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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.
Petitioner,

v.

CARBYNE BIOMETRICS, LLC,
Patent Owner

IPR2024-00332 Patent 10,929,512 B2
IPR2024-00334 Patent 11,514,138 B2

Record of Oral Hearing
Held: April 16, 2025

BEFORE: JAMESON LEE, ARTHUR M. PESLAK,
STEVEN M. AMUNDSON, Administrative Patent Judges.

APPEARANCES:

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The above-entitled matter came on for hearing on April 16, 2025, commencing at 1:00 p.m., via video teleconference.

1 P R O C E E D I N G S
2 - - - - -
3 JUDGE PESLAK: Okay. Good afternoon and welcome.
4 We're now on the record. This is the consolidated oral hearing for
5 IPR2024-00332, in which is Patent Number 10,929,512 is
6 challenged, and IPR2024-00334, in which Patent Number
7 11,514,138 is challenged. I'm Judge Peslak. I'm joined by Judge
8 Lee and Judge Amundson. As stated in the oral hearing order, the
9 parties agreed to this being a video hearing. Will Counsel for
10 Petitioner, Apple, Inc., please state your name and firm of
11 affiliation for the record, please?
12 MR. O'BRIEN: Certainly, Your Honor. This is David
13 O'Brien from Haynes and Boone representing Apple. Also with
14 me is Kelley Lyle, and I believe on the line, we also have Garrett
15 Sakimae and Chris Hong from Apple, and Andrew Ratch from
16 (INDISCERNIBLE).
17 JUDGE PESLAK: Okay, thank you. Have there been
18 any changes in Petitioner's real parties in interest since the last
19 time you filed updated mandatory notices?
20 MR. O'BRIEN: Not for Petitioner, Your Honor.
21 JUDGE PESLAK: Okay, thank you. Counsel for Patent
22 Owner, Carbyne Biometrics, LLC, please state your name and
23 affirm your affiliation for the record, please.
24 MR. FISHBACK: Good afternoon, Your Honors. I'm
25 George Fishback from McKool Smith representing Carbyne

1 Biometrics. With me on the line is also Mr. Richard Kamprath.
2 He's the lead counsel on these proceedings.
3 JUDGE PESLAK: Okay, thank you. Were there any
4 changes in Patent Owner's real parties in interest since the last time
5 you filed mandatory notices?
6 MR. FISHBACK: No, Your Honor.
7 JUDGE PESLAK: Okay, thank you. I'm going to go
8 over a few ground rules before we get started with the arguments.
9 We have a Court Reporter here today transcribing the hearing, so
10 please speak clearly so we can have an accurate transcript. The
11 transcript constitutes the official record of these proceedings.
12 Recording of any PTAB proceeding is strictly prohibited. To
13 ensure that the transcript of the hearing is clear, we ask that you
14 identify yourselves before speaking and please mute yourself when
15 you're not speaking. Please do not interrupt the opposing counsel
16 to raise an objection. Any objections can be put on the record
17 during your rebuttal time.
18 If you encounter any technical difficulties today during
19 the hearing, please let us know immediately. If for some reason
20 you lose the connection, please contact our IT support staff who
21 set up the call. Likewise, if one of the Judges gets disconnected,
22 we may have to pause and then reset things.
23 We have the entire record, including the parties'
24 demonstrative exhibits. When referring to a demonstrative paper
25 or other exhibit, please do so clearly and explicitly by slide or page

1 number. Please also pause a moment after identifying it to provide
2 us some time to find it. I'll be keeping track of the time for the
3 hearing, and we'll give each side a warning when you're getting
4 close to the end of your time. But you should also keep track of
5 the time.
6 There's a public line open and members of the public
7 may be listening in. I note that neither party informed us that they
8 will be discussing any confidential information, so the public line
9 will remain open during the entire hearing. As stated in the oral
10 hearing order, the parties each have 90 minutes total, including any
11 rebuttal time for both cases. The parties should address both cases
12 during their opening argument time. Petitioner's rebuttal time
13 should be limited to responding to arguments raised by Patent
14 Owner in its opening arguments.
15 Likewise, Patent Owner's surrebuttal time should be
16 limited to responding to arguments by Petitioner in its rebuttal.
17 Just as a heads up, we'll take a short break after both parties
18 present their opening arguments and prior to hearing the oral
19 arguments.
20 Mr. O'Brien, just out of curiosity --
21 MR. O'BRIEN: Yes, Your Honor.
22 JUDGE PESLAK: Your name comes up on the screen
23 as Gary Clark.
24 MR. O'BRIEN: That's the name of this conference room.
25 They are music themed, so, yeah, Mr. Clark is not with us.

1 JUDGE PESLAK: Oh, okay. Thank you.
2 MR. O'BRIEN: Sorry about that.
3 JUDGE PESLAK: No problem. No problem.
4 MR. O'BRIEN: Good to know that that --
5 JUDGE PESLAK: Yeah.
6 MR. O'BRIEN: -- comes through. Glad we're not in the
7 Willie Nelson conference room. That would --
8 JUDGE PESLAK: Exactly.
9 MR. FISHBACK : Your Honors, I'm sorry. Before we
10 begin, is anyone else having stuttering of the video stream for any
11 of it or is that just on my end? Okay.
12 MR. O'BRIEN: We are not.
13 JUDGE PESLAK: Okay. So Petitioner, how much of
14 your 90 minutes do you wish to reserve for rebuttal?
15 MR. O'BRIEN: Thirty minutes, Your Honor.
16 JUDGE PESLAK: Excuse me?
17 MR. O'BRIEN: Thirty minutes, please.
18 JUDGE PESLAK: Thirty minutes?
19 MR. O'BRIEN: Yes, please.
20 JUDGE PESLAK: Okay. So you have 60 minutes for
21 your opening. You can begin when ready.
22 MR. O'BRIEN: Thank you, Your Honors. May it please
23 the Board. A couple of things I'd like to start out with first -- a
24 couple key points. First, the mapping of prior art elements to the
25 claim elements is in this case are undisputed by the Patent Owner.

1 Second, our affirmative case of motivations to combine those
2 teachings is unchallenged. Patent Owner only offers arguments
3 that Mr. Kesanupalli did not include wiping or a trusted platform
4 module, TPM, and that this Board must honor that supposed
5 choice. That's one.
6 Or two, argues that the primary reference, the reference
7 Kesanupalli, was only concerned with social engineering attacks
8 and that neither wiping sensitive information, biometric and
9 password information, nor isolation or protection of that sort of
10 information using a trusted platform would have advanced that
11 limited purpose.
12 Finally, they argue that our grounds for the '512 patent,
13 in which we demonstrate that Cheng discloses performing a secure
14 backup of the record to a storage service, and in which we
15 demonstrate that a POSITA would've been motivated to put that
16 functionality on a secure second processor, they allege that that
17 must instead really be performed on a first end secure processor.
18 So I will be addressing each of those points. I will emphasize the
19 contested points as we go forward.
20 Slides 2 and 3 in your deck summarize the grounds on
21 which trial was instituted. I'm sure you're very familiar. Slide 4
22 presents Claim 1 of the respective patents in a side-by-side format
23 where we highlight the aspects of commonality in green and some
24 of the points that are specific to a given patent in yellow.
25 First, with respect to the commonality, each of the

1 patents deals with associating a biometric template and credentials
2 with an external resource. And in each case, a user presentation of
3 biometric information, for example, fingerprint or a face, causes
4 the credential information to be retrieved. The retrieved
5 credentials are used to facilitate a login to a remote resource. And
6 in each case, the patents describe and the claims recite the use of
7 processors, sensors, encryption technologies, and secure storage in
8 furtherance of that. So that's the commonality. That's also all fully
9 disclosed in the primary reference, Kesanupalli.
10 The differences between the two are, of course, in the
11 case of the '138 patent, there's a recitation of wiping that sensitive
12 information, namely the biometric template and credential from
13 the record of the device, and in the case of the '512, there's a
14 recitation of performing a secure backup of that record to a storage
15 service. In the case of the '512, there is a recitation of first and
16 second processors, specifically, whereas in the '138, only a more
17 generic processor is recited.
18 Turning to Slide 5, we inventory some of the points here
19 for you and I want to really quickly talk to the processor, first
20 processor and second processor. Want to emphasize that in each
21 of the two cases, there is lexicography in the record, in the patent
22 itself, defining a processor to be one or more processor circuits
23 and/or processing cores configured to process data, such as
24 computer program instructions. So they do broaden that term out
25 to -- even in the case with one processor of a multiplicity of

1 devices. The other items here --
2 JUDGE PESLAK: Mr. O'Brien?
3 MR. O'BRIEN: -- of course -- yes, sir?
4 JUDGE PESLAK: All right. Just so it's clear, there's no
5 dispute that the references Kesanupalli and Challener may disclose
6 a processor, right? A processor, which the question is really, in the
7 '512 case, if the second processor is configured to do those tasks. I
8 guess I'm asking --
9 MR. O'BRIEN: I think that's correct.
10 JUDGE PESLAK: The question of construction of
11 processor isn't really an issue, right?
12 MR. O'BRIEN: I don't believe it has been brought into
13 question. We did construe processor in one of the proceedings
14 because we felt it was relevant to do so. But it's not contested, as
15 far as I understand, by the other parties.
16 JUDGE PESLAK: Okay, thank you.
17 MR. O'BRIEN: Yep. So let's -- we'll skip ahead. In
18 each -- in 6 and several other cases, we have sort of a roadmap
19 slide. I'm going to skip this first instance and go directly to Slides
20 20, then 21 in view of my first point that none of the teachings of
21 the reference and their application to elements of the claim have
22 been disputed. So going to Slide 21 then, Petitioner --
23 JUDGE LEE: Mr. O'Brien, it's Judge Lee.
24 MR. O'BRIEN: Yes, Your Honor.
25 JUDGE LEE: I noticed that you had a change in

1 language there. When I reviewed the material, I didn't see any
2 dispute of the prior art teachings, except for the motivation to
3 combine. So on your first slide, you kind of said, not seriously
4 disputing. So I was wondering, well, do you mean they just
5 dispute a little bit but not seriously? But then later on, when you
6 continued --
7 MR. O'BRIEN: That's not what -- we're not trying to
8 prevaricate, Your Honor.
9 JUDGE LEE: When you -- later on, you --
10 MR. O'BRIEN: (CROSSTALK) --
11 JUDGE LEE: -- you just mentioned it's not disputed, so
12 I just wanted to make clear. I didn't see that it was disputed at all,
13 so I'm just wondering why -- when you say not seriously, did you
14 mean something else? That it was actually disputed somewhat,
15 but, you know, not meritorious? You know, if it isn't disputed, it
16 isn't disputed, and we can go on. I don't want to miss something. I
17 didn't see any dispute other than the motivations to combine in the
18 '334 case.
19 MR. O'BRIEN: I believe that's correct, Your Honor.
20 We're not aware of a dispute from the Patent Owner.
21 JUDGE LEE: Thank you.
22 MR. O'BRIEN: So regarding the motivations to combine
23 where our affirmative assertion under KSR is itself unchallenged,
24 but the Patent Owner raises its own counter argument that they
25 believe there is a motivation not to combine. Our petition

