify that I am not related to
2 any of the parties to this action by blood or
3 marriage, I am not employed by or an attorney to
4 any of the parties to this action, and that I am
5 in no way interested, financially or otherwise,
6 in the outcome of this matter.

7
8 IN WITNESS WHEREOF, I have hereunto set my
9 hand this 2nd of October, 2025.

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Linda Russell, CSR 2965

Expiration Date: 4/30/27

Planet Depos

451 Hungerford Drive, Suite 400

Rockville, MD 20850

888.433.3767

Firm Registration 686

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