

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NETFLIX, INC., AND  
COMCAST CABLE COMMUNICATIONS, LLC,  
Petitioner,

v.

REALTIME ADAPTIVE STREAMING, LLC,  
Patent Owner.

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Case IPR2018-01187 (Patent 9,769,477 B2)  
Case IPR2018-01630 (Patent 9,769,477 B2)

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Oral Hearing Held: October 15, 2019

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Before GEORGIANNA W. BRADEN, KEVIN W. CHERRY, and  
KAMRAN JIVANI, *Administrative Patent Judges*.

IPR2018-01187 (Patent 9,769,477 B2)

IPR2018-01630 (Patent 9,769,477 B2)

APPEARANCES:

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The above-entitled matter came on for hearing on Tuesday, October 15, 2019, commencing at 12:59 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

P R O C E E D I N G S

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JUDGE CHERRY: Please be seated. Good afternoon. This is the hearing in IPR 2018-1187. I'm Judge Cherry and with me remotely are Judges Braden and Jivani and I'm going to turn it over to Judge Braden now that she's on the screen.

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JUDGE BRADEN: Hello again. I'm Judge Braden. Also appearing remotely, as Judge Cherry mentioned, is Judge Jivani. As Judge Jivani and myself are appearing via video, we require counselors to speak directly into the microphone when talking and to identify specific slide numbers when referring to demonstratives.

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Per the Hearing Order which is paper 35 in this proceeding, each party has 75 minutes total time to argue their cases. Petitioner Netflix, Inc., along with Comcast Cable Communications, LLC, has the burden of establishing unpatentability, therefore Petitioner will open the hearing by presenting its case as presented in its petition regarding the alleged unpatentability of the challenged claims.

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Petitioner may reserve rebuttal time but no more than half of its total argument time. Thereafter, Patent Owner Realtime Adaptive Streaming, LLC, will respond to Petitioner's arguments. Patent Owner may reserve surrebuttal time of no more than half of its total argument time to respond to Petitioner's rebuttal. Otherwise, the parties may use their allotted time to discuss the case however you choose. We ask however that you make it clear which challenges and claims you are addressing. In order to ensure clarity of the record (indiscernible) the hearing, please provide the court reporter with a list of names and word spellings unless you have done

1 so already.

2               Lastly, we ask that the parties hold any objections regarding the  
3 parties' arguments until it is their time at the podium. So just to be clear, we  
4 will not take objections during a parties' arguments. You must wait until it  
5 is your time at the podium to note any objections. I will maintain a clock  
6 and inform the parties when they have five minutes left and I believe in  
7 Alexandria you may have some lights up there that will also let you know  
8 the time that you have left.

9               So let's go ahead and get started with appearances for both  
10 sides. We'll start with Petitioner.

11              MR. BATTS: Yes, Your Honor. Harper Batts on behalf of  
12 Petitioner and along with me is my colleague, Chris Ponder.

13              JUDGE BRADEN: All right. And Patent Owner?

14              MR. STONEDALE: Thank you, Your Honor. My name is  
15 Joel Stonedale. I will be speaking for Netflix.

16              JUDGE BRADEN: Very good. Petitioner, do you wish to  
17 reserve any rebuttal time?

18              MR. BATTS: Yes, Your Honor. Given that it appears  
19 Realtime has dropped some of its issues from the surreply based upon the  
20 slides that we see, I'm planning for 25 minutes of rebuttal time at this point.

21              JUDGE BRADEN: Very good. You may begin your  
22 arguments when ready.

23              JUDGE CHERRY: Do we have an hour on this?

24              MR. BATTS: An hour and 15 minutes, Your Honor, which is  
25 why I was (indiscernible.)

26              JUDGE CHERRY: Oh, sorry, sorry, yes, that's right.

1 MR. BATTS: So I was planning on 50 minutes for my --

2 JUDGE CHERRY: That's why I was like -- sorry, I didn't  
3 realize.

4 MR. BATTS: No problem, Your Honor. It's nice to have a  
5 clock in this room, so.

6 JUDGE JIVANI: Counsel, I do want to just caution you, you  
7 mentioned a moment ago that you believe Patent Owner may have dropped  
8 some arguments. We remind you that as Petitioner you bear the ultimate  
9 burden of proof so if there are arguments that you would like to bring for  
10 which you carry the burden, we ask that you address those now and not  
11 make your argument dependent on what Patent Owner may or may not  
12 argue.

13 MR. BATTS: Yes, understood, Your Honor. Good afternoon,  
14 Your Honors. This is a proceeding regarding two different -- actually two  
15 different proceedings regarding a single patent, the '477 Realtime patent and  
16 I'm going to briefly go through the grounds that are laid out on slides 2 and 3  
17 of Petitioner's slides that primarily relate to the Imai and Pauls references.  
18 As you can see on slide 2 it's the 1187 proceeding, I'm going to try to refer to  
19 that as the 1187 proceeding for purposes today.

20 The instituted grounds were all obviousness grounds that all  
21 include Imai or Pauls or a combination of Imai and Pauls and slide 3  
22 includes the overview of, again, all obviousness grounds. Again, all the  
23 grounds include either Imai, Pauls or some combination of those two  
24 references and so in terms of where we are I guess in this proceeding I think  
25 it's useful to look at the claims require basically two different things. One is  
26 that there's BA compressors with different data compression rates,

1 asymmetric compressors, and then that when you're looking at these  
2 encoders or compressors for selection you're looking at the throughput of the  
3 communication channel to determine which encoder to select, and for  
4 context what we don't have here is we don't have any dispute about Imai's  
5 teachings with respect to asymmetric encoders.

6           The Patent Owner has not disputed that Imai's teaching  
7 asymmetric encoders and it's not disputing that Imai teaches looking at the  
8 throughput of the communication channel to select the appropriate encoder  
9 and they also don't dispute that Imai has encoders with different properties  
10 and we'll get into a little more of that a little later.

11           Similarly, with respect to the Pauls reference the Patent Owner  
12 is not disputing that Pauls teaches asymmetric encoders and that Pauls  
13 teaches looking at the throughput of the communication channel to select the  
14 appropriate encoder.

15           So if we go to slide 8, slide 8 of Petitioner's slides gives an  
16 overview of the kind of POSITA knowledge here in question as well as what  
17 the '477 patent discusses or doesn't discuss and I think -- I won't go through  
18 all the bullets here but I do think that what is notable is the '477 patent itself  
19 doesn't explain how to track the throughput of the communication channel  
20 and the '477 patent doesn't describe how to actually make encoders with  
21 different data compression rates and we'll get into the execution speed or the  
22 data compression rate of the encoders because that's certainly one of the  
23 arguments that we have here.

24           But I think I did want to highlight the lack of teachings or the  
25 lack of explanation in the '477 patent about these issues, although there are a  
26 few portions of the '477 specification I plan to address with you today on the

1 issue of compression rate or the execution speed of the encoder as well as  
2 the throughput because there's at least a few things that I think are helpful to  
3 note. So if I turn to slides 4 and 5 and I guess slides --

4 JUDGE JIVANI: Before you do that can I just make sure I  
5 understood your point. With regard to the last slide, you're not in this venue  
6 arguing enablement or written description, correct? You're simply saying  
7 that the patent has these gaps in it? I'm not sure I understand your point.

8 MR. BATTS: Sure. So, Your Honor, we are definitely not --  
9 this is not the forum, and there's not the jurisdiction to argue enablement or  
10 written description but what I do think is relevant for our discussion here  
11 today is really that the main portions and what the Patent Owner had claimed  
12 was the novelty of these claims are not in dispute here. As to asymmetric  
13 encoders, as to looking at the throughput of the communication channel for  
14 the selection of the encoder, those aren't things that are in any dispute here.

15 So instead, what we're really talking about and that's what I'm  
16 getting at I guess to my next slide is what is left in the dispute is really this  
17 issue of limitation 1B of the '477 patent about higher or lower data  
18 compression rates and what I want to point out is just how little there is in  
19 the '477 patent on this issue and so the '477 patent assumes that a POSITA  
20 would have knowledge about these issues in order to be able to operate the  
21 patent. So I don't think that's written description or enablement although I  
22 realize that they can overlap with the issue I'm discussing. I think it goes to  
23 what are you expecting to show for an obviousness challenge as to this and  
24 there's no dispute by the Patent Owner as to the proposed POSITA  
25 knowledge that was introduced in the petition and the knowledge that a  
26 POSITA would have when coming to address these claims for an

1 obviousness challenge because there's no anticipatory challenges here.

2 JUDGE CHERRY: I mean the way I kind of understood your  
3 argument was that to the extent that Patent Owner is complaining that Imai  
4 or Pauls don't have this disclosure on these points, theirs kind of doesn't have  
5 it either.

6 MR. BATTS: Yes. And I realize it's our burden of  
7 patentability but I still think that's a relevant point to make for I guess our  
8 burden of unpatentability, sorry.

9 JUDGE BRADEN: Can you confirm, do you still feel that  
10 person of ordinary skill in the art at the time of this invention would be  
11 somebody with a Bachelor's degree in electrical engineering or computer  
12 science with two years of experience or somebody who has a Master's  
13 degree?

14 MR. BATTS: Yes, Your Honor. I don't believe there's any  
15 dispute on that, the proposed ordinary --

16 JUDGE BRADEN: I mean do you believe that that's an  
17 appropriate characterization of a person of ordinary skill?

18 MR. BATTS: Yes, Your Honor.

19 JUDGE BRADEN: Okay. Thank you.

20 MR. BATTS: So if we turn to slide 4 first, and I guess this will  
21 address Judge Jivani's caution to me at the beginning of the hearing about  
22 what I'm obligated to do. I guess I look at this, and what I'd like to go  
23 through if I may since I have a little more time here today, is I'd like to go  
24 through their first kind of twin arguments about the configure to language  
25 and whether we've specifically identified the first and second encoders in  
26 our petition and our accompanying declaration.

1           Then I think there's a question of have we shown higher and  
2 lower data compression rates for the encoders in question and I want to go  
3 through that as my second point and then it seems from what I see, Realtime  
4 is still arguing that the lack of motivation to combine as to the Imai and  
5 Pauls references and they're arguing the claim 20 limitations, whether we've  
6 properly addressed the claim 20 limitations. But I didn't see anything in  
7 their slides or any of their argument about the Winner International case or  
8 the combination of Chao for slide 4 or the combination of Dawson on slide 5  
9 and I think our briefing -- we certainly addressed those issues in the briefing  
10 and I'm happy to take questions but that was the reason I pointed out what I  
11 plan to address here today.

12           So moving first to I guess, I think of them as twin issues, is this  
13 argument and I think if we look at slide 22 of Petitioner's slides there's really  
14 twin arguments here by Patent Owner that I think tie together about whether  
15 the Petitioner or the petition has specifically identified the first and second  
16 encoders and this was an issue they raised in the POPR, it was addressed in  
17 the Institution decision and they continue to raise that issue here today and I  
18 think the second argument which I think is best shown in Patent Owner's  
19 slide 14 is an argument that we can't merely show, that what the configured  
20 to language of claim 1, we can't merely show that what happened by  
21 happenstance or by chance. So I think if you look at the top of their slide  
22 here they say Petitioner's argue that limitation 1B would be met by chance.  
23 So I think they both go to -- we didn't identify what are the first and second  
24 and you can't simply, with the "configure to" language, just kind of guess or  
25 like hope that the limitation is met.

26           So I'd like to address both of those at the same time and I think

1 on the second point about it would be met by chance, we certainly are in no  
2 way -- I will go through the petition and the expert declaration and explain  
3 how we specifically identified in the Imai paragraphs what would be the first  
4 and second encoders and the teachings that are relevant there. But I think  
5 also this idea that we pointed out that it is almost impossible that the  
6 encoders wouldn't have data compression rates is the exact opposite of the  
7 frequent Patent Owner argument of hey, it's possible that out of your one out  
8 of 1,000 permutations or one out of 10,000 permutations you might have  
9 met this claim limitation. That doesn't make it obvious.

10 We basically had, in our expert's opinion, the opposite, that it's  
11 almost never going to be that it would be the same data compression rate.  
12 That it's 999 or 9,999 out of 10,000 instances where that would be the  
13 occurrence. So I think I'd like to go through the petition, the declarations  
14 and deposition testimony with you here to show you that Imai specifically  
15 and purposely designed a system that has higher and lower data compression  
16 rate encoders and again, this data compression rate is really the execution  
17 speed of the encoders. That's what we explained in our petition. Patent  
18 Owner has not disputed that explanation of what we're talking about when  
19 we say data compression rate.

20 So if we go to slide 10. At the highest level, I'd like to give us a  
21 kind of an overview of Imai before we get into paragraphs 67, 68 and some  
22 of these other paragraphs. Imai is teaching a system where you have a  
23 plurality of asymmetric encoders that you're choosing between. So it's the  
24 531 to N and it's teaching that the encoders have different coding methods or  
25 different properties and if you look at the clear teachings of paragraphs 145  
26 and I think 146 and it goes further than that, the clear teachings are not

1   disputed by Patent Owner is that Imai's purpose for having encoders with  
2   different properties or coding methods is to be able to choose between the  
3   encoders for the appropriate encoder, for the throughput of communication  
4   channel. Now Imai has other teachings that we've discussed in other IPR  
5   proceedings --

6               JUDGE BRADEN: Excuse me. If I understand Patent Owner's  
7   arguments correctly, they're saying well, you've got to be able to identify this  
8   is the first encoder and it specifically has an encryption rate with an  
9   algorithm that will always be faster than this my No. 2 encoder and if I  
10   understand their argument correctly, they're saying that's where Imai fails is  
11   that it doesn't say this is No. 1 and it's got this super fast encrypter and this is  
12   No. 2 with a slightly less fast encrypter algorithm?

