

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

1			
2			
3			
4	TWITTER, INC.,)	
)	
5	PETITIONER,)	
)	CASE IPR2017-00829
6)	(PATENT 9,083,997 B2)
	V.)	
7)	CASE IPR2017-00830
	STI-ACQ, LLC,)	(PATENT 9,083,997 B2)
8)	
	PATENT OWNER.)	
9)	
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

DEPOSITION OF EXPERT KEVIN C. ALMEROOTH Ph.D.

FRIDAY, JUNE 15, 2018

REPORTED BY MARK McCLURE, C.S.R. 12203

Twitter, Inc. v. VidStream LLC
IPR2017-00830
VidStream LLC | Ex. 2009

1 DEPOSITION OF KEVIN C. ALMERO TH Ph.D., TAKEN AT 8:58
2 A.M., FRIDAY, JUNE 15, 2018, AT 411 EAST CANON PERDIDO
3 STREET, SUITE 21, SANTA BARBARA, CALIFORNIA, BEFORE MARK
4 MCCLURE, C.S.R. #12203, CERTIFIED SHORTHAND REPORTER IN
5 AND FOR THE STATE OF CALIFORNIA.

6
7
8 APPEARANCES OF COUNSEL:

9
10 FOR THE PETITIONER:

11 HAYNES AND BOONE, LLP
12 BY: JAMIE H. McDOL E, ESQ.
13 BY: DAVID L. MCCOMBS, ESQ.
2323 VICTORY AVENUE, SUITE 700
14 DALLAS, TEXAS 75219
(214) 651-5121
JAMIE.MCDOL E@HAYNESBOONE.COM
DAVID.MCCOMBS@HAYNESBOONE.COM

15
16 HAYNES AND BOONE, LLP
BY: RAGHAV BAJAJ, ESQ.
600 CONGRESS AVENUE, SUITE 1300
17 AUSTIN, TEXAS 78701-3285
(512) 867-8520
18 RAGHAV.BAJAB@HAYNESBOONE.COM

19
20 FOR THE PATENT OWNER:

21 NORTON ROSE FULBRIGHT US, LLP
BY: EAGLE ROBINSON, ESQ.
98 SAN JACINTO BOULEVARD, SUITE 1100
22 AUSTIN, TEXAS 78701-4255
(512) 474-5201
23 EAGLE.ROBINSON@NORTONROSEFULBRIGHT.COM

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

WITNESS	EXAMINATION	PAGE
KEVIN C. ALMEROOTH Ph.D.		
	BY MR. ROBINSON	4

E X H I B I T S

(NONE)

EXHIBITS PREVIOUSLY MARKED

NUMBER	PAGE
1007	40
1009	61
1010	126
1012	92
1017	96

1 SANTA BARBARA, CALIFORNIA

2 FRIDAY, JUNE 15, 2018, 8:58 A.M.

3

4 MR. MCDOLE: Should we do introductions so we
5 know who's here?

6 MR. ROBINSON: Sure.

7 MR. McDOLLE: Jamie McDole, from Haynes and
8 Boone, representing Twitter and the witness.

9 MR. BAJAJ: Raghav Bajaj, Haynes and Boone,
10 representing Twitter.

11 MR. McCOMBS: David McCombs, with Haynes and
12 Boone, also with Twitter.

13 MR. ROBINSON: And Eagle Robinson with Norton
14 Rose Fulbright for patent owner Vidstream.

15

16 KEVIN C. ALMEROTH Ph.D.,
17 having been sworn, was examined
18 and testified as follows:

19

20 EXAMINATION

21 BY MR. ROBINSON:

22 Q. Good morning, Dr. Almeroth. Thank you for
23 being here today.

24 Have you been deposed before?

25 A. I have.

1 Q. Approximately how many times?

2 A. Fifty or so.

3 Q. All right. I won't go into a lot of detail
4 with instructions or anything. The one thing I would
5 ask is if I ask a question that you don't understand,
6 please just ask me to repeat it or clarify.

7 A. I will do that.

8 Q. Thank you.

9 What is a video file, digitally speaking?

10 A. I'm not sure what you mean. In what context?

11 Q. So in the context of a video file that you
12 might transmit on the internet and watch on the
13 computer.

14 A. It's a fairly broad term. I'm not sure I can
15 give you a definition off the top of my head based on
16 that context. I can give you some examples,
17 potentially, of what video files might be.

18 Q. Let's start with this. Are there particular
19 characteristics that digital video files share?

20 A. It would depend. It would depend on the
21 context. There might be. I mean I haven't tried to
22 identify any particular -- I'd have to think about it,
23 if there would be.

24 Q. Let's start with MPEG-4. Does an MPEG-4 video
25 file -- does that have multiple components?

1 A. I'm not sure what you mean by "components."

2 Q. Is there a standard for the MPEG-4 format?

3 A. There is.

4 Q. Are there different parts of an MPEG-4 file
5 that do different things, for example?

6 A. Your question is a little bit technically
7 imprecise. The MPEG file -- I don't usually
8 characterize it as doing anything. Usually you might
9 have a decoder that uses the file and then creates a
10 decoded version of video that can be displayed.

11 My recollection, sitting here now, of the
12 MPEG-4 standard is certainly the representation that it
13 uses within the file, I think, has different parts. I'd
14 have to go back and check the standard to see if it
15 calls them components or what it says about what the
16 structure is.

17 Q. You just called them parts, so let's call them
18 parts. Are there different parts that serve different
19 purposes?

20 A. I call them parts because you called them
21 parts, and you asked about parts in your question.
22 Parts, or components -- I'd have to go back and check
23 the details of the standard and what the structure is.
24 I don't have them memorized.

25 Q. So as we sit here today, is it accurate to say

1 that you don't have a clear understanding of the MPEG
2 file format and what it involves?

3 A. No, I don't think that's accurate. But
4 whether it has components or parts or what structure
5 you're asking about, I just don't have that memorized.
6 The way that the encoding works, generally speaking,
7 across the MPEG family of standards I understand well,
8 but the details of the structure of the format I just
9 don't have memorized.

10 Q. So if I have an MPEG-4 file on my computer and
11 I want to play it, can you walk me through how it goes
12 from a file sitting in storage to actually being
13 displayed on the screen?

14 A. It would depend. There's lots of different
15 scenarios, potentially. Maybe one scenario would be
16 that you have got some sort of player. Windows Media
17 Player should play an MPEG-4 file. You can either
18 double-click on the MPEG-4 file icon, you can load it
19 through the player through like an open menu.

20 I mean there's half a dozen, a dozen other
21 ways of getting a file to appear on the screen.

22 Q. So at the code level what's happening when you
23 double-click that file to play it through Windows Media
24 Player?

25 A. It would depend on the operating system. As

1 one example, there is a file type for the file. The
2 operating system associates that with a particular piece
3 of software. Once that software is opened, it's passed
4 information about the file as a result of clicking on
5 it, and then, depending on the internals of the
6 software, the file is opened and, I mean, those get into
7 the details of how the software would work.

8 Q. What types of information are passed to the
9 software when you open the file?

10 A. Again, it depends. Operating system, how it's
11 configured, how it's set up, what software is associated
12 with it. It might be as simple as the file name. There
13 might be other attributes that are passed. I mean it
14 depends.

15 Q. What are some examples of the other attributes
16 that are passed?

17 A. It would depend. I'm not sure that you would
18 need much else other than the file name in at least some
19 instances, but what else could be configured with the
20 file, again it depends on the software. It could be
21 just about anything. There's not really any specific
22 scenarios you're asking about, so any attributes of the
23 file could potentially be passed.

24 Q. Let's start with a video file that's stored
25 locally on a computer running Windows, the latest

1 version of Windows, and the file type being associated
2 with Windows Media Player. What gets passed from the
3 video file to Windows Media Player when you first open
4 that file?

5 A. When you first open it, I don't have the
6 details memorized. It certainly wasn't something I had
7 to look at for working on the declaration in this case.
8 I'd probably go and research it to see exactly what
9 Windows is passing. I just don't have it memorized.

10 Q. Are there any instances or examples of
11 software and media -- operating system and media player
12 software for which you could explain what is passed and
13 how it works?

14 A. I think I've already generally described it.
15 As you get into more specific details about what exactly
16 is passed, those are easy enough to look up, I just
17 don't have them memorized.

18 It's a similar process for other operating
19 systems, other file types, other source code -- or,
20 sorry, other video players. They all follow a pretty
21 similar process where information is passed via the
22 operating system to the application. Specifically what
23 that information is would just depend on what the
24 operating system is, how it's configured, if there's
25 expectations by the software. I mean, it depends.

1 Q. I think I understand what you just said to be
2 that all of them follow a fairly similar process. Are
3 there any other examples of attributes that are passed
4 that you can give me, as we sit here today?

5 A. Again, it depends. You're asking about a
6 specific detail. You haven't given me a timeframe. It
7 really just depends. There's a lot of variability in
8 what can be passed. As I testified to earlier, it
9 really could be any kinds of attributes -- file sizes,
10 meta information associated with the MPEG file. It
11 ultimately boils down to programming, so whatever the
12 code is that would say what would be passed would
13 ultimately be how the software and operating system work
14 together.

15 Q. Would the length of the video be something
16 that is passed?

17 A. It depends. It could be. It might not be.
18 Again, it's really just computer programming. You could
19 write an operating system. It might be something that's
20 passed. I don't know that it needs to be passed,
21 necessarily is passed.

22 Q. Are you familiar with the operating systems
23 that had the greatest market share in 2011?

24 A. I don't recall what those were. I don't
25 recall doing any research to determine what those were,

1 but certainly if you look at variants of Windows, of
2 Apple's operating system and the Unix-based variants,
3 those would generally have dominated the marketplace at
4 the time.

5 Q. So the Apple OS, Windows and Unix based OSs
6 were the dominant operating systems as of 2011?

7 A. I suspect so. I would just have to confirm
8 that that were the case.

9 Q. As we sit here today, you're not certain that
10 those were the most common operating systems at that
11 time?

12 A. As I sit here right now, it wasn't something I
13 looked at for purposes of this declaration so I'm
14 essentially doing it from memory. I would just
15 double-check to confirm that what I have said is
16 accurate.

17 Q. Is it fair to say, then, that none of your
18 testimony and your declaration depends on what the most
19 common operating systems were at that time or how they
20 precisely functioned?

21 A. I don't know that that's accurate. Certainly
22 the opinions I've offered in my declaration are based on
23 my experience and knowledge. I don't know that I could
24 divide it down into what specific knowledge and
25 expertise I'm relying in over the last 30 years of

1 experience.

2 Certainly what I have testified here to today
3 is the awareness that I had at the time I was working on
4 the declaration. To the extent I needed any more
5 specific details, I could have gone off and looked at
6 those. I don't recall needing any more specificity than
7 what's in the declaration or what I know about.

8 Q. I believe you testified a moment ago that you
9 did not look into the most -- what the most common OSs
10 were at that time when you were preparing the
11 declaration, is that accurate?

12 MR. McDOLLE: Objection. Mischaracterization.

13 THE WITNESS: As I sit here today, I don't
14 recall trying to confirm what those operating systems
15 were. It was really based on my expertise. I've
16 testified to what I recall them being. To the extent
17 you wanted any further confirmation or certainty, then
18 it's certainly something you could go look up.

19 BY MR. ROBINSON:

20 Q. Your declaration has a list of materials that
21 you reviewed and considered in preparing your analysis.
22 Had you looked into specifics about operating systems or
23 how they worked? Would that be listed?

24 A. To the extent I needed any additional
25 information beyond what I had as expertise that I was

1 using, to the extent that there was some additional
2 document that I sought out and relied on and considered,
3 it would have been listed in the declaration.

4 Q. So if it's not listed in the declaration, you
5 didn't review it and consider it preparing that
6 declaration testimony?

7 A. If it's not listed in the declaration, I
8 forget the specific language in the declaration as to
9 what it says about those materials. The best I can say
10 is it's what I said in the declaration. I don't have it
11 in front of me, I don't have it memorized, but I think
12 what's in the declaration is an accurate reflection of
13 what my methodology was.

14 Q. Are you familiar with the most common media
15 player software applications that were in use in the
16 2011 timeframe?

17 A. I think it would be similar to operating
18 systems. I have an awareness and understanding of many
19 different software players over the years. If you --
20 well, I'll just stop there. You can ask another
21 question.

22 Q. Do you have enough of an awareness and
23 understanding of how any particular combination of media
24 player software and operating system worked as of 2011
25 to tell me how it would have opened a file, a digital

1 video file, with any specificity?

2 A. I actually think I've given you a fair amount
3 of specificity. It's generally a pretty straightforward
4 process. I don't recall there being a need for any
5 particular details as it relates to the opinions that I
6 have offered in the declaration.

7 Q. Can you tell me the difference between a
8 streaming video format and a streamable video format?

9 A. I think it depends in large part in context
10 and how those two terms are used. I mean there's some
11 simple observations that I can make. If it says it's
12 streamable, that would suggest that it can be streamed
13 or used in a streaming application. Calling something a
14 streaming format is potentially something that could be
15 used for streaming or is used or has been used, but I
16 think attempting to compare and/or contrast those terms
17 would depend on the context in which they are used.

18 Q. Is that true of a person of ordinary skill in
19 the art as of May of 2012?

20 A. Generally I think that's correct. It would
21 really depend on what level of distinction you're trying
22 to draw between those two terms, how you want to
23 characterize them, identify similarities or contrast
24 them.

25 Whether or not it creates a difference that's

1 relevant in the context of my analysis for a particular
2 reference or not, I'd have to see what the reference is
3 or where the terms are used to really opine on what a
4 person of skill in the art would have thought about
5 those terms at the relevant time period.

6 Q. In the 2011-2012 timeframe, did you personally
7 work on any streaming video applications?

8 A. Narrowing it to that timeframe, I'm sure I
9 was. I've been using streaming video players since,
10 probably, about 1995. In that timeframe, I've used
11 dozens and dozens of different players. In the
12 2011-2012 timeframe it would have been some subset of
13 those players.

14 Q. Can you give me any specific examples of
15 players you were using in that timeframe?

16 A. Windows Media Player, VLC, quite possibly
17 QuickTime. Those are the ones that come to mind off the
18 top of my head. I think if I had a few more minutes to
19 think about it I would probably come up with a few more.

20 Q. With which operating systems were you using
21 those videos players in that timeframe?

22 A. I suspect the answer is something of a
23 two-dimensional matrix. So, for example, I don't think
24 Windows Media Player has a version that runs on Unix,
25 but certainly I was using Windows-based operating

1 systems, Unix-based operating systems. There certainly
2 could have been mobile operating system platforms,
3 players in the mobile context.

4 It's certainly possible I was also using Apple
5 operating systems, though as I sit here right now I
6 don't recall specifically an instance where I was.

7 Q. Would it be accurate to say, then, that you
8 used Windows Media Player with a Windows OS in that
9 timeframe?

10 A. I suspect that was very likely the case, as
11 one example.

12 Q. Did you ever use Windows Media Player with
13 Windows OS to watch a streaming video from the internet?

14 A. As I sit here right now I don't recall one way
15 or another if I did nor not. It certainly might have
16 been possible. Many situations, streaming tools that I
17 have used have been tools other than Windows Media
18 Player, though I did do some Windows-based streaming at
19 some point, maybe before 2011.

20 Q. So in that period before 2011 that you used
21 Windows Media Player to watch a streaming video on the
22 internet, can you walk me through how the file was
23 opened in that particular instance at that particular
24 time?

25 A. So the instance that I remember specifically

1 was there was a conference hosted at UCSB on security
2 and I set up a Windows-based streaming media platform
3 just because it was easy to do, and then I also had a
4 Windows Media Player. I don't recall specifically how I
5 started it. It could have been based on a URL, it could
6 have been a link in an email. I just don't remember
7 specifically what the steps were, as I sit here right
8 now.

9 Q. What was the video that you were opening and
10 viewing?

11 A. So it was the streaming video of the
12 conference that was being hosted at UCSB.

13 Q. What kind of file format was that video in?

14 A. Oh, I don't remember. It's been a few years.

15 Q. In the 2011-2012 timeframe, are there any
16 instances that you can recall specifically of using a
17 different media player to stream video from the
18 internet?

19 A. It's hard to look at it in that timeframe.
20 Certainly I've used VLC for streaming media. There's
21 also -- any time I've looked at Facebook and clicked on
22 videos, many instances those have been streaming video.
23 YouTube, I suspect I was. In that two-year timeframe,
24 2011 to 2012, I suspect I was using most of those kinds
25 of applications as well.

