

1 DR. CHANDRAJIT BAJAJ - 3/26/2021
2 IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
3
4 BEFORE THE PATENT TRIAL AND APPEAL BOARD
5
6 NETFLIX, INC. AND HULU, LLC,
7
8 Petitioners,
9
10 v.
11
12 DIVX, LLC,
13
14 Patent Owner.

11 Case No. IPR2020-00646
12 U.S. Patent No. 8,472,792
13

14
15 REMOTE DEPOSITION OF DR. CHANDRAJIT BAJAJ
16
17 Austin, Texas
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19 Friday, March 26, 2021
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25
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1 DR. CHANDRAJIT BAJAJ - 3/26/2021

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March 26, 2021

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11:06 a.m.

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Remote oral deposition of

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DR. CHANDRAJIT BAJAJ, held via Zoom remote

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videoconference in Austin, Texas, pursuant to the

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Federal Rules of Civil Procedure before Kim A.

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McCann, Registered Merit Reporter, Certified

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Realtime Reporter and Certified Shorthand

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Reporter in and for the State of Texas.

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2 A P P E A R A N C E S:

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E X H I B I T S

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

3 DR. CHANDRAJIT BAJAJ,

4 Having been first duly sworn, testified as
5 follows:

6 EXAMINATION

7 BY MR. LIANG:

8 Q. Good morning, Dr. Bajaj.

9 A. Good morning, Jeff.

10 Q. And so I just want to go over some
11 ground rules. I know you've heard them before,
12 but I still like to just go over them anyway. So
13 you understand that you're under oath today to
14 tell the truth; right?

15 A. Absolutely.

16 Q. And that, you know, we are
17 transcribing this deposition, so we'll need
18 verbal responses to the court reporter. Instead
19 of nods or anything like that, we'll actually
20 need, you know, verbal answers.

21 A. Yes.

22 Q. All right. And we can take a break
23 whenever you want, just let me know. I'd just
24 ask that there's no question pending.

25 A. Understood. Thank you.

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2 Q. And I think we'll try to take a break
3 every hour, you know, if that works for you,
4 something around there.

5 A. Yeah. I'd appreciate it because also
6 sitting and, you know, I need to walk around a
7 little bit.

8 Q. Yeah, no problem. So just let me
9 know if you need a break.

10 A. Okay.

11 Q. All right. So -- and you understand
12 that for this proceeding, you're not allowed to
13 discuss your testimony with your counsel during
14 the breaks?

15 A. I understand.

16 Q. Now, if you don't understand a
17 question, just let me know and I'll rephrase.
18 Okay?

19 A. Yes.

20 Q. But unless you say otherwise, I'll
21 assume that you understood the question. Is that
22 fair?

23 A. That's fair.

24 Q. Now, you understand you have to
25 answer my questions unless your attorney

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2 instructs you otherwise; right?

3 A. Okay.

4 Q. Are you on any medication today?

5 A. No.

6 Q. Is there any reason you can't provide
7 accurate or truthful testimony today?

8 A. No reason.

9 Q. Okay. Do you have any documents
10 printed out with you today?

11 A. Yes, I do. I have the binder that
12 counsel provided me of all the documents that I
13 had also used in my declaration.

14 Q. Okay. And can you walk through and
15 just list the -- the documents that are in that
16 binder? And if they are, for example, exhibits,
17 you can just list out the exhibit number.

18 A. Got it. So I have my declaration. I
19 believe that's maybe 10 -- I actually forget
20 because I printed the declaration separately on
21 the binder.

22 Q. It should be on the bottom, I
23 believe.

24 A. Yeah, that's right. It's 2005.

25 Q. Okay.

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2 A. And -- and I have Exhibit 1001, which
3 is the patent. I have printed Exhibit 1003,
4 which is the Reader declaration. I have
5 Exhibit 1004, which is the Zetts patent. I have
6 Exhibit 1005, which is the Kaku patent. I have
7 Exhibit 1006, which is the Sao patent. I have
8 Exhibit 1007, which is the Naka patent. And I
9 have Exhibit 1008, which is not marked. It's the
10 Maertens patent. And I have Exhibit 1009, which
11 is just a -- called the Professional Video Legal.
12 That's all I have.

13 Q. Okay. So those are all the exhibits
14 in your binder; right?

15 A. Right.

16 Q. And are all of those documents, are
17 they clean or do they have any markings on them
18 at all?

19 A. Yeah, I made sure that I didn't mark
20 any of those documents there for me, as is the
21 declaration I just printed out.

22 Q. Okay. And other than the binder you
23 have in front of you that you just walked
24 through, do you have any other physical documents
25 in front of you?

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2 A. No.

3 Q. Do you have any other physical
4 documents in the room with you that --

5 A. Well, I have lots of documents.

6 Q. Well, let me rephrase that question.
7 Do you have any other physical
8 documents that are in any way related to the
9 proceeding in the room with you?

10 A. No. I made sure that anything I've
11 scribbled upon is not in my office.

12 Q. Okay. Now -- so you have physical
13 documents in front of you. All right. We are
14 taking this deposition remotely today; right?
15 Okay. So we're taking it over video.

16 And you are on your computer; right?

17 A. Yes, it's from my laptop.

18 Q. And I would ask that you don't access
19 things on your computer or other devices unless I
20 ask you to. All right?

21 A. Okay.

22 Q. And there will be sometimes we will
23 be using a -- you know, a website, which I
24 believe you've logged in to from the court
25 reporter, TSG, to share documents with you.

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2 A. Right.

3 Q. Okay. So, you know, if we do share
4 documents that way, I'll let you know, but
5 otherwise I'd ask that you don't go and access
6 things on your computer. We just, you know,
7 treat this as if was a -- an in-person
8 deposition.

9 A. Got it.

10 Q. And you're here to give testimony in
11 the interparty review proceeding involving
12 U.S. Patent No. 8,472,792; correct?

13 A. That's correct.

14 Q. And if I refer to this as the '792
15 patent, you'll understand that I'm referring to
16 U.S. Patent No. 8,472,792?

17 A. That's correct.

18 Q. Sometimes in this declaration or just
19 in this deposition, we may refer to a term called
20 the POSITA, P-O-S-I-T-A, and that would mean the
21 person of ordinary skill in the art; is that
22 right?

23 A. That's correct.

24 Q. Okay. Now, are there any errors in
25 your declaration or is there anything that you

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2 would want to change in your declaration?

3 A. No, I don't think I discovered any
4 errors. There was, however, a -- when I was
5 going through the declaration yesterday, there
6 was an exhibit which was not the correct subject,
7 and I think counsel -- I mentioned it to counsel
8 and counsel communicated back to you.

9 Q. Okay.

10 A. It was a brochure from Microsoft that
11 was not included in the exhibits that I had
12 looked at.

13 Q. Okay. And other than that one
14 exhibit issue, you didn't see any other -- you
15 didn't see any errors or anything you would want
16 to change about your declaration?

17 A. Yes, nothing I -- I noticed that was
18 awry.

19 Q. When did you begin working on your
20 declaration in this matter?

21 A. Oh, I think this was several months
22 ago. Maybe I misunderstood your question and I
23 should have asked. Are you talking about when I
24 was working on this declaration before I
25 submitted it to you?

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2 Q. Correct, before -- right.

3 A. I believe the date was January 8th
4 when I submitted this, so a couple of months
5 before that, as far as I can recall.

6 Q. How much time did you spend preparing
7 your -- this declaration?

8 A. Oh, gosh. You know, I worked on
9 different parts over time, and I don't exactly
10 recall exactly how much time.

11 Q. Just roughly, ballpark figure.

12 A. Yeah, maybe 30 to 50 hours.

13 Q. What -- and what did you review when
14 preparing your declaration?

15 A. You know, I believe I listed
16 everything I reviewed. Of course, I also relied
17 on my -- my expertise and my knowledge of what a
18 POSITA would also do around the time frame of the
19 patent, but the exhibit list is a fair summary of
20 all the documents I reviewed.

21 Q. Okay. And so -- so every document
22 that you reviewed in preparing your declaration
23 would be either cited in your declaration or
24 listed in the exhibit list?

25 A. Not every. Whatever I thought was

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2 relevant to the matters at hand and that I
3 reviewed, I've included. I -- there are possibly
4 other documents that I looked at which I have
5 which may turn out to be relevant later in case
6 there was something that one needed to look for.
7 But it's pretty much what I've listed.

8 Q. Okay. So -- I see. So everything
9 that you thought was relevant at the time when
10 you submitted your declaration is either cited in
11 your declaration or listed in your patent owner's
12 exhibit list or petitioner's -- one of the
13 exhibit lists in the matter?

14 A. No every one. Like I said, it's
15 like, for example, you know, one of the documents
16 I haven't printed out is the patent execution
17 history, and that references documents. And
18 there are lots of documents that are referenced
19 or cited as included by reference, and I
20 previewed them, but I didn't include them in the
21 exhibit list because I didn't think it was
22 exactly pertinent to the -- to the issues that
23 the petition raised and for the reply. And so I
24 was not overly verbose in -- in stating
25 everything.

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2 Q. And can you provide me with a list of
3 the materials that you reviewed that you did not
4 cite in your declaration or are not included in a
5 -- in the exhibit list?

6 A. That would be difficult. I could
7 possibly spend time looking for it, but it will
8 take time. You know, when you review matters,
9 sometimes you keep things reviewed and sometimes
10 you don't because it's not relevant. So -- but
11 pertinent to the matter on hand, I believe I was
12 fairly consistent in keeping everything which is
13 relevant and including that in the exhibit list.

14 Q. Okay. What -- now, we've been
15 talking about your declaration, and I want to ask
16 you about your preparation for today's
17 deposition.

18 So what did you do to prepare for
19 your deposition today?

20 A. So I spent time in reviewing my
21 declaration and the exhibits that I've cited
22 because I need to refresh, it's been a while. I
23 also discussed it with counsel and, you know,
24 made sure that there were no errors in the cites.
25 So I spent time reviewing those.

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2 Q. About how much time have you spent in
3 preparation for today's deposition?

4 A. I'd say, you know, I spent the
5 afternoons yesterday and also a little bit the
6 day before.

7 Q. So roughly eight hours or so?

8 A. Approximately. Probably a little
9 less.

10 Q. Did you review any documents in
11 preparation for today's deposition?

12 A. I'm sorry, you mean documents other
13 than what we just discussed such as my
14 declaration and the exhibits?

15 Q. Well, I mean, I guess I actually just
16 want to know what documents you reviewed, which
17 would include your declaration and exhibits, if
18 that's what you reviewed?

19 A. Yeah, I reviewed my declaration and
20 check marked all the exhibits, made sure I looked
21 at them, and that's when I discovered, you know,
22 one of the exhibits was -- was not present. And
23 it was -- and we -- or something that I
24 discovered that together with counsel yesterday,
25 we communicated back to you in the afternoon.

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2 Q. Okay. And other than the -- your
3 declaration and the exhibits in this case, did
4 you review any other documents while preparing
5 for today's deposition?

6 A. No, I -- because I thought the matter
7 today was to discuss my testimony, my
8 declaration.

9 Q. Okay. That's fine. I just wanted to
10 get a list just to check. Okay. In total, so
11 including the time when you were preparing your
12 declaration and the time in preparation for this
13 deposition, how much time have you spent
14 reviewing the '792 patent?

15 A. You're saying what fraction of time
16 I've spent on this have I used for the '792
17 patent; is that your -- what your question is?

18 Q. Well, just roughly how much time in
19 terms of minutes or hours have you spent reading
20 the '792 patent?

21 A. I'm sorry, it's very hard to quantify
22 and be accurate. When you're working on -- on
23 the reply to your petition and writing a report,
24 you consult a document intermittently, and of
25 course you've done a read once. So it would be

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2 very hard for me to say exactly how many hours or
3 minutes or seconds I spent.

4 Q. Is there anything you think is
5 unclear about the '792 patent?

6 A. In what context is it unclear? You
7 mean, have they any typos in them or...

8 Q. Well, while you were reviewing the
9 '792 patent, were there any portions that you
10 encountered that you thought were unclear?

11 A. Nothing was unclear, though we -- I
12 did discover a typo. I don't know whether I did
13 or it was in the time I was preparing the report.

14 Q. What's the typo you discovered?

15 A. I think it was in one of the claims,
16 and it was mentioned in my report. I think there
17 was a mistaken "and" for an "or" and I think this
18 was pointed out. And from the context, you'll
19 see that it was obvious that it was a typo.

20 Would you like me to look at it for you? I mean,
21 I can --

22 Q. Yeah, if you could point that out,
23 please.

24 A. I believe it's -- since it's
25 unmarked, it might take me a little bit of time.

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2 I'll point it out in my declaration since that's
3 the best place to start. Yeah, it's in the
4 footnotes of my declaration -- I just discovered
5 another. So this is column 48, line 50 to 55,
6 and I cite that in my declaration in
7 paragraph 94, in which you see the footnote.

8 Q. So to be clearer, I think -- yeah,
9 you're referring to your declaration,
10 paragraph 94, footnote 2?

11 A. Right. And that's a direct quote
12 from the '792 patent, column 48, lines 50 to 55.

13 Q. Okay. So the correct sentence in the
14 '792 patent, column 48, lines 50 to 55 should
15 read "Knowing the corresponding location of the
16 idx1 chunk can decrease search time through the
17 idx1 chunk when attempting to locate associated
18 information." Correct?

19 A. That's correct. That's correct. And
20 as you can see, it's obvious that is the case,
21 because the -- the idx1 is the first index and
22 the index chunk is the second index. And that is
23 indexing into the first index to enhance or
24 decrease the search time through the first index.
25 So you've got these two indices, one timing and

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2 indexing into the idx1 chunk, and if you add only
3 the idx1 chunk, you would spend X amount of time.
4 But now that you have a second index which
5 indexes into it, which is abridged, then you can
6 go faster.

7 Q. For the record, I just want to
8 reflect, we've been using the term idx1, and that
9 as -- is basically spelled all lower case and all
10 one word idx1; correct?

11 A. That's correct. If you're reading
12 through that on paragraph 94 I explain it, and
13 then I use the quote. And so I referred to idx1
14 as the first index and index chunk as the second
15 index, and then I quote from the patent.

16 And that's where there's this typo,
17 the increase should have been decrease, which is
18 natural because you're using this -- and in the
19 context of the patent, if you read through, you
20 will see that obviously it had to be decrease.

21 Q. And why does it decrease search time
22 to know the corresponding location of the idx1
23 chunk?

24 A. Good question. So if you read
25 through the patent, and as I've also explained in

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2 the iteration, the idx1 chunk is the first index
3 which is a complete index of every video frame.
4 So it's a very long index, and when you're
5 searching for a specific frame, you have to
6 search a very long index.

7 But if you have a second index which
8 is much more abridged which provides indices or
9 pointers into the first index, then clearly this
10 two-level procedure used in conjunction allows
11 you to rapidly search just like any hierarchical
12 search will do.

13 Q. Okay. So if you did not have -- if
14 you did not have this abridged index, then how
15 would you search the first index to find a
16 particular frame?

17 MR. HENDIFAR: Objection. Form and
18 incomplete hypothetical.

19 A. You know, this should also be taken
20 in context, and there are many a way and many a
21 way to do search. And it's also something what I
22 was telling you earlier is what I had disclosed
23 in my declaration to -- you know, to consider
24 searching an indices where there's many a way is
25 something I don't want to dwell on at this time

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2 because it's not something I, you know, have
3 analyzed relevant to this -- these proceedings.

4 Q. Well, you said that when you're
5 searching for a specific frame, you have to
6 search the index. So I guess I'm asking for that
7 context that you just explained, how do you
8 search for a specific frame in the idx1 index?

9 MR. HENDIFAR: Objection. Form.
10 Incomplete hypothetical.

11 A. So what I explained was regardless of
12 how you do your search in your first index,
13 having a second index, which is a smaller index,
14 that points to specific parts of the first index
15 will always be faster to locate things in the
16 first index, regardless of how you search in the
17 text.

18 Q. Why is it always faster?

19 MR. HENDIFAR: Objection. Form.

20 A. You know, if you've done the
21 necessary preprocessing of building multiple
22 indices and using a small index to index into
23 something which is larger, then clearly you've
24 done the homework and the preprocessing to
25 facilitate rapid search.

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2 And this is, you know, a person of
3 ordinary skill in the art who even has taken the
4 first course on data structures and computer
5 science would know that's how we speed our search
6 by organizing them into search hierarchies and so
7 on.

8 The reason why it's always done, it
9 has to be carefully balanced, you know, and --
10 and used such that you can -- you cannot have to
11 touch every item in a gigantic list to find what
12 you're looking for, but you're using something
13 that you -- you, you know, organized into
14 subsets, and hence you're going to be superior to
15 where you did not do that organization to begin
16 with.

17 Q. So the purpose of the second index is
18 to speed up the search for a specific frame in
19 the first index; correct?

20 MR. HENDIFAR: Objection. Form.

21 A. In one of the embodiments, as I have
22 been explaining in paragraph 94 of the
23 declaration, in this specific embodiment, yes,
24 one of the advantages of -- one of the advantages
25 of the second index is to speed up the search in

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2 a larger index.

3 Q. The larger index you're referring to
4 idx1?

5 A. Idx1, which is the first index.

6 Q. So this embodiment that you're
7 describing in the '792 patent, the second index
8 speeds up the search for a specific frame in
9 idx1; and then after it finds that frame in idx1,
10 it uses the location information in idx1 to
11 access that specific frame?

12 MR. HENDIFAR: Objection. Form.
13 Incomplete hypothetical.

14 A. You know, as the patent explains and
15 also the paragraph we read, there's a lot of
16 things that get facilitated, including the fact
17 that once you know the corresponding location of
18 the idx1 chunk -- I'm reading from the patent and
19 the quote I inserted -- can decrease the search
20 time through the idx1 chunk when attempting to
21 locate associated information. So all of that is
22 -- is captured in this statement.

23 Q. So why bother with idx1 at all? Why
24 not just use the abridged index to jump straight
25 to the specific frame?

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2 MR. HENDIFAR: Objection. Form.

3 Incomplete hypothetical.

4 A. Again, this is something that one can
5 posit many, many things. It's not something that
6 I was asked to analyze. I'm here to tell you
7 about what I've testified to or declared in my --
8 originally in my declaration. So I have not
9 analyzed what you're asking.

10 Q. So why does the abridged index point
11 to idx1? Why not just use the abridged index to
12 jump straight to the specific frame that's
13 desired?

14 MR. HENDIFAR: Objection. Form.
15 Incomplete hypothetical.

16 A. You know, these are things that I was
17 not asked to analyze. I was telling you what the
18 patent has done, and the patent has done it this
19 way. It has a second index that indexes it to
20 the first index.

21 Q. Right. So why does the second index
22 -- let me go back and make sure that we covered
23 all the typos that you mentioned earlier. So we
24 stopped here at paragraph 94, and you, I think,
25 had mentioned that there's some other typo.

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2 So can you point me to where that
3 typo is in the '792 patent or where it's
4 described in your declaration?

5 A. Actually, I was looking through that.
6 I do remember it's in the claims, and I was
7 thinking I had pointed that out, which maybe for
8 this declaration I do not cite that claim
9 direction. I might have. I just don't -- let me
10 see if I can remember what that was. I have to
11 look at the claims again. Aha. I think I just
12 found it.

13 So, right, I think it's in claim 13,
14 which is dependent on claim 9, and the claim
15 reads, "The encoder of claim 9 wherein the
16 processor is configured to insert key frames when
17 one of the processor" -- so it says "when one
18 of," it means one or the other, so "when one of
19 the processor detects a scene change and a
20 threshold interval of video frames is exceeding
21 without the processor detecting a scene change."

22 So the "and" would make this
23 contradictory, so hence it had to be an "or." So
24 the correct claim typo should -- I mean, the
25 correct claim language should be "when one of the

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2 processor detects a scene change or a threshold
3 internal of video frames is exceeding without the
4 processor detecting the scene change."

5 And, again, it's obvious from the
6 context that that "and" should be an "or."

7 Q. Got it. So that's claim 13 of the
8 '792 patent; is that correct?

9 A. That's correct.

10 Q. All right. Are there any other typos
11 that you're aware of in the '792 patent?

12 A. I don't believe so. But I don't want
13 to go with --

14 Q. Well, let me -- let me ask that
15 question a different way.

16 Are you aware of any other typos in
17 the '792 patent?

18 A. If you can give me a minute, I'm just
19 going through my declaration very quickly to --
20 to make sure that -- that's something that I was
21 using.

22 (Witness reviewing document.)

23 A. No, nothing I -- comes to mind. So,
24 you know, those are the two I'm aware of at this
25 time.

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2 Q. Beyond typos are there any portions
3 of the '792 patent that you found to be unclear
4 when you were reviewing the patent?

5 A. No, I don't believe so. I think I --
6 I'm sure there's nothing unclear.

7 Q. When were you first retained by DivX
8 in this matter?

9 A. For the '792 patent?

10 Q. Correct.

11 A. So as far as I recall, it was a few
12 months before -- it could have been three months
13 or four months before the declaration or -- it's
14 maybe a couple of months that I remember,
15 something around that time frame.

16 Q. Okay. So sometime around October or
17 November of 2020?

18 A. Sometime around then. I was -- yeah,
19 for this patent. For this patent.

20 Q. Are you receiving financial
21 compensation for your work in this matter?

22 A. Yes, I am. I am a consultant. I've
23 consulted on IPR cases.

24 Q. How are you being compensated for
25 your time in this matter?

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2 A. With my usual rate of compensation
3 for such consulting matters, and I think I've
4 disclosed that also in my declaration. It's
5 paragraph 6.

6 Q. Okay. So you're being compensated at
7 an hourly rate of \$675 an hour; correct?

8 A. That's correct.

9 Q. How many times have you been retained
10 as an expert for patent litigation matters?

11 A. Several times over the last 15,
12 20 years.

13 Q. Have you ever charged less than \$675
14 an hour?

15 A. The answer is yes.

16 Q. Why did you charge less than \$675 for
17 some other matters?

18 A. You know, over time my rates have
19 gone up. So there have been matters which were,
20 you know, started before, and at that time the
21 rate that was negotiated was less because that
22 was my rate. And sometimes I was given referrals
23 through companies that specialize in matching up
24 experts with patent lawyers, and since they
25 charge a markup, they request a discount on the

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2 rate. So for those reasons, not based on
3 anything else.

4 Q. Are you currently charging less than
5 \$675 an hour for any of your matters that you're
6 currently working on?

7 MR. HENDIFAR: I'd just caution
8 Dr. Bajaj that he should not disclose any
9 confidential information of other parties
10 to the extent the rate he charges for other
11 cases is confidential information of those
12 parties.

13 A. That's correct. I mean, I -- I, you
14 know, I would say this is confidential
15 information, yes.

16 Q. Well, you -- your compensation rate
17 for IPR matters is public record; right? They're
18 listed in your declarations; correct?

19 A. That is correct. It's only -- and
20 this is part of all engagements -- they -- I am
21 sworn to confidentiality of the arrangement until
22 it becomes a matter of public record.

23 Q. Yeah, I don't need to know the
24 specific matters, right, or -- I'm just asking
25 you in general currently, are you charging less

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2 than \$675 an hour for any matters?

3 A. Again, you know, this information
4 will get public when the matter gets in the
5 public record, and I'm not hiding behind what I
6 charge or defending what I have, I've told you
7 the reasons for the kind. So you'll find out
8 when the matters get public.

9 Q. Well, so I'm not asking you to
10 identify any specific matters or any specific
11 parkings. I'm just asking you about your
12 personal practice, right. So the -- are you
13 personally charging less than \$675 to work on
14 other matters?

15 A. You know, I --

16 MR. HENDIFAR: I have to offer --

17 THE WITNESS: I'm sorry. Go ahead.

18 MR. HENDIFAR: I'm just going to
19 offer, Jeff, that I can instruct, Doctor,
20 to answer without disclosing information.

21 A. Right. I also don't keep those
22 figures in my head. I would have to really go
23 back and check what the engagement was, when it
24 started. I am working on another matter and at
25 might well be. It's exactly this rate. It's not

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2 something I remember. It's not that important.

3 Q. When did you start charging \$675 an
4 hour for your work as an expert?

5 A. I believe it was over a year ago.

6 Again, I don't pay much heed to this. I'm busy
7 with lots of things, and this is consulting and
8 an agreement made at the time someone wants to
9 take me on, that that's my prevalent rate and go
10 from there.

11 Q. So you started charging \$675 an hour
12 at some point in -- in 2020; is that right?

13 A. Possibly. Again, I -- like I said, I
14 don't pay much heed to it, but it is -- yeah,
15 it's around that time I was -- what I told you
16 about where sometimes the rates have to be
17 negotiated because I went through an intermediary
18 and they have a markup, so...

19 Q. Before you began charging \$675 an
20 hour, what -- what did you charge as an hourly
21 rate before that?

22 A. You know, I -- it's something I'd
23 have to go back and check with my accounting, and
24 with everything I charge I disclose in my taxes.
25 This is my current rate and other than, you know,

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2 that, I don't recall all the rates I charged
3 before. They were less but this is my current
4 rate.

5 Q. You've had a long career as a
6 professor. Have you ever worked in industry?

7 MR. HENDIFAR: Objection. Form.

8 A. I've never worked in industry. I've
9 consulted for industry.

10 Q. Now, in your -- in your declaration
11 paragraph 8, you mention you're currently
12 employed as a professor of computer science at UT
13 Austin; right?

14 A. That's correct.

15 Q. You're the director of Computer
16 Visual -- of the Computer Visualization Center at
17 UT Austin; right?

18 A. That's one of the hats I wear, yes.

19 Q. What does the Computer Visualization
20 Center focus on for its research?

21 A. It's actually the Computational
22 Visualization Center.

23 Q. Okay. What does the Computational
24 Visualization Center focus on for its research?

25 A. It's a broad charter. It deals with

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2 anything which is data and computed data and
3 scientific data and engineering data and social
4 data, and -- and so it's always the -- the
5 computational and that is the analysis and
6 visualization of that data.

7 Q. What's your current research focus?

8 A. A lot of the current work is in
9 applying and developing machine learning methods,
10 a lot of driven methods, things we have been
11 doing in the past but now in light of newer
12 algorithms and machine learning algorithms.