13              MR. BATTIS: Yes. And that's where they're wrong because I  
14   would say first, that's basically an anticipation argument in a lot of ways  
15   rather than the obviousness argument that we're dealing with here. But if we  
16   go to the teachings of Imai, and I would say slide 12 has this paragraph 67 of  
17   Imai, Imai explains that the system is specifically constructed to utilize  
18   encoders that are using particular algorithms including asymmetric  
19   algorithms and I think it's been highly deceiving here that the Patent Owner  
20   has conflated and confused the terms algorithms with the implementations in  
21   the encoders.

22              So I think a good example would be in Dr. Storer's deposition, I  
23   would say the pages that I would ask that you look at is pages 28 through 46  
24   as a really good example of where they repeatedly kept on asking him about  
25   MPEG or these other ATRAK as being the encoder and repeatedly Dr.  
26   Storer had to explain, consistent with the opinions I want to walk through in

1 his declaration, that they're saying an algorithm versus an encoder that's an  
2 implementation of an algorithm and so Imai is teaching that you have these  
3 algorithms that can be selected whether it be ATRAK or MPEG and the  
4 algorithms are a starting point for an implementation of the encoder. But  
5 both sides' experts are in agreement that when you look at a specific encoder  
6 that's implementing a particular algorithm, then you're going to have a  
7 specific execution rate of that a encoder rather than well, is MPEG faster  
8 than ATRAK where you're talking about or one MPEG versus another  
9 MPEG encoder is going to depend upon implementation but that's why we  
10 said a person of skill in the art would understand that because that's the  
11 whole purpose of Imai is to have these encoders with these different  
12 execution rates to allow for selection of the appropriate encoder based on  
13 what's happening in the communication channel and throughput of  
14 communication channel into making alteration as to the coding or the  
15 compression process, depending upon the changing conditions of the  
16 channel. It looks like you have a question.

17 JUDGE BRADEN: So I want to make sure that I understand  
18 your point, is that Imai will specifically move the data blocks to the encoder  
19 that's implemented an algorithm that's going to be the fastest for that data  
20 block?

21 MR. BATTIS: I don't know that fastest for that data block is the  
22 right -- everything up until that point I agree with. I think what Imai is  
23 saying is it will change which encoder to utilize based upon the throughput  
24 of communication channel and I don't want to jump too quickly to  
25 compression rate because that's kind of where we're going.

26 JUDGE BRADEN: Okay.

1           MR. BATTS: But I do think that's where you start talking  
2 about ratio of the compression versus the speed at which the compression is  
3 occurring. But it's talking about -- I would say, the word I'd use is the  
4 appropriate encoder for the conditions of the communication channel, the  
5 throughput of the communication channel.

6           JUDGE BRADEN: Of the communications channel, not  
7 necessarily the data block itself? Okay.

8           MR. BATTS: Correct. Imai has teachings about using the data  
9 type of the data block but that's not relevant for the claims that we're dealing  
10 with here but it has numerous teachings about what type of characteristics or  
11 properties you would use for the selection of the appropriate encoder and the  
12 ones that are here that match up exactly with the '477 claims is looking at  
13 the throughput of the communication channel to say hey, which of these  
14 asymmetric encoders are we going to choose to use.

15           So I think 67 is really a prime example and it was cited in the  
16 Institution decision for this idea of we were identifying specific encoders a  
17 person of skill in the art would know to use and also that the system  
18 specifically designed or constructed for the purpose of having encoders with  
19 these different properties to select between based upon what's happening in  
20 the communication channel. So I think that's where they cite to the  
21 ActiveVideo Networks case for this kind of proposition we didn't identify  
22 the specific encoders and, you know, our analysis isn't proper, but I think  
23 that this is actually useful for us to show that -- if you turn to page 1328 of  
24 this case and that's the page that they cited -- they talk about the testimony  
25 that the expert provided was generic and bears no relationship to any  
26 specific combination of prior art elements and I think it's quite the contrast

1 here where our expert walked through the teachings of Imai, including  
2 paragraphs 67 and 68 and said here's the type of information that the  
3 POSITA would have coming to address this issue as well as looking at Imai  
4 -- and we're going to get to Pauls as well too but I guess the examples here I  
5 think are most applicable to Imai -- to make a determination about what  
6 would be the most appropriate encoder.

7 So it talks about, and I think that gets to the configured to and  
8 identification and I'd like to switch over to the compression rate issue  
9 because I know these all kind of tie in together but I want to make sure  
10 before I do if you have any questions on those issues.

11 Okay. So compression rate. Again, the data compression rate  
12 is the term that Realtime is now arguing we haven't shown our position and  
13 our expert report insufficiently show that there is different data compression  
14 rates between the encoders that are being selected or that have the option to  
15 be selected and as I explained, the data compression rate in this patent in this  
16 proceeding is really talking about the execution speed or the computational  
17 speed of the encoder and so --

18 JUDGE BRADEN: Is this a term that we need to construe in  
19 order to be able to make a final decision?

20 MR. BATTS: I don't believe so, Your Honor, because I don't  
21 believe there's any dispute between the parties as to that is the meaning. We  
22 haven't had any that I've seen even in whether formal or kinematic  
23 constructions, I haven't seen in this proceeding where the parties are  
24 disputing somehow the underlying meaning of the term.

25 JUDGE BRADEN: Okay. Thank you.

26 MR. BATTS: But I do think if we go to slide 20, I do think it's

1 notable that while Realtime argues we haven't shown data compression rate  
2 in the art, even their own expert admitted that this type of usage of the term,  
3 this term wasn't the way that the concept was explained prior to their patent  
4 so unique to their patent. So while the concept was known, execution speed  
5 of the encoder or the processing of the encoder wasn't referred to as data  
6 compression rate. So this idea of finding a match, even their own expert is  
7 saying there's not going to be match in the art as to this term with a prior art  
8 reference. You have to look at what are we talking about and that's the  
9 execution speed of the encoder.

10 So I think I'd like to turn to the patent itself here for a minute to  
11 kind of walk through what the patent has to say that's relevant for this issue  
12 of data compression rate and I turn first to column 1 and at the bottom of  
13 column 1 starting in line 63 it says,

14 "Accordingly, a system and method that would provide  
15 dynamic modification of compression system parameters so as to provide an  
16 optimal balance between execution speed of the algorithm (compression  
17 rate) and the resulting compression ratio is highly desirable."

18 So the patent introduces this concept of execution speed of the  
19 algorithm as being the compression rate but also introduces the idea that  
20 there's this balance that any encoder, you're having to balance when  
21 selecting an encoder, an encoder that has a particular ratio amount of  
22 compression that's actually occurring with the speed that you're getting that  
23 data out down to the system and I think that is going to get quite relevant  
24 when we're talking to Imai's teachings about having a real time transmission  
25 and looking at the throughput of the communication channel to allow for  
26 communications to occur and for data to be transmitted.

1 Columns 5 and 8 I think also have relevant teachings for us. So  
2 column 5, lines 22 to 40, kind of introduce this concept of showing  
3 decreasing execution speed but increasing the amount of the processing  
4 time. So again it goes to looking at what are we going to do for execution  
5 speed versus the ratio that we're going to compress the data. So different  
6 data you can compress more if you spend more time on it or depending on  
7 the type of data it may be more random and you get less compression. But  
8 there's this concept of you have a trade-off that you're looking for a  
9 compression, the execution and compression amount by ratio and the  
10 compression speed for how much the data gets out, and particularly relevant  
11 for us I think is column 8 starting at I would say line 10. It talks about the  
12 controller for tracking the throughput of the system and generating a control  
13 signal to select a compression routine based on the system throughput. In a  
14 preferred embodiment where the controller determines that the system  
15 throughput falls below a predetermined throughput threshold, the controller  
16 commands the data compression engine to use a compression routine  
17 providing a faster rate of compression so as to increase the throughput.

18 So you're talking about faster compression and what's the  
19 purpose? To increase throughput and I think that's relevant for when we get  
20 into the discussion of what is Imai actually teaching and I guess go back to  
21 slide 12, please. What is Imai teaching and in paragraphs 67 and 68 Imai  
22 teaches here an example of five different encoders with five different  
23 properties. So it starts with on -- hang on I'm looking at my slides so I may  
24 not get the -- I guess five lines down stated otherwise language of Imai  
25 where it starts talking about in the embodiment you would have two  
26 encoders that would have higher and lower bit rate. Then it goes on to talk

1 about two encoders that would have different amounts of computation and  
2 then lastly it talks about an encoder that would be particularly suitable for  
3 coding a voice.

4 Now the voice coding encoder I don't think is relevant to our  
5 discussion, but as to the first two encoders and to the second two encoders,  
6 the first two encoders -- and as explained by Dr. Storer and I want to walk  
7 through his declaration next here paragraph by paragraph where he does this  
8 because I think a lot of the arguments are about we didn't show this rather  
9 than being some argument about the actual substantive merits -- the first two  
10 encoders are talking about the compression ratio, higher and lower  
11 compression ratio and in the second two encoders they're talking about the  
12 computation, the large amount of computation and it has the (indiscernible)  
13 such a method usually also requires the larger amount of computation for  
14 coding. That's talking about data compression ratio, the execution speed of  
15 the encoder.

16 So we have both teachings here in a specific teaching beyond  
17 the general teachings of Imai that Imai is saying you have two encoders with  
18 varying or higher and lower compression rates and higher and lower  
19 compression ratios and I want to tie that into rather than you just hearing it  
20 from me and get an argument that this is attorney argument, I think it's worth  
21 spending the time to go to the actual declaration where Dr. Storer explains  
22 this. So if we go to --

23 JUDGE CHERRY: So really regardless of whatever way you  
24 construe it Imai teaches it?

25 MR. BATTS: Yes.

26 JUDGE CHERRY: Okay.

1           MR. BATTS: And with respect to claim 20 that's dealing with  
2 ratios, and I'm jumping around a little bit, but that claim 20 deals with ratios  
3 versus compression rates paragraph 67 is teaching both principles with two  
4 different encoders for each. I apologize, Your Honors, but I guess I should  
5 be clear. I'm going to refer to Dr. Storer's declarations from the 1187  
6 proceeding when I walk through the paragraphs and I think the similar  
7 paragraphs are in both, but I was just planning to walk through one for ease.

8           So if you go to paragraph 132 of Dr. Storer's -- and I guess I  
9 should note for the record at least that petition page 22 starts addressing  
10 these issues and then I'm going to, the citations from the petition in Dr.  
11 Storer's --

12           JUDGE BRADEN: And this is Exhibit 1003, correct?

13           MR. BATTS: Correct. But those --

14           JUDGE BRADEN: The original declaration and petition?

15           MR. BATTS: In both proceedings I believe the declaration is  
16 1003.

17           JUDGE BRADEN: It is.

18           MR. BATTS: So 1187. So if we start at paragraph 132 Dr.  
19 Storer provided an explanation about the implementations of the algorithms.  
20 So he discussed not that we're looking at MPEG, we're looking at the  
21 implementation of MPEG as an example and he pointed out the lack of  
22 discussion in the 477 patent.

23           The following paragraph 133 he starts providing an explanation  
24 of Imai's general teachings about a system that is designed to look at  
25 compressing, transmitting and receiving signals. Then in paragraph 134 he  
26 says,

1           "A POSITA would have understood that Imai teaches that the  
2 execution speed of the encoder/decompressor and the bandwidth connecting  
3 both must be sufficiently fine or the system will fail to achieve real time  
4 reproduction. For example, Imai teaches that even if there's sufficient  
5 bandwidth the complexity of the compression algorithm and the speed of the  
6 decompressor affect whether real time reproduction can be achieved."

7           So this idea that we didn't address in our petition or in our  
8 expert declaration the execution speed of the encoder and Imai's teachings of  
9 that simply isn't true when looking at the actual declaration, and if we turn to  
10 paragraph 136 he goes directly to the core of the issue I think that we're  
11 dealing with where he talks Imai's solution to these problems is to provide  
12 encoders that implement a number of different coding methods and then  
13 talks about the differ in the amount of computation required which is  
14 directly related to execution speed or data compression rate and he cites to  
15 paragraph 67 as the support in Imai for his opinion regarding the different  
16 encoders.

17           Going to paragraph 138 he explains that Imai makes it clear that  
18 each encoder would have different execution speeds and he talks about the  
19 algorithms but then he talks about the use of those algorithms for specific  
20 compression rates and then I think paragraph 143 is a good kind of final  
21 paragraph because I don't want to go through the whole declaration here but  
22 I think it's a useful one to say that he ties this in by saying hey, a POSITA  
23 would have found it obvious to look at these different compression encoders  
24 that have these different data compression rates to match the throughput of  
25 the communication channel, the very purpose that the '477 is saying you're  
26 looking at for -- the limitation's not in dispute here, but I though it's still

1 relevant to say the same purpose in the prior art reference. We're not just  
2 cherry-picking a teaching out of a prior art reference that may be about all  
3 sorts of other things, it has the same underlying purpose is to match the  
4 throughput and then he goes on to say that a POSITA would recognize that  
5 adjusting the output rate would have impacted throughput.