1 Q. So starting with the YouTube example, when you
2 watch a video on YouTube, what information is passed to
3 the media player when you start that?

4 A. It might depend. So, for example, there's
5 different ways to launch YouTube. You can have the
6 YouTube app which would have the embedded player, you
7 can have a URL that's entered into the browser that will
8 pull up the page, you can select links. In any of those
9 instances, what is specifically passed between the
10 browser to player I don't recall specifically, I just
11 don't have it memorized. It wasn't something I had to
12 go off and investigate for this declaration.

13 Q. Do you recall whether the media player told
14 you how long the video was at the beginning so it could
15 show progress of how far it had been played?

16 A. In some instances, as I recall, it could. If
17 it were video being streamed from a file, for example,
18 that had a length, it shows what's called the scrubber
19 bar on the bottom, and that will indicate a duration for
20 the video. In other cases, if it's a live video, it
21 doesn't have that information.

22 Q. 2011-2012 timeframe, do you remember any
23 instances of watching a live video on YouTube?

24 A. I'd have to give it some thought. I don't
25 remember. It's certainly possible.

1 Q. But there are no instances you can recall as
2 we sit here now?

3 A. As I sit here now, from that two-year time
4 period, I can't recall a specific instance. I mean it's
5 like asking what I had for breakfast two years ago. I
6 mean it's -- I do streaming video as research, I do
7 streaming video on sites like Facebook, and so I can't
8 remember a specific instance.

9 Q. Do you remember any streaming video research
10 that you were doing in the 2011-2012 timeframe?

11 A. I would have to go back and look at some of
12 the research papers I was working on in that timeframe.
13 It's hard to bookend it. Certainly, I suspect so.

14 Q. Is it accurate to say that a digital video
15 file has content, a codec and a container?

16 A. It would depend on how those terms were being
17 used and in what context that characterization was being
18 made.

19 Q. In the context of digital video files, can you
20 tell me what a codec is?

21 A. The term "codec" stands for coder-decoder. So
22 a codec could be different things. It could be the
23 thing that did the encoding on one side in preparation
24 of a file or a stream. It could be a decoder on the
25 receiving side for decoding and display. That's one

1 example.

2 Q. Was it common to include a codec in a digital
3 video file as of 2011-2012?

4 A. If you're asking about the full
5 encoder-decoder as part of the file, I doubt that it was
6 common. Usually that would be something that would be a
7 separate tool or executable or part of a separate tool
8 or executable. There might be portions in a file that
9 can be used for encoding and decoding.

10 Q. Was it common for a digital video file in
11 2011-2012 to include something that POSITAs referred to
12 as a codec at that time?

13 A. It depends on context. It depends on what
14 you're referring to as a codec that would be included in
15 the video file what it would be used for. I mean if
16 there's some document where that's described, you'd have
17 to show it to me so I could understand what that context
18 is.

19 Second, whether it's common or not is really
20 hard to answer for two respects. One, I'm not sure
21 really what you're asking about when you say "codec,"
22 and then, two, what sort of the standard is for common
23 in that timeframe.

24 Q. Are you familiar with POSITAs as of 2011-2012
25 in the art having to do with the '997 patent?

1 A. I believe so.

2 Q. Are you familiar with the -- or were you
3 familiar with the art as of the 2011-2012 timeframe?

4 A. Absolutely.

5 Q. Would you consider yourself to be at least a
6 POSITA in that art as of that time?

7 A. Yes.

8 Q. Do you remember ever using the term "codec" in
9 that timeframe?

10 A. I'm sure I did.

11 Q. Do you remember ever using the term "codec" in
12 that timeframe to refer to a component of a digital
13 video file?

14 A. I don't recall doing so. I think it can be
15 ambiguous and so I think to the extent I would have
16 wanted to talk about something that was part of the
17 file, I probably would have been more specific or more
18 clear.

19 Q. Do you --

20 A. Sorry. In part because the term "codec" can
21 have different meanings and so I think it's important to
22 be clear.

23 Q. Do you recall POSITAs at that time using the
24 term "codec" to refer to something that was included in
25 a digital video file?

1 A. I don't recall any specific instances. There
2 might have been references that talked about including
3 portions of information that needed to be used by codec.
4 There might have been references that called it a codec.
5 There might have been some systems that actually sent
6 the full codec as part of the file. I mean what was
7 possible or what people generally did in that timeframe,
8 I mean, it's a pretty wide range, so again to the extent
9 there's some document where it's mentioned, it would be
10 useful to see if it's talking about the full codec, the
11 software itself, or something else.

12 Q. Did MPEG-4 files include a codec as of that
13 timeframe?

14 A. Again it depends on what you mean by codec.
15 It's hard to answer without some more specific context.

16 Q. Was there an MPEG-4 codec at that time?

17 A. My recollection is that there was. There's --
18 I mean a codec can be software or hardware. There were
19 lots of implementations for hardware and software -- or
20 hardware and software implementations of a MPEG-4 codec,
21 some of which could be included in software.

22 Q. Were there also MPEG-4 file containers as of
23 that timeframe?

24 A. My recollection is that that was a term that
25 was used consistent with the standards. If my

1 recollection is correct and it is a term that was used
2 in the standards, then certainly those would have
3 existed for files that were encoded and adhered to the
4 standard.

5 Q. So to the best of your recollection, there
6 were MPEG-4 file containers at that time?

7 A. So what I'm saying is I don't remember the use
8 of that term specifically. I have a vague recollection
9 that there were terms in the MPEG-4 standard that
10 described the structure of an encoded object, and if
11 that recollection is correct and there were containers
12 described in the MPEG-4 specification, that certainly
13 streams that were encoded according to that
14 specification would include those structures.

15 Q. Would a dot MPG video file be an MPEG
16 container?

17 A. It depends. It could be. In certain
18 situations, it certainly could be.

19 Q. As of 2012, was it possible for a dot MPG
20 digital video file to not be in an MPEG container?

21 A. Was it possible? Absolutely. I could take a
22 text file with just my name in it and give it the
23 extension dot MPG and it wouldn't really have a
24 container.

25 Q. But that wouldn't be a digital video file,

1 would it?

2 A. That wasn't part of your question.

3 Q. Let me re-ask.

4 As of 2012, was it possible for a digital
5 video file with dot MPG to not have an MPEG container?

6 A. Yeah, I mean the problem is when you ask about
7 whether or not it was possible, there is a lot of
8 possibilities. Whether there was an encoding standard
9 at the time that didn't have containers, whether you
10 could mislabel it and call it MPG -- I mean even
11 assuming it was properly labeled, I don't have the
12 standard memorized to the degree to know one way or the
13 other whether it was always the case that every MPG file
14 had a container or not. It wasn't something I tried to
15 determine whether it was possible or not as part of a
16 declaration. To the extent it's relevant I would have
17 gone back and looked or might look at some point in the
18 future.

19 Q. You were certainly familiar with digital video
20 files as of 2011-2012?

21 A. I was.

22 Q. If you found a properly labeled digital video
23 file with the dot MPG extension as of 2011-2012, would
24 you expect it to be in an MPEG container?

25 A. I'd have to go back and check the standard or

1 description of what the details of those files would be,
2 whether it would be proper to say that any properly
3 formatted file didn't have a container or was in a
4 container. I mean it's just a detail I don't have
5 memorized. I'd have to go back and check.

6 Q. My question wasn't to any file or any
7 container, it was just whether based on your expertise
8 and experience at the time you would have expected a
9 digital video file with a dot MPG extension to be in an
10 MPEG container.

11 A. So it's essentially what I just answered,
12 right. You're asking a detail about typical files and
13 whether or not they would have characteristics of the
14 standard. I don't have the standard memorized, what the
15 structure of the files would be or would necessarily be
16 or could possibly be, given extensions and options
17 within the standard. I mean I'd have to go back and
18 check.

19 Q. Can you give me any examples of digital video
20 files in 2011-2012 that did not have containers?

21 A. I don't think I could give you the specific
22 name of a file. I don't have files and their structures
23 from six or seven years ago memorized.

24 Q. Did you have them memorized at the time you
25 wrote your declaration?

1 A. No. I mean it's not something I needed to
2 know one way or another, whether or not there existed
3 files in that timeframe that could be used as an
4 anecdote one way or another.

5 I mean I generally understand how MPEG
6 encoding works. If you're asking about specific
7 examples of files and how they were encoded and what
8 their resulting structure was in that timeframe, I mean
9 I could certainly go look.

10 Q. In 2011-2012 timeframe, did all digital video
11 files with dot MPG extension utilize an MPEG codec?

12 A. Not necessarily. I mean an MPG extension is
13 just an extension. You can give any file any extension
14 you want.

15 Q. What does that extension typically signify?

16 A. A file type.

17 Q. What is that file type?

18 A. I don't understand the question.

19 Q. What is the dot MPG file type?

20 A. An MPEG file, generally.

21 Q. I believe you just testified that that didn't
22 necessarily imply an MPEG codec, is that correct?

23 A. Yeah. I mean you could -- I gave you the
24 example before of a text file that had a different
25 extension. You amended the question to say digital

1 video file. You could have -- depends on what your test
2 is for a digital video file, but assuming you have a
3 digital video file, whether it's MPEG or not, whether
4 it's mislabeled or not, it could essentially be
5 anything.

6 If you're asking me that it was the case that
7 every single file in that timeframe had an extension
8 that was accurate -- I mean, clearly it's too broad of a
9 characterization to make. It's computers and
10 programming; people can label things however they want.
11 It just depends.

12 Q. Let's assume a properly labeled digital video
13 file as of 2011-2012. As of that timeframe, did you
14 have the expertise and experience to determine whether a
15 video was properly labeled, whether a digital video file
16 was properly labeled?

17 A. I'm not sure what your test is for properly
18 labeled.

19 Q. I'm just using the words that you just used.

20 A. Okay. Well, I can give you an example of
21 where a file is not properly labeled; I can't give you
22 the test for, in all instances, determining whether a
23 digital video file was properly labeled or not. So, for
24 example, if you give a text file a dot MPG extension, I
25 would say that's not properly labeled. But applying

1 that same test to different video files, whether they're
2 MPEG or not, whether you can use the same decoder or not
3 is a different exercise.

4 Q. Let's just assume for these questions that
5 we're not talking about a text file that's been labeled
6 as a video file. I'm talking about genuine digital
7 video files. If you have a video file labeled MPEG, dot
8 MPG, in the 2011-2012 timeframe and it plays when you
9 click it, would you assume that it was properly labeled?

10 A. I don't know how to answer that question. The
11 best I can say is if the conditions of your hypothetical
12 are true, then the conditions of your hypothetical are
13 true. I mean I'm not sure what test you want me to
14 apply for whether it's properly labeled. If your test
15 for properly labeled is that when you double-click on it
16 then it plays, then it's tautological so I'm not sure
17 what else your question is asking that isn't really
18 circular about the assumptions of the hypothetical.

19 Q. Dr. Almeroth, when you first used the phrase
20 "properly labeled," what did you mean by it?

21 A. What I meant is you could take a text file or
22 you could take a non-MPG file and you could label it
23 with an extension that was used exclusively for MPEG
24 files and that that wouldn't be properly labeled.

25 As I testified to earlier, if you want to be

1 specific about other examples and what "properly
2 labeled" means, you seem to reject in your last question
3 that "properly labeled" meant you could double-click on
4 it and play it, then that becomes the test for the
5 hypothetical.

6 Q. So in explaining that you said an MPEG file
7 could have an MPEG extension. How do you define an MPEG
8 file?

9 A. Something that would adhere to the MPEG
10 standard.

11 Q. So let's assume, then, an MPEG file with a dot
12 MPEG extension. Does it necessarily utilize an MPEG
13 codec?

14 A. I don't know that I can say that that would
15 exclusively be true.

16 Q. Is that because other codecs were used in the
17 2011-2012 timeframe or is that because you don't know?

18 A. No, it just depends on your hypothetical.
19 Even assuming into your hypothetical that the extension
20 is correct, even assuming into your hypothetical that a
21 decoder can be used to properly decode, the thing that I
22 can't determine that's incomplete about your
23 hypothetical is, is it possible that you can have a
24 non-MPEG decoder decode an MPEG file. It depends on
25 what criteria you want to use to establish whether

1 something is an MPEG decoder. You can make it
2 tautological and say anything that can decode an MPEG
3 file is necessarily an MPEG decoder and then it becomes
4 circular.

5 I'm not certain whether in your hypothetical
6 it's possible to have a non-MPEG decoder decode an MPEG
7 file. I don't know. Maybe you could write a decoder
8 that you wouldn't call an MPEG decoder that could still
9 decode an MPEG file. Your hypothetical is kind of
10 missing all of those assumptions.

11 Q. Were MPEG files universally -- by MPEG file, I
12 mean as you said a moment ago, a file format that was
13 consistent with the MPEG standard.

14 Did MPEG files in 2011-2012, were they
15 universally configured to work with MPEG codecs?

16 A. So first, it's not quite what I described an
17 MPEG file as.

18 Second, your question is technically
19 imprecise. When you say an MPEG file is configured
20 to -- I mean MPEG files, generally speaking, are just
21 objects. If they adhere to the standard and you have a
22 decoder that adheres to the standard, then presumably
23 you can decode that file with an MPEG decoder.

24 You used the term in your question
25 "universally true." I don't know if there might be some

1 exceptions. Certainly it's not the case that every
2 single MPEG file was without errors. There might be
3 other extenuating circumstances. I just haven't tried
4 to think about that hypothetical and whether or not
5 there could be reasonable exceptions to that scenario.

6 Q. So let's unpack that. The first thing you
7 said was that's not quite what you said an MPEG file
8 was.

9 What exactly did you say an MPEG file is?

10 A. So what I said was about MPEG, and it was
11 whether or not something adhered to the standard. One
12 of your first questions in the deposition was what
13 essentially was an MPEG file, and so it's a question of
14 sort of what the requirements are for a file, what would
15 you need to define a file.

16 Again, I think I testified to right out of the
17 gate that I can think of examples of where you have
18 files, but I'm not trying to offer a definition of what
19 "file" is. So what I limited my characterization to was
20 if it's labeled as MPEG and it adheres to the standard
21 and then whether it's a file or an object or a stream,
22 the MPEG is really just a modifier for that noun.

23 Q. As you sit here today, can you determine
24 whether something is a digital video file or not?

25 A. Certainly I can give you examples of what

1 digital video files might be.

2 Q. Let me make sure I understand the first part
3 of that first.

4 I believe you said that an MPEG file is one
5 that adheres to the MPEG standard. Is that accurate?

6 A. So what I said was that if it's labeled as
7 MPEG and it adheres to the standard, whether you want to
8 call it an object or a stream or a file then requires an
9 additional discussion about what the requirements are
10 for a file or an object or a stream.

11 Q. What are the requirements to distinguish a
12 file or an object or a stream?

13 A. I don't know that those categories are
14 distinctive. You can have objects that are files,
15 objects that are streams, streams that become files.

16 Q. Let's start with that example. How does a
17 stream become a file?

18 A. One example is you could store it,
19 potentially, on a disk drive, for example. I can
20 envision scenarios or even work that I did where I was
21 receiving a video stream and stored it into a file.

22 Q. What is the difference between an object and a
23 file?

24 A. An object isn't necessarily a file. In many
25 cases, files can be objects. "Object" is sometimes a

1 broader term.

2 Q. Can you give me an example of an object that
3 isn't a file?

4 A. For example, you can have a web object that
5 when displayed on your screen isn't a file. It could
6 have originated as a file, retrieved from a file, but
7 one distinction might be that if it's not stored, it's
8 just in memory, you might not call it a file. It
9 depends on the situation, it depends on the context in
10 which those terms are used. You might even call a
11 stream an object.

12 Q. But not necessarily a file?

13 A. I don't understand the question.

14 Q. Well, you said you might call a stream an
15 object but the stream wouldn't necessarily be a file?

16 A. Yeah, I don't think a stream necessarily has
17 to be a file. It could come from a file, it could go to
18 a file, but certainly you can have live streams that
19 aren't files on the server side and live streams that
20 are consumed on the receiver without becoming a file.

21 Q. So I want to go back to a codec.
22 Specifically, I want to make sure that I understand how
23 you're using that term. I think what you have explained
24 is that a codec is something that's used to encode or
25 decode a file but doesn't necessarily go into the file

1 itself. Is that accurate?