13 Q. Okay. So your current research focus
14 is machine learning algorithms, did I understand
15 that right?

16 A. Applied to a large diversity of data.

17 Q. And what was your research focus over
18 the past decade?

19 MR. HENDIFAR: I'm sorry, you
20 weren't connected with the mike. Would you
21 mind repeating the question?

22 MR. LIANG: Yes. You know, I
23 actually -- you know, I'd like to go to
24 your CV. Do you have your CV in front of
25 you? You mentioned you have your

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2 declaration and your CV is attached at the
3 end; right?

4 A. I didn't print out the CV, but we
5 could go over my CV. But it's my -- I also
6 describe my experience over the last decade.

7 Q. Let me just ask you so, you know,
8 your CV mentions that for the past decade you had
9 been working on, and you have this list. And the
10 first things on the list is forward and inverse
11 problems in microscopy, spectroscopy, biomedical
12 imaging.

13 Can you explain what that refers to?

14 A. So as I've also stated in my
15 declaration, you know, it's dealing with imaging
16 and time-dependent imaging and video processing.
17 And you are doing both what we call forward
18 problems where you observe something and you want
19 to elucidate what is it that you observed in your
20 imaging with class tasks of recognition and so
21 on. And inverse problems are trying to figure
22 out how best to acquire the data so that you can
23 get the best fidelity of what you're trying to
24 observe.

25 Q. I see. And microscopy, that refers

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2 to microscopes; is that right?

3 A. Microscopy is whenever you're doing
4 micron and below in your spatial resolution of
5 imaging or variable, and as you get tinier, the
6 size of the data becomes larger and larger.

7 Q. And then what is spectroscopy?

8 A. Spectroscopy is the term used to
9 solve something akin to an inverse problem where,
10 from the data that you observed, you can make out
11 what were the constituents that made up that
12 combination that is what you capture.

13 So if you see, for example, my shirt
14 is -- is orange, then what were the basic
15 elements that were part of that that made that
16 shirt look orange. So it's breaking up it's
17 called the mixture problem. So when I'm looking
18 at observations of a search in material, then I
19 can tell you what are the -- let's call it
20 atomistic elements that are combined to make up
21 that composite material. So that branch of
22 imaging on which you can elucidate that inverse
23 problem is called spectroscopy.

24 Q. I see. And then the next thing that
25 you list is phenom -- phenomenological models.

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2 What is that?

3 A. So it's a -- it comes from an old
4 Greek term, so any object that you can see in
5 nature is called a phenomenological object. And
6 videos or real or synthetic objects are all
7 phenomenological objects.

8 Q. So then the next item you list is
9 development of fast high-dimensional
10 search/scoring engines for projecting
11 energetically favorable multi-molecular and
12 cellular complexes.

13 What does that refer to?

14 A. So that's part of computer, you know,
15 modeling from imaging and video sources. So once
16 I take all of this data, I can build a model and
17 these models can be at many scales. And one of
18 the scales we looked at through microscopy is to
19 build models of molecules and macromolecules, and
20 that's what it's referring to.

21 Q. Then the last item on this list is
22 statistical analysis and interrogative
23 visualization of neuronal form-function.

24 What does that refer to?

25 A. That's, you know, the word

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2 interrogative is telling you that it's
3 quantitative analysis and the ability to query
4 into the data for information, and then also to
5 visualize it.

6 Q. And neuronal form-function, is this
7 a -- like a biological model of neurons?

8 A. It's both a virtual model of -- of --
9 so you -- the old adage of lessons from nature
10 are helping you to design, you know,
11 computational techniques. So you're learning
12 neuronal form and function and designing methods
13 by which you could, you know, disentangle
14 complicated bytes of information from data.

15 And this is generic terms we use
16 because, after all, being in the computational
17 end of things, you're looking at core problems
18 that span -- that span multiple scales. So we've
19 -- you go to my website, you also see data that
20 spans, you know, imaging that we nanoscale all
21 the way to -- to cosmological scales. And that's
22 what we do in our center. It's not just one type
23 of data that we look at.

24 Q. So if we go to your --

25 THE WITNESS: Sorry, do you think

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2 we can take a short break now?

3 MR. LIANG: Yeah, we can take a
4 short break.

5 MR. HENDIFAR: So about ten
6 minutes. So ten minutes past the hour?

7 MR. LIANG: Okay. Sure.

8 MR. HENDIFAR: Is that okay with
9 you, Doctor?

10 THE WITNESS: Yeah, that would be
11 perfect. Take my dog out also.

12 (Break from 12:09 p.m. to 12:22 p.m.)

13 Q. (BY MR. LIANG) Dr. Bajaj, I want you
14 to turn to column 48 of the '792 patent, line 38.
15 Let me know when you get there.

16 A. Okay. I'm sorry, which line did you
17 say?

18 Q. Column 48, line 38.

19 A. Okay.

20 Q. Okay. So this paragraph starting at
21 line 38 describes a process that can be used in
22 accordance with an embodiment of the method of
23 the invention to locate a specific window frame
24 using an index chunk; is that right?

25 A. Yeah. Give me a second and I can

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2 read that and recall it. Thank you. Yeah, I
3 perused it briefly.

4 Q. Okay. So this -- so this paragraph
5 starting at line 38 describes a process for
6 locating a specific video frame; correct?

7 A. A specific video frame using the
8 index chunk.

9 Q. And this index chunk referenced here
10 would be the second index recited in claim 1;
11 correct?

12 A. That's correct.

13 Q. Okay. So then in this embodiment,
14 the second index points you to information
15 concerning the specific frame you're looking for
16 within the idx1 chunk; correct?

17 MR. HENDIFAR: Objection. Form.

18 A. So it's, you know, the process
19 identifies the particular frame in the video
20 sequence in the -- by first locating what is
21 called the tag chunk that references a video
22 frame closest to the frame being sought.

23 And then the closest video frame is
24 using the information within the tag chunk to
25 provide information concerning the location of

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2 the encoded video that is referenced by the tag
3 chunk within the multimedia file using the idx1
4 chunk.

5 Q. So the tag chunk in the second index
6 contains information that tells you where the
7 specific frame that you're looking for is found
8 within the idx1 chunk; correct?

9 MR. HENDIFAR: Objection. Form.

10 A. It's actually as a -- as stated and
11 what the patent states, that the search uses the
12 index chunk to locate the tag chunk that
13 references a video frame closest to the frame
14 being sought, and in one embodiment the closest
15 preceding video frame is sought.

16 And once that closest video frame has
17 been located, the information within the tagged
18 chunk is then used to provide information
19 concerning the location of the encoded video
20 frame referenced by the tag chunk within the
21 multimedia file --

22 Q. So --

23 A. -- using the idx1 chunk.

24 Q. Where is the tag chunk located?

25 MR. HENDIFAR: I'm sorry, I

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2 misheard you. Was that a tag chunk, T-a-g?

3 Q. Right. So, Dr. Bajaj, you were just
4 reading from the discussion in the paragraph
5 starting at column 48, line 38, and there's a
6 discussion of a tag chunk, for example, on
7 line 44. Is that -- do you see that? Is that
8 right?

9 A. That's correct.

10 Q. Okay. Where is that tag chunk
11 located?

12 MR. HENDIFAR: Objection. Form.

13 A. So I believe I've referenced this
14 also in my declaration, and it says in -- you
15 know, the index chunk contains tags, and I'm
16 trying to find you that information. So the
17 infor -- the index chunk contains tags, and
18 that's what you're going to be using to locate
19 the closest frames then to the idx1 chunk.

20 Q. Right. Uses tags to locate the
21 closest frames in the idx1 chunk. And then how
22 does it use the idx1 chunk to access a specific
23 video frame?

24 MR. HENDIFAR: Objection. Form.

25 A. You know, the details of all this is

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2 fairly outlined in several columns of the patent,
3 and we can go back and look at each one of those.
4 So the process for locating the tag chunk within
5 an index chunk is explained, and then the process
6 of what the index chunk contains -- I'm sorry --
7 the idx1 chunk contains, which encodes the
8 information of the location and characteristics
9 of each video frame is explained in -- further in
10 the patent.

11 Q. Where are you looking at?

12 A. I'm -- I was just telling you
13 generally because if it is the details of how
14 these things work, we have to go through and read
15 different columns and different portions of the
16 -- of the patent. I pulled out everything that
17 is relevant hopefully and -- but some of the
18 details of what you're asking, we can pull them
19 out by going through, you know, some of the
20 disclosures and specification of the patent.

21 Q. Yeah, and I was just asking about
22 this process that's describes in column 48,
23 starting line 38 --

24 A. Line --

25 Q. -- for locating a specific video

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2 frame. And you've described a first part of this
3 process where a tag in the index chunk is used to
4 locate information in the idx1 chunk. And so I'm
5 just asking you, well, what's next in the process
6 and how is that used to locate a specific video
7 frame?

8 MR. HENDIFAR: Objection. Form.

9 A. Right. So if you want to know, you
10 can turn to Figure 4.0.1 where the process
11 initiates, and then look at Figure 0.2. And I'm
12 happy to walk you through those.

13 Q. Sure. Can you walk me through
14 Figure 4.0.1?

15 A. Right. So the first, you know, block
16 is to identify a frame to be located within the
17 video sequence, which is the process we are
18 talking about. It calls a identification of the
19 tag chunk in the index chunk that references the
20 encoded video frame closest to the desired frame
21 in the video sequence, which is labeled 641b,
22 which then calls 641c of returning encoded video
23 frames and the portion of the audio tracks
24 indicated by the tag chunk.

25 And then if you flip over and look at

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2 4.0.2, it gives you further detail of how once
3 you've identified the current tag chunk and you
4 compare the position within the video sequence of
5 encoded video frame referenced by the tag chunk,
6 the position within video sequence of the desired
7 video frame. Then after you've located the next
8 tag chunk within the index chunk, you compare its
9 position, and once your search is completed,
10 you've found the desired frame between frames
11 referenced by the current and next tag chunks.
12 And you then call the box 143g, which returns the
13 location of the video frame referenced by the
14 current tag chunk.

15 Q. So if we can go back to 4.0.1.

16 A. Right.

17 Q. The Figure 4.0.1. Let me know when
18 you get there?

19 A. I'm there.

20 Q. The index chunk described in
21 Figure 4.0.1 refers to the second index of claim
22 1; correct?

23 A. That's correct.

24 Q. Now, at the end of Figure 4.0.1, the
25 last step returns an encoded video frame and/or

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2 portion of audio tracks indicated by a tag chunk;
3 correct?

4 A. It's a box. And as, you know, you go
5 to the specification column 48 where the figures
6 are explained, so the process starts by this
7 figure in 4.0.1, which contains of three main
8 macro steps, because there's an identification of
9 the frame process that kicks into the
10 identification of the tag chunks inside the next
11 chunk. And that process is, you know, further
12 explained together in the next paragraph on
13 column 48, a process for locating the tag chunk
14 within an index chunk then references the
15 proceeding frame closest to a desired video frame
16 is shown in Figure 4.0.2, and that process 142
17 commences. So that's the detail of how it goes
18 back and locates.

19 And the final -- once you've found
20 frames in the second chunk, which is the index
21 chunk -- or the second index, which is the index
22 chunk, which references through the tag the
23 frames closest in the idx1 chunk, that's how you
24 then grab and return the location of the video
25 frame referenced by that tag chunk.

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2 And if you go further in the
3 specification, it explains each of those boxes.
4 And it's in column 49 that it explains that this
5 is showing you, you know, all -- one of the
6 embodiments. And it says in line 30 onwards,
7 although the processes shown in figures 4.0.1,
8 and 4.0.2 are discussed with reference the
9 location of the desired video frame, similar
10 processes in accordance within an embodiment of
11 the invention could also be used to locate a
12 desired portion of one or more audio or subtitled
13 tracks.

14 And then it goes on further in
15 explaining how this duo tandem of the second
16 index with the first index is used to locate
17 various elements in the entire multimedia file.

18 Q. So I want to go back. You know, I
19 was just asking about Figure 4.0.1, and I just
20 want to -- I think we're on the same page, I just
21 want to get -- understand.

22 So column 48 -- column 48 around
23 line 43 says, "A search can then be performed
24 through an index chunk to locate the tag chunk
25 that references a video frame closest to the

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2 frame being sought."

3 Do you see that sentence?

4 A. Yes.

5 Q. Okay. And then the next paragraph
6 describes that process for locating the tag chunk
7 within an index chunk that references the
8 preceding frame that's closest to desired video
9 frame; correct?

10 A. Right.

11 Q. Okay. So then Figure 4.0.2, which is
12 described in that next paragraph starting around
13 line 56, that is a more detailed explanation of
14 the process that's referred to in steps 641b of
15 Figure 4.0.1; right? The process of identifying
16 the tag chunk in the index chunk.

17 A. That's correct.

18 Q. Okay. And then the last step of 641c
19 states, "Return encoded video frame."

20 Do you see -- do you see that?

21 A. In 4.0.1, right. And that's in
22 conjunction for 4.0.2 is broken down. So once
23 you found the desired frame between the frames
24 referenced by current and next tag chunks that
25 are bracketing that encoded video frame, you go

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2 and return the location of the video frame
3 referenced by the current tag chunk, and that's
4 why it's pointing you to 49 where it's from
5 line 30 to 42 where -- I didn't read the last
6 portion, but maybe that will help answer with
7 your question -- it says, "referenced in an index
8 chunk that is closest to a particular time, where
9 the time is measured relative to the running time
10 of a video," audio is measured in the multimedia
11 presentation --

12 Q. Dr. Bajaj, I wasn't asking you to
13 read that portion. I just was asking that the
14 last step of 641c states "Return Encoded Video
15 Frame"?

16 A. Right. Right. So you didn't let me
17 finish. It says -- similar --

18 Q. We'll get to those -- Dr. Bajaj,
19 we'll get to those details. But I'm just asking
20 just as a first pass this Box 641c, it states,
21 "Return Encoded Video Frame," correct?

22 MR. HENDIFAR: I have to include
23 please not interrupt Dr. Bajaj so he can
24 complete his response. I would appreciate
25 that. Thank you.

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2 THE WITNESS: So thank you both.

3 A. So returning that encoded video frame
4 is under the process of search in two indices,
5 and that's what I was concluding with, that
6 returning that location of that video frame,
7 which was started from searching in the index
8 chunk, which is the second index, which links to
9 the first index, which is the idx1 chunk, which
10 then points to the video frame, is in the last
11 sentence which I was reading, "Furthermore,
12 similar processes can be used to locate
13 information within the idx1 chunk."

14 And so you have to go and note that
15 the idx1 chunk encodes the position of every
16 video frame, and so this is that large complete
17 index. And the second index which is the index
18 chunk, which has encoded tags which are giving
19 you information of the closest video frames
20 because they are only capturing a subset of the
21 video frames.

22 So once you've bracketed the video
23 frame that you are desiring, that specific video
24 frame is -- is found by using the second index
25 chunk pointed to into the first -- in idx1, which

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2 is the first index, which then gives you the
3 location of the video frame, which is what is
4 that return of the located video frames. So it's
5 a -- the culmination of this entire intertwined
6 process.

7 Q. So the AVI idx1 chunk contains the
8 location of every video frame in the file; is
9 that right?

10 MR. HENDIFAR: Objection. Form.

11 And incomplete hypothetical.

12 A. You know, so, again, I -- while I --
13 I fully read the patent and I understand
14 everything, you know, I was not asked to analyze
15 all of -- how all the -- the various inventions
16 there were in the patent. I was only asked to --
17 to provide to the petitioners -- or the petition
18 and I've done that in my declaration.

19 Q. Right. And I --

20 A. I haven't analyze every nuance and
21 there are many embodiments here, right, and so I
22 was explaining to you as far as I can recall.

23 Q. And I'm just trying to understand
24 here. I'm just talking about this embodiment
25 then, you know, in this talking about starting in

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2 column 48. And it discusses the idx1 chunk;
3 right?

4 A. (No verbal response.)

5 Q. Right?

6 A. That's correct.

7 Q. And this idx1 chunk is a reference to
8 the AVI idx1 chunk; right?

9 A. So, again, everything in the '792 is
10 encoded using AVI, and -- and so the first and
11 second indices are encapsulated into -- to both.
12 And just as your -- you know, I was reading, it
13 might clarify, if you would, to read in column 49
14 from line 24 talks about -- which is the details
15 I was mentioning that I was not asked to
16 analyze -- but it's clear from "In further
17 embodiments, the location of a desired frame can
18 be further refined by using the references within
19 the index chunk through the corresponding
20 information within the idx1 chunk to search for a
21 reference within the idx1 chunk to a specifically
22 desired encoded video frame that is not
23 referenced in the abridged index chunk, the
24 second index."

25 So that's very clear from that that

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2 these two indices are working together to -- to
3 do everything we were discussing in the figures
4 4.0.1 and 4.0.2 and with detail -- specific
5 details of that, of course, are spread out
6 through knowing the format of how the idx1 chunk
7 encodes and how the index chunk encodes using the
8 AVI format. And like I said, that's not what I
9 spent my time analyzing, so I can't give you any
10 more details than I've already offered.

11 Q. In column 48, line 38, it describes a
12 process to locate a specific video frame.

13 Where is the location of that
14 specific video frame stored? Is it in the first
15 index? the second index? or both?

16 MR. HENDIFAR: Objection. Form.

17 And foundation.

18 A. You know, I didn't analyze this to
19 that detail. Like I said, it's the fact that
20 both indices are used to locate any desired and
21 specific video frame has been explained, and they
22 are used in conjunction because one indexes it to
23 the other.

24 And as far as, you know, to unravel
25 everything exactly what the encoding is, one has

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2 to analyze the patent a little bit further
3 because it gives you specific details of how it
4 captures the location and also other
5 characteristics and also the information both in
6 the tags, in the index chart, which is the second
7 index, and the idx1 chunk, which is the first
8 index, encapsulates it into the second AVI file.
9 So that's what I can tell you right now.

10 Q. And for the embodiments described
11 starting in column 48 -- withdrawn.

12 For the embodiments described in
13 columns 48 and 49 of the '792 patent, is there
14 any embodiment where the second index contains
15 location information for video frames?

16 A. No. I -- at this stage, I can't -- I
17 don't have this memorized. Is there something
18 specific in my declaration you can point me to,
19 and we can unravel it from there?

20 Q. Well --

21 A. I think that's what we were --

22 Q. Well, Dr. Bajaj, you don't have to
23 have it memorized. You have the patent in front
24 of you, and I'm referring specifically to column
25 48, for example, the process that they start

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2 describing around lines 49. You're free to refer
3 to the patent. You're free to refer to your
4 declaration.

5 So let me ask my question again.

6 A. Okay.

7 Q. For the embodiments described in
8 columns 48 and 49 of the '792 patent, is there
9 any embodiment where the second index contains
10 location information for video frames?

11 A. You know, it might well, but it does
12 not contain -- at this level I can tell you it
13 doesn't contain information for all of them
14 because it's an abridged index, so it's always a
15 subset. The details of what information is
16 encoded could include location and could include
17 location within -- it does include location
18 within the first index chunk.

19 So I -- you know, and there are
20 several embodiments sketched out and written
21 throughout the patent, so you can't just state
22 and say I'm referring to column 48 embodiments.
23 There are many embodiments there because these
24 also talk about further embodiments.

25 But at this level, which is, I think,

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2 you know, understood that the second index is an
3 abridged index, so it does not have the location
4 of everything. It has to use the first index to
5 provide the location of video frames, of any
6 specific video frame.

7 Does that answer your question?

8 Q. So the first index is the index that
9 contains the location information for all of the
10 frames in the video file; right?

11 A. Location and other information about
12 each frame in the video file, yes.

13 Q. The second index -- withdrawn.

14 Can the second index by itself be
15 used to locate a specific video frame within the
16 video file?

17 MR. HENDIFAR: Objection. Form.

18 Incomplete hypothetical.

19 A. Again, I'm perhaps answering the same
20 question again, and so hence my answer is the
21 same. The second index is an abridged index.
22 It's only having information about a subset of
23 the video frames. So it's used in conjunction
24 with the first index to locate any specific video
25 frame that is desired.

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2 Again, I haven't analyzed all the
3 intricacies, but all the claims mentioned the
4 same thing. All the claims and the
5 specifications are what are mentioning the fact
6 that the second index in conjunction with the
7 first index is used to -- to locate in specific
8 because of the reasons I've outlined.

9 Q. Are you aware of any embodiments in
10 the '792 patent where the second index is used by
11 itself without any use of the first index to --
12 to locate the closest video frame to a desired
13 video frame?

14 A. Yes, I mean, that's exactly what the
15 second index is doing. It's got tags which allow
16 you to locate video frames closest to a desired
17 video frame.

18 Q. And do the tags of the second index
19 contain location information for video frames?

20 MR. HENDIFAR: Objection. Form.

21 A. The tag information has
22 information -- and we'd have to go back -- and it
23 has information about where in the first, it
24 could well have information about a subset of the
25 video frames and in that information would be of

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2 some subset of the frames where they are located.

3 Q. Well, let me go to -- if we can turn
4 to Figure 4.0.1.

5 A. Right.

6 Q. Okay. And do you see that box 641c
7 states "Return encoded video frame and/or portion
8 of audio frames indicated by tag chunk."

9 Do you see that?

10 A. 4.0.1?

11 Q. 4.0.1. Let me know when you get to
12 that figure.

13 A. Yeah, I am here now. Thank you.

14 Q. Okay. And you see that box 641c
15 states "Return encoded video frame and/or portion
16 of audio frames indicated by tag chunk."

17 Do you see that language?

18 A. Yes.

19 Q. So in -- would you agree, then, that
20 for Figure 4.0.1, the tag chunk can be used to
21 provide information concerning the location of
22 the encoded video frame?

23 A. Yeah, it's telling you that I can,
24 you know, locate the closest video frames, right,
25 and that's why the detail of that is shown in

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2 Figure 4.0.2, the location of what is the tag
3 chunk doing. And if you flip over, you'll see it
4 says "Identify current tag chunk," and so once
5 you in your second index found your tag chunk,
6 then you compare the position within video
7 sequence of encoded video frame referenced by the
8 tag chunk, the position within video sequence of
9 the desired video frame.

10 So it's got information that
11 references the position, and once you then locate
12 another tag chunk, which brackets the desired
13 video frame. So this referencing by the tag
14 chunk is, you know, providing information about
15 the video frame in the first -- in the first
16 index, which allows you to locate the desired
17 video frame.

18 Q. So the second index by itself can be
19 used to locate within the video file the closest
20 preceding video frame to the one being sought;
21 right?

22 A. No, I didn't say that. I didn't say
23 that. You know --

24 Q. Do you disagree with that statement?

25 A. Well, I don't disagree, but this is

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2 not what I was analyze -- I was not asked to
3 analyze the details of exactly what -- I
4 understand what is disclosed in the -- you know,
5 with respect to -- the -- the items you've raised
6 in your petition, and I've replied to them.

7 Given time I can post-analyze all the
8 intricacies that are embodied in the patent.
9 It's not something I was asked to do, so hence I
10 don't want to be inaccurate.

11 Q. If you could turn to column 49, you
12 had read a paragraph here starting at column 24.
13 And if you could just read to yourself -- just
14 read to yourself the paragraph starting at column
15 -- column 49, line 24, and let me know when
16 you're finished. This is that paragraph that you
17 had read into the record earlier.

18 A. Yes.

19 MR. HENDIFAR: Could you state the
20 citation again, please.

21 MR. LIANG: It's column 49, line 24
22 through 29.

23 MR. HENDIFAR: Thank you.

24 Q. So if you'd just read it, and let me
25 know when you're ready for a question.

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2 A. Yes, I've read it.

3 Q. The index that's referred to in this
4 paragraph is the second index; correct?

5 A. That's correct.

6 Q. And then idx1 that's referred to in
7 this paragraph is the first index; correct?

8 A. That's correct.

9 Q. So this paragraph is explaining that
10 the idx1 chunk can be used to locate a desired
11 video frame if it's not referenced in the index
12 chunk; correct?

13 A. That's correct.

14 Q. But then on the flip side, for a
15 desired video frame that is referenced in the
16 index chunk, then the idx1 chunk isn't necessary;
17 correct?

18 MR. HENDIFAR: Objection.

19 Incomplete hypothetical.

20 A. You know, when you say not necessary,
21 the entire patent talks about having two indices,
22 and of course there are many embodiments, you
23 know, how you use these two indices. So what is
24 used and in conjunction with what is what's been
25 explained here how the desired frame is, as is

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2 being explained, is using both the index chunk,
3 the second index, with the corresponding
4 information that its tags are telling you are,
5 you know, bracketing in the first index of idx1.
6 And once you've found the closest ones in both,
7 you can go back and refine your search and then
8 locate it.

9 Again, you know, that's the analysis
10 I've kind of put into the -- into the -- into my
11 declaration in reply to your questions or their
12 -- your contentions in the petition. I don't
13 know the details of all of the -- of all of the
14 hypotheticals you have.

15 MR. HENDIFAR: It's been close to
16 an hour.

17 MR. LIANG: Sure, we can do that.

18 MR. HENDIFAR: Come back at
19 15 minutes past the hour. Is that good
20 with everybody?

21 MR. LIANG: Sure.

22 THE WITNESS: Yes.

23 MR. HENDIFAR: Thank you.

24 (Break from 1:10 p.m. to 1:17 p.m.)

25 Q. If you can go to your declaration.

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2 A. Yes.

3 Q. And if you can go to paragraph 12 of
4 your declaration.

5 A. Yeah, I'm there.

6 Q. So paragraph 12 describes a paper at
7 the end entitled Shastra. Well, that's the start
8 of the title.

9 Do you see that?

10 A. Yes.

11 Q. Okay. And in the preceding sentence
12 you mentioned you've created 3D collaborative
13 multimedia software environments which were fully
14 navigable for multi-person computer gaming and
15 simulation.

16 Do you see that?

17 A. Yes.

18 Q. Okay. And is this Shastra paper a
19 reference to that 3D collaborative multimedia
20 software environment mentioned in the previous
21 sentence?

22 A. Yes, this is an example of one of the
23 papers that we wrote. This is about the Shastra
24 multimedia collaborative design environment, and
25 there were others as well.

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2 Q. What was that multimedia -- the 3D
3 collaborative multimedia environment?

4 A. It was an environment that allowed
5 multiple people to work together in 2D and 3D
6 design.

7 Q. In the next paragraph, paragraph 13
8 of your declaration, you reference a publication,
9 "Compression-Based 3D Texture Mapping for
10 Real-Time Rendering."