6           So I think if we go to slide 21, and maybe this is too high level  
7 after going into the guts of the declaration. I think Dr. Storer provided more  
8 than sufficient explanations as to why Imai's paragraphs 67 and 68 would  
9 render obvious these claims to a POSITA that would come in knowing about  
10 these standardized algorithms and the encoders that could be created off  
11 them that would permit the changing of encoders to match the changing  
12 circumstances of the throughput of the communication channel.

13           Now Realtime I think makes an argument well, you know, there  
14 are certain circumstances where Imai is supposed to be doing the real time  
15 and wouldn't the system break down if you're at a certain point in the  
16 throughput and I think we have to keep in context at some point if  
17 throughput reaches zero or almost zero you're going to lose the ability to  
18 transmit, especially audio or video in real time. The point is, is that both  
19 Imai and Pauls, and I've been talking too much Imai probably for this, but  
20 both Imai and Pauls are teaching looking at the throughput of the  
21 communication channel and doing your best to adjust this balancing act on  
22 compression rate and compression ratio to allow for the best possible  
23 transmission given the throughput. That doesn't mean that it's going to  
24 always --

25           JUDGE BRADEN: So then is it okay for the claim language if,  
26 initially you have say, encoder A with an algorithm and it's going at a

1 specific rate and encoder B is going at a different rate but then later on -- so  
2 initially encoder A is faster or is compressing at a higher rate than encoder  
3 B, but later on things change and encoder B may be encoding at a higher  
4 rate than encoder A, does that still mean that you've met the claim language?  
5 Is encoder A the first encoder every time or does it switch depending on the  
6 situation?

7 MR. BATTIS: So I think --

8 JUDGE BRADEN: And is that allowable under the claim  
9 language?

10 MR. BATTIS: Is that allowable under the claim language? I  
11 guess I --

12 JUDGE BRADEN: Does the first encoder always have to be  
13 the first encoder? I guess what I'm trying to figure out here if you have one  
14 encoder and under Imai, okay, your first encoder goes faster. It compresses  
15 at a higher rate than a different encoder in order to be able to do this  
16 balancing and be able, you know, to keep up with the transmission channel.  
17 You're trying to go real time data. What happens when something changes?  
18 This one slows down and gets backlogged or bottlenecked and this one's  
19 now going faster?

20 MR. BATTIS: So I don't think the premise of that question is  
21 correct in that the system has -- the point is that the system would have  
22 encoders with different algorithmic capabilities, one with a higher capability  
23 and one with a lower capability. A POSITA would know how to implement  
24 the encoders in Imai's system to have ones that have the higher and the  
25 lower. Now --

26 JUDGE BRADEN: Do you always have an encoder that has a

1 higher compression rate?

2 MR. BATTS: Yes. So --

3 JUDGE BRADEN: Did I understand that correctly?

4 JUDGE CHERRY: I think what -- you're relying on the  
5 execution rate, right?

6 MR. BATTS: Correct.

7 JUDGE CHERRY: So based on the implementation one will  
8 always have a higher execution rate and they'll select that execution rate, but  
9 in terms of the real time there may be other encoders that are selecting for  
10 other -- based on other conditions in the data channel, right?

11 MR. BATTS: Yes. And I also think --

12 JUDGE BRADEN: I'm sorry. Can we get Judge Cherry's  
13 microphone turned up.

14 JUDGE CHERRY: Sorry, I'm mumbling.

15 JUDGE BRADEN: It's very difficult for us to hear it.

16 JUDGE CHERRY: Sorry, I'm mumbling. No, I was just  
17 saying that the execution rate will always vary but there may be other  
18 conditions in the data channel that they get to pick these other algorithms  
19 that have different properties that may enable better real time transmission  
20 given the data channel conditions; is that correct?

21 MR. BATTS: Yes. And I guess the second point to try to give  
22 a complete answer -- thank you for that position, but I think the other point  
23 that I would make is that the different data types may have different  
24 compression speeds but that doesn't change the execution speeds of the  
25 encoders are what they are. So while they may move relatively depending  
26 on a particular chunk of data that may be more random or less random,

1 there's still that difference in the relationship that's necessary in the claims.  
2 Because if we're going back, especially under BRI, if we're going back and  
3 looking at these claims it's saying a higher one, a lower one that you choose  
4 between and you look at the throughput of the communication channel as  
5 your parameter for selecting them. So I think both Judge Cherry's point as  
6 well as mine answer your question hopefully.

7           So I think that goes to, and I do think if we go to slide 32 it  
8 carries over to slide 33 based on the questioning Dr. Zeger, but you can  
9 review it, the point being that even Dr. Zeger, Realtime's expert, admitted  
10 that when it talks about you're looking at a particular implementation that  
11 implementations are going to vary from an algorithm. So depending on how  
12 sophisticated the programmer is, how efficient they make a particular  
13 algorithm, algorithms will vary but that's the point of this is the knowledge  
14 of a POSITA when looking at this problem what knowledge did they bring  
15 to the table with Imai's teachings of having these different algorithms that  
16 you would select and implement into encoders. So if there aren't any  
17 questions on that I wanted to next turn to the output rate briefly because I  
18 think Patent Owner has argued, and I hopefully have addressed already that  
19 we were arguing the output bit rate being the data compression rate rather  
20 than the execution speed of the algorithm and I think I've walked through the  
21 declaration's citations that makes clear that that's not the case.

22           But I do want to point out that both experts agree that the output  
23 bit rate is an indicator as to whether it's a higher or lower data compression  
24 rate or the execution speed of the encoder. So if we go to slide 31, Dr. Zeger  
25 admitted that the output rate still does provide you that correlation or that  
26 indication. So I do think it's still a relevant indicator and it still can render

1 the claims obvious but we certainly didn't rely on that alone in our petitions,  
2 our declarations, to say here's Imai's teachings about execution speed of  
3 encoders.

4               So the next issue that I have that I wanted to address was the, I  
5 guess, the Pauls reference and then motivation to combine. So I think on the  
6 Pauls reference, and again I'm going to turn to the 1187 proceeding Exhibit  
7 1003 and if we turn to paragraph 174 I don't want to I guess get us bogged  
8 down too much in the actual paragraph so I'll just say for the record  
9 paragraphs 174 through 178 of Dr. Storer's declaration in the 1187  
10 proceeding walk through why the teachings of Pauls similarly have the  
11 throughput of the communication channel as being the parameter that you  
12 look at when choosing between different compression algorithms and then,  
13 for example, if we turn to paragraph 178 he explains again that this is  
14 particularly true of at least the H.263 MPEG and MPEG2 algorithms and  
15 compression encoders created to implement each of these algorithms. So I  
16 think we were very consistent and clear throughout our petitions and in our  
17 expert declarations the distinction between the algorithm that then has to be  
18 implemented in a specific encoder in the properties of an encoder and that  
19 when you look at a specific encoder, one MPEG encoder can have a  
20 different execution rate than a second MPEG encoder. But that's within the  
21 skill and knowledge of a POSITA when they're constructing it to know those  
22 differences.

23               So I guess it's kind of like a four cylinder engine. I hate  
24 analogies I guess in PTAB hearings so this may be not the best thing but  
25 four cylinder engine you can say well what's faster, four cylinder or six  
26 cylinder, and then you say oh, well, how did you actually build it? What did

1 you put into it? How is it actually operating? The answer is going to be  
2 based upon the implementation rather than this higher level description of  
3 the engine and I'll stop the analogies because I know that's probably not the  
4 way to go.

5           So I think turning to the motivation to combine, it seems like  
6 Patent Owner has been arguing that we didn't provide a sufficient motivation  
7 to combine Imai's and Pauls' teachings and I guess the first thing I would  
8 start off with is Imai itself, particularly under KSR where you're supposed to  
9 find a suggestion in the art to combine, it's clear that it teaches also that its  
10 system can be used for video and rather than in our petition simply relying  
11 on a POSITA's knowledge to say hey, there's a lot of video encoders out  
12 there and then have the Patent Owner say that's not true, maybe they weren't,  
13 we provided a specific reference here that has specific examples of the  
14 asymmetric video encoders that were available and there's no dispute now  
15 that those encoders referenced in Pauls are asymmetric video encoders. The  
16 dispute is well was it obvious to combine, and I think I would start and end  
17 almost with yes, it would be obvious because Imai itself is providing that  
18 explicit teaching saying you can use video encoders in our system and Imai's  
19 teaching are broad teachings. It's not a teaching where you're looking at you  
20 have to use this encoder and you have to use this encoder, Imai's saying you  
21 can use encoders 1 to N, you can use various encoders from various different  
22 standards or algorithms for implementation in a specific encoder.

23           So if we go to -- I'm going to go to the 1187 petition at page 12  
24 because I do think if you're just looking at Realtime's briefing on the issue or  
25 their slides rather than the underlying record, they're not including the full  
26 explanations in all the references in our record as to why there should be the

1 combination of these references. So page 12 of our petition explains how  
2 paragraph 172 of Imai ties in this idea of using other signals including video  
3 signals in its system and then we have a citation to Dr. Storer's declaration at  
4 the bottom there saying that, you know, it would have been well known at  
5 the time for POSITAs in this field that they would have been  
6 interchangeably using audio and video encoders and they would look at that.  
7 If we turn to petition, page 19 there's an additional discussion on the  
8 paragraph in the middle of that page again talking about the applicability and  
9 the benefits of using the Imai system with video and the same types of  
10 benefits that Imai provides to audio being available for video and I don't  
11 believe that Patent Owner has addressed these portions of our petition.  
12 They've pointed to other areas to say hey, they didn't show how or why to  
13 combine.

14 But I think Imai's certainly teaching why, and Imai provides the  
15 basis of how, to say a person of skill in the art would be suggested from  
16 Imai's explicit statement of using video encoders to look at the typical types  
17 of video encoders that were available that we provided specific examples for  
18 in the Pauls reference notwithstanding that the Pauls reference itself is also  
19 about choosing between different encoders for the throughput of a  
20 communication channel and selecting a different asymmetric encoder. So I  
21 think all those kind of wrap arounds basically say there's more than  
22 sufficient evidence, especially under KSR, that there's a motivation to  
23 combine here, and I think that's all I have on this unless there are any  
24 questions, Your Honors. So then I think the last issue that I'm seeing from  
25 Realtime's slides at least and then any other issues that you feel I should  
26 address is the claim 20 and whether we addressed for claim 20 the

1 compression ratio rather than the compression rate of the encoders.

2           If we go to the specific paragraph of Dr. Storer's declaration in  
3 the 1187 proceeding again, Dr. Storer in paragraph 230 addressed claim 20  
4 and he referenced the fact that it had the limitations of claim 1 and then he  
5 addressed the additional issues of the arithmetic algorithm and if we go back  
6 to the analysis that's for claim 1 what I just walked through from paragraph  
7 67 of Imai, it's clear that Imai is teaching both encoders with different  
8 compression rates and encoders with different ratios in paragraph 67 and in  
9 fact Realtime's expert admitted, and I guess it's Exhibit 1029 in his  
10 deposition at page 139, lines 19 to 22, he admitted that Imai teaches  
11 switching between encoders with different compression ratios. So I don't  
12 think that there should really be any dispute here. The only dispute I think is  
13 between Realtime, maybe their attorney, and both sides experts that the 67  
14 teaches the ratio rather than the rate selected between two compressors, and  
15 although I have nine minutes remaining I guess I'll ask -- I've been probably  
16 speeding through too fast. Are there any questions about any of the topics  
17 I've discussed or anything else that's bothering you?

18           JUDGE CHERRY: No, I don't have any questions. You can  
19 reserve the balance of your time. We'll add that to your --

20           MR. BATTS: Thank you, Your Honors.

21           JUDGE CHERRY: How much time would Patent Owner like  
22 to reserve for surrebuttal?

23           MR. STONEDALE: Thank you, Your Honor. I'd like to  
24 reserve ten minutes.

25           JUDGE CHERRY: Whenever you're ready.

26           MR. STONEDALE: Thank you. I'd like to discuss with you

1 some details of the '477 patent, particularly what it requires and what it  
2 discloses. I'd like to start off by noting that we have not dropped any of our  
3 arguments, there are certain arguments not referenced in the slides and to the  
4 extent we don't talk about those today we are resting on the papers on those  
5 arguments. So first I want to start out with the requirement of the first and  
6 second encoders and --

7 JUDGE CHERRY: Don't forget to reference the slide numbers.

8 MR. STONEDALE: Oh, thank you. Starting on slide 8, sorry,  
9 slide 4. There's a requirement to read the obviousness combination onto the  
10 claims and in this particular place going on to slide 5 limitation 1B recites  
11 two encoders, a first asymmetric data compression encoder that is  
12 configured to compress video image data at a higher speed, a higher data  
13 compression rate than the second asymmetric data compression encoder.  
14 Petitioner's have not indicated which encoder running which algorithm  
15 would be either of these encoders in their obviousness combinations nor  
16 have they done so with respect to Imai or Pauls and --

17 JUDGE BRADEN: But don't Imai and Pauls both have  
18 multiple encoders that do both video and image data and they do them at  
19 different rates? I want to make sure, when you say that they need to be  
20 identified as this is number one and this is number two and those never  
21 change. It always has to be number one and always has to be number two.

