

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC., INSTAGRAM, INC., WHATSAPP LLC,
META PLATFORMS TECHNOLOGIES, LLC, AND GIPHY, INC.,
Petitioner

v.

VL COLLECTIVE IP LLC,
Patent Owner.

IPR2023-00923
Patent 7,266,682 B2

Record of Oral Hearing
Held: September 10, 2024

Before KARL D. EASTHOM, JEFFREY S. SMITH, and DAVID C.
McKONE, *Administrative Patent Judges*.

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The above-entitled matter came on for hearing on Tuesday, September 10, 2024, commencing at 1:00 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 SMITH: Good afternoon, everybody. Welcome to the Patent Trial and Appeal Board.

My name is Judge Jeffrey Smith. With me in person is Judge Karl Easthom, and from Detroit is Judge David McKone. This hearing is for IPR2023-00923, *Meta Platforms v. VL Collective IP*.

Please unmute yourself only when -- oh, this is in person. Sorry about that. The panel has access to all your papers filed with the Board, including demonstratives.

When presenting your case, please identify clearly and specifically each slide number you are discussing so that when we read the transcript, we can identify the slides being discussed.

Can you hear me okay, David?

JUDGE McKONE: You're pretty faint. I can hear you probably well enough. If the microphone --

JUDGE SMITH: How's this?

JUDGE McKONE: Better.

JUDGE SMITH: Okay. I'll keep the microphone here.

Each party has 60 minutes to present arguments for this hearing. Petitioner will open the hearing by presenting its case regarding the challenged claims for which the Board instituted trial.

Thereafter, Patent Owner will respond to Petitioner's arguments. Petitioner may reserve time for rebuttal to respond to arguments presented by Patent Owner, and Patent Owner may reserve time for sur-rebuttal.

1 I will call out the time only after your time has expired. I ask you to
2 keep track of your own time during your presentation. We'll also have the
3 clock here.

4 Petitioner, please step up to the podium, and state your name and the
5 names of those who are here with you.

6 MR. BAKER: Good afternoon, Your Honors. Todd Baker here on
7 behalf of Petitioner, Meta Platforms. Today with me I have Ethan
8 Perbohner, Jonathan Brit, and Yan-Xin Li.

9 May I ask a point of clarification?

10 JUDGE SMITH: Yes.

11 MR. BAKER: You indicated that each party had 60 minutes for oral
12 argument.

13 JUDGE SMITH: That's right. You have the LEAP practitioner?

14 MR. BAKER: That is correct. And we would like to allocate an
15 additional five minutes for the first IPR and ten minutes for the second IPR,
16 if that's agreeable.

17 JUDGE SMITH: That's fine. So you'll have 65 minutes for this case
18 and 70 minutes for the second case?

19 MR. BAKER: Yes, Your Honor.

20 JUDGE SMITH: Okay. Do you wish to reserve time for rebuttal?

21 MR. BAKER: I wish to reserve ten minutes for rebuttal in this IPR.

22 JUDGE SMITH: Thank you.

23 Patent Owner, please step up to the podium and state your name and
24 the names of those you have here with you.

1 MR. CARDENAS-NAVIA: Good afternoon, Your Honors. I'm
2 Jaime Cardenas-Navia of Reichman Jorgensen Lehman & Feldberg, on
3 behalf of the Patent Owner.

4 With me as my co-counsel are Mr. Philip Eklem and Christine
5 Lehman. And here representing the client is Ira Blumberg. And I just
6 wanted to note for the Board that Mr. Eklem and I will be splitting the
7 argument for this first proceeding here today.

8 JUDGE SMITH: Do you wish to reserve time for rebuttal?

9 MR. CARDENAS-NAVIA: Ten minutes, please.

10 JUDGE SMITH: Okay, thank you.

11 MR. CARDENAS-NAVIA: Thank you.

12 JUDGE SMITH: Okay. Before we begin, let me just check with IT.
13 Can you hear us, Charles? Can you hear us okay?

14 MR. BRIT: No, sir. I can't really hear you on the phone. Are your
15 mic buttons pressed in?

16 JUDGE SMITH: Yes. They're both turned on.

17 MR. BRIT: We have our tech in the room. I'm not sure if he can do
18 anything on his end.

19 JUDGE SMITH: We'll go off the record for this.

20 (Recess)

21 JUDGE SMITH: Petitioner, you may begin when ready.

22 MR. BAKER: Good afternoon, Your Honors. May it please the
23 Board. Let's first start with slide 3.

24 Your Honors, three primary issues remain in this IPR: first, the public
25 availability of Handley and PacketCable; second, Basturk's on-the-fly
26 processing and its compatibility with Handley; and lastly, the obviousness of

1 placing authentication information at the end of each packet as taught by
2 PacketCable.

3 Can we please go to slide 8? Your Honors, this panel granted
4 Petitioner's motion to submit supplemental evidence on March 28, 2024.
5 That motion sought entry of various exhibits confirming that both Handley
6 and PacketCable were printed publications and qualified as prior art against
7 the challenged claims.

8 Patent Owner now argues that Petitioner forfeited the right to argue
9 that Handley was publicly accessible, and that the supplemental evidence
10 proves that Handley was not a printed publication. We believe both of
11 Patent Owner's arguments missed the mark.

12 Slide 9, please.

13 Your Honors, Petitioner did not forfeit its right to argue that Handley
14 constitutes a printed publication. In its reply, Petitioner cited the Board's
15 supplemental information decision.

16 And that decision concludes that the supplemental information
17 confirms Handley, and in particular Exhibit 1005, was publicly accessible.
18 That conclusion, at the very least, constitutes a preliminary finding such as
19 one made in an institution decision. Relying on the findings --

20 JUDGE McKONE: So even when a finding is an institution decision
21 and it's preliminary, it doesn't carry through. You still have to meet the
22 burden --

23 JUDGE SMITH: Judge McKone?

24 JUDGE McKONE: -- in the final decision.

25 MR. BAKER: Yes, Judge McKone. I understand your question.
26 Understood that a preliminary finding in an institution decision doesn't

1 necessarily carry the day of a final written decision. There is an opportunity
2 to develop the record.

3 But here, Patent Owners are relying on the forfeiture argument. There
4 is no new evidence which rebuts the evidence entered as supplemental
5 information. There's only attorney argument directed towards the
6 comparison of 1005 to 1027 and 1028, those exhibits. And there is a re-
7 litigation of whether or not there is a new theory presented.

8 JUDGE McKONE: Now these exhibits that you're talking about,
9 1027 and 1028, they were not referred to or even listed in your substantive
10 briefs, correct?

11 MR. BAKER: They were not identified explicitly in our Petitioner
12 Reply. That is correct.

13 JUDGE McKONE: So they weren't identified in the petition or reply
14 at all?

15 MR. BAKER: They weren't in the petition because they were not
16 entered at that time. They were the subject of the supplemental information
17 motion. So they were not officially in the record until prior to the Petitioner
18 Reply, but what we did do --

19 JUDGE SMITH: Let me ask you about that. When you say they
20 weren't cited in the petition, the Petitioner actually did cite the journal
21 article, what is now Exhibits 1027 and 1028.

22 MR. BAKER: Correct.

23 JUDGE SMITH: The grounds of unpatentability in the petition cite
24 the journal article in 1027 and 1028. I'll call -- so there are two Handleys in
25 the petition. There's Handley Exhibit 1005, which was published on the
26 website. I'll call that website Handley --

1 MR. BAKER: Yes.

2 JUDGE SMITH: -- Website Article. And then there's Exhibits 1027
3 and 1028, which were published by the journal. I'll call that journal Handley
4 Journal Article.

5 I guess this is part of the confusion. The petition itself cites to the
6 journal article but then submits, as evidence of the journal article, the
7 website article.

8 What is it that the Petitioner relies -- does the Petitioner rely on the
9 journal article, the website article, or both? Can you speak to that?

10 MR. BAKER: We've made it crystal clear, we believe, in the reply to
11 the motion for entry of supplemental information that Petitioner has not
12 changed theories, that we continue to rely on Exhibit 1005 as the printed
13 publication, which is assertive against the challenged claims.

14 The Elsevier and the library copy of Exhibit 1005 are just evidence of
15 the publication of Exhibit 1005, but that is the reference, 1005, Your
16 Honors.

17 JUDGE SMITH: Okay. Thank you.

18 JUDGE McKONE: How can we consider 1027 and 1028 if you
19 haven't cited them, explained them, or argued them in any of your
20 substantive papers?

21 MR. BAKER: Your Honor, they are substantially overlapping
22 disclosures. Everything that is in 1005 you will find in 1027 and 1028.

23 There is a comparison by the expert, Dr. Houh, where he confirms
24 that every citation that he made to 1005 can be found in 1027 and 1028. He
25 also confirmed that every citation in the petition --

26 JUDGE McKONE: Where in your reply do you cite to this expert?

1 MR. BAKER: That expert report is cited to, I believe, in the reply to
2 the motion for entry of supplemental information. So it is inherent -- I'm
3 sorry, implicitly cited to by our reference to the Panel's decision which
4 confirms these findings, that 1005...

5 JUDGE McKONE: Are you considering the Panel's decision on
6 supplemental evidence to be, in a sense, a summary determination or a
7 summary judgment as to the merits?

8 MR. BAKER: I'm not, Your Honor. I'm considering that to be a
9 preliminary finding as to the factual determinations. One, that Exhibit 1005
10 was publicly available, and two, that there are no material distinctions
11 between 1005, 1027, and 1028.

12 What I do think is finally decided by the interlocutory decision is that
13 there are no new theories entered by entry of the supplemental information.
14 That is clearly decided. It was fully briefed. It was a three-judge panel.
15 You, Judge McKone, entered a dissent. For purposes of this litigation, this
16 IPR, that issue has been resolved, the no new theory issue.

17 JUDGE McKONE: But that wasn't what you were asking for in
18 relief. You were simply wanting to get the documents admitted. You seem
19 to go far beyond that to also resolve a substantive issue as to the scope of the
20 arguments, but never has that point been made.

21 MR. BAKER: Your Honor, if you look at the rule, Rule 42.71, it says
22 a panel decision on an issue will govern the trial. It does not indicate that it's
23 limited to the precise relief requested. And what I'm specifying is the issue
24 of the new theory, that that was fully litigated, fully briefed by both parties,
25 that question of whether or not there was a new issue, a new theory
26 presented, was resolved by this panel.

1 As for the factual findings, again, whether there's a difference between
2 1005 and the Elsevier publication, we acknowledge that that may only be a
3 preliminary finding at the very least, but I think it's understandable and
4 acceptable for Petitioner to rely upon these explicit findings that were made
5 in that decision and rely upon them in future briefing. This is not a case
6 where --

7 JUDGE McKONE: Well, in a sense, are you saying that you didn't
8 have to make your argument in your reply because the Panel had already
9 made that argument for you in a motion decision?

10 MR. BAKER: It was our sense that we had made our best case in the
11 motion for supplemental information. We made our best arguments for why
12 we had proven public availability and why we had not changed theories.

13 And in reliance on your decision, the decision granting the motion for
14 supplemental information, your concurrence that we had made those
15 showings, we thought it was sufficient to reference that in our Petitioner
16 Reply in lieu of repeating what had already been argued.

17 JUDGE SMITH: I have a question for you. I think Patent Owner
18 cites several Board decisions, such as *Apple v. Qualcomm*, and argues that
19 motion arguments not presented in reply shouldn't be considered.

20 And then they give several reasons, such as: considering the motion
21 arguments would eviscerate all page limits; you know the opposing party
22 needs to know what arguments are being advanced by Petitioner and have a
23 chance to respond. Could you speak to that?

24 MR. BAKER: Yes, Your Honor. I don't think that there's any basis
25 for Patent Owner to assert that they were not aware of what arguments were
26 being advanced by Petitioner and the rationale that we presented, the

1 argument that we presented for why 1005 constitutes a publicly available,
2 printed publication.

3 And as for the other decisions that referred to incorporating by
4 reference from other motions, in this situation, we're relying upon the
5 decision and its findings. So we're not trying to avoid page limits by
6 incorporating by reference. We're merely relying upon a finding which was
7 made in a decision from the Board.

8 JUDGE SMITH: Okay. Thank you.

9 JUDGE EASTHOM: And then so in a nutshell, are you saying that
10 the Elsevier showing in Exhibit 1027, 1028, that makes it more likely that
11 Exhibit 1005 was published on the website? Or are you saying that
12 collectively they were published in different places?

13 MR. BAKER: So Your Honor, Exhibit 1005 is what's called an
14 author-formatted submission. And that was submitted. We turn your
15 attention to our slide 21.

16 This is based on the testimony from Dr. John Crowcroft, a co-author
17 of Handley, where he testifies -- based, of course, on his personal knowledge
18 as a co-author -- that 1005 was publicly accessible, and he explains where,
19 and that it was ultimately published in Computer Networks on February 11,
20 1999, as shown in Exhibits 1027 and 1028. And he also confirms that it's
21 identical to those two latter exhibits for all intents and purposes.

22 JUDGE SMITH: I just want to be clear on this point, the identical for
23 all intents and purposes. From what I understand in the motion briefing, it's
24 identical in the sense that all of the cites to Exhibit 1005 in the petition are
25 also found in the journal article.