11 Do you see that?

12 A. Yes.

13 Q. Was -- what was this paper about?

14 A. I can't recall everything I did, but,
15 you know, just going by the title, it was based
16 on compression of 3D texture maps, which are used
17 in computer graphic rendering.

18 Q. And so your discussion in
19 paragraph 13 you mention, you know, this says
20 "increasing need for computer graphics display
21 realism," and it seems to me this portion of your
22 declaration is somewhat chronological. And you
23 have this stuff in 1994, and, you know, in
24 paragraph 15 you start talking about stuff in the
25 2000s.

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2 So is it fair to say that this --
3 that the contents described in paragraph 13 would
4 be discussing papers and research you -- work
5 that you did in the late 1990s or early 2000s?

6 A. You know, it's fair. But what
7 happens is you don't just drop something you are
8 doing earlier and -- but clearly the focus in the
9 late 1990s and the need was perceived as -- as
10 more and more people were interested in working
11 on networked environments.

12 So this is -- and the kind of data
13 that you want to exchange went up from simple
14 textual files to multimedia that was natural to
15 work on encoding, compression that facilitates,
16 and that's what these papers are referencing.

17 Q. And this -- would these papers be
18 describing ways to add 3D models to 2D video?

19 MR. HENDIFAR: Objection. Form.

20 A. You know, everything is finally
21 digitized, so when you say add 2D -- 3D models to
22 2D video, 2D models get rasterized into 2D video
23 and transmitted. It's how you encode that
24 information that allows you to recover. And also
25 displays are all two dimensional, so everything

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2 becomes 3D video.

3 Q. You know, in this -- towards the
4 bottom of page 4 of your declaration, you say, "I
5 was intimately involved with the development of a
6 new synthetic hybrid data compression...MPEG
7 standard."

8 Do you see that sentence?

9 A. Yes.

10 Q. And I think we've discussed before
11 that the synthetic-natural hybrid coding let you
12 encode 2D video along with 3D shapes and
13 functions on 3D shapes and compress them; is that
14 right?

15 A. Encode them and compress them, so you
16 took -- in fact, the patent itself is encoding
17 images of 3D objects with improved rendering time
18 and transmission processes. So, yes, you can
19 take all kind of phenomenological data and encode
20 it into a stream and compress it and transmit it.

21 Q. Okay. So -- so then
22 synthetic-natural coding is for encoding 2D video
23 along with 3D shapes and functions on 3D shapes
24 and compressing them; right?

25 A. The word "hybrid" is a good thing to

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2 note. The hybrid is of what we distinguish
3 between real and synthetic. So when you -- what
4 you acquire from -- and this is just a notation
5 in parlance -- what you acquire from a video
6 camera is also synthetic, right. It's a
7 digitized version of the real physical object or
8 the scene.

9 But just to make a distinction, when
10 you build a virtual model of something and then
11 you digitize it as opposed to acquiring something
12 from a camera, which is also digitizing it and
13 encoding it, then if you confuse the two,
14 something that you've done from a local model or
15 from something that you acquired from a natural
16 scene, finally becomes 2D and fused, you can
17 encode this multiplex stream and transmit it and
18 also decode it.

19 And so such encoding, transmission,
20 reconstruction, decoding, compression are all
21 intertwined topics in the field of compression or
22 multimedia.

23 Q. So what -- I'm just trying to get a
24 sense for what -- you know, what is the
25 synthetic-natural hybrid data compression that

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2 you worked on. And, you know, I had thrown out a
3 description that I think you provided previously,
4 and I'm just trying to get an understanding for
5 what this is.

6 A. I'm pretty sure you don't throw out
7 anything, Jeffrey. But anyway, so we worked on
8 both the MPEG standard as well as the -- this was
9 going beyond just what we call natural video,
10 which was video that you acquire from sensory
11 cameras or other acquisition devices.

12 Recall, you know, cameras are
13 equipped with multiple sensors. You can capture
14 audio; you can capture video; you can also with
15 OCR capture textual information automatically,
16 glean it from your video.

17 So there was a lot of multimedia that
18 is encoded and compressed differently because
19 different loss factors had to be balanced. So
20 when it comes to text, you can't make a mistake
21 and you can't misspell a word when you
22 reconstruct it.

23 Where it comes to audio, the frame
24 rates are different to that of the video. So
25 standards like MP-2, MP-1 or MPEG-1, MPEG-2,

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2 MPEG-3, MPEG-4 have always been looking at
3 various ways in which to transmit multiplexed
4 data.

5 Now along comes with the advent of
6 computer graphics and the ability to model shapes
7 and ability to simulate phenomena, you can have,
8 you know, things that you use in computer -- in
9 movies. If you've seen "The Perfect Storm,"
10 about 80 percent of all of that content of that
11 movie was computer graphics generated and -- and
12 fused with acquired data.

13 In all of the "Lord Of The Rings" and
14 all of those movies, maybe 90 percent of the
15 scenes are computer graphics generated. So that
16 was the advent in the 1900 -- 1990s all the way
17 to the present day that people are building
18 different standards.

19 So we worked on what was then called
20 MPEG-5 and -6, and such standards we had -- since
21 we had been working on compression and encoding
22 and transmission, that is also used in
23 computer-supported cooperative work like Shastra
24 in the years before, and you are constantly
25 switching between groups of people, just like we

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2 are doing now with Zoom, but it's only camera and
3 audio that's being multiplexed and maybe some
4 chat text.

5 So that's the background of what is
6 the hybrid fusion of synthetic and natural video,
7 encoding those imageries or those video frames,
8 transmitting them, un-multiplexing them, and
9 providing appropriate fidelity. And so we got
10 one of the patents. There were many patents that
11 were awarded, of course, because it's a
12 complicated field.

13 Does that refresh your memory too?

14 Q. So let's go to your -- let's go to
15 your declaration. If you could turn to page 9,
16 there's a section starting at paragraph 29. Let
17 me know when you get there.

18 A. Okay. I'm on page 9.

19 Q. Do you see there's a section that
20 says "My Understanding of Legal Standards"?

21 Do you see that?

22 A. Yeah, that subsection.

23 Q. In this subsection III(C) titled "My
24 Understanding of Legal Standards" explains the
25 legal principle that you applied when forming

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2 your opinions in this case; is that fair?

3 A. That is correct.

4 Q. Now, have you ever heard of a US
5 Supreme Court decision called KSR?

6 A. I'm sorry, I have not.

7 Q. Have you ever -- are you aware of an
8 obviousness rationale where the combination of
9 familiar elements according to known methods is
10 likely to be obvious when it does no more than
11 yield predictable results?

12 A. So the obviousness argument -- and
13 this is what I also received from counsel is
14 inclusion based on these four general types,
15 which I've listed in the declaration -- the scope
16 and content of the prior art, the level of
17 ordinary skill, the differences between the
18 claims, and objective indicia of non-obviousness.

19 Then I further elaborate, of course,
20 in paragraph 31, which is, again, what I've
21 learned from counsel.

22 Q. Is it your understanding that in
23 conducting an obviousness analysis, a precise
24 teaching directed to the specific subject matter
25 of the challenged claim need not be sought out

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2 because it is appropriate to take account of the
3 inferences and creative steps that a person of
4 ordinary skill in the art would employ?

5 A. You well know I'm not a legal person,
6 so I don't understand all the nuances of -- of
7 what you just said. But I do understand that,
8 you know, if -- if this combination of scope and
9 content of the prior art would lead a person of
10 ordinary skill in the art to understand, you
11 know, that there is something minuscule between
12 what the prior art discloses and what is claimed,
13 and those differences are very small, then I
14 would call that obvious to a person of ordinary
15 skill in the art.

16 But, clearly, if you -- if you, you
17 know -- you can't use hindsight, for example,
18 knowing the solution and then saying, oh, here's
19 how I would have put it together, you know, then
20 obviousness is the wrong argument.

21 Q. In forming your opinions for this
22 proceeding, did you apply an understanding that
23 the obviousness analysis need not seek out
24 precise teachings directed to the subject matter
25 of the challenged claim for a Court to take

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2 account of the inferences and creative steps that
3 a person of ordinary skill in the art would
4 employ?

5 MR. HENDIFAR: Objection. Asked
6 and --

7 Q. Did you apply that understanding when
8 forming your analysis in this case?

9 MR. HENDIFAR: Objection. Asked
10 and answered.

11 A. You know, again, I am not a legal
12 expert. I don't understand all the nuances of
13 everything you said, and you said a lot. I'm
14 telling you what I have been doing and what I've
15 done for this matter as well is a completely
16 honest testimony of what I've received and
17 examined the scope and content of the prior art
18 based on your arguments and whether it's the
19 petitioner's onus, and that's what my charter was
20 to reply to.

21 We defined and agreed upon a person
22 of ordinary skill in the art of the differences
23 of my opinion with your expert, I've also pointed
24 out and I've also looked at the various grounds
25 you have indicated and I --

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2 Q. Did you look at the differences
3 between the claimed invention and the prior art?

4 A. As per your arguments, and I have
5 indicated that in all of the subsequent pages of
6 my report; and we can go over them para by para,
7 and I'll tell you exactly how I applied that to
8 it.

9 Q. And it's your opinion that no single
10 reference that's relied on by the petition
11 discloses a video file with two indexes; is that
12 fair?

13 A. So the prior art that are part of
14 your grounds are Zetts and Kaku and possibly Sao,
15 and none of them have two indices. And your
16 petition is all about trying to -- to combine the
17 teachings of Zetts, which is on MPEG with the
18 teachings of Kaku, which is actually dealing with
19 not multimedia streaming files but -- but camera
20 displays and encoding.

21 And as I've stated in my report, you
22 know, Kaku and Zetts and trying to show on them
23 together without any explanation, and also the
24 fact that Zetts and Kaku are quite far apart,
25 and, furthermore, you know, it's not having

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2 second index pointing to the first index and used
3 in conjunction. And all of these arguments we've
4 gone through I've laid out in the report. It's
5 in --

6 Q. In forming your opinions, then, in
7 this matter, did you apply an understanding --
8 and it's fine if you didn't, I just want to under
9 -- know if you applied an understanding or not --
10 that when analyzing obviousness, the precise
11 teaching of a video file with two indexes need
12 not be sought out because it is appropriate to
13 take account of the inferences and creative steps
14 that a person of ordinary skill in the art would
15 employ -- did you apply that understanding? Yes
16 or no.

17 MR. HENDIFAR: Objection. Asked
18 and answered. And form.

19 A. I've applied my understanding of the
20 legal standards, as I've stated in my
21 declaration, you know, honestly and to my full
22 capability, and I stand by every word I have
23 placed in that. And that includes looking at the
24 scope and content of the prior art, looking at
25 the level of ordinary skill, and the differences

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2 as pertains to your petition arguments. And --
3 and, you know, the arguments are not obvious at
4 all, and I've explained that in each of your
5 grounds.

6 Q. Right. And so I've asked this a few
7 times and I still haven't gotten an answer. So
8 I'm -- if the answer to this question is yes,
9 this is your opportunity to say yes. You can
10 provide additional explanation, but you -- if you
11 applied this understanding, then I need an answer
12 that yes, you applied it. So I'll ask the
13 question again.

14 When forming your opinions in this
15 case, did you apply an understanding that when
16 analyzing obviousness, precise teaching of a
17 video file with two indexes need not be sought
18 out because it is appropriate to take into
19 account the inference and creative steps that a
20 person of ordinary skill in the art would employ?

21 MR. HENDIFAR: Objection. Form.

22 Asked and answered.

23 A. So I -- answering it again because,
24 you know, my charter was to look at your
25 petition, its contentions and reply to them, and

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2 I have on each of your grounds. And for each of
3 those grounds, I've applied exactly my full
4 understanding of the legal standards, as I have
5 stated in my declaration.

6 And, you know, we can go contention
7 by contention, ground by ground as I've laid out
8 in my declaration, and I can tell you exactly the
9 reasons. And I've tried to state them precisely
10 in my declaration as well as to the reasons why I
11 feel this is neither obvious nor is it disclosed
12 as to how you put these things together based on
13 your contentions.

14 Q. Is it your understanding that the
15 teachings of Kaku may have obvious uses beyond
16 their primary purposes?

17 MR. HENDIFAR: Objection. Form.
18 Incomplete hypothetical.

19 A. Based on your contentions, I
20 responded to them and also explained why Kaku
21 was, you know, not analogous art with respect to
22 the claims of the '792. And, furthermore, how it
23 would not be possible to -- or obvious to a
24 person of ordinary skill in the art to combine it
25 with Zetts.

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2 But that's what you're claiming,
3 you're saying Zetts in view of Kaku. I'm saying
4 they are in different realms, and the combination
5 is not obvious because you haven't explained it.

6 Q. And did you apply an understanding in
7 this proceeding that familiar items may have
8 obvious uses beyond their primary purposes?

9 MR. HENDIFAR: Objection. Form.

10 Asked and answered. Incomplete
11 hypothetical.

12 A. You know, everything I stated and I
13 applied with respect to what I've stated for a
14 person of ordinary skill in the art is in my
15 declaration. And I'm happy to go, you know,
16 specifically through each paragraph, and if
17 there's any question you have there and you'd
18 like me to answer it.

19 Q. Have you -- can you -- have you
20 provided any opinions in your declaration that
21 analyzed whether the teachings of Kaku may have
22 obvious uses beyond their primary purposes?

23 MR. HENDIFAR: Objection.

24 Incomplete hypothetical. Form.

25 A. I was not asked to analyze all of

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2 Kaku and its uses. I was replying to your
3 construction of trying to show on Kaku into
4 Zetts, and I'm saying it's not obvious and for
5 reasons I've outlined in my declaration.

6 Q. Now, we have -- you have a website
7 from -- from the court reporter, TSG, that you've
8 logged in to, I believe, to share exhibits. So
9 if you could go into that website. I shared an
10 Exhibit 1027 in the submitted folder. So let me
11 know when you -- well, first let me know if
12 you're able to access the website.

13 A. Yeah, I actually -- magically it's
14 still logged me in. Okay. I'm there.

15 Q. Okay. And --

16 MR. HENDIFAR: I'm sorry for
17 interrupting, Jeff. So I'm also logged on
18 and in the submitted folder it is the
19 exhibit from the last deposition, not the
20 exhibit --

21 MR. LIANG: There should be nothing
22 in there. So if you look on the top,
23 there's a -- the breadcrumbs, right, the
24 trail, the paths.

25 MR. HENDIFAR: Right.

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2 MR. LIANG: And you should see --
3 it should say 3/26.

4 MR. HENDIFAR: So I can tell you
5 that -- sure. Let me tell you what the
6 path that is shown on my computer says,
7 please. It says, Folders, Predeposition
8 Master Folder, Netflix and Hulu with DivX
9 and --

10 MR. LIANG: Okay. Can you try
11 clicking on -- just clicking on the Netflix
12 and Hulu. I'll see -- and it will take you
13 to that folder and see what other folders
14 is there.

15 MR. HENDIFAR: There is only one
16 folder underneath that and that is called
17 186622 Chandrajit Bajaj. And uploaded date
18 is 10/21/20. There is nothing else.

19 MR. LIANG: And, Dr. Bajaj, what do
20 you see on your screen?

21 THE WITNESS: I'm actually seeing
22 only one folder, and that it's it. And
23 there's a file.

24 MR. LIANG: So --

25 THE WITNESS: Yeah. Go ahead.

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2 MR. LIANG: Let's go off the
3 record.

4 (Break from 1:49 p.m. to 1:52 p.m.)

5 Q. (BY MR. LIANG) So we're back on the
6 record. And, Dr. Bajaj, do you have the PDF
7 that's been labeled 1027 open?

8 A. Oh, the -- it's in the chat you mean?

9 Q. It's in the website that you were
10 accessing or through the chat. But I think the
11 website is the easier way to access it. The TSG
12 website you had, if you click into the folder,
13 the submitted folder, you'll see that there's a
14 link in there.

15 A. I see that, yeah.

16 Q. Okay. And if you click that and let
17 me know when you have it open.

18 A. Yes, I have it open.

19 Q. So I have handed you an exhibit that
20 is labeled 1027.

21 Do you recognize this document?

22 A. Yes, I -- it's a declaration I did
23 awhile back, yeah.

24 Q. Awhile back, you mean 2018; right?
25 If you go to page 51, the very last page of the

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2 document.

3 A. That's right, July of 2018.

4 Q. And on page 51 this is your signature
5 at the -- on page 51 of Exhibit 2000 --
6 Exhibit 1027; correct?

7 A. Yes, it is. Yeah.

8 Q. Now, if we could turn, then, to
9 paragraph 18 of this exhibit. Let me know when
10 you're there.

11 A. Give me a minute, please.

12 Q. Okay. Well, let's back up a second.
13 So this -- if we go to page 10 of this -- let me
14 go -- let's go to page 10 of Exhibit 1027, and
15 let me know when you get there. Are you there?

16 A. On 20 --

17 Q. Page 10 of Exhibit 1027.

18 A. Yeah, I'm there.

19 Q. And this section is titled "Legal
20 Framework" and these were the -- these paragraphs
21 in this section describe the legal understanding
22 you applied when providing your opinions in that
23 matter; correct?

24 MR. HENDIFAR: Objection. If you
25 would allow me to state the objections,

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2 Doctor. Objection. Scope and relevance.

3 Q. Okay. Now if we could go back to
4 column -- I'm sorry -- paragraph 18.

5 A. So, you know, these are the legal
6 framework documents I was given by the counsel
7 then, and that's what I applied for that -- for
8 that matter, yes.

9 Q. For that matter. Okay. Now, if we
10 could go to paragraph 18 and let me know when you
11 get there.

12 A. Uh-huh.

13 Q. In this previous matter that you
14 provided opinions for, you applied an
15 understanding that in conducting an obviousness
16 analysis, a precise teaching to the specific
17 subject matter of the challenged claim need not
18 be sought out because it is appropriate to take
19 account of the inferences and creative steps that
20 a POSITA would employ; is that right?

21 MR. HENDIFAR: Objection. Scope
22 and relevance.

23 Q. And then you also applied an opinion
24 that the prior art could be directed to any need
25 or problem in the field of endeavor at the time

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2 of invention to provide a reason for combining
3 the elements of the prior art in the manner
4 claimed; is that right?

5 MR. HENDIFAR: Objection. Scope.
6 Relevance.

7 A. You're reading the paragraph and
8 that's how I've written it, yes.

9 Q. And then in the last sentence of the
10 paragraph, you write, "I am informed that under
11 the KSR obviousness standard, common sense is
12 important and should be considered." Is that
13 right?

14 MR. HENDIFAR: Objection. Scope.
15 Relevance.

16 Q. Okay. So -- and that is, in fact,
17 the legal standard you applied when forming
18 obviousness opinions in this previous matter;
19 correct?

20 MR. HENDIFAR: Objection.
21 Objection. Scope. Thank you.

22 THE WITNESS: I'm sorry.

23 A. That is what my counsel had told me
24 to do, and that's what I did there.

25 Q. And in this other matter, you also

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2 applied a legal understanding that common sense
3 teaches that familiar items may have obvious uses
4 beyond their primary purposes; correct?

5 MR. HENDIFAR: Objection. Scope.
6 Relevance.

7 A. Yes, for this matter what was
8 required, and that's what I did.

9 Q. Okay. And -- but for the current
10 matter for the '792 patent, you did not apply an
11 understanding that common sense teaches that
12 particular items may have obvious uses beyond
13 their primary purposes; is that fair?

14 MR. HENDIFAR: Objection. Scope.
15 Relevance. Incomplete hypothetical.
16 Misstates testimony. And form.

17 A. You are putting words in my mouth,
18 Jeffrey. I did not say I did not apply anything
19 that was not what I was supposed to apply. I
20 stated to you what I applied was what's given in
21 my declaration, and I've replied to each and
22 every aspect of your contention and given honest
23 testimony.

24 Q. So you -- you, in fact, did apply an
25 understanding in forming your opinions for the

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2 '792 patent that a reference may be relied upon
3 for all that it teaches, including beyond its
4 primary purpose; is that right?

5 MR. HENDIFAR: Objection.

6 Incomplete hypothetical. Form. Scope.

7 Relevance. Asked and answered.

8 A. I applied all of the understanding of
9 legal standards I've stated, and I've honestly
10 given a honest declaration as to why each of your
11 grounds is not obvious or, you know, there's no
12 detail that I could even respond to.

13 Q. I'm just looking at Exhibit 1027 in
14 this last line, right, the idea that particular
15 items might have obvious uses beyond their
16 primary purposes. And -- and I just want to know
17 is -- is that yes or no -- something that you
18 applied when analyzing your opinions for the '792
19 patent?

20 MR. HENDIFAR: Objection. Form.

21 Asked and answered. Incomplete
22 hypothetical. Scope and relevance.

23 A. And, you know, I'm repeating, again,
24 as I've declared in -- or I've stated in my
25 declaration, which are paragraphs we didn't even

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2 come to when I applied exactly similar tests.

3 So you go to paragraph 36 and 37 of
4 my current declaration, you will see that it's
5 exactly the kind of things that I did take into
6 account. If the reference is not in the field of
7 the inventor's endeavor, whether the reference is
8 still reasonably pertinent to the particular
9 problem with which the inventor is involved.

10 So all I've -- I've stated to you,
11 you know, when you asked me about what have you
12 applied, I'm saying I've applied everything that
13 I've stated in my declaration.

14 Q. Okay. And if we could go to
15 paragraph 32 of your declaration.

16 A. Right.

17 MR. HENDIFAR: I'm sorry, is that
18 the declaration in this matter or the
19 Exhibit 1027?

20 Q. Yes. If we could go to Exhibit 2005
21 of this proceeding, paragraph 32.

22 A. Right.

23 Q. Let me know when you get there.

24 A. I'm there now.

25 Q. Okay. And the first sentence reads,

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2 "I understand that a reference may be relied upon
3 for all that it teaches, including uses beyond
4 its primary purpose."

5 Do you see that?

6 A. I do.

7 Q. Now, you agree that AVI teaches the
8 -- withdrawn.

9 You agree that Kaku teaches the AVI
10 file format; correct?

11 MR. HENDIFAR: Objection. Form.

12 If you would allow me to get the
13 objections.

14 THE WITNESS: I'm so sorry.

15 MR. HENDIFAR: It's okay.

16 Objection as to form.

17 Please respond.

18 A. Kaku does not teach the AVI file
19 format. The AVI file format existed much before
20 Kaku used it. He refers to it.

21 Q. Okay. So Kaku refers to the AVI file
22 format; right?

23 A. Yes.

24 Q. And, in fact, Kaku discloses a AVI
25 file format; right?

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2 A. Kaku does not disclose the full AVI
3 file format.

4 Q. But Kaku discloses portions of the
5 AVI file format; correct?

6 A. Kaku mentions use of the file format.

7 Q. And Kaku does describe certain
8 aspects of the AVI file format; correct?

9 A. Kaku mentions that one could use AVI
10 as a possible file format.

11 Q. And in your opinion, the primary
12 purpose of Kaku is directed to digital cameras;
13 is that fair?

14 MR. HENDIFAR: Objection.

15 Incomplete hypothetical. Form. I withdraw
16 incomplete. Objection as to form.

17 A. Now I've explained to you in several
18 paragraphs, if I was to bring to your attention
19 what Kaku -- I've stated it and like I said, it's
20 my -- it's my opinion and based on the following
21 facts that Kaku is an invention for motion image
22 reproducing apparatus. It states it clearly that
23 that's what its field of invention is, which is
24 applicable to a digital camera for reproducing
25 motion image data. If you go to the first column

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2 of Kaku and look at lines 6 to 11 under the broad
3 banner of what Kaku claims its field of invention
4 is, it mentions exactly what I reproduced in my
5 declaration.

6 Q. Now, it's your understanding that
7 Kaku may be relied on for all that it teaches,
8 including its discussion of the AVI file format,
9 even if that is not its primary purpose; correct?

10 MR. HENDIFAR: Objection. Form.

11 Incomplete hypothetical. Calls for a legal
12 conclusion.

13 A. I used all that we've been discussing
14 for the last hour on legal standards, as I've
15 stated in my declaration, and I applied them, you
16 know, in the eyes of POSITA in that time frame.
17 And I've declared all the grounds I've stated in
18 my declaration.

19 Q. And do you agree that Kaku may be
20 relied on for all that it teaches, including its
21 discussion of the AVI file format, even if that
22 is not its primary purpose?

23 MR. HENDIFAR: Objection.

24 Incomplete hypothetical. I'm sorry.

25 Objection -- objection. Incomplete

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2 hypothetical. Form. Asked and answered.

3 Calls for a legal conclusion.

4 A. Again, Kaku does not teach the AVI
5 file format. It uses it as one of the
6 possibilities. I took that into account as well
7 in all of your grounds and contentions, and I
8 replied to each one of them.

9 Q. When forming in your opinions in this
10 case --

11 A. Yeah.

12 Q. -- did you apply an understanding
13 that Kaku may be relied on for all that it
14 teaches, including its discussion of the AVI file
15 format, even if that is not its primary purpose?

16 And this is your opportunity if you
17 applied that understanding to say "yes," and if
18 you don't give me a yes-or-no answer, then this
19 is your opportunity to say it if you did apply
20 that understanding.

21 MR. HENDIFAR: Objection.

22 Incomplete hypothetical. Asked and
23 answered. Form.

24 A. So, again, I haven't memorized my
25 declaration, but if you give me a moment, let me

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2 refresh my memory as to all the opinions I have
3 stated about Kaku, and I'll point you to them as
4 I refresh --

5 Q. Well, how -- how about this: If you
6 take a moment to review your declaration, and
7 then when you are ready, then I'll re-ask the
8 question. And just let me know when you're ready
9 for a question.

10 A. Okay. So, Jeffrey, I'm sorry, you
11 know, you don't go to a library to read every
12 book in it and memorize it. If you give me a
13 specific question, I can refer to my declaration
14 and look for an answer, and then I'll give you
15 that answer. I cannot answer --

16 Q. Let's go to paragraph --

17 A. -- all of your questions.

18 Q. Sure. Let's go to paragraph 32 of
19 your declaration. Exhibit 2005, paragraph 32.
20 Let me know when you get there.