22 MR. STONEDALE: I don't that they never have to change but  
23 there has to be some disclosure of an encoder that is configured to compress  
24 video or image data at a higher rate than another encoder. Now it could --

25 JUDGE CHERRY: You agree that just to lay the ground work  
26 that --

1 JUDGE BRADEN: Judge Cherry, can you turn your  
2 microphone on?

3 JUDGE CHERRY: Sure. Do you agree that the compression  
4 rate is the execution rate?

5 MR. STONEDALE: We did not dispute the definition the  
6 Petitioners offered that it can be measured by the amount of input data that  
7 can be compressed to give a compression ratio. I'm not sure if you're  
8 referring to something that's distinct from that.

9 JUDGE CHERRY: Okay.

10 MR. STONEDALE: When you say execution rate.

11 JUDGE CHERRY: Because he talked about how Imai teaches  
12 some that operate as an execution rate, some that have different compression  
13 ratios and he said that we're relying on the execution -- I'm paraphrasing so  
14 he can come back up and clarify -- but he said that we're relying on the  
15 execution rate to measure this compression rate. Is that -- do you dispute  
16 that that's an accurate measure of compression rate?

17 MR. STONEDALE: I don't believe Imai mentions the  
18 execution rate of any of its encoders so --

19 JUDGE CHERRY: But doesn't it say that there are some that  
20 have a higher execution rate than others?

21 MR. STONEDALE: No, I don't think so.

22 JUDGE CHERRY: I reviewed this at paragraphs 67 and 68 of  
23 Imai.

24 MR. STONEDALE: I have paragraph 67 here, we can go right  
25 there. Okay. So start with slide 18 is paragraph 67 of Imai and I have here  
26 highlighted what Petitioners and Dr. Storer have been relying as a purported

1 disclosure of compression rate.

2 JUDGE BRADEN: Sorry. What slide are you on?

3 MR. STONEDALE: Slide 18. And paragraph 67 of Imai  
4 reads,

5 "Including a method which provides a relatively high or a large  
6 bit rate of the resulting coded data," that of course is referring to the output  
7 bit rate, "but can reproduce an audio signal with relatively good  
8 reproducibility, a method which can provide a relatively low or small bit rate  
9 of the resulting coded data but reproduces signal with a poor reproducibility  
10 and a method which requires a large amount of computation for decoding  
11 (such a method also requires a larger amount of computation for coding)."

12 Now the amount of computation for decoding is not the  
13 compression rate and to the extent Petitioners properly rely on that  
14 parenthetical which they bring up in their reply, that is not suggesting that  
15 Imai should include a coder or algorithm that requires a larger amount of  
16 computation for coding. It's saying that by virtue of having one that requires  
17 a larger amount of computation for decoding that may also result in having  
18 one that requires a larger amount of computation for coding and I think it's  
19 notable that this is the only reference in all of Imai to the amount of  
20 computation for coding and the reason that is is because Imai is not  
21 concerned with compression rate at all. It is concerned with, to the extent it  
22 is concerned with throughput, it's concerned with slow networks slowing  
23 down their real time transmission of data and it's concerned with a decoder  
24 that is not quipped on the client's side of the server to decompress the  
25 encoded data fast enough to reproduce in real time. They would not need to  
26 be concerned, or Imai does not need to be concerned about the amount of

1 computation for coding because the POSITA implementing the system  
2 knows what kind of system he's implementing, he knows the hardware, he  
3 knows its capabilities. The concern with Imai is with regard with what's  
4 happening with the connection to the client and what kind of hardware  
5 implementation the client has. So that does not discuss execution speed.

6 We can go also to paragraph 69. I'm now looking at slide 17. It  
7 mentions the various output speeds that could be outputted from the  
8 encoders. These of course are not execution speeds, they're output speeds.  
9 Paragraph 68 mentions one example of a coding method which requires not  
10 so large an amount of computation for decoding as ATRAK. That again is  
11 concerned with decoding. It's not mentioning a coding speed and another  
12 portion that Petitioners rely on for a purported disclosure of execution rate is  
13 here on slide 15, it's highlighted. That's paragraph 68 of Imai which states,

14 "An example of the coding method which provides a relatively  
15 less bit rate of the resulting coded data, i.e., which provides a high  
16 compression rate or MPEG3," MPEG layer 3 that's MP3 and ATRAK2.

17 Now here it does use the term compression rate but I think  
18 everyone agrees that's actually referring to compression ratio. It's a high  
19 amount of compression, not a high speed of compression and Dr. Storer  
20 agreed with that interpretation. So, and to the extent that there is any doubt  
21 there the line above compression rate refers to a relatively less bit rate of the  
22 resulting coded data which makes it clear that it's talking about output bit  
23 rate, not compression speed. Are there any questions about the meaning of  
24 these passages? I'm afraid I may have gone through those too --

25 JUDGE BRADEN: Now could you address paragraph 69  
26 which talks about that even if you've got similar encoders or you get

1 encoders that are using the same algorithms, if the bit rates are different  
2 from each other that means the use of different coding methods and then it  
3 does discuss the outputted data rate from each of the encoders. Can you  
4 discuss your thoughts on that and its implications?

5 MR. STONEDALE: Yes, Your Honor. The ATRAK2 is a  
6 coding standard and in these coding standards you can output multiple  
7 different output rates, different levels of compression of the same standard.  
8 So for example, you can stream an ATRAK or an MPEG stream at 64, 128  
9 kilobytes per second or more than that and so what it's saying here is that  
10 even with just the ATRAK2 algorithm, encoders using the ATRAK2  
11 algorithm, it can encode at different output speeds with different  
12 compression ratios to match, for example, different speeds in a  
13 communication channel. So for example, a user who has a slow  
14 communication channel could listen to the audio at 24 KBPS and that user  
15 could listen to it in real time. If he had a faster communication channel, say  
16 a better connection, then he could listen at 64 KPBS and that would provide  
17 him with higher quality audio. It would be an ATRAK, it would be included  
18 using an ATRAK algorithm that would be a slightly algorithm that got a  
19 higher output rate because it was not compressing it as much, usually  
20 because it's less lossy, it's maintaining more of the original information that's  
21 there to reproduce higher quality audio and this is referenced in Imai when it  
22 talks about the using encoding methods that produce lower quality audio but  
23 at a lower bit rate and higher quality audio at a higher bit rate.

24 JUDGE CHERRY: But you agree that Imai does teach  
25 selecting based on the amount of computation, at least at the decoder, right?

26 MR. STONEDALE: Yes, it is concerned with the decoder's

1 computation.

2 JUDGE CHERRY: And it does draw a relation between that  
3 computational load of the decoder and the encoder, correct?

4 MR. STONEDALE: It notes a vague sometimes correlation  
5 between the two, to the extent that it is --

6 JUDGE CHERRY: But aren't you kind of requiring that it  
7 anticipate -- aren't they relying on obviousness and they have Dr. Storer  
8 testifying that, you know, kind of based on that teaching a person of ordinary  
9 skill who -- do you dispute the level of ordinary skill in this case?

10 MR. STONEDALE: We do not.

11 JUDGE CHERRY: Someone who's got a Master's degree or a  
12 Bachelor's degree and experience working in this field?

13 MR. STONEDALE: We have not disputed that.

14 JUDGE CHERRY: So you just testified that a person of  
15 ordinary skill using this teaching about computational -- okay I'll call it  
16 computational, I don't know if that's exactly the term in this art -- but the  
17 amount of computation necessary for decoding that a person of ordinary skill  
18 and also this suggestion about the amount of computation in encoding and  
19 that could have used that teaching to select a system that selects based  
20 computational load encoding. Does your expert dispute that a person of  
21 ordinary skill could make those inferences from this reference?

22 MR. STONEDALE: Which inference?

23 JUDGE CHERRY: Like the inference that this would suggest  
24 to a person of ordinary skill that you can select based on computational load  
25 and that you can select based on computational load of the encoder and then  
26 Dr. Storer provides examples of some of the encoders that are provided in

1 this reference and said that a person of ordinary skill could understand it as  
2 suggesting this, or teaching or suggesting this, does your expert dispute that?

3 MR. STONEDALE: Yes. Well our expert disputes -- the only  
4 reason that --

5 JUDGE CHERRY: Has he addressed this testimony by Dr.  
6 Storer in paragraphs 136 and 137 of his declaration that the Petitioner's  
7 counsel walked us through a little bit ago? Did you expert specifically  
8 dispute this?

9 MR. STONEDALE: Let me look at those paragraphs  
10 specifically. Paragraph 136.

11 JUDGE CHERRY: Yes. Where he points to the part that we  
12 just talked about in paragraph 67 and then he -- and 137 where he says,

13 "In my analysis of the claim limitation I've explained how  
14 MPEG layer 3 and ATRAK and ATRAK2 are asymmetric compressors,"

15 I'm paraphrasing now. A POSITA would understand that an  
16 encoder implementing any one of these compression algorithms would have  
17 a different execution speed from another encoder that implements a different  
18 one of the compression algorithms. I mean, so if Imai already teaches that  
19 we can -- a system configured to select it, well a decoder based on a  
20 compression rate, isn't that also configured to select based on encoding  
21 really which is what I --

22 MR. STONEDALE: No.

23 JUDGE CHERRY: Why not?

24 MR. STONEDALE: First of all, the claim requires that an  
25 asymmetric data compression encoder and so by definition asymmetric data  
26 compression encoders have inverse relationships between the amount of

1 computation for encoding and decoding. So the, and this is described in the  
2 patent and the Petitioner's agrees with the same definition of asymmetric  
3 data compression encoder. So Imai's note that a algorithm that requires less  
4 computation for decoding would also require less computation for encoding.  
5 It's not even applicable to an asymmetric data compression encoder.

6           The other problem with it is it's not actually suggesting that you  
7 should have a compression encoder that requires different amounts of  
8 computation. It's suggesting you should have a decoder that has different  
9 amounts of computation and that may have the side effect of having  
10 compressors that have differing amounts of computation, especially if  
11 they're symmetric not asymmetric encoders.

12           With respect to this paragraph you asked about. Our expert did  
13 disagree that any of these teachings teach the configured to limitation. Here  
14 Dr. Storer is saying that if you have all these different encoders, sometimes  
15 they're going to have different compression rates. That may be too. Imai  
16 doesn't say so. Pauls doesn't say so because that's not a relevant concern in  
17 those references. But it may be true but the point is that's insufficient. If  
18 you can't say which is intended to be the faster encoder, then it can't meet the  
19 configured to limitation which requires that one encoder be configured to be  
20 faster, not just may be faster because of some reason that's not being taken  
21 advantage of or a reason that's not by design. So I think here what Dr. Storer  
22 is saying is both incorrect and irrelevant. It's incorrect because he relies on  
23 those portions of Imai that we just walked through as disclosures of  
24 compression rate and they're not and I think to the extent you have any  
25 questions about that we should go through that in detail because I think this  
26 is a very important point.

1           The whole premise of what Dr. Storer is relying on isn't there.  
2   There's just no teachings about compression rate. Imai doesn't care about  
3   compression rate and so it's incorrect in that sense. It's also irrelevant  
4   because what he's determining from these purported disclosures of  
5   compression rates is that they would be different and that doesn't matter.  
6   That's insufficient.

7           JUDGE BRADEN: So are ATRAK and MPEG, are you saying  
8   that they're not asymmetric algorithms, encoding algorithms?

9           MR. STONEDALE: We have not disputed that. I don't think  
10   it's clear that ATRAK is symmetric personally but we have not disputed that  
11   because when we offered our declaration, Petitioner's had not yet relied on  
12   this parenthetical. But I would point out that this parenthetical is not talking  
13   about any particular encoder. It's saying that an encoder in general requires  
14   a large amount of computation for decoding will usually also require a large  
15   amount of computation for coding. Now that relationship that's being  
16   described there is not a relationship that exists between an asymmetric data  
17   compression encoder and its decoder.

18          JUDGE BRADEN: Well I believe that the petition does cite to  
19   paragraph 137 of Exhibit 1003 which is Dr. Storer's declaration and the  
20   petition and Storer talk about MPEG layer 3 and ATRAK 2 being  
21   asymmetric compression algorithms. So I believe that that started off the  
22   proceeding with that intention.

23          MR. STONEDALE: Yes, that's right. To be clear I'm not  
24   actually talking about those encoders. This portion of Imai that has the  
25   parenthetical -- which is what I thought you were asking about, perhaps I  
26   misunderstood --

1 JUDGE CHERRY: They did cite the paragraph with the  
2 parenthetical and they do reproduce it there, right?

3 MR. STONEDALE: Yes.

4 JUDGE CHERRY: They did cite a totally different paragraph  
5 of the thing.

6 MR. STONEDALE: Yes.

7 JUDGE CHERRY: Your contention is they just didn't focus  
8 their discussion on the --

9 MR. STONEDALE: They only focused their arguments on the  
10 computation for decoding. Now we're talking about the computation for  
11 coding. But I will say that the parenthetical computation for coding also  
12 does not disclose the limitation 1B because it's not actually saying that it  
13 should be included for that reason and it's not even saying that the  
14 relationship necessarily exists. But what I thought Judge Braden was asking  
15 about was whether or not we are contending that ATRAK or MP3 are  
16 asymmetric and we're not disputing that. We're not taking a position either  
17 way.