1 establishes the motivation in each of the combinations and on the
2 left-hand portion of Slide 21, we inventory those. It turns out that
3 with respect to the combination that involves Cheng and Headley,
4 those are not addressed at all by the Patent Owner.
5 The issues seem to be focused on whether Brown would
6 be combined with Kesanupalli, or Challener would be combined,
7 either with the Kesanupalli Brown base or the Kesanupalli Cheng
8 base, and that's where we're going to focus. But again, what I'll get
9 to in a moment is our KSR affirmative case of motivations to
10 combine is not itself challenged. Instead, the Patent Owner raises
11 two theories that purport to show from their perspective reasons
12 not to combine, and those are the ones we identify on the slide that
13 Kesanupalli the person -- so Mr. Kesanupalli -- Judge Lee, you
14 seemed like you had a question there. I'm happy to -- okay, no?
15 Fine.
16 That Mr. Kesanupalli's selection of features for inclusion
17 and by implication, features that did not appear is binding on this
18 tribunal as an indication of what there is not a motivation to
19 combine. And secondly, the argument that Kesanupalli, the
20 reference, was solely concerned about social engineering attacks
21 and therefore, it would not be appropriate to combine anything else
22 that wasn't solely focused on addressing social engineering attacks.
23 But turning to Slide 22 and then we'll get to the others, in
24 terms of combining Brown, our reference for the feature of wiping,
25 with Kesanupalli, the authentication translation reference, the -- in

1 a KSR sense, the need or problem was established in the record,
2 mainly that information or credentials would be placed at risk if a
3 device were lost or stolen.
4 Moreover, we established that a POSITA would have --
5 by applying the teachings of Kesanupalli would actually have
6 created a heightened risk by transitioning from remembering
7 passwords in one's head to recording them in one's device. You
8 get a concentration of these risk assets there.
9 In terms of a benefit that we describe in the record,
10 Brown's system teaches wiping data to reduce the risk that that sort
11 of information, for example, in a biometrically secured device,
12 would fall into the wrong hands. And to avoid its unauthorized
13 use, it teaches wiping that information, that sensitive information,
14 from the device. That's the benefit that we describe.
15 And of course, in terms of expectations of success, the
16 record shows that the kind of facilities that Brown teaches, namely
17 software that executes on processors, was generic, was well
18 understood, and a person of skill would expect success in
19 implementing that. None of this is disputed, Your Honors, and
20 instead, they go to reasons that they allege as to be not to combine,
21 but I would point out to you, they do not allege that those reasons
22 constitute teaching away.
23 Turning to the similar treatment of Challener, that's the
24 trusted platform module or segregation into secure and unsecure
25 processing components, though limited by a restricted interface, in

1 terms of that combination, the need or problem is established in the
2 record. Again, sensitive info needs to be protected, and again, the
3 approach of Kesanupalli of instead of having individuals
4 remember passwords, but storing them in their device actually
5 heightens that risk and creates the need.
6 Moreover, Challener itself teaches a desire to protect that
7 kind of information. That's the whole purpose of Challener. The
8 benefit of course is that Challener teaches a solution that would
9 isolate sensitive information like biometrics, crypto keys, et cetera.
10 It provides cryptographic algorithms, hardware support, software
11 storage, secure storage for crypto keys, and it also does so in a
12 standards-based environment, a standards-based approach, it
13 would have engendered trust and confidence amongst users and
14 customers.
15 So those are the benefits of Challener. Again, these are
16 well known pieces of software. There's an architecture for them.
17 There's a -- there are APIs, they're adopted by major manufacturers
18 of computing devices. These are things that are combinable
19 according to known methods and we would expect success in
20 doing so or a POSITA would expect success. Again, none of this
21 affirmative case is disputed, and again, they instead go to
22 arguments that they describe as reasons not to, which again are not
23 teaching away, as far as I can tell.
24 Turning to Slide 24, the similar evaluation or similar set
25 of KSR facts plays in that case as well. It's very analogous to what

1 I just went over in the '138 in terms of Challener combining with
2 Kesanupalli and Cheng. Turning to Slide 25, as previously
3 previewed, Patent Owner advances two theories of a motivation
4 not to combine. Those I would characterize perhaps as the what
5 would Kesanupalli, the person, do. What would Kesanupalli do.
6 And the Kesanupalli, the reference, is only about social
7 engineering attacks argument.
8 Here in terms of the what would Kesanupalli do
9 argument, the briefing is very extensive, but I'll highlight a few
10 points for you. First, the focus on a subjective evaluation of what
11 they would allege an individual thought is not the '103 analysis.
12 It's from the perspective of a POSITA, which is a hypothetical
13 person construct. Patent Owner doesn't, in this record, even
14 credibly support its factual assertion that it knows what this
15 person, Mr. Kesanupalli, would have thought about the motivation
16 to combine.
17 The record demonstrates that its expert admitted that he
18 had never met with Mr. Kesanupalli. I believe he does not have
19 personal knowledge of Mr. Kesanupalli's instincts here or his
20 evaluation or motivation, or what he did in terms of selecting or
21 not selecting items to include in his patent application.
22 Moreover, the Patent Owner does not even establish that
23 Mr. Kesanupalli, the person, was a POSITA, or perhaps more
24 important, was not much more than a POSITA. In either case, the
25 record does not support the conclusions that they would like to

1 draw. And then finally, as we've pointed out in our record, their
2 theory here, their theory that if a reference discloses A and B, but
3 not C, that that is determinative of a motivation to not include C in
4 a combination entirely eviscerates the doctrine of obviousness. It
5 basically supplants it and says that anticipation is the law of
6 obviousness. We brief each of those issues in the record and I'll
7 move forward here.
8 Slide 26 on the factual proposition. The disclosed set of
9 features in Kesanupalli is not indicative of Mr. Kesanupalli's views
10 on combinability. All it is, is what he, as an author or as an
11 inventor -- and frankly, four other individuals included in the
12 patent application -- as I think we all know in this hearing, a patent
13 application has a job. It is to support the claims that it makes. It is
14 not to inventory all the possible things with which that claimed
15 subject matter may be combined. So I think we've made a couple
16 of points there, but that one seems pretty straightforward.
17 Let's go to Slide 27. In terms of the argument that
18 Kesanupalli, the reference, was concerned only with one problem,
19 a mention in the background section -- and that's all it is -- of a
20 particular problem does not constrain Your Honor's obviousness
21 analysis or a POSITA's obviousness analysis that you would apply
22 to an inquiry only into solutions to that limited problem.
23 Turning to Patent Owner's arguments here, they apply
24 that reasoning in the context of both of the matters to argue that
25 because Kesanupalli, the reference -- excuse me -- because the

1 problem of solving social engineering attacks would not be solved
2 by introducing a protective environment, a TPM, and because
3 wiping the device would not address social engineering attacks,
4 that they should not be combined. That they are reasons not to
5 combine.
6 I think Patent Owner misunderstands the role of the
7 problem in the obviousness analysis. In this record, we have
8 established that each of these references, Kesanupalli, Challener,
9 Cheng, Brown, and the audible prompt reference, are all analogous
10 art. We establish that and that is not disputed in this record. So
11 the introduction of thoughts of what problem the inventor would
12 be reasonably pertinent to is not really a threshold issue here.
13 Ultimately, the obviousness inquiry is from the perspective of a
14 POSITA who has relevant creativity and is governed by the
15 analysis of KSR.
16 Turning to Slide 28. Again, as a factual matter,
17 Kesanupalli is not limited to the problem of avoiding social
18 engineering attacks. So leaving aside the point that it's irrelevant --
19 the argument -- is not true. The briefing and evidence here are
20 quite extensive. I'll simply commend you to the recitations at the
21 bottom of the slide in each case, both in the reply deck, Exhibit
22 1036 for one and 1030 for the other, and in the corresponding
23 citations to the reply, but the record is replete.
24 Turning to Slide 29, I'll highlight a few of these aspects
25 for you. Kesanupalli itself deals with numerous security features,

1 not withstanding Patent Owner's argument that it's focused only on
2 solving social engineering attacks. It details numerous security
3 measures, which are addressing other security risks. For examples,
4 it details approaches to secure transactions, securing application
5 code, secured communications.
6 It deals with secure socket layer for encrypting
7 information, using crypto keys. It has algorithms and software to
8 use and secure the keys for the cryptography and hashes. It uses
9 unique identifiers to identify the sensor to provide additional
10 security. It addresses dictionary attacks, and it's fundamentally
11 concerned also with malware risks.
12 In other words, for pieces of code that it executes outside
13 its protective envelope, it digitally signs those so that
14 manipulations of that code or changes to that code that could seek
15 to divert sensitive information would be detected because the
16 digital signature would no longer correspond to the code. So these
17 are all aspects of Kesanupalli that have nothing to do with social
18 engineering attacks. So the premise is entirely false.
19 Let's skip ahead to 34. In terms of the combination,
20 Kesanupalli is ready for improvement by Challener's TPM
21 architecture. I'd like to address a little bit here the talking point of
22 Patent Owner, where they allege the Challener, that combining
23 Challener with Kesanupalli is kind of like gold plating a toothpick.
24 It's like trying to denigrate the combination of something, you
25 know, I guess childish.

1 The analogy is not well-formed. It's kind of like arguing,
2 and we've argued each of these in our record, that having antilock
3 brakes in a car obviates the need for seatbelts or airbags. That's
4 not true. Or that if I'm a merchant and I accept cash in furtherance
5 of my business, that if I use an armored car and check to make sure
6 the driver isn't an imposter driving away with my cash, I would
7 have no reason to secure in a safe or in a register my cash in my
8 place of business.
9 Those are all preposterous. And that's essentially the
10 argument they're making here with this gold plated toothpick. As
11 we point out, there are benefits to the architecture that Challener
12 provides. It is a standards-based architecture. It's going to
13 engender trust. And just technically, it does a job of isolating and
14 protecting the sensitive information resources.
15 So Dr. McDaniel in his unrebutted testimony, by the
16 way, confirms that the TPM architecture of Challener augments
17 Kesanupalli's approach. He describes in detail, as we've cited on
18 the slide, the strategy of defending -- the securing strategy of
19 defending in depth. Not simply focused on securing the front
20 door, but looking at the back, too, and looking at where you keep
21 your cash in a safe or things of that sort. He also describes that
22 specifically Challener's TPM architecture prevents keylogging
23 attacks, another set of attacks, prevents man-in-the-middle attacks.
24 It resists brute force attacks, and it provides robust barriers to
25 exfiltration of information.