1 There may be differences beyond that, but everything cited in the
2 petition to Exhibit 1005 is found -- that's what you mean by identical; is that
3 right?

4 MR. BAKER: Yes, Your Honor. For example, the publisher changed
5 the title. Those are the types of changes that occur during the publication
6 process.

7 But what Dr. Crowcroft is explaining is, once they were finished with
8 the document, there were only minimal, non-substantive changes as it relates
9 to what we're relying upon before the formal publication in 1027 and 1028.

10 JUDGE SMITH: But there were -- I just want to be clear on this.
11 You can correct me if I'm wrong. There were paragraphs added or figures
12 deleted or changes --

13 MR. BAKER: Nothing deleted.

14 JUDGE SMITH: Nothing deleted?

15 MR. BAKER: Nothing deleted. I'll confirm, but it's my
16 understanding that there were only additions. And I contemplated making
17 this analogy and I'm not -- actually, I'll pause. I'm not going to make the
18 analogy.

19 Again, our position -- and Dr. Crowcroft's testimony is spot-on
20 representing what our position is -- is that 1005 is the publication we rely
21 upon, and he explains to the degree that there were any changes. I would
22 point out -- and I think this is significant, and it kind of goes to what Judge
23 McKone is getting at -- this factual issue could have been resolved by some
24 cross-examination of Dr. Crowcroft.

25 Patent Owner made a litigation decision to forego that, to put all their
26 eggs in the forfeiture basket, but we believe that Petitioner had a basis in the

1 rules and a basis in the record to cite the decision from the motion for
2 supplemental information in its response, concluding that Exhibit 1005,
3 Handley, was publicly available.

4 JUDGE SMITH: Let me ask you the -- yeah I guess -- so there are
5 two issues in terms of Exhibit 1005 publicly available. One is that Dr.
6 Crowcroft submitted testimony stating that, according to him, it was publicly
7 accessible by at least February 11, 1999 on his website.

8 Is there any evidence of public accessibility of this article on this
9 website other than his testimony?

10 MR. BAKER: I believe so. Did Dr. Houh testify that it was on the
11 website?

12 MR. BRIT: Yes.

13 MR. BAKER: So our expert, Dr. Houh, also testified that the
14 document could be found on Dr. Crowcroft's webpage.

15 JUDGE SMITH: By a person of ordinary skill, not just Dr. Crowcroft
16 and his colleagues?

17 MR. BAKER: Correct.

18 JUDGE SMITH: And how would a person of skill have found it?

19 MR. BAKER: First, he is a professor. He is a well-known person in
20 this industry, so his publications would have been known. This is not a
21 situation where we believe indexing was required. Because of his notoriety,
22 because of his position, his papers would have been discoverable by a person
23 of ordinary skill in the article.

24 JUDGE SMITH: Okay. To the extent we need to rely on Exhibits
25 1027 and 1028, I think Patent Owner's argument is that's a different
26 publication. Maybe substantively, in terms of substance, there's no

1 difference between what you cited in the petition and what's found in the
2 article, but still, that remains. They're not identical.

3 If we relied on Exhibits 1027 and 1028 to show public accessibility,
4 what basis would we have for relying on what Patent Owner argues is a
5 different article to show public accessibility of Exhibit 1005?

6 MR. BAKER: Your Honor, first, we want to make clear that we're
7 not changing theories. We are consistently of the position -- taking the
8 position that 1005 is the basis of the grounds and is also what was publicly
9 available. Exhibits 1027 and 1028 and the testimony of Dr. Crowcroft is just
10 evidence that 1005 was publicly available, as asserted in the petition.

11 JUDGE SMITH: Okay. Thank you.

12 MR. BAKER: Your Honor, just a point of clarification. You inquired
13 whether anything was deleted from 1005.

14 JUDGE SMITH: Yes.

15 MR. BAKER: I've been informed that one figure was deleted and a
16 figure was added with respect to 1027 and 1028, but that figure was not the
17 basis of any of our --

18 JUDGE SMITH: Right.

19 MR. BAKER: -- arguments in the petition.

20 JUDGE SMITH: So it was more than just formatting and correcting
21 typos. There were some substantive changes, but those substantive changes
22 had nothing to do with any of the content that was cited in the petition?

23 That's what I'm asking you. Is that right?

24 MR. BAKER: That's correct, Your Honor.

25 JUDGE SMITH: Okay.

1 JUDGE McKONE: The changes were substantive enough to add an
2 author, correct?

3 MR. BAKER: Your Honor, I am unable to say that the degree of the
4 change was the basis for the change in the author. I don't have discovery to
5 decide whether that is correct or not. I do know through the publication
6 process that an author was added.

7 Your Honor, are there any further questions regarding Handley and its
8 publication issues before I turn to PacketCable?

9 JUDGE EASTHOM: Just a quick question. You had cited a Board
10 case, I think, that said even though -- it said something about even if there
11 were some minor differences between the two publications, that didn't stop a
12 finding of public accessibility. And I thought I had seen a case in the
13 Federal Circuit. Did you cite that?

14 MR. BAKER: Your Honor, there is a case. During our rebuttal
15 period we will identify it expressly for you --

16 JUDGE EASTHOM: Okay. Thank you.

17 MR. BAKER: -- if that's okay, but you are correct.

18 JUDGE SMITH: I have no further questions.

19 MR. BAKER: Okay. Can we turn to slide 31, please?

20 Your Honor, PacketCable is a technical report published by
21 CableLabs, quote, for the benefit of the cable industry. As you can see here,
22 it bears a copyright of 1999 to Cable Television Laboratories, who will be
23 referred to as CableLabs when we discuss future slides.

24 Can we go to slide 32, please?

25 PacketCable's abstract notes that the intended audience is not just
26 CableLabs' members but, quote, includes developers of equipment intended

1 to be conformant to PacketCable specifications and network architects who
2 need to understand the overall PacketCable architecture framework.

3 JUDGE McKONE: Before we go further, have you articulated a
4 theory or put forward evidence as to how the recipients received
5 PacketCable? Did they download it off the Internet? Were they handed it at
6 a conference? Do you have any evidence of that?

7 MR. BAKER: Dr. Hall-Ellis, I believe, provided testimony that the
8 PacketCable was provided to its members electronically.

9 JUDGE McKONE: And what did she base that on?

10 MR. BAKER: She reviewed their history. She reviewed their
11 membership. It was based on her experience as a librarian and her review of
12 other companies similar to CableLabs and the way that they would
13 communicate with their members.

14 She identified them as a type of -- they were incorporated as a type of
15 association that had members. That was their business model. All evidence
16 points to the direction that, on its face, this reference is chock-full of indicia
17 identifying a date, plus the nature of the company itself, CableLabs, the way
18 they're organized and recognized by the state, all evidence points to the fact
19 that their distribution is accurate.

20 JUDGE McKONE: Would this have been distributed by email? Is
21 that what you mean by electronically?

22 MR. BAKER: I would only be making an assumption whether it was
23 by email or if the members were downloading it. But there's no evidence --

24 JUDGE McKONE: I want to know what your factual position is,
25 what your factual position is to how the recipients would have received
26 PacketCable. And if you don't have a factual position, you can say that.

1 MR. BAKER: I would have to -- I don't recall this issue being
2 briefed, the actual basis. I would have to review the briefing, response, and
3 rebuttal.

4 I've been informed if we go to slide 45, again, this is Petitioner's
5 expert, Dr. Houh. He testified that he was satisfied that PacketCable was
6 publicly available, based on his experience that these documents or types of
7 documents are released both electronically and in paper form.

8 And he was familiar with CableLabs. He worked for a company in
9 the 1990s called NBX, acquired by 3Com. There, Dr. Houh made DOCSIS-
10 compliant equipment. He also characterized CableLabs as a reputable
11 industry association.

12 JUDGE McKONE: Did Dr. Houh receive PacketCable from
13 CableLabs?

14 MR. BAKER: I do not believe he personally testified that he received
15 it.

16 JUDGE McKONE: Did he receive anything from CableLabs that
17 would give him personal knowledge as to how CableLabs distributed their
18 materials?

19 MR. BAKER: He did not, Your Honor, not that I'm aware of.

20 JUDGE McKONE: Do you have any evidence that anybody sent or
21 received PacketCable?

22 MR. BAKER: Your Honor, I would bring your attention to *Valve v.*
23 *Ironburg Inventions*. It's a Fed Circuit case.

24 JUDGE McKONE: I mean that was a simple question, we don't need
25 an example.

1 MR. BAKER: I do not believe that there's anything explicitly on the
2 record, any personal knowledge of actual receipt of PacketCable.

3 What we do have is the indicia on the document. We have
4 information related to the nature of the company and the nature of its
5 members. We have a webpage identifying even to this day the release date
6 of Version 1, which we're relying upon.

7 JUDGE McKONE: No was it -- do you have evidence that that
8 website was in existence in 1999?

9 MR. BAKER: No, Your Honor, not of record, not that I'm aware of.
10 What we are relying upon is: the reputation of the company, which I think is
11 indisputable; the indicia on the document; and the experience of a librarian
12 and the experience of a person in the field, that everything that they have
13 seen about the reference is consistent with their understanding that it would
14 be publicly available.

15 JUDGE EASTHOM: So in other words, actual dissemination isn't
16 required by our case law. You're saying that all the factors point to public
17 accessibility?

18 MR. BAKER: All the factors, including the publication's purpose.
19 That's why I was pointing towards *Valve v. Ironburg*, where the Federal
20 Circuit concluded that a publication's purpose, where that purpose is
21 dialogue with the intended audience, which is clear here, that purpose
22 indicates public accessibility.

23 All the circumstantial evidence is here, all of it. There's nothing
24 pointing in the other direction other than the fact that it's not on the Wayback
25 Machine, and we all know that the Wayback Machine is not 100 percent
26 reliable.

1 We all understand that some companies elect not to have their
2 information kept. We all understand from access or use of Wayback that
3 there are some links that are broken. The best proof pointing in any
4 direction away from the public availability of PacketCable is the lack of a
5 document on that particular site.

6 JUDGE McKONE: So you did check the Wayback Machine, and you
7 found nothing on the Wayback Machine?

8 MR. BAKER: Dr. Hall-Ellis checked. She said it was not available,
9 but she testified that means nothing to her.

10 JUDGE SMITH: Let me ask you -- I'm sorry. Finish.

11 MR. BAKER: No I was just going to point to slide 40, where Dr. Hall
12 was questioned about the Wayback Machine. And she testified, based on
13 her experience as a librarian, that it does not collect everything on the
14 Internet, and the fact that something is not found on the Wayback Machine
15 site doesn't matter.

16 JUDGE SMITH: Let me ask you -- the effective filing date of the
17 challenged patent is -- I don't have it here. Is it 2003?

18 MR. BAKER: Yes, that's correct.

19 JUDGE SMITH: And this is giving a release date of December 1,
20 1999?

21 MR. BAKER: Yes, Your Honor.

22 JUDGE SMITH: So it's not a question of, was it in the mail for a
23 week or two?

24 MR. BAKER: Yes. This is not a close call.

1 JUDGE SMITH: And then I think part of the Patent Owner's
2 arguments is that it says release date, but we don't know what the word
3 release means. What can the word release mean?

4 MR. BAKER: I think it's its ordinary meaning, that the report is
5 generated, and they have members, and on a certain date, they make the
6 report available to their members.

7 JUDGE SMITH: And if it's available to the members, but it's not
8 made available outside the members, would that be enough to satisfy --

9 MR. BAKER: I think their members are large companies, other
10 individuals. I think their membership list is clear. That's their purpose.
11 They're organized to disseminate information to their members. That's why
12 they exist.

13 JUDGE McKONE: Do you have evidence of who their members are?

14 MR. BAKER: We have evidence that they are organized in the state
15 of, I believe, New York, for this purpose.

16 JUDGE McKONE: Now do we know who their members are, and it's
17 evidence in this case?

18 JUDGE SMITH: Does PacketCable, the reference itself, list
19 members?

20 MR. BAKER: I do not believe that PacketCable itself lists members.
21 I do believe that their website does.

22 JUDGE SMITH: I thought there was something in PacketCable.

23 JUDGE McKONE: There's a page that says some people contributed
24 to PacketCable. I don't think that's the same as a membership list. And I'm
25 not sure how -- if we don't know whether PacketCable's website was

1 available in 1999, I'm not sure how that would show us what the
2 membership would have been in 1999.

3 MR. BAKER: Your Honor, I would also turn to slide 39. This is
4 from their current webpage. It shows the most recent version of
5 PacketCable, which was published in 2007. And it also, as highlighted at
6 the bottom, says Version 1 was published on December 1, 1999.

7 This is consistent with all the indicia on the face of PacketCable.
8 Again, I'm not aware of any inconsistent information in the record, other
9 than the absence of a Wayback site that points to anything other than the
10 release of a technical document by a company whose purpose is to provide
11 documentation to their members in 1999 for more than two years, before the
12 effective filing date of the challenged patent.

13 Your Honors, are there any additional questions on PacketCable?
14 And if not, I will turn to the merits of Ground I.

15 JUDGE SMITH: Okay.

16 MR. BAKER: Can we go to slide 49, please?

17 Claim 1 of the '682 is straightforward. It's directed to a method for
18 transmitting data from a transmitter to a receiver, including, among other
19 steps: in Element 1.1, providing transmitter-to-receiver authentication at a
20 real-time transport protocol packet level as an application protocol on an
21 application layer; and in step 1.2, authentication is accomplished by
22 inserting the transmitter authentication data at an end of a whole RTP packet
23 payload.