21 A. I'm there.

22 Q. Okay. And in forming your opinions
23 in this case, did you apply an understanding that
24 Kaku may be relied on for all that it teaches,
25 including its discussion of the AVI file format,

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2 even if that is not its primary purpose? If you
3 applied such an understanding, this is your
4 opportunity to say "yes."

5 A. That is too broad a question. I have
6 stated to you I have used all of the legal
7 standards, including paragraph 32, in forming an
8 opinion about Kaku. And I've disclosed all of my
9 opinions in reply to your contentions in my
10 declaration. And so I would go -- happy to go
11 paragraph by paragraph and apply paragraphs 31,
12 32, 33 to that and tell you why I wrote what I
13 wrote, but I stand by what I wrote.

14 MR. HENDIFAR: And is there a good
15 time for a break? I don't want to
16 interrupt the flow of a question. Whenever
17 is a good time.

18 MR. LIANG: We can take a break.
19 Do you want to take five minutes?

20 MR. HENDIFAR: I think I need a
21 lunch break, actually. It's 12 past --

22 MR. LIANG: Sure. How long do you
23 want? Let's go off the record.

24 MR. HENDIFAR: Sure.

25 (Break from 2:11 p.m. to 3:01 p.m.)

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2 Q. (BY MR. LIANG) Welcome back,
3 Dr. Bajaj. Did you speak to anybody during this
4 break?

5 A. I did to my dog-sitter. I have to
6 take care of the dog.

7 Q. Have you spoken to anybody during any
8 of our breaks today regarding this deposition?

9 A. No.

10 Q. And have you had any communications
11 with counsel with your -- you know, with your
12 counsel regarding this deposition during the
13 breaks today?

14 A. No.

15 Q. All right. Dr. Bajaj, have you ever
16 designed any multimedia file formats?

17 MR. HENDIFAR: Objection. Form.
18 Incomplete hypothetical.

19 A. Yeah, insomuch as it wasn't something
20 I was asked to do for this patent. To answer
21 your question, yes, I have.

22 Q. What file formats have you designed?

23 MR. HENDIFAR: Objection. Form.

24 A. So some of these file formats were in
25 the morning we were referring to the system we

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2 had to develop called Shastra, the
3 computer-supported collaborative design which
4 allowed for multimedia communication. And so we
5 designed now file formats, and in visualization,
6 you know, there aren't existing file formats for
7 all kinds of data, so it's a necessary -- we have
8 to design file formats because the very large
9 data we have to deal with, and they're all used
10 when we share software with others.

11 If you go to my website you'll see a
12 lot of software that you can download for free
13 and included within it are descriptions of the
14 file formats we have to design.

15 Q. Have you ever designed a video file
16 format?

17 A. We actually designed one of the
18 first, you know, interactive video file formats
19 so you could actually interact with the video as
20 well.

21 Q. For -- for Shastra?

22 A. And for other -- there's a few other
23 references on video, interactive video,
24 volumetric video and my -- this was done with
25 most of my students and members of the center

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2 that I direct.

3 Q. Why didn't you just use an existing
4 file format?

5 MR. HENDIFAR: Objection. Form.
6 Scope. Relevance.

7 A. You know, the goals when you're doing
8 research are not the same as what you do when you
9 practice in industry. We're not making sales.
10 We are trying to show proof of concept, and it's
11 easier rather than try to conform to and check on
12 whether some file formats are proprietary, some
13 are not.

14 But one does use -- you know,
15 co-exists with file formats that are defined in
16 different subspecifics, like for microscopy data.
17 And if you're doing a video stream of microscopy
18 data, and there's a video file format that we
19 co-developed and contributed to called the MRC.

20 And then there's AIV file format. We
21 call it, you know, I for -- IV for interact
22 video, which is also in the -- when other file
23 formats are proprietary, they are what we use in
24 our system. So if anyone has to use our software
25 which is already distributed, they better know

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2 how to -- how to transfer their data into our
3 file format because then only they can use it.

4 Q. Did students in your lab work on
5 these file formats with you?

6 MR. HENDIFAR: Objection. Form.

7 A. Students and us and all researchers
8 in the center work together in teams, depending
9 on which project you're working on because
10 everyone has to work collaboratively.

11 Q. What types of students worked on the
12 Shastra project with you? Would they be master
13 students? Ph.D.? Mix?

14 A. Undergraduates. We had very sharp
15 undergraduates in our program. You were an
16 undergraduate at UT. You were very sharp as
17 well. So -- so undergraduates are involved in
18 research.

19 Q. I see you've done some research.
20 In 2003 what industry file format --
21 withdrawn.

22 What industry video file format were
23 you most familiar with in 2003?

24 MR. HENDIFAR: Objection. Form.

25 Scope. Relevance.

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2 A. You know, you have to be conversant
3 with whatever input data comes in. Quite often
4 when you are developing a new algorithm and a
5 tool like the papers you were talking about when
6 we were developing new compression techniques,
7 then you have to compare and contrast with, you
8 know, existing methods.

9 So you have to familiarize yourself
10 with a range of formats that with data comes in
11 different forms and different formats. And so
12 rather than convert each to the other, we
13 developed our own format so that we convert every
14 format to our own because then we only develop
15 based on our own. And that's a -- what we call
16 an order and problem, so if you have in different
17 format -- different formats, you're always
18 transmitting to a single one rather than each
19 format to the other, which is N choose 2 or N
20 squared. So that's one of the other reasons why
21 we developed our own internal formats.

22 Q. When your team was developing its own
23 formats, were the members of the team generally
24 aware of other existing formats at the time?

25 MR. HENDIFAR: Objection. Form.

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2 Calls for speculation. Incomplete

3 hypothetical.

4 A. I'm sure they've familiarized them
5 self with whatever was necessary, and we were not
6 trying to build a product, we were trying to make
7 comparisons. And so you -- it depends on exactly
8 what data was available and what we needed. And
9 so, generally speaking, they have to become
10 familiar before you can actually develop
11 something.

12 Q. And in 2003 were you familiar with
13 the AVI file format?

14 A. That's really -- it's a question, of
15 course, that I've thought about given the subject
16 matter. Yes, I was familiar with AVI. There
17 were layers of AVI file format that originated
18 from Microsoft.

19 Q. And in 2003, were you familiar with
20 the MPEG-4 file format?

21 A. Yeah, very much so. Because we were
22 familiar with MPEG-1, -2, -3, -4, all the way up
23 to -5 and -6 because we were working on through
24 the 19 -- late 1900's we were working on our own
25 patent.

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2 Q. And by "we," you're referring to
3 your -- the team that you worked on for research;
4 right?

5 A. The students and I -- and specific
6 students because there are many students I've had
7 -- specific students were working on at that
8 time. As their leader I have to be -- and I'm a
9 hands-on person, so I -- I work with each
10 Ph.D. student or master student or undergraduate
11 student. So we were very familiar with -- we
12 being that subteam, myself included -- about
13 MPEG.

14 Q. What file format -- in terms of
15 common video file formats that were known in the
16 art, which one were you most familiar with in
17 2003?

18 MR. HENDIFAR: Objection. Form.

19 A. It's very difficult to answer that
20 because you're talking about something which is
21 20 years ago and also telling me to rank what was
22 the thing I knew most and what I perhaps knew
23 second most.

24 So, you know, if we go publication by
25 publication, it might help me jog my memory as to

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2 what was needed, because most of these
3 publications required experimentation, empirical
4 comparisons to show that your method is somewhat
5 superior, because otherwise why publish something
6 which is inferior.

7 Q. You mentioned that you -- I'm sorry.

8 A. I was done.

9 Q. Okay. You mentioned that you were
10 very familiar with the MPEG file formats.

11 Are you still familiar with the MPEG
12 base file format?

13 MR. HENDIFAR: Objection. Form.

14 A. Yes, I am.

15 Q. What are the basic structures of the
16 MPEG-4 file format called?

17 MR. HENDIFAR: Objection. Form.

18 Incomplete hypothetical.

19 A. When you said "basic structures," if
20 it's not a term that MPEG uses, what exactly
21 would you refer to?

22 Q. Well, what -- what kind of
23 terminology does MPEG use to describe the
24 components in the MPEG-4 file format?

25 MR. HENDIFAR: Objection. Form.

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2 A. Now I'm thinking through, I'm also
3 trying to see how this is relevant to the subject
4 matter we were here to discuss. But there are
5 containers and groups of pictures and packets and
6 header information, a lot to tell you what
7 multiplexing occurs. But an MPEG is a very
8 complicated -- you know, it's a entire system of
9 -- it gives you the ability to choose different
10 compression algorithms, lossless, lossy,
11 arithmetically versus other kind. And so all --
12 any scheme that you use to encode your multimedia
13 file, that information is captured in various
14 parts of the MPEG file.

15 Q. Now, in AVI there's something called
16 a chunk; right?

17 A. That's a term they use, yes.

18 Q. Is there a corresponding concept in
19 the MPEG-4 file format?

20 MR. HENDIFAR: Objection. Form.
21 Incomplete hypothetical.

22 A. So the MPEG file format is quite
23 orders of magnitude more complicated than the
24 AVI. The AVI, you know, was not designed for,
25 say, multimedia streaming. MPEG was designed and

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2 is used for all types of multimedia streaming,
3 not only audio, video, multiplex, text, image
4 frame, MPEG, JPEG, synthetic-natural hybrid.

5 So it's like, you know, not even a
6 David and Goliath; it's like -- like they are --
7 yes, so many differences.

8 Q. Would you agree that the MPEG-4 file
9 format uses object-oriented building blocks?

10 MR. HENDIFAR: Objection. Form.
11 Scope. Relevance. Incomplete
12 hypothetical.

13 A. You know, the MPEG file format spans
14 multiple volumes, and, again, I haven't memorized
15 the file format.

16 Q. I'm just asking about just the basic
17 building block of the MPEG-4 file format. Those
18 are called blocks; right?

19 MR. HENDIFAR: Objection. Form.
20 Scope. Relevance.

21 A. They are blocks used in many a
22 context. Blocks are blocks within a frame.
23 Blocks are across, you know, different media
24 types. Now in image frames there are certain
25 types of blocks, and there are certain types of

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2 blocks in audio, and there are certain types of
3 blocks in other things.

4 Again, it's a very, you know,
5 large -- because of its very nature, it handles
6 multimedia data of various types. And so I'd be
7 starting to become pedantic if I was to tell you
8 more, which is not what we're here to discuss
9 anyway.

10 Q. Does the MPEG-4 file format include
11 chunks?

12 MR. HENDIFAR: Objection. Form.
13 Incomplete hypothetical. Scope.
14 Relevance.

15 A. You know, everything is defined
16 within the context, and so, you know, you can't
17 say if I use the same word "block" in A, the
18 meaning is the same as one in the B, or "chunk"
19 in C is the same as something in --

20 Q. Well, let me just ask you this basic
21 question.

22 A. It -- it has to be looked in the
23 context, and if you point me to a document, I
24 will tell you what it means.

25 Q. Does the MPEG-4 file format define

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2 terminology for the word "chunk" or does it not?

3 MR. HENDIFAR: Objection. Form.

4 Scope. Relevance.

5 A. So, again, I haven't memorized MPEG
6 file format. I was not asked to memorize it. I
7 -- if you point me to a document.

8 (Brief interruption.)

9 MR. LIANG: Is that your phone?

10 THE WITNESS: Yeah, it's my phone.

11 I'm trying to -- can I take a minute?

12 because it's my doctor and --

13 MR. LIANG: All right. Let's go

14 off the record.

15 THE WITNESS: Okay. Thanks.

16 (Break from 3:21 p.m. to 3:25 p.m.)

17 Q. (BY MR. LIANG) Dr. Bajaj, if the
18 basic building block for AVI is the chunk, what's
19 the name of the basic building block for the
20 MPEG-4 file format?

21 MR. HENDIFAR: Objection. Form.

22 And scope.

23 A. Again, you know, I -- you know, when
24 you say something is a basic building block is a
25 chunk, AVI has a certain blocking to it or a

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2 chunkiness to it, they're are called chunks, and
3 specifically in AVI. They are lots of similar
4 "chunks" in MPEG, depends on the media type. As
5 well as, you know, the term "blocks" you raised
6 are also used because they are natural, they are
7 tiles, they are segments, they are containers.

8 Many things are part of a description
9 of the complexity of the MPEG format. So I'm
10 hard pressed to -- to answer that more than what
11 I'm telling you now. If there's something that
12 -- if you wanted me to give you a one-to-one,
13 it's something that I would need to analyze, and
14 I will do it and I will give you a more accurate
15 answer.

16 Q. Does the MPEG-4 file format use
17 object-oriented building blocks?

18 MR. HENDIFAR: Objection. Asked
19 and answered. Form. Scope.

20 A. I have to look at all the manuals and
21 read it. I don't recall, off the top of my head,
22 any of the details.

23 Q. In what structure does the MPEG-4
24 file format store video data?

25 MR. HENDIFAR: Objection. Form.

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2 Scope.

3 A. Again, there's a lot of structure in
4 storing videos, and the details are also
5 intertwined with the compression methods that you
6 use.

7 Q. Can you identify the name of any
8 structure in the MPEG file format that is used to
9 store video frames?

10 MR. HENDIFAR: Objection. Form.

11 Scope. Relevance. Incomplete
12 hypothetical.

13 A. No. There are certain MPEGs that
14 will store something you call I-frames and
15 P-frames. There are many other MPEG formats that
16 have also something called B-frames. They are
17 groups of such I-frame, P-frame, B-frame,
18 consecutive sequences. There's different
19 blocking, timing to each frame and intraframe,
20 there are different compression methods for --

21 Q. For this question, I'm not asking
22 about the compression methods or the frame types.
23 I'm just asking you to identify the name of any
24 structure in the MPEG-4 file format that is used
25 to store video data.

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2 A. So I believe I'm telling you that.

3 MR. HENDIFAR: Dr. Bajaj, I'm
4 sorry. Objection. Form. Scope,
5 relevance. Asked and answered. Incomplete
6 hypothetical.

7 Please respond.

8 A. So what I said before is what I'm
9 going to repeat, which is example of the video,
10 you know, structure, as you say, it's I-frames,
11 P-frames, B-frames, the way those frames are
12 structured depends on how you encode them. They
13 are different parameters, there's different
14 blocking on each of those frames.

15 They are different coefficient types
16 because you might do different transforms to the
17 data. So when you stopped me before while I was
18 completing it, this is all part of the structure.

19 Q. Well, let me ask you this: Does the
20 MPEG-4 file format have something called the box?

21 MR. HENDIFAR: Objection. Form.
22 Scope. Relevance.

23 A. You know, if you told me you were
24 going to quiz me on all aspects of MPEG, maybe
25 you would have given me all of the manuals of

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2 MPEG -- I'm sure you've looked at them. There's
3 been many -- and then I could answer your
4 questions accurately. I was not asked to do
5 that, so...

6 Q. Sitting here today, you're not sure
7 if the MPEG-4 file format has something called a
8 box?

9 MR. HENDIFAR: Objection. Asked
10 and answered. Form. Scope. Relevance.

11 A. I cannot recall every term that is
12 used. If you tell me what you're looking for,
13 point me to that, I will tell you whether it
14 contains "box" and what box means because that's
15 my expertise. I've not -- I haven't memorized
16 the MPEG format. I don't know every word in it.

17 Q. Can you identify the name of any
18 boxes in the MPEG-4 file format that are used to
19 store video data?

20 MR. HENDIFAR: Objection. Form.
21 Asked and answered. Scope. Relevance.

22 A. I know of containers. I don't know
23 of boxes right off the top of my head. It's not
24 something I've memorized.

25 Q. Well, earlier you had said that you

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2 were still familiar with the MPEG-4 file format,
3 so I just wanted to follow up and explore that a
4 little.

5 Does the MPEG-4 file format include
6 any indexes in it?

7 MR. HENDIFAR: Objection. Form.
8 Scope. Incomplete hypothetical.

9 A. So maybe I don't understand your
10 question. What do you mean by an "index"?

11 Q. Does the MPEG-4 file format include a
12 index of frames?

13 MR. HENDIFAR: Objection. Form.
14 Incomplete hypothetical. Scope.
15 Relevance.

16 A. You know, you are defining the word
17 "index" by using index, and that's not a
18 definition. I said what do you mean by "index"?

19 Q. Do you know if the MPEG-4 file format
20 defines anything called an index?

21 MR. HENDIFAR: Objection. Form.
22 Scope. Incomplete hypothetical.

23 Q. Let me rephrase the question. Do you
24 know whether the MPEG-4 file format uses the
25 terminology "index"?

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2 MR. HENDIFAR: Objection. Form.

3 Scope. Relevance. Incomplete

4 hypothetical.

5 A. English terms have a lot of usage and
6 it well meant, it might not. It depends entirely
7 on what the term means and what its usage is for.
8 So when I asked you what index is, you don't know
9 what you want to ask me to look for. So please
10 tell me what you mean by "index."

11 Q. Well, when you read the word "index"
12 in the '792 patent, was its meaning clear to you?

13 A. In the context of the '792 patent,
14 it's explained very well.

15 Q. And do you know whether the MPEG-4
16 file format includes an index to video frames?

17 MR. HENDIFAR: Objection. Asked
18 and answered. Form. Scope, relevance.
19 Incomplete hypothetical.

20 A. So I was asked with respect to
21 answering your questions on the '792 patent, you
22 know, from my declaration. I've done that. It
23 -- it was not to learn every word of the MPEG.
24 So if you -- you know, it might well; might not.
25 It's not what was relevant in this proceedings.

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2 Q. Do you believe that an index for the
3 MPEG-4 file format would have a different meaning
4 than how that term is used for the '792 patent?

5 MR. HENDIFAR: Objection.

6 Incomplete hypothetical. Scope. Form.

7 A. Possibly because there are terms like
8 "header" in the MPEG file format that I have
9 seen. And, you know, index can be of many, many
10 types, and how it's used relevant to what's in a
11 header is another matter. And so that's why we
12 can't go into specifics yet be flying at, you
13 know, 10,000 feet.

14 Q. I see. So if the MPEG-4 file format
15 were to state that it has an index to video
16 frames, that wouldn't necessarily have the same
17 meaning as an index as that term is used by the
18 '792 patent; correct?

19 MR. HENDIFAR: Objection. Asked
20 and answered. Incomplete hypothetical.
21 Form. Scope. Relevance.

22 A. I did not say it does not have to be
23 the same or it's different. I was not asked to
24 look at that question. I was asked to analyze
25 the word "index" in the '792. I was not asked to

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2 compare it to the word "index" if it is used in
3 the MPEG-4.

4 Q. Sure. And you've told me earlier
5 that you are still very familiar with the MPEG-4
6 file format. So I'm just asking you whether the
7 MPEG-4 file format has an index to video frames
8 as that term is used by the '792 patent?

9 MR. HENDIFAR: Objection. Scope.
10 Form. Incomplete hypothetical. Relevance.

11 A. And I believe I've always answered
12 your question, the same question you keep
13 repeating several times.

14 Q. Does the MPEG-4 file format have an
15 index to video frames as that term is use in the
16 '792 patent?

17 MR. HENDIFAR: Objection.
18 Relevance. Scope. Incomplete
19 hypothetical. Form.

20 Q. Let me -- let me clarify the
21 question. I want you to take your understanding
22 of the word "index" as that term is used by the
23 '792 patent and your familiarity with the MPEG-4
24 file format to tell me does the MPEG-4 file
25 format contain an index to video frames?

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2 MR. HENDIFAR: Objection.

3 Incomplete hypothetical. Form. Scope.

4 Asked and answered.

5 A. So I'm going to try one more time in
6 clarifying your -- with your clarifier question
7 and what I'm mostly repeating myself. The word
8 "index" as used in its context, the '792 patent
9 has multiple indices or indexes. It's got a
10 first index. It's got a second index. The index
11 information is different in the -- between the
12 first and the second. They are co-linked.
13 There's different tags present.

14 So when you start talking about
15 indices and file formats, file formats is the way
16 you organize data on a, you know, file that you
17 store or transmit from storage. So it's not a
18 simple thing like you're trying to make it.
19 That's why I said you're flying at about
20 10,000 feet, and you're asking me about something
21 which is a, you know, bicycle on the ground and
22 saying is this red and that's blue and is it
23 similar or not. It's always in the context of
24 where you're defining it.

25 Q. And I'm asking you to apply the

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2 definition of the word "index" as that is used in
3 '792 patent. So let me ask it this way then:

4 Does the MPEG-4 file format include
5 the first index that is recited in claim 1 of the
6 '792 patent?

7 MR. HENDIFAR: Objection. Scope,
8 relevance. Form. Incomplete hypothetical.

9 A. And while that's now becoming a more
10 focused question, it was a question that I was
11 not asked to look at. And if you tell me to look
12 at that question, I will be very happy to. I
13 will take the definition of index in the '792,
14 look it up in the MPEG-4, and give you a precise
15 answer.

16 Q. But sitting here today, you can't
17 tell me whether the MPEG-4 file format includes a
18 index to all frames?

19 MR. HENDIFAR: Objection. Form.
20 Scope. Relevance. Asked and answered.
21 Incomplete hypothetical.

22 A. You've also now gone back up to
23 10,000 feet again, and so I -- my answer is the
24 same as what I told you before.

25 Q. And you didn't give me an answer

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2 before so I'll ask it again. And if you don't
3 know the answer, that's fine, but just yes or no.

4 Based on your familiarity with the
5 MPEG-4 file format, does the MPEG-4 file format
6 include a index to all video frames?

7 MR. HENDIFAR: Objection. Form.
8 Scope. Incomplete hypothetical.

9 A. So I believe I answered you before to
10 the level when you went down and asked me the
11 question about the index in the '792, which I
12 know, and I told you there were several. Then
13 you asked me if the same kind of index was
14 present in the MPEG, and I answered to you that's
15 something that I was not asked to consider and
16 I'm happy to consider that.

17 But at this moment, I can tell you
18 what index is used in the '792, multiple indices.
19 And so it's not something I want to opine on on
20 the fly.

21 Q. Does the MPEG-4 file format have more
22 than one index for video frames?

23 MR. HENDIFAR: Objection. Form.
24 Scope. Relevance. Incomplete
25 hypothetical.

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2 A. My answer is similar to before. It's
3 not a question that I've been asked to consider.

4 Q. Now, I want you to turn to
5 paragraph 83 of your declaration.

6 MR. HENDIFAR: Was that 83,
7 Counsel?

8 MR. LIANG: Yeah, paragraph 83.

9 A. Paragraph --

10 Q. Yeah, paragraph 83 of Exhibit 2005.
11 It begins "By way of background." Let me know
12 when you get there.

13 A. I'm there.

14 Q. Right. Now, if you could read
15 paragraph 83 to yourself as you're reviewing it
16 now, just if you could take a moment to review
17 and let me know when you are ready for questions.

18 A. Very good. Thank you.

19 (Witness reviewing document.)

20 A. Yes, I've read that.

21 Q. What's the difference between a file
22 format and a compression algorithm?

23 A. Completely different. A file format
24 is a format in which you lay out your data that
25 can be used to be stored and/or transmitted and

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2 exchanged. A compression algorithm is a method
3 of encoding data to create a compressed version
4 of the data, smaller size if it is streaming
5 data, having different bit rates of transmission,
6 and so hence completely different.

7 Q. So the compression algorithm is the
8 thing that actually would compress video data; is
9 that right?

10 MR. HENDIFAR: Objection. Form.

11 A. There are many compression
12 algorithms, and, yes, each compression algorithm
13 is compressing some form of data.

14 Q. So for a video file, the compression
15 algorithm would determine how the video is
16 compressed; is that right?

17 MR. HENDIFAR: Objection.

18 Incomplete hypothetical. Form.

19 A. You know, I would not state it the
20 way you did within reason. A file format is a
21 file format. It's a way to store information or
22 data. A compression method or algorithm takes
23 data and transforms it into something of smaller
24 size. And if it's video, allows it to do, you
25 know, transmission of that -- that smaller

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2 transformed data at perhaps different rates and
3 so on.

4 Q. So the compression algorithm
5 transforms the video data, while the file format
6 tells you where in the file information is
7 written; is that right?

8 MR. HENDIFAR: Objection. Form.
9 Incomplete hypothetical.

10 A. The file format -- and if it is a
11 file format for storage -- is giving you how you
12 lay out your data. A file format for streaming
13 will tell you how you will lay out your data on
14 the screen. A compression algorithm is a
15 transformation of the data from one, you know,
16 verbose raw form into compressed form or
17 something of smaller size with some loss at times
18 or without loss. That's why they call it
19 compression algorithm.

20 Q. I see. So the compression algorithm,
21 not the file format, determines how much a video
22 file is compressed; is that right?

23 MR. HENDIFAR: Objection.
24 Incomplete hypothetical. Form.

25 A. The compression of the data is

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2 dictated by the compression algorithm.

3 Q. I see. The compression algorithm
4 determines the compression ratio; right?

5 MR. HENDIFAR: Objection.

6 Incomplete hypothetical. Form and scope.

7 A. Compression ratio is a measure, yes,
8 of how you would consider the input/output sizes
9 of the data.

10 Q. Right. And so it's the compression
11 algorithm that determines the compression ratio
12 for a video; right?

13 MR. HENDIFAR: Objection.

14 Incomplete hypothetical. Form.

15 A. So the compression algorithm is --
16 also has many parameter settings, and depending
17 on the parameter settings you choose to apply,
18 the same compression algorithm can produce video
19 of different compression ratios.

20 Q. Yeah, I guess I was just trying to
21 understand. Because it sounds like it's the
22 compression algorithm, not the file format that
23 determines how much a video is compressed; is
24 that correct?

25 MR. HENDIFAR: Objection. Form.

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2 Incomplete hypothetical.

3 A. Again, I'm trying to find the full
4 relevance of this with respect to, you know, this
5 subject matter. But the compression algorithm
6 with respect to the parameters are information
7 that is packaged in a file format and
8 transmitted. And so the information that's
9 contained in that stream in that -- or that file
10 format which is stored dictates how -- what type
11 of compression ratios and quality of the video
12 are obtained.

13 Q. I see. So you're saying that the
14 file format dictates the compression ratio for a
15 video; is that right?

16 MR. HENDIFAR: Objection. Form.
17 Incomplete hypothetical.

18 A. You're absolutely wrong, I'm sorry to
19 say, because that's not what I said.

20 Q. Oh.

21 A. The file format is the way you lay
22 out the data. The parameters of the data and the
23 compression algorithm method that supply dictates
24 how the data compresses and the compression
25 ratio. The file format is just packaging.