1 Turning to Slide 35, moreover, the petition showed that
2 Challener itself provides a benefit of a standards-based architecture
3 that engenders trust. The description of Challener in its TPM
4 architecture provides for both secure storage of keys and it
5 provides for a fingerprint reader or other biometric device behind a
6 secure processor. Those are precisely the kinds of security
7 architecture features that a POSITA having the construct or the
8 approach of Kesanupalli would be motivated to use as a
9 framework in which to implement Kesanupalli, in order to secure
10 the underlying information in a manner that would engender trust
11 amongst users and customers alike, because it's a standard-based
12 approach.
13 Finally, a POSITA would have valued a proven and
14 widely accepted security architecture and would have expected
15 that the marketplace would favor a standards-based approach.
16 Each of those is established in our record, as well, Your Honors.
17 In terms of the benefits of TPM -- I'm now turning to
18 Slide 36 -- those benefits apply regardless of whether TPM, as a
19 standardized approach, was adopted industrywide. Patent Owner's
20 arguments that there could have been compatibility issues with
21 TPMs or that non-TPM solutions were available at the time.
22 Those are really beside the point, Your Honor. Fundamentally, the
23 proper question is whether a person of skill facing the problems in
24 the field would have seen the benefit to incorporating
25 Kesanupalli's approach in Challener's architecture. The answer on

1 this record is very clearly a yes, they would.
2 Turning to 37 and finally, as another, I suppose, factual
3 matter, TPM was in fact widely deployed in available commercial
4 products. So not withstanding the protestations of the Patent
5 Owner, TPM was used in a wide variety of commercially available
6 computers at the time, from manufacturers that you will recognize.
7 We cite Dell, Lenovo, HP, Toshiba, and Fujitsu in our record.
8 And it moreover, with respect to -- I think we identify for
9 Your Honors two particular assets. One, the ThinkPad T60P,
10 which our expert has familiarity with, and personally, I have
11 familiarity with, but in terms of our record, he has familiarity
12 with -- in 2008, was reviewed in a manner that described the
13 security features of that laptop as including a biometric fingerprint
14 sensor linked to a trusted platform chip. So the record establishes
15 that TPM was deployed in this very manner and the argument that
16 a person of skill in the art would have been motivated not to do it
17 is belied by the record.
18 So let's turn to Slide 38 and at this point, I want to jump
19 to the second processor arguments. We're now -- we have dealt
20 generally with both cases up until now. This is localized to the
21 '512. So --
22 JUDGE LEE: Mr. O'Brien? Mr. O'Brien?
23 MR. O'BRIEN: Yes, Your Honor.
24 JUDGE LEE: It's Judge Lee. Before you move there, let
25 me ask one question. What comes to mind after reading the briefs

1 and listening to your arguments is this long line of cases that I'm
2 aware of that goes back to the 1960s. It seems to be directly on
3 point. You didn't cite any one of these. I just wanted to bring it up
4 for your attention and see what you think. For instance there's --
5 MR. O'BRIEN: Okay.
6 JUDGE LEE: -- *In re Heck*, 1983 Federal Circuit, but it
7 cites to a CCPA case 1968. It says, the use of patents as references
8 is not limited to what their patentees describe as their own
9 inventions, or to the problems with which they are concerned as
10 they are a part of the literature and are relevant for all they contain.
11 So that seems to say it really doesn't matter what Kesanupalli,
12 what problem it was addressing because whatever is in that
13 disclosure is in that disclosure, and a POSITA is not solving Mr.
14 Kesanupalli's problem. So whatever is in the reference is in the
15 reference and is good teaching, even if it doesn't have anything to
16 do with solving a problem in social engineering. What are your
17 thoughts on --
18 MR. O'BRIEN: We would agree with it.
19 JUDGE LEE: -- these line of cases?
20 MR. O'BRIEN: We would agree with it. We took the
21 approach of challenging the legal reasoning, as well as establishing
22 in your record that the factual points that the Patent Owner sought
23 to assert were in fact unsupportable. But I think that analysis
24 would be correct, Your Honor.
25 JUDGE LEE: All right. Thank you.

1 MR. O'BRIEN: So turning to Slide 39, we're going to
2 pivot, I think, to the second processor question. I believe the
3 parties agree that the claims recite a second processor is configured
4 to perform a secure backup of the record to a storage service.
5 JUDGE PESLAK: Mr. O'Brien? Before you get too far.
6 MR. O'BRIEN: Yes, Your Honor.
7 JUDGE PESLAK: I want to ask you sort of a procedural
8 question here. This looks like a simple claim limitation and, you
9 know, conceptually -- if you think I'm wrong when I say this, tell
10 me -- but it involves -- performing a backup means you make --
11 the processor is going to be configured to make a copy of the data
12 that's located in one place and then send the data via some path to
13 anotherpace, right? That's sort of what we're talking about in this
14 limitation. And --
15 MR. O'BRIEN: I think that sounds correct.
16 JUDGE PESLAK: Okay. So it appears to me that the
17 Patent Owner's argument is directed to the second part of that,
18 namely the path by which it would go from the secure storage in
19 your Kesanupalli/Challener combo to the storage service. And that
20 argument seems to be based on a construction, I think, of the word
21 "to" in the Patent Owner response. Now, this is not something that
22 we addressed in the institution decision, so in the event that we
23 were to be persuaded by that claim construction argument, has
24 Petitioner had an adequate opportunity to brief that issue before
25 today?

1 MR. O'BRIEN: I don't believe we have, Your Honors. I
2 think the -- I think based on the record before you, the nature of
3 that term is really plain meaning and the record establishes that the
4 applied references address it, not withstanding the Patent Owner's
5 arguments later in this proceeding regarding perhaps the scope of
6 "perform" or the scope of "to". And I would like to persuade that
7 there really isn't anything to those arguments. That said, were
8 Your Honors to entertain it, I think Petitioner would be entitled to
9 briefing on the point, if the construction of that term were really an
10 issue in this proceeding.
11 JUDGE PESLAK: Okay, I understand.
12 MR. O'BRIEN: Does that answer your question, Your
13 Honor?
14 JUDGE PESLAK: Yeah. I understand what you're
15 saying.
16 MR. O'BRIEN: Okay. So our position on this point is
17 that Cheng, our reference, teaches a processor configured to
18 perform a secure backup of a record to a processing service, an
19 internet processing service, by the way, so cloud-based. It
20 describes all of that. And the record establishes that a person of
21 skill would've been motivated to post or cite or place that teaching
22 functionality of Cheng into a secure second processor, as taught in
23 the Kesanupalli/Challener combination. And we believe that is
24 very directly dispositive of the questions before you.
25 Turning to Slide 40, our petition explains that the second

1 processor performs a secure backup. It explains that Cheng
2 teaches secure backup by encrypting data of a biometric space
3 device and providing it to an external storage device, to a remote
4 storage device. It would've been obvious to implement Cheng's
5 backup on Kesanupalli's second secure processor.
6 Why would it have been obvious? Because the data
7 related to the security features, the underlying biometric templates
8 or the credentials, is stored in the secure processor that only the
9 second processor has access to. The unsecure processor doesn't
10 have access to it. That secure processor is itself protected from
11 attacks, so the crypto keys that would be used, the crypto
12 algorithms that would be used in accordance with Cheng to
13 encrypt the data, to secure it, to protect it from unauthorized
14 access, would themselves be secured in there.
15 And as I said, the records themselves that would be the
16 subject of the secure backup, are only accessible by the secure
17 processor. Therefore, it would've been obvious to a person what
18 the benefits of doing that are. We established the motivations
19 before, but it's obvious that that's where it goes. As we've tiptoed
20 into it before, the arrangement was conventional, it was
21 implemented by widely practiced methods, people ported code into
22 TPMs all the time. Our record is replete with demonstrations of
23 how that was done, including doing it for the very specific purpose
24 of backup sensitive information from within the TPM.
25 Turning to Slide 41, the specifics of the implementation

1 are well supported in our record. The petition details how a
2 second processor performs the backup, including backups in the
3 context of TPMs that were known in the industry. Dr. McDaniel
4 goes through, in particular, an Infineon Whitepaper that does
5 precisely that. It takes information that needs to be secured, that's
6 sensitive from inside the TPM and it backs it up to an external
7 resource that teaches exactly this. And as I said, porting of code
8 into taking code that might've been developed in an OS native
9 context and bringing it into TPM was a well understood process.
10 There was teaching to do it. Our record demonstrates it.
11 Finally, Cheng itself in describing, as I've mentioned to
12 you, a processor configured to perform a secure backup to a
13 storage service, itself teaches that the processor that should do this
14 job is the processor that is involved in making decisions about the
15 biometric information itself, because it has access to the sensitive
16 data. So Cheng itself teaches that this is the proper place to do it.
17 JUDGE PESLAK: Mr. O'Brien?
18 MR. O'BRIEN: Yes, Your Honor.
19 JUDGE PESLAK: So does the petition specifically say
20 that the data that's being backed up, whether it's sent through the
21 general processor or it just bypasses the general processor and goes
22 directly to the storage servers?
23 MR. O'BRIEN: Can you say the question again? I want
24 to make sure I heard you correctly.
25 JUDGE PESLAK: Yeah, and it seems like there's two

1 ways to do it and there's two possible ways, right? You have the
2 general insecure processor in the combination. Does the secure
3 processor -- does the petition say whether the backup data is going
4 to go through that insecure processor or whether you're going to
5 configure it so it bypasses the insecure processor and goes directly
6 to storage?
7 MR. O'BRIEN: Our grounds do not require one or the
8 other. I think as I tried to suggest, we make the point that Cheng
9 teaches doing -- performing a secure backup of the record to
10 remote service to a storage service on a processor, and the
11 POSITA, teachings of the POSITA, would've been to put that
12 aspect in the secure processor. It has access to the underlying data,
13 the crypto keys, everything is secured there. That's who would
14 perform the act of performing a secure backup, as claimed.
15 The question that maybe you're asking is can any other
16 components, elements, processors, be along the path from -- the
17 example here is a handheld device that has first and second
18 processors in it. The second processor being the secured one that
19 does the performing, the secure backup. Can there be any other
20 steps along the path to the storage service that may be in Ashburn,
21 Virginia, or in Ireland, or in Redmond, Washington? And I think
22 the answer is absolutely yes.
23 There can be other components along the path to a
24 remote cloud storage service. It would -- on our -- based on the
25 late-stage briefing of the Patent Owner, it seems that they are