24 Slide 50, please.

25 MR. BRIT: This is 50.

1 MR. BAKER: So Your Honor, focusing on the highlighted portion of
2 Element 1.1, which reads, at a real-time transport protocol packet level as an
3 application protocol on an application layer.

4 Your Honor, although the name RTP suggests that it's a transport
5 level protocol, RTP is actually implemented as an application protocol at the
6 application layer. Thus, the first part of Element 1.1, the providing
7 transmitter-to-receiver authentication occurs at the RTP packet level, not at
8 the transport level.

9 Slide 51, please.

10 Your Honors, it's clear from the record that RTP is an application
11 layer protocol. First, in the top row, Handley uses RTP for its multimedia
12 conferencing system. That's clear.

13 In the second row, according to the RTP specification, RTP is used as
14 an application protocol on an application layer. The quote is a little small
15 here. It says RTP will, quote, often be integrated into the application
16 processing layer.

17 And third, the third row, Figures 1 and 2 of the '682 illustrate that
18 even though RTP stands for the real-time transport protocol, it's used in its
19 expected spot, which is at the application layer, as an application protocol.
20 In Figure 1, the application layer is S5. In Figure 2, you see an exploded
21 depiction of S5. And you can see RTP at the bottom there.

22 Slide 52, please. Again, focusing for a second on Element 1.1 and the
23 highlighted passage, providing transmitter-to-receiver authentication.

24 Slide 53. The '682 background acknowledges different known
25 approaches for providing transmitter-to-receiver authentication. For
26 example, the '682 acknowledges the known uses of message authentication,

1 better known as MAC, one-way hash functions, and asymmetric
2 cryptographic methods.

3 Slide 55, please.

4 Your Honor, Handley is combined with Basturk. To the extent that
5 Handley does not expressly teach providing authentication to its RTP packet,
6 Basturk indicates it was well known to authenticate application layer
7 packets.

8 Basturk explains in the middle of this passage that integrity is usually
9 guaranteed by signing the data at the application layer before passing it to
10 the transport layer. This means to a procedure that integrity can be achieved
11 at the application layer and the packets are passed down to the transport
12 layer.

13 Slide 56. In Basturk's solution, integrity is achieved at the transport
14 layer by attaching to each packet a signature, like a MAC. And Basturk not
15 only does this authentication at the transport layer, but it teaches a special
16 technique called on-the-fly where it calculates the MAC during the
17 transmission of the packet and then dumps the MAC into the trailer at the
18 end of that transmission.

19 JUDGE SMITH: Let me just make sure I understand. You're relying
20 on Basturk to teach authenticating at the application layer or signing it at the
21 application and then passing it to the transport layer?

22 MR. BAKER: Yes.

23 JUDGE SMITH: Is that right?

24 MR. BAKER: We are relying upon Basturk's teaching of on-the-fly
25 processing of the authentication and placing the MAC in the trailer of a
26 packet.

1 JUDGE SMITH: But Basturk does it --

2 MR. BAKER: At the transport layer.

3 JUDGE SMITH: -- at the transport layer.

4 MR. BAKER: We're saying that technique is applicable to Handley,
5 their RTP packet at the application layer.

6 JUDGE SMITH: Handley does it at the application layer?

7 MR. BAKER: The RTP packet is at the application layer, effectively.

8 JUDGE SMITH: Which reference is signing it at the application layer
9 and sending it to the transport layer?

10 MR. BAKER: Handley.

11 JUDGE SMITH: Handley, okay.

12 MR. BAKER: Because RTP is at the application layer. That prior
13 slide I showed you where I showed the protocol stack, this shows you in the
14 '682, it explains that the RTP actually arrives at the application layer. So
15 they call it RTP, but it's an application layer protocol.

16 JUDGE SMITH: If Handley is already doing it at the application
17 layer, why do you need --

18 MR. BAKER: We need the authentication on-the-fly, placing it in the
19 trailer, as taught by Basturk.

20 JUDGE SMITH: Okay.

21 MR. BAKER: That's the technique we're relying upon from Basturk.

22 JUDGE SMITH: The on-the-fly and --

23 MR. BAKER: The on-the-fly, placing the authentication in the trailer
24 apply to Handley's RTP --

25 JUDGE SMITH: I understand.

26 MR. BAKER: -- packet, which is taught by Handley.

1 JUDGE SMITH: Thank you.

2 MR. BAKER: Let's go to slide 57.

3 Your Honors, there are multiple levels where Patent Owner argues
4 that Basturk teaches away from Handley. I want to touch on a few, but the
5 discussion we just had is pertinent to all of them.

6 We have to be mindful of the proposal we're making. The
7 modification is Handley has transmission of the packet at the application
8 layer, RTP. It has everything that the claim requires.

9 What we're looking for is a teaching of putting the authentication data
10 at the end of a packet. And that's what we're relying upon from Basturk. It
11 does on-the-fly processing to accomplish that.

12 A very useful slide to have an understanding is slide 73. Here, Dr.
13 Houh provides a teaching of how this is accomplished in Basturk through
14 on-the-fly processing. You can see the on-the-fly technique when a packet
15 is being transmitted. The packet is shown here with a yellow header. At
16 first, I'm talking about the on-the-fly computation at the very bottom with a
17 yellow header and a green payload.

18 The MAC, which is used for authentication, is computed as the packet
19 is being transmitted. So it's doing it in little chunks. And then by the time
20 the packet is fully transmitted, the on-the-fly computation is completed, and
21 the MAC can be placed in the trailer. So that's the technique that we're
22 relying upon in combination with Handley to teach the full scope of Claim 1.

23 Your Honors, unless you have any questions on the combination of
24 Handley and Basturk, I see we have about 15 minutes remaining in our
25 primary time. I would like to have my colleague, Ethan Perbohner, under
26 the LEAP program come discuss Ground II.

1 JUDGE SMITH: Thank you.

2 MR. BAKER: Thank you.

3 MR. PERBOHNER: Thank you, Your Honors. I'll be starting today
4 by discussing Ground II, which is the combination of PacketCable and
5 Handley. If you could turn your attention to slide 109. Slide 110, please.

6 As a quick reminder, the Board in its institutional decision stated that
7 PacketCable alone teaches all the elements of Claim 1. And nothing that
8 Patent Owner has put forward changes this.

9 Slide 111, please.

10 Just like we did for Ground I, we're going to start with the highlighted
11 portion here, which is, at a real-time transport protocol packet level as an
12 application protocol on an application layer.

13 Next slide, please.

14 Here in the PacketCable reference, it shows that it's explicitly using
15 RTP and that it uses RTP to transport both media such as audio and video
16 data across the PacketCable network.

17 Next slide, please.

18 So here in slide 113, we know that PacketCable is using RTP in its
19 ordinary fashion. We know that because it references the RTP specification
20 itself, which says that it's based off of application-level framing, and in the
21 '682 patent, which says that RTP is used above layer 4.

22 Next slide, please.

23 JUDGE SMITH: Let me ask you -- I think one of the complaints that
24 Patent Owner has is -- what Patent Owner argues is you're relying on the
25 invention as part of your obviousness theory.

1 Is this the only evidence to show that RTP is done at the application
2 layer? And if so, is this in the challenged patent? Is this well known in the
3 prior art as part of the invention?

4 MR. PERBOHNER: No. This is well known that RTP's application
5 is typically used as application-level framing. We know that because it says
6 that in the RTP specification itself, and our expert Dr. Houh confirms this.

7 He says that it is based off of the OSI model with Clark and
8 Tennenhouse, the very famous authors or developers of that. He actually
9 worked with -- his thesis advisor was Dr. Tanenbaum, so he knows a thing
10 or two about where these protocols fit into the layers. And even he said that
11 RTP is used at the application layer or in some sort of combination that's
12 above layer 4.

13 JUDGE SMITH: Okay.

14 MR. PERBOHNER: So Patent Owner via Dr. Stubblebine makes a
15 sort of curious argument that PacketCable does not disclose integration into
16 the application processing, but there's no indication in PacketCable itself that
17 RTP is not being used in its ordinary fashion.

18 I'd like to direct you to Patent Owner's presentation slide 137. What
19 they're showing here, this portion right here, they're going to point to this
20 and say that RTP will often be integrated into the application processing
21 rather than being implemented as a separate layer. And then they're going to
22 argue that Petitioner has not shown this.

23 But this is simply not credible because as we see on the left here, as
24 they cited from Dr. Houh, even he states that RTP operates on an application
25 layer. So this is exactly how RTP works even under Patent Owner's own

1 claim construction, which is the application layer, which is any layers above
2 the transport layer 4. That's where RTP resides.

3 So if we look at the RTP specification itself, we can turn to slide 134
4 of Patent Owner's presentation. This provides a functional architecture of
5 what the PacketCable specification looks like.

6 You can see at the bottom you have the physical layer, which is
7 DOCSIS. You have layer 2, which is DOCSIS 1.1. Then you have layer 3,
8 which is IP. Layer 4 is UDP. And above that, above layer 4 is RTP, exactly
9 where you'd expect the RTP protocol to reside because it's an application
10 protocol on an application layer.

11 Let's move to slide 116. Now we'll focus on --

12 JUDGE McKONE: Which presentation?

13 MR. PERBOHNER: Petitioner's.

14 Now, focusing on the authentication portion of Element 1.1. Next
15 slide, please. This PacketCable specification explicitly says that RTP
16 packets are encrypted directly with RC4 and that an MMH-based MAC
17 optionally provides this integrity.

18 Next slide, please.

19 So what Petitioners have pointed to is this figure here, which is Figure
20 13 of the PacketCable specification. Patent Owner will get up here and try
21 to say that the RTP specification did not define authentication or that it
22 would be expected later on, for authentication to occur at lower layers.

23 First, if we look at this real quickly, it says -- and the way to read this
24 is RTP is the protocol we're using. RC4+MMH is the security protocol that
25 we're using. And then the CMS-based KM, that's for key management.

1 So if we look closely back to Patent Owner's presentation at slide 135,
2 they're going to point to this bottom portion here, which is a snippet of the
3 RTP specification. This is where they're drawing their support from. The
4 highlighted portion, the pink at the top says, authentication and message
5 integrity are not defined in the current specification of RTP.

6 It's important to note the unhighlighted portion that they ignored here.
7 And it says, since these services would not be directly feasible without a key
8 management infrastructure. So the reason the RTP specification didn't say,
9 we can't add authentication at this time, is because it wasn't contemplating
10 this key management structure.

11 If we go back to Patent Owner's slide 118 --

12 JUDGE SMITH: Petitioner's slide?

13 MR. PERBOHNER: -- Petitioner's slide, this is exactly what we
14 have. We have CMS-based key management. So here, the very thing that
15 would allow authentication, to make that feasible is present.

16 One thing I'd like to also note is that the PacketCable specification
17 specifically says RTP layer security. That's written directly above this
18 reference on page 43 of PacketCable.

19 And one last note on this slide is the fact that the RTP specification
20 says that authentication is, quote, expected to happen at the lower layer. It
21 shouldn't be afforded any weight because right here in black and white, in
22 front of our eyes, it shows that authentication is occurring at the application
23 layer and is being used with RTP.

24 JUDGE McKONE: I thought you just said we're seeing encryption
25 happen --

26 MR. PERBOHNER: So RC4 --

1 JUDGE McKONE: -- at the application layer. This doesn't actually
2 show authentication at the application layer, correct?

3 MR. PERBOHNER: No, Your Honor. RC4 is the encryption, and
4 that's always going to be used. And then it provides an optional integrity,
5 MMH-based MAC, which is the authentication.

6 Next slide, please.

7 Looking at the next element, which is where you would put the
8 authentication, we say it would be obvious and our expert says it would be
9 obvious to someone skilled in the art because there's only a finite number of
10 places to place the authentication. That would be in the beginning, middle,
11 or at the end.

12 If we move to slide 121, there's only finite number of options. And as
13 the Board has rightly noted, *KSR* provides that when you have a finite
14 number of positions that someone skilled in the art -- it would lead towards
15 obviousness of where you could put it. The Patent Owner continues to
16 ignore this.

17 Next slide, please.

18 So as noted, we have the beginning, middle, or end. I'll quickly touch
19 on each of them. Let's start with the beginning.

20 As our expert explains, when you place the authentication data in the
21 beginning of the packet, it requires storing the packet, computing the
22 authentication data, and then transmitting the packet. What this does is it
23 adds latency compared to the alternative, which is placing the authentication
24 at the end of the packet so that you can compute the authentication while
25 you're transmitting the data.

26 Next slide, please.

1 This gets a little bit in the weeds, but Dr. Stubblebine disagrees with
2 what we say. And he says that, data can be found more quickly in an area
3 with a defined and/or fixed-length field. All he's saying is it's easier to go
4 find something if it's stationary. I want you to remember this, and I'll come
5 back to it in a minute.

6 Next slide, please.

7 And there's a couple points I'd like to rebut on this. First, the RTP
8 specification itself says, that this header extension is intended only for
9 limited use. Most potential uses of this mechanism would actually be done a
10 better way or another way.

11 And at the bottom, the RTP specification also says, additional
12 information that is required for a particular payload format, such as video
13 encoding here or authentication in our case, should be carried out in the
14 payload section.