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2 Q. So sometimes I've seen a reference to
3 a video CODEC. Is that -- is that a term that
4 you've -- you've heard before?

5 A. Yes.

6 Q. Does CODEC refer to the compression
7 algorithm?

8 MR. HENDIFAR: Objection. Form.

9 Incomplete hypothetical.

10 A. The CODEC is a pneumatic used for
11 compression/decompression or it's a short form.
12 And you would need to tell someone if you are
13 distinguishing it whether it's the CODEC format
14 or the CODEC algorithm. So it's just a
15 nomenclature how you label. So it's just a term.

16 Q. So I've watched some videos that have
17 really good image quality, and I've seen some
18 videos that have had really bad image quality.

19 Is it the compression algorithm that
20 determines the image quality for a video; right?

21 MR. HENDIFAR: Objection.

22 Incomplete hypothetical. Scope. Form.

23 A. There are many, many factors. Also
24 many factors in how you are watching the video.

25 Q. So the -- does the file format

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2 determine the image quality for a decoded video
3 frame?

4 MR. HENDIFAR: Objection.

5 Incomplete hypothetical. Form. Scope.

6 A. You know, again, this is getting into
7 very rough talk about some precise topics, you
8 know. So the compression ratio is a mathematical
9 term. Image quality can be quantified by various
10 metrics, and all of these formulated in
11 quantitative terms have many parameters. And so
12 it cannot just be said it's this or that or this.
13 There are many aspects to it.

14 Q. Well, does the video file format
15 determine the image quality for decoded video?

16 MR. HENDIFAR: Objection. Asked
17 and answered. Scope. Form. Incomplete
18 hypothetical.

19 A. There are many types of file formats,
20 many types of compression algorithms, many types
21 of encoders, decoders, many types of -- you know,
22 whether you're playing it from a disk or on your
23 computer or you're playing it over the internet,
24 transmission bandwidths. All of these factors
25 determine and there are many more that I'm not

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2 really responding to.

3 Q. I'm just trying to get an
4 understanding of this opinion you have in
5 paragraph 83. Because it seems to me like you're
6 drawing a distinction between the video file
7 format and the compression algorithm.

8 A. Right.

9 Q. And so I'm just -- I'm just trying to
10 understand whether the file format affects image
11 quality?

12 MR. HENDIFAR: Objection. Scope.

13 Relevance. Incomplete hypothetical. Form.

14 A. So we've gone through and I've tried
15 to explain as best as I could that file format is
16 the way you lay out data. The compression
17 algorithm is how you encode and compress the
18 data. And they're two separate things, and
19 that's what I'm saying in my paragraph 83.

20 So the -- you know, it's like saying
21 I have this packaging and inside there's a
22 chocolate cake or does it have a balloon. I'm
23 just making this up. But, you know, we are not
24 talking about -- when you're talking about the
25 packaging, that's the file format. When you're

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2 talking about the data, that's the chocolate cake
3 inside or it's just a balloon.

4 (Brief interruption.)

5 THE WITNESS: Sorry about that.

6 MR. LIANG: That's fine. No
7 problem. Do you want to take a break?

8 MR. HENDIFAR: Let's come back at
9 2:10 our time, 4:10 Doctor's time.

10 (Break from 4:01 p.m. to 4:10 p.m.)

11 Q. (BY MR. LIANG) Okay. And,
12 Dr. Bajaj, I think we were just talking about
13 paragraph 83 of your declaration. And towards
14 the end you mention how Kaku references data that
15 is compressed towards the MPEG scheme. And is it
16 correct that -- well, let me back up. Withdrawn.

17 AVI is a file format, not a
18 compression algorithm; correct?

19 A. I'm sorry. Say that again. AVI you
20 said or --

21 Q. AVI is a file format, not a
22 compression algorithm; correct?

23 A. You know, any file format which is
24 also meant for -- a file format meant for, say,
25 video data, because AVI stands for audio video --

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2 I forget what the I stands for now but -- so it's
3 saying I can multiplex audio and video chunks and
4 lay it out in a file format, has some way of
5 encoding the audio and video.

6 So when we think of AVI, we need to
7 qualify are you talking about the AVI file
8 format? And if so, that's in that context is
9 clear that you're using it the way you encode it.
10 And if you are saying, oh, I'm going to say
11 compression method as AVI, because it -- then I
12 would have to qualify that also, and it's always
13 with respect to the context.

14 Q. I see. So AVI -- the AVI file format
15 is a file format that can be used with different
16 compression methods; is that right?

17 MR. HENDIFAR: Objection.

18 Incomplete hypothetical. Scope.

19 A. Not different. It's encoding it with
20 some specific compression or, you know, encoding
21 of the data. So AVI produced in AVI file format
22 for the AVI methods, and those were for encoding
23 on to CD ROMs.

24 And as I've stated in my patent and
25 I've also -- was developed by Microsoft is that

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2 its own design for anything more. And so they've
3 switched the design to -- or it was not designed
4 for, say, streaming over the internet. So they
5 came up with a new format and a new set of
6 compression methods that were designed for the
7 internet.

8 Q. So here in paragraph 83 you say,
9 "Kaku's reference to data that is compressed
10 according to the MPEG scheme relates to MPEG
11 compression algorithms, not the MPEG file
12 format."

13 A. It's compressed according to an MPEG
14 scheme. And so let's -- you know, I've cited
15 1005, column 11, 40 through 43, and let's look at
16 that context of how Kaku -- or Kaku describes it
17 and you'll see what I mean.

18 Q. Okay. And so --

19 A. Do you want to go to that reference
20 or no?

21 Q. Well, I guess -- yeah, I just looked
22 -- you know, I just looked at it here and it --
23 and so, yeah. I -- it seems like so what you're
24 saying is that Kaku is telling you that you can
25 compress video data using the MPEG scheme and

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2 that's a reference to the MPEG compression
3 algorithm; right?

4 A. To compression algorithms in general,
5 not to any specific part. It's saying I could
6 think of them as I-frames and P-frames.

7 Q. What is an I-frame?

8 A. So here's another usage of the word
9 "index," which is very contextual. It's called
10 the indexed frame. So the I stands for the
11 indexed frame. And in video, because every frame
12 in time order and it depends at the rate at which
13 you have your frames encoded is something called
14 a progressive frame, which is the difference
15 between the second frame on the indexed frame.

16 And you can have more than one
17 progressive frame. This is what is exactly what
18 Kaku is saying that -- and very loosely in three
19 sentences he says while my entire focus was on
20 motion JPEG frame by frame, you know, one could
21 possibly -- you know, a person of skill in the
22 art, maybe focus skill in the art, could
23 translate this to I-frames and P-frames. But
24 there's no mention of the complexity of all of
25 MPEG or anything else.

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2 Q. So let me -- I'm sharing with you
3 Exhibit 1023. I've put it in that folder, so you
4 should be able to access it in the submitted
5 folder on the website. Let me know when you have
6 it. And when you open it and just stay on page 1
7 when you open it. Let me know when it's open.

8 A. Yes.

9 Q. Okay. Well, I figured we may end up
10 talking about frame types, so I made some
11 demonstratives that help us just guide our
12 discussion. So on page 1 of Exhibit 1023, you
13 know, there's a -- there is a -- you know,
14 there's illustration of a sequence of frames,
15 some I-frames, some B-frames, and some P-frames.

16 Do you see that?

17 A. Yeah, I see what appears red, green,
18 and blue.

19 Q. Right. So the first frame in the
20 sequence on page 1 is I-frame shown in red, the
21 P-frames are shown in blue, and the B-frames are
22 shown in green.

23 Do you see that?

24 A. I'm not seeing frames. I'm seeing
25 little bars.

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2 Q. The bars are -- are -- indicate
3 frames, you know, they representative frames,
4 right. We've got I-frames, B-frames, and
5 P-frames.

6 Does that make sense?

7 A. Frames of what?

8 Q. Video frames.

9 A. And how are they represented?

10 Q. So in this -- this will be an MPEG --
11 for example, MPEG-2 encoded video, right. In
12 MPEG-2 encoded video you have I-, B-, and
13 P-frames; right?

14 A. But there are many different ways to
15 represent each I-frame and each B-frame and each
16 P-frame. So which representations are you using?

17 Q. What representations are there for an
18 I-frame?

19 A. Again, let's go to the MPEG manual
20 and you'll see a variety of ways in which you can
21 encode each of those frames. There's no generic
22 type. They're giving you a plethora of methods.

23 Q. And are you able to identify any of
24 those methods sitting here today?

25 MR. HENDIFAR: Objection. Form.

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2 Scope.

3 A. Now, this is your example, and if
4 you're wanting to understand detail of what a B
5 is with respect to an I and what are the P with
6 respect to a B and an I, you must know
7 immediately or at the start how are you
8 representing, you know, I; so therefore then only
9 you can understand what is the representation of
10 a B and a P.

11 Q. Right. And so I'm not -- I'm asking
12 you what are the different ways that you can
13 represent an I-frame that would impact your
14 understanding of the relationship that's shown
15 here on page 1?

16 MR. HENDIFAR: Objection. Asked
17 and answered. Form. Scope. Incomplete
18 hypothetical.

19 A. I think this is like the cart before
20 the horse. I mean, this is your question. You
21 brought up this, and I'm trying to understand
22 what you're asking me. And to complete my
23 understanding of your question, I wanted
24 clarification of what the -- that bar meant.
25 Arrows and bars, I don't understand --

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2 Q. Well, we can -- we'll walk through
3 it. I just wanted to -- I just first wanted to
4 -- to just establish some baseline, right.

5 So can you tell me the difference
6 between an I-frame and a P-frame in MPEG-2, for
7 example?

8 MR. HENDIFAR: Objection.

9 Incomplete hypothetical. Form. Scope.

10 A. When you say whether I can tell you,
11 the file format labels these frames so that a
12 computer can read that format and understand,
13 aha, this is an I-frame, and the next set of
14 packets are the representation of that frame.

15 So it's not me who's, you know -- but
16 it's important to know what that I is because
17 everything gets indexed from that, and that's why
18 I was asking you what is the representation you
19 are choosing for that.

20 Q. Would I be -- would it be correct
21 that an -- for MPEG-2 video, the three basic
22 frame types would be I-, P-, and B-frames?

23 MR. HENDIFAR: Objection. Form.

24 Scope. And incomplete hypothetical.

25 A. I believe MPEG-2 is when it

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2 started -- again, I'm going from memory -- but
3 MPEG-1 perhaps didn't have B-frames. But they're
4 just label types, you know, so there are three
5 types of image frames, and each type can be
6 represented in many ways and -- the I type and
7 there's a B type and a P type.

8 Q. Right. So for MPEG-2 video the three
9 basic types of frames would be I-, B-, and
10 P-frames; right?

11 MR. HENDIFAR: Objection. Form.
12 Scope. Incomplete hypothetical.

13 A. Those are the three types of frames
14 that are there.

15 Q. Now, what's the difference between a
16 P-frame and an I-frame?

17 MR. HENDIFAR: Objection.
18 Incomplete hypothetical. Form and scope.

19 A. So a P-frame is going to encode, and
20 depending on the representation of your I-frame
21 how you have encoded it. And there are many
22 different ways because the raw data gets
23 transformed, each image frame. Then whatever is
24 in the I-frame there's -- since its motion is
25 going to be the forward motion is captured in the

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2 P-frame. Again, very dependent on what is the
3 representation in the I-frame.

4 Q. Okay. And how does -- what are the
5 different ways that an I-frame can be represented
6 that would impact your explanation that you just
7 gave?

8 MR. HENDIFAR: Objection. Asked
9 and answered. Form. Scope. And
10 incomplete hypothetical.

11 A. Impact my answer to your question?
12 I'm kind of getting wrapped up here. So I'll say
13 your question as best as I could, and now you're
14 asking me to say how would I impact my answer.

15 Q. Well, so --

16 A. What did you understand my answer to.
17 I'm sorry.

18 Q. I believe the board would benefit
19 from just a -- from just a basic explanation of
20 I-, P-, and B-frames, right. And I realize that
21 this discussion may be very basic for video
22 coding, right, but I do think it would be
23 beneficial to explain it to the board. And so I
24 just want to give you that opportunity and we can
25 walk through it. So right at a --

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2 A. Okay. So is that the intent?

3 Because the board can look at a simple manual,
4 and all of these things are defined there. The
5 fact that you're asking me -- it's a quiz to my
6 knowledge about what I know about MPEG. And I've
7 already told you I've been dealing with MPEG.
8 I've worked with MPEG. I cannot claim I've
9 memorized every of the multiple manuals.

10 So if this is going to be a tutorial
11 with demonstratives so that you would show this
12 to the board, then you should give me the
13 opportunity to give me this demonstrative, give
14 me time so I can give you accurate answers so I
15 don't mislead.

16 The board --

17 Q. Okay. And that --

18 A. -- so the board would have all the
19 information it needs from me as well.

20 Q. So this isn't a quiz about granular
21 details of -- of how frames, you know, can be
22 encoded. What I'm only going to ask a sequence
23 of questions just about a basic relationship
24 between what's an I-frame, B-frame, and P-frame.
25 That's all it is.

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2 And I just want to ask you, is it
3 correct that an I-frame is encoded in a way so
4 that it doesn't require any other frames in order
5 for it to be decoded?

6 MR. HENDIFAR: Objection.

7 Incomplete hypothetical. Form. Scope.

8 A. You mentioned before that you were
9 wanting this for the purpose so that the board
10 would understand my answers and get eliminated.
11 You know, I'm sorry, topics of this are something
12 that should not be opined on on the fly.

13 I'm very happy to take your
14 demonstratives, mark them up, and do this, but I
15 can't do this at the moment. I wasn't asked to
16 do this. And if you're questioning my knowledge,
17 well, you can give me all the quizzes you want,
18 but that would be at perhaps a different time,
19 not at this time.

20 Q. Yeah. And I'm not questioning your
21 knowledge. I'm just trying to get just the basic
22 walk-through for I-, P-, and B-frames. So let's
23 put the demonstrative away. Let's put the
24 demonstrative away. All right.

25 So let me just ask you for MPEG-2, is

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2 it correct that an I-frame can be decoded without
3 needing to first decode any other frame?

4 A. Again, Jeffrey, you know, when I ask
5 you for detail, you -- you change the question or
6 you don't answer. It depends entirely on how the
7 I-frame is represented, and all of the packet
8 information preceding the I-frames are absolutely
9 necessary to understand how the I-frame is
10 encoded.

11 So just handing someone an I-frame is
12 -- and not someone -- it's a computer algorithm
13 that does the decoding, it needs all that prior
14 information beforehand to understand what is the
15 format you've encoded the I-frame, what is the
16 representation. And also what is the
17 representation will determine how you then decode
18 the B-frame in conjunction with the I-frame.

19 Q. Okay.

20 A. So there's a lot of complexity there.
21 I'm not wanting to belittle it, and I don't want
22 to be inaccurate.

23 Q. So is it correct that P-frames depend
24 on a preceding frame?

25 MR. HENDIFAR: Objection. Form.

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2 Q. Withdrawn. Let me -- let me
3 rephrase.

4 Is it correct that decoding a P-frame
5 depends on a preceding frame?

6 MR. HENDIFAR: Same objection as to
7 form.

8 A. So P-frames in an MPEG encoding can
9 take on many forms, and -- but all of these
10 preframes are progressive into the forward motion
11 from some index. It depends what is in that
12 P-frame is also depending on what's in the
13 I-frame. And so to even decode a P-frame and
14 then combine it with I-frames, to decode an image
15 frame, whether there are B-frames present or not,
16 that is an entire process.

17 Q. So is it correct that decoding a
18 P-frame depends -- withdrawn.

19 You know, I noticed that your last
20 answer mentioned B-frames and -- B, as in "Bob,"
21 and I just want to make sure it's clear I'm
22 asking about P-frames, as in -- P, as in "Peter."
23 So let me -- let me ask the question.

24 Is it correct that a P-frame can be
25 encoded with reference to another frame?

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2 A. You know, again, this is something
3 that is too high level for me to give you an
4 accurate answer. There are many possibilities of
5 encoding. There are many methods of decoding.
6 You can do things differently in the algorithm --
7 what you buffer, how you encode, how you combine.

8 So it's not -- it's not like saying
9 one plus one is two, and so I need another one to
10 make up two, that kind of thing.

11 Q. Now, in previous answers you had
12 referenced I-frames, P-frames, and B-frames.

13 So are you able to provide the board
14 with a basic explanation about the differences
15 between these types of frames?

16 MR. HENDIFAR: Objection. Asked
17 and answered. Form. Scope. And
18 incomplete hypothetical.

19 A. Yes, I'm fully capable of writing up
20 a brief tutorial with demonstratives with
21 explanation if the board asks me to do that. I
22 would need time and I will be accurate and I will
23 be thorough.

24 Q. And sitting here today, are you able
25 to provide just a basic explanation of the

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2 differences between I-frames and P-frames and
3 B-frames?

4 MR. HENDIFAR: Objection. Form.

5 Incomplete hypothetical. Scope. And asked
6 and answered.

7 A. For the board I would like to do this
8 thoroughly and carefully and properly. I -- you
9 can't explain the complexity of a rocket engine
10 by just being basic; you need to be specific and
11 correct. And given, if that's the ask, the board
12 would like for me to do, I would be very happy to
13 do it.

14 Q. Now, let me ask you about -- would
15 you agree that the AVI file format was known in
16 the art before the '792 patent?

17 A. Yes, I believe so.

18 Q. The AVI file format is analogous art
19 for the '792 patent; correct?

20 MR. HENDIFAR: Objection. Scope.

21 A. Now, you used a legal term, and I
22 think I've espoused on that from I'm not a legal
23 person. Analogous art has requirements, and I
24 can turn you to paragraph 37 on the various
25 tests. And the '792 is a patent, and analogous

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2 art to the patent is different than saying a file
3 format is analogous to it.

4 So, you know, when we are talking
5 about analogous art to a patent, the criteria I
6 just took there on paragraph 37.

7 Q. And would you agree that the AVI file
8 format is from the same field of endeavor as the
9 '792 patent?

10 MR. HENDIFAR: Form and scope.

11 A. A file format is -- is a way of
12 packaging audio/video data specifically for the
13 AVI file format because it's audio/video -- I
14 have to remember what I is -- but a patent is
15 governed by its claims, and the claims of
16 the '792 are numerous.

17 And so you can't be saying a file
18 format is analogous art to all of the claims of
19 the '792.

20 Q. Okay. So you wouldn't go as far as
21 to say that the AVI file format is in the same
22 field of endeavor as the '792 patent?

23 MR. HENDIFAR: Objection. Form and
24 scope.

25 A. So the field of endeavor of the '792

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2 patent and your prior art need to be understood,
3 and then you would understand the fact that a
4 file format is not applying a field. A file
5 format is just a description of how you lay out
6 multimedia data. The AVI format I should say.
7 File formats in general are for laying out all
8 kinds of data.

9 So when you say the field of
10 endeavor, the field of endeavor of the '792 is
11 encoding, transmission, decoding of multimedia
12 streams and multimedia files and so on. File
13 format is just a simple description of how you
14 would lay it out, it's the packaging,
15 multidimensional.

16 Q. And you didn't quite answer my
17 question, so let me ask it again.

18 And is the AVI file format in the
19 same field of endeavor as the '792 patent? And
20 if you believe that this is the case, then this
21 is your opportunity to say "yes."

22 MR. HENDIFAR: Objection. Asked
23 and answered. Form. Scope.

24 A. Thank you for the opportunity. But a
25 file format does not define a field, and so the

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2 question itself is not comprehensible. The '792
3 patent is a field of endeavor in a field of
4 invention. And so I thank you, again, for the
5 opportunity.

6 Q. And I note that you did not take the
7 opportunity to say "yes." So I will take that,
8 unless you correct me, to mean that you are not
9 willing to say that the AVI file format is in the
10 same field of endeavor as the '792 patent?

11 MR. HENDIFAR: Objection. Asked
12 and answered.

13 A. I'm not trying to be blunt, but a
14 file format is not a field of endeavor. And you
15 saying the AVI field -- AVI file format is a
16 field comparable to the '792, I'm saying it makes
17 no sense.

18 Q. Well, and you're still not answering
19 my question. So if this is, in fact, your
20 opinion, I will give you one last opportunity to
21 say "yes" or "no," but I'll give you one last
22 opportunity to give an answer.

23 Do you believe the AVI file format is
24 from the same field of endeavor as the '792
25 patent?

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2 MR. HENDIFAR: Objection. Asked
3 and answered. Harassment. Form. Scope.

4 A. Sorry, I have answered you
5 repeatedly. The question makes no sense to me.

6 Q. Well -- and, Dr. Bajaj, you've
7 provided a number of opinions about whether --
8 whether Kaku is in the same field of endeavor as
9 the '792 patent; correct?

10 A. Yes, I have. Kaku is a patent and I
11 compared that patent with the '792 patent. I was
12 not talking about a file format comparing it to a
13 '792 patent, which you repeatedly asked me
14 questions about and which I'm telling you it does
15 not make sense.

16 Q. I see. So you're not able to form an
17 opinion about whether the prior art AVI file
18 format is from the same field of endeavor as the
19 '792 patent; is that right?

20 MR. HENDIFAR: Objection. Asked
21 and answered. Form. Scope. Harassment.

22 A. I believe I've answered each time you
23 asked me the same question. And saying it again,
24 there are incomparables what you are asking me
25 about. A file format is not comparable to a

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2 field of endeavor. Whether it be the same or
3 different, it's not comparable.

4 Q. And would you consider that the AVI
5 file format was reasonably pertinent to the
6 particular problem with which the inventors of
7 the '792 patent were involved with?

8 MR. HENDIFAR: Objection. Form.
9 Scope.

10 A. The '792 patent used the AVI file
11 format and used it cleverly to use their
12 invention and their scheme of multiple indices to
13 create a new multimedia file and so on. So they
14 used the file format.

15 Q. Right. And, again, you know, if you
16 agree with the statement, this is your
17 opportunity to say "yes." But if you -- unless
18 you say -- you know, you keep dodging my
19 questions without answering them, and I'm going
20 to ask you a yes-or-no question. All right? You
21 understand that I'm about to ask you a yes-or-no
22 question, Dr. Bajaj?

23 A. The premise of a yes-and-no question
24 is that question should be well formed --

25 Q. Okay.

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2 A. -- and I'm telling you your question
3 does not make sense to me.

4 Q. What about -- what about my
5 question -- now, hold on. Let me ask you the
6 question. If it doesn't make sense, you can ask
7 me and you can point out what doesn't make sense
8 about it.

9 Would you consider the AVI file
10 format to be reasonably pertinent to the
11 particular problems with which the inventors of
12 the '792 patent were involved with?

13 MR. HENDIFAR: Objection. Form.
14 Scope. Asked and answered.

15 A. The AVI file format was the format
16 that the inventors of the '792 chose to use to
17 explain their invention.

18 Q. So then you agree that the AVI file
19 format is reasonably pertinent to the problem
20 with which the inventors of the '792 patent were
21 involved; correct?

22 MR. HENDIFAR: Objection. Form.
23 Scope. Asked and answered. Harassment.

24 A. I'm sorry, I don't understand what
25 you mean by "reasonably pertinent."

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2 Q. I'm just -- have you -- have you ever
3 provided any opinions about using a phrase
4 "reasonably pertinent"?

5 A. In my entire lifetime?

6 Q. In your -- in your declaration, do
7 you provide opinions about things being
8 reasonably pertinent?

9 A. I did not use the words "reasonably
10 pertinent." But I'm asking you what do you mean
11 by reasonably pertinent? because that's your
12 question, not mine.

13 Q. It's okay if you don't understand
14 what "reasonably pertinent" means, we can move
15 on.

16 A. If you choose to move on, that's your
17 prerogative. I'm asking you -- I don't
18 understand what "reasonably pertinent" means.

19 Q. Okay. Would you agree that trick
20 play was known in the art before the '792 patent?

21 MR. HENDIFAR: Objection. Form.
22 Incomplete hypothetical.

23 A. So everything has to be taken in the
24 context, and so trick play is, again, a set of
25 terms that one should look at in the context of

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2 the '792 and with respect to what, you know, your
3 contentions are. All right. So are you
4 referring to something in my declaration, with
5 regards to that? I'm happy to look at that to
6 answer that.

7 Q. Did trick play have an established
8 meaning in the art in 2003?

9 MR. HENDIFAR: Objection. Form.

10 Scope. Incomplete hypothetical.

11 A. I was not asked to analyze that
12 question either. I was asked to look at what
13 trick play was in relevance to the '792 patent.
14 And, again, that was not part of the analysis I
15 was asked to perform. I was asked to reply to
16 your contentions, and I think I've done that in
17 my declaration.

18 Q. Now, claim 1 uses the word -- uses
19 the phrase "trick play," correct?

20 A. In the '792 patent, yes.

21 (Discussion off the record.)

22 Q. When you read claim 1 of the '792
23 patent and you read the words "trick play" in
24 claim 1, did you have an understanding of what
25 was meant by trick play?

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2 A. You know, to gain an understanding of
3 the context, you have to look to the patent
4 specifications for all the claim terms, and
5 that's what I did.

6 Q. And do you know whether the '792
7 patent specification uses the word tricks --
8 "trick play"?

9 MR. HENDIFAR: Objection. Scope.

10 A. Sorry, I don't understand. You just
11 mentioned that the claim terms use the word
12 "trick play," and then are you asking me whether
13 the '792 used the words "trick play."

14 Q. Outside of the claims, do you know
15 whether the specification of the '792 patent uses
16 the phrase "trick play"?

17 A. You mean in the specification?

18 Q. Correct.

19 A. Yes, I believe it does.

20 Q. Where in the specification does the
21 '792 patent mention the words "trick play"?

22 A. Okay. Let's go look at the '792
23 patent. I think I've pointed to those as well in
24 my declaration.

25 (Witness reviewing document.)

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2 MR. LIANG: And I'll note the time
3 on the record is 2:54 p.m.

4 (Witness reviewing document.)

5 A. So I think it's in -- so it gives
6 examples. So I think it's in -- I'm having some
7 difficulty looking for it. But it is easier to
8 search for terms. Each of the claims mentions it
9 and also gives examples. I have to -- do you
10 know if I cite that in my declaration as well?
11 We can go faster that way.