2 A. No.

3 Q. What is wrong about that statement?

4 A. It depends on the context in which you would
5 use that term but certainly you can have codecs that
6 take in unencoded stuff, whether it's audio or video or
7 images or text, and convert it into a format that's
8 encoded and it depends on the situation, what that
9 encoding might be. In some situations the encoding
10 might also include compression, but I mean a codec, an
11 encoder is a fairly general term.

12 Q. Let me back up a little bit and break that
13 down.

14 A codec is something that's used to encode or
15 decode content that goes into a file?

16 A. Not necessarily.

17 Q. What's wrong with that?

18 A. It doesn't have to necessarily go into a file.

19 Q. Okay.

20 A. As one example.

21 Q. All right. So if you've got a digital video
22 file, say an MPEG that adheres to the standard, is the
23 video content within that file typically encoded?

24 A. If it's an MPEG file, in most situations it's
25 considered to be encoded. I don't know if there might

1 be some exceptions. That's generally the case.

2 Q. Okay. And it's encoded, generally, using a
3 codec?

4 A. In most situations it would have become an
5 MPEG file using an encoder.

6 Q. So in the 2011-2012 timeframe, in most
7 situations, an MPEG file adhering to the MPEG standard
8 would include encoded video content?

9 A. Certainly in typical scenarios, and assuming
10 you started off with some content -- presumably you
11 could have empty files, but if you started off with some
12 content, I could envision scenarios where you could use
13 an encoder and the end result would be an encoded file.

14 Q. So at that time an MPEG file with video
15 content, the video content typically would have been
16 encoded with a codec of some sort?

17 A. Yeah. I mean the result of using an encoder,
18 especially in the context of MPEG, and assuming the
19 process works correctly and you're adhering to the
20 standard, the result will have encoded content.

21 Q. Okay. And so the format of that encoded
22 content would have depended on the type of codec used to
23 encode it, is that correct?

24 A. Certainly if you have different encoders and
25 not just different implementations of the same encoding

1 standard but different encoders implementing different
2 encoders, the result would likely be a different format
3 for the video.

4 Q. Is H.264 another example of an encoded format?

5 A. It is.

6 Q. Is that a format that could have been used in
7 an MPEG file in the 2011-2012 timeframe?

8 A. I don't recall if there was some capability
9 within MPEG. Generally you could wrap the video file --
10 or, sorry, video content. There's a lot of similarities
11 between the video portion of H.264 and the MPEG family
12 of standards, but I suspect if you had an MPEG video
13 file you wouldn't call it H.264.

14 Q. What does that mean, "you wouldn't call it
15 H.264"?

16 A. You wouldn't look at the MPEG encoded file and
17 say, well, that's H.264.

18 Q. But it could have been H.264?

19 A. Unless there's some portion of the standard
20 that I'm forgetting where you could wrap a different
21 encoding format, I don't recall there being a way to do
22 it, but I mean I don't have all of the options and the
23 nuances of MPEG or H.264 memorized. Each standard is a
24 thousand pages long. There's lots of optional portions.
25 I just don't have it all memorized.

1 Q. What do you mean by "wrap"?

2 A. In some cases you can -- from a networking
3 perspective, we call it "encapsulation," but you can in
4 some cases take one type of format and provide
5 instructions around it that will allow a decoder to be
6 able to decode it. There are all sorts of techniques in
7 computer science, like translation, encapsulation.
8 Certainly in the video context there are wrappers that
9 provide metadata that assist in decoding.

10 Q. Is a wrapper the same as a container in the
11 context of a digital video file?

12 A. I don't think it's necessarily the same thing.

13 Q. Can you give me an example of a wrapper that
14 is not a container?

15 A. I mean wrappers and containers, unless you're
16 speaking specifically about a particular implementation
17 or standard, are generic terms. They don't have to be
18 the same thing. They can be different. It's just a
19 generic term for a capability or functionality.

20 Q. In the 2011-2012 timeframe can you give me an
21 example of a wrapper that was not a container in the
22 context of digital video files?

23 A. I don't know how specific of an example you
24 want. You could just take any implementation for a
25 container and you could take a packet encapsulation

1 technique for digital video packets. I don't think that
2 that would necessarily be a container, at least if
3 you're referring to containers as they are defined
4 within the MPEG standard.

5 Q. How are containers defined within the MPEG
6 standard?

7 A. I don't have the standard memorized. If
8 you've got it and want to get it out, I can certainly
9 point you to a relevant section to the extent I can find
10 it.

11 Q. Can you describe any aspects of a container as
12 that term is used in the MPEG standard?

13 A. I don't have it memorized. You'd have to get
14 out the standard. It's a long standard. It's a
15 detail -- sitting here right now, I don't have it
16 memorized.

17 Q. As we sit here today, are there no
18 characteristics of a container as that term is used in
19 the MPEG standard that you can describe for me?

20 A. I don't have the standard memorized off the
21 top of my head. You could give me a reference. I could
22 check. I just don't have it memorized.

23 Q. That's not quite what I asked.

24 Are you able to describe any characteristics
25 of a container as that term is used in the MPEG

1 standard?

2 MR. McDOLE: Objection. Asked and answered.

3 THE WITNESS: As I testified to, I don't have
4 the standard memorized. You haven't given it to me. I
5 don't understand this to be a memory contest. I don't
6 know, if I stopped and gave it some thought for a few
7 minutes I might be able to, but just off the top of my
8 head, I can't think of anything.

9 BY MR. ROBINSON:

10 Q. If one of your students came to you and said,
11 "What is a container?" just colloquially, "What is a
12 container for a digital video file?" what would you say?

13 A. I'd say, "In what context are you asking?"

14 Without some more specific information, it's
15 something that holds a video file. It's a container for
16 it. Just the term can be used in different ways and
17 different standards and different contexts, so I'd say,
18 "What are you specifically asking about?"

19 Q. What kind of specifics would you ask for to be
20 able to give that student an answer?

21 A. What they had in mind, anything more specific.
22 If it was something we'd talked about, if there was a
23 textbook or they said, "Here's the MPEG-4 standard that
24 uses this term in this paragraph. Help me understand
25 what it's saying." Generally, I don't have students who

1 come in and just ask me random words.

2 Q. Are there any specific examples of wrappers
3 that you could give me from the 2011-2012 timeframe that
4 were not containers?

5 A. Yeah, I think you asked me that question. I
6 mentioned specifically packet encapsulation, wrappers
7 around packets, wrappers around files, just generally
8 speaking. If you want something more specific or a
9 specific type of application or -- then I'd have to give
10 it some thought.

11 Q. So you mentioned wrappers around files. Any
12 of those wrappers have particular names that were used
13 to reference them at that time?

14 A. Again you're asking about -- I mean I'm
15 speaking generally. If you're asking about specific
16 applications, specific examples, I mean it's not
17 something I really looked at for the declaration. I
18 could potentially go off and look, but not off the top
19 of my head.

20 MR. ROBINSON: We have been going for about an
21 hour. Do you want to take a quick break?

22 (Recess: 10:06 a.m. - 10:14 a.m.)

23 BY MR. ROBINSON:

24 Q. Dr. Almeroth, I'd like to hand you what has
25 been marked Twitter Exhibit 1007 in the -- for claims 1

1 through 19 of the '997 patent. It's the '829 IPR.
2 Would you please review that briefly and confirm that
3 you recognize that.

4 A. I do recognize it.

5 Q. Is that one of the declarations that you
6 referenced earlier in terms of your testimony that you
7 prepared for this matter?

8 A. It is.

9 Q. Would you please turn to page 5, specifically
10 paragraph 3 that spans pages 5 and 6.

11 A. Okay.

12 Q. Is that a complete list of the documents that
13 you reviewed in preparing this declaration?

14 A. I believe that it is. To the extent there's
15 anything else in the declaration that I would have
16 identified that's not on this list, then certainly that
17 would be included.

18 Q. You beat me to it, but paragraph 5 actually
19 mentions any additional documents and references cited
20 in your analysis.

21 A. Right.

22 Q. From paragraphs 3 and 5, is it fair to
23 conclude that if it's not listed in paragraph 3 or
24 otherwise referenced in the declaration you did not
25 review it or consider it?

1 MR. McDOLE: Objection to form.

2 THE WITNESS: Well, paragraph 5 includes
3 knowledge and experience, and subject to any oversight
4 of documents that are cited, then it should be a
5 complete list.

6 BY MR. ROBINSON:

7 Q. Would you please turn to page 19, specifically
8 paragraph 34.

9 A. Okay.

10 Q. Paragraph 34 lists certain secondary
11 considerations that would tend to rebut the obviousness
12 of a claim. One of those includes copying.

13 A. I see that.

14 Q. Paragraph 35 says you're not aware of any
15 allegations by the named inventors of the '997 patent or
16 any assignee of the '997 patent, that any secondary
17 considerations tend to rebut the obviousness of any
18 challenged claim of the '997 patent.

19 A. Yes.

20 Q. Have you been informed of any allegations of
21 copying?

22 A. Specifically to copying, not that I'm aware
23 of.

24 Q. Has anybody provided you with a copy of the
25 complaint in the co-pending litigation between Twitter

1 and Youtoo?

2 A. I might have seen it. I don't recall, sitting
3 here right now.

4 Q. Are you aware that Twitter and Youtoo had a
5 nondisclosure agreement?

6 A. As I sit here right now, I don't recall that.

7 Q. Are you aware that Youtoo gave access to
8 Twitter to Youtoo's system that embody the '997 patent?

9 A. As I sit here now, I don't recall that, at
10 least, allegation.

11 Q. Are you aware that Youtoo has specifically
12 alleged that Twitter copied Youtoo's systems?

13 A. Not that I recall.

14 Q. Would those allegations have any impact on
15 your analysis of obviousness in this declaration?

16 A. I don't think they would impact my
17 conclusions. Certainly, there would be several steps
18 that Youtoo would have to take. For example, suggesting
19 that that copying rises to the level of a secondary
20 consideration, I'd have to see some evidence that there
21 was a nexus there, some evidence of what the Youtoo
22 system was that Twitter was given access to, allegedly,
23 whether it embodied the claims. I mean just saying
24 that -- or at least making those allegations without
25 then saying that they rise to the level of secondary

1 considerations and would rebut the motivation to combine
2 the references in the manners that I have set forth, I
3 mean I'd have to see what that evidence is.

4 Given the strength of the motivation to
5 combine the references -- for example, in many instances
6 it's demonstrating the knowledge of a person of skill in
7 the art -- and the strength of Nassiri in disclosing
8 most, if not all, of the limitations for many claims, I
9 mean it would have to be an exceptionally strong
10 secondary considerations to overcome what the
11 combinations are.

12 Q. What does it take for copying to rise to the
13 level of a secondary consideration?

14 MR. McDOLE: Objection. Calls for a legal
15 conclusion.

16 THE WITNESS: I'm not sure how to answer that.
17 I think it is you're asking essentially a legal
18 question.

19 BY MR. ROBINSON:

20 Q. Dr. Almeroth, just a moment ago you told me
21 that that copying would have to rise to the level of
22 being a secondary consideration. What did you mean by
23 that?

24 A. Oh, yeah, what I meant by that is it's one
25 thing to allege copying, for example, in a complaint.

1 It's another thing to establish that that copying rises
2 to the level of a secondary consideration.

3 For example, in demonstrating a relationship
4 between what was copied, knowledge of the patents, that
5 there was a nexus between what was copied and the
6 claims, I mean all of the additional sort of factors
7 that you have to identify that are listed in paragraph
8 34.

9 Q. Did you say knowledge of the claims?

10 A. Knowledge of the system. If you're going to
11 copy it, then you have to be aware of the system, and
12 it's a system that would -- the copying aspect would
13 have to relate to the claims. I mean that's the whole
14 point of the nexus that's set forth in the last few
15 sentences of paragraph 34.

16 Q. Are you familiar with Vine?

17 A. Generally, yes.

18 Q. Is Vine commercially successful?

19 A. I haven't tried to analyze that question for
20 purposes of this declaration. I'd have to give it some
21 thought. I'd have to see some evidence, consider what
22 factors you would want to use for commercial success.

23 Q. Are you familiar with Periscope?

24 A. I don't recall it, sitting here right now.

25 Q. Are you familiar with Twitter Video and

1 Twitter Live?

2 A. Very generally speaking.

3 Q. Are they commercially successful?

4 A. As part of this declaration, I haven't really
5 tried to answer that question. I'd have to give it some
6 thought.

7 Q. Are you aware that Twitter stands accused of
8 infringing certain claims of the '997 patent?

9 A. I am aware of that.

10 Q. Are you aware that that necessarily includes
11 the allegation that the accused systems embody those
12 claims of the '997 patent?

13 A. I am aware that Twitter is accused of
14 infringing the '997 patent. What features, what claims,
15 I don't recall what those are, as I sit here right now.

16 Q. And you did not assess whether the commercial
17 success of those Twitter systems and methods might be a
18 secondary consideration?

19 A. Well, I think my opinions are based on exactly
20 what these paragraphs say. I'm not aware of any
21 allegations of secondary considerations. My
22 understanding is that it's Youtoo's burden to show
23 commercial success, to show a nexus, to show the
24 secondary considerations. It has the burden of showing
25 those things. It's not my responsibility to go out and

1 proactively determine whether those secondary
2 considerations exist, and what paragraph 35 says, I'm
3 not aware of even where allegations of secondary
4 considerations have been made by Youtoo. To the extent
5 that they are raised, for example, in Youtoo's response,
6 then I will take the first opportunity to respond to
7 those, to the extent that I have opinions to offer.

8 Q. In paragraph 41, you say that as of the '997
9 patent's 2012 priority date, YouTube allowed users to
10 upload their videos for other users to view, comment on
11 and rate.

12 How did YouTube allow users to upload their
13 videos?

14 A. I'm not sure I understand the question.

15 Q. YouTube allowed users to upload their videos.
16 How did that happen?

17 A. There are a variety of ways they could do it.
18 There were web-based forms that a person could fill out.
19 There might have been other mechanisms within YouTube.
20 I didn't in this paragraph attempt to delineate all of
21 the different techniques. To the extent I wanted to
22 list them I'd have to go think about it, do some
23 research.

24 Q. So your testimony in this declaration didn't
25 take into consideration any of the specific ways that

1 YouTube may have allowed users to upload their videos?

2 A. I don't know that to be the case. I mean I've
3 given you at least one example. I think there was a
4 variety of ways that YouTube could receive videos. I
5 didn't attempt to delineate all of them in this
6 declaration.

7 Q. What attempts did you make to confirm the ways
8 that YouTube used in 2012?

9 A. It was based on my own specific knowledge.
10 And again, I wasn't trying to list all of the different
11 ways, but simply to make the statement that's there in
12 the last sentence, "YouTube allows users to upload their
13 videos for other users to view, comment on and rate."
14 To the extent that it's relevant or becomes relevant to
15 list all of the different ways that it's possible, then
16 certainly I could try and do that list.

17 Q. In paragraph 49 you list four factors relevant
18 to determining the level of ordinary skill in the
19 pertinent art. Did you address factors 3 or 4 in your
20 declaration?

21 A. I'm not sure what you mean by "address."
22 Certainly I considered those factors. I don't know if I
23 specifically spelled out instances of what those might
24 be. I mean maybe there's something in these paragraphs
25 that's relevant to factors 3 and 4. I'd have to check.

1 Q. Would you review paragraphs 50 through 52 for
2 me. Let me know when you're done.

3 A. Okay. Okay.

4 Q. Is there anything in those paragraphs that
5 addresses factors 3 or 4?

6 A. I'd have to give it some thought. I mean I
7 think the declaration speaks for itself. There might be
8 some portions of those paragraphs that bear on the
9 factors 3 and 4. I mean my experience in industry with
10 colleagues from academia, with graduate students, I mean
11 certainly I'm aware of what problems there were, what
12 other solutions to those problems existed. I mean I was
13 working on streaming video, capturing streaming video
14 back in the mid to late '90s, so I think that there are
15 aspects of those paragraphs that are relevant to points
16 3 and 4.

17 Q. But as you sit here today, having just
18 reviewed paragraphs 50 through 52, are there any
19 examples of the types of problems encountered in the
20 field listed in those paragraphs?

21 A. Again, I think that the declaration speaks for
22 itself. I gave you examples of where there are
23 sentences in those paragraphs that relate to those
24 specific bullets.