15 Next slide, please.

16 If you were to use the RTP header extension, you can only use it once.
17 So it precludes any other uses where RTP header extension might come into
18 play as well. And this is what our expert, Dr. Houh, is explaining here.

19 Next slide, please.

20 When I said we'll revisit something, this is what I'm talking about.
21 Dr. Stubblebine says putting the authentication in a fixed location is the
22 easiest way to determine the location of the MAC.

23 Next slide, please.

24 Our expert, Dr. Houh, looks at the RTP specification. And he says
25 that when you use the RTP header extension and you set that bit to one, it
26 introduces a variable-length field.

1 Put plainly, if we were to use the RTP header extension, it introduces
2 the very thing that Dr. Stubblebine says would be difficult to implement.
3 And it would not be as easy because you're placing additional data in that
4 RTP header extension, and that introduces more latency. This is just another
5 example of where --

6 JUDGE SMITH: The variable length comes from the fact that
7 sometimes the extension will be used for additional data and sometimes it
8 won't; is that right?

9 MR. PERBOHNER: That's right, yes.

10 JUDGE SMITH: Okay.

11 MR. PERBOHNER: Next slide, please.

12 One last point on this is that the IP layers and the UDP layers, they
13 already use variable-length fields. And so when we use the implementation
14 where MAC is placed at the end of the RTP packet, where you don't
15 introduce another variable-length field, contrast that to where you would use
16 the variable-length field in the RTP header extension.

17 And so instead of just having the two variable-length fields that you
18 have at the IP and the UDP layer, now you have that third, which would
19 increase computing costs, latency, and so on.

20 If we skip ahead to slide 133, as seen, there's no reason why the
21 authentication would be placed in the beginning because the RTP
22 specification itself teaches away from this and the benefits of the
23 authentication at the end would occur if a POSA placed it at the end.

24 I'll touch on the middle really quick. Our expert, Dr. Houh, says that
25 authentication data in the middle of the packet would negatively impact

1 performance, cause packet fragmentation issues, and complicate the
2 implementation of the software.

3 And that's because you're placing the authentication in this packet
4 payload. Well, you've got to go find it somehow, and you need additional
5 data to be able to go do that. When you add additional data, it takes longer
6 to transmit things because, as he explains, you need to find the exact location
7 of the authentication data, and thus you're sending more data.

8 Next slide, please.

9 So Patent Owner is going to get up here and try to send us on a little
10 bit of a red herring talking about fragmentation. They say we haven't
11 identified any negative impacts of fragmentation, but the fragmentation that
12 they're talking about is a very specific, narrow type of fragmentation. As
13 our expert, Dr. Houh, on slide 136 shows, they're limiting their definition of
14 fragmentation to link fragmentation.

15 Link fragmentation, as Dr. Houh explains, is simply when you have a
16 packet that's 1,500 bytes. You need to get it across a max transmission unit
17 that may be 512 bytes. Invariably, you're going to have to break up that big
18 packet so that it can fit across this unit, but that's not the type of
19 fragmentation that we're talking about.

20 Next slide, please.

21 The type of fragmentation that we're talking about is simply that when
22 you place data in the middle of a payload, it creates two non-contiguous
23 portions of data. When we asked Dr. Stubblebine about this, he recognized
24 that this is the type of fragmentation.

1 And we asked him about disk fragmentation specifically. For this, he
2 said that sometimes content is distributed, and you have to search on
3 multiple sectors to retrieve the entire file, multiple non-contiguous sectors.

4 If you go to the next slide on 138, this is exactly the type we're talking
5 about here, as Dr. Houh says. When the MAC is put in the middle of the
6 data section of the packet, it separates the data that was originally contiguous
7 into two non-contiguous portions.

8 Next slide, please.

9 Now, with respect to any performance impacts that would be avoided
10 that Patent Owner is going to argue, we have demonstrated those
11 performance impacts.

12 If you go to the next slide, on 140, they seem to ignore the fact that
13 when you add this authentication in the middle of the payload, you're going
14 to have that extra data. And it's going to cause latencies for the reasons I've
15 already explained.

16 If you go to slide 142, please. As I've said, it's clear that a POSITA
17 would not have placed the authentication in the middle of the packet. And
18 I'll quickly recap why a POSITA would have put it at the end.

19 If you go to the next slide, on 144, placing authentication at the end of
20 the whole RTP packet payload would allow for the data to be transmitted
21 simultaneously or in parallel to the MAC being computed.

22 I'm out of time, Your Honors. For the remaining grounds, we rest on
23 our brief. Thank you for your time.

24 JUDGE SMITH: Thank you. That was really good timing.

25 Patent Owner, you have 50 minutes. Let me get set up here. You
26 may begin when ready.

1 MR. CARDENAS-NAVIA: Good afternoon again, Your Honors.
2 May it please the court. I'm going to be addressing the printed publication
3 issues. So I'll start with those, and I'll leave everything else for Mr. Eklem.
4 I'm going to start with Handley.

5 Can we get up slide 34, please?

6 In our briefs, we detailed a lot of reasons why Handley isn't a printed
7 publication. Right now I'm just going to focus on one. Counsel was making
8 the argument that there wasn't a forfeiture here, but it's actually more than
9 forfeiture.

10 Actually setting forth your argument by citing to relevant record
11 evidence with specificity and explaining the significance of the produced
12 material in your substantive briefs, that's actually a statutory requirement for
13 meeting your burden of proof as a petitioner. So our argument is more than
14 forfeiture. It's a statutory requirement.

15 This is the *Parus Holdings v. Google* case. It's really the foundation
16 for our argument. Again, I'm on slide 34 here.

17 JUDGE McKONE: You said statutory requirement. Which statutes
18 should we be paying attention to?

19 MR. CARDENAS-NAVIA: Let me get that for you for rebuttal.

20 JUDGE SMITH: Let me ask you about this case. This is talking
21 about explaining the significance of the produced materials in the briefs.
22 Petitioner did explain the significance in its motion.

23 You had a chance to respond in your opposition. Petitioner again, in
24 reply to your opposition, presented additional arguments. And then you in
25 your additional papers presented arguments. You here today are presenting
26 arguments on this.

1 In terms of giving you notice and an opportunity to respond, you had
2 notice and an opportunity to respond. Why isn't that enough?

3 MR. CARDENAS-NAVIA: I disagree that we had notice and an
4 opportunity to respond. I'll start with the motion to submit supplemental
5 information.

6 At issue in that motion wasn't whether or not Handley was prior art.
7 We weren't briefing whether it was prior art. We were briefing whether
8 certain regulatory requirements were met about whether additional
9 information could be submitted. And Patent Owner's primary response to
10 that was that, notwithstanding certain regulatory requirements being met,
11 this new evidence shouldn't be admitted into the proceeding because it was
12 in support of a new theory.

13 So what we were briefing was whether or not the new evidence
14 supported a new theory or not, not whether or not Handley was a printed
15 publication. I didn't understand either party to be briefing that issue in the
16 context of the motion to submit supplemental information.

17 Your Honor is correct that out of an abundance of caution in our sur-
18 reply, we did put forth some argument about why Handley is not a printed
19 publication, but again, it goes back to Parus. The whole point is we have to
20 know what Petitioner's argument is so we can fully respond to it and fully
21 understand how they're using the evidence, what theories they're supporting.

22 At the motion to submit supplemental information, our primary
23 concern was we're not sure what their theory is. And they did try to clarify
24 that, but as you saw in our sur-reply, we still addressed any number of
25 theories.

1 Petitioner until today, maybe for the first time has actually put some
2 argument about why Handley might be prior art, in addition to their
3 argument that it was maybe initially decided in some way in the context of
4 that motion, that supplemental information.

5 Again, the Federal Circuit in this *Parus v. Google* case tells us that's
6 not sufficient. Those arguments, they have to be in the substantive papers,
7 the petition or the reply.

8 JUDGE SMITH: How about to Petitioner's point that we said in our
9 order -- along with the evidence to be submitted, we made comments saying
10 that these documents -- I forget the exact language, but it was something to
11 the effect that these documents are evidence showing that Exhibit 1005 was
12 publicly accessible.

13 MR. CARDENAS-NAVIA: Yes. I've got that exact language here, if
14 you're interested. It said, we agree with Petitioner that Exhibits 1016
15 through 1018 and 1020 through 1028 confirm that Exhibit 1005 was
16 publicly accessible by February 11, 1999.

17 Of course, the Board knows what it meant when it said that. We did
18 not understand the Board to be making any kind of preliminary finding. We
19 understood the Board to be -- again, this was in the context of Patent
20 Owner's argument that the evidence is being used to make a new theory, to
21 support a new theory.

22 We understood the Board to essentially be saying, well, there is a way
23 in which this evidence could support Petitioner's existing theory. And
24 Petitioners were saying that that's exactly how they were going to use the
25 evidence. So that's the way we understood that statement.

1 And of course, as we noted later on towards the very end of the
2 decision, the Board stated that Patent Owner is able to argue any publication
3 or evidentiary issues collectively with respect to Exhibits 1005, 1007, and
4 1016 through 1028 in the normal course of scheduled briefing.

5 We didn't think that the Board would have stated that if the Board
6 considered the issue to be decided in a way that was at all binding on the
7 parties. So we expected it to be fully briefed. Petitioners had an opportunity
8 to brief it. They, of course, didn't.

9 JUDGE EASTHOM: But you just read there where we said the
10 Patent Owner has the opportunity. So doesn't that sort of imply that we
11 meant that your friends already presented their opportunity; maybe they
12 don't have to go any further with it?

13 MR. CARDENAS-NAVIA: We didn't understand that to be what the
14 Board was saying. And that still runs into this *Parus* case, as well as the
15 other cases we've cited about the unfairness in terms of --

16 JUDGE EASTHOM: I don't understand your *Parus* argument
17 because it isn't a brief. It's in their motion.

18 So your argument is that, well, we were all trying to figure out
19 whether they were pursuing a different theory of printed publication. We
20 tried to straighten it out. We said, look, it looks like it's the same theory. It's
21 whether this Handley reference was publicly disseminated prior to the data I
22 mentioned.

23 And then this new evidence just comes and corroborates that. And
24 then you have the ball in your part now on that.

1 MR. CARDENAS-NAVIA: Again, that's not how we understood
2 that. And we believe that's inconsistent with the overall framework of how
3 petitioners are vetted and decided.

4 In these intermediate motions, I mean, they gave some indicia of what
5 their theory was. Again, it's got to be in the right papers. We cited some
6 other IPR decisions that were referenced when Petitioner was arguing about
7 kind of the unfairness from that in terms of the use of the page limit and
8 things of that nature.

9 JUDGE SMITH: So when we said we agreed with Petitioner that
10 Exhibits 1016 through 1018 and 1020 through 1028 confirmed that Exhibit
11 1005 was publicly accessible by February 11, 1999, you took that to mean
12 they can submit these documents, and they still need to show that they were
13 publicly accessible?

14 MR. CARDENAS-NAVIA: Yes. We assumed the normal statutory -
15 -

16 JUDGE SMITH: Why would you assume that when we said, in black
17 and white, we agree with Petitioner that these exhibits confirm that Exhibit
18 1005 were publicly accessible? Why wouldn't you take that to mean the
19 Board here is saying that these exhibits show publicly accessible, and now
20 the burden is on us to show that these exhibits don't show they're publicly
21 accessible, or it wasn't -- why would you take that to mean anything other
22 than what it literally says?

23 MR. CARDENAS-NAVIA: Two reasons. One is the overall
24 statutory structure. We're not sure that the Board can necessarily override
25 that.

1 Two was, again, this was in the context of a motion to submit
2 supplemental information. It wasn't in the context of is Handley a printed
3 publication or not, so we didn't brief that issue.

4 JUDGE SMITH: When you say --

5 MR. CARDENAS-NAVIA: So if the Board decided that issue, then
6 that's a separate issue that we weren't aware of.

7 JUDGE SMITH: We didn't decide it in the sense of making a final
8 decision, but we made an interim decision and provided you with the
9 opportunity. We said in this order you have the opportunity to challenge
10 this. Why isn't that enough to put you on notice to challenge it?

11 MR. CARDENAS-NAVIA: Ultimately, the Petitioner is the one who
12 has to cite the evidence and set forth the theories why something is or is not
13 a printed publication, and they must do so in their substantive papers. That's
14 what we understand the Federal Circuit to have stated expressly in *Parus v.*
15 *Google*, and so that's why.

16 JUDGE SMITH: So we can't make any interim findings to put the
17 parties on notice as to what we think the evidence shows during the course
18 of the trial? Is that what you're saying?

19 MR. CARDENAS-NAVIA: I'm not sure I can make a statement that
20 broad. We certainly don't think it could do so in this specific context, and
21 we certainly didn't think that's what the Board had done.

22 JUDGE SMITH: I guess I'm having a hard time understanding why
23 you didn't think that's what we had done when we actually said that's what
24 we're doing.

25 MR. CARDENAS-NAVIA: We didn't think the Board had decided
26 an issue that the parties hadn't briefed, was our understanding.

1 JUDGE SMITH: We made an interim finding, and we invited you to
2 provide us with further briefing. Why didn't you provide us with further
3 briefing?