18 But what I am suggesting is that whatever is being referred to in  
19 this parenthetical, that that is not asymmetric. This parenthetical is not  
20 referring to a particular encoder but it's describing a relationship in general  
21 amongst encoders and decoders that is not asymmetric. Does --

22 JUDGE CHERRY: So you're saying there's discussion in 139  
23 about paragraph 68 so that that compression rate you're saying is the  
24 compression ratio and that's not talking about the execution speed? This is  
25 in paragraph 139, I'm sorry about that.

26 MR. STONEDALE: Paragraph 139 of the declaration.

1 JUDGE CHERRY: Yes, and then where he's talking about  
2 paragraph 68 which I think you explained was, and I think we all agree is the  
3 compression -- where it says provide high compression rate, that that's high  
4 compression ratio. It should be --

5 MR. STONEDALE: Yes, yes, that's right. So again I would  
6 say paragraph 139 is talking about compression ratios, not compression rate  
7 so it can't be describing the configured to limitation section 1B, sorry  
8 limitation 1B. Because I read some confusion on Judge Braden's face I think  
9 I want to go more into that asymmetric point. The patent and Petitioners  
10 both took the position that asymmetric data compression encoder is one  
11 where the encoder takes significantly more time than the decoder,  
12 significantly more computation. So this relationship being described here in  
13 Imai is not comporting with that definition because it's talking about if  
14 there's more computation required for decoding then there is also more  
15 computation for coding whereas --

16 JUDGE CHERRY: Well why wouldn't that still be true? Why  
17 couldn't an asymmetric encoder where the, let's say encoder A the  
18 decompression takes is slower than encoder -- let me start again. You have  
19 two encoders A and B and if the encoder A's decompression is slower than  
20 encoder B's, then why wouldn't the same be true even -- if it's asymmetric  
21 why wouldn't it be true that the encoding takes longer on the other side. Is  
22 there testimony as to that that this relationship would hold true if encoder A  
23 is slower than encoder B, why wouldn't this relationship continue on on the  
24 other side on the decoder even though there's an asymmetry between  
25 encoding and decoding, why wouldn't there still be this relationship between  
26 A and B being different algorithms?

1           MR. STONEDALE: Much of the computational expense of an  
2 asymmetric encoder is in order to compress to a large degree it's also easy to  
3 uncompress. So some of the effort that makes it fast decompress is actually  
4 what's causing a high compression rate. So you don't have that same  
5 relationship as you do with that symmetric encoder where you're simply  
6 undoing what's been done and in that case, where you have a symmetric  
7 encoder, the more computation required for encoding because you're  
8 undoing what's been done, the more computation is required for encoding.  
9 So this is a consistent relationship for symmetric encoders. For asymmetric  
10 encoders there just is no consistent relationship. So this --

11           JUDGE CHERRY: Do we have evidence of that?

12           MR. STONEDALE: I believe that's described in actually Dr.  
13 Storer's declaration where he's talking about why these encoders are  
14 asymmetric and it's mentioned in the patent as well.

15           JUDGE CHERRY: Well I understand that general point about  
16 asymmetric encoders is described, but this thing you've just provided this  
17 relationship between different asymmetric encoders that between the  
18 decoding and encoding relative to two separate types of asymmetric  
19 encoders; where is that in the record?

20           MR. STONEDALE: That is at least in Dr. Storer's declaration  
21 where he mentions --

22           JUDGE CHERRY: And more importantly, does your brief cite  
23 this and explain this that you're now talking about?

24           MR. STONEDALE: The surreply makes the argument that to  
25 the extent that this is describing symmetric encoders but does not rely on  
26 that because of course even if this were describing asymmetric encoders it's

1 not actually -- it's saying that they should be included. It's saying sometimes  
2 this relationship exists.

3 JUDGE CHERRY: What evidence does your surreply say to  
4 support that?

5 MR. STONEDALE: I do not recall what citation  
6 (indiscernible.)

7 JUDGE CHERRY: Maybe when you do surrebuttal you can  
8 point us to those specific pages where this argument was raised.

9 MR. STONEDALE: I can do that right now. The surreply --

10 JUDGE JIVANI: To help you let me suggest counsel that it  
11 appears to be on page 9 of your surreply and the final paragraph beginning,  
12 "Second, Imai does not disclose that the system should include  
13 encoders."

14 MR. STONEDALE: Yes.

15 JUDGE JIVANI: And I think what my colleagues and I are  
16 concerned about is while we see the argument disclosed on that page, we see  
17 the citation beyond just a direct quote of the same language at issue in  
18 paragraph 67 of Imai so it would be particularly helpful if in addition to this  
19 what appears to be attorney argument in the surreply, you had portions of  
20 deposition testimony or other evidence from either declarant that might help  
21 support your position.

22 MR. STONEDALE: Understood.

23 JUDGE JIVANI: Thank you. That I understand is sort of an  
24 ask on the fly perhaps of you, but to the extent that that exists in the record  
25 I'd ask that you present that at surrebuttal

26 MR. STONEDALE: Thank you. I will find it and do so.

1 JUDGE JIVANI: Since we're at looking that page, I would like  
2 to direct your attention to the following page in which I understand that you  
3 argue that Imai's disclosure of ATRAK2 encoders that operate at different  
4 bit rates does still not meet the claim limitation and I see that you argue that  
5 that's new. I'm not quite sure I understand how that's new given the  
6 language in the petition that we've looked at and particularly in Storer's  
7 declaration at 137. But I question how this argument is new so I'd like to  
8 hear your explanation of that, but I also don't fully understand this paragraph  
9 so if you could explain it to me that would be helpful also.

10 MR. STONEDALE: The bit rates that are being disclosed are  
11 output bit rates and the output bit rates are not compression rates because  
12 they are saying how much data is being output per second, not how much is  
13 being compressed. So they reflect differences in compression ratio, not  
14 differences in compression rate. Does that --

15 JUDGE CHERRY: Doesn't the compression rate differences  
16 factor into that? I mean that you just said it's a kind of combined metric of  
17 compression ratio and compression rate, right?

18 MR. STONEDALE: I think this gets to the situation that Dr.  
19 Zeger described in his declaration where he shows how you can't, without  
20 breaking the real time function of Imai, you can't create different output bit  
21 rates by varying the compression rate and holding the compression ratio the  
22 same.

23 So let's go to this paragraph of Imai. We are on slide 17,  
24 talking about paragraph 69 and here it's saying that there's these various  
25 output bit rates and you can see these are all going in descending order and  
26 the reason they're going in descending order is not because the encoder is

1 slowing down, it's because these encoders are operating at different  
2 compression ratios and if they had been slowing down, it would present a  
3 major problem because each -- so let's start with the example of the first  
4 disclosed bit rate, the 64 KBPS.

5           So if audio is being transmitted at 64 KBPS that means that  
6 each 64 kilobyte chunk of data encodes one second of audio. So if you then  
7 take that exact same encoder and without changing the compression ratio,  
8 you cut that in half in terms of its speed, its compression rate and you slow it  
9 down to 32 KBPS now every second you're transmitting half a second of  
10 data which means you can't listen to that in real time. It would take two  
11 minutes to listen to one minute of audio. So that makes it very clear that the  
12 only way this can work at these different output bit rates is if the  
13 compression ratio is changing, not the compression rate. The compression  
14 rate is simply not mentioned. It could be the same, it could be different, it  
15 doesn't say. If in fact it's starting with the same source file, the compression  
16 rate's very likely about the same because it still has to encode as much per  
17 second.

18           JUDGE CHERRY: And where is this -- is this in the  
19 declaration? I mean I'm getting a little concerned because I feel like we're  
20 kind of getting testimony on the fly here at the hearing that, you know,  
21 wasn't in the declaration so can you ground this in the declaration so we're  
22 not introducing new arguments?

23           MR. STONEDALE: Yes. This is in paragraph 81 through --  
24 it's actually cited in the paragraph that Judge Jivani was just pointing out.  
25 Paragraphs 81 through 86 of Dr. Zeger's declaration explain that if you try to  
26 change the output bit rate by modifying the compression rate of the encoder

1 then it breaks the real time function of Imai and won't work. You have to  
2 change the compression ratio.

3 JUDGE BRADEN: So were you saying that paragraph 81 of  
4 Mr. Zeger's declaration, which is Exhibit 2002, explains this because  
5 evidently that's talking about paragraph 67 and I'm looking here and I'm  
6 trying to tie that in to the discussion of the bit rate dealing with ATRAK2.  
7 I'm not sure --

8 MR. STONEDALE: The --

9 JUDGE BRADEN: All right. So I'm at paragraph 93 and 94 of  
10 Dr. Zeger's declaration. Is this what you're referencing?

11 MR. STONEDALE: Are you looking at the 1187 declaration  
12 or the 1630?

13 JUDGE BRADEN: The 1187.

14 MR. STONEDALE: Okay. I've got the wrong one.

15 JUDGE BRADEN: Exhibit 2002.

16 MR. STONEDALE: Yes. That is a different set of numbering.  
17 Let me bring that up.

18 JUDGE BRADEN: That's paragraph -- I think you're really  
19 talking about paragraphs 93 and 94 going to 95. I think that's --

20 MR. STONEDALE: You may very well be right. I'm having  
21 trouble finding that at the moment. But Dr. Zeger walks through the  
22 situation where the -- he uses Dr. Storer's example where Dr. Storer talks  
23 about taking a 64 kilobyte per second encoder and making it into a 32  
24 kilobyte encoder by cutting its speed by half and Dr. Zeger specifically  
25 walks through and says why that won't work. The same explanation is  
26 applicable to changing the speed of any encoder that's operating at real time

1 while holding the compression ratio constant.

2 JUDGE CHERRY: I guess what concerns me is that, you  
3 know, Dr. Zeger's testimony is in this very abstract way but I mean Dr.  
4 Storer's offered us these specific examples. I don't see Dr. Zeger really  
5 disputing them.

6 MR. STONEDALE: Dr. Zeger does in fact dispute the  
7 paragraph that Dr. Storer relies on to illustrate this. Dr. Storer in paragraph  
8 159 of his declaration --

9 JUDGE BRADEN: And you're on which proceeding? Not the  
10 1187.

11 MR. STONEDALE: I'm looking at the 1630 proceeding. So  
12 here in paragraph 159 Dr. Storer offers this example to illustrate what he  
13 says is going on in paragraph 69 of Imai. So paragraph 69 references  
14 ATRAK2 encoding at these various speeds and then in paragraph 159 of Dr.  
15 Storer's declaration in the 1630 case he illustrates how this would work and  
16 then referencing that same paragraph Dr. Zeger, in paragraph 83, begins  
17 walking through the example of why that would not work and he gives the  
18 same explanation I just summarized which is that if you were to take a 64  
19 KBPS stream of audio but encode it such that 64 kilobytes represents each  
20 second of audio and then slow that down by half, you're only encoding half a  
21 second of audio per second, the result being it can't possibly be transmitted  
22 or listened to in real time. So Dr. Storer is incorrect in his interpretation of  
23 what's going on.

24 JUDGE BRADEN: Or maybe we should turn to Pauls and take  
25 a look at it because I have some other questions regarding figure 5 of Pauls  
26 and I would really like you to address, please.

1           MR. STONEDALE: Of course. Slide 21 shows figure 5 of  
2 Pauls and here again we have multiple output bit rates and Pauls makes it  
3 clear that these output bit rates in paragraph 24 of Pauls I believe it is. What  
4 was your question?

5           JUDGE BRADEN: Sorry, I was on mute. What I'd actually  
6 like to talk a little bit about is why you believe that Pauls does not show the  
7 first and second encoders with asymmetric algorithms, especially I mean I  
8 realize that your argument is that figure 5 only shows output but given the  
9 disclosures within Pauls itself that talks about the encoding algorithms and  
10 in their different levels of compression, what is your argument then that it  
11 does not meet the claim limitations?

12          MR. STONEDALE: So the part of Pauls that Petitioner is  
13 relying on for references the different levels of percentages of compression,  
14 this again is talking about compression ratio, the degree of compression, not  
15 the rate of compression and that's evident here from reference to losing  
16 information and reducing the amount of data to be transmitted. So it's  
17 talking about degree of compression, not speed and again these bit rates  
18 disclosed in figure 5 are output bit rates.

19          Pauls, like Imai, is simply unconcerned with the speed at which  
20 the encoders can encode because it assumes that it's running on hardware  
21 that is sufficiently fast to keep up with the transmission of the data. The  
22 bottleneck in both these systems is the data transmission, it's not the encoder  
23 and in fact Pauls is even a worse position because there's not even a  
24 parenthetical that mentions anything to do with computation speed in Pauls.

25          JUDGE BRADEN: But what do we do with the fact that we  
26 have testimony that talks about how MPEG2, H.263 are known in the art and

1 known to be video compression algorithms that have different relative rates  
2 of compression and they're being used here and we see multiple encoders  
3 being used by Pauls in figure 3, and then we see these different relative rates  
4 of compression in figure 5. Putting that together with the declaratory  
5 testimony we have, I would not see that being two different encoders with  
6 two different rates compression.

7 MR. STONEDALE: I disagree that what we have here in  
8 figure 5 is rates of compression. These are output bit rates and that's stated  
9 in paragraph 24 I believe it is of Pauls, that explicitly makes clear these are  
10 output bit rates. With respect to Dr. Storer's statement that a POSITA would  
11 know the relative compression rates of MPEG and H.263, when asked at  
12 deposition about that he wouldn't say which one would compress faster. He  
13 said one could compress faster than the other, it all depends on  
14 implementation and Pauls does not disclose such an implementation.