1 arguing that you should understand "perform" and "to" as
2 excluding from the proper scope of that term any involvement of
3 anything downstream of the second processor.
4 I frankly can't see how we could get there in terms of
5 that, but if that's what they are really advocating and that really is a
6 cogent claim construction position in front of you, we would want
7 to brief that. But I think to the question that you are asking, Your
8 Honor, we did not require either that a first processor needed to be
9 involved or did not need to be involved. And I guess one of the
10 things I would point out to you is that may be a false errand.
11 I'll point to you to Slide 19, just to sort of level set us into
12 the framework of Challener's architecture here. Nothing in the
13 symbology, the teaching of Challener, or in our arguments,
14 requires that to get -- our assertion is that the second processor 26
15 performs a secure backup as required by the claim. There's
16 nothing in this architecture that requires that to go through CPU
17 30, what would be the first processor in their arguments. One
18 would expect that processor 26 would have to interact with
19 communication IO. You know, if this is a handheld device, it's
20 going to have to communicate things over a wireless physical layer
21 to a base station. There are going to be components that are
22 involved in that handoff.
23 In fact, from that base station, it's going to have to go to a
24 wide area network or a back hall, if it's telco, it's going to transition
25 all the way to -- through a number of routers and switches in the

1 internet, or in the telco networks to a data center, front ends of that,
2 finally all the way to, you know, a machine that's hosting the
3 storage service. All of those people or all of those components are
4 going to interact along the way, but nothing requires that it go
5 through CPU 30. In fact, one would expect that the processor
6 could write to the storage device, it could write to input/output
7 devices and go directly out.
8 So I think it's a little bit of false errand for Patent Owner
9 to argue that -- which is, I believe, their argument. Their first
10 order argument has been that it is not the second processor that
11 does it at all. They say, we were wrong. It isn't the second
12 processor. That our grounds really should be read as requiring the
13 first processor to do it. That's not our grounds at all. So it's a little
14 bit of a roundabout response to your question. Does that address
15 what you asked me, Your Honor?
16 JUDGE PESLAK: Yes, I understand what you're saying.
17 MR. O'BRIEN: Okay. We are on Slide 43, I believe --
18 44, thank you. Oh, okay. So on a related point, let's go to Slide 23
19 (sic). I want to talk to the nature of the TPM teachings of
20 Challener. A TPM architecture like Challener restricts access to
21 the second processor. In Cheng's backup technique, it's a -- that
22 means that the access from the outside is restricted, and in the
23 context of putting Cheng's backup technique into the second
24 processor, it protects the second processor that is performing the
25 secure backup from interference or intermeddling or attacks from

1 the outside. But the restricted interface doesn't -- it keeps that
2 second processor secure.
3 However, the second processor can interact with the
4 outside world, and we would expect that in its performance of the
5 secure backup. It has to, after all, get the data to that data center
6 that hosts the backup servers -- the storage servers, excuse me -- to
7 use the language claim, which based on our understanding, for
8 example, Figure 1 of the patent, which we'll turn to here in a
9 second, shows a device, a cloud, and a cloud-based storage service.
10 So it has to get all the way over there to, as I said, Ashburn or to
11 Redmond or Ireland or wherever the data center would be.
12 Let's turn to Slide 44. So the claims -- our interpretation
13 is based on the claims and the spec and we also feel that whatever
14 Patent Owner's interpretation is here, it is unsupported by the
15 language of the claims and unsupported by the specification. So
16 the claims recite this language that, you know, we're probably all
17 are getting sick of, but the second processor is configured to
18 perform a secure backup of the record, the record that is only
19 accessible by the second processor, to a storage service.
20 As we explained, the petition demonstrates that Cheng
21 does that. Its processor server performs a secure backup of that
22 kind of information through a storage service and indeed, an
23 internet remote storage service. And the record also establishes
24 that a POSITA would have placed that functionality in the second
25 processor for the reasons that we described. The data is only

1 available there, the crypto algorithms are there, the crypto keys
2 that will be used to secure the data, to protect it from unauthorized
3 access are there and not available outside. The second processor is
4 where it's done. Patent Owner, I believe --
5 JUDGE AMUNDSON: This is Judge Amundson. If I
6 could --
7 MR. O'BRIEN: Yes, Your Honor.
8 JUDGE AMUNDSON: -- ask a question. Yeah, I
9 probably should've --
10 MR. O'BRIEN: Yes, Your Honor.
11 JUDGE AMUNDSON: -- asked this a little bit earlier,
12 but in the prosecution history, is there something in the way the
13 examiner mapped the claims to the prior art that would support
14 what you were saying about all these intermediaries between --
15 going from the second processor to where the information is
16 stored?
17 MR. O'BRIEN: I'm not immediately aware of something
18 that would've done that. If you have something in mind, I'd be
19 happy to comment.
20 JUDGE AMUNDSON: I was just wondering if there
21 was like a -- if the examiner, in mapping the claim language to
22 prior art, made an implicit claim construction that would -- well,
23 either support what you're saying or not support what you're
24 saying. But I guess we'd have to go to the prosecution history.
25 MR. O'BRIEN: So my understanding is there was no

1 office action at all in this matter, so it was issued on a first action,
2 so I think we would not find such a statement in the record. In
3 terms of our analysis, one of the things that we have jumped to
4 is -- or that we've duplicated for you on Slide 46 -- is the nature of
5 the system that they described.
6 Here, 104, I think that's supposed to be a handheld tablet,
7 would be 106. Those are the devices on which this authentication
8 translation system would reside and in terms of it performing a
9 backup to a storage service, we would expect that the performance
10 of the remote backup, as claimed by the second processor, would
11 have to get the information all the way to a cloud storage service
12 140.
13 So in the sense -- what I was describing to you, and I was
14 evoking Ashburn or Redmond or Ireland, I would say that the
15 cloud -- that a person of skill looking at this diagram would
16 understand that the cloud denominates at least some potentially
17 significant geographic displacement between the device, the
18 wireless device and the data center that would host the cloud
19 storage service. So I think the intrinsic record of this diagram
20 certainly supports that argument. Does that help you?
21 JUDGE AMUNDSON: Yes. Yes, very much. Thank
22 you.
23 MR. O'BRIEN: Okay.
24 JUDGE PESLAK: Mr. O'Brien?
25 MR. O'BRIEN: Yes, Your Honor?

1 JUDGE PESLAK: Isn't the -- I think the question that
2 Patent Owner raises is what happens on the device before it goes
3 off the device into the cloud, right? I mean, I certainly understand
4 what you're saying. We're going to get -- device is going to go,
5 you know, wherever, thousands of miles away, but really I think
6 Patent Owner is focusing on the fact that -- just according to Patent
7 Owner, that in your combination, that once it -- backup is made
8 from the secure storage, it's going to have to go through this
9 processor. So I think it's different than what you're saying here.
10 Would you like to comment on that?
11 MR. O'BRIEN: Yeah. At a base level, as I've said, our
12 argument is very clearly that the second processor does it. We do
13 not require that it go through the first processor at all. What I
14 would also say is to the extent that Patent Owner is arguing that
15 your understanding of the claim language should be informed by
16 an exclusion -- a construction by exclusion of any participation of
17 a downstream component, whether that would happen to be first
18 processor or it would happen to be a network interface or a router
19 downstream, or any of these sort of things, that is not consistent
20 with the spec.
21 In terms of these far down stream components in a
22 geographic sense, it's very clear from Figure 1. It's also very clear
23 in terms of the, quote, "other processor" in the parlance of the '512
24 patent, the fast processor. They describe them as the -- as, I
25 believe, the centralized processor and the fast processor. That

1 would be the -- so I want to turn you to Slide 47, and the treatment
2 here is from the spec. They describe the fast processor that would
3 be analogous to the first processor, with its insecure storage and
4 they speak to the dedicated processor. I used the wrong word,
5 Your Honors, with its secured storage. They interact with each
6 other, they communicate over the restricted interface. That's what
7 they describe in terms of their environment. Not our mapping,
8 which doesn't require a first processor to even be involved, but in
9 terms of their patent itself and the credibility of their argument that
10 a first processor or a fast processor cannot be involved in any
11 way -- I think that's the argument you're referring to, Your
12 Honor -- it's not consistent with their breakdown here. And when I
13 turn you to Slide 48, I think we try to make that point even more
14 clear. The '512 patent itself describes that its backup path is from
15 the second processor, through the insecure storage of the first
16 processor. That is their description. In the '512 backup process,
17 the record is accessed by the second processor, it's encrypted by
18 the second processor, it's written by the second processor to
19 insecure storage of the first processor, and it is, quote, "in turn"
20 propagated to the storage service. That's their teaching.
21 Now, Patent Owner comes up with an argument that this
22 is just one embodiment and that their claim should be understood
23 to cover something else. Well, Your Honors, this is the only
24 embodiment described by the patent of how the second processor
25 performs the secure backup of a record to a storage service. This

1 is all we know about what they require for this claim term, and I
2 would suggest to Your Honors both that our grounds do not
3 require participation of a first processor at all. That's not our
4 grounds, but to the extent that Patent Owner is arguing that they do
5 and that that is verboten, for some reason, they're just wrong. So I
6 hope that answers directly the question that you were asking there.
7 JUDGEPESLAK: It does.
8 MR. O'BRIEN: That --
9 JUDGEPESLAK: You have about five minutes left in
10 your time.
11 MR. O'BRIEN: Okay. So then I'm going to jump to
12 Slide 49. I think I made this point really at bottom. The only
13 identified embodiment in the '512 patent is a communication
14 passed through the first processor, so this argument that they are
15 (INDISCERNIBLE) that we've just addressed really holds no
16 water. Their insinuation that the claim covers some other
17 embodiment doesn't hold water. This is the only embodiment in
18 the spec. And in terms of the evidence, the evidence supports the
19 possibility of -- as I point out, our grounds do not require it -- but
20 certainly, the record supports the possibility that the second
21 processor's communication path includes downstream components.
22 You see where that is in the '512, you see that where it is in our
23 evidentiary record. There is no support for the argument that it
24 must exclude or preclude involvement of downstream components.
25 So wrapping up then in terms of the patents themselves,

1 the '138 patent, the prior art teaching of claim elements and the
2 mapping to -- the prior art teachings and its mapping to the
3 elements of the claim is uncontested. Our description of the KSR
4 motivation to combine Kesanupalli and Brown is unrefuted.
5 Similarly, with respect to the combination of Challener with the
6 Brown/Kesanupalli combination. Patent Owner's reasons that they
7 articulate to supposedly not combine are contrary to the legal
8 standards under 103 KSR. They do not constitute a teaching away.
9 Turning to the '512. Again, the prior art teachings in our
10 record and their mapping to claim elements uncontested. Our KSR
11 motivation is unrefuted and the point that the petition
12 demonstrated that the second processor is configured to perform a
13 backup of the record to the storage service, as I described. Cheng
14 teaches that and the POSITA would've been motivated to cite that
15 in the second processor. That statement or that ground that the
16 second processor does it is unrefuted. Instead, the Patent Owner
17 argues that the claim language should be understood to preclude
18 downstream involvements and that's really irrelevant, as I pointed
19 out, because our ground doesn't require it. But in any case, it's
20 unpersuasive because it's contrary to the '512 patent itself, to the
21 language of the claims, and to the specification. So with that,
22 Your Honors, I'm very happy to answer further questions, but I
23 think that's the core of our case.
24 JUDGE PESLAK: Judge Lee, do you have any more --
25 further questions? Judge Amundson?