4 MR. CARDENAS-NAVIA: Well, we did address these issues in the
5 sur-reply, but again, we were throwing darts.

6 JUDGE SMITH: Why isn't it enough, then? Why isn't it enough to
7 address it in the sur-reply, and you're addressing it again today?

8 MR. CARDENAS-NAVIA: Until maybe today a little bit, we've
9 never heard Petitioners articulate their theory in one of the papers that
10 matters.

11 JUDGE SMITH: You heard them in their reply. They cited to what
12 we said in our order. Why wasn't that enough to put you on notice?

13 MR. CARDENAS-NAVIA: My understanding is that the Board
14 cannot set forth the theories that are -- substantive theories that are at issue,
15 and that can't govern the scope of the dispute. That's my understanding of
16 the statutory framework. Again, it's also what the Board says --

17 JUDGE SMITH: We didn't set forth theories. I don't understand what
18 you're saying. You're saying we set forth theories?

19 MR. CARDENAS-NAVIA: Maybe I misunderstood what Your
20 Honor was saying. I thought Your Honor was referencing the Board's
21 analysis in its decision and saying that that was the basis, those were the
22 theories for why Handley could have been a printed publication.

23 JUDGE SMITH: Okay. I'm not sure I follow what you're saying, but
24 I don't want to take up too much time on this.

1 MR. CARDENAS-NAVIA: Okay. I'll move on then. Unless Your
2 Honors have any more questions about Handley, I'm going to move on to
3 PacketCable.

4 So the standard for public accessibility is whether the interested
5 members of the relevant public could locate the reference by reasonable due
6 diligence before the critical date. So basically, there's three components to
7 this requirement.

8 You've got to show when the reference was publicly available, how
9 the reference was publicly available, and that persons interested would be
10 able to locate the reference. There's not sufficient evidence for either of
11 those three required showings.

12 I'll start with the first one. When was PacketCable first available?
13 We actually don't know. We know it was available at some point on the
14 Internet, many years after the critical date. Beyond that, we honestly don't
15 know.

16 It's got a release date. It says December 1, 1999. What release means,
17 was that a method of version tracking? Was it actually released to anyone
18 beyond the authors, anyone beyond the initial company that was working on
19 it, any kind of release broader than that? It's all speculation and assumption.

20 JUDGE SMITH: Why would the authors release it to themselves?
21 That doesn't make any sense.

22 MR. CARDENAS-NAVIA: It could just be a version tracking
23 protocol.

24 JUDGE SMITH: Release date means version tracking?

25 MR. CARDENAS-NAVIA: It certainly could. I don't see why it
26 necessarily means a broader release. It could be an internal release.

1 JUDGE SMITH: I mean, the normal meaning of release is a synonym
2 for being public. Why would it mean anything other than its normal
3 meaning of release?

4 MR. CARDENAS-NAVIA: Well I disagree that it's its normal
5 meaning in this context, but even if it meant that, we have no idea whether
6 the intent was to release it on that day or not, that it actually was released on
7 that date. We have zero evidence about the policies and procedures for how
8 PacketCable comes up with its document and releases them.

9 And that gets to the second thing is, you know, how was this
10 document available? Again, I believe Counsel even admitted they're just
11 assuming it must have been released in some way, maybe email, maybe on a
12 website, maybe some other means.

13 There is zero evidence of how it was actually distributed or if it was
14 actually distributed. Again, we're relying purely on assumption and
15 speculation. And cases like *In re Lister* tell us that's not enough.

16 Going to the third prong, that reasonable persons could locate the
17 reference. Here, we're getting at there's not firm evidence that members of
18 PacketCable, of CableLabs, could access it.

19 But even if we assume that they could, which is an assumption, we
20 have no idea who these people are. We don't know who the member
21 companies were. We don't know who the people were at the member
22 companies. It's all just assumptions.

23 We're talking about the state of the world 25 years ago, and there is no
24 evidence in the record of what it was like. So there's a huge gap in the
25 evidence. And there's actually a lot of evidence that it wasn't publicly
26 available.

1 I took the deposition of Dr. Hall-Ellis. And as is her nature, she
2 searched for it. She spent a lot of time searching for PacketCable and trying
3 to figure out if it was publicly available as of the critical date.

4 She couldn't find PacketCable anywhere before then. She tried to.
5 She checked the Wayback Machine. She checked all the cataloging systems
6 that she has access to and couldn't find it. She found no indexing or
7 cataloging of PacketCable ever.

8 She also searched for evidence that PacketCable might have been at
9 the Copyright Office because of the copyright stamp on there, couldn't find
10 it. No evidence that it was ever there. She also found no evidence of
11 websites or other resources directing people to PacketCable as of the critical
12 date.

13 Again, it goes to those three prongs of: when was it available, how
14 was it available, could POSITAs locate it? There's a lot of evidence that it
15 wasn't and they couldn't.

16 JUDGE EASTHOM: What do we do with the statement in the
17 abstract that your friend showed? I think they showed it on their slide.

18 It says, the intended audience for this document includes developers
19 of equipment intended to be conformant to PacketCable specifications and
20 network architects who need to understand the overall PacketCable
21 architecture framework.

22 It seems the pure intent of this is to send it out. You know, it has an
23 intended audience.

24 MR. CARDENAS-NAVIA: Yes. I think I'll say two points on that.
25 One is a hypothetical that I think illustrates the weakness of that evidence.

1 Let's say I open up my computer. I open up a Word document and I
2 write, this document is intended to be shared with the world. And then
3 below that I wrote, smile. And then below that I wrote, released September
4 10, 2024. Now I save that document. I close it. And then ten years from
5 now, someone finds my document on the internet.

6 Is the document a printed publication because it said I wanted to
7 release it to the world? And I know there's here, again, evidence of intent,
8 you need more than that because whether --

9 JUDGE SMITH: This isn't just some guy sitting at his computer
10 saying, I release this. This is a document -- this is a 47-page technical
11 description where people put in -- I mean this isn't one person. On page 47,
12 there are acknowledgements to many, many people in the cable industry that
13 helped contribute to this document.

14 If I opened up a computer, and I saw a highly detailed technical
15 document that took a significant amount of time by several people who are
16 experts in this field to create, I would say these people didn't just get
17 together on a Saturday afternoon with nothing to do, create this document,
18 and then just forget about it.

19 I would say the whole reason they got together and created this
20 document is to do what they said they want to do with it, which is distribute
21 it to members of the industry.

22 MR. CARDENAS-NAVIA: And I think the *In re Lister* case gets to
23 the heart of where you're going because intent is one thing. You actually
24 need evidence of some kind of distribution or availability.

25 I believe it was the *In re Lister* case that there was no dispute that the
26 document was at the National Archives, but that wasn't enough to make it a

1 printed publication. And there was even evidence that certain services,
2 maybe like Westlaw or LexisNexis, would at some point in the future go and
3 grab the document from there and make it sufficiently accessible on their
4 websites.

5 But there was no evidence in the record of when they actually did it,
6 no evidence in the record of what their policies and procedures, how long
7 they generally take, or how they do it. Even though everyone knew it did
8 happen and we can make some inferences about how long it would take,
9 there was a lack of evidence. That wasn't sufficient.

10 Here the hole is even more big, again, because we just don't know
11 when they did it. We also don't know how they did it, who they did it to.
12 There is no LexisNexis or someone waiting to distribute it. That's all also a
13 giant question mark.

14 JUDGE EASTHOM: But that case is not even close to this. It doesn't
15 have this indicia that we're talking about. You might have a copyright and a
16 title, and that was it, right, in the *Lister* case?

17 MR. CARDENAS-NAVIA: Well, there was evidence that it was at
18 the Archives. And there was evidence that it was going to be picked up and
19 distributed.

20 JUDGE EASTHOM: Okay.

21 JUDGE SMITH: But it wasn't catalogued in the Archives; is that
22 right?

23 MR. CARDENAS-NAVIA: That's right. That wasn't a sufficient
24 cataloguing. That wouldn't happen until one of the larger entities had picked
25 it up. And then I think the parties didn't dispute that it was sufficiently
26 searchable.

1 JUDGE SMITH: But here, we're not talking about submitting it to
2 some library, and it just sits on a shelf somewhere without being catalogued.
3 We're talking about releasing to what the abstract calls the developers of
4 equipment intended to be conformant to these specifications and network
5 architects who need to understand the architectural framework.

6 Why isn't that evidence enough to show, this combined with what it
7 calls the release date? This is several years before the effective filing date of
8 the challenged patent.

9 MR. CARDENAS-NAVIA: It's not, actually.

10 JUDGE SMITH: What's the effective filing date?

11 MR. CARDENAS-NAVIA: It's January 18, 2000. So about six
12 weeks or so after the date on this PacketCable document.

13 JUDGE SMITH: Okay.

14 MR. CARDENAS-NAVIA: And to the broader point, again, it's
15 assumption. It's speculating that they actually followed through on a certain
16 time frame to the right people when there's no evidence of what those
17 actually are. So there would need to be more development of the factual
18 record, of all three of those prongs were lacking here.

19 I did want to be able to pull up the slide 45.

20 MR. PERBOHNER: Petitioner's slide?

21 MR. CARDENAS-NAVIA: Petitioner's slide 45. I'll go ahead and
22 start talking about it. The specifics aren't important. Petitioner put up a
23 slide, and it had a deposition testimony of their expert. And there's a couple
24 problems with this.

25 One, this is deposition testimony that they elicited as part of their
26 redirect of their own expert. It raised a lot of issues that weren't in his

1 declaration and weren't in the scope of his direct examination, so it was all
2 improper. We objected in the record at the time.

3 Also, none of that is cited in their reply or their petition, so none of
4 that is evidence to be properly considered by the Board. This is the slide
5 here. I think this is the closest they get to having evidence. And again, we
6 believe it's improper to consider this evidence for the reasons I just laid out.

7 Unless Your Honors have any more questions about PacketCable or
8 the prior art, I will turn it over to my colleague.

9 JUDGE SMITH: Thank you.

10 MR. CARDENAS-NAVIA: Thank you.

11 MR. EKLEM: Good afternoon, Your Honors. Philip Eklem with the
12 Patent Owner. I'll take you to Patent Owner's slide 4.

13 Petitioner has attempted to prove obviousness by picking claims apart
14 and analyzing pieces in isolation and out of context, but the crux of the
15 invention includes a novel combination of three things, shown here in three
16 different colors -- green, red, and blue -- that together mark an improvement
17 over conventional techniques of transmitting real-time data with RTP.

18 That combination is: one, providing authentication specifically at the
19 RTP packet level; two, providing that RTP packet level authentication as an
20 application protocol on an application layer; and three, doing so by inserting
21 authentication data at the end of the RTP packet payload to be transmitted.

22 This combination breaks with the conventional approach to
23 authentication that was used specifically when RTP was being used, which
24 was to provide authentication at a lower layer.

25 Turn to slide 8, please.

1 RTP itself did not provide authentication and integrity services at all.
2 RTP was designed with the expectation that authentication and integrity
3 would not be provided at the RTP packet level as an application protocol, an
4 application layer, but instead that it would be provided at a lower layer by
5 other protocols in the future.

6 The RTP specification indicates that it provided encryption services --
7 and I'm talking about encryption services -- because there was an established
8 need for confidentiality with audio and video applications that were
9 expected to use RTP. That's at Exhibit 1008, page 49.

10 But RTP does not say anything about an established need for
11 authentication or integrity services for audio and video applications,
12 implicitly recognizing that there was no established need. So instead, RTP
13 expected that authentication and integrity would be provided by lower layers
14 in the future, such as at the IP level.

15 Consistent with that expectation -- turning to slide 7, please -- it was
16 known at the time to use something called the IPSEC protocol, which
17 provided integrity services at the lower IP level. As the '682 patent points
18 out, one problem with IPSEC was that its security services could not be
19 linked to the application layer due to the layered structure in the OSI model.

20 Turning to slide 13, please.

21 As I'll explain further, the record shows that the inventor of the '682
22 patent was first to realize a need to provide authentication specifically at the
23 RTP packet level as an application protocol and application layer.

24 He discovered several benefits for doing so, including the ability to
25 perform more efficient security computations over less data -- and turning
26 to slide 14 -- as well as improving performance by taking the special

1 functions of audio and video applications and incorporating them into the
2 providing of authentication for RTP packets.

3 As I'll explain, each of Petitioner's references indicates that before the
4 '682 patent, the person of ordinary skill in the art would have instead thought
5 to provide authentication for RTP when using RTP below the application
6 layer, if at all.

7 As to Handley -- turning to slide 84, please -- Handley's architecture is
8 for IP multicast distribution through routers. For this multicast architecture
9 where receivers do not need to know who the transmitters are, Handley
10 indicates that sufficient security is provided through encryption.

11 Turning to slide 86 --

12 JUDGE EASTHOM: But isn't encryption and authenticity a little
13 different?

14 MR. EKLEM: They are different.

15 JUDGE EASTHOM: Okay.

16 MR. EKLEM: And that's exactly the point. When Handley is saying
17 that encryption is sufficient for providing security in its multicast
18 framework, that's just encryption. And --

19 JUDGE SMITH: But authentication doesn't provide security. It just
20 authenticates the source of the packet.

21 MR. EKLEM: Well, I think that is considered a form of security, but
22 it is a different -- I think conceptually, it's a different --

23 JUDGE SMITH: I mean security in the sense that if I have a piece of
24 paper and I sign it, it's signed, but it's not encrypted. Anybody can look at it,
25 and it's signed, so they know it came from me. Whereas if I take this

1 document and I put it in a black envelope so nobody can look at it, that
2 would be encrypted in the sense that nobody could look at it.