25 If you're asking is there the identification

1 of a particular problem or what prior art solutions were
2 in those particular paragraphs, I mean I think the
3 declaration speaks for itself. I also think that if you
4 look at the prior art, the description of the prior art
5 in the following sections, those are all relevant
6 materials that would go into those factors. They list
7 specific types of problems. It's prior art, so it's
8 what those solutions to those problems were. There's
9 the background of the '997 patent that lists specific
10 relevant information, so I mean certainly I think those
11 factors were considered in arriving at the definition of
12 a person of skill in the art.

13 Q. Paragraph 53, you say that it's your
14 understanding "that the claims are to be given their
15 broadest reasonable interpretation in light of the
16 specification."

17 What does that mean to you?

18 MR. McDOLLE: Objection. Calls for a legal
19 conclusion.

20 THE WITNESS: It's essentially the broadest
21 reasonable interpretation as understood by one of
22 ordinary skill in the art, how those terms are used in
23 the context of the claims through the eyes of a person
24 of skill in the art.

25 As to what the legal definition for what that

1 phrase means, what's involved in that phrase, it's a
2 legal question. I don't have a legal opinion.

3 BY MR. ROBINSON:

4 Q. Is that the broadest reasonable interpretation
5 to a POSITA today?

6 MR. McDOLLE: Objection. Calls for a legal
7 conclusion.

8 THE WITNESS: It's my recollection that it's
9 at the time of the patent and not how you would
10 interpret how a person of skill in the art would
11 interpret those terms as of 2018. The terms might
12 actually not have changed, or they might have. At least
13 for the purposes of this declaration I believe it's in
14 the context of the claim at the time.

15 BY MR. ROBINSON:

16 Q. So you understand the two matters that we're
17 here on today are inter partes reviews, correct?

18 A. Yes.

19 Q. Have you also worked on District Court
20 litigation matters?

21 A. Generally?

22 Q. Yes.

23 A. Yes.

24 Q. Are you familiar with the Phillips standard
25 claim construction?

1 A. I am.

2 Q. Would any of your opinions on the
3 interpretation of these claim terms change under that
4 standard?

5 MR. McDOLE: Objection. Calls for a legal
6 conclusion and outside the scope.

7 THE WITNESS: I'd have to give that some
8 thought. It's a different standard. I've been focused
9 on the IPR. Whether they would change or not I'd have
10 to give some thought to.

11 BY MR. ROBINSON:

12 Q. What's traditional television programming?

13 A. I'm not sure how to give it a more specific
14 definition than it's traditional television programming,
15 programming for TVs, for traditional programming, shows
16 you can watch on TVs.

17 Q. Is it linear?

18 MR. McDOLE: Objection to form.

19 BY MR. ROBINSON:

20 Q. Is traditional television programming linear?

21 A. I'm not sure how to answer that question. I'd
22 have to give it some thought. It's more an example
23 of -- well, what I was looking at was trying to
24 understand what linear television programming -- or what
25 a linear television program was. Whether or not the

1 opposite, whether for traditional television programming
2 you would be correct to characterize that as linear,
3 whether there could be examples where there weren't, I
4 mean I'd have to give it some thought, although you can
5 sort of flip the definition.

6 Q. You also quote a sentence from the '304 patent
7 that says "Traditional television programming for
8 television network is linear."

9 A. I do.

10 Q. In your experience, from your CV, I think
11 would suggest that you've worked on streaming
12 traditional -- multicasting traditional television
13 programming. What does that mean?

14 A. Well, in the examples where I streamed
15 traditional television programming that were shows like
16 Bugs Bunny cartoons that appeared on TV, I think that
17 would be a good example of traditional television
18 programming. And as paragraph 60 goes on to describe,
19 there's additional context from the '304 patent that
20 talks about it and gives some additional examples.

21 Q. None of that says it's not linear, does it?

22 A. I would agree that none of the citations in
23 paragraph 60 describe television programming as not
24 being linear.

25 Q. Do all set-top boxes decode signals for

1 traditional television programming?

2 A. It would be hard to say. It depends on what
3 the bounds for a set-top box are. I mean certainly
4 there are set-top boxes that can receive and decode
5 signals so that they can be played on a television or
6 monitor.

7 Q. Are there other set-top boxes that don't?

8 A. It depends on what your definition of a
9 set-top box is. If an Atari console is a set-top box,
10 it may not have the ability to receive and decode
11 signals that can be played on a television or monitor.
12 They can originate, but maybe not receive. So if you
13 include those as a set-top box, then -- then no.

14 Q. What about a set-top box for a security camera
15 system, does that receive and decode traditional
16 television programming signals?

17 A. You'd have to be more specific. Does it? Can
18 it? Are there that do? I mean your question is kind of
19 vague and I'm not sure how, really, to answer it.

20 Q. As we sit here today, can you tell me that all
21 set-top boxes necessarily receive and decode traditional
22 television programming?

23 A. So you've added qualifiers to that question,
24 that "all set-top boxes necessarily." As I testified to
25 earlier, it depends on your definition of set-top boxes.

1 Certainly I think that the statement quoted in paragraph
2 60 is accurate, that the use of set-top boxes is an
3 example of something that can receive traditional
4 television programming and decode it and play it on a
5 TV, but whether all set-top boxes can necessarily do it
6 depends on the scope of what you define as a set-top
7 box, at least is one determinant in answering that
8 question.

9 Q. How would you define a set-top box?

10 A. It depends on the context. It could be
11 something that sits on top of a TV. That's sort of
12 where the term originates. But that term doesn't define
13 a necessary set of functionality, given its breadth.

14 Q. Paragraphs 66 through 69, you address user
15 submissions and user-generated content.

16 A. Okay.

17 Q. What's the difference between user-generated
18 content and a user-generated content file?

19 A. One is a file, one is not necessarily a file.

20 Q. If I said that I'm going to generate a
21 user-generated content file from some user-generated
22 content, is it reasonable to infer that the
23 user-generated content is not yet a file?

24 A. I think it would depend on the context. If
25 all you told me was what you said in the question, I

1 don't think it would necessarily be reasonable to assume
2 that.

3 Q. From the perspective of a POSITA in the
4 2011-2012 timeframe, as of May 2012, if I tell you that
5 a web page has a link on it, what does that mean to you?
6 I'm sorry, what does that mean to the POSITA as of May
7 2012?

8 A. That there's a link on the web page. Again,
9 depending on context, it could mean more than that. It
10 could provide some context for what the link is, what
11 type of link, how it's formatted.

12 Q. Generally speaking, as of that timeframe, is
13 it accurate that a link on a web page is something that
14 a user can click to cause some action, whether it's
15 going to a different web page or invoking something
16 else?

17 MR. McDOLLE: Objection to form.

18 THE WITNESS: Certainly a person could click
19 on a link, selectively activate a link in some way and a
20 variety of actions could then take place. It depends on
21 what the link is or what it does.

22 BY MR. ROBINSON:

23 Q. Is there a difference between a link on a web
24 page and a link that's just written to the code of a web
25 page, for example, as the source of an I-frame?

1 A. I don't understand the question. I'm not sure
2 if you're asking about -- I'm not sure what you're
3 asking. Maybe you can rephrase it.

4 Q. Sure. So start by setting it up. So you
5 could put a link with the source, or SRC, field of an
6 I-frame that would automatically populate the I-frame,
7 is that correct?

8 A. You can automatically populate. You can have
9 embedded objects in the web page. I'm not sure you
10 would characterize those as links that can be selected
11 by a user. Certainly you could -- they could be links,
12 but they're different than, say, reference to links that
13 a user could click on.

14 Q. And then in another instance a link on a web
15 page would be a link that a user could click on to
16 initiate some action?

17 A. I think I understand what you're asking.
18 Certainly if you look at a visually displayed web page
19 or a web page that's displayed in a browser, intuitively
20 there are links that a user could click on and could go
21 somewhere and that's different than, say, embedded tags
22 that would automatically be retrieved as part of an
23 object displayed within a web page. Those things can be
24 different both in how they are referenced in the syntax
25 of the web page and how they are presented to the user,

1 but they might also have similarities, for example, in
2 that they both use URLs.

3 Q. But for a link to be selectable by a user --
4 trying to use the words that you were using so we're
5 consistent -- but for a link to be selectable by a user,
6 it has to be displayed on the web page?

7 A. That seems an overly strong statement. For
8 example, whether or not you can have instances within
9 that description -- for example, if I click on a banner
10 ad or an image, is that considered a link? So your
11 statement seems a little bit strong.

12 Q. Help me understand your concern. The banner
13 ad would -- might include some object associated with
14 the link, but if you click on that, doesn't there have
15 to be a link that you're clicking on to initiate some
16 action?

17 A. Yeah, I think part of the disconnect here is
18 when we started with the term "link." Ultimately, when
19 you get into the syntax, if you're saying URL, that
20 there's a URL that backstops an image and is associated
21 with the image so if you click on the image you're
22 activating the URL, that can be the case.

23 You can have text that's underlined because
24 it's associated with hyperlink and there's a URL that's
25 associated with that. Certainly that's functionality

1 that exists within the web and web pages.

2 Q. It's fair to say for a link to be selectable
3 by a user, it has to be displayed to the user on the web
4 page, right?

5 A. I would say generally, in order for something
6 to be selectable, the user has to see something that can
7 be selected. I would be careful to consider whether or
8 not there can be exceptions to that.

9 The opposite of that statement, to suggest
10 that you can't have a link unless it's displayed seems
11 to potentially exclude some corner cases, maybe. I mean
12 certainly in most common web pages, for things that are
13 hyperlinked, they are associated with things that a user
14 can see and select and have some intuition about what's
15 going to happen next -- a new page or something is going
16 to happen, something is going to be displayed related to
17 what they're seeing that they selected.

18 But then that's not always the case. You can
19 click on a link and get a virus, so maybe it's
20 unintended.

21 I'm sort of having a hard time generalizing a
22 characteristic, given the kind of fuzziness of the
23 scenario you're describing.

24 Q. Okay. So generally speaking, a link displayed
25 on a web page is one that's selectable by a user?

1 A. I think I'm still having problems with that
2 characterization. So, for example, to test whether I
3 would agree with that statement, I would think whether
4 or not you could have links on a web page that were not
5 selectable. So let's say I put a URL on a web page.
6 You might call that a link, but then you don't program
7 the HTML so that a user can select that URL and go to
8 that URL. If it's just the string of characters for the
9 URL that the user can't select and go to that link, then
10 maybe you couldn't consider that a link that's
11 selectable by a user.

12 Q. I'm trying not to be that clever. If you have
13 just got an <a> href reference with a URL in it and it's
14 displayed on the web page, that's selectable by a user
15 to invoke whatever the action is?

16 A. That's more technically precise. I think
17 that's correct.

18 Q. Okay.

19 A. And so that it's clear, it's "<a> href." It's
20 an HTML tag.

21 Q. From the perspective of a POSITA in 2011-2012,
22 is there a difference between capturing video and
23 recording video?

24 A. I think there certainly could be. Those terms
25 are broad and vague enough that, depending on context,

1 they could have different meanings. There might be
2 instances where they have very similar meanings or are
3 used interchangeably, and in other instances they are
4 distinctive. It would depend.

5 Q. Okay. I'd like to hand you what has been
6 marked as Exhibit 1009.

7 Is that the Nassiri reference addressed in the
8 declaration?

9 A. It is.

10 Q. Just so we're clear, is that the same Nassiri
11 reference that's addressed in both of your declarations?

12 A. It is.

13 Q. Addressed in the '997 patent? Okay.

14 Would you please turn to page 7.

15 A. Okay.

16 Q. Right at the top where it says "<iframe
17 src=http://watch.videogenie.com," that I-frame is
18 already going to preload with the media player, is that
19 correct?

20 A. I would have to see where it talked about in
21 the description that that particular example would be
22 preloaded. I skimmed the paragraphs before and after.
23 I didn't see where it said that it would be preloaded.

24 Q. So about the last two sentences of paragraph
25 57 on page 6.

1 A. Okay. I mean both here and in other
2 paragraphs it's describing different capabilities, but
3 as the declaration describes, it, at least, describes
4 the functionality where the user is clicking on that
5 embedded link, but I don't see anything for this
6 particular code snippet, whether it's describing it as
7 something that is automatically loaded.

8 Q. Well, at the very least, that SRC tag is going
9 to automatically load that URL that follows it, correct?

10 A. It depends. I mean this is a URL snippet, so
11 it's part of what would go into a web page. Since it's
12 incomplete, I think you have to look at the descriptions
13 and the specification to understand what the system is
14 doing. And as described in the declaration, it, at
15 least, describes an instance where a user can select
16 that I-frame and load the video recorder.

17 It also describes, I think, for example, at
18 the end of paragraph 58 in some examples the video host
19 computing system may automatically insert the code into
20 code of the enterprise computing system, so some
21 portions can be automatic. I don't know that it's
22 describing that the video recorder itself would ever be
23 automatically loaded or not. I mean if there's some
24 portion of the specification that you think says that,
25 you can point me to it and I'll confirm it.

1 Q. Is this code here on page 7 related to the
2 video recorder?

3 A. The tag at the top?

4 Q. Yes.

5 A. So this is describing video playing. At least
6 that's what the last sentence of paragraph 57 says: "In
7 one example of the executable instructions for video
8 playing may include."

9 Q. Then it's referencing that code snippet at the
10 top of page 7, correct?

11 A. It is.

12 Q. Okay. And that code snippet, the I-frame is
13 going to automatically load the URL that follows the SRC
14 tag, is that correct?

15 A. It might. It doesn't say that that's what is
16 supposed to happen, and given that it's only a portion
17 of the snippet, it isn't the case that it's necessarily
18 true. I mean it doesn't say. Without looking at more
19 of the code, what it's supposed to do, all that it's
20 really saying is offering that HTML snippet as an
21 example of the executable instructions for video
22 playing.

23 Q. Doesn't your declaration explain that that
24 I-frame would need a name tag to be able to target it
25 with some external link? Let's say I-frame generally.

1 I'm not sure that you speak directly to this code
2 snippet, but isn't that how I-frames work?

3 A. In what sense? Are you --

4 Q. Don't they require a name tag to be able to
5 target them with an external link?

6 A. I don't think that's quite what I'm saying in
7 the declaration. There is a description about Bradford
8 on pages 48 and 49 and 50.

9 Q. We'll get to Bradford. Right now I just want
10 to understand what it is that Nassiri discloses. My
11 understanding of your declaration is that Nassiri's
12 I-frames are set up to autoload that SRC URL and that
13 because that is the case, you then turn to Bradford for
14 the idea of an external link that targets an I-frame.

15 A. I don't think that's exactly accurate.

16 Q. From the code at the top of page 7 in Nassiri,
17 is there some external action that you think needs to be
18 taken to invoke or to load that SRC tagged URL in this
19 I-frame?

20 A. So I think that what's disclosed in Nassiri as
21 it relates to the limitation in the claims that I think
22 is related to what you're asking about, Nassiri
23 describes being able to use I-frames to embed the video
24 player. I think a person of skill in the art would
25 understand in the context of Nassiri that that means a

1 user would be clicking on the link. It doesn't say
2 those exact words. I think that's what the reference
3 teaches.

4 What I'm relying on Bradford for is to
5 demonstrate that the use of I-frames supports that
6 functionality and a person of skill in the art would
7 understand that. So in seeing a discussion of I-frames
8 as it's described in Nassiri a person of skill in the
9 art would understand that that's what it's describing.

10 Pointing specifically to the code snippet at
11 the top of page 7, Nassiri isn't offering that to
12 demonstrate the exclusive functionality of what Nassiri
13 can do as it relates to whether or not a user is
14 clicking on a link, so I think it's not an accurate
15 understanding of what a person of skill in the art would
16 disclose in Nassiri to look at that code snippet and
17 argue that its functionality limits the disclosure in
18 some way.

19 Q. So that was a lot. I want to start -- I'm
20 starting simple.

21 What does this code at the top of page 7 do?
22 This I-frame automatically loads the URL that follows
23 the SRC tag, does it not?

24 A. Not necessarily. It depends on what the code
25 around it does, what the other embedded portions of the

1 web page are doing. All that this code at the top of
2 page 7 is being described for is an executable
3 instruction for video playing. It doesn't -- Nassiri
4 doesn't describe it as something that's automatically
5 loaded or not. It's really just describing what the
6 code would look like.