1 JUDGE AMUNDSON: No, I don't.
2 JUDGE PESLAK: Okay. Thank you, Mr. O'Brien. I
3 think you used 58 minutes, so you'll have 32 minutes for rebuttal.
4 Mr. Fishback, you're arguing for Patent Owner?
5 MR. FISHBACK: Yes, Your Honor.
6 JUDGE PESLAK: How much time do you want to
7 reserve for rebuttal?
8 MR. FISHBACK: I'd like to reserve 30 minutes, Your
9 Honor.
10 JUDGE PESLAK: Thirty minutes, okay. You can begin
11 when you're ready.
12 MR. FISHBACK: May it please the Board. I'm George
13 Fishback representing Carbyne Biometrics. And while I may not
14 qualify for the LEAP program, this is my first argument in front of
15 the Board, so I'm going to try to reign in how quickly I'm speaking,
16 but please, if I get a little too excited, please let me know. I'm
17 sorry in advance.
18 So with that out of the way, I'd like to briefly reframe the
19 argument a bit. And despite what Counsel for Petitioner may
20 argue, these aren't your typical computer security patents. The
21 claims, particularly of the '512 patent, are novel and have already
22 withstood multiple IPR challenges from Samsung, now Apple, and
23 another patent in the family was denied institution of the '105
24 patent. And this novelty is reflected by the art that was chosen by
25 Petitioner. Neither petition includes a single '102 anticipatory

1 reference. Rather, every ground is the combination of two to three
2 references to arrive at the claims.
3 So moving on to Slide 2 of Patent Owner's
4 demonstrative, there are really three main arguments that we'd like
5 to reply to in today's argument. First, regarding the '512 patent
6 only, and this is where Counsel for Petitioner just ended, there's a
7 serious question about whether the Kesanupalli, Cheng, and
8 Challener combination actually teaches the elements of the '512
9 patent. Particularly, the second processor performing a secure
10 backup through a storage service or a cloud backup service, as
11 required by Claims 1, 2, 11, and 21.
12 The second thing we'd like to address is relevant to both
13 the '512 and the '138 patent and this is whether or not a person of
14 skill in the art would've been motivated to combine the teachings
15 of Kesanupalli -- or motivated to combine or motivated to modify
16 Kesanupalli in light of Challener's TPM teachings. And the final
17 thing we'd like to address is just limited to the '138 patent and this
18 is whether or not a person of skill in the art would've modified
19 Kesanupalli in light of Brown's wiping teachings and wiping
20 disclosures.
21 So with that, let's pick up where Counsel for Petitioner
22 concluded and that's whether the second processor is configured to
23 perform a secure backup of the record to a storage service, as
24 found in Claims 1, 11, and 21 of the '512 patent, or where that
25 storage service is a cloud storage service, as in Claims 2 and 12 of

1 the '512 patent, and whether that is taught or rendered obvious by
2 the Kesanupalli, Challener, and Cheng combination.
3 So one thing that the Federal Circuit has been consistent
4 on is that we need to focus on the actual wording of the claims.
5 It's the precise wording that defines the scope of the claims. So
6 let's take a look at the claim -- the '512 patent claim. So this is on
7 Patent Owner's demonstrative Slide 6. So here we see an
8 abbreviated version of Claim 1 and I've just got it broken out so
9 that we can follow the important parts of this claim.
10 So the claim requires a first processor that -- the first part
11 right there under the preamble -- to communicate with a second
12 processor using a restricted interface. Then the second processor
13 is configured to perform a secure backup of the record to the
14 storage service. And just for future reference, I'm going to refer to
15 this as the secure backup limitation throughout.
16 Now, notably, the claim doesn't say the second processor
17 is required to initiate a secure backup of the record to the storage
18 service or facilitate the secure backup of the record to a storage
19 service. And it doesn't say perform a secure backup of the record
20 to the general processing of a device. It is the second processor
21 that must be configured to perform a secure backup of the record
22 to the storage service.
23 And this is important. What this patent is doing and the
24 whole point behind it is we're delineating tasks between different
25 processors. If the first processor is to get malware or some sort of

1 virus or a bad actor gets access to it, anything that's protected by
2 the second processor can hopefully be restrained and not
3 accessible by the bad actor. So we want to keep what the second
4 processor is doing to the second processor. We don't want to open
5 it up to the first processor.
6 So why are the exact words of the claims important? So
7 let's turn to -- this is page 7 of Patent Owner's demonstratives. So
8 on the slide here is a figure from page 20 of the petition and this is
9 the Kesanupalli reference architecture on the left, which has been
10 annotated with the red box and the blue box by Petitioner, and on
11 the right, we've got the Challener architecture, which again, has
12 been annotated with the red and blue boxes by Petitioner. The red
13 arrow was added by Patent Owner to show the modifications that
14 are being made here.
15 So essentially what you have is you have Kesanupalli's
16 system, which has a sensor 204 and that's where we're going to
17 take the teachings -- or that's what Petitioner tells us, we're going
18 to take teachings from Challener and we're going to modify that
19 processor, the processor in sensor 204. And that could be done.
20 There's no argument that we could add that TPM to that sensor.
21 That is not a point of contention here. The point of contention is
22 that that then processor, going on to Slide 8 of Patent Owner's
23 demonstratives, that processor can only communicate with the host
24 PC.
25 So either the backup is being initiated by -- if a backup is

1 being made, it is being made to the host PC. It is not being made
2 to a storage service, it is not being made to a cloud storage service.
3 There is simply no way for that second processor, even in light of
4 all the teachings of Cheng, to perform that backup.
5 JUDGE PESLAK: Mr. Fishback?
6 MR. FISHBACK: Yes.
7 JUDGE PESLAK: I'm going to go back to what I said to
8 Mr. O'Brien, which is I conceptually look at this limitation as
9 performing a backup is the processor is copying data, correct?
10 MR. FISHBACK: We would say --
11 JUDGE PESLAK: And you're not disputing --
12 MR. FISHBACK: Oh, sorry.
13 JUDGE PESLAK: -- that the processor can copy files,
14 right? The second processor.
15 MR. FISHBACK: That is correct. We are not disputing
16 that.
17 JUDGE PESLAK: So what you're disputing is what
18 happens after it copies the files and where they go, correct?
19 MR. FISHBACK: Correct.
20 JUDGE PESLAK: Okay. So aren't you really asking us
21 to add a negative limitation to this limitation that performs -- a
22 second processor is configured to perform a secure backup to a
23 storage service, but not through the unsecure processor. That's
24 what you're really asking us to do is add words to the claim or add
25 a negative limitation. Isn't that what you're really doing?

1 MR. FISHBACK: Your Honor, I respectfully disagree.
2 I think what we are arguing -- actually, I know what we are
3 arguing, I'm sorry -- is that the claim is very specific about where
4 the backup is being performed and where it's going to and what is
5 doing that. And it says the second processor here and let's just --
6 for everyone's reference, let's flip back to Patent Owner's
7 demonstrative Slide 6. The claim language -- we're not asking to
8 add a negative limitation. We're asking to enforce the plain and
9 ordinary meaning of what is being shown in the claim.
10 It's the second processor that's performing secure backup
11 to the storage service. And this claim goes out of its way to talk
12 about what each processor must be configured to do and it's
13 explicitly saying that it's the second processor that's doing it to the
14 storage service. It's performing that backup; it's carrying the
15 backup all the way to the storage service. And I'm sorry -- did that
16 answer your question? Did I go around it?
17 JUDGE PESLAK: Then that begs another question.
18 There is this provision in the spec of the patent at column 4 that
19 Mr. O'Brien briefly referred to, but what it says is -- it's column 4
20 around line 19 -- profiles and vaults can be updated while in secure
21 storage. If this occurs, they are encrypted and mapped before
22 written back to the insecure storage, which may in turn propagate
23 them to external backup storage. So this is all -- when I was
24 reading the patent, this is the only discussion of this type of backup
25 in the patent. It seems to indicate that the secure processor is

1 going to pass these files onto the insecure side which is then going
2 to send them to the external backup. So how can we construe the
3 claim to exclude this embodiment when it's the only embodiment?
4 MR. FISHBACK: Yes, Your Honor. Two points on
5 that. If we could go to Patent Owner's demonstrative Slide 14. So
6 even though it's the only embodiment, there are different ways to
7 go about claiming the backup. So there's another patent in this
8 family, the '105 patent, which discusses a processor that's
9 configured to initiate the backup. That sounds a lot like what we're
10 doing with the Kesanupalli/Challener reference, where the second
11 processor is initiating the backup to the first processor and then to
12 the storage service or to the cloud storage.
13 But the '512 patent specifically used the word perform
14 and that's an important term. That means the second processor is
15 performing the entirety of that step, of that backup, to the storage
16 service. So while there is only one embodiment, that may be a
17 '112 issue, but that's not how it has to be read later on.
18 JUDGE PESLAK: Is that other patent -- the '105
19 patent -- is that in the chain of prior --
20 MR. FISHBACK: Yes, and I'm -- for the record, let me
21 read that. That's U.S. Patent 11,475,105 and it shares a
22 specification with the '512 and that can be found at Exhibit 2028 to
23 the '332 IPR.
24 So going back to -- I just want to re-emphasize this point.
25 Going back to Petitioner's Slide 8 -- I'm sorry, not Petitioner's