3 So these are two different things. What you're calling security
4 provided by encryption, that's not the same as the authentication provided by
5 the signature.

6 MR. EKLEM: That's right. Just because you provide encryption
7 doesn't mean you provide authentication or signature. And that's what I'm
8 getting to.

9 JUDGE SMITH: Okay.

10 MR. EKLEM: The claims are talking about authentication. The
11 claims are not directed to providing encryption at an RTP packet level as an
12 application protocol at an application layer. It's directed to something
13 different, which is I think what you're getting at, which is authentication.

14 JUDGE SMITH: Right.

15 MR. EKLEM: And one way to do that would be to incorporate a
16 signature, or another example is a MAC, things of that nature.

17 Turning to slide 86, Handley notes that RTP itself provides a way to
18 encrypt packets for the purpose that it sought. So if Handley wanted
19 encryption, it could use RTP. RTP has encryption.

20 But Handley does not teach authenticating RTP packets by inserting
21 authentication data into the RTP packet as an application protocol on an
22 application layer. That's what Handley does not teach, and that's what these
23 claims are directed to.

24 JUDGE EASTHOM: So Handley just teaches it at a lower layer. Is
25 that your argument, or you're disputing that too?

1 MR. EKLEM: Well, Handley does not teach doing it at a lower layer.
2 It is consistent, however, with the standard approach, which was laid out by
3 the RTP specification, which was that it would be provided at a lower layer.

4 So in terms of what does Handley disclose, it does not disclose doing
5 it at the application layer. It actually doesn't tell you at all where it would be
6 done.

7 JUDGE EASTHOM: It just discloses authenticating something at
8 some layer?

9 MR. EKLEM: So Handley is about this multicast architecture. And
10 its discussion of security, in Chapter 8 there's a section that mentions that for
11 a different architecture, if you were to use broadcast instead of multicast, it
12 suggests that in a broadcast architecture, you might need some form of
13 signature to ensure that parties sending can control who is sending and
14 receiving and things of that nature.

15 That's not the architecture that it was teaching, but in any event, in
16 that discussion where it's discussing the signature for integrity, Handley
17 doesn't discuss where the signature would be provided. And that's really the
18 key thing here.

19 JUDGE EASTHOM: Whether it would be at the beginning, the
20 middle, or the end? Is that what you're --

21 MR. EKLEM: No, sir. Whether it would be at the application layer
22 or --

23 JUDGE EASTHOM: I see.

24 MR. EKLEM: -- at some additional security layer which would have
25 been expected to be provided at a lower layer.

1 JUDGE SMITH: If I remember correctly Petitioner's argument -- and
2 if I'm wrong, correct me -- I thought Petitioner was saying that Handley talks
3 about signing the packet at the application layer before passing it to the
4 transport layer, and they're relying on Basturk to show the signature can be
5 put at the end of the packet. Is that correct?

6 MR. EKLEM: I think it's close. Petitioners were relying on Basturk.
7 Petitioners argue that Basturk teaches providing signatures at the application
8 layer.

9 JUDGE SMITH: Okay.

10 MR. EKLEM: But their point was that what they were relying on in
11 terms of the asserted combination, I don't believe was that generality. It was
12 more so that Basturk teaches a technique whereby a MAC signature is
13 provided at the end of the packet. So they were creating a combination to
14 loop in that specific part of the claim where the data is asserted at the very
15 end.

16 JUDGE SMITH: So Basturk has signing at the application layer
17 before passing to the transport layer; is that correct?

18 One of the references says -- I'm looking at -- let's see. I'm reading
19 from Petitioner's slide 55, application-level security. Application-level
20 security features are easily and usually provided by application level
21 security.

22 And then it goes on to say, integrity is usually guaranteed by signing
23 data before passing it to the transport level. Isn't that enough to show
24 signing at the application layer?

1 MR. EKLEM: Well, so I believe the part of Basturk that they're
2 referring to that you're reading from would be on page 3 of Basturk, page 3
3 of the reference exhibit --

4 JUDGE SMITH: Okay.

5 MR. EKLEM: -- the 1006. So there, yes, on that portion, Basturk
6 generically refers to using a signature for integrity at the application level,
7 but that essentially confirms that that's why Basturk is not talking about RTP
8 or a solution that could be used with RTP.

9 Turning to slide 116, please --

10 JUDGE EASTHOM: So you're disputing that RTP is an application
11 layer? Because I thought your friends are saying that it actually is.

12 MR. EKLEM: We're not disputing that. So RTP --

13 JUDGE EASTHOM: Or it's at least a layer above level 4 if it's not
14 quite an application layer.

15 MR. EKLEM: So there is some details here that we should pay
16 attention to. RTP can be used as an application protocol, but it doesn't have
17 to be.

18 How it's being used as an application protocol, if it is, is critical here
19 because what the claim requires is it requires providing authentication as an
20 application protocol, an application layer, and inserting that authentication
21 data into the RTP packet. So it's about where the authentication data is
22 being provided.

23 We're on slide 116. Petitioners agree that Basturk is not talking about
24 RTP. It's essentially speaking in generalities about what would have been
25 known about perhaps some types of applications.

1 JUDGE SMITH: Let me ask you, is there a difference between the
2 application layer provided by RTP and the application layer provided by
3 Basturk?

4 MR. EKLEM: Yes.

5 JUDGE SMITH: What's the difference?

6 MR. EKLEM: So one of the key differences is that with -- if we can
7 go to slide 143, please -- with RTP, RTP does not have authentication. It
8 doesn't come with authentication or integrity services.

9 So when Basturk is saying, well, you could put a signature at an
10 application layer, Basturk is not talking about RTP. It's talking about some
11 other category of applications. It's not apples to apples here that we're
12 talking about.

13 JUDGE SMITH: I mean, does it have to be identical? We have *KSR*.
14 If a technique has been used to improve one device, a skilled artisan would
15 use that same technique to improve another device in the same way.

16 Here, Basturk is using signing the authentication layer to improve
17 integrity. One of skill in the art could use that technique to improve the
18 integrity of RTP by signing at the application layer.

19 MR. EKLEM: So when it comes to the motivation to combine, with
20 respect to why a person of ordinary skill in the art would -- what would they
21 do with that information from Basturk, Basturk teaches that for some
22 applications, it was typical for doing that.

23 For RTP, when we're starting with RTP, we're starting with a
24 foundation of there is no authentication and there is no integrity. And there's
25 a reason for that. The reason for that is because at the relevant time, the
26 person of ordinary skill in the art reading RTP would say -- would read that

1 document which says the authentication is expected to come from a lower
2 layer. The reason for that was because there wasn't a known need for
3 providing it at the application layer for RTP.

4 So RTP is different from typical applications in that sense. You could
5 say it's a special case. And that's what, essentially, RTP was getting at when
6 it says, we don't provide that information. And if it is coming, it's going to
7 be coming at a lower layer.

8 And Basturk is not teaching that if you have an application layer
9 without security, you would add it there. That's not what Basturk is
10 teaching. In fact, it's teaching the opposite. It's teaching that if you have
11 authentication and integrity services that you want to provide, you're going
12 to provide it at the transport layer, which is below the application layer.

13 And you're going to do that because this is the whole point of the
14 search paper is providing the elements of security. And it ropes in
15 authentication and integrity with types of security, that if you provide them
16 at the application layer but not at the transport layer, you're going to have
17 big problems.

18 So it's saying when you don't have those security elements, don't do it
19 there. Do it at the transport layer. It's more efficient. And that's the whole
20 point of its teaching on that point.

21 JUDGE SMITH: So just to be clear, Basturk saying do it at the
22 transport layer is authenticating at the application layer and then passing it to
23 the transport layer? Is that what you're calling doing it at the transport layer?

24 MR. EKLEM: No. If you're signing at the application layer and then
25 passing that to the transport layer, that's providing and inserting
26 authentication data at the application layer, which is what Basturk is saying

1 their technique does not do. Their technique does all that at the transport
2 layer.

3 JUDGE SMITH: Okay.

4 MR. EKLEM: Turning to, if we could, slide 138, I'll just make a note
5 on PacketCable. PacketCable is similar to Handley in several ways. As
6 shown on slide 138 in the upper left excerpt in yellow, we have here that
7 PacketCable implements encryption, specifically encryption without
8 additional security layers. That makes sense because RTP provides
9 encryption services as part of the RTP protocol that PacketCable uses in its
10 documentation.

11 As shown in blue, PacketCable does not say the same thing about its
12 MAC not needing an additional security layer, which suggests that an
13 additional security layer would be needed. And that too makes sense
14 because, as we know, RTP doesn't come with authentication or integrity
15 services, so it has to come from somewhere. And that's really the critical
16 thing. Where does it come from?

17 When PacketCable wanted to indicate that authentication was being
18 provided at the application level, it did. For example, on page 46 of
19 PacketCable -- that's Exhibit 1007 -- it includes a reference to something
20 called an application layer authenticator, which is not how it chose to
21 describe RTP.

22 For RTP, it says you can get encryption without any additional
23 security layers. That's not what it says about the MAC, which is entirely
24 consistent with RTP's teaching, which is that RTP doesn't provide those
25 authentication and integrity features because there wasn't an established
26 need for it and that they would be provided by lower layers in the future.

1 So turning to slide 87, we discussed this a bit, but Basturk proposes
2 specifically a transport protocol to address security issues that specifically
3 reside at the transport layer.

4 Slide 89, please.

5 So in Basturk's protocol, a transport module is what signs the data.
6 And it signs data in the transport packets, as well as acknowledgments that
7 exist only at the transport layer. So what Basturk is teaching here is it's
8 teaching a security solution designed specifically for a transport layer.

9 Turning to slide 117, please -- I'm sorry. Back to 116, if you could.

10 Petitioners can see that Basturk is not talking about RTP. And it
11 makes sense that Basturk is not talking about RTP because, as we've
12 discussed a little bit already, although Basturk mentions that signatures are
13 usually provided by application layer security, that's simply not true for
14 RTP, which explicitly does not provide for integrity or authentication
15 services.

16 Basturk's remark here -- not here, but on page 3 -- providing
17 signatures at generic application layers would essentially be like saying seat
18 belts are usually provided with vehicles, right. That might be true for some
19 vehicles, like cars and trucks that are certified to drive on public roads, but
20 it's not true of other types of vehicles, like bicycles or motorcycles.

21 So Basturk isn't suggesting here a solution that would have been
22 thought to have been used with RTP. In fact -- turning to slide 117, please --
23 Basturk teaches away from adding security to an application layer in favor
24 of doing it at the transport layer.

25 Basturk says that applications shouldn't have to be modified at all to
26 provide the necessary security functions and, turning to slide 118, teaches

1 that duplicating functionality -- so in other words, doing it at the application
2 layer and the transport layer -- is bad design and adversely affects
3 performance.

4 And again, the whole point of Basturk's teaching is that when you
5 have application security, that's not the right place to do it. The right place
6 to do it is at the transport layer. That's what Basturk --

7 JUDGE SMITH: I know you're running out of time here. I don't want
8 to take up too much. I just have one final question on this.

9 MR. EKLEM: Yes.

10 JUDGE SMITH: Let's say we agree with everything you're saying
11 about Basturk --

12 MR. EKLEM: Yes.

13 JUDGE SMITH: -- and we just look at Basturk for Petitioner's
14 relying on it to show you can sign a packet, and you can attach the signature
15 to the end of the packet, and that's it.

16 In terms of signing and putting it at the end of the document, Handley
17 doesn't have it, but in terms of RTP, I guess Handley does use RTP. And
18 then Handley does talk about doing authentication, I think.

19 Can you just real quickly -- I don't want to take up the rest of your
20 time on this. Why isn't Handley talking about using RTP, which is an
21 application-level protocol, and doing authentication along with RTP? Why
22 isn't it enough to show doing it at the application layer, and then rely on
23 Basturk to show you can put the signature at the end of the packet?

24 MR. EKLEM: Right, so as I briefly discussed before, the details of
25 where and how the signature that Handley mentioned --

1 JUDGE SMITH: You're saying even Handley is at the transport
2 layer?

3 MR. EKLEM: No. We don't agree that Handley is teaching doing a
4 signature at the application layer. Handley doesn't say where that signature
5 would come from. It doesn't say what protocol would do it. It doesn't say
6 anything about how that would be provided. It was mentioned offhand in a
7 discussion of a different type of architecture, which isn't the architecture that
8 Handley is even teaching.

9 JUDGE SMITH: Okay.

10 MR. EKLEM: It was for broadcast authentication, whereas Handley
11 is focusing on a multicast authentication.

12 JUDGE SMITH: But the fact that Handley is using RTP, that isn't
13 enough to establish that it's done at the application layer?

14 MR. EKLEM: It's not enough to establish that the security -- I'm
15 sorry --

16 JUDGE SMITH: The authentication?

17 MR. EKLEM: -- the authentication is provided as an application
18 protocol on an application layer --

19 JUDGE SMITH: Okay.

20 MR. EKLEM: -- by inserting authentication data into the RTP packet.
21 Now, Petitioners include a combination with Basturk to address the issue of
22 where in the packet does the authentication data go. The claim says that it
23 goes at the end of the payload. This is where Basturk comes in.