15 JUDGE BRADEN: It doesn't disclose an implementation  
16 where they would be faster than the other?

17 MR. STONEDALE: Well it simply doesn't say --

18 JUDGE BRADEN: Are all of these going to compress at -- is  
19 the compression rate the same? Do you have testimony to that fact?

20 MR. STONEDALE: Well it doesn't matter if it's the same  
21 because it's not configured such that one is faster than the other. Dr. Storer  
22 argued that a POSITA would know based on his understanding which of  
23 these is faster than the other. He doesn't say which one it is, he just says that  
24 a POSITA would know and then when I asked him at his deposition which  
25 one would be faster, he said it could be either and I can get you that  
26 deposition testimony.

1 JUDGE CHERRY: Does your patent disclose which one is  
2 faster?

3 MR. STONEDALE: Between H.263 and MPEG2?

4 JUDGE CHERRY: Between any of these algorithms.

5 MR. STONEDALE: Yes. The patent discloses that for --

6 JUDGE CHERRY: Does it disclose the implementation of the  
7 algorithm?

8 MR. STONEDALE: Well it discloses two things. There's two  
9 asymmetric data compression encoders disclosed in the patent. That's  
10 Lempel-ziv and arithmetic and it discloses that the arithmetic is slower but  
11 compresses the higher compression ratio than the Lempel-ziv. Then when it  
12 talks about --

13 JUDGE CHERRY: Does that depend on the implementation or  
14 is that irrespective of the implementation?

15 MR. STONEDALE: I assume what it means is that, assuming  
16 that they're on the same hardware and they're both running close to optimum  
17 that the arithmetic would still be slower than Lempel-ziv.

18 JUDGE CHERRY: Does your patent explain that or does it  
19 assume that a person of ordinary skill would know that?

20 MR. STONEDALE: It assumes that knowledge, or it actually  
21 does explain the issue about that it's assuming close to optimal.

22 JUDGE CHERRY: So you agree that a person of ordinary skill  
23 at that time would understand how they implement these -- you agree that a  
24 person of ordinary skill at this time would understand how to implement  
25 these different encoding algorithms?

26 MR. STONEDALE: We haven't disputed that they would

1 know how to implement them. We've disputed that there's any disclosure of  
2 whether H.263 or MPEG is faster.

3 JUDGE CHERRY: Do you dispute that a person of ordinary  
4 skill would -- I mean Dr. Storer has testified that a person of ordinary skill  
5 would know how to implement these such that one was faster than the other.  
6 Do you dispute that?

7 MR. STONEDALE: I understand Dr. Storer's testimony was  
8 correct that his testimony was that a POSITA would understand that one of  
9 these was faster than the other and that a POSITA would understand that  
10 say, H.263 was faster than MPEG or vice versa, I don't recall which it was  
11 and that I think is untrue. I don't think a POSITA would know that and I  
12 also --

13 JUDGE CHERRY: Do you have any evidence to support that?

14 MR. STONEDALE: I have Dr. Storer's own testimony. Dr.  
15 Storer, when asked about this, said that it could be either and he wouldn't say  
16 which one was faster and we talked about this for quite a while and I have  
17 quote in the Patent Owner's response.

18 JUDGE CHERRY: But didn't you just agree that even in your  
19 example of Lempel.ziv and the arithmetic, that it would also depend on  
20 implementation?

21 MR. STONEDALE: So, for example, if you implemented  
22 Lempel.ziv on a computer that was, you know, a Commodore 64, an old  
23 computer like that and --

24 JUDGE CHERRY: That would be a miracle.

25 MR. STONEDALE: Yes. But arithmetic on a new computer,  
26 of course Lempel.ziv would probably run faster. So it's true you could do

1 that but the difference between what's disclosed in the patent where it's  
2 saying incomparable situations Lempel.ziv is going to be faster.

3           There is no such disclosure about Pauls because Pauls does not  
4 care about the encoding speed. It's just not an issue and I think that's  
5 fundamentally what's wrong with Petitioner's reliance on these two  
6 references is they're trying to extract a reason to configure these encoders  
7 based on compression rate when these references say nothing at all about  
8 compression rate. They're totally unconcerned with compression rate and  
9 they point to this and that as a subtle disclosure that may imply that maybe  
10 this encoder is faster than the other encoder and maybe they're not the same,  
11 but none of that goes to the issue that concerns us here and that's a disclosure  
12 of how or why the system would be configured such that it would be able to  
13 take advantage, it would have a reason to use one encoder that's faster than  
14 the other and the patent does disclose that. The patent talks about why it  
15 makes use of that difference in compression rate and why it has that  
16 configuration as (indiscernible.)

17           JUDGE BRADEN: But sort of as in the patent it talks about  
18 trying to eliminate a bottleneck by choosing a compression algorithm that  
19 would meet its specific need at that time. But my understanding is Imai is  
20 specifically saying what we're trying to do in real time we're trying to go to  
21 the encoder and it's going to get us the compression and then the  
22 decompression that we need in order to be able to maintain this real time  
23 transmission. Wouldn't that be the same thing? Here you've got one  
24 bottleneck in -- what is it, the '477 patent -- and in Imai you've got another  
25 kind of bottleneck so you're switching algorithms in order to be able to  
26 mitigate those kinds of bottlenecks and maintain the transmission level that

1     you want.

2                   MR. STONEDALE: That's true. But they're different  
3     bottlenecks and they're solved in different ways. The '477 patent concerns  
4     itself with two types of bottlenecks, actually it concerns itself with more than  
5     that. But the particular bottleneck at issue in claim 1 is the bottleneck where  
6     the encoder is running so slow that there's extra room in the transmission  
7     channel to transmit more data but the encoder is holding up the whole  
8     system and in order to solve that problem you need the encoder to go faster  
9     and in fact you would transmit more data if the encoder goes faster even if  
10    you do that at the expense of compression ratio. So, for example, if you  
11    switch from an arithmetic encoder to a Lempel.ziv encoder you could  
12    transmit more data even though the compression ratio is lower because the  
13    CPU or whatever it is that's doing the encoding has become the bottleneck in  
14    the system.

15                  Now what Imai is concerned with is that it never talks about the  
16    situation where the compressor is the bottleneck. It's concerned with a  
17    different bottleneck and that's the network, the network connection, and the  
18    solution to that problem is higher compression ratio. So it's a different  
19    problem and a different solution.

20                 JUDGE CHERRY: Wasn't it also concerned, I mean at least in  
21    your reading it's also concerned with the decompression bottleneck on the  
22    client side, right?

23                 MR. STONEDALE: Yes. But the solution to that problem is  
24    using not a faster encoder, a slower encoder but an algorithm that can be  
25    decoded with less computation power. So these are different problems and  
26    different solutions and Dr. Storer takes two tacks in trying to show that this

1 limitation is disclosed.

2           He talks about the disclosures in Imai and Pauls themselves as  
3 disclosures of compression rates and we've gone through that and explained  
4 why that isn't true and then he also says that a POSITA would modify Imai  
5 and such that it would use a difference in compression rate to match the  
6 throughput of the channel and he cites a portion of Imai, it's paragraph 145,  
7 and that is on slide 19 and here Imai is talking about the slow network issue  
8 that we just discussed and when you try to modify the compression rate of  
9 an encoder to address this problem it just does not work, and Dr. Zeger  
10 walked through that in specifics in his declaration in both cases where he  
11 said that if you increase the compression rate you're certainly not doing any  
12 good because that's going to have either no effect or it's going to output the  
13 data even faster and the network can't handle it. So that's pointless. If you  
14 decrease the compression rate then you break the real time issue as we've  
15 already discussed. Then you're transmitting less than a second's worth of  
16 data every second. So that won't work either.

17           So Dr. Storer has relied on only this one modification to get to  
18 the compression rate limitation where it's not otherwise disclosed and it  
19 doesn't work and if there are any more questions about the other recorded  
20 disclosures of compression rate, I'd be happy to address them but I think  
21 we've walked through why each of those does not disclose the compression  
22 rate. Judge Braden, did I answer all your questions with respect to Pauls?

23           JUDGE BRADEN: Yes, you did.

24           MR. STONEDALE: I want to move on now to the issue of  
25 motivation to combine. Petitioners have offered the combination, it's listed  
26 on slide 24. A POSITA would have been motivated to utilize the numerous

1 video and image data compression encoders of Pauls to enable data  
2 compression in Imai's system and Petitioners have not said which video or  
3 image compression encoders would be included, which algorithms would be  
4 included. They have just said some of them would be and they have not  
5 therefore offered a reason why any particular encoders would be included.

6           They do say that there's a number of similarities between those  
7 references and we don't disagree there are a number of similarities between  
8 the references. The issue is that just because two references are similar,  
9 POSITAs don't go taking everything out of one reference and combining it  
10 with the other reference. There has to be a reason and here we have this  
11 quote from Personal Web indicating that the motivation to combine has to  
12 say why a POSITA would make the combination, not just why it couldn't,  
13 and Petitioners only say why a POSITA could have made the combination.  
14 They don't fully say what the combination is because they don't say which  
15 encoders are taken from Pauls and they certainly don't say why those  
16 encoders would be selected outside of saying that video encoders would be  
17 selected because the POSITA wants to compress video.

18           Here on slide 25 we have the motivation to combine and it  
19 merely gives a reason to look to Pauls as you can see, and in fact they say a  
20 POSITA would logically look towards Pauls but that is not sufficient. In the  
21 Institution decision the Board relied on real time data in Active in order to  
22 indicate that merely looking to another reference can be sufficient. But this  
23 is a very different case because in Active the --

24           JUDGE CHERRY: Iancu.

25           MR. STONEDALE: Iancu?

26           JUDGE CHERRY: Yes           MR. STONEDALE: Thank

1 you. You would know. The secondary reference was being used merely to  
2 define and provide information about what was in the primary reference. It  
3 wasn't actually a combination of the two references, whereas here we have  
4 the Petitioners actually saying that a POSITA would take the encoders of  
5 Pauls and put them in Imai which is not merely looking at Pauls to define  
6 what's in Imai.

7 JUDGE CHERRY: But doesn't Imai say that it can be used  
8 with video encoders and Pauls provides examples of video encoders, right?

9 MR. STONEDALE: Yes. Both of those are true, but to render  
10 the limitation obvious the Petitioner has to say which specific elements  
11 would be combined, which specific encoders in Pauls would be in first and  
12 second encoders.

13 JUDGE CHERRY: I'm not sure whether they have to be that  
14 specific, right? Why do they have to -- I mean why can't the teaching,  
15 they've said that here's teachings of video encoders. A person of ordinary  
16 skill, I'm relying on paragraph 137 of Dr. Storer's declaration where he says  
17 a person of ordinary skill would know that some of these are faster than  
18 others based on the implementation and then you would, you know, again  
19 you're going back to whether Imai teaches I mean if Imai teaches, if we find  
20 that Imai teaches or at least renders obvious the idea of selecting an encoder  
21 based on computational rate, right, then wouldn't that testimony be enough  
22 at this point? I mean it all turns on whether we find Imai teaches or suggests  
23 or renders obvious this idea of selecting the encoder based on that disclosure  
24 in paragraph 67. Wouldn't you agree with that?

25 MR. STONEDALE: Yes, that's the primary concern. Of  
26 course if, for example, you were to find that Imai taught this limitation

1 because it taught encoder A and encoder B and everyone knows encoder A  
2 is faster than encoder B. Those being audio encoders you would need some  
3 sort of teaching to show that to do the same thing with the video encoders,  
4 whereas here Imai discloses no reason in general to take advantage of a  
5 difference in compression rates. It doesn't concern itself with the problem  
6 that that would solve, the problem that different compression rates would  
7 solve.

8               So then I think if you're looking to a more specific teaching  
9 about two of the encoders in Imai and you think that Imai discloses one is  
10 faster than the other, then those are audio encoders and here we need video  
11 or imaging encoders. So then you would need a similar teaching with  
12 respect to the video or imaging encoders. I think if you have a general  
13 understanding you'd be in a different situation that Imai does not disclose a  
14 general reason to configure the system that way and Petitioners have created  
15 an obviousness theory that really can't be evaluated because they never said  
16 which encoder would be first or second. They just say if there's encoders  
17 some of them will be different sometimes.

18               So there's no way for the Board to say yes, what would be  
19 obvious is to do this thing. To do this thing is to take this encoder, make it  
20 faster than this other encoder for this reason. They have not alleged that.  
21 They have merely said there's a lot of encoders here. They have different  
22 compression rates. They will be different sometimes and so configure the  
23 system like that. The only reason they've offered to configure the system to  
24 take advantage of the compression rate doesn't make any sense as we've  
25 shown and that really gets to the next point which is that they have not  
26 shown how the elements would be combined to make the predictable result

1 but I won't go over that again here.

2 I want to go back to the predictable relationship that the  
3 invention relies upon to show the distinction because Petitioners argued  
4 before that the patent did not disclose much about this compression rate  
5 limitation and I think that's totally incorrect and I've got these two citations  
6 here that were recited in the POR at page 3 and 21 of 1187 case that talk  
7 about how the invention uses these differences of compression rate to  
8 increase the throughput and this is specific to a problem where the encoder is  
9 the bottleneck, that the problem that Imai and Pauls are concerned with  
10 about the slow network is the bottleneck, and with that I am pretty much out  
11 of time.