1 Slide 8. Patent Owner's Slide 8. We see the alleged prior art
2 system of the Kesanupalli and then you take the sensor 204 and
3 replace that of the teachings of Challener's TPM. And again, it's
4 Patent Owner's position that that second processor does not have
5 the ability in this arrangement to perform the backup to the storage
6 service or to the cloud storage service. And with that, I'd like to
7 move on to the motivation to combine unless there's further
8 questions on the '512.
9 JUDGE PESLAK: I don't. Judge Lee or Judge
10 Amundson, any questions?
11 MR. FISHBACK: Judge Lee, I can't hear you if you're
12 speaking. It looks like you are.
13 JUDGE LEE: Okay. Can I ask you a question?
14 MR. FISHBACK: Yes.
15 JUDGE LEE: You're saying when the second processor,
16 when incorporated into Kesanupalli, cannot access an external
17 storage without going through the first processor, right?
18 MR. FISHBACK: Correct.
19 JUDGE LEE: Well, is that what Petitioner has proposed
20 or has Petitioner said, well, once you do that, you would separately
21 provide it independent access to a secure external storage? I have
22 to go through the first --
23 MR. FISHBACK: Sorry for interrupting you, Your
24 Honor. I have not seen the latter argument from Petitioner. My
25 understanding of Petitioner's argument was that the second

1 processor was that processor -- the sensor TPM of
2 Kesanupalli/Challener -- and that there is no argument that it
3 would be having its own interface or its own connection to an
4 external storage service or anything like that. That was my
5 understanding of Petitioner's argument, Your Honor.
6 JUDGE LEE: Okay. And so if it has to go through the
7 first processor, then it's your view that it's no longer secure, so
8 that's why you wouldn't do it?
9 MR. FISHBACK: Correct, Your Honor. Yeah, the idea
10 of bifurcating tasks among different processors really benefits the
11 security of the device because the first processor, that fast insecure
12 processor, that's where the malware may reside. That's where you
13 may have a bad actor residing, watching everything. But by
14 isolating and using that second processor and that secure storage,
15 and this is the whole idea of a TPM, we're going to have this
16 isolated area that even if there was malware on that first processor,
17 it's not going to access the second processor in that second storage.
18 And then by opening that back up, by sending the backup back
19 then through the first processor which is contrary to the claims,
20 you open up that backup to the malware that you're trying to avoid
21 the entire time.
22 JUDGE LEE: Okay. So you don't think it's implicit that
23 Petitioner meant when you incorporate it into Kesanupalli, it
24 would have its own separate access to an external storage? It's not
25 implicit?

1 MR. FISHBACK: No, Your Honor. I think with the --
2 especially with the figures that Petitioner points to, I don't think
3 that is implicit at all.
4 JUDGE LEE: Thank you.
5 JUDGE AMUNDSON: This is Judge Amundson. I
6 actually do have a question on this point. I was just trying to
7 understand, if I'm a person of ordinary skill in the art and I'm going
8 to write computer code and I want to write computer code so that I
9 have the second processor configured to perform a secure backup
10 of the record to secure storage, it seems to me I would have to
11 basically have two modules -- software modules. One that says,
12 okay, a second processor, make a copy of a file, and then a second
13 software module that would say, essentially, send the software file
14 to the storage service. Is that how this would kind of work in
15 practice?
16 MR. FISHBACK: In practice, there are likely endless
17 amount of ways that you could implement the second processor
18 performing the backup. The second processor, you could have a
19 restricted interface directly to a server or something of that kind
20 that bypasses, or a restricted interface from the second processor to
21 a hard drive or something for storing the credentials. It doesn't
22 necessarily have to have, oh, we've got this first module and this
23 second module. And maybe -- I'm sorry if I misunderstood your
24 question, Your Honor.
25 JUDGE AMUNDSON: No, I think you got it, but if we

1 looked at -- if we look at Figure 1 of the '512 patent and to get
2 from one of those devices to cloud storage service, wouldn't you
3 need a module that caused the copied file to go through
4 whatever -- the cloud 110 to get to cloud storage service 140?
5 MR. FISHBACK: And when you say "module", Your
6 Honor, are you referring to a physical module? I'm sorry. Maybe
7 I'm misunderstanding.
8 JUDGE AMUNDSON: No, I'm not a person of ordinary
9 skill in the art.
10 MR. FISHBACK: Sure.
11 JUDGE AMUNDSON: When I talk about software
12 module, it’s just like code for various steps, okay? And so in my
13 mind, I thought, you need to do what the claim requires. It seems
14 to me you would have to basically have the second processor do
15 two things. One, copy a file; two, send the file somewhere. Okay.
16 And I'm just trying to understand how that would work.
17 MR. FISHBACK: And I think you're correct, so there
18 are essentially two steps to this. There's the copying, the
19 performing of the backup, and then the two, the storage. So you've
20 got the backup and you've got that sending. And let's not forget
21 that the second storage and the processor, it's its own processor. It
22 has computing capabilities to do what it needs to do, and there
23 could be an interface, like I said earlier, to where the second
24 processor can perform that backup and send it to a storage service,
25 like a hard drive or anything of the like.

1 JUDGE AMUNDSON: All right. Well, it seems to me
2 if the second processor was sending something through the cloud,
3 to the cloud storage service, you could write code that caused the
4 second processor to establish a tunnel, a virtual private network, to
5 get to the cloud storage service.
6 MR. FISHBACK: Yeah, you could --
7 JUDGE AMUNDSON: Go ahead.
8 MR. FISHBACK: No, you could have some sort of
9 secure channel or the like. You're right, Your Honor.
10 JUDGE AMUNDSON: Well and then -- so then my
11 next question is, if you could have that secured channel, why
12 couldn't you have that secured channel go through the first
13 processor?
14 MR. FISHBACK: So in your hypothetical, Your Honor,
15 is that secure channel -- is it going around the first processor or is
16 it going through the first processor?
17 JUDGE AMUNDSON: I guess -- and again, I'm not a
18 person of ordinary skill in the art -- in my hypothetical and maybe
19 this is not possible, it would go through the first processor. It
20 would tunnel through the first processor. Now, I don't know if
21 that's technically possible.
22 MR. FISHBACK: Your Honor, do you mind if I take a
23 look at the patent specification and come back on this on rebuttal?
24 JUDGE AMUNDSON: That's fine, yes. Go ahead.
25 Sorry to --

1 MR. FISHBACK: Thank you.
2 JUDGE AMUNDSON: -- disrupt you.
3 MR. FISHBACK: Oh, no. No worries at all. Let me see
4 if I can find a sufficient answer to your question.
5 JUDGE PESLAK: Mr. Fishback?
6 JUDGE AMUNDSON: Go ahead. You better continue
7 with your argument.
8 JUDGE PESLAK: Mr. Fishback, I do have another
9 question.
10 MR. FISHBACK: Yes.
11 JUDGE PESLAK: You said that there are a lot of ways
12 that this could be accomplished -- a person of ordinary skill in the
13 art could accomplish getting the data off the second processor, and
14 if you look at Dr. McDaniel's declaration at paragraph 159, he
15 says, using the second secure processor to perform Cheng's backup
16 would ensure that the information accessed in the course of the
17 backup procedure is isolated from insecure portions or processes
18 of the device, while the resulting backup is reliably available in
19 presence of failures, thefts of devices, et cetera.
20 Is it this evidence that Petitioner is arguing that a
21 POSITA would know that you could take that backup information
22 directly off the second processor and not have it go through the
23 insecure processor? Isn't that what Dr. McDaniel is saying in this
24 paragraph?
25 MR. FISHBACK: Your Honor, we disagree with the

1 premise of that. Yes, he's talking about Dr. -- or I'm sorry -- the
2 Cheng reference disclosing this encrypted method of backing up
3 and implementing that on the second processor, but there's still this
4 disconnect that's not found in the petition, that's not found in the
5 response of how that second processor then, in the architecture of
6 Kesanupalli and Challener, would perform that backup method
7 given the restrictions that are on the second processor in the
8 Kesanupalli and Challener system. There's simply just one way,
9 one restricted interface -- the TPM restricted interface, API
10 restricted interface -- that's the only interface. So the backup has
11 to go through the general processing in this combination.
12 JUDGE PESLAK: So if it goes through the first
13 processor, then you're saying it no longer meets the limitation of a
14 secure processor backing up the data?
15 MR. FISHBACK: That's correct, Your Honor. We
16 would say that that would be either backing up to the general
17 processing section, so it's taking the data and sending it to the
18 general processing section, or that it's initiating the backup and the
19 general processor is what is sending it along to the other sections,
20 that there's a disconnect between that "perform" and "to" that the
21 petitioned art cannot accomplish.
22 So with that, I'd like to briefly touch on the combination
23 of Kesanupalli and Challener, so this is at Patent Owner's
24 demonstrative Slide 19. And the real concern here -- so the
25 Kesanupalli and Challener system is present through all of the

1 grounds for the '512 patent IPR, which is the 333 -- or 332
2 proceedings, excuse me -- and is present in Ground 3 of the '138
3 patent, which are 334 proceedings, and this can be seen on Patent
4 Owner's demonstrative Slide 20.
5 So I'd like to call back to Judge Lee's point on the *In re*
6 *Heck*, I believe, was the name of the cases, it's a line of cases from
7 the -- I think you said the 70s and 80s. The cases that -- it's a line
8 of cases, it shows prior art patent literatures, good teaching. Not
9 just for what it teaches, but all the teachings within the reference,
10 and I think I'm pointing you correctly, Judge Lee. But one thing
11 that we must consider, and the Federal Circuit has emphasized we
12 consider is that we can't view the motivations to combine in a
13 vacuum. So even though the art may have certain teachings doing
14 certain things, and that could be good teaching and that could be
15 good art, we need to look at the motivation to combine, thinking
16 about everything in the teaching. Not just a certain select portions.
17 So as Petitioner stated in their presentation, there's
18 certain telltale signs for obvious -- the KSI or KSR analysis, the
19 need or problem on the field, obvious benefit and predictable
20 results. And I think that this was at Petitioner's demonstrative
21 Slides 22 through 24. So what is the need in the field that
22 Petitioner argues would lead somebody to combine the '512
23 patent -- or I'm sorry, not the '512 patent. To combine Kesanupalli
24 and Challener?
25 Well, Petitioner alleges that's just the desire to be