24 JUDGE SMITH: Okay. Thank you. I don't mean to cut you off, but
25 if you could address PacketCable?

26 JUDGE McKONE: I do have one question.

1 JUDGE SMITH: Okay.

2 JUDGE McKONE: You just went through and explained why you
3 think Basturk teaches signing or authenticating at the transport level.

4 Can we circle back to -- I think the first slide you showed us was
5 actually Petitioner's slide 55, which is I think page 3 or 4 of Basturk. It says
6 integrity is usually guaranteed by signing the data before passing it to the
7 transport level. How do we reconcile that statement with what you told us
8 about Basturk?

9 MR. EKLEM: Because that's not how it's usually done for RTP. And
10 that's one of the critical things here, is that RTP was designed with certain
11 needs in mind, so certain needs for where security would be provided in the
12 context of audio and video applications. The designers made a conscious
13 decision to not put those kinds of security elements in RTP.

14 If you consider for argument that RTP is always an application
15 protocol -- it's not always in all senses, but if you accept that for a moment --
16 RTP said, we're not doing that. We're not putting it there. We're not doing it
17 there on purpose because there isn't a need for certain things, like
18 authentication and integrity. If it ever becomes a need, those are going to
19 show up at lower layers. They simply didn't provide the infrastructure for
20 doing that.

21 And as for key management, whether or not key management is
22 provided -- for example, PacketCable talks about that -- that doesn't do away
23 with the argument here because if you have certain types of encryption,
24 you're going to have a key management service.

25 So notwithstanding that there was encryption, notwithstanding that
26 there was key management, RTP made the conscious choice to design a

1 protocol that does not have these security features, given that there wasn't a
2 need for those things at the time.

3 That's why a person of ordinary skill in the art reading these
4 documents, you would look at Basturk and you'd say, well, what is it
5 teaching? It's teaching --

6 JUDGE SMITH: I'm sorry. I don't know what that was.

7 MR. EKLEM: Yes.

8 JUDGE SMITH: Yes, I think we understand your argument on that
9 point.

10 MR. EKLEM: Okay. If I may --

11 JUDGE SMITH: Can you talk about PacketCable?

12 MR. EKLEM: I'm sorry?

13 JUDGE SMITH: Can you discuss PacketCable?

14 MR. EKLEM: Certainly. I hope to hit this quickly. I have one more
15 point on Basturk that I'd like to make. As to PacketCable, I think I
16 mentioned this a little bit. If we could have slide 138, please?

17 The point that we have about PacketCable is that when it comes to
18 what is being provided in an application protocol on an application layer, the
19 claims require that to be authentication. What PacketCable does not teach is
20 providing that security -- in other words, inserting that authentication data --
21 as part of an application protocol on an application layer.

22 JUDGE SMITH: So it's a similar argument with respect to Handley
23 in PacketCable? It's discussing authentication, but it's not saying where it's
24 being done?

1 MR. EKLEM: It's not saying where it would come from and how it
2 would get there. And that is what the claim is directed to, where does this
3 come from. In other words, who is doing it?

4 JUDGE SMITH: Right.

5 MR. EKLEM: If I may, with respect to -- many of the arguments are
6 combination arguments with Basturk. The arguments with PacketCable and
7 Handley are actually kind of similar in this regard, but I want to talk about
8 the on-the-fly processing of Basturk.

9 Petitioners use Dr. Houh's demonstratives to redesign what Basturk's
10 on-the-fly technique is to mean something that Basturk does not disclose.
11 There were the demonstratives that were shown, for example, in slides 72
12 and 73 of their deck, but you don't need Dr. Houh's demonstratives to
13 understand what on-the-fly means because Basturk tells us exactly what it is.

14 If we could have slide 93, please?

15 Basturk teaches that adding security functions increases processing,
16 and that its goal is for nothing to slow down that additional processing. So
17 to keep an impact to a minimum, Basturk says you can do on-the-fly
18 computations to minimize latency, but Basturk tells us exactly what those
19 latencies are. And it's not the latency of actually transmitting packets to the
20 network.

21 Turning to slide 94, Basturk explains that achieving on-the-fly
22 processing depends on two things: reducing context retrieval latency by
23 including context early in the packet; and reducing latency by allowing
24 computations to start before context retrieval is completed, which is just
25 another way of saying context retrieval latency, and using computations of
26 minimal complexity.

1 So the only parallel processing that Basturk teaches for on-the-fly is
2 computing signatures in parallel to context retrieval, not in parallel to actual
3 packet transmission on the network. To justify using a trailer, Petitioners
4 offer a theory of what on-the-fly means that is not only not disclosed in
5 Basturk, but it wouldn't even perform the claimed invention.

6 Turn to slide 99, please.

7 Petitioners argue that it would be obvious to do the on-the-fly
8 technique with Handley or PacketCable because it parallelizes computing
9 and inserting the signature with the actual packet transmission, which they
10 say requires a trailer because you have to slap it on the back of the packet as
11 its last bytes are literally leaving the transmitter.

12 Turning to slide 100, Dr. Houh confirmed that on-the-fly means
13 adding a signature to the packet just as the last bytes of the packet are
14 leaving the transmitter, likening it to jumping onto a train as the train leaves
15 the station.

16 Turn to slide 102, please.

17 In all events, under Petitioner's theory, Dr. Houh concedes that the
18 signature generation and insertion, under his theory of what on-the-fly
19 means, means it would be happening clearly at a lower layer which is below
20 the application layer. He confirmed that multiple times in his deposition.

21 So the point here is that even if you were to take Petitioner's
22 arguments for what they claim to be, for what they say on-the-fly means, the
23 point is that even if you combined it, you would be generating signatures
24 and inserting the signatures into a packet on the physical layer or the link
25 layer, somewhere down there, which is clearly below the application layer.

1 And these claims are about inserting authentication data as an application
2 layer protocol on the application layer into the RTP packet.

3 JUDGE SMITH: Okay.

4 MR. EKLEM: Unless there are any questions about that, I'll reserve
5 the balance of our time.

6 JUDGE SMITH: Okay. Thank you.

7 You asked for ten minutes, correct?

8 MR. BAKER: Yes, please.

9 JUDGE SMITH: You may begin when ready.

10 MR. BRIT: Just a moment, sir.

11 MR. BAKER: Thank you, Your Honors. If we could turn to slide 18
12 of Petitioner's demonstratives, please?

13 Judge Easthom, you asked whether there was a case where there were
14 small modifications to a publication and the publication was still deemed
15 publicly accessible. And we do want to point you to *Seabery v. Lincoln*
16 *Global* (Petitioner's slide 18). That case is on point.

17 You can see at the bottom, it says, it overlooks also the fact that
18 despite minor formatting differences, there's no dispute that the text of the
19 Aiteanu thesis is the same across the three documents. So we think that case
20 is on point.

21 JUDGE EASTHOM: I was actually thinking there was a Federal
22 Circuit case on point. I saw that case. I'll have to reread it. Maybe they cite
23 the case. Thanks.

24 MR. BAKER: Thank you, Your Honor.

25 Judge Smith, we do want to acknowledge that we misspoke regarding
26 the effective filing date of the challenged patent. That is January 18, 2000, if

1 it's given benefit of its foreign filing date. So we do want to make sure that's
2 clear.

3 JUDGE SMITH: Do you think that has an impact on the distribution
4 or the release of the PacketCable records?

5 MR. BAKER: I do not, Your Honor. Again, I think the indicia speak
6 for themselves. I also believe that Dr. Hall-Ellis' testimony, which we didn't
7 dig into enough, reinforces the conclusion that it was publicly available and
8 available as prior art against the '682.

9 She testifies in paragraph 19 of Exhibit 1019 that she found
10 PacketCable within the custody of the issuing agency -- that would be
11 CableLabs -- a place where, if authentic, meaning it is what it represents
12 itself to be, a copy of this document would likely be found.

13 JUDGE McKONE: She found that today, right?

14 MR. BAKER: She found it in their custody today.

15 (Simultaneous speaking.)

16 MR. BAKER: Right. Correct, in their custody today, on their
17 website. There's also the reference to the version control webpage that we
18 mentioned before. Again, all the evidence points to the fact that this is a
19 reliable document and what it says for its date can be trusted.

20 We would also point to the fact that on page 55 of PacketCable where
21 they do give out the acknowledgments, they list somewhere near, I would
22 think, 20 or 30 different organizations and individuals who made
23 contributions to this particular document. It's difficult to believe that they
24 are also not members or that some set of those folks are members. It's a
25 lengthy list. It includes both individuals and corporate entities.

26 JUDGE SMITH: I think we understand your argument.

1 MR. BAKER: All right. Turning to Handley, we'd like to point out
2 that Patent Owner did acknowledge here that it did brief the new theories
3 issue as part of its opposition to our motion to supplement information,
4 reflecting that that was fully briefed and ruled upon by this panel in an
5 interlocutory decision.

6 We want to speak briefly to the Parus decision. We think this
7 situation is distinguishable. Here, the supplemental information decision
8 invited PO to further develop the record if it felt it needed to.

9 There was nothing else for Petitioners to establish. It put forth its
10 evidence of public availability in Exhibit 1005. There was a finding that that
11 was sufficient, and there was an invitation to Patent Owner to rebut if they
12 felt it needed to be rebutted. So again, we believe Parus --

13 JUDGE SMITH: Patent Owner's point was they didn't understand
14 what the Board was talking about when it issued the order. It was not clear
15 to them until today.

16 MR. BAKER: I believe, Your Honors, that the language in the
17 decision was crystal clear. And we acknowledge the invitation for them to
18 attempt to rebut those findings. And we also recognize that they didn't do
19 so, that they put forth no new evidence, that all they've added is attorney
20 argument in response to that invitation.

21 JUDGE SMITH: Okay.

22 MR. BAKER: Your Honors, Patent Owners question whether the
23 testimony from Dr. Houh -- regarding our slide 45, whether that was
24 reliable, that was a subject of cross-examination of Dr. Houh. During that
25 cross-examination, PO waived any objections to that testimony. So we think

1 that that testimony is admissible and should be evaluated for its appropriate
2 value.

3 And Your Honors, in the last four minutes, if we could just briefly
4 discuss some technical issues as it relates to Handley. I believe my
5 colleague has a brief, 30-second comment on PacketCable, so I'll try to be
6 brief.

7 If you go to our slide 74, this is where we respond to Patent Owner's
8 argument that any of the on-the-fly techniques, that they're not pertinent to
9 the authentication, calculation, and placement of that MAC in the trailer, but
10 instead is applicable to this retrieving context data.

11 We believe this argument is wrong for numerous reasons, but I do
12 want to focus on the fact that Basturk is crystal clear that it states, all
13 processing required by security functions are to be carried out on-the-fly as
14 data is being transmitted or received. So even if it's applicable to the process
15 of context retrieval, there's nothing that says that it's not also applicable to
16 the on-the-fly computation. Both things can be done in parallel.

17 And this is further evidenced by the fact that Basturk talks about
18 dedicated hardware which can do the authentication calculations. That
19 makes it clear that there's the technical ability to do it in parallel and to
20 dump that MAC into the trailer at the end of the transmission of the packet.

21 JUDGE SMITH: If I may add, I don't want to take up too much time
22 on this, but just real briefly. Handley talks about RTP, and it says doing
23 encryption in RTP, but it doesn't say doing authentication at the RTP level;
24 so we don't know where the authentication is being done in Handley? Just
25 real briefly.

1 MR. BAKER: Absolutely. Let's look at Handley in context. It is this
2 real-time conferencing technology with audio and video, and you have end-
3 users.

4 Clearly, a POSITA would recognize the need, one, to go as fast as
5 possible because you need real-time, so you want to do the on-the-fly
6 technique; and two, why you would want to authenticate the end-user to
7 confirm, even at the application level, that the packets that are being
8 transmitted and received are to and from who they're supposed to be
9 received from.

10 So I think looking at Handley as a whole, it's clear that authentication
11 fits and makes sense. Basturk teaches the technique for doing so and placing
12 that data in the trailer of a packet.

13 JUDGE SMITH: Thank you.

14 MR. BAKER: I also just want to briefly touch on slides 86 and 87.
15 This just kind of emphasizes what I was talking about as far as using the
16 dedicated hardware to do the processing to allow the on-the-fly
17 computations to be done in parallel with the transmission of a packet.

18 If you go to slide 87, Dr. Houh confirming that hardware, such as
19 accelerators, allow incomplete packets to be passed from one layer to the
20 next. So you could use an accelerator, have incomplete packets at the
21 application layer, and pass them to the transport layer, consistent with what
22 Basturk says about providing security and integrity at the application layer.

23 Your Honor, I'd like to reserve the last minute, if you don't mind --

24 JUDGE SMITH: Yes.

25 MR. BAKER: -- for my colleague.

26 JUDGE SMITH: Okay.

1 MR. PERBOHNER: Thank you, Your Honors. Just to follow up on
2 one thing Mr. Baker said, to be clear, at the Houh deposition, PO waived its
3 objections because it opened a door to a particular line of questioning that
4 was relevant for what Petitioners ended up asking the questions on.

5 I'd like to switch to Petitioner's slide 118 really quick. I'll briefly get
6 started talking about this. What Patent Owner has tried to -- Petitioner's
7 slide 118.