12 JUDGE BRADEN: Thank you, counselor.

13 JUDGE CHERRY: Thank you, and you still have ten minutes  
14 so --

15 MR. STONEDALE: For surrebuttal.

16 JUDGE CHERRY: -- for surrebuttal. Petitioner has 34  
17 minutes based on my counting of --

18 MR. BATTS: Hopefully I don't need it, Your Honors.

19 JUDGE CHERRY: Great.

20 MR. BATTS: I think what we see here today is really a  
21 contrast in styles. On the one hand, I tried to point to the record and to the  
22 specific grounds and to the expert testimony and the expert opinions in the  
23 case while Realtime's counsel spent a fair amount of time here providing his  
24 own opinions about what he viewed as being the arguments that should have  
25 been raised or what he thinks which I think is all objectionable argument by  
26 counsel rather than --

1 JUDGE BRADEN: Okay, counselor, but can you talk to us a  
2 little bit about Patent Owner's arguments that Imai is really concerned with  
3 decompression and based on decompression rate or at any rate you can't  
4 determine compression rates which is what's required by the claim  
5 limitation.

6 MR. BATTIS: Sure, and I will. I did want to note at the  
7 beginning that they did concede claim 20. He repeatedly said that Imai  
8 teaches compression ratio and choosing between compressors that have  
9 different compression ratios and he admitted that specifically looking at his  
10 discussion of paragraph 68 of Imai where he talks about that it teaches using  
11 the compression ratio differences as being a variance. So I think before we  
12 get into the rest, I think whatever arguments they had earlier they've now  
13 conceded that Imai has that teaching for claim 20 and the claims that depend  
14 off of it.

15 I also wanted to note that your question earlier to me about the  
16 requirement of whether the compressors or the encoders always have to be  
17 higher or lower could be changing. His answer to you there he also  
18 conceded that Realtime's position is that they don't have to never change,  
19 they could actually change over time so Realtime's taken a broader  
20 interpretation of the claims and the requirements of claim 1 on the question  
21 you asked earlier.

22 I also think there is a real disconnect here on the arguments that  
23 we heard from him. When we look at the '477 patent which is repeatedly  
24 discussing and as explained by both experts, there's always this trade-off  
25 inherent in compression between compression rate and compression ratio  
26 and yet all of his arguments are trying to ignore teachings of rate or looking

1 at, in the vacuum, I'm just going to look at this and ignore the balance  
2 between compression rate and compression ratio even though the column 1  
3 explanation of the '477 patent that I pointed to earlier it says this is a critical  
4 kind of balancing point for compressors and, again, columns 5 and 8  
5 explanations of the '477 patent again stress this point. You have to look at  
6 both, you don't look at it in a vacuum.

7           Going to, I do want to object -- I guess I'm trying to go through  
8 my list and I do have time so I will get to your question -- I do want to object  
9 for the record formally as to this new argument regarding paragraph 67 and  
10 counsel's opinions about whether I guess what we are calling the  
11 parenthetical within 67 is with regard to symmetric or asymmetric  
12 compressors. They certainly did not raise this argument in their Patent  
13 Owner response. They have no expert opinion on this topic so whatever  
14 Realtime's counsel's opinions are, that is not a proper argument to be  
15 addressing here.

16           To I think Judge Cherry's point on this issue earlier when  
17 Realtime's counsel was arguing this parenthetical, they've really taken note -  
18 - they intentionally if you heard repeatedly when you asked for positions  
19 about what's your position on this, your position on ATRAK, asymmetric or  
20 symmetric -- they always were saying we're not taking a position on this or  
21 we're not taking a position on that. Well, they've intentionally taken no  
22 position on what is asymmetric versus symmetric in this proceeding and I  
23 assume that's intentional to leave it open for infringement if ever these  
24 claims survive. But I don't think they should be entitled to take we have no  
25 position on this and foot that now at the oral hearing to say oh, but now  
26 we're going to tell you what's a symmetric encoder versus an asymmetric

1 encoder. I think they should have to stand on what they raised in their  
2 Patent Owner response and even on their surreply they never even raised  
3 that sort of argument.

4 I do think if we go back to Dr. Storer's declaration for the 1187  
5 proceeding, Exhibit 1003, in paragraphs 136 and 137 he does address this  
6 idea that we did not address or include in our argument that the full  
7 paragraph of paragraph 67 is just not credible when reviewing our petition  
8 and when reviewing the accompanying declaration. We made clear that we  
9 were relying upon the overall paragraph and the teachings in that paragraph  
10 for what a POSITA would find to have been obvious and specifically as to  
11 the execution speed or the data compression rate. So then --

12 JUDGE BRADEN: Well what is your position then about their  
13 argument that paragraph 67 indicates that Imai does not have asymmetric  
14 compression because then the computational rates would be the same?

15 MR. BATTS: So I think it's clear that Imai paragraph 67, as  
16 explained by Dr. Storer, has one example but it has broader teachings in it,  
17 but it has this specific example of five encoders, two encoders that are the  
18 different compression ratios which appears Realtime's conceded and then the  
19 subsequent two encoders that have different compression rate and this idea  
20 that such a method usually requires a larger amount of computation for  
21 coding, that language -- and I believe Dr. Storer addressed that language in  
22 his deposition -- is consistent with the idea that an encoder may take longer  
23 to compress and the same data takes longer to decompress. There may be a  
24 relationship between the two but that relationship is actually --

25 JUDGE BRADEN: See that's my problem right there. There  
26 may be a relationship between the two. Where do I get to there is a

1 relationship so I can take what's there is here in Imai about decoding and  
2 cognitively be able to apply it saying this also applies to encoding, to  
3 compression?

4 MR. BATTIS: Because it explicitly says that it does apply to  
5 coding. It's saying that it does require a large amount of computation for  
6 coding. So it's not about just the relationship between the decoding and  
7 encoding, it's that the specific teaching here that Dr. Storer is relying upon is  
8 for coding and I think this goes back to that somehow in Realtime's  
9 argument they're running away from what they claim to be this invention of  
10 addressing the throughput of a communication channel which they aren't  
11 disputing (indiscernible) in the papers -- I don't know about today's  
12 argument at this point -- but they certainly do not dispute in any of the  
13 papers that both Imai and Pauls are teaching looking at the throughput of a  
14 communication channel for the selection of an encoder and at the same time  
15 they're saying there's no reason that anybody would ever look at the  
16 execution speed of an encoder when looking at the throughput of a  
17 communication channel, which is precisely what this claim 1 is supposed to  
18 be addressing. So there's a disconnect here where they're saying there's no  
19 reason anybody would ever do this, but that's the claim that we're looking at  
20 so if they're going to disclaim their claim that's one thing but I'm certain  
21 they're not going to disclaim their claim here.

22 So there is a really a logical disconnect in their argument as to  
23 there's no relationship between looking at throughput of a communication  
24 channel like Imai and Pauls both indisputably teach, by both sides they have  
25 not disputed that point and yet they're saying you wouldn't look at using  
26 different execution rates of encoders when looking at the throughput of a

1 communication channel.

2 JUDGE CHERRY: I guess the way I understood it was that he  
3 was saying that Imai and Pauls don't tell us anything about that though, that  
4 they're looking at the throughput but none of them look at the computation  
5 rate of the coding to do that.

6 MR. BATTS: And I think I'm just going to have to circle back  
7 to the paragraphs that I pointed to for Dr. Storer and the 67, 68, 69  
8 disclosures for Imai at least in particular where we had pointed to what we  
9 had relied upon for evidence and teachings there. This isn't anticipation  
10 ground, we're saying it would be obvious reading these disclosures to a  
11 person of skill in the art when implementing these algorithms and encoders  
12 to have these different data compression rates.

13 JUDGE CHERRY: Well their explanation is then that Dr.  
14 Storer got it wrong, that Dr. Storer is like -- I think it's this discussion we  
15 had, this lengthy back and forth about I think it was paragraphs 81 to 89 and  
16 then Judge Braden also pointed to 93 and 94 of Dr. Zeger's declaration  
17 where he's talking about the compression rate isn't, like if it's 64 kilobytes  
18 per second that's not reflective of the execution rate?

19 MR. BATTS: I believe I understand your point, Your Honor.

20 JUDGE CHERRY: I'm sorry, yes.

21 MR. BATTS: And so I think -- and you can tell me if I'm  
22 giving the right answer -- but I think if we go back to, it's I think the  
23 ATRAK example with 64 and then the decreasing bit rates.

24 JUDGE CHERRY: Yes.

25 MR. BATTS: What we pointed out in our reply brief and what  
26 Realtime continues to not address including in its surreply is that they

1 always predicate their examples or analysis on maintaining a fixed  
2 compression ratio when talking about different compression rates and that's  
3 ridiculous. When we look back to even the '477 patent right at the  
4 beginning of the definition of when we're talking about what is data  
5 compression rate and what is its relationship, it's always talking about and  
6 both experts had talked extensively about the relationship between  
7 compression rate and compression ratio and the trade-offs that are inherent  
8 when you're trying to get a faster rate versus not necessarily the amount of  
9 the compression or efficiency of the compression ratio and so I feel like  
10 that's always been a smoke screen and they've never addressed that smoke  
11 screen directly.

12 So I'm curious to hear what they say I guess, but there's no  
13 addressing of how do you deal with it and a person of skill in the art knows  
14 that whenever you're changing one you're doing it with a trade-off for the  
15 other and so you can't always say well, hey, we're just going to fix it and  
16 therefore suddenly the system breaks, that's why Imai does look at the  
17 throughput of the communication channel because it's trying to determine  
18 what's the maximum amount of compression I can or cannot do. When I say  
19 compression I should be clear. Compression ratio I can do that still  
20 maintains this basically transmission so it can be usable but part of that  
21 equation -- and this is not me testifying, this is going back to the experts --  
22 that equation that both experts agree upon and the '477 patent is there has to  
23 be that trade-off and that's something that they always avoid addressing in  
24 their arguments because they know that's fatal to their arguments.

25 JUDGE CHERRY: So in other words if you're not holding the  
26 compression ratio constant, then if you speed up or slow down compression,

1 execution speed -- I'll try to sort, we're using too many compressions --

2 MR. BATTS: (Indiscernible) execution.

3 JUDGE CHERRY: -- speed, if we're speeding that up and then  
4 we can slow that down and there's that trade-off that can be made to  
5 maintain this bit rate that we desire.

6 MR. BATTS: Correct. So when you're sending it slower you  
7 have more of an opportunity to better compress or further compress the data.  
8 I realize there's a lot of the compression terminology here but allows that  
9 trade-off that you have that time and you have the ability to do more  
10 complex compression that allows for more compression, but then you're  
11 having to look at the throughput of the communication channel which, again,  
12 has not been in dispute for either of the references to determine what level  
13 can I do of one versus the other to maintain what I want for the balance and  
14 that's where every argument -- I wrote down a few of the quotes, but it's  
15 always while holding the compression ratio constant. I heard that repeatedly  
16 where Realtime's counsel was making these arguments about well, if you do  
17 this and hold it constant, then this would result, the system would break.  
18 But that's always predicated on the underlying issue that they've never  
19 addressed in any of our briefing that they're ignoring that balance that it's not  
20 just our experts, but the '477 patent is talking about that balance.

21 I do, I guess I also -- it's more of a formal objection but also just  
22 to note that this testimony or argument about the Lempel-ziv and arithmetic  
23 coding, it's again not in the record. There's no expert support for it and --

24 JUDGE BRADEN: Counsel, it's in their specification though.

25 MR. BATTS: Correct. Those are the two referenced  
26 algorithms that are used as examples but this idea of assuming saying when

1 the compression rates would vary or not vary is not something that's in the  
2 record for them when they're talking about well, what would the  
3 implementation be. So the questioning about implementations of those,  
4 there's no evidence in the record about how implementations of those would  
5 vary or not and that was again what I view as a proxy for expert testimony  
6 here today by Realtime's counsel.

7           Whereas I do think in contrast we do have the Storer testimony  
8 including his deposition that really ties into what he said in his expert  
9 declaration explaining this whole concept of an algorithm versus an  
10 implementation and what a person of skill would know when they're  
11 building these encoders. When you actually want to build an encoder you  
12 don't just say it's an MPEG encoder, you have to say well, how am I actually  
13 building this encoder and what are the properties of this encoder including  
14 the execution rate of the encoder and that's something that I don't think is  
15 being – is being overlooked and is being ignored by Realtime's counsel but  
16 is also not addressed by Realtime's expert.

17           JUDGE CHERRY: So if I get Dr. Storer's point, is that it's in a  
18 vacuum, it's impossible to tell which one just based on algorithms would be  
19 faster but, for example, you could have an ASIC in a system that's especially  
20 optimized for MPEG4 or is optimized for H.264, so maybe H.264 run faster  
21 on that implementation than in another implementation. But a person of  
22 ordinary skill would know that in that implementation H.264 or MPEG4, I  
23 mean these are new really arguments but the point is that they would know  
24 that that would be faster in that implementation.