12 Q. Dr. Bajaj, you know, it's been five
13 minutes. I think it's safe to say you did not
14 find any mention of the words "trick play" or the
15 phrase "trick play" in your declaration; right?

16 A. You know, you're timing me and you're
17 saying five minutes. And you're asking me to
18 look up into this patent where they're defining
19 "trick play," but also the prosecution history,
20 which is 1,000 pages and has mention of it.

21 Q. Right. And so, Dr. Bajaj, let me --
22 let me just confirm. I realize that you need
23 more time, but we've spent five minutes. And let
24 me just ask, in the five minutes that you spent,
25 you did not find any reference to trick play;

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2 right?

3 A. You're asking me to search for the
4 words in a specification which is not marked up,
5 and also, as I said, it's -- it's explained or
6 mentioned in the prosecution history multiple
7 times.

8 Q. So let me ask you this, Dr. Bajaj.

9 A. Will you let me complete my answer or
10 -- you're trying to pull a trick by timing me and
11 then not letting me finish.

12 Q. Let me -- let me --

13 A. You've asked a question and I'm still
14 looking.

15 Q. Right. And Dr. Bajaj, let me -- how
16 much time would you need then to look through the
17 patent and tell me whether you can find the use
18 of the word "trick play" in the specification?

19 A. Well, it's explained and, like I
20 said, I have seen -- it's, of course, mentioned
21 clearly in all of the claims and it's also
22 explained in the -- in the prosecution history.
23 There's -- I've read large parts of it.

24 Q. And let me just ask you just in terms
25 of time, right, you've spent over seven minutes

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2 -- or eight minutes on that question. So let me
3 just ask you: In terms of time, how much time
4 would you need to point me to a part of the '792
5 specification that uses the phrase "trick play"?

6 A. So you need -- you know, I might need
7 some time to think about how much time I will
8 need to go back and search in all those documents
9 to find you the exact line number. So let me
10 think about that, too. So there's -- 54 columns
11 and a thousand pages of the prosecution history,
12 which are together with the specification, and,
13 you know, it might take me half an hour to an
14 hour to exactly locate it. That's a guess.

15 Q. Now, let me -- let me tell you that
16 -- that I did a search -- I'll represent to you
17 that I did a search through the '792 patent, and
18 I didn't find any mention of the phrase "trick
19 play" in the specification, so --

20 A. And the prosecution history, did you
21 look through that?

22 Q. So let me ask you this, Dr. Bajaj:
23 When reading claim 1, if you read -- you read the
24 word "trick play" -- you read the phrase "trick
25 play," if the words "trick play" aren't mentioned

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2 in the specification, would you still have known
3 what was meant by the claim?

4 A. You know, when you read each claim,
5 you also have to look at the totality of all the
6 claims and also the specification and the
7 prosecution history, and "trick play" is defined
8 and some examples are given in future claims.

9 So for example, you know, if you even
10 go to claim 23 and there are others, it tells you
11 trick play functionality comprises at least one
12 of fast-forward, rewind, and scene skipping --

13 Q. Yeah, and that's probably --

14 A. -- as examples. And that is telling
15 you that, you know -- and then, like I said, it's
16 a item that is at the heart of the '792 patent
17 and was discussed a lot in the prosecution
18 history, and I read through these segments as
19 well.

20 Q. And that's all I'm getting at, right,
21 that trick play used in the '792 patent, it's
22 consistent with how it was known in the art;
23 right? It's fast-forward, scene skipping,
24 rewind; right?

25 A. It's -- you know, it's giving you

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2 embodiments of what are trick play. But trick
3 play by itself was not a term that I was asked to
4 analyze or define and that's why I -- you know,
5 the contentions of your petition are what I was
6 replying to. And none of your prior art, even in
7 their combinations, which I've explained, come
8 anywhere close to explaining how to even do some
9 of the examples of trick play that I mention.

10 So, you know, the -- if it comes to
11 explaining all the various types of trick play
12 that exists and what are capable of or what
13 the '792 is capable of, that's a separate
14 question altogether.

15 Q. Would you agree that knowledge of the
16 location of specific encoded video frames can be
17 used to skip frames?

18 MR. HENDIFAR: I'm sorry. Could
19 you repeat that question? You had a quick
20 interruption with that question.

21 Q. Would you agree that knowledge of the
22 location of specific encoded video frames can be
23 used to skip frames?

24 MR. HENDIFAR: There's a word I'm
25 missing. Knowledge of what?

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2 Q. Would you agree that knowledge of
3 location of specific encoded video frames can be
4 used to skip frames?

5 MR. HENDIFAR: Objection. Form.
6 Incomplete hypothetical.

7 A. So in the context of what trick play
8 and even for the examples in the '792, the '792
9 explains it uses two indices, a first index and a
10 second index to perform trick play functionality.
11 Each of the claims mentions that and, you know,
12 that's the context I analyzed, and I have made
13 mention in my declaration.

14 Q. Would you agree that knowledge of the
15 location of specific encoded video frames can be
16 used to skip frames either in a regular fashion
17 such as during fast-forward or rewinding, or in
18 an irregular fashion, such as when skipping
19 between scenes or chapters?

20 MR. HENDIFAR: Objection. Form.
21 Incomplete hypothetical. Scope.

22 A. Again, this is not a question that I
23 was asked to consider. I was asked to look at
24 the claims of the '792 and also your contentions,
25 and those are what I have declared.

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2 Q. Do you think that the statement I
3 just made was unclear?

4 MR. HENDIFAR: Objection. Form.
5 Scope. Incomplete hypothetical.

6 A. You can come up with lots of
7 combinations and ask hypothetical questions,
8 which are something that I don't want to answer
9 on the fly because I'm not -- you know, these are
10 nice questions, some of them are -- you know, are
11 correct, and I need time to analyze them before I
12 can --

13 Q. Then let me point you to the '792
14 patent, Exhibit 1001, and let's go to column 48,
15 line 33. And let me know when you get there.

16 A. Yes.

17 Q. All right. There's a sentence that
18 reads "Knowledge of the location of specific
19 encoded video frames can be used to skip frames
20 either in a regular fashion (such as during
21 fast-forward or rewinding) or in an irregular
22 fashion (such as when skipping between scenes or
23 chapters)."

24 Do you agree with this statement?

25 A. In the context of they are indexed

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2 locations. So which -- which lines were you
3 reading? Let me read them again.

4 Q. At column 48, line 33.

5 A. It starts off with, "In several
6 embodiments, the decoder uses an index chunk
7 within the DXDT chunk to locate particular
8 encoded video frames." Knowledge of location of
9 specific -- within this context. So you have
10 information within this.

11 So you'd have to go back and see what
12 has the information encoded in the index chunk
13 and also the DXDT notion. And with that
14 knowledge you can be used to skip frames either
15 in a regular fashion, such as during
16 fast-forwarding or rewinding or in the regular
17 fashion.

18 Q. Do you agree with that statement that
19 knowledge of location of specific encoded video
20 frames can be used to skip frames either in a
21 regular fashion (such as during fast-forward or
22 rewinding) or in an irregular fashion (such as
23 when skipping between scenes or chapters)?

24 MR. HENDIFAR: Objection. Asked
25 and answered.

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2 A. In the specific context of what they
3 are mentioning, so the parenthetical remark of
4 the sentence, In several embodiments, the decoder
5 uses both an index chunk within the DXDT
6 information of multimedia file to locate
7 particular encoded video frames, and with that
8 knowledge of the location or specific encoded,
9 the rest of the sentence is there.

10 Q. So then the index chunk contains the
11 location of specific encoded video frames that
12 can be used to skip frames either in a regular
13 fashion, such as during fast-forward or
14 rewinding, or in a irregular fashion, such as
15 when skipping between scenes or chapters; right?

16 MR. HENDIFAR: Objection. Asked
17 and answered.

18 A. The decoder uses an index chunk
19 within the DXDT of a multimedia file. So you
20 have to also see what all is the information the
21 DXDT that has been encoded that allows it to do
22 the rest of that paragraph.

23 Q. And do you know whether the index
24 chunk referenced in column 48, line 31 contains
25 information regarding the location of any video

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2 frames?

3 A. Are you talking about the index chunk
4 within the DXDT of a multimedia file when you're
5 looking at column 48? because that's the context
6 that's explained.

7 Q. Right. And what I'm asking is does
8 the index chunk referenced in column 48, line 31
9 include any information regarding the location of
10 video frames?

11 A. The index chunk within the DXDT of a
12 multimedia file, one needs to, again, look at the
13 patent and see what kind of information is
14 encoded, and it would have information about how
15 it could locate video frames.

16 But to answer that precisely, one
17 would have to go back and look up that
18 information again in the patent. It's not a
19 question I was asked to consider, but in response
20 to what you're -- you know, the details of this
21 is present in the patent.

22 Q. Okay. Let me ask you this: Would
23 you agree that if an index included the location
24 of specific video frames, then that knowledge
25 regarding the location of specific video frames

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2 can be used to skip frames either in a regular
3 fashion, such as during fast-forward or
4 rewinding, or in an irregular fashion, such as
5 when skipping between scenes and chapters?

6 MR. HENDIFAR: Objection. Form.

7 Incomplete hypothetical. And scope.

8 A. So, you know, if you look at it in
9 the context of even the Section 5.1.1, it's
10 talking about usage of the index chunk within the
11 DXDT of a multimedia file. The index chunk is,
12 you know, the second index, and within that DXDT
13 of a multimedia file which has additional
14 information, it can use that information to
15 locate particular video frames.

16 So in that context, the index chunk
17 within the DXDT of a multimedia file has
18 information, as it's explained in that paragraph.

19 Q. So then the index chunk within the
20 DXDT of a multimedia file allows frames to be
21 located without using the idx1 chunk; correct?

22 MR. HENDIFAR: Objection.

23 Incomplete hypothetical. Form. Scope.

24 A. As we discussed this morning, the
25 index chunk encodes only a subset of the frames.

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2 So the --

3 Q. Frames that are encoded within the
4 index chunk, the index chunk contains the
5 location of those frames within the multimedia
6 file; correct?

7 MR. HENDIFAR: Objection. I'm
8 sorry, Doctor. If the counsel would allow
9 Dr. Bajaj to complete his answer, then
10 objection to the specific question. Form.
11 Incomplete hypothetical. Thank you.

12 Please respond, Doctor.

13 A. Yeah, I didn't complete my answer to
14 the first question, which you asked again. So
15 let me switch to your second question, which
16 because of all of this, maybe I don't want to be
17 imprecise, I want to answer you correctly, could
18 you repeat your question, please?

19 Q. Within the frames that are indexed --
20 withdrawn.

21 Within the frames that are described
22 in the index chunk, the index chunk contains the
23 location of those frames within the multimedia
24 file; correct?

25 MR. HENDIFAR: Objection. Asked

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2 and answered. Scope. Form. Incomplete
3 hypothetical.

4 Q. Let me clean up the question then.

5 Would you agree that the index chunk
6 contains information indicative of the location
7 of a multimedia file of a subset of the encoded
8 video frames; correct?

9 A. I did not say that. I had mentioned
10 before, and I repeat with respect to column 48,
11 it's very clearly written. The decoder uses an
12 indexed chunk which is within a DXDT of a
13 multimedia file, and the information within that
14 would help it locate some particular encoded
15 video frames.

16 The information we have been talking
17 before of the index chunk as referencing certain
18 particular video frames, and that process we went
19 over was where it was referencing the tags
20 information into the first index, the complete
21 index, which was being used to locate each and
22 specific video frames. And that's what I've
23 declared also in my -- or stated in my
24 declaration.

25 Q. Now, I'm going to ask you the

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2 question again to give you the opportunity to say
3 "yes" if you agree. And if you -- you can always
4 provide additional explanation, but unless you
5 say "yes," I'm going to take that to understand
6 that you disagree. So let me ask you again.

7 Would you agree that the index
8 described in column 48, line 31 in the '792
9 patent includes information indicative of the
10 location within the file of a subset of the
11 encoded video frames?

12 A. The index chunk has information that
13 references, you know, particular subset of video
14 frames.

15 Q. Okay. So then you agree that the
16 index chunk includes information indicative of
17 the location in the file of a subset of the
18 encoded video frames?

19 MR. HENDIFAR: Objection. Asked
20 and answered.

21 A. No, I don't agree because I did not
22 say that. I am not going to read more than what
23 the claims say or the specification. It says the
24 index chunk has reference to information in a
25 primal index or information about a subset of the

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2 pictures, and those referenced information allows
3 it to, you know, identify different subframes
4 within -- with the use of the idx1.

5 And so precisely what information
6 there is is something I have not gone through
7 because it is not something that I was asked to
8 deeply analyze.

9 Q. Let me change gears, then, and ask
10 you about the --

11 MR. HENDIFAR: Sorry for
12 interrupting. Do you think it's a good
13 time for a break, as long you are done with
14 your tenor of question because I'm almost
15 falling asleep.

16 MR. LIANG: All right. We can take
17 a short -- take a five-minute break.

18 MR. HENDIFAR: Let's come back at
19 2:27 -- let's say 2:30.

20 (Break from 5:22 p.m. to 5:31 p.m.)

21 Q. (BY MR. LIANG) Dr. Bajaj, the MPEG-4
22 file format was known in the art before the '792
23 patent; correct?

24 A. Again, this is a memory quiz. It was
25 around that time frame, maybe 19 -- late 1990s,

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2 2000. So I'm not entirely sure about MPEG-4.

3 Q. And did you participate in any MPEG
4 meetings for the development of the MPEG-4 file
5 format?

6 A. The only thing I recall I
7 participated in specifically, there was some
8 meetings we were looking at CODECs, lossless and
9 lossy, and that was used in MPEG-3 and possibly
10 -4. There were some meetings where people looked
11 at different algorithms.

12 Q. And there's actually a style format
13 that's part of the MPEG-4 standard -- let me
14 rephrase it.

15 The MPEG-4 standard does have a part
16 that defines the file format; correct?

17 A. Not singular, but plural. There are
18 many formats.

19 Q. Right. So the MPEG-4 standard has
20 parts that describe file format -- that define
21 file formats; correct?

22 A. Yes. There are profiles and a bunch
23 of things, yes.

24 Q. And did you participate in any of the
25 MPEG meetings that were directed to the

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2 development of those portions of the MPEG-4
3 standard that define file formats?

4 A. So the question is a little
5 confusing. You know, you -- the MPEG standard
6 committees are multiple committees and they are
7 intertwined. And if you're asking me
8 specifically about a certain file format at a
9 certain time, I don't recall participating in
10 that. But there are multiple meetings happening
11 simultaneously because these things are
12 intertwined.

13 Q. Right. But you don't have any
14 specific memory of attending any meetings that
15 were directed to the development of the portions
16 of the MPEG-4 standard that define file formats;
17 correct?

18 A. I'm trying to answer your question.
19 The MPEG-4 standards that define the file format,
20 not specifically from file formats. It's too
21 narrow a subdivision.

22 Q. And that's a narrow question. I'm
23 just asking about the meetings that were directed
24 towards developing the portions of the MPEG-4
25 standard that define file formats. And I just

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2 want to know whether you have any specific
3 memories of attending any such meetings?

4 A. Not really.

5 Q. Do you have any -- withdrawn.

6 Did you attend any meetings for the
7 development of the MPEG-1 file format?

8 MR. HENDIFAR: Objection.

9 Foundation.

10 A. No.

11 Q. Did you attend any meetings for the
12 development of the MPEG-2 file format?

13 MR. HENDIFAR: Objection.

14 Foundation.

15 A. No.

16 Q. Now, MPEG-1 files have been around
17 since the -- earlier than the 1990s; right?

18 A. Something around that time, yes.

19 Q. And MPEG-2 files have been around
20 since at least the mid '90s; right?

21 A. Possibly, yeah.

22 Q. And you'd agree that MPEG-1 was a
23 file format that was suitable for streaming;
24 right?

25 MR. HENDIFAR: Objection. Scope.

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2 Incomplete hypothetical. Form.

3 A. So, you know, you agreed with me that
4 -- and it's common knowledge in -- even for
5 anyone who's in this domain -- file format is a
6 very narrow sub-sub-sub-portion of a standard.
7 What makes a MPEG-1 stream is not given by the
8 packaging or the file format. It's essential
9 because you have to deliver content.

10 But the very nature of the encodings
11 and the various methods used and what type of
12 data can be multiplexed are the -- all that goes
13 in a standard. So your questions about are you
14 familiar with the MPEG-1 file format is like
15 saying were you familiar with the details of the
16 packaging.

17 And whenever we needed to and had to
18 read an MPEG-1, we had to get conversant to the
19 file format. What made it suitable is the entire
20 standard.

21 Q. You'd agree that the MPEG-1 file
22 format was used for video streaming in the prior
23 art; right?

24 MR. HENDIFAR: Objection. Scope.
25 Form. Incomplete hypothetical.

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2 A. So these are memory tests about, you
3 know, file formats, and I'm sorry I have not --
4 you know, I don't recall.

5 Q. Are you aware of any use in the prior
6 art of the MPEG-1 or MPEG-2 file formats for
7 video streaming?

8 MR. HENDIFAR: Objection. Scope.
9 Form. Incomplete hypothetical.

10 A. Again, I am sorry I don't recall, you
11 know, about at what time and what place MPEG-1
12 became MPEG-2 and then became MPEG-3. These
13 standards had a lot more than just the file
14 format change, and so as the different types of
15 data compression methods and the different types
16 of data became available, things became more
17 prevalent and adopted.

18 Q. Let me turn you -- or have you turn
19 to your -- your declaration, Exhibit 2005, and I
20 want to direct you to paragraph 27. So let me
21 know when you get there.

22 A. Okay.

23 MR. HENDIFAR: 2 -- what?

24 MR. LIANG: 27. Paragraph 27 of
25 2005. And let me know when you're there.

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2 Q. Are you there, Dr. Bajaj?

3 A. I am there. Thank you.

4 Q. Now, in the middle of this paragraph,
5 it reads, "I disagree with Dr. Reader that the
6 nature of a POSITA's experience would be so
7 narrow and focused."

8 Do you see that?

9 A. Yes.

10 Q. So let's back up one sentence, then,
11 for context. So paragraph 27 says, "Dr. Reader
12 unduly limits the scope of the POSITA's
13 experience to be focused on video playback and
14 files formats. I disagree with Dr. Reader that
15 the nature of the POSITA's experience would be so
16 narrow and focused."

17 Do you see that?

18 A. Yes, I do.

19 Q. So then in your view, if a POSITA's
20 knowledge is not so narrow, what additional
21 knowledge would a POSITA have had?

22 MR. HENDIFAR: Objection. Form.

23 A. So let me point you to paragraph 26,
24 and that precedes that statement. And Dr. Reader
25 opines that a person of ordinary skill in the art

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2 would have a bachelor degree in electrical
3 engineering, computer science, or a similar field
4 with at least two years of experience.

5 So the "or a similar field with at
6 least two years of experience in video playback
7 and file formats," so you're comparing the narrow
8 domain of video playback and file formats with a
9 field of electrical engineering and computer
10 science.

11 Q. So Dr. --

12 A. And let me -- please, if you don't
13 let me complete and you keep interrupting me, I
14 cannot answer your question.

15 Q. Well, I just want to point out -- and
16 I just wanted to point out, if it might help your
17 answer. So let me just point out this -- let me
18 just point this out and -- and then you can
19 finish your answer.

20 A. Interrupt for the next question
21 because I've forgotten my chain of thought.

22 Q. Okay. Because this -- what you've
23 just read it is meant -- there's a list here, a
24 bachelor's degree in, and then he lists degree
25 fields, -- right? -- electrical engineering,

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2 computer science, or a similar field.

3 And so in addition to that, right, so
4 a bachelor's degree in one of those fields with
5 at least two years of experience in video
6 playback and file formats. So that's what he's
7 actually saying.

8 And with that understanding in mind,
9 does that change any of your views of the
10 examples described in paragraph 27?

11 A. What I disagreed with that, you know,
12 having video playback and file formats is too
13 narrow and focused. A field of endeavor, right,
14 was more on video encoding, transmission,
15 decoding, and that knowledge is what a person of
16 ordinary skill in the art should possess if they
17 have to look at the '792 patent, as well as the
18 inventors of the Zetts reference, as you have or
19 Dr. Reader has placed as prior art.

20 A person who's only knowledgeable of
21 video playback and file formats would not have
22 the scope, regardless, you know -- I -- I said
23 given the benefit of the doubt, you know, as
24 you've pointed out, the, quote/unquote, ambiguous
25 similar fields, you know, right, other than

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2 computer science and electrical engineering, what
3 other similar fields would you talk about.

4 Given that benefit of the doubt, I
5 will not -- my opinions in the rest of the
6 document do not change, and so I've qualified
7 that right after paragraph 27 as well.

8 Q. Right. So then it sounds like what
9 you're saying is that in addition to video
10 playback and file formats, a POSITA would have
11 also had knowledge regarding video encoding,
12 transmission, and decoding; is that right?

13 A. Yes, because that's what the '792,
14 you know, explains as the background of its
15 invention. And the Zetts reference claims as the
16 field of invention, that's your prior art, but
17 not statements of the type or a similar field
18 with the specialization in video playback and
19 file formats, which is another "or" in your
20 Dr. Reader's opinion.

21 And an "or" means if a person in
22 similar field with video playback and file
23 formats, I would say, oh, that person would have
24 all the knowledge that would allow it to
25 interpret the encoding capabilities, the

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2 compression capabilities, the transmission and
3 decoding capabilities, then that person would be
4 too narrow, too narrow.

5 Q. What is the -- what is the field of
6 the invention of the '792 patent?

7 A. So that's a good question to ask with
8 respect, you know, to the '792. And if you go
9 back and read the background of the invention and
10 the abstract, and I also stated that in my
11 declaration. So let me see if I can find that
12 for you. I think I might have highlighted it. I
13 need to write my declarations with better indexes
14 so I can pinpoint my paragraphs better.

15 If you would go to column 1 of
16 the '792, line 20, "The present invention relates
17 generally to encoding, transmission, and decoding
18 of multimedia files. More specifically, the
19 invention relates to encoding, transmission, and
20 decoding of multimedia files that can include
21 tracks in addition to a single audio track and a
22 single video track."

23 So it's not just file formats and
24 video playback. That's not a field in -- in most
25 places what I'm aware of, and -- and having

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2 knowledge of encoding, transmission, and decoding
3 of multimedia files would be essential to
4 interpreting what the invention is.

5 Q. Do you know the inventor of the Zetts
6 reference, John Zetts?

7 A. No, I don't.

8 Q. Do you know anything about his
9 education level?

10 A. No.

11 Q. Do you any -- do you know anything
12 about John Zetts' work experience?

13 A. No. Didn't need to look into his
14 privacy or anything.

15 Q. So in paragraph 27 at the end, you
16 say, "I also note that the inventors of the
17 Petitioner's Zetts reference, a U.S. Patent, were
18 persons of extraordinary skill in the art."

19 Do you see that statement?

20 A. Yes.

21 Q. So what's your basis for saying that
22 John Zetts had extraordinary skill in the art?

23 A. Because persons who come up with
24 inventions such as Zetts and '792 are not just
25 ordinary people. They have extraordinary skills.

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2 They have come up with a clever idea and
3 explained that. So both Zetts and the '792 are
4 clever people.

5 Q. Now, you'd agree that Zetts teaches
6 modifying the MPEG file format to include a GOP
7 offset table; right?

8 A. Is this a paragraph in my declaration
9 you're reading now or referring to? At least you
10 can point me to that.

11 Q. Let me just point you -- let me just
12 point you to Zetts, Exhibit 1004. You have it in
13 front of you; right?

14 A. No, I don't. I mean, I have it, but
15 I have to locate it.

16 Q. Okay. Well, let me know when you
17 have Zetts in front of you.

18 A. The size of binders, all these rings.
19 Zetts, yes, I have it now. Thank you.

20 Q. Okay. So if you could go to column
21 5, line 46. And around line 48, it says, "The
22 method and system of the present invention
23 processes an existing MPEG-1 or MPEG-2 video file
24 and inserts a GOP offset table as the starting
25 sets of the packet stream."

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2 Do you see that?

3 A. Yes, I do.

4 Q. So Zetts teaches modifying MPEG-1 and
5 MPEG-2 video files by inserting a GOP -- GOP
6 offset table; correct?

7 A. So it -- it -- the invention
8 processes an existing MPEG file and inserts a GOP
9 offset table into that file. It's not modifying
10 the file format. It's modifying the file -- the
11 video file by inserting a GOP offset table.

12 Q. And specifically Zetts inserts the
13 GOP offset table -- and that's spelled G-O-P all
14 caps -- offset table into MPEG padding packets;
15 correct?

16 A. Starting packets of the stream, and
17 GOP is group of pictures, and, yes, it's a clever
18 scheme by which it -- it processes MPEG-1 and
19 MPEG-2 video files and inserts this GOP offset
20 table using the format of either MPEG-1 or
21 MPEG-2.

22 Q. Right. And the GOP offset table is
23 inserting the padding packets; correct?

24 A. Yes, the term padding in the stream
25 is you're adding extraneous information, and so

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2 you're putting this GOP offset table into the
3 stream of the video file.

4 Q. Normally padding packets are
5 discarded by the MPEG decoder; right?

6 MR. HENDIFAR: Objection.
7 Incomplete hypothetical. Scope.

8 A. So you have to realize that MPEG is a
9 generic standard and, you know, you conform to
10 the standard, and there are many options, just
11 like indices are options of the AVI file format.

12 Padding packets, you know, if you are
13 encoding and using padding packets, you would set
14 a flag and you would not discard them. And so
15 that gives you the ability whenever you have an
16 option of including information that this is an
17 MPEG where the padding packets are being used so
18 you don't discard them.

19 Q. Do you agree that padding packets are
20 normally discarded but the MPEG decoder; right?

21 MR. HENDIFAR: Objection. Asked
22 and answered. Scope. Incomplete
23 hypothetical.

24 A. As I've explained my opinion, which I
25 -- which is correct, is like any optional in a

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2 generic standard, when you use the option, you
3 flag it and then the decoder would use it.

4 So if -- if you're inserting into the
5 padding packets, of course you don't want it to
6 be ignored. It will -- it will defeat the
7 purpose of why you're decoding that information.

8 So, you know, a vanilla decoder which
9 is not using the Zetts invention would be
10 discarding any extraneous padding packets which
11 are not being used.