8 JUDGE SMITH: We have it.

9 MR. PERBOHNER: Okay. In fact, they're trying to muddy the
10 waters a little bit as to where the authentication is occurring. They're saying,
11 we're not sure where the authentication is occurring, at what layer.

12 But PacketCable is crystal clear, as I've stated here. It says RTP and
13 then the MMH-based authentication that's happening at the RTP layer. We
14 know it says this because at page 43, it says the security mechanisms include
15 both the security protocol, including RTP layer security. And this is the
16 exact type of RTP layer security that we're talking about here.

17 JUDGE McKONE: Okay. Thank you.

18 JUDGE EASTHOM: Real quick, your friend said that RTP isn't
19 always an application protocol. Can you address that, please?

20 MR. PERBOHNER: Yes, Your Honor. So in the architecture
21 framework that the PacketCable specification shows, I counted through the
22 layers of where 1, 2, 3, and 4 is. And then on top of that, it showed where
23 RTP is. And so it's being used at its natural spot, which is above the
24 transport layer.

1 Under Patent Owner's own claim construction in application protocol,
2 that's any layer that's above layer 4. And so it's consistent with their own
3 construction.

4 JUDGE EASTHOM: Okay.

5 JUDGE SMITH: Thank you.

6 Judge McKone, any questions?

7 JUDGE McKONE: No.

8 MR. CARDENAS-NAVIA: So I wanted to follow up on Your
9 Honor's questions about the statutory basis for the *Parus* case. That's 35
10 USC 312. It requires that a petition identify in writing and with particularity
11 each claim challenged, the grounds on which the challenge is based, and the
12 evidence that supports the grounds for the challenge to each claim.

13 And the *Parus* case was actually using that as a background. The
14 *Parus* case was actually about the patent owner. And at issue was whether
15 or not the patent owner had a requirement because there was no -- there was
16 a clear statute for the petitioner. Sort of the issue was, well, is there a similar
17 requirement for the patent owner?

18 And the court essentially found, yes, saying you've got to cite your
19 evidence and you've got to explain it. And so there's a statutory requirement
20 for the Petitioner. There's also this, essentially, *Parus* requirement that I
21 read as applying more broadly.

22 The primary reasoning in the Federal Circuit's decision was that
23 otherwise, you're skirting page limits. You're essentially asking the Board to
24 say, hey, the evidence is in there; go do your own analysis and figure it out.
25 They thought that was improper. It's contrary to the Board's regulations.

1 The other case I wanted to direct the Board to is *In re NuVasive*.
2 There, the Federal Circuit held that arguments only made in preliminary
3 papers are waived. And so given that, a fortiori, arguments only made in
4 motion briefs, I would imagine, are also waived. And that's 842 F.3d 1376.

5 And then just two final points. The *Seabery* case was put up there on
6 this printed publication argument about Handley and the newer versions of
7 it. There's been reference to a Federal Circuit case. I think the discussion of
8 these cases just proves our underlying point, which is that if those are
9 arguments, we need an opportunity to vet them. We haven't had an
10 opportunity to vet them.

11 And the final thing I'll say is, if you can put up slide 71, on
12 PacketCable. I was describing the release date as having to do with revision
13 history. That's because that's how PacketCable describes the release date, as
14 part of the document's revision history.

15 So unless Your Honor has any questions about printed publications, I
16 turn it over to my colleague.

17 MR. EKLEM: Thank you, Your Honors. I want to go back to
18 Basturk here for a moment to talk about on-the-fly. We were a little hurried
19 a moment ago. I want to clear up some things, go a little bit slower.

20 So on-the-fly is this thing that Basturk talks about. It's a way of doing
21 signature computations in parallel with context retrieval. That's what on-
22 the-fly is. There is no other on-the-fly. There's no version of on-the-fly
23 where you're doing computations at the physical layer, the link layer, or
24 anywhere below the transport layer. Basturk's protocol is a transport layer
25 protocol. That's where on-the-fly is happening.

1 And as I was explaining earlier -- well, so first of all, Petitioner's slide
2 87, which they were just showing, my colleague was talking about the
3 passing of incomplete packets from a higher layer to a lower layer through
4 the use of offloading to hardware.

5 If anything, that confirms that Petitioner's notion of where on-the-fly
6 happens and what it does, it confirms that what's happening is the
7 authentication data is being determined and is being inserted not at the
8 application layer as part of an application protocol. It's happening
9 somewhere lower.

10 If you take a packet that's incomplete, which means it doesn't have its
11 authentication data, and you send it layers down the chain, then you insert it
12 in at the bottom right before it leaves the transmitter, the instant it leaves at
13 the physical layer, that's just not at the application layer.

14 So that's not what these claims are about. You can't justify making --
15 you can motivate a combination all you want, but if it doesn't preface the
16 claims, there's no unpatentability. And that's what I want to talk about a
17 little bit here.

18 If we can go to slide 94, please? Slide 94. Actually, I can do a little
19 bit of this, too.

20 Previously, I was talking about what Basturk clearly indicates as its
21 two requirements for on-the-fly processing that essentially have to do with
22 parallelizing the computation with context retrieval in addition to using an
23 efficient algorithm. We see here on slide 94, that is what is shown here on
24 slide 94. These are those requirements.

25 And then turning to slide 96, those requirements are reflected in what
26 Basturk calls two rules for providing on-the-fly. Those rules, the first one is

1 providing context in each packet, such that signatures can be verified in
2 parallel with context retrieval. It's clear as day what that means. It's not in
3 parallel with sending the packet down to the physical layer. It's just in
4 parallel with context retrieval.

5 And then number two, on slide 97, choosing a MAC algorithm that
6 can be computed in parallel with context retrieval and is computationally
7 efficient. Again, the only parallelizing that Basturk is talking about, even
8 when it's talking about not relating to hardware, is doing things faster in
9 terms of parallelizing with context retrieval, nothing more.

10 Turning to slide 98, Basturk goes a little bit farther and provides three
11 design rules. None of these design rules have anything to do with sending
12 incomplete packets down to the physical layer, to receive authentication data
13 the instant the train is leaving the station, as Dr. Houh describes it.

14 It's simply not disclosed in Basturk. Their interpretation of how
15 Basturk works and how on-the-fly works is a made-up theory. It's just
16 another way to -- it's alternatively reading Basturk in a way that Basturk
17 doesn't describe.

18 So at bottom, none of Basturk's design rules, none of its requirements
19 for on-the-fly, nothing has anything to do with parallelizing with actual
20 transmission of the packet at the instant that it leaves the transmitter.

21 To go a little bit deeper on what Petitioners are saying is going on
22 here, on slide 99, Petitioners argued that it would be obvious to do on-the-fly
23 because it parallelizes computing with inserting the signature in parallel with
24 actual packet transmission.

25 But again, as shown here on slide 100, Dr. Houh confirmed what their
26 theory means with this train leaving the station analogy. He says right here,

1 that is what Basturk is referring to when it refers to on-the-fly. You can
2 stuff that generated signature at the end of the packet just as the last bytes of
3 the trailer need to be transmitted.

4 That's not at the application layer. That's about as low as you can go
5 in the protocol stack, anywhere but the application layer.

6 And it's shown here on slide 101, when you put -- the key phrase that
7 Petitioners rely on is that Basturk says that MAC generation should be
8 carried out as data transmissions, or receptions, proceed rather than before or
9 after these operations have completed. The context of that is clear. It's in
10 parallel with context retrieval. That's what's underlined in green.

11 So it's not this alternative notion of stuffing incomplete packets with
12 authentication data far down, near the physical layer. It's actually talking
13 about parallelizing at the transport layer and the process of context retrieval.

14 Turning to slide 102 --

15 JUDGE SMITH: You only have a couple minutes left. I think we
16 understand your point on on-the-fly. If you could -- you only have a couple
17 minutes. If you want to continue with this, I don't want to stop you, but my
18 preference would be to hear about PacketCable.

19 MR. EKLEM: Sure. So PacketCable, Petitioners keep putting up
20 slides showing that PacketCable talks about putting a MAC somewhere in an
21 RTP packet.

22 Even if RTP is shown somewhere on the border of layer 4 and above,
23 somewhere on the border of the application layer and the transport layer, that
24 doesn't tell you where the security comes from and how it gets there. That's
25 the critical thing. Where does the security come from, and how does it get
26 there?

1 What we know, as I was discussing earlier, is that the typical scenario
2 would be security would be provided somewhere lower, somehow, at a --

3 JUDGE SMITH: Could you respond to Petitioner's point about -- and
4 I'm looking at slide 118 of Petitioner's presentation. They're citing this
5 figure from page 44 of PacketCable where they say, look, this is explicitly
6 showing at the RTP layer you're doing encryption and authentication.

7 MR. EKLEM: Right. What's not explicitly shown is what elements
8 of the network are generating the authentication and putting it there. That's
9 what's not shown. It's important to think of it that way because RTP itself
10 does not do those things.

11 What PacketCable doesn't tell you is where does that come from. Is
12 there a security application? Is there a security layer? It has to come from
13 somewhere. What we do know is it does not come from --

14 JUDGE SMITH: Does the claim require it to come from something?
15 I'm looking at the claim. I don't see it --

16 MR. PERBOHNER: It requires it to come from the application layer
17 as an application protocol. That's what it requires.

18 JUDGE SMITH: So if you could pull up -- you don't have --

19 MR. EKLEM: If I may, I'll use an example from the patent. I
20 understand clearly the point that you're asking here.

21 Take, for example, the embodiment shown in Figure 2 of the patent
22 where RTP is at the bottom of the exemplary application layer. It's the very
23 last thing, so it's on the threshold of application and transport. And it shows
24 a security application layer. It shows that because RTP doesn't provide
25 those things.

1 So the question becomes, where does the security come from? Do
2 you put a layer up here, or do you put a layer down there? If you put it
3 below RTP, then you're potentially not doing the invention. You would
4 need more information to know. And that's the critical point, is that
5 PacketCable doesn't provide you that information.

6 JUDGE SMITH: But to this specific figure, it's literally showing
7 RTP, and then in parentheses RC4+MMH/CMS --

8 MR. EKLEM: Right. The question becomes, what provides the
9 MMH? The MMH is the MAC part. Where does that come from? It
10 doesn't come from RTP.

11 There is no discussion in PacketCable about this coming from the,
12 quote, MCA application, but it has to come from somewhere. It's just as
13 possible that it's coming from somebody who programmed up a security
14 application, tucked it below RTP somewhere at the transport layer, and that's
15 where it comes from. You slap it on at the end.

16 So you have to make an assumption. And that's our point, is that you
17 have to make an assumption. They haven't satisfied how that assumption
18 would make sense.

19 JUDGE SMITH: I mean, the figure is literally showing it.

20 MR. EKLEM: Right, but what is putting it there? What's putting it
21 there? Is it the application? Is it something at the application layer? It's not
22 the RTP protocol. Is there another protocol that's doing it? What protocol is
23 doing it? We have no idea. We have no idea what protocol is putting that
24 there.

25 JUDGE SMITH: Okay. I understand.

1 JUDGE McKONE: So it's your point that it's packaging various
2 pieces of data, but we don't know at what layer each of those pieces of data
3 are generated?

4 MR. EKLEM: That's essentially right.

5 And if there are no further questions, I think I'm out of time, Your
6 Honor.

7 JUDGE SMITH: Okay. Thank you.

8 JUDGE EASTHOM: So you're saying the phrase in Claim 1,
9 providing transmitter-to-receiver authentication at an RTP packet level as an
10 application protocol on an application layer by inserting at the transmitter
11 authentication data at the end of the RTP packet payload, you're saying that
12 that requires that any authentication comes from, what, the application
13 protocol on an application layer?

14 MR. EKLEM: Yes, sir. What is being inserted has to be inserted as
15 an application protocol on an application layer.

16 For example, it wouldn't be sufficient for an IP layer protocol to insert
17 it or the transport layer, the IP layer, down to the physical layer. It would
18 have to be done by something that is an application protocol on the
19 application layer. And that's kind of where our construction issue comes
20 from.

21 JUDGE EASTHOM: I see. Okay.

22 MR. EKLEM: It creates that demarcation between what is and what
23 isn't, what's above and what's below.

24 JUDGE EASTHOM: So even if it ends up in an application layer or
25 in the RTP layer, that's not sufficient to meet the claim? Is that what you're
26 saying?

1 MR. EKLEM: Just the fact that it ended up there wouldn't tell you
2 whether or not you practiced the claim. You would need more information.

3 JUDGE EASTHOM: Because --

4 MR. EKLEM: Because of the way layered processing works. As
5 packets come down, information gets added to them. What information gets
6 added and where it gets added is what's critical here.

7 JUDGE EASTHOM: I'm looking for the claim phrase that's critical. I
8 don't want to keep kicking a dead horse here, but you're saying it's because
9 the authentication itself has to come from an application protocol?

10 MR. EKLEM: On an application layer.

11 JUDGE EASTHOM: On an application layer, okay. Okay.

12 MR. EKLEM: Yes, sir.

13 JUDGE EASTHOM: Thank you.

14 MR. EKLEM: Thank you.

15 JUDGE SMITH: We're off the record.

16 (Whereupon, the proceedings at 3:22 p.m. were concluded.)

IPR2023-00923
Patent 7,266,682 B2

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