25           MR. BATTS: That's exactly correct, Your Honor, and I think  
26 the point would be that each algorithm has general characteristics but then,

1 and Dr. Storer explained this, and I hate to say this, but if you actually go  
2 through the deposition transcript of Dr. Storer and read the questions that he  
3 was asked versus the answers he was giving, he tried to repeatedly make  
4 clear that you can't just compare the general characteristics of each  
5 algorithm which may generally be more favorable, more faster, better for  
6 video et cetera, with the actual implementation the person of skill in the art  
7 would know that they would be implementing, they would be putting in.  
8 They would know the characteristics and they would be intentionally  
9 creating a system with these varying characteristics which Imai says you  
10 should do and as Pauls says you should do to allow you, otherwise there's no  
11 point in choosing between the different encoders unless you have those  
12 different characteristics to try to better match the throughput in the  
13 communication channel.

14 I guess I do want to address, even though we are challenging  
15 and we certainly have addressed the Realtime aspect of claim 12, I do want  
16 to point out that a lot of Realtime's arguments here today -- that's a  
17 dependent claim -- a lot of Realtime's arguments seem to be predicated on a  
18 requirement that claim 1 have a real time functionality and that's not in the  
19 claim. It's not until dependent claim 12 that they add in a real time  
20 limitation.

21 JUDGE CHERRY: I mean I'm going to say I understood their  
22 argument as kind of being an operability argument -- I mean I'm not sure  
23 that it's this clear in their briefing -- but is it fair to understand it's like an  
24 inoperability argument, that Imai is describing a real time system so it would  
25 be rendered inoperative? Did they make that argument?

26 MR. BATTS: I think they might have but I do think they

1 mixed in this concept of real time requirement into their claim and on that  
2 specific argument I also do want to note, Your Honor, that that argument  
3 again goes back to the fixed compression ratio versus looking at the balance  
4 of compression ratio in a rate and I also think it goes back to, if you recall  
5 from a couple of hours ago now I guess my explanation that that is not  
6 looking at -- and I've lost my (indiscernible), right it was a couple of hours  
7 ago -- so I'll see if I can remember it. It will come to me.

8 But I do want to say that I think the ATRAK example that they  
9 were focusing on is just one additional argument that we provided. I think if  
10 you look at the explanations that we provided for paragraphs 67, 68, 69, that  
11 the ATRAK example where they are intentionally avoiding the balance or  
12 the addressing of the balance and then we have the third argument where we  
13 are talking about the output bit rate and I don't think they addressed the  
14 output bit rate and the fact that their own expert, as I pointed out in the slides  
15 earlier, admitted that the output bit rate is indicative or indicates what the  
16 compression rate or the execution speed of the encoder is. Notably, that was  
17 kind of ignored in the discussion that their own expert and our expert both  
18 agree, so both experts are in agreement that you can look at the output bit  
19 rate to see that there's different data compression rates or execution rates of  
20 the encoder.

21 JUDGE BRADEN: And what was the citation for that in the  
22 deposition? I believe it's -- is it Exhibit 1029 from the 1187?

23 MR. BATTS: Yes, from the 1187, yes, Your Honor, and 1029  
24 at 148, 13 to 24.

25 JUDGE BRADEN: Thank you.

26 MR. BATTS: And also I don't recall if I pointed out now, but

1 slides 32 and 33 in our presentation where we noted that Dr. Zeger,  
2 Realtime's expert, also admitted that the compression rates would vary based  
3 upon a specific implementation and we tried to truncate the testimony as  
4 much as we could on that slide to make it visually concise but I think if you  
5 look at the full context of questioning there you'll see where he eventually  
6 agreed on the concept that it really does depend on a specific  
7 implementation rather than just to (indiscernible) this algorithm versus  
8 another algorithm, which one is faster? So I think Dr. Storer and Dr. Zeger  
9 are consistent on that point again also that when Dr. Storer was saying "I  
10 can't answer that question in a vacuum," Dr. Zeger agreed with him in that  
11 area of the deposition.

12 I do want to address the Personal Web case briefly that  
13 Realtime's counsel raised. I don't think that's applicable here because on,  
14 sorry, on the motivation to combine issue of Imai and Pauls. The Personal  
15 Web case was a case dealing with entirely disparate teachings across two  
16 references and a failure by the expert to provide testimony explaining how  
17 you would just combine in disparate teachings across two references  
18 together and I think that's a far cry from where we're talking about -- I think  
19 Realtime's counsel agreed or admitted that they are overlapping in a lot of  
20 ways the two references. They do have a lot of similarities across the  
21 references and it also didn't address a situation where I think this is  
22 quintessential KSR of is there a suggestion? We're not relying upon an  
23 expert at testimony to say hey, a person of skill in the art at the time would  
24 have known. We have the actual suggestion within the paragraph of Imai  
25 saying hey, this system does work with video encoders too and then we're  
26 pointing to Pauls for the specific video encoders that were in existence at the

1 time that could be used that are asymmetric video encoders and, again, I  
2 don't believe Realtime has disputed, including at the hearing today, that the  
3 video encoders in Pauls are asymmetric video encoders.

4 And I believe, let me just check to see if I -- I actually have  
5 some spare time for once. I guess the last point that I have here that I have  
6 on my notes is that there was a portion, I guess we can look back at the  
7 transcript, but there was a portion of the transcript where Patent Owner's  
8 counsel admitted that looking at the output rate would allow a person to  
9 know whether there was the same or different compression rates or  
10 execution rates of the encoders were occurring. So I did want to note that as  
11 well. And so I've got 11 minutes, I don't necessarily have to stand up here  
12 for 11 more minutes. Are there any other questions that you have for me?

13 JUDGE CHERRY: No, I don't.

14 MR. BATTS: Okay. Well, will save us time. Thank you,  
15 Your Honors.

16 JUDGE CHERRY: Whenever you're ready.

17 MR. STONEDALE: Oh, thank you very much. So I wanted to  
18 point out some parts of Dr. Storer's declaration. I'm looking at page 25 of  
19 Exhibit 1003 in the 1187 and here on page 74 Dr. Storer describes that the  
20 asymmetric encoders are used because they -- one example he gives in video  
21 is motion compensation and there's a lot more of the computation necessary  
22 in predicting which frame will be most similar and that causes the  
23 compression step to be much more computationally complex than the  
24 decompression step and gives rise to the resulting asymmetry and in  
25 paragraph 75 says that this is a common approach in video encoding because  
26 the decoding computer will not have the same computational resources and

1 this saves computational resources for the decoding computer.

2           So you can see from this there's not relationship such that the  
3 more computation required for the decoder, the more computation required  
4 for the encoder. In fact sometimes the relationship is reversed. So this is an  
5 indication that Imai's parenthetical implying that sometimes that when a  
6 decoder does not require much computation the encoder will also not require  
7 much computation. That's not necessarily referring to the asymmetric  
8 encoders which don't necessarily have that relationship.

9           JUDGE BRADEN: Well what should we take from Dr. Zeger's  
10 testimony that said if you increase the data compression rate you're pulling  
11 in more input data per unit time in a given compression rate. So that, in  
12 general, would increase the output rate of the encoder so you're having to  
13 send more data across the channel.

14           MR. STONEDALE: There's two things going on there. The  
15 "in general" and the "at a given compression ratio" are both qualifications.  
16 At a given compression ratio matters because if the encoder is always  
17 compressing, say it's never buffering at all, then for every bit that comes in  
18 then a bit has to go out in that same period of time. So, for example, you've  
19 got 128 kilobytes coming in with a 2 to 1 compression ratio, 64 kilobytes go  
20 out. If you double the speed of the encoder it takes in twice as much and it  
21 puts out twice as much. However, if you also --

22           JUDGE CHERRY: At a constant compression ratio.

23           MR. STONEDALE: At a constant compression ratio, exactly.  
24 So he's making an assumption in the question that is not applicable to what  
25 is going on in these references. These references are changing the  
26 compression ratio which they state that they're doing that because they're

1 talking about different levels of audio quality and video quality.

2 JUDGE CHERRY: But don't we know for a known  
3 compression algorithm what the compression ratio is?

4 MR. STONEDALE: It's possible to know. I don't know that  
5 we do know that. Again it depends on the implementation. Because these  
6 are lossy algorithms you can select multiple different compression ratios.  
7 You just have lower quality video. So they're capable of achieving all sorts  
8 of compression ratios, they just may be more and more pixelated or sound  
9 more staticky in (indiscernible.)

10 The other assumption going in is that he's implying that there's  
11 no buffering. So in a real time application if you have more than a second's  
12 worth of audio encoded, you wouldn't necessarily send that second of audio  
13 because it's not ready to be listened to yet. So the encoder is not encoding  
14 all the time necessarily and I should point out that on redirect I asked him to  
15 clarify that issue and he said specifically that you would not know based on  
16 a compression ratio and an output bit rate what the compression rate is.

17 JUDGE BRADEN: What is the citation for your redirect  
18 please? Go to page 156 looking at line 17, please, or line 22.

19 MR. STONEDALE: Yes. So he makes clear that you can't  
20 calculate the compression rate of an encoder from its output bit rate and I'll  
21 also point out that this is the POR. I quote this testimony from Dr. Storer,  
22 there's similar testimony where he says,

23 "Just by knowing the relative compression ratios of two  
24 encoders, you still can't tell which one is faster."

25 And it's also evident from Dr. Storer's testimony when he  
26 refused to say which of the encoders was faster even though he has the

1 output bit rates in that the references do disclose the output bit rates and  
2 even though that was there, Dr. Storer in his deposition still could not say  
3 which of the various algorithms was implemented more fast with a higher  
4 compression rate. So I don't think there's any disagreement between the  
5 experts that just having the output bit rate and the compression ratio is even  
6 enough. I also heard that --

7 JUDGE CHERRY: But isn't the implementation needed? So  
8 you're saying we also need to know the implementation?

9 MR. STONEDALE: In order to know the compression rate you  
10 would have to know whether -- there's several ways you could know. It  
11 could be disclosed in the reference as the patent does where it says which  
12 one's faster because that's a relevant consideration there. It could tell you  
13 that one is implemented to be faster, for example. It could say that it's using  
14 this faster encoder when the encoder is the bottleneck and but there's nothing  
15 even pertaining to any of that and Dr. Storer didn't say how you could tell  
16 from what's disclosed in the references which the encoders and which of the  
17 algorithms is faster. He said correctly I think that they could be  
18 implemented to -- in various ways it could cause either one to be faster but  
19 the reason it doesn't say is because it doesn't matter. These references are  
20 simply addressed as a separate problem that does not pertain to compression.

21 I also heard Petitioner's counsel indicate that we had admitted  
22 the limitations of claim 20 were disclosed. We of course have not admitted  
23 that. It's their burden to show where those limitations --

24 JUDGE CHERRY: But you agree that Imai teaches selecting  
25 based on compression ratio, right?

26 MR. STONEDALE: Yes. Imai does take compression ratios

1 into consideration but that does not meet Petitioner's burden to show where  
2 each of the limitations in claim 20 have been met.

3 JUDGE CHERRY: But you don't dispute any longer that Imai  
4 doesn't teach the compression ratio?

5 MR. STONEDALE: There's nothing to dispute because we  
6 have not presented with --

7 JUDGE CHERRY: And what are you disputing with respect to  
8 claim 20?

9 MR. STONEDALE: They've only shown that one limitation in  
10 claim 20 is disclosed. They've only attempted to show that one limitation is  
11 disclosed. So we don't have an obviousness argument with respect to claim  
12 20.

13 JUDGE CHERRY: What do you mean they only have -- don't  
14 they say that --

15 MR. STONEDALE: Yes.

16 JUDGE CHERRY: And they went back to claim 1?

17 MR. STONEDALE: Their obviousness argument with respect  
18 to claim 20 is premised on this notion which is on slide 32 that claim 20  
19 includes all the limitations of claim 1 plus this additional limitation about  
20 arithmetic encoding and that premise is simply incorrect. They did not  
21 address the configure 59 the first encoder and the second encoder. They  
22 again don't say which is which. They don't address the issue of how they're  
23 configured --

24 JUDGE CHERRY: I think they are actually. Is this is your  
25 brief?

26 MR. STONEDALE: Yes. This is in the POR and I believe just

1 briefly in the surreply. They don't address the

2 --

3 JUDGE CHERRY: But you agree that Imai discloses, it is  
4 configured to select based on data compression rate?

5 MR. STONEDALE: No. Imai does not even mention a data  
6 compression rate.

7 JUDGE CHERRY: But I thought we just agreed that--  
8 compression ratio, sorry.

9 MR. STONEDALE: Oh, Imai is concerned with compression  
10 ratios but they've never shown that it's configured to compress -- that one  
11 encoder is configured to compress at a higher ratio than another. They just  
12 don't try to show that so there's nothing to disprove here. It's their burden  
13 and they haven't met it.

14 JUDGE CHERRY: But you agree that it discloses selecting  
15 different compression ratios and it says one of them is higher than the other?  
16 Can you speak to that?

17 MR. STONEDALE: We're not taking a position on that  
18 because it's not -- that case hasn't been (indiscernible.) We have disputed  
19 that a JPEG is a video compression encoder.

20 JUDGE CHERRY: Okay. Well your time is up. Do you -- do  
21 the other panelists have any additional questions?

22 JUDGE JIVANI: No, nothing for me.

23 MR. STONEDALE: Thank you.

24 JUDGE CHERRY: Thank you both for your very able  
25 presentations. The case is submitted.

26 (Whereupon, at 3:27 p.m., the oral hearing was concluded.)

IPR2018-01187 (Patent 9,769,477 B2)

IPR2018-01630 (Patent 9,769,477 B2)

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