12 Q. And -- but then Zetts does teach that
13 it is going to mark the inserted GOP offset table
14 padding packets with a signature that's
15 recognized by a decoder enabled to extract the
16 GOP offset table; right?

17 A. It explains that, yes, because
18 otherwise its insertion would not be accepted,
19 right, by the decoder.

20 Q. You offered a number of opinions in
21 this case on -- if you go to, for example,
22 page 11 of Exhibit 2005 of your -- which is your
23 declaration. And the heading says "Petitioner
24 Does Not Show That Kaku is Analogous Art."

25 Do you see that?

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2 A. I do.

3 Q. Now, in paragraph 37, which we looked
4 at, you have -- you described your understanding,
5 you know, in terms of analogous art. And I want
6 to ask you, is this the first declaration that
7 you've provided in which you have provided an
8 opinion regarding whether prior art is or is not
9 analogous art?

10 MR. HENDIFAR: Objection. Scope.
11 Relevance.

12 A. You know, I've written thousands of
13 declarations. I -- you just pulled out one
14 earlier this morning and showed it to me from two
15 years ago, and that's only two years ago, and I
16 don't even remember the details of that. So I'm
17 sorry, I don't -- I don't recall.

18 Q. Do you -- is it correct that the --
19 your -- that paragraph 37 of your declaration
20 describes your legal understanding in terms of
21 analogous art?

22 A. Yes, counsel provided me with -- I'm
23 not a legal expert -- but counsel provided me
24 with these as two-part tests and -- and I used
25 them.

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2 Q. So when you were provided with your
3 legal understanding for analogous art, did you
4 feel like that was something that was very
5 familiar that you had analyzed before, or did it
6 feel new to you?

7 MR. HENDIFAR: Objection. Form.
8 Scope. Relevance.

9 A. Yeah, I'm a little confused by your
10 question. You know, appropriate prior art is
11 well recognized if it's in the same field of
12 invention, and, you know, there is a legal
13 process, at least a two-part test that is devised
14 and should be applied by experts like me who are
15 writing declarations and standing by them. And
16 so that's what I did. And I'm sorry, but Kaku
17 failed the test.

18 Q. Can you think of any previous
19 opinions that you've provided where you've
20 applied the two-part test that is described in
21 paragraph 37 of your declaration?

22 MR. HENDIFAR: Objection. Asked
23 and answered. Relevance.

24 A. Again, I don't recall. I mean, I've
25 written many declarations and it's really the

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2 quality of the petitioner that is being
3 considered, whether they have mistakenly or
4 knowingly put in something which doesn't make
5 sense and also doesn't pass the test. And that's
6 what I did here.

7 Q. Are you aware that DivX has asserted
8 the '792 patent against Netflix in district
9 court?

10 MR. HENDIFAR: Objection.
11 Relevance.

12 A. Vaguely aware there's a district
13 court case. But this is an IPR around Netflix;
14 right?

15 Q. And Netflix provides a streaming
16 video service over the internet; right?

17 MR. HENDIFAR: Object. Could you
18 repeat the question? I'm sorry. I had a
19 bad connection. Can you repeat the
20 question, please.

21 (Requested portion was read.)

22 MR. HENDIFAR: Thank you.

23 Objection. Form and relevance.

24 You can respond, Doctor.

25 THE WITNESS: Thank you.

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2 A. Yeah, I'm familiar with Netflix.

3 Q. And does the '792 patent disclose a
4 file format for streaming video over the
5 internet?

6 MR. HENDIFAR: Objection. Form.
7 Scope. Relevance.

8 A. The '792 patent provides methods for
9 encoding and decoding multimedia files that also
10 enable many, you know, interactions and also
11 trick play. So I, you know, of course am
12 completely familiar with the '792, but in the
13 context of these proceedings, I was only asked to
14 look at specific questions that were raised by
15 petitioner, and those I've answered in my
16 declaration.

17 Q. Okay. So then for this proceeding,
18 you don't have an opinion about whether the '792
19 patent discloses a file format for streaming
20 video over the internet; correct?

21 A. I was not asked to opine on that. I
22 was asked to opine on exactly contentions raised
23 by the petitioner and also by your expert, and
24 I've got that in my declaration.

25 Q. And have you provided an opinion in

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2 this proceeding about whether the '792 patent
3 modifies AVI to make it more suitable for
4 internet streaming?

5 A. I was not asked for an opinion other
6 than to look at the '792 patent and the prior art
7 that you had raised in your petition with certain
8 combinations and grounds, and I've replied to
9 each one of them in my declaration.

10 Q. Now, in -- you have a binder in front
11 of you with some exhibits, and I noticed that
12 when you listed them earlier, they basically were
13 exhibits all in the 1000 range. So I want to ask
14 you about some exhibits that have been filed. I
15 just want to know if you have printed copies of
16 any exhibits in the 2000 range or whether we
17 should do it electronically.

18 A. I have an electronic copy of
19 everything which is in the 2000 range, and I
20 didn't print that out.

21 Q. Well, let me just spend it -- we'll
22 use the same website.

23 A. Okay.

24 Q. That same website that's the TSG
25 website. So let me get in here.

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2 MR. LIANG: And actually, wait,
3 while I get this set up, maybe we could
4 take a -- go off the record for a short
5 break. So if we could just take a
6 five-minute break.

7 MR. HENDIFAR: Sure.

8 MR. LIANG: All right.

9 THE WITNESS: I also need -- it's
10 6:00 and I just wanted to know because I
11 have to feed the dog since my wife is not
12 here -- what's the -- shall we take a -- a
13 break now and I feed the dog and we come
14 back? Or do you want to go --

15 MR. HENDIFAR: I guess the question
16 is how much more do you think you have
17 left, Jeff?

18 THE WITNESS: Right, so I can plan.

19 MR. LIANG: There's still --
20 there's still some amount more. I think
21 there's quite a bit more. So I think if
22 you want to feed your dog now, we can take
23 a break.

24 (Break from 6:12 p.m. to 6:31 p.m.)

25 Q. (BY MR. LIANG) I'm about to share a

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2 file with you. One moment. So it is in the
3 submitted folder, Exhibit 2009.

4 MR. HENDIFAR: If you could also --
5 you don't need to send it in the chat box.
6 If it is something that's already filed.
7 It's not necessary.

8 MR. LIANG: Yeah, it's an exhibit
9 that's already filed. It's Exhibit 2009.

10 MR. HENDIFAR: Thank you.

11 Q. And, Dr. Bajaj, let me know when you
12 have opened it.

13 A. Yes, I have.

14 Q. Great. Okay. Have you ever seen
15 Exhibit 2009 before?

16 A. Yes. I believe I referenced it in my
17 declaration as well.

18 Q. Did you find Exhibit 2009, or was it
19 provided to you by counsel?

20 A. I don't fully recall, but maybe one
21 of the files that counsel gave me.

22 Q. Now, it's safe to say that
23 Exhibit 2009 would have been posted to the
24 internet sometime in 2020 or later; correct?

25 A. Well, kind of. It's a -- it's a

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2 survey publication and -- actually, I'm also
3 looking in where I reference this. Do you happen
4 to know in my documents?

5 Q. I don't know. I think -- well, let
6 me -- I'm just asking you whether do you know --
7 do you have a -- let me ask you this.

8 A. Yes.

9 Q. Other than based on text in the
10 document itself, do you have any independent
11 basis or understanding as to when Exhibit 2009
12 was posted to the internet?

13 A. Possibly -- there's no date I can
14 rely on, but I'd say it's a simple, you know,
15 article published in IEEE peer society who is
16 well recognized.

17 Q. Before this IPR proceeding, have you
18 ever seen Exhibit 2009 before?

19 A. You know, I've seen similar things
20 published from time to time.

21 Q. Have you ever seen Exhibit 2009
22 specifically?

23 A. I don't actually recall exactly when
24 I posted this. Yeah, last year when it was
25 provided by counsel, maybe.

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2 Q. And just looking at the title, right,
3 "8 Best Video File Formats For 2020," it's safe
4 to say this article would have been published
5 sometime around 2020; is that fair?

6 A. Or 2021.

7 Q. 2020 or later; is that fair?

8 A. Yeah, it seems like it's a generic
9 brief survey of some of the -- yeah, Gilad Maayan
10 calls it "8 Best Video File Formats."

11 Q. Okay. And do you know Gilad Maayan,
12 the author?

13 A. No.

14 MR. LIANG: And just for the
15 record, that's spelled G-i-l-a-d is the
16 first name, Gilad, and the last name
17 Maayan, M-a-a-y-a-n.

18 Q. Before this IPR proceeding, had you
19 ever heard of the author Gilad Maayan before?

20 A. No. But when you find articles on
21 the internet, you go by topic, you don't go by
22 name, so you know. So that's how I find
23 articles. Actually, it's not the name but it's
24 the topic of what you're searching for.

25 Q. Do you know anything about the

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2 educational background of Gilad Maayan?

3 A. No.

4 Q. Do you know anything about the
5 technical work experience that Gilad Maayan has?

6 A. No. Other than what's in the
7 article.

8 Q. So I'm about to share with you
9 another exhibit.

10 A. You saw what the -- he writes about
11 himself; right? It's at the very end of that
12 document, that he had worked for over 150
13 technology companies, SAP, Samsung NEXT, NetApp,
14 Imperva and --

15 Q. Okay.

16 A. -- it's an IEEE Computer Society
17 publication.

18 Q. Now, I have shared with you another
19 document. If you could close this one and open
20 Exhibit 1021, which I will also drop into the
21 Zoom chat window for Mr. Hendifar and the court
22 reporter. So let me know when you have that
23 open.

24 MR. HENDIFAR: I haven't received
25 it either. So -- oh, I just got it.

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2 Q. And, Dr. Bajaj, just let me know when
3 you are able to open it.

4 A. It's still downloading. It seems to
5 be a LinkedIn PDF.

6 MR. HENDIFAR: Wait. I need a
7 couple of more seconds to download it as
8 well.

9 THE WITNESS: Yeah, well, I can see
10 it. It just popped up for me.

11 (Discussion off the record.)

12 Q. And, Dr. Bajaj, you're familiar with
13 LinkedIn; right?

14 A. Yes.

15 Q. In fact, you have a LinkedIn page for
16 yourself; right?

17 A. Yes.

18 Q. Okay. And are you able to open
19 Exhibit 1021?

20 A. Yes, I can see it.

21 Q. Okay. Now, Exhibit 1021 is the
22 LinkedIn page for the -- for Gilad Maayan who's
23 the author of Exhibit 2009; right?

24 MR. HENDIFAR: Objection.
25 Foundation.

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2 A. Well --

3 MR. HENDIFAR: And calls for
4 speculation.

5 A. Well, I was just looking to verify
6 there could be several people named Gilad Maayan,
7 and I presume you have checked that this is the
8 same person that wrote both articles?

9 Q. Well, let me ask you a little bit
10 about -- let me ask you a little bit about Gilad
11 Maayan. And if you go to the bottom of
12 Exhibit 1021.

13 A. I'm sorry. You didn't answer my
14 question. You ignored it.

15 Q. Well, let me represent to you that
16 this is the same Gilad Maayan. And when you
17 looked at the bottom of on page 10 -- so let's go
18 to page 10 of Exhibit 1021.

19 A. Page 10?

20 Q. You see -- let me know when you get
21 to page 10.

22 A. Okay.

23 Q. Okay. And you see that a lot of his
24 experience in -- has included technical writing;
25 correct?

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2 A. Yeah.

3 Q. All right. And when you look at his
4 education level, you see that he has the
5 bachelors -- this is on page 11 of
6 Exhibit 1021 -- he has a bachelors of the arts in
7 economics and management.

8 Do you see that?

9 A. Uh-huh.

10 Q. And under his education he writes, "I
11 was practically the only one in my faculty who
12 seriously enjoyed studying economics. Now
13 putting it to good use when managing my team and
14 capturing the economics of my own business and
15 the SEO campaigns of my customers."

16 Do you see that?

17 A. That's in the 2000 time frame; right?

18 Q. Right, under his education level on
19 page 11. Do you see that?

20 A. Yeah.

21 Q. Okay.

22 A. Wait a minute. Page 11 and his --
23 yeah. Okay. This was back in 2000, yeah.

24 Q. Okay.

25 A. What's your question?

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2 Q. All right. So you agree that
3 Mr. Maayan has a bachelors of the arts, not a
4 bachelors of science; correct?

5 MR. HENDIFAR: Object to
6 foundation. Calls for speculation.

7 A. Right. He's -- on this page it says
8 "BA in Economics and Management."

9 Q. And if we go back to the first page,
10 page 1 of Exhibit 1021.

11 A. Give me a second. Page 1.

12 Q. Okay. Let me know when you're at
13 page 1.

14 A. I'm there.

15 Q. And he lists a number of specialties
16 at the bottom.

17 Do you see that?

18 A. At the bottom?

19 Q. At the bottom of page 1, he lists a
20 number of specialties.

21 Do you see that?

22 A. I do, yeah.

23 Q. Okay. And if you read those
24 specialties, would you agree that he does not
25 list video at all in his specialties?

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2 A. He talks about content marketing,
3 digital marketing, and digital marketing and
4 content and digital, you know. Anyway, I'm still
5 not sure what you're leading up to or what are
6 you insinuating.

7 Q. I'm just asking in his specialties,
8 he doesn't list any sort of video engineering;
9 right?

10 A. Well, you're looking at a linked page
11 and he's been in content creation and link
12 building in the company called NetApp for three
13 years and five months in Tel Aviv. Before that
14 he was in content creation in -- in Samsung NEXT.

15 Q. And you'd agree that content creation
16 refers to creating -- creating content like for
17 marketing or purposes of that sort; right?

18 MR. HENDIFAR: Objection. Form.

19 A. Yeah, I don't know what hairs you're
20 splitting, but, you know, you're saying if
21 digital content does not contain video -- is that
22 the point you're trying --

23 Q. I'm just asking you, you know, is --
24 so --

25 A. You're asking me what?

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2 Q. Would you consider Mr. Maayan to be
3 -- the focus of -- his career focus is marketing
4 and SEO; right?

5 A. And also technical SEO analysis,
6 technical writing.

7 Q. Okay. And what is --

8 A. This is an example of technical
9 writing.

10 Q. Okay. And what is SEO?

11 A. I don't know what SEO is.

12 Q. SEO stands for search engine
13 optimization; right?

14 A. When you say "right," I don't know --

15 Q. Sure. Okay.

16 A. -- SEO can mean many things.

17 Q. Have you ever heard of search engine
18 optimization as a marketing technique to get more
19 hits and more traffic from search engines?

20 A. I've heard of the concept, but I
21 don't -- I didn't ever have to decipher what SEO
22 meant. It's not stated anywhere here. But I
23 believe you. And it's a lot of optimization, in
24 fact, on middleware and content management of
25 various spaces. So he's been there. So what's

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2 the point or question?

3 (Zoom disconnection of Mr. Liang.)

4 MR. LIANG: Okay. I'm back.

5 THE WITNESS: Oh.

6 Q. (BY MR. LIANG) I think I got
7 disconnected. Can you hear me?

8 A. Now, I can, yes.

9 Q. Okay. So are you on page 4? I'd
10 like you to turn to page 4. I'm not sure if I
11 got disconnected.

12 A. I didn't think you were gone. So you
13 might want to listen to everything I was saying
14 because you disappeared, but I was speaking
15 still.

16 Q. Okay. Yeah. So if you'd turn to
17 page 4 of Exhibit 1021.

18 A. All right.

19 Q. And you see this entry for PPC and
20 SEO and Link Building.

21 Do you see that?

22 A. I'm sorry. Where on page 4? Okay.
23 PPC, SEO, and Link Building.

24 Q. You see that; right?

25 A. I also see that.

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2 Q. Okay. And in that description he
3 says, "We helped WhiteSource achieve dominant
4 rankings for over 30 competitive industry
5 keywords." All right. So there he's talking
6 about search engine optimization, right, sharing
7 dominant rankings for industry keywords.

8 Do you see that?

9 A. Yeah, I'm seeing all that. I'm also
10 seeing in Strategic SEO, Content Creation says,
11 Helped Mobility create a learning center with
12 over 150 articles about smart cities and future
13 mobility, and plan..."

14 So this person definitely has -- has
15 written lots of articles and his technical
16 writing is his expertise.

17 So what's the point again -- or your
18 question?

19 Q. Would a person with a BA degree in
20 economics and specialization in search engine
21 optimization be your definition of a person of
22 ordinary skill in the art?

23 MR. HENDIFAR: Objection.

24 Incomplete hypothetical. Relevance.

25 A. Boy, you're reaching. So the

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2 reference to Maayan is very specific when I was
3 talking about AVI. So I should pull you to my --
4 you know, don't take it out of context -- I'm
5 referencing Maayan and other articles about the
6 fact that AVI doesn't rank as the format for
7 video streaming.

8 And also I've added directly to the
9 source people from Microsoft and also cited their
10 references where they claim -- the originators
11 claim AVI was not designed for -- for video
12 streaming.

13 Q. Dr. Bajaj --

14 A. And that context, I've given you
15 this.

16 Q. That was not my question at all.
17 That was not my question at all.

18 MR. LIANG: So I'm going to move to
19 strike that answer, and I'm going to ask
20 you just a simple question, right.

21 Q. I'm not asking about other articles
22 or other -- other authors. I'm just asking about
23 Exhibit 1021.

24 Would a person with a bachelors of
25 the arts degree in economics and a specialization

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2 of search engine optimization meet your
3 definition of a person of ordinary skill in the
4 art?

5 MR. HENDIFAR: Objection.

6 Incomplete hypothetical and relevance.

7 A. So, you know, when you look at a
8 person's skills, you don't look at an article,
9 you don't look at a LinkedIn page, you look at
10 his entire portfolio. You look at his
11 background, his education and experience and what
12 he's worked on, and that's how you judge a person
13 of ordinary skill in the art.

14 Having said that, I was not
15 considering Gilad Maayan, and neither did I state
16 that in my declaration, as a person of ordinary
17 skill in the art. It's one of several references
18 I've attached, together with people from
19 Microsoft who are the originators of AVI, and
20 samples of other articles, including Gilad
21 Maayan, as someone who's reflecting on the same
22 fact that AVI was not designed for video
23 streaming. Does that answer your question?

24 Q. Based on Exhibit 1021, would you
25 consider Gilad Maayan to be a person of ordinary

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2 skill in the art?

3 MR. HENDIFAR: Objection.

4 Incomplete hypothetical. Relevance. Asked
5 and answered.

6 A. Your Exhibit 1021 is a LinkedIn page,
7 and that's not what I would assume you would --
8 neither would I -- use to assess someone's
9 qualifications for a person of ordinary skill in
10 the art for important inventions such as
11 the '792.

12 Q. And you have no other information
13 about Gilad Maayan; correct?

14 A. We cite articles for a purpose to,
15 you know, bolster the justification of our
16 declaration and our testimony, that this is not
17 pulled out of the air. As I've stated, I have
18 explained that AVI is, in my opinion, not meant
19 for video streaming or not designed for video
20 streaming, and I've put in references.

21 Q. That's not my question at all.

22 MR. LIANG: I move to strike.

23 You're obstructing the deposition
24 by not answering questions, that's why this
25 deposition has gone on. You are not

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2 answering the questions.

3 Q. So let me ask you, again, other than
4 Exhibit 1021, you don't know anything else about
5 Gilad Maayan's education or work history;
6 correct?

7 A. Not correct. I know something about
8 Gilad Maayan because that information is at the
9 end of Exhibit 2009.

10 Q. Okay. And based on the information
11 in Exhibits 2009 and Exhibits 1021, would you
12 consider Gilad Maayan to be a person of ordinary
13 skill in the art?

14 MR. HENDIFAR: Objection. Asked
15 and answered. Incomplete hypothetical.

16 A. And I'm going to state the same as I
17 answered before, and much as you might say that I
18 have not answered your question, I'm answering
19 the same question again, which is that I don't
20 use the --

21 THE WITNESS: I'm sorry, can you hear
22 me?

23 MR. LIANG: Uh-huh.

24 THE WITNESS: I think Parham is
25 gesticulating he can't hear me.

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2 MR. LIANG: I can hear you.

3 THE WITNESS: I think he got
4 disconnected.

5 MR. LIANG: Go off the record for
6 just a few minutes while Parham gets back.

7 (Zoom disconnect of Mr. Hendifar.)

8 MR. HENDIFAR: I apologize. Please
9 continue.

10 MR. LIANG: Okay. Let's go back.

11 THE WITNESS: So maybe you want to
12 replay back --

13 MR. HENDIFAR: I think just ask a
14 question -- maybe I missed it -- but
15 otherwise there's no pending question. And
16 continue.

17 MR. LIANG: Thank you.

18 Q. (BY MR. LIANG) Would you consider
19 Gilad Maayan to be a person of ordinary skill in
20 the art?

21 MR. HENDIFAR: Objection. Asked
22 and answered.

23 A. You know, I've not considered that
24 question. I have not evaluated his credentials.
25 I was not asked to do that. So I'm sorry I don't

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2 have an answer.

3 Q. Okay. Well, I'm going to share
4 another exhibit with you. Okay. And this is
5 Exhibit 2007. Let me know when you receive it.

6 A. Yes, sir.

7 Q. Okay. So you're able to open the
8 document?

9 A. Yes, it's here.

10 Q. Okay. Have you ever seen
11 Exhibit 2007 before?

12 A. Yes, it's another that I've
13 referenced in my declaration.

14 Q. Did you find Exhibit 2007 on your
15 own, or was it provided to you by counsel?

16 A. Again, I can't say the way. There
17 were several documents. Some I found, some
18 counsel gave me, I looked at those.

19 Q. Before this IPR proceeding, had you
20 ever seen Exhibit 2007 before?

21 A. You know, I may have. I cannot
22 recall.

23 Q. You have no specific memory of seeing
24 Exhibit 2007 prior to this litigation; correct?

25 A. I didn't say that. I said I don't

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2 recall. I may have.

3 Q. You don't recall ever seeing
4 Exhibit 2007 prior to this IPR proceeding;
5 correct?

6 A. I may have. And I don't recall
7 whether I had seen it prior to the proceedings or
8 when did I see it first, but it's something I'm
9 aware of.

10 Q. Are you willing to testify on the
11 record under oath that you had seen Exhibit 2007
12 prior to working on this IPR proceeding?

13 MR. HENDIFAR: Objection. Asked
14 and answered. Harassment.

15 A. Mr. Jeffrey, I've always been under
16 oath. Every answer, I've listened to your
17 question and I've spoken the truth and nothing
18 but the truth. So I may have seen this document.
19 I've seen several documents. I've been in this
20 field for a long time. I see several things.
21 And even today I work in, you know, aspects of
22 video processing and image processing in my
23 center. So I'm not lying to you.

24 Q. And, Dr. Bajaj, I'm just asking you a
25 simple question: Do you have any specific memory

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2 of seeing Exhibit 2007 prior to your work for
3 this IPR proceeding?

4 MR. HENDIFAR: Objection. Asked
5 and answered.

6 A. You know, I've worked on lots of
7 video cases as well in the last 40 years. You
8 just showed me another case just two years ago
9 with Sony on video streaming. And there are many
10 other IPRs I've worked on, and I might have this
11 document in my files. So when I was searching
12 for AVI and so on, I pulled out certain documents
13 that I shared with counsel as well, and so it's
14 very possible I've seen this before and I've used
15 it perhaps before.

16 Q. Is it fair to say that you don't know
17 one way or the other whether you've seen
18 Exhibit 2007 prior to working on this IPR
19 proceeding?

20 A. Well, it's -- it's around the 2019
21 time frame, so it's -- either way it's a document
22 that I've been aware of. Whether it happened
23 last year or before last year, there's a
24 possibility. It's not very big an article, and
25 it's something that crosses my desk a lot because

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2 we are -- you know, I'm writing different
3 declarations at different times, so...

4 Q. Do you know the author Mischa
5 Flinspach?

6 A. Again, I don't know the author. We
7 search for content on the internet plus by Google
8 to -- by topic, and so MP4, MOV, AVI, this would
9 be a fit even if you searched for it before. And
10 so I don't know the author, no.

11 Q. You know nothing about the author's
12 educational history; correct?

13 A. Well, unless he's put it into the
14 thing below, no, I have no idea.

15 Q. And you know nothing about the
16 author's work experience; correct?

17 A. That's correct. It's a person who I
18 did not feel the need to know his bio because I
19 wasn't reading it for any -- any position or any
20 other -- like, your question before about POSITA,
21 that was not what the reason for this exhibit
22 was.

23 Q. The first sentence of Exhibit 2007
24 reads, "You know explainer videos, image films,
25 recruiting films, and many other forms of video

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2 implementation."

3 Do you see that?

4 A. Yes.

5 Q. What's an explainer film?

6 A. I'm sure you've seen lots of
7 explainer films. They are instructor videos
8 about how to use an appliance, how to do
9 something, how to plant basal in your backyard.
10 These are all explainer videos.

11 Q. Okay. And what are image films?

12 A. That's a little ambiguous, image
13 films. You must mean -- it's ambiguous, so I
14 wouldn't -- I wouldn't try to explain that.

15 Q. Okay. What about recruiting films?

16 A. Oh, that is used quite heavily.
17 It's, you know, explaining for a job or your
18 environment and, you know, what the task is. So
19 YouTube is full of them.

20 Q. And if we turn to page 4 of
21 Exhibit 2007.

22 A. Okay.

23 Q. Sorry, let's start on page 3. And
24 there's a section at the bottom that says AVI.

25 Do you see that?

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2 A. Yes, I can see that.

3 Q. Okay. And at the bottom of page 3
4 for Exhibit 2007, it says, "Audio Video
5 Interleave (AVI files)" -- oh, which by the way,
6 I guess that's the answer to what the I stands
7 for; right?

8 A. That's right. The same thing as, you
9 know, it's -- you can always remember it, you
10 know, at 999 times out of the 1,000, and the
11 1,000 time you blank out, and so I won't forget
12 it now for a while.

13 Q. So page 3 of Exhibit 2007, it says at
14 the bottom, "Audio Video Interleave (AVI files)
15 were Microsoft's answer to do Apple's QuickTime
16 architecture. The good image quality meant high
17 storage capacity in the early years of the
18 format, which was improved a bit with new codecs
19 like DivX."