7 And paragraph 58 goes on to, again, describe
8 what the role of that code is. It's not -- you can't
9 read in more to what's in that code and what its
10 functionality is that might depend on other code in the
11 web page to suggest that Nassiri is limited in some
12 specific way.

13 Q. I'm not suggesting anything, Dr. Almeroth, I'm
14 just asking how that I-frame code works in and of
15 itself. An I-frame with a source loads the source, does
16 it not?

17 A. It might load the source. As I testified to
18 several times, it depends on what the other code around
19 it does.

20 Q. Can you give me an example of some other code
21 around it that would prevent this I-frame code that's
22 shown at the top of page 7 of Nassiri from automatically
23 loading the URL that follows the source tag?

24 A. Other JavaScript, other conditional tags,
25 other I-frame structures that depend on user input.

1 There could be, potentially, lots of examples.

2 Q. If you put this code snippet at the top of
3 page 7 of Nassiri into an HTML file and you open that
4 HTML file with a browser, will it automatically load the
5 URL that follows the SRC tag?

6 A. It would depend. I think if all you had in
7 the HTML file was this code, it might actually not load
8 at all. You might need additional HTML structure in
9 order to define what the frames are, or at least what
10 this frame is in order for the code to execute
11 correctly.

12 It's intended to be a code snippet, not a
13 complete HTML file. It's used to convey one particular
14 concept, and to read more in to that than what it says
15 here, I think, would be an inaccurate understanding as
16 to what a POSITA would think.

17 Q. What additional HTML code structure would be
18 necessary to get this I-frame to load?

19 A. You might need a starting HTML tag, an ending
20 HTML tag. It depends on how good the browser is at
21 interpreting incomplete HTML.

22 Q. If you put this code snippet in an HTML file,
23 precede it by a starting HTML tag and ending with a
24 closing HTML tag and you open that HTML file in a
25 browser in 2012, will the I-frame automatically load the

1 URL that loads the SRC tag?

2 A. Yeah, I mean, look, if you modify this tag and
3 add tags so that it goes into a web page that only
4 includes this one link, certainly you can build a web
5 page around it to get the referenced link to
6 automatically load, but that's not the purpose of why
7 this HTML snippet is included in the specification.

8 Q. I'm not asking about the purpose of why it's
9 included, I'm just asking about how this would operate
10 in a straightforward set of circumstances.

11 A. Well, but you're changing what the reference
12 describes. You're adding additional tags in order to
13 get it to display in a web page. You're changing the
14 functionality beyond what is referenced in the web page
15 to import some understanding beyond what it specifically
16 says and is referenced for.

17 Q. I'm confused. I thought you said that this
18 was included as an example and that it would necessarily
19 include other things.

20 A. No. What I'm saying is the sentence before it
21 says "In one example the executable instructions for
22 video playing may include." It's included as exemplary,
23 it's included as a code segment, it's not intended to
24 convey meaning beyond what it's used for, and to read
25 more in to what this code snippet does, to try and build

1 a web page around it that's inconsistent with other
2 functionality that's described, I think, is inaccurate.

3 Q. So with respect to this media player, code
4 snippet at the top of page 7, what other functionality
5 is described that's inconsistent with anything that I
6 just asked you?

7 A. What is inconsistent is it's not a complete
8 web page. It's not clear what a browser would do, if
9 you just entered this snippet into a page and loaded it.

10 Whether or not this page -- or this snippet
11 could be included in a page and made to automatically
12 load or not is not the relevant point that Nassiri is
13 pointing to it for. And Nassiri identifies the use of
14 I-frames, and a person of skill in the art would
15 understand what I-frames were capable of doing, as
16 further confirmed by Bradford.

17 Q. I feel like you're telling me a lot of about
18 what Nassiri intended, and I'm really just asking if you
19 drop this code snippet into a basic HTML tag that -- or
20 HTML page that otherwise will load in a browser, can you
21 really not tell me how that I-frame is going to behave
22 in the way that it's written?

23 MR. McDOLLE: Objection. Asked and answered.

24 THE WITNESS: So the first thing, I'm not
25 trying to tell you what Nassiri intended. What I'm

1 telling you is Nassiri says in one example the
2 executable instructions for video playing may include.

3 It's included in the paragraph where there are
4 other examples, and it's described in the context of
5 other functionality for Nassiri. What that specific
6 code would do is an example of executable instructions
7 for video playing.

8 Whether or not that code would do additional
9 things or have additional characteristics, it's not
10 being described that way. How that code would function
11 in practice would depend on what the code around it
12 does. You asked if there were examples of where this
13 code would not result in an automatically loaded player
14 and I gave you some. In other instances it might,
15 depending on how that code was used in a web page.

16 The point would be that Nassiri is describing
17 that code as executable instructions for video playing.
18 In some scenarios it might lead to an automatically
19 loaded player, in other instances it might not. It's
20 not being offered for that proposition by Nassiri as an
21 example of one way or the other. The functionality of
22 whether or not code could be loaded and executed
23 automatically is described elsewhere in the
24 specification.

25 BY MR. ROBINSON:

1 Q. Paragraph 57 says: "The video player may be
2 displayed on a stand-alone site or other
3 content-providing application, or may in some examples
4 be embedded in an enterprise's own site or other
5 content-providing application."

6 Does the code snippet at the top of paragraph
7 7 that follows -- or top of page 7 that follows
8 paragraph 57, is that an example of a way to embed that
9 in a web page?

10 A. It's an example of executable instructions for
11 video playing that may be included in a web page. It's
12 one example, as Nassiri says.

13 MR. ROBINSON: We have been going for about an
14 hour. Let's take another quick bathroom break.

15 (Recess: 11:17 a.m. - 11:28 a.m.)

16 BY MR. ROBINSON:

17 Q. Dr. Almeroth, taking a step back, I think that
18 we established a little earlier that a digital video
19 file that complies with the MPEG standard, as of May of
20 2012, would include an MPEG container and some video
21 content encoded in accordance with the MPEG standard.
22 Is that accurate?

23 A. With respect to the container, since we didn't
24 look at the standard to see whether or not the concept
25 of a container was something that was required in all

1 files or not, I don't think I can say one way or another
2 sitting here without the benefit of looking at that
3 standard.

4 With respect to whether or not it has content,
5 it was essentially circular in the sense that if you
6 assumed in your hypothetical there was content to
7 encode, and it was encoded, then that encoded content
8 would be in the results. Whether it could be stored in
9 a file is one possibility. It could be streamed is
10 another option. I mean that's kind of the
11 characteristic of MPEG or MPEG-4, as an example within
12 the family.

13 Q. So a dot MPG file that includes video content,
14 the video content would typically be encoded in
15 accordance with the MPEG standard, if the dot MPG file
16 complies with that standard, is that correct?

17 A. If my understanding of your question is
18 accurate, you've essentially made it circular. I'm not
19 sure what you're asking me other than to confirm that
20 the assumptions in your question are true.

21 Q. I guess I'm trying to figure out as of May
22 2012, given your experience, what was typical of dot MPG
23 files at the time? Certainly there must have been
24 exceptions, but what was typical of dot MPG files?

25 MR. McDOLLE: Objection. Form.

1 THE WITNESS: So the question of what is
2 typical sort of depends on what you mean by "typical."
3 I mean, is it common or required or necessary? I mean
4 there's a lot of variability in what an MPEG file could
5 be. There's even the misdirection of whether or not MPG
6 stands for an MPEG file or what it could represent. We
7 sort of went through that in the first hour of the
8 deposition.

9 If you're asking if you have an MPEG file
10 what's in that file, I mean ultimately it depends. In
11 some instances you can create files that can be used to
12 stream, you can move that file around as an object by
13 downloading it. I mean it's really the power of the
14 programming and the flexibility of programming what you
15 can do with this content.

16 It makes perfect sense to apply an MPEG
17 encoder to a source of consent. The source could come
18 from a file, it could come from a live stream, it could
19 come from an external source like a DVD. You can take
20 the result of that encoding, you can stream it, you can
21 download it, you can progressively download it, you can
22 stream it with buffering.

23 And at the receiver, you can take the result
24 of that, store it in its file, you can consume it and
25 display it, you can do both, you can transcode it, you

1 can encrypt it.

2 I mean it's pretty straightforward
3 functionality and capability and programming as to what
4 you do with content as it's encoded, decoded,
5 transformed, compressed, decompressed from origination
6 to consumption.

7 One last point. I know that was long, but
8 what's in an MPEG file depends on where it comes from,
9 how it gets there, what's done with it when it gets
10 there, and so when you try and boil it down to kind of
11 fundamentally what has to be there, then we start
12 talking about kind of very broad statements like, well,
13 if an MPEG file and it's got the right extension and it
14 has content, then it's something that can be decoded by
15 an MPEG player, something that was encoded by an MPEG
16 encoder and generally would meet the requirements of the
17 standard such that what was produced could be consumed.

18 BY MR. ROBINSON:

19 Q. In May of 2012, was there so much variability
20 in MPEG files that it's impossible to say that they had
21 any common components or characteristics?

22 A. There is certainly variability within the
23 standard. It creates a variety of options with respect
24 to the structure of the file, the quality at which the
25 encoding takes place, but regardless of the variability,

1 in order to adhere to the standard, what's produced must
2 be decodable by a decoder that meets the standard.

3 To try and identify common characteristics or
4 structure or components, whatever terms you want to use
5 for that and whatever criterion you want to use for
6 establishing the threshold for what's common versus
7 what's possible versus what's likely versus what a
8 sampling of encoded files in that timeframe would have
9 revealed, the best way to identify those, separating out
10 just doing a sampling of files from the 2011-2012
11 timeframe, would be to look at the standard. Certainly
12 there might be common structural components.

13 Most of my recollection is around the process
14 of sampling, how temporal compression and spatial
15 compression can take place, the creation of a discrete
16 cosign transform, the use of Huffman encoding,
17 run-length encoding, the use of I-, P- and B-frames to
18 achieve greater degrees of compression, the algorithmic
19 elements for how the encoding takes place. Those are
20 really kind of the important distinctive aspects of
21 MPEG.

22 How it's structured, how the bits are ordered
23 within a file or a stream isn't something that I have
24 memorized, and I think it's described in the standard.
25 It's easy enough to reference.

1 Q. What are the differences between I-, P- and
2 B-frames?

3 A. So an I-frame is an intra-encoded frame,
4 meaning it doesn't rely on other frames around it.

5 A P-frame is the progressive, the encoded
6 frame, which means it depends on I-frames. It achieves
7 better compression through temporal redundancy, meaning
8 if you're doing 30 frames a second, there are likely
9 aspects in the second frame one thirtieth of a second
10 later that's very similar, and by only encoding the
11 differences you can significantly reduce the size of the
12 video.

13 And then a B-frame is bidirectional, so it can
14 rely on both forward and backward similarities in
15 interpreting the differences between the frames is what
16 is called "error," and then encoding that error so that
17 a frame can be created or reconstructed by adding that
18 error back into the base frames.

19 Q. Are those unique to the MPEG standard?

20 A. No.

21 Q. Are they consistent with the MPEG standard?

22 A. I'm not sure what you mean, "consistent."

23 It's a concept that's used in the encoding
24 process within MPEG, in most versions of MPEG,
25 potentially all, but there's a number of different MPEG

1 standards so I just have to go back and double-check.

2 Q. But the MPEG standard, generally speaking,
3 encompasses or doesn't exclude the use of I-, P- and
4 B-frames as you've just described them?

5 A. MPEG, the encoding process generally uses I-,
6 P- and B-frames.

7 Q. A moment ago you mentioned that a -- I think
8 it was the P-frame, as an example could be one thirtieth
9 of a second after the I-frame. Does that correspond to
10 a frame rate of 30 frames per second?

11 A. If frames are separated by one thirtieth of a
12 second, that's 30 frames per second.

13 Q. And that was, in fact, what you were
14 referencing when you said one thirtieth of a second?

15 A. That was the example.

16 Q. Are there other frame rates at which digital
17 video can be encoded within the MPEG standard?

18 A. I'm almost certain that the answer is yes.

19 Q. Are there other ways in the MPEG standard of
20 varying file size in the encoding?

21 A. Yes.

22 Q. Can you give me other examples of those?

23 A. Resolution is an example. The quantization
24 levels is another example.

25 MPEG tends to be what's called an asymmetric

1 encode-decode, meaning you can put more effort into the
2 encode process. So, for example, you can look farther
3 afield of where an object in a video occurs to determine
4 if it's moved a significant difference so that you can
5 still achieve spatial redundancy.

6 So an example would be if you're looking at a
7 talking head newscaster, you don't have to look very far
8 for differences and to find the differences from one
9 frame to the next. If you're in a close-up shot of a
10 football moving through the air, if you allow the
11 encoder to look further afield for the object, then the
12 error that you can encode still saves you resulting size
13 of the stream.

14 So those are some of the considerations that
15 you can adjust to affect the size of either a stream or
16 the ultimate size of a file.

17 Q. So looking farther afield, is that
18 quantization?

19 A. No.

20 Q. What's quantization?

21 A. Quantization is you are converting a
22 fundamentally analog process into a digital process and
23 it requires sampling. So if you think about -- this
24 works for music as well. Music is a continuous
25 waveform, but you have to associate with it a set of

1 bits. If you're using 16 bits for sampling, then when
2 you take a sample it has to be associated with one of
3 the bit values.

4 The difference between the actual sample value
5 and the digital value is called "quantization noise."
6 The further the values are spaced apart, the more noise
7 that you have and the greater loss of accuracy in the
8 compressed signal, but if you can use eight bits for an
9 encoding instead of 16, then you can greatly increase
10 the compression, so by varying the quantization levels,
11 how many bits you do for each sample, you can adjust the
12 quality.

13 There's also hierarchical video encoding where
14 you have multiple layers of quality. It's become a
15 fairly robust field in terms of how you can dynamically
16 adjust the output rate of the encoder.

17 Q. And all of these variations are included in
18 the MPEG standard?

19 A. Many of them are. Many of them are included
20 as the MPEG standard has evolved. I think MPEG-1 was in
21 1992, MPEG-2 was shortly after that, MPEG-4, MPEG-7,
22 MPEG-21, it's continued to evolve at intervals over the
23 last almost 30 years.

24 Q. Were the variations that you just described
25 included in the MPEG-4 standard?

1 A. I would have to go back and check. I know at
2 least some of them were.

3 Q. Do you know which of them were?

4 A. Not off the top of my head.

5 Q. Paragraph 158 of your declaration, you explain
6 that "a POSITA would have recognized that it would be
7 beneficial to transmit a series video as a stream as it
8 is being recorded in accordance with Bradford's teaching
9 because it would obviate the need to save the video in
10 multiple files before transmitting, which again is
11 undesirable because it needlessly utilizes computer
12 resources and time."

13 How would it have worked to save the video in
14 multiple files before transmitting? Is that something
15 that was done at that time?

16 MR. McDOLE: Objection to form.

17 THE WITNESS: One of the ways of getting
18 around the delay of doing all of the encoding and
19 compression in creating a file and delivering a file is
20 to stream it.

21 There's another option which is essentially
22 streaming it, but what's called "chunking," just -- it's
23 not really called "chunking" as a term of art, it's the
24 term that I've used where you can record pieces of the
25 video, you can store it as files and then transfer the

1 files and then reconstruct the files at the receiver, or
2 you can watch them as files. So for example, HTTP
3 streaming today works similar to that, where you don't
4 request the entire file, you just request a segment of
5 the file.

6 So the point that's being made here is with
7 streaming you obviate the need to do this kind of create
8 a chunk, store it to a file and then transfer the file.
9 Even that is an implementation of streaming where you're
10 able to deliver and use the content before you've
11 finished the encoding process, either for a live or
12 pre-stored stream.

13 BY MR. ROBINSON:

14 Q. Meaning if you've got a chunk saved as a
15 smaller file, you can just send that chunk and the end
16 user can watch it without having to download the entire
17 video, is that correct?

18 A. That's a similar example of what you can do.

19 Q. I thought that was one of the examples that
20 you just mentioned.

21 A. See, again, how you do the encoding is really
22 independent of how you do the receiving or playing or
23 storing. I mean, really, the compressing side works to
24 generate the video. It can either do so as a stream or
25 into a single file or into subdivisions of files.