1 protected, to protect data, and this is that petition at 13 and
2 Petitioner's Slide 24. But the desire to protect or improve
3 computer security is always a concern with computers. It's a very
4 vague, very broad motivation to combine that doesn't really limit
5 itself to any particular teachings of the patents. It doesn't limit
6 itself to the real -- the cause of the issues that Kesanupalli was
7 trying to solve, Challener was trying to solve, the '502 patent was
8 trying to solve. This is just this broad, vague computer security
9 concern.
10 So let's turn to Slide 22 of Patent Owner's demonstrative.
11 So what real issue what Kesanupalli trying to solve? Well, let's --
12 you don't have to look too hard. It's right in the background, as
13 Petitioner mentioned. Well, the issue is that password practices
14 were bad among users. They were subject to social engineering
15 attacks, phishing attacks, dictionary attacks, and these are the types
16 of attacks that they pry on a user's technical efficiency. They pry
17 on the user side of the authentication. It's not on the hardware side
18 of the authentication.
19 So what's a dictionary attack? A dictionary attack is
20 we're going to take a dictionary of commonly used passwords,
21 we're just going to run those passwords through until we find the
22 one that works, apprised on a user's laziness, a user not wanting to
23 use a complex password that they cannot remember, that kind of
24 thing. What is a phishing attack? A phishing attack is when they
25 send you a link, they impersonate somebody to get you to send you

1 credentials. And the same is similar for a social engineering
2 attack.
3 So those are the types of attacks that were bound or were
4 issues with traditional password-based methods. And those are the
5 types of issues that are simply not benefitted by adding a TPM to
6 Kesanupalli. The Petitioner says, oh, the benefit is this widely
7 adopted security standard, an approach that would engender trust
8 amongst users, and that's at petition 19 through 20 and Petitioner
9 Slides 24 and 35, but there's two issues with this approach. First,
10 as in the response, what was stated, TPMs were anything but
11 universal at the time and TPMs were not often not on by default.
12 Just adding a TPM may not engender any trust among users. That
13 simply is just a broad reasoning.
14 And second, any benefit of adding the TPM is untethered
15 from the goal of improving the traditional password-based
16 authentication methods that Kesanupalli was really trying to
17 attack.
18 So if you'll allow me for a second, let's consider an
19 analogy -- and I know analogies are dangerous. I know, so give
20 me a second. So think of your money in a physical bank vault as a
21 login credential, and say a bad actor wants to get access to the
22 money in your back account. Well, they really have -- they have
23 two options. One option is they can go try and trick the bank
24 teller. They can try and impersonate themselves as you and get
25 access to your money in the bank account. The other option is

1 they could try a brute force attack. An attack where they just go
2 and try and rob the bank to get access to your physical money.
3 Now, adding a security guard, like a TPM, can block
4 unauthorized accessed through the brute force or describing or
5 getting at those attacks that are just trying to use malware to get at
6 the computer. But that extra security guard -- that extra TPM --
7 that does not affect what the user, or in this case, the bank teller
8 could be tricked to release or tricked to do, or anything of the kind.
9 And that's just not what the goal of Kesanupalli is and it's not
10 addressed by a TPM. It would be superfluous in light of the
11 teachings of TPM -- I'm sorry, of Kesanupalli -- and a person of
12 skill in the art of Kesanupalli wouldn't have seen the need for that
13 TPM.
14 And then, Your Honors, in light of that, the same is true
15 for Brown in the '334 IPR. Brown teaches this wiping method and
16 wiping methods were known and were well known before the
17 advent of the '138 patent, but that's not what Kesanupalli, the
18 reference, was concerned with. And adding a wiping feature, like
19 adding bodyguards, is not going to help the user against social
20 engineering or any type of attack that's going at the user
21 component of the authentication process. And with that, Your
22 Honors, I'd like to save the rest of the time for rebuttal. I know it
23 was brief, but those are our three main arguments here.
24 JUDGE LEE: Mr. Fishback, it's Judge Lee, again. I just
25 briefly read pages 18 and 19 of the Reply. That seems to indicate

1 to me Petitioner is explaining that because the Cheng reference
2 talks about direct backup by the secure processor, so when you
3 incorporate into Kesanupalli, the same thing would be present in
4 Kesanupalli. That sounds like they're saying, when incorporated,
5 the second processor would have a secure connection to the
6 external storage.
7 MR. FISHBACK: Okay.
8 JUDGE LEE: This is a little bit more clear than implicit.
9 It's expressed kind of. So let's assume that's the argument they
10 make. What is your comeback? Are you saying, no, one wouldn't
11 have a direct connection between the second processor with the
12 external storage, or do you say no, they didn't make that argument
13 before, so you shouldn't consider it. But if you do consider it, I
14 have no comeback because it would be easy to do.
15 MR. FISHBACK: And I'm sorry, Your Honor. Could
16 you direct me what you said was in the surreply?
17 JUDGE LEE: Their reply --
18 MR. FISHBACK: Reply.
19 JUDGE LEE: --18 to 19.
20 MR. FISHBACK: Okay --
21 JUDGE LEE: Of 1332 case.
22 MR. FISHBACK: -- 18 to 19. One moment, Your
23 Honor. Let me just -- sorry, struggling to pull that up at the
24 moment. One second.
25 JUDGE LEE: Okay.

1 MR. FISHBACK: And you said that was at 18 to 19,
2 Your Honor?
3 JUDGE LEE: Yeah. Starts at 18 and progressively goes
4 into 19. Really, it's near the second half of 19 where it says
5 Cheng's disclosed secure backup technique includes security
6 features of encrypting the data before transmission, and a secure
7 transmission to a storage device, thus, ready for combination with
8 Kesanupalli and Cheng.
9 MR. FISHBACK: And Your Honor, thank you for
10 directing me to this. Our understanding of this argument is that
11 you would implement Cheng's backup method on to the second
12 processor, obviously, of the Kesanupalli/Challener, and that's that
13 TPM sensor combination. And even with this disclosure that we're
14 going to have a secure transmission to the storage service, that
15 transmission still needs to go through what would be the only
16 connection in this art between the general processing section and
17 the secure processing section. That there's no teaching or
18 reasonable expectation of success that's been shown, that we could
19 just take Cheng --
20 JUDGE LEE: But why do you assume that, though?
21 Because in Cheng, there is no other processor to go through.
22 MR. FISHBACK: Correct. It is just going -- it would be
23 just going through the general processor in Cheng.
24 JUDGE LEE: So when you take that and put it in
25 Kesanupalli, wouldn't -- aren't they saying just do what Cheng did,

1 which is a separate secure communication between that second
2 processor and the external storage device. So you're kind of
3 adding an external channel.
4 MR. FISHBACK: Your Honor, I see what you're saying.
5 I think this still comes back to the issue that there's no teaching
6 that -- even if you were to implement the transmission disclosed in
7 Cheng, that that could be implemented on the second processor
8 here that only has this single communication lane, this API
9 meditated -- or mediated interface between the general processing
10 and the secure processing. So maybe I'm talking around the issue
11 a bit and I apologize, but I think that that's kind of where our
12 stance is.
13 JUDGE LEE: Yeah. Hypothetically, if the Board were
14 to say, yeah, that's what Petitioner has proposed, a separate
15 channel between the secure processor and the external storage,
16 what's your comeback? Do you say, no, that's too hard to do?
17 You know, I wouldn't know how to do it. Or, yeah, well, if that's
18 the argument, then it's easy to do, one could do it.
19 MR. FISHBACK: Our argument would be we haven't --
20 that that -- one moment, Your Honor. Our argument would be that
21 that hasn't been shown. While they say here that this -- we're
22 going to create this secure transmission to the storage service,
23 there's no showing that that could be accomplished with this
24 architecture.
25 JUDGE LEE: What do you mean? The only -- to draw a

1 channel between the second processor and another box in the same
2 drawing?
3 MR. FISHBACK: Not --
4 JUDGE LEE: (CROSSTALK), but I can picture it.
5 MR. FISHBACK: And Your Honor, if that were the
6 case, that would be -- we don't believe they've made that showing.
7 JUDGE LEE: What do you mean showing? I know they
8 didn't draw it, but if I read the words and I can see what they mean,
9 isn't that a showing?
10 MR. FISHBACK: Again, Your Honor -- and I
11 apologize -- we don't read this as we're -- the petition is
12 establishing -- Petitioner is establishing that the second processor
13 is performing Cheng's exact method and it's implementing the
14 secure channel from the second processor to the storage service.
15 And that's in part because we need to look at this in combination
16 with the entirety of the references.
17 JUDGE LEE: I see. So your response is just that you
18 don't think that's what they proposed?
19 MR. FISHBACK: Correct, Your Honor.
20 JUDGE LEE: But hypothetically, if that is what they
21 proposed, then you don't have an answer on the record?
22 MR. FISHBACK: Correct, Your Honor. So and with
23 that, that's all I have for the Patent Owner. We'll reserve the rest of
24 the time for rebuttal.
25 JUDGE PESLAK: All right. Judge Amundson, do you

1 have any more questions?
2 JUDGE AMUNDSON: Nope, not any more.
3 JUDGE PESLAK: I think you used about 35 minutes,
4 Mr. Fishback. It's 2:41 now. We're going to take a five-minute
5 break and come back at 2:46 and then we'll hear from Petitioner's
6 rebuttal, and then Patent Owner will have a chance at surrebuttal.
7 MR. FISHBACK: And I'm sorry, Your Honor. You
8 said -- what time was that?
9 JUDGE PESLAK: Five minutes. You're on Central
10 Time, right?
11 MR. FISHBACK: Yeah.
12 JUDGE PESLAK: 1:46. Not 2:46.
13 MR. FISHBACK: I thought we were taking a long
14 break. No.
15 JUDGE PESLAK: Thank you.
16 MR. FISHBACK: Thanks.
17 (Whereupon, the above-entitled matter went off the
18 record at 2:41 p.m. and resumed at 2:47 p.m.)
19 JUDGE PESLAK: Okay. Mr. O'Brien, are you back?
20 MR. O'BRIEN: I believe I am, Your Honor. Can you
21 hear me?
22 JUDGE PESLAK: Yes. We can hear and see you.
23 MR. O'BRIEN: Excellent.
24 JUDGE PESLAK: Mr. Fishback is back. I believe you
25 have 30 minutes, Mr. O'Brien. You can begin.