20 Do you see that?

21 A. Yes.

22 Q. So this sentence in Exhibit 2007 is
23 discussing the use of the DivX CODEC with the AVI
24 file format; correct?

25 A. Right. It also says it was meant for

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2 high storage capacity and not for direct
3 streaming. So I can read all of that.

4 Q. Right. And so this -- this -- in
5 this paragraph in Exhibit 2007, it explains that
6 the DivX CODEC was used with the AVI file format
7 and that it improved the image quality; right?

8 A. No, it didn't say that. It says the
9 good image quality, not excellent image quality,
10 meant high storage capacity in the early years of
11 the format.

12 Q. Right. And that image quality was
13 improved by new CODECs like DivX; correct?

14 MR. HENDIFAR: Objection. Form.

15 A. Yeah. So you know what it's
16 mentioning, if you read the paragraph in totality
17 and not snippets of it, it's talking about AVI
18 comparing it to QuickTime, which he had mentioned
19 above, and around the time that these
20 architectures came out, of course there are many
21 versions of it.

22 So QuickTime now is probably in
23 version 12 or something. So you're constantly
24 enhancing what Microsoft, you know, basically
25 gave AVI as public domain and developed its own

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2 ASF format to address the needs for streaming and
3 so on.

4 But this paragraph is essentially
5 saying that AVI is yet another format. At the
6 time it was Microsoft's answer to Apple to
7 introduce QuickTime, which was also in the 1900s
8 and late 1990s. And DivX improved the CODEC, and
9 it's not mentioning anything more. Of course we
10 are seeing the '792, which is giving you a lot of
11 improvement in being able to do trick play and so
12 on in streaming.

13 So anyway, that's -- again, I'm not
14 referring to this document which I have in my
15 declaration for anything more than to bolster my
16 opinion or justify my opinion that AVI, while
17 used, was not designed for streaming over the
18 internet.

19 Q. And specifically this article says
20 that with AVI, no direct streaming is possible;
21 is that correct?

22 A. Well, one has to go back and analyze,
23 which I have not, and so, you know, to give
24 benefit of the doubt, what does he mean by direct
25 streaming as opposed to indirect streaming? So

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2 there's a lot of nuances that one needs to
3 consider as to what he meant by saying "no direct
4 streaming."

5 Q. What does direct streaming mean to
6 you?

7 MR. HENDIFAR: Objection.
8 Incomplete hypothetical.

9 A. Again, it's not something I'm
10 analyzed, and I don't want to give any opinion of
11 terms. It always has to be considered in the
12 context of what it is. I would have to ask the
13 writer for more information before I could even
14 answer why -- what he meant by direct streaming
15 in his context.

16 Q. Now, I want to move back to
17 Exhibit 1001, the '792 patent. And I think you
18 have a printout of it; right?

19 A. I do. I do. I have to go back to
20 the binder.

21 Q. If you go back to the binder and
22 claim 9 -- or of the '792 patent of Exhibit 1001,
23 and I want to go to claim 9. So let me know when
24 you get there.

25 A. Okay.

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2 Q. If you look at column 52, line 7,
3 claim 9 refers to the abridged index.

4 Do you see that?

5 A. Yes.

6 Q. Okay. And I just want to make sure
7 we're on the same page. So claim 9 says the
8 abridged index, and claim 1 talks about a second
9 index.

10 Do you see that on --

11 A. Yes.

12 Q. So for the embodiments of the '792
13 patent, the abridged index is described as just
14 index; right?

15 MR. HENDIFAR: Objection. Form and
16 incomplete hypothetical.

17 A. I'm sorry, I don't understand the
18 question.

19 Q. Let me ask you -- let me ask it a
20 different way. So for -- so let's start by just
21 looking at the terminology -- some of the
22 terminology in the claim names.

23 So claim 9 recites an abridged index
24 and a full -- claim 9 recites an abridged index
25 and a full index.

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2 Do you see that?

3 A. Yes.

4 Q. Okay. And then claim 15 there was a
5 first index and a second index; right? Sorry,
6 withdrawn.

7 Claim 1 there was a first index and a
8 second index; right?

9 A. That's correct.

10 Q. Okay. And then claim 15, if you read
11 it, it recites a complete index and an abridged
12 index; is that right?

13 A. That's correct.

14 Q. So is it your understanding that the
15 abridged index refers to the same index as the
16 second index of claim 1?

17 A. So claim 1 is talking about a
18 decoder, a decoder for decoding a multimedia file
19 comprising at least one media track. Claim 9 is
20 talking about an encoder and it's giving you, you
21 know, details of the encoding.

22 Q. I see. Let me -- let me ask a
23 different question then.

24 A. Can you let me complete?

25 Q. Okay.

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2 A. You always interrupt me. So the
3 abridged index is a second index because that is
4 a full index, which is a first index. And so it
5 is reasonable to consider that the indices of the
6 encoder and decoder, the decoder requires two
7 indices and the decoder is providing two indices.
8 So up to that it makes sense, right. There are
9 two indices for the encoder or indexes in the
10 decoder.

11 Q. And does it make sense, then, that
12 the full index of claim 9 corresponds to the
13 first index of claim 1?

14 A. Again, inasmuch as we are looking at
15 this, the full index corresponds in the decoder
16 setting as the first index because it includes
17 information indicative of the location within the
18 file and characteristics of each encoded video
19 frame.

20 And so as much as the, you know,
21 information that's written exactly in the claims,
22 they are two indices and one index encodes
23 information indicative of the location within the
24 file of each encoded video frame.

25 Q. And if you could go to column 22 of

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2 the specification in Exhibit 1001, so column 22,
3 line 18. And let me know when you get there.

4 A. Okay. I'm there.

5 Q. Do you see there's a description
6 there for the idx1 chunk; correct?

7 A. Yes.

8 Q. Okay. So with respect to claim 1, is
9 it correct that the idx1 chunk would be the --
10 would be the first index?

11 MR. HENDIFAR: Objection. Form.

12 A. With respect to claim 1?

13 Q. With respect to claim 1, the idx1
14 chunk would be the first index; correct?

15 A. So, you know, there are several
16 embodiments explaining the claims. In column 22
17 it's specifying an idx1 chunk, which in, you
18 know, several embodiments could be first index --
19 not could be -- is the first index.

20 But the paragraph that you are
21 reading is only describing the fact that in the
22 AVI format, an index is an optional chunk, as you
23 are aware. And the idx1 is that chunk which is
24 put into the optional portion of the AVI format;
25 hence that in an embodiment where the first index

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2 is at the end of the multimedia file is a good
3 correspondence to make.

4 Q. Idx1 is the optional traditional
5 index in the standard AVI file format; right?

6 MR. HENDIFAR: Objection. Form.

7 You can answer. I'm just stating
8 my objection. Please continue.

9 A. So, I'm sorry, I -- could you repeat
10 the question?

11 Q. Yeah. Idx1 is the optional
12 traditional index in the standard AVI file
13 format; right?

14 MR. HENDIFAR: Objection. Form.

15 A. Yeah, that's what -- I'm puzzled,
16 again, by the way you're phrasing the question.
17 So idx1 chunk description -- I'm sorry, I don't
18 understand the question. I'm sorry.

19 Can you repeat the question again?

20 Q. Yeah. I'm just asking so idx1 is the
21 optional traditional index in the standard AVI
22 file format; right?

23 MR. HENDIFAR: Objection. Form.

24 A. There's no traditional index, you
25 know, in the -- AVI format allows for an optional

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2 index, and it -- you know, and it's a format --
3 it's a file format so it allows for there's no
4 tradition to it, it's an option.

5 And idx1 chunk is being designed to
6 pick that option. So in this description, the
7 idx1 chunk is describing as in the AVI file
8 format I will be using the location of the
9 optional index chunk.

10 Q. Does the AVI file format defines more
11 than one index?

12 MR. HENDIFAR: Objection. Form.
13 Incomplete hypothetical. Scope.

14 A. The AVI file format, as far as I'm
15 aware, has a option to place an index at the very
16 end of the file.

17 Q. And that --

18 A. By definition it has a placeholder in
19 its file format where you could design an index
20 and place it there.

21 Q. This discussion in column 22, line 18
22 of the idx1 chunk in the '792 patent, for claim 9
23 -- withdrawn. Let me rephrase.

24 The '792 patent specification
25 describes embodiments where the first index of

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2 claim 1 is the idx1 chunk; correct?

3 A. So the idx1 -- so let me -- you know,
4 since you are flipping this backwards, I have to
5 gravel it. But, you know, the claim 1 is talking
6 about having the first index and the second index
7 and it has requirements of how you have to design
8 those indices to enable trick play functionality.

9 Now, the format in which you would
10 design such indices, you can use, you know, a
11 idx1 chunk and place it in the optional portion
12 of the placeholder of an AVI file. So how you
13 design, you know, the encoder, which is in
14 claim 9, then the corresponding decoder would
15 interpret that design and use it for any -- trick
16 play functionality.

17 Q. Would you agree that the AVI format
18 is a flexible format?

19 MR. HENDIFAR: Objection. Form.
20 Incomplete hypothetical. Scope.

21 A. I'm sorry. I would need to ask you,
22 what do you mean by a flexible format?

23 Q. Sure. Would you agree that the AVI
24 format is flexible in the sense that it defines
25 chunks in lists that are part of the defined file

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2 format, but it also allows files to include lists
3 and chunks that are outside the AVI file format
4 definitions?

5 MR. HENDIFAR: Objection.

6 Incomplete hypothetical. Form. Scope.

7 A. Yeah. So I still don't understand,
8 you know -- I'm sorry, you might need to be more
9 specific. Exactly what are you wanting to use
10 the AVI file format to do? And also this is
11 something I'll have to see whether I can -- I
12 don't want to opine on the fly, as you know.

13 Q. Sure.

14 MR. LIANG: Well, let's take a --
15 let's take a quick break. Go off the
16 record. Let's take a five-minute break.

17 MR. HENDIFAR: Sure.

18 (Break from 7:30 p.m. to 7:35 p.m.)

19 Q. (BY MR. LIANG) Dr. Bajaj, is it
20 correct that the embodiments of the '792 patent
21 include some chunks that are defined by the AVI
22 format and some chunks that are not contained in
23 the AVI file format?

24 MR. HENDIFAR: Objection. Form.

25 A. I don't believe that's correct. And

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2 it goes through a lot of pain -- you know, even
3 though this is not what I was asked to opine on,
4 I was directly replying to your contentions -- it
5 goes through a lot of pain of explaining how it
6 would design its first index and second index in
7 chunks, which would conform to the AVI format.
8 And, of course, and in special it defined would
9 still make it a valid AVI file. So that's my
10 understanding.

11 Q. All the chunks that's described in
12 the '792 patent specification are defined in the
13 AVI file format; is that right?

14 MR. HENDIFAR: Objection. Form.

15 A. They're defined using chunks. And
16 chunks was a building block for the AVI file so
17 you could compare chunks in the AVI file stream
18 or file -- multimedia file.

19 Q. Let me point you to column 16,
20 line 37 of the Exhibit 1001. And let me know
21 when you get there.

22 A. I'm here. Line -- I'm sorry, what
23 line number?

24 Q. Column 16, line 37.

25 A. Yes, I'm there.

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2 Q. Okay. You see at line 37 the
3 specification describes the DMNU chunks?

4 A. Yes.

5 Q. Are the DMNU chunks described in
6 column 16 of the '792 patent defined in the AVI
7 file format?

8 MR. HENDIFAR: Objection. Form.

9 A. Again, this was not something I
10 analyzed, you know, in coming up with my
11 declaration. There's a lot of, you know,
12 information contained in the invention of
13 the '792. I was responding to the contentions of
14 your petition, and I did not see any mention of
15 DMNU in your petition. So sorry, I cannot opine
16 on this on the fly.

17 Q. If you could turn to column 8,
18 line 16 of Exhibit 1001, and let me know when you
19 get there.

20 A. Column 8. And what is the line
21 number?

22 Q. Column 8, line 16.

23 A. Yes.

24 Q. You see column 8 describes something
25 called the DXDT chunk.

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2 Do you see that?

3 A. Yes.

4 Q. Is the DXDT chunk described in column
5 8 starting line 16, is that DXDT chunk defined by
6 the AVI file format?

7 MR. HENDIFAR: Objection. Form.

8 A. Again, you know, it's a chunk, and
9 the exact details of the chunk I have not
10 analyzed, and I have not any reason to. But the
11 fact that the column calling it a chunk and the
12 chunks can be put into an AVI file, it therefore
13 can be implemented in the AVI file format.

14 Q. Right. And what I'm asking you is
15 whether the DXDT chunk is defined by the AVI file
16 format, or whether the DXDT chunk is a new chunk
17 that the '792 patent is introducing?

18 MR. HENDIFAR: Objection. Form.

19 A. So, again, the AVI file format is a
20 file format. It's a set of rules of how you lay
21 down information. Everything in the, you know,
22 '792 patent describes how to encode multimedia
23 information and how to decode it and play it back
24 and so on. And so everything is designed and can
25 be written down and implemented in the AVI file

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2 format.

3 So everything there is -- is,
4 quote/unquote, new and specific to the '792
5 patent, the specification of the claims that are
6 mentioned.

7 Q. So the DXDT chunk is the new chunk
8 that the '792 patent is introducing that wasn't
9 already defined by the AVI file format; correct?

10 MR. HENDIFAR: Objection. Form.

11 A. So the AVI file format is a set of --
12 you know, a specification of how you lay down
13 audio video interleave, that information, and
14 there's an optional place for an index. And
15 that's a generic file descriptor, and there's, of
16 course, what Microsoft came up with.

17 Now, again, all of the disclosures
18 here are talking about new things, and some of
19 the things are perhaps using the same terms.
20 Within the context of the '792, you know, there
21 are various chunks, and every time the
22 information is given on the chunk, there is not
23 only may be understanding, but also the explicit
24 mention that this is because of the very nature
25 and the descriptions given, it's implementable in

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2 the AVI file format.

3 And so, you know, I want to qualify
4 that, that when I say, quote/unquote, new, it's
5 not something I've analyzed as to exactly what
6 name was given by Microsoft and what was
7 developed in the '792 as a new name and are there
8 differences. All of those things are important,
9 and if I'm asked to, I can analyze them and give
10 you a better answer or a complete -- correct
11 answer. I can't give you an answer on the fly
12 right now.

13 Q. If I could turn you to column 6,
14 line 4 of the '792 patent. Let me know when you
15 get there.

16 A. Column 6, line 4, yes, I'm there.

17 Q. Okay. And it -- in column -- in this
18 paragraph begins in it by describing a number of
19 different chunks, and then on line 12 it reads,
20 "Some of these chunks in portions to others are
21 defined in the AVI file format while others are
22 not contained in the AVI file format."

23 Do you see that sentence?

24 A. Yes, I do.

25 Q. Okay. So what I'm asking you is

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2 whether the DXDT chunk is one of the chunks
3 that's defined in the AVI file format, or if it's
4 one of the others that are not contained in the
5 AVI file format?

6 MR. HENDIFAR: Objection. Scope.
7 Relevance.

8 A. Again, I -- I understand your
9 question, and I kind of answered it by saying
10 this is not something I was asked to analyze what
11 were the differences between what was defined
12 before and what is here.

13 And the part I'm telling you which
14 is, is that everything defined in chunks and they
15 can be implemented. So, for example, if you look
16 at column 7 after it describes a bunch of chunks,
17 it has a sentence, this new 'avih' chunk can be
18 implemented in accordance with the AVI file
19 format. So the very -- the pains they've taken
20 in defining these various chunks are
21 implementable in the AVI file format.

22 Q. If you could turn to column 15,
23 line 10 of the '792 patent.

24 A. Yes.

25 Q. Okay. And you see in column 15,

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2 line 10 it mentions the index chunk.

3 Do you see that?

4 A. Yes.

5 Q. Is the index chunk one of the chunks
6 that is already defined in the standard AVI file
7 format, or is it one of the chunks that is not
8 contained in the AVI file format?

9 A. So, again, I must repeat, the index
10 chunk is described in the '792 specifications.
11 This is giving you several embodiments of
12 different types of index chunks. The fact that
13 it's an index chunk is implementable in the AVI
14 file format. The specifications are supporting
15 the invention, the invention given in the claims.

16 The claims are very specific.
17 They're talking about a first index and a second
18 index that encodes specific information to enable
19 trick play functionality. And they're giving you
20 details of how you could implement them in
21 several different embodiments. So, yes, this
22 index chunk is implementable in the AVI file
23 format.

24 Q. That wasn't my question. My question
25 was whether the index chunk is one of the chunks

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2 that's already defined in the AVI file format, or
3 is it one of the other chunks that is not
4 contained in the AVI file format?

5 A. The AVI file format gives you an
6 optional placeholder where something called an
7 index could be placed at the end of your file.
8 It gives you a placeholder. Now, the index chunk
9 here in some embodiments could well be used in
10 that placeholder of the AVI file format, but
11 everything has to be taken in its context.

12 There are several different
13 descriptors of what the index should contain,
14 just like the IVX should contain. But this index
15 chunk is not used in the optional position. This
16 index chunk, as we've been discussing and I've
17 explained, is used prior, so it's defined in a
18 separate chunk because it has separate things.

19 The idx1 chunk in an embodiment, as
20 is explained, is used as the first index, that's
21 at the end of a file. This index chunk is
22 describing a secondary index, and in its
23 embodiments it talks about having tag
24 information, which indexes into a first index,
25 which is placed in the new implemented in the AVI

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2 file in one embodiment at the end of the file;
3 while this index chunk, which is the second
4 index, is placed in the beginning of the chunk,
5 beginning of the file. That's what the claims
6 require.

7 Q. I see. So the index chunk described
8 in column 15, line 10 of the '792 patent is a
9 nonstandard chunk that's not defined by the
10 standard AVI file format; correct?

11 A. Again, you know, what the file format
12 does not describe the descriptions of the various
13 chunks, just like it does not tell you what audio
14 is placed in the audio portion and what video is
15 placed in the video portion. So it's giving you
16 placeholders.

17 It's the actual description of what
18 constitutes your audio, what constitutes your
19 video, what constitutes your index, where do you
20 put it into your AVI file is all part of the
21 specification.

22 And the claims require there be two
23 indices. Now they've given you a recipe of
24 saying the first index can be put into the
25 placeholder, which is in an AVI placeholder where

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2 indices are put. You are also allowed other
3 chunks in the stream. So one of the chunks,
4 which is called the index chunk of column 15, is
5 put in the beginning because it has a -- you
6 know, it's going to be implemented by a subset of
7 the frames and information indicative of that
8 subset of frames, which points to -- with tags to
9 the first index, which is placed at the end of a
10 file.

11 So it's all implementation issues
12 regarding how you can in different embodiments,
13 you know, draw any structure to the claims.

14 Q. So you said the AVI file format
15 allows an index to be added towards the front of
16 the file; correct?

17 MR. HENDIFAR: Objection. Form.
18 Incomplete hypothetical.

19 A. An AVI file you can -- you can put
20 chunks anywhere you please and it deletes them.
21 The '792 requires that you place a second index
22 chunk in the beginning of the file prior to the
23 audio/video information or movie chunks. It's in
24 the claims. It's in the claims.

25 Q. And your audio was a little bit

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2 muffled there, so I just want to make sure I
3 heard you. I think you may have had your hand
4 over your mouth.

5 A. I was just holding my head up. I'm
6 sorry.

7 Q. Did you just -- so you just said that
8 an AVI file format, you can put chunks anywhere
9 you please and you can use them -- is that what
10 you were explaining?

11 A. AVI gives you a recipe and it's also
12 in your expert's -- so I didn't repeat that file
13 format because, again, it was available -- it
14 gives you a way in which there's an order to how
15 you place chunks. So if I said anywhere, it's --
16 I clearly misspoke.

17 You have to follow the order of an
18 AVI file format. If you don't, you don't conform
19 to the file format. The format is a format, so
20 there are specific places where you can add
21 information, and there's, you know, something you
22 call the audio/video.

23 And there's something one can call
24 the index optional placeholder, and there are
25 chunks that can precede in header information

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2 above the AVI. And that's the location that the
3 claims have described a -- '792 patent has
4 described how it can use that placement of the
5 second index prior to the movie chunks, which are
6 the audio video interleaving.

7 MR. HENDIFAR: And I have about
8 five minutes left, if I'm not mistaken.

9 Q. Does the AVI file format allow an
10 index chunk to be added towards the beginning of
11 a file?

12 MR. HENDIFAR: Objection. Form.
13 Incomplete hypothetical.

14 A. So what do you consider a index
15 chunk?

16 Q. Well, let me ask you this. I'm
17 asking you this question, I'm just trying to get
18 a clear answer. In column 15, line 10 of the
19 '792 patent, it describes an index chunk. And
20 I'm just trying to get an understanding about
21 whether the AVI file format allows this index
22 chunk to be added towards the beginning of a
23 file, or whether that's something nonstandard
24 that the '792 patent is doing?

25 MR. HENDIFAR: Objection. Form.

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2 Incomplete hypothetical.

3 A. So when you say "nonstandard," what
4 do you mean by nonstandard? I'm sorry, I don't
5 understand.

6 Q. I mean something it's -- it's
7 breaking the ordering rules that you just
8 referenced.

9 MR. HENDIFAR: Same objection.

10 Form and incomplete hypothetical.

11 A. No, there's no breakage of ordering
12 rules in placing chunks as described by the '792
13 patent.

14 Q. Okay. So adding an index chunk
15 toward the beginning of an AVI file doesn't break
16 any ordering rules of the AVI file format;
17 correct?

18 MR. HENDIFAR: Objection. Form.

19 Incomplete hypothetical.

20 A. So there's no single index chunk.
21 The index chunk referred to in column 15 is in
22 quotes, there's other index chunks like idx1,
23 which are also chunks. How you design your
24 multimedia file is what the '792 patent is
25 saying. It's going to follow the rules of the

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2 AVI file format, and it's not going to be
3 destroying those. So --

4 Q. Can you point to any rules of the AVI
5 file format that would limit where the index
6 chunk of -- described in column 15, line 10 can
7 be located within the file?

8 MR. HENDIFAR: Objection. Form.

9 A. So as you are looking at the AVI file
10 format, please don't confuse the terms of index
11 and the index referred to in the '792. Like I
12 said, the '792 talks about two indices, and both
13 of those indices -- and sometimes it refers to
14 them as the abridged index and a full index and
15 sometimes it's the complete index -- which is how
16 you implement them and how you place them
17 conforms to the AVI file format diagrams. That's
18 what's explained in the '792.

19 Q. And that didn't answer my question at
20 all. I'm asking specifically about the index
21 described in column 15, line 10, and asking you
22 if you are able to identify any rules in the AVI
23 file format that would limit where the index can
24 be located within the file?

25 MR. HENDIFAR: Objection. Form and

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2 incomplete hypothetical and scope.

3 A. So it's not the onus of the AVI file
4 format. Or I should say the AVI file format is
5 not the limiting. What has been shown is that
6 every, you know, aspect of the claims are being
7 met by the various descriptions, and the
8 requirements of the claims are you must have a
9 first index in your file, you must have a second
10 index.

11 Q. Dr. Bajaj, did I ask you anything
12 about the claims in that question?

13 A. Because you're asking me a question
14 about how does the index get reflected in AVI,
15 I'm saying AVI is a description of how you should
16 place. The '792 is designing a set of indices --
17 indexes, and it's giving you the specifications
18 of how each of those things are designed and
19 conforming to AVI file descriptions. So your
20 question is -- I'm trying the best to explain it
21 to you.

22 Q. And I've asked you this several times
23 and you've dodged the answer, so I'll give you
24 one opportunity to provide the answer. So if
25 you're able to provide the answer, and you want

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2 to demonstrate to the board that you are able to
3 answer this question, then this is your
4 opportunity to do it.

5 Is the index chunk described in
6 column 15, line 10 one of the chunks that's
7 already defined in the AVI file format, or is it
8 one of the other chunks that is not contained in
9 the AVI file format?

10 MR. HENDIFAR: Objection. Form.

11 A. It's a completely, you know,
12 irrelevant aspect and also not a -- a question I
13 was asked to even consider for the following
14 reason: The '792 is designing a set of indices,
15 first and second. It's also giving you the way
16 in which you can create a multimedia file that
17 conforms to the AVI file format.

18 Nothing in that description is being
19 questioned. Your question is about something
20 which is not relevant.

21 Q. During this deposition today, we've
22 taken several breaks. Have you had any
23 conversations with your counsel during any of the
24 breaks today?

25 A. No, I have not.

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2 Q. Have you discussed this deposition
3 with anybody during any of your breaks today?

4 A. There's no one here to discuss. I
5 have not.

6 Q. Okay. Have you had any
7 communications, you know, verbally, written, or
8 in any other form with any person regarding your
9 deposition today during this deposition?

10 A. No, I have -- no, I have not.

11 Q. Okay.

12 MR. LIANG: I'll pass the witness.

13 MR. HENDIFAR: I have no questions.

14 Let's go to bed.

15 MR. LIANG: Okay. All right.

16 Let's go off record.

17 (Time noted - 8:05 p.m.)

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2 C E R T I F I C A T E

3 I, Kim A. McCann, RMR, CRR, CSR in and
4 for the State of Texas, do hereby certify:

5 That DR. CHANDRAJIT BAJAJ, the witness
6 whose deposition is hereinbefore set forth, was
7 duly sworn by me and that such deposition is a
8 true record of the testimony given by such
9 witness;

10 That pursuant to FRCP Rule 30,
11 signature of the witness was not requested by the
12 witness or other party before the conclusion of
13 the deposition;

14 I further certify that I am not related
15 to any of the parties to this action by blood or
16 marriage; and that I am in no way interested in
17 the outcome of this matter.

18 IN WITNESS WHEREOF, I have hereunto
19 set my hand this April 5, 2021.

20 
21
22 Kim A. McCann, RMR, CRR, CSR

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2 ERRATA SHEET FOR THE TRANSCRIPT OF:

3 Case Name: Netflix and Hulu v. DivX

4 Dep. Date: March 26, 2021

5 Deponent: DR. CHANDRAJIT BAJAJ

6 Pg. Ln. Now Reads Should Read Reason

7 _____

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14 _____

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16 _____

17 _____

18 _____

19 _____

20 Signature of Deponent

21 SUBSCRIBED AND SWORN BEFORE ME

22 THIS _____ DAY OF _____, 20____.

23

24 _____

25 (Notary Public) MY COMMISSION EXPIRES: _____