1 And then the next independent step is what do
2 you do with that content? You can encapsulate it in UDT
3 and stream it, you can encapsulate it in TCP and stream
4 it, you can download the smaller versions of the files,
5 which if you do that one after the other and then
6 consume the files at the other end looks a lot like
7 streaming. It would be characterized as streaming, I
8 think, in most instances, and that's independent of what
9 happens at the receiver.

10 The receiver can receive streamed packets,
11 streamed chunks, downloaded chunks, the entire
12 downloaded file, store it to a single file, store it to
13 chunks, play it out to a user. The flexibility of the
14 encoders, the transmission protocols are all such that
15 you can have any of that capability at basically the
16 generation, the transmission or the reception portions
17 of the process.

18 Q. And those options were available in May of
19 2012?

20 A. Yes. I mean we were experimenting with these
21 different techniques in the late '90s. I wrote papers
22 on how to do this stuff in 1997.

23 Q. Would you take a look at Nassiri, the pages
24 with Figures 3 and 4 on it, please.

25 A. Okay.

1 Q. Which of these interfaces is included in the
2 I-frame example, the I-frame discussed at page 2 at
3 paragraph 19?

4 A. So there's two places I can look to answer
5 that question. For the dependent claims that talk about
6 user controls, I believe these are cited to as examples,
7 and so I can look in the declaration. I think it's
8 addressed there.

9 The other thing that I can also do is find in
10 the specification where it's describing Figures 3 and 4,
11 and that looks to start in about paragraph 37.

12 In looking at those paragraphs, starting at
13 37 -- I'm sort of trying to read them quickly. Unless
14 you want to point me to something specific, I don't
15 recall where it says if there's a limitation with
16 respect to either Figure 3 or 4 as to what can be used
17 in the functionality associated with paragraph 19. I
18 mean, if anything, it's describing what a user interface
19 might look like and what kinds of buttons and features
20 that might be used within an interface, and then I
21 basically go through that analysis in the declaration.

22 Q. Does Nassiri say somewhere that the interface
23 of Figure 3 or Figure 4 could be included in the I-frame
24 that's described on page 2, paragraph 19?

25 A. I don't recall. I mean I don't have Nassiri

1 memorized. I could look through it and see.

2 Basically the other thing I would do is
3 just -- I mean I've set forth the opinions in the
4 declaration for why those figures and that functionality
5 would be disclosed or taught to a person of skill in the
6 art. I can find that section of the declaration and
7 walk you through the reasoning, if you want, but I think
8 it's in there.

9 Q. In paragraph 24 --

10 A. Nassiri?

11 Q. Sorry, paragraph 204 of your declaration, you
12 say that "A POSITA would have understood and it would
13 have been obvious that because a web page can only
14 display a finite number of videos, the video files with
15 greatest number of views will be selected for display on
16 the second web page."

17 Why is it that a web page can only display a
18 finite number of videos?

19 A. There's both practical limitations as well as
20 design considerations.

21 From a design consideration, it's pretty much
22 a well-understood concept, to order pages and to have
23 multiple pages based on content. You know, if you think
24 about Google, for example, it puts a finite number of
25 search results on a first page and then identifies

1 multiple pages. If you're looking through YouTube, if
2 you're looking through a catalog, it's pretty much a
3 design principle that you don't put every single video
4 file onto a single page.

5 From a practical consideration, let's say you
6 display for the user 10 videos. If you think about the
7 challenges and the overhead of displaying a web page
8 with 50 million videos and having links and tags and
9 thumbnails and information describing each of those
10 videos, the amount of time to download that page, to
11 create that page on the server side, there's no
12 expectation that a user would look at all 50 million of
13 those, so the idea that you have an ordering to the web
14 pages and then use web pages -- sorry, an ordering to
15 the videos and then have multiple web pages to divide up
16 those video files is exactly as this section talks
17 about, supported in the context of what's disclosed and
18 obvious for the reasons I've just described and included
19 in the declaration.

20 Q. So I think what you just described is a limit
21 to the number of videos that can be displayed
22 simultaneously on a single web page. If you have one
23 video player, you can play all of the videos through a
24 single video player, can't you, it would just be back to
25 back?

1 A. Is it possible? I mean I think you could
2 certainly program something that way. It wouldn't be
3 desirable for the reasons that are set forth in these
4 paragraphs.

5 Q. Is it your understanding that -- if you flip
6 back to page 92, in between paragraph 205 and 206 of
7 your declaration, is it your understanding that the
8 first web page is limited to a single instance of the
9 first web page, or could the first web page be displayed
10 to multiple users at once?

11 A. I didn't understand the question.

12 Q. Well, could the first web page be displayed in
13 multiple instances or is each time you display a web
14 page, is that the only web page?

15 A. Are you asking about what Nassiri discloses?

16 Q. I'm asking about what this claim requires.

17 A. Oh, okay.

18 MR. McDOLE: Objection to form.

19 BY MR. ROBINSON:

20 Q. What is your understanding of what this claim
21 requires?

22 MR. McDOLE: Same objection.

23 THE WITNESS: I don't see in the limitation
24 6.1 or 6.2 anything that talks about whether or not the
25 same web page can be provided to multiple users or not.

1 I don't really understand how your question would relate
2 to the claim. I mean, it's a dependent claim. I don't
3 know if you're referencing something from Claim 5 or
4 something later.

5 I mean ultimately the best that I can say is
6 I've looked at Nassiri and identified what I think
7 discloses the limitation. If there's other
8 characteristics or permutations about the claim, I mean
9 I haven't tried to address those here.

10 BY MR. ROBINSON:

11 Q. On page 86, Claim Element 3.3.

12 A. Okay.

13 Q. It follows from 3.2. 3.2 says "providing,
14 using media player software on the video management
15 server system, the stored video file for display."

16 And then 3.3 says "within a plurality of
17 displayed instances of one or more web pages hosted on
18 one or more web server systems."

19 Does that suggest that a single web page can
20 be displayed in multiple instances?

21 A. Again, I'm not sure with respect to the
22 requirements of the claim sort of what the claim scope
23 is, what could be within the scope of the claim versus
24 not, whether if some hypothetical system where there's
25 different web pages with different video instances would

1 meet the limitation or whether or not it has to be the
2 same.

3 What I pointed to again is what I think
4 Nassiri discloses and why Nassiri would disclose the
5 limitation. I don't see Nassiri describing its system
6 in a way that requires me to analyze the claim to
7 determine its scope with any more specificity than
8 what's described here.

9 Q. If you have a web page that embeds a media
10 player and that web page is displayed to 50 people in 50
11 instances, or even more people in more instances,
12 there's no natural limit to the number of videos that
13 can be displayed through that first web page, is there?

14 A. I don't understand from your question if
15 you're asking about within that single embedded video
16 just playing one video after another after another after
17 another. If that's what you're asking about, then
18 certainly you could create a web page where, assuming
19 the network is working, the server is operating, the
20 client device is operating correctly that you couldn't
21 program a web page with the right instructions so that
22 after one video was done being played, the next one
23 would be queued up and then you just repeat that process
24 until something happens.

25 Q. And in fact --

1 A. Sorry, let me finish.

2 Q. Sorry.

3 A. You could certainly create a program that
4 would do that.

5 Q. And in fact, with an embedded media player
6 there's no requirement that the media player play the
7 same video in each instance of the web page, is there?

8 MR. McDOLE: Objection to form.

9 THE WITNESS: Your question asked about a
10 requirement. I'm not sure I understand how that word is
11 used in this context.

12 Similar to banner ads, the HTML that executes
13 on my computer is identical to the HTML that would
14 execute on somebody else's computer, and yet I would see
15 a different ad because of the interplay in what gets
16 executed. I don't know that anything about that
17 description ties into a requirement, but again it sort
18 of boils down to how you do the programming, how the
19 server operates on the back end, how the system is
20 configured, et cetera.

21 BY MR. ROBINSON:

22 Q. So let me ask this a slightly different way
23 based I think on what I think you just said.

24 If you've got a media player embedded in a web
25 page, you can have two different instances of that web

1 page being displayed in which the media player is
2 playing different videos in each instance of the web
3 page?

4 A. I don't hear anything in your question that
5 describes a scenario that couldn't be accomplished by
6 some programming.

7 Q. Okay.

8 A. It sort of is a testament to the capability
9 and diversity of programming languages.

10 Q. And that was true as of May of 2012, correct?

11 A. That you could create a system that plays a
12 different video in different embedded players? Sure.

13 MR. ROBINSON: It's about 12:10. Why don't we
14 take a quick lunch break.

15 (Recess: 12:11 p.m. - 1:01 p.m.)

16 BY MR. ROBINSON:

17 Q. What's the difference between a browser
18 plug-in and a browser extension?

19 A. I'm trying to think of where any differences
20 would be relevant in the context of the declaration and
21 why I would think about that question. They are similar
22 except for the way that they are implemented and the
23 capabilities that are offered through the browser.
24 Beyond that is a difference -- there isn't anything
25 really relevant to the IPR, so --

1 Q. What are the differences in how they're
2 implemented?

3 A. They have different security access for what
4 they can do within the browser context. I think if you
5 want to get into any sort of specifics, I'd have to go
6 look and compare them. Like I said, it's not really an
7 issue that came up in the context of the declaration, so
8 it wasn't really something I focused on trying to
9 address.

10 Q. You mentioned differences in functionality.
11 What are those differences?

12 A. It depends. It completely depends. It
13 depends on the browser environment, the capabilities of
14 the extensions. I don't think there's really a
15 definitive list on what their different capabilities
16 would be.

17 Q. Is it fair to say that either would be a
18 software package that is downloaded and operated within
19 the browser environment locally?

20 A. I don't know that that's accurate for both.
21 I'd have to double-check. I think, as I testified to,
22 the permissions of what you can do within the context of
23 a browser are different, but again I'd have to go look
24 it up to see. It's just not something I investigated in
25 the context of this declaration.

1 Q. So you said you don't know that it's accurate
2 for both. Do you know that it's accurate for one or the
3 other?

4 A. No. I think you're describing them in a way
5 that I believe there are differences. I'd have to go
6 look. Again, it's not something that came up in the
7 context of this declaration, so I'd have to give it some
8 thought and do some additional research to see.

9 Q. I'm going to hand you a copy of Twitter's
10 Exhibit 1012. Is that the Lerman reference that's
11 addressed in your declarations?

12 A. It is.

13 Q. This Lerman reference describes both browser
14 plug-ins and browser extensions and is relied on in your
15 declaration as suggesting video editing functions.

16 Is there any difference between the browser
17 extension and browser plug-ins that Lerman describes?

18 A. First of all, there was a preamble to that
19 question. I'm not sure that that's accurate. I
20 primarily relied on the references as described in the
21 declaration for video editing functions. I don't recall
22 the claims identifying one implementation versus
23 another. Certainly we can look at Lerman and see what
24 it says about plug-ins versus extensions. I don't
25 recall anything being relevant as a distinction, but I

1 would defer to what's described in the declaration.

2 Q. Your declaration actually references both
3 browser extensions and browser plug-ins. Is there a
4 difference between those two things, as described in
5 Lerman?

6 A. You'd have to point me to where in the
7 declaration it's referenced and where in Lerman it's
8 described that would raise whether or not there's a
9 distinction.

10 Q. Well, Lerman is addressed in your declaration
11 starting at paragraph 266, at least in the declaration
12 for Claims 1 through 19 of the '997 patent.

13 In paragraph 267 it quotes some language about
14 a browser extension, and in paragraph 269 it references
15 a browser plug-in. Is there any difference between
16 those two things that you considered for purposes of
17 your analysis?

18 A. What I can say is I considered the reference.
19 I didn't recall there being any distinction in the
20 claims for which Lerman was used as a reference where it
21 mattered whether or not the video editing functions were
22 provided in some specifically implemented way.

23 Q. You repeatedly in these paragraphs quote the
24 language from Lerman that says "self-contained
25 embeddable software component." Lerman describes that

1 being "a self-contained embeddable software component
2 that, whether in the form of a plug-in or an extension,
3 is downloaded and operates locally in the browser
4 environment."

5 Is that accurate?

6 A. If you're asking about what's described in --
7 or quoting from Lerman, you'd have to point me to where
8 it's saying that in Lerman. I see in paragraph 269 it
9 talks about the self-contained embedded software
10 component. I agree that that's cited there, and in 268
11 as well.

12 Q. So 268, it says: "Specifically, Lerman
13 discloses 'plug-in software' installed to a user's
14 browser enabling users to drag and drop video files for
15 immediate extraction, or edit and post a video file to a
16 website 122 or other location accessible through the
17 network user interface."

18 That seems to state that Lerman's software is
19 installed to the user's browser.

20 A. Yeah. I think what you're -- I'm not sure if
21 you're misunderstanding about what I'm relying on Lerman
22 for or reading more into the combination than I was
23 describing.

24 Lerman describes video editing functionality
25 in a variety of ways and used in a variety of different

1 instances. What I described in the declaration is that
2 this kind of video editing functionality is something
3 that would have been known to a person of skill in the
4 art, was used in these kinds of applications, and so
5 used specifically in editing videos that had been
6 received.

7 It doesn't have to rise to the level of
8 whether or not those video editing functions were as an
9 extension or as a plug-in or wasn't something that had
10 to specifically be combined into the system, it was the
11 functionality and the capability for that specific type
12 of system.

13 The reality is that a person of skill in the
14 art would have understood that you could implement it in
15 a variety of different ways, and by 2012 video editing
16 capability existed in a wide array of tools.

17 MR. ROBINSON: I'm going to object to that
18 entire answer as non-responsive.

19 MR. McDOLE: I disagree.

20 MR. ROBINSON: I don't know how I could have
21 misread or misunderstood anything. I literally just
22 read your words back to you from this sentence in 268.

23 Q. Does it say that the plug-in software is
24 installed in a user's browser?

25 MR. McDOLE: Objection. Asked and answered.

1 THE WITNESS: That's part of what it says in
2 paragraph 68. It's not the extent of what that sentence
3 that you have partially read from says.

4 BY MR. ROBINSON:

5 Q. Just to be clear, that's paragraph 268,
6 correct?

7 A. It is.

8 Q. Okay. So if that plug-in software is
9 installed to a user's browser, any editing that that
10 software would provide is locally, correct?

11 A. In the instance or the place and where that
12 functionality was installed, that's where that
13 capability would be provided.

14 Q. I'm going to hand you what's been marked as
15 Twitter's Exhibit 1017.

16 Is that the document that's referred to in
17 your declarations as Tosh.0?

18 A. I believe it is.

19 Q. Does Tosh.0 describe the automated selection
20 of videos for inclusion in a television program?

21 A. Would you repeat the question.

22 Q. Does Tosh.0 describe the automated selection
23 of videos for inclusion in a television program?

24 A. I don't recall that it specifically describes
25 that concept. That's not really why I'm relying on it.

1 Q. Did you just review Tosh.0?

2 A. I did.

3 Q. Does it describe the automated selection of
4 videos for inclusion in a television program?

5 MR. McDOLLE: Objection. Asked and answered.

6 THE WITNESS: It's hard to say. I'd have to
7 go through and look at it again.

8 BY MR. ROBINSON:

9 Q. Take your time.

10 A. It's not really why I relied on the reference.
11 Whether it would support such a concept -- I mean I can
12 certainly try and reread it and do the analysis on the
13 fly for you. Do you want me to do that?

14 Q. Yes, please.

15 A. I see where it describes what the process is,
16 it describes what some of the criterion are that are
17 used for what videos are selected, but it doesn't go
18 into the details as to what the process is exactly.

19 Q. Do you see on page 3, the third full paragraph
20 in the left column where it says "The scouring of
21 YouTube takes two full-time researchers who spend most
22 of their time on-line searching for the worst and the
23 weirdest and the funniest clips"?

24 A. I do see that.

25 Q. Doesn't that suggest that two full-time

1 researchers manually review videos on YouTube?

2 A. That's part of it. But I mean there are lots
3 of different videos on-line. Whether or not they use an
4 automated process to capture videos -- I mean, there's a
5 set of criteria on page 2 -- short, good quality, legal
6 to put on TV. It just doesn't go into the details about
7 what the process exactly is, whether there's an
8 automated portion of it. I mean ultimately it says what
9 it says about what the process is.

10 Q. The paragraph on page 3, though, I mean,
11 suggests at the very least that two full-time
12 researchers manually review these videos to find the
13 worst and the weirdest and the funniest.

14 MR. McDOLLE: Objection. Form.

15 BY MR. ROBINSON:

16 Q. That part is manual, isn't it?

17 A. Well, it doesn't say, does it? I mean it says
18 that you have two full-time researchers who scour the
19 internet. They can use automated tools to help
20 determine popular videos and then pull those in and then
21 watch them and add them to a database, as described in
22 the next paragraph.

23 It just doesn't get into the details about how
24 they do the scouring. It doesn't say you have two
25 researchers who go to YouTube and just click randomly

1 through videos and determine whether or not they're
2 appropriate, whether they have automated tools to help
3 them or look for keywords or tags or quality checks
4 before they even review them. You haven't really
5 defined whether in order to be automated or automatic
6 every single part of the process has to be automated or
7 not. The best I can say is it says what it says.

8 Q. Are you aware of any software that was
9 available in May of 2012 that would have identified the
10 worst or the weirdest or the funniest clips, both
11 intentionally and unintentionally funny?

12 A. Yeah, that's -- I don't have an encyclopedic
13 knowledge of all software that existed, and as I
14 testified to earlier, those aren't the only criterion
15 that are used. Focusing even there, that's not to
16 suggest that some part of the process might not be
17 automated. Again, it doesn't say what the details of
18 the process are. It's providing a context, and I mean
19 as to what's required by the claim, I think it's a
20 sufficient disclosure.

21 Q. In fact, it doesn't even say that users submit
22 their videos to Tosh.0, does it?

23 A. Again, I think the reference says what it
24 says. It doesn't say that they don't. If you're
25 looking at YouTube, the videos could be submitted by

1 users. If you have automated tools that then look
2 through those videos, there's a variety of techniques
3 that can be brought to bear, and even the disclosure
4 that's here is sufficient to tie it into the claims and
5 the limitations for which I've relied on it.

6 Q. Have you ever watched Tosh.0?

7 A. I might have at some point.

8 Q. As you sit here today, do you have any
9 specific recollection of having ever watched Tosh.0?

10 A. Not something specific. I'm sure I've watched
11 it at some point. Again, I couldn't give you a catalog
12 of every show that I have watched or video clip,
13 especially from five or six years ago.

14 Q. Can you tell me what network Tosh.0 was on?

15 A. Comedy Central.

16 Q. Did you have to read the article to answer
17 that question?

18 A. I certainly looked at the article to confirm
19 it. I'm not sure that it really matters whether I
20 recall it or not, but that's fine.

21 Q. You mentioned earlier that varying the
22 resolution is one way to affect the file size of a
23 digital video file. Is there a minimum resolution
24 that's required for traditional television programming?

25 A. First of all, I don't think I characterized

1 resolution as being specifically for files. I was
2 careful to talk about it being something you would apply
3 to streamed video as well.

4 As for a minimum resolution size, it depends
5 again on what the test is, right? There's an
6 understanding that TV in the U.S. is 525 scanned lines
7 at almost 30 frames a second, and you can encode that
8 with MPEG-1. That was often cited as kind of the one of
9 the goals for MPEG-1, to be able to encode NTSC video.
10 I think there's a corresponding resolution for it.

11 I wouldn't interpret or identify that
12 resolution as being the minimum resolution. It mean,
13 you can down sample, downsize, have thumbnail videos. I
14 mean, it depends. I don't know that there's an
15 authority on what it would have to be.

16 Q. Do you know what the resolution is that you
17 just mentioned in the NTSC?

18 A. For NTSC video, I don't remember what it is.
19 I don't remember.

20 Q. Have you ever worked at a television network?

21 A. Not as an employee. I have collaborated with
22 television networks.

23 Q. Do you know whether persons of ordinary skill
24 in the television arts would understand there to be a
25 minimum resolution for traditional television

1 broadcasting?

2 A. I'm not sure what level of skill you're
3 attributing to that person.

4 Independent of that, you talk about a -- I'm
5 not sure exactly how you phrased it, some sort of
6 minimum quality level. For what objective? I'm just
7 not sure what you're asking.

8 Q. Tosh.0 explains that they will only consider
9 high-definition videos for inclusion in the Tosh.0
10 television program. Do you know if that's consistent
11 across traditional television programming in general?

12 A. Sorry, where does it say that? I see on the
13 second page the discussion of good quality in that last
14 column.

15 Q. Just after that, "repeating his preference for
16 high-definition video."

17 A. Okay, so that's a preference for
18 high-definition video from Mr. Tosh.

19 Q. It's his show, isn't it?

20 A. Look, I'm just saying it says it's his
21 preference, and so I'm not sure how you get from that to
22 anything else but a description of what his preference
23 is.

24 Q. Is there a resolution below which you would
25 expect television networks to reject videos?

1 A. I don't have --

2 MR. McDOLE: Objection. Form.

3 THE WITNESS: -- really an understanding of
4 what that question is asking. What show, who is making
5 the decisions?

6 BY MR. ROBINSON:

7 Q. You have experience in multicasting television
8 programming, correct?

9 A. I do.

10 Q. Do you recall the resolution of
11 standard-definition video that was broadcast through the
12 multicast system?

13 A. When you say "standard definition," I'm not
14 sure what you're referring to. I mean these standards
15 allow a variety of resolutions. We used one in
16 particular when we did the encoding. I don't remember
17 what that resolution was. It might be in one of the
18 papers that I wrote.

19 Q. Is that the only resolution that you used when
20 encoding television programming?

21 A. Likely not.

22 Q. If Nassiri's videos were, say,
23 600-pixel-by-800-pixel resolution, do you think that
24 would be sufficient for inclusion in Tosh.0?

25 A. It's hard to say. I don't think you can

1 definitively say that it wouldn't, but as a
2 hypothetical, it doesn't really provide guidance on
3 whether or not there would have been a motivation to
4 combine those references.

5 Maybe this goes to your question earlier. It
6 isn't that Nassiri is limited in one way and Tosh.0 is
7 limited in another way such that those don't overlap
8 such that that would lead a person skilled in the art
9 not to consider those references as being related to
10 each other or combinable.

11 Q. If Nassiri's video were 200 pixels by 250
12 pixels, would that be too small for inclusion in Tosh.0?

13 A. I think you'd have to ask Mr. Tosh. I suspect
14 it would probably depend on other factors. Again, it
15 doesn't say -- you're asking about a hypothetical
16 system. I don't see in Nassiri where it's limiting it
17 one way or another.

18 Q. Is there no lower limit to the resolution at
19 which a video would become so pixelated or unclear that
20 you wouldn't put it on TV?

21 MR. McDOLLE: Objection to form.

22 THE WITNESS: I suppose that would be up to
23 the producers or developers of the TV show. Again,
24 where you draw that threshold isn't relevant to the
25 motivation to combine these references in the context of

1 what they are actually teaching.

2 BY MR. ROBINSON:

3 Q. Doesn't Mr. Tosh's preference for
4 high-definition video suggest that at some point the
5 resolution gets low enough that you wouldn't put it on
6 TV?

7 MR. McDOLE: Objection to form.

8 THE WITNESS: Look, I think to a person of
9 skill in the art looking at these references, such a
10 person would see the preferences described in the
11 article and would understand the context of these
12 references for what they actually teach.

13 In 2012, there's a lot of different variations
14 in quality. There's nothing specific in these
15 references that create a barrier to combining them based
16 on what resolution or quality levels might be. The
17 fundamental ideas of what they offer and what the
18 resulting combination would be is fully consistent with
19 the variations and quality levels that people of skill
20 in the art knew about at the time.

21 BY MR. ROBINSON:

22 Q. I'd like you to refer back to your
23 declaration, paragraph 51, specifically.

24 A. Okay.

25 Q. A person of ordinary skill in the art, network

1 architecture, website design and internet application
2 design. What did that person know about producing
3 traditional television programming?

4 A. So, for example, if you're looking at internet
5 application design and you're looking at websites that
6 are able to provide video, I was a good example of what
7 that person would have understood, and this goes back
8 even into the mid-'90s. We understood what NTSC was,
9 what PAL was, the different display formats for
10 videoconferencing, the challenges of doing TV kinds of
11 services over the internet.

12 From a user perspective, it's fairly
13 straightforward to watch the TV and see what you're able
14 to see. It's a fairly passive experience. So
15 understanding what you could do and what the challenges
16 were in the mid-'90s to be able to put that kind of
17 video onto the internet was the challenges that needed
18 to be overcome.

19 In the intervening years I think people of
20 skill in the art really only gained expertise in the
21 different formats that would need to be encoded. The
22 fact that the MPEG-1 standard mentions NTSC, that the
23 MPEG-2 standard mentions HDTV, that there were attempts
24 to draw parallels between the quality that was on TV and
25 what could be provided over a network and displayed to a

1 user, and then extended through the particular two-way
2 capabilities of the internet.

3 Q. You referenced the NTSC standard again. Would
4 resolution in that be the resolution -- I mean, if that
5 was the standard, would that be the resolution needed
6 for inclusion in traditional television programming?

7 A. So NTSC is an analog format, so it talks about
8 scan lines and frequency, and part of what you need to
9 be able to do to convert that into an MPEG-1 video
10 stream, you have to deal with the fact that TV is 60
11 hertz, interlaced, so it will come up with 30 frames per
12 second, or 29.97, considering the vertical blanking
13 interval. I mean those all were considerations for how
14 you could encode NTSC video in a format like MPEG.

15 Whether or not you down-sampled it, whether
16 you had a smaller resolution, the fact that you were
17 going from analog to digital, you were still introducing
18 noise. It's the same kind of consideration people who
19 listen to records versus CDs like to claim sometimes
20 that there's a difference in quality or fidelity, and so
21 these concepts and what you could do with NTSC video and
22 how you could use it in applications were all things
23 that people were experimenting with in the mid-'90s and
24 continued to build services on up through and including
25 today, even.

1 Q. Does the NTSC standard include a resolution
2 for the digital video that you just mentioned?

3 A. It's my recollection that it doesn't. NTSC is
4 not -- or does not contemplate eventually converting
5 that signal into MPEG. I don't know if there was an
6 addendum or something that mentions MPEG, but MPEG came
7 later and was an attempt to build a standard that could
8 support that level of quality.

9 Q. Are you familiar with the resolution of
10 standard-definition television?

11 A. What standard are you talking about?

12 Q. 480p, for example.

13 A. Generally, I am.

14 Q. What is that resolution?

15 A. I don't remember exactly what the numbers are.

16 Q. Does 640-by-480 sound right?

17 A. It could be, yeah.

18 Q. Any television formats you're aware of that
19 have a lower resolution than that?

20 MR. McDOLE: Objection to form.

21 THE WITNESS: It's kind of apples and oranges
22 since that's more of a digital resolution as opposed
23 to -- I'm not sure how you would translate that into a
24 number of scan lines for an analog format, so --

25 BY MR. ROBINSON:

1 Q. Was digital TV not available in 2012?

2 A. I'm trying to get the negative correct in your
3 question. It was available.

4 Q. It was available?

5 A. Yeah.

6 Sorry, but I believe there were standards for
7 it. I'm not sure if available means you could buy a TV
8 and tune in for that particular date. I'd have to
9 check.

10 Q. Do you know whether digital video was ever
11 encoded for broadcast on traditional television
12 networks?

13 A. I'm not sure what you're asking, what you mean
14 by traditional video or traditional broadcast.

15 Certainly the NST or the TV broadcast networks
16 that used NTSC, you could use a different encoding. You
17 could do a digital encoding and still send over the same
18 airwaves.

19 Whether you consider that traditional
20 television, because you then need a decoder for that
21 particular encoded video, I'm not sure if that then
22 takes it out of the realm of traditional broadcast
23 television or not, according to your definition.

24 Q. So you referenced analog television broadcasts
25 with a certain number of lines?

1 A. Right.

2 Q. Do you know whether digital files were ever
3 converted into analog format and broadcast by television
4 networks?

5 A. I'm not sure I understand the question. I
6 think you're asking if you had a digital file, like an
7 MPEG file, that that was ever converted back into an
8 analog signal and then sent over a TV network.

9 If that's the question you're asking, then I
10 did that. Part of this interactive multimedia jukebox
11 project in 1997, we used multicast to distribute Bugs
12 Bunny cartoons from TBS. They were encoded, I think it
13 was H.261 for the video, sent over the internet and then
14 decoded and injected on the public access channel at
15 Georgia Tech.

16 Q. What was the resolution of those digital
17 videos that were sent?

18 A. I don't remember.

19 Q. When they were broadcast over the public
20 access network at Georgia Tech, how many lines of
21 resolution did the analog signal include?

22 MR. McDOLLE: Objection to form.

23 THE WITNESS: What was sent over the Georgia
24 Tech network was NTSC video, to my recollection.

25 BY MR. ROBINSON:

1 Q. Earlier you mentioned something called
2 progressive download.

3 A. Yes.

4 Q. Is that the same as the chunking that you
5 described?

6 A. It has similarities, but I don't think it's
7 the same. Progressive downloading can use chunks of
8 data. In some cases they are increasingly larger in
9 size, sometimes called pyramid broadcasting, so
10 sometimes it's referred to in different ways.

11 Q. How does progressive downloading work?

12 A. Essentially, you can divide up a file into
13 chunks, but under the assumption that the bandwidth
14 available for transmission is greater than the bandwidth
15 of the consumed video, then you can start off with a
16 small file of data and then increase the size of the
17 files over time so that the user builds up a greater
18 buffer of data.

19 Q. So the size of the files that an overall file
20 might be divided into for download might depend on the
21 bandwidth available for download?

22 A. Or it may be statically configured ahead of
23 time so not dependent on -- the assumption for that kind
24 of system to work is that the bandwidth available for
25 transmission is greater than the consumption rate of the

1 video so you have the ability to get ahead.

2 Q. Okay. But chunking is, maybe, a little more
3 primitive in that it doesn't require that assumption?

4 A. It's hard to say. They can overlap in
5 different ways. The way that we use chunking was, from
6 my recollection, they were static-sized units and we
7 just delivered those on an as-needed basis, one after
8 the other.

9 Q. When streaming a video, can the receiving
10 system determine whether there are errors or corrupted
11 data in the streamed video stream?

12 A. Absolutely.

13 Q. How?

14 A. A couple of different ways. There are
15 protocols like RTP, the real-time transport protocol,
16 that includes sequence numbers, so even if you're
17 streaming the video on UDP, the use of RTP gives you
18 sequence numbers so you can determine missed packets.

19 In some cases, for example, like with Youtoo,
20 it uses TCP and so it already has a built-in sequence
21 number mechanism.

22 And let me sort of back up. When this work
23 first started -- and by "this work" I mean generally the
24 idea of streaming video in the '90s -- it was all based
25 on UDP and so you would use a protocol like RTP to

1 provide sequence numbers, audio-video synchronization,
2 that kind of thing. That started in about 1997.

3 As the internet evolved, at some point,
4 certainly by 2010, if not earlier, companies like
5 YouTube and even Realnetworks -- that was t-u-b-e --
6 were using TCP, because even though TCP didn't deliver
7 data to the application unless it was delivered in
8 order, so if a packet was lost it would stop and wait
9 for a retransmission, the speed of the internet was such
10 that you could deliver enough content, start the
11 play-out without much delay and build up enough buffer
12 that that kind of behavior in TCP didn't cause an
13 interruption in play-out.

14 In addition to TCP, RTP, things like errors
15 are detected by protocol checks on UDP, TCP, IP, and
16 most data link layer protocols.

17 Q. Is there ever an instance where you're
18 streaming a video and some packets get lost and the
19 video just keeps on playing?

20 A. Absolutely.

21 Q. So in those instances, are those
22 error-prevention aspects not present or are they just
23 waived in certain instances?

24 A. Well, if you're using a system that's RTP on
25 top of UDP, generally the encoders and decoders are

1 designed to be robust to those kind of errors and so
2 we'll get what is called a screen artifact or in the
3 audio you might hear the audio cut out briefly. In some
4 cases it might cause pixilation or blockiness. It
5 happens.

6 If it's based on top of TCP, then TCP will
7 re-request the delivery of that data and won't deliver
8 data to the application layer unless it's in order and
9 the next data that's expected so you don't see those
10 kinds of problems in systems -- in streaming systems
11 that use TCP.

12 So for example if you watch YouTube, if you
13 have errors in the network or low bandwidth availability
14 the stream will be interrupted, it won't continue and it
15 won't have artifacts. If you're doing a UDP-based
16 streaming system, then the video might cut out or
17 something like that.

18 So it depends on the application from
19 streaming TV kinds of programs versus videoconferencing,
20 for example. You'll use different protocols, different
21 support protocols like RTP or RTSP. I mean, those kind
22 of techniques are pretty well understood or well
23 understood in 2012.

24 Q. I think you mentioned a moment ago that Youtoo
25 now uses TCP. When did that start?

1 A. I think it was very soon after Youtoo grew
2 into a sizable platform. I'd have to go back and check
3 whether -- how much of the commercial service ever used
4 UDP. I think pretty early on they switched to TCP. I'd
5 have to check dates to be sure.

6 Q. Are there other services of which you're aware
7 streaming videos to users that don't use TCP?

8 A. Sorry, what timeframe?

9 Q. 2012 timeframe.

10 A. So over time I think that the internet has
11 involved to principally using TCP.

12 There's also the problem that UDP is sometimes
13 associated with denial-of-service attacks and blocked by
14 firewalls. I know that tools like RealAudio and
15 RealVideo, which became services like Rhapsody,
16 originally were UDP based. They made the switch to TCP
17 at some point.

18 There's really just dozens and dozens of
19 services and I don't have them all memorized, if they
20 used UDP, when they switched to TCP.

21 Now, even on top of TCP there's HTTP
22 streaming. So generally from the time I started working
23 on streaming video in 1995 until now and even sort of
24 stopping in 2011 and 2012, there's just a huge amount of
25 streaming being done on the internet.

1 Q. Using UDP and TCP?

2 A. Yes. So, for example, there are some cable
3 companies today that offer services that are multicast
4 based. Multicast is exclusively on top of UDP, so you
5 have digital video systems in cable companies.

6 In some cases you also have universities that
7 deploy IPTV-based video distribution where multicast is
8 used. It's almost exclusively on top of UDP. It was
9 never designed to work on top of TCP.

10 Q. Part of that sounded like you may have been
11 talking about present-day systems still run on UDP. Did
12 I hear that correctly?

13 A. They are present-day systems. So for example
14 AT&T U-verse runs on top of IP multicast.

15 When the 2012 -- I'd have to go back and check
16 the dates but it's very possible U-verse was an IP
17 multicast-based system.

18 The other example that I have is we were
19 looking at doing IPTV-based services using multicast in
20 campuses as part of when I worked in the Internet2
21 multicast working group, and I know -- I want to say
22 that the University of Chicago or Northwestern -- maybe
23 it was Northwestern that was deploying an IPTV-based
24 video distribution network for their campus.

25 Q. And what is IPTV?

1 A. IPTV is TV over IP.

2 Q. Does that imply UDP or is that just a generic?

3 A. It can be either. So for particular services
4 like U-verse or what Northwestern was doing, it was
5 based off of multicast. In some cases you can do video
6 on demand, so one-to-one video distribution that's
7 called IPTV. That's what is called unicast, so point to
8 point, and in most situations -- many situations -- at
9 least some situations -- it's TCP based.

10 But if you're doing one-to-many distribution
11 over a cable infrastructure or something like that, it
12 would mostly be UDP based.

13 Q. You're not backing up and asking for missed
14 packets if you're sending it out to everybody at the
15 same time?

16 MR. McDOLE: Objection. Objection to form.

17 THE WITNESS: Those systems are a little bit
18 more complicated. There was a product by Microsoft.
19 Maybe it was Media Center. I don't remember what it
20 was. But the issue in using IP multicast in those kind
21 of environments are responsiveness during channel change
22 and so what they use is they use a kind of pre-fetch
23 buffer. So when you switch to a channel, it very
24 quickly sends you a burst of data that allows you to
25 start watching the channel quickly and then you merge

1 into the multicast channel. That initial channel is
2 sent using TCP, so it's kind of a complex system using a
3 combination of techniques, including some stream repair
4 aspects.

5 BY MR. ROBINSON:

6 Q. So the initial burst is TCP and then after
7 that it switches to UDP?

8 A. I think that's right.

9 Q. Where does the stream repair come into that?
10 Is that the TCP piece or the UDP piece?

11 A. I don't remember for that system. The use of
12 repair packets for multicast streams was -- that's
13 pretty widely known as well as a technique for either
14 reliable delivery of data or specifically in instances
15 where you want to create files from streamed media.

16 Q. How do repair packets work in streaming TV
17 multicasts like that?

18 A. A couple of different ways. So for example
19 you can do satellite-based distribution where you make
20 requests for missed data via a terrestrial channel.
21 Those are aggregated into each other or aggregated
22 together and a schedule of missed packets is
23 rebroadcast.

24 In some cases, if the system is not that
25 large, you can create a separate feedback channel to

1 request on an individual basis specific missed packets.

2 Those kinds of concepts were developed in,
3 probably, the early 2000s.

4 Q. And those are used in live TV?

5 A. It depends. It depends on how much of a delay
6 is used. So if there's enough time to request -- to
7 identify data as missed, request retransmission and
8 receive and use that retransmitted data, then they can
9 be used in live TV. In some cases you have the ability
10 to take advantage of the seven-second delay in the
11 distribution of audio and video from broadcast TV.

12 Q. So you need a delay to be able to take
13 advantage of that in live TV?

14 A. Logically it follows that if you're trying to
15 do live TV with minimal delay and you don't have the
16 time to receive missed data, or packets, then the only
17 benefit of a repair stream would be if you are
18 attempting to record the stream. So therefore, for
19 example, that is an application that was contemplated in
20 the context of things like TiVo where you want to store
21 streamed data. You can do something similar.

22 Q. In a TV multicast system, what file format is
23 being streamed?

24 A. It's a little bit of a non sequitur. In some
25 instances, the encoding is done in realtime, meaning

1 there isn't really a separate stored file, so like if
2 you have a football game, you generally use MPEG-2 for
3 just about most video distribution these days. This
4 goes back to the point I made earlier. You have the
5 kind of stream generation, transmission and then
6 reception.

7 On the creation side, it can come from a file,
8 it can come from a live feed, you can do real-time video
9 encoding.

10 And then there's the transmission aspect which
11 streamed, download, buffered, progressive, chunked. I
12 mean, there's a handful of techniques you can use.

13 And then the reception can be written to a
14 file, displayed in realtime, displayed with a delay, one
15 or more of those options.

16 Q. So MPEG-2 is used even today with streaming
17 live TV, did I get that right?

18 A. You can, yes.

19 Q. And it actually is used, usually, for
20 streaming live TV, is that what you said?

21 A. There you asked about usually. Anecdotally,
22 it has been used. Whether they have transitioned to
23 other encoders, it would depend on the system. There's
24 lots of use of streaming video today. Other encoding
25 formats can certainly be used.

1 Q. I thought you said usually. When was the last
2 time that you knew MPEG-2 was being used to stream live
3 TV?

4 A. I don't know I could put a specific date on it
5 or a timeframe.

6 Q. After 2012?

7 A. Certainly possible.

8 Q. Is there a reason to use MPEG-2 instead of
9 MPEG-4?

10 A. MPEG-2 was developed earlier; MPEG-4 has
11 different capabilities. In some cases, it's just the
12 legacy hardware, whoever is doing the distribution
13 hasn't upgraded or changed or switched for whatever
14 reason.

15 Q. Are there other names for streaming?

16 A. Maybe. You can call it whatever name you
17 want. You can call it "foo," but you'd need some
18 context to say that "foo" is essentially what streaming
19 is or to call it streaming.

20 Q. Have you ever called it "foo" before just now?

21 A. I don't know. Probably not.

22 Q. In 2012 were there other names that POSITAS
23 used for streaming?

24 A. I haven't thought to try to answer that
25 question. Maybe there were. I'd have to jar my

1 recollection with some reference or see some mention of
2 it.

3 Q. But none that you can recall as you sit here
4 today?

5 A. Just off the top of my head, no. It's not a
6 fair characterization of my opinion because I'd have to
7 give it some thought before I could say one way or
8 another.

9 Q. I don't think I characterized your opinion. I
10 think I just asked your opinion as we were sitting here.

11 A. Yeah.

12 MR. ROBINSON: We have been going a little
13 over an hour. Let's take a quick bathroom break and
14 then I think I'm fairly close to wrapping up.

15 (Recess: 2:07 p.m. - 2:15 p.m.)

16 BY MR. ROBINSON:

17 Q. Turn to page 28 of your declaration, please.
18 I'm sorry, 128 of your declaration.

19 A. Okay.

20 Q. So claim element 13.5, where it says
21 "generating a user submission content file using the
22 received user submission."

23 A. Yes.

24 Q. What does that mean to you in the context of
25 this patent?

1 A. I'm not sure what you're asking. I mean, it
2 says you are generating a user-submission content file
3 using the received submission, so generating that file
4 from what's received, from the received user submission.

5 Q. That's consistent with the user submission not
6 yet being a file, isn't it?

7 A. No, not necessarily. I don't think that the
8 way that that limitation is worded implies that what has
9 to have been received was not a file.

10 Q. Well, if it was a file wouldn't it just say
11 saving the user-submitted content file?

12 A. There might be other things that could be
13 included in what is created and what's generated. You
14 could put metadata in there, time stamps and so you can
15 generate a user-submission content file from what's
16 received.

17 Whether that includes or has the possibility
18 of adding information or translating it could be
19 possible. All it's saying is that you have to end up
20 with a user submission content file and you do so based
21 on having received the user submission. There isn't, in
22 this limitation, requirements for how it's done or what
23 steps have to be taken.

24 Q. Where does the '997 patent describe the
25 possibilities that you just listed?

1 MR. McDOLE: Objection to form.

2 THE WITNESS: I don't know if it does or not.

3 I don't have it memorized. It might or might not. I
4 was really just describing examples of what could happen
5 in the context of meeting the limitation.

6 BY MR. ROBINSON:

7 Q. So the broadest reasonable interpretation is
8 in light of the specification, correct?

9 A. It is.

10 Q. Can you point to anything in this
11 specification that supports your explanation of how you
12 interpret that claim feature?

13 MR. McDOLE: Objection to form.

14 THE WITNESS: I haven't tried to look at the
15 specification to see if there's support. I mean, the
16 ordinary meaning of the words "generating," you have a
17 user submission content file and that that has to be
18 generated using the received user submission -- I mean,
19 it doesn't seem like there's a lot of confusion over
20 what that could possibly mean.

21 If anything, your question earlier suggesting
22 that the user submission content file is generated from
23 something that's not a file seems to be reading a
24 limitation or a requirement into this limitation that's
25 not present, so I'm just really using the ordinary

1 meaning of these words. And if you're suggesting
2 there's something else, then that would seem to have a
3 need for support in the specification as to just what
4 the ordinary meaning of the words are.

5 BY MR. ROBINSON:

6 Q. So I think all that adds up to no, you can't
7 point to anything in the specification to support any of
8 the possibilities you just described.

9 MR. McDOLLE: Objection. Form.

10 THE WITNESS: I don't understand the question,
11 then, because you asked me what it could include. I'm
12 describing what a person of skill in the art could
13 understand would also be included, other functionality
14 or possibilities. I'm not trying to define the scope or
15 limit of the claim. It's not -- I don't understand how
16 I would need to find support for what else could be
17 included as meeting this limitation in the specification
18 itself, so I don't really understand what your question
19 is asking.

20 BY MR. ROBINSON:

21 Q. I'm going to hand you what has been marked
22 Twitter Exhibit 1007 in the IPR of claims 20 through 35
23 of the '997 patent.

24 A. Okay, I have it.

25 Q. Is that your declaration from the '830 IPR?

1 A. It is.

2 Q. If you could reference paragraphs 2 through 4,
3 or review paragraphs 2 through 4, please.

4 A. Okay.

5 Q. It says "complete listing of the materials you
6 reviewed in preparing this declaration."

7 A. It looks to be the same as what we discussed
8 for the '829 patent. I'd have the same answer with
9 respect to this list of materials as I did earlier for
10 the '829 IPR.

11 Q. So if you considered it, it's either listed
12 here or cited within the text?

13 A. Or some oversight or something like that, but
14 it should be here.

15 Q. Since you signed this declaration, have you
16 discovered any oversights or things that were omitted?

17 A. Not that I'm aware of as I sit here today.
18 Actually, so Exhibit 1010 for both of these is that
19 "HTML5 Mastery Semantics." The exhibit includes a
20 portion of that book. I've certainly looked at the
21 whole book, so just make sure that's clear.

22 Q. Anything else?

23 A. I think that's it.

24 Q. Do streamed video -- streamed digital video
25 files include a container?

1 A. It depends. They might.

2 Q. Depends on what?

3 A. It depends on the system, how it does the
4 streaming, what standard it's using.

5 Q. Are there any standards you can think of that
6 stream the video file within a container, or stream the
7 video content within a container?

8 A. I mean as I testified to earlier, the concept
9 of a container can be fairly generic, so whether or not
10 you can look at a streaming system and identify a
11 container, whether it's the same kind of container that
12 might be defined within a particular standard, I mean it
13 would depend.

14 Q. So setting aside whether the MPEG standard
15 requires the dot MPG container, are you familiar with
16 dot MPG containers as a possibility?

17 A. Generally speaking.

18 Q. If an MPEG digital video file with video
19 content is streamed, does the dot MPG container get
20 streamed with the content?

21 A. I would have to double-check the details. I
22 think you could or couldn't. It depends on how you want
23 to implement the streaming, what portions you want to be
24 able to send. My recollection is that some of these
25 standards include optional features to support more

1 robust streaming delivery, so it depends on the
2 implementation. I mean I think it's possible either
3 way, from my recollection. I'd have to double-check the
4 standard to see what its recommendation is for how to do
5 stream, whether it's optional or required and just
6 really the details of the standard.

7 Q. So as we sit here today, it sounds like you're
8 not sure either way.

9 MR. McDOLLE: Objection. Form.

10 THE WITNESS: Not sure either way what?

11 BY MR. ROBINSON:

12 Q. Whether the dot MPG file can be streamed with
13 its container?

14 A. As I sit here now, I don't recall whether or
15 not there's a requirement in the standard one way or
16 another, so it boils down to the implementation and
17 whether it's possible that you could do it both ways.
18 So what I'm uncertain about is, and what I don't recall
19 is whether or not there's anything in the standard that
20 would prevent you or would require you to send a
21 container and define exactly what that means. That part
22 I don't have memorized. I'd have to double-check.

23 Q. Can you say whether one way or the other is
24 more common?

25 MR. McDOLLE: Objection. Form.

1 THE WITNESS: Sitting here now, I don't
2 believe so. It's not a question I tried to answer in
3 the context of the declaration. I'm not even sure how
4 you -- what information, how you would gather the
5 information to do some kind of survey to say one way or
6 the other.

7 BY MR. ROBINSON:

8 Q. Can you say whether one way or the other was
9 more common in 2012?

10 MR. McDOLE: Objection. Form.

11 THE WITNESS: I think it's the same answer.
12 I'm not sure what the test for more common would be,
13 what systems are within the denominator to consider,
14 whether it's volume or prevalence. I mean, it just
15 depends. But I mean it's not something I tried to
16 undertake to identify in my declaration. I don't think
17 it has an impact on what my conclusions are.

18 MR. ROBINSON: Pass the witness.

19 MR. McDOLE: We have no questions. We'll
20 review and reserve signature.

21 COURT REPORTER: Where shall I send the
22 original? Would you like me to arrange for review and
23 signature?

24 MR. ROBINSON: Why don't you send it to us and
25 we'll work with him to get it done. And we all want a

1 rough.

2 COURT REPORTER: Yes, but everybody is getting
3 a rough, both sides.

4 MR. McDOLLE: Yes, rough.

5 COURT REPORTER: And you want the final rather
6 quickly, by Thursday, I think?

7 MR. ROBINSON: Yes, and the rough tonight or
8 tomorrow.

9 COURT REPORTER: Yes, by tomorrow morning.

10 (The deposition concluded at 2:29 p.m.)

11 --oOo--

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DEPONENT'S DECLARATION

I, KEVIN C. ALMEROTH Ph.D., hereby declare:

I have read the foregoing deposition transcript and identify it as my own and approve same.

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

Dated this _____ day of _____,
2018, at _____, California.

KEVIN C. ALMEROTH Ph.D.

1 STATE OF CALIFORNIA)
2 COUNTY OF LOS ANGELES) ss.
3

4 I, Mark McClure, C.S.R. No. 12203, in
5 and for the State of California, do hereby certify:

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

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

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

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

21 Witness my hand this 20th day of June
22 2018.

23 
24 Certified Shorthand Reporter
25 for the State of California