1 MR. O'BRIEN: Okay. Well, thank you, Your Honors. I
2 think I'll be brief. I'll have a few items here to address and rebut.
3 I'll start with the points to the end where Judge Lee raised the
4 question of some testimony -- or some arguments in reply and
5 reply testimony -- or supplemental declaration.
6 I want to point out just for the record that that same
7 argument is actually made in the petition, so Patent Owner didn't
8 bite on an improper scope of reply argument, but it is in the
9 petition itself. It is referenced in the petition on page 54 and in
10 terms of Dr. McDaniel's declaration 1003, I want to point you to
11 paragraphs 158 through 178 and in very particular manner to 173,
12 which addresses the argument, to the extent the Patent Owner
13 argues that the second processor must solely be the performer of
14 the backup procedure, and it explains our position.
15 So it's in the petition, as well. And then further to that
16 point, in terms of the ability to respond, I just want to point out to
17 the Board that Patent Owner chose not to depose Dr. McDaniel
18 regarding his testimony in the supplemental deck, for whatever
19 reason, but they forewent that opportunity.
20 Then trying to unload a few points that I heard in the
21 Patent Owner's arguments. One, I believe I heard Patent Owner
22 admit that, in fact, what we had argued, that the only embodiment
23 in the specification is this embodiment in which information goes
24 through the second processor. Regardless of whether our grounds
25 require that or not, he admitted that in terms of the '512 patent

1 itself. There was a rejoinder there and there was an appeal to the
2 '105 patent, another patent, a different patent, and it was
3 represented by Counsel to be sharing a specification. It was
4 insinuated that it was the same. It's in fact a CIP, it's a downstream
5 continuation. Actually, an in-part continuation.
6 In fact, Your Honors determined with respect to the '105
7 that there was added matter in it, such that the claims were not
8 entitled to the early date. So there were differences between those
9 two. It's not a part and parcel of the same. And with respect to the
10 argument that that other downstream CIP uses a different word, I
11 don't think that really matters in the context of the '512, but to the
12 extent that that was the argument, I want to point out that that
13 different word "initiate" appears in a much different context. It
14 appears in the context of Claim 1, which recites based at least in
15 part on the first device being a same brand as the second device.
16 So it's a first device to second device backup that's being
17 discussed. Not a first device to storage service device. Initiate a
18 backup to the second device. So it required initiating a peer-to-
19 peer, so a first to a second device argument. So it's a much
20 different context. A different usage of the term -- a different
21 term -- initiate. We don't think it has anything to do with how you
22 would properly understand the word "perform" in this context.
23 But I think that context is useful for you to sort of be able to
24 interpret what Patent Owner said and represented about how
25 "initiate" would inform how you should understand perform.

1 Let's see. Third item. Judge Peslak, I think you asked
2 Patent Owner whether Patent Owner was, in fact, simply asking
3 for a negative limitation on the configured to perform a secure
4 backup of record to storage service. And I think the answer to that
5 is that's exactly what they're asking you to do, so my answer to that
6 would be, yes, they are asking for a negative limitation.
7 Conceptually, I think Patent Owner has suggested to
8 you -- I think they've argued in the concept of a couple
9 presentations of Kesanupalli's secure and unsecure portions
10 juxtaposed with Challener's TPM architecture with its sort of
11 standards based, more heavyweight framework for doing
12 something similar, that our grounds could be understood as
13 bringing a TPM into the sensor. I don't think that's what our
14 grounds are about.
15 Our grounds are about Kesanupalli teaches an approach
16 of using biometrics, associating them with passwords or other
17 credentials, using a fingerprint or a face or some biometric to look
18 up, and then leveraging that to present that to a remote resource.
19 That approach is described extensively. In Kesanupalli, it maps
20 precisely to what is disclosed and claimed in these patents. Our
21 ground is to perform that functionality that Kesanupalli teaches in
22 the context of the standards-based TPM architecture.
23 So it's really the Kesanupalli functionality, including the
24 functionality that would be secure, and also in the case of the
25 backup would be performed in the secure portion is done within

1 the secure processor of the Challener architecture. So it's not that a
2 TPM chip gets located into the sensor chip. I think that's -- that
3 framing is actually backwards.
4 Fifth item, our ground -- as I think we've gone through,
5 our ground does not require passing through the first processor. I
6 think that's been relatively thoroughly vetted. I think the Patent
7 Owner -- the suggestion that that was something sort of toxic, that
8 it would go through this hinterland of the first processor and
9 everything should be exposed and that would be bad, and that's
10 why you couldn't do that, that is, I think what I heard.
11 I want to point out -- and this is really in furtherance of, I
12 think, a question or a hypothetical that Judge Amundson played
13 out -- our grounds are Cheng, and Cheng not only accesses the
14 secure information from -- within the secure, but would map to the
15 TPM from the secure second processor domain, but it encrypts it.
16 In fact, Cheng teaches a double encryption.
17 There's two levels of encryption that would secure the
18 information and then it goes out. So then it's sent in the context.
19 I'll get to Judge Amundson's point in a second. So the suggestion
20 that there's something problematic about the secured backup, the
21 encrypted sensitive information passing through, you know, an
22 internet router further down the stream or a first processor for that
23 matter, it's just -- that's not a problem. That's the whole point of
24 encrypting it.
25 That's the whole point of encrypting it, that's the whole

1 point of securing it and making it the secure backup, number one.
2 Then specifically to Judge Amundson's point, I think Your Honor
3 was decomposing the secure backup really into two components. I
4 think you described it as copy and send. I would suggest that
5 there's probably three components that we have articulated.
6 One we've actually described as accessing the sensitive
7 information, the biometric template and the credentials, accessing,
8 copying a local copy perhaps. They're one in the same. But the
9 second step really is encrypting it, securing it, using the crypto
10 keys to protect it from unauthorized access and then sending it.
11 So I would just sort of add to the understanding here that
12 what our grounds describe as the application of Cheng's teaching,
13 which is exactly this, into the second processor performing it, is
14 accessing the second information, securing it -- so
15 cryptographically securing it, protecting it from unauthorized
16 access, and sending it off. So that's perhaps the fine point that I
17 wanted to identify that. I think finally -- and I'm happy to answer
18 any questions, by the way, as well -- the Patent Owner made a
19 pitch for focusing on the claim and I know in the briefing, they
20 have focused on a particular case as their touchstone for that
21 argument.
22 They recite the MySpace v. GraphOn case, but I just
23 have to point out, they do a quote from there which they would
24 like -- I think they're insinuating for Your Honors that the only
25 thing you should look at is the claim language. And what I have to

1 point out is -- I'm sure Your Honors will check the citation, but if
2 you go to the quote that they cite, it continues with a semicolon
3 and then it says the written description and preferred embodiments
4 are aid in the understanding of these words. So it truncates
5 precisely the opposite point, which is Your Honors have to
6 consider the specification and the context provided by the
7 embodiments, the admittedly only embodiment in this case, in
8 understanding the language.
9 So I think the way it has been framed for you in the
10 briefing as, it's just the claim language, Your Honors, is really a
11 disservice to what the case law says. With that, I think I've
12 addressed most of the points of Patent Owner. I'm happy to
13 answer any further questions if it would help Your Honors in
14 writing your final written decisions.
15 JUDGE PESLAK: Judge Lee, you're muted.
16 JUDGE LEE: I'd like to ask Counsel this. Your
17 opposing Counsel said -- well, let me preface the question by
18 saying, I'm not sure the answer matters, but I'd like to ask it
19 anyway. And that is the opposing Counsel says Petitioner didn't
20 show how the backup by secure processor to an external storage is
21 done. Like he doesn't know whether you say you do it through a
22 separate independent channel to the external storage, or you say it's
23 through the first processor in a tunnel, or it's like, hey, I give you a
24 copy and then you send it out yourself, and that counts as my
25 sending because I initiated it. So he says he doesn't know, you

1 didn't say, no showing. I'm not sure what showing means, but can
2 you explain, what did you contemplate as manifested by your
3 briefs? How is that done in the combination?
4 MR. O'BRIEN: Well, I think what we described includes
5 the teaching of Cheng, which is to access the sensitive biometric
6 information, to encrypt it, and in fact, encrypt it twice.
7 JUDGE LEE: Yeah. This problem -- we have no
8 problem. Now --
9 MR. O'BRIEN: Right.
10 JUDGE LEE: The part is --
11 MR. O'BRIEN: And the --
12 JUDGE LEE: The second part is here. How do you get
13 it to the external storage?
14 MR. O'BRIEN: And to send it onward to the storage. I
15 don't think that a person of skill would read this patent document
16 as requiring any particular methodology. We don't know whether
17 it's -- we assume some of the examples it's a wireless
18 communication, so it's going to have to be -- it will have to be a
19 physical layer interface and it'll go over a wire, it'll go through a
20 base station, and then it'll move on. Those are all downstream sort
21 of things. Whether the information is placed in an input buffer of a
22 network interface, not a processor, that would certainly be
23 something that would be doable. The illustrations in the -- from
24 Challener -- show that the interface between the second processor
25 and the other processing complex are not processor to processor,

1 but there are other components. There are the IO facilities there,
2 there's the storage facilities. Any of those can be involved as part
3 of the pathway, or as I think --
4 JUDGE LEE: I understand that. I'm sorry --
5 MR. O'BRIEN: (CROSSTALK) --
6 JUDGE LEE: -- to interrupt, but you're not answering --
7 I'm sorry. You're not really answering the question. We know
8 that. But the question is just, what did you propose in the petition
9 or in the reply. I mean, he said there's a thousand ways of doing it,
10 but he said you didn't say any way of doing it. So I'm not sure it
11 matters because if one with ordinary skill would know how to do
12 it, but I'm asking, what did you actually propose. You know, so if
13 you did propose it, let us know, what did you propose. If you
14 didn't propose it, it's fine if you just say, oh, we didn't propose it,
15 but one would know how to do it, whichever way works.
16 MR. O'BRIEN: Well, one would know how to do it, but
17 I believe the citations that I gave you at the open of the rebuttal
18 were some of the important ones. In the petition, 54, the expert
19 dec, paragraphs 155 through 178, and in particular, 173, which we
20 set up and say the second processor does this, and then we say to
21 the extent that the Patent Owner argues that the second processor
22 must be the sole performer of the backup, Cheng states that an
23 onboard microprocessor of the biometrics base performs the
24 backup. It says that it's the guy that does it. So we articulated that
25 in the petition and in the evidence offered with the petition.

1 That was anticipating a possible argument by Patent
2 Owner. So to the extent that they argue this, this is how it would
3 be done, I don't want to say that that is what we were limited to,
4 but I think that is covered, in fact, in the petition and the
5 declaratory evidence at petition. As well as in the paragraph, I
6 think that you identified in the reply and that I pointed out that the
7 Patent Owner did not choose to take the witness on deposition. So
8 I think that answers your question, but I appreciate that it may not
9 matter. I think it probably does not matter as well.
10 JUDGE LEE: Thank you.
11 JUDGE PESLAK: Judge Amundson, any other
12 questions? Okay. Thank you, Mr. O'Brien. Mr. Fishback, you
13 have 30 minutes if you want to take -- if you need it.
14 MR. FISHBURN: Thank you. I don't imagine it's going
15 to take 30 minutes, Your Honor. I just have two points I'd like to
16 clarify in response to Counsel's arguments. One, obviously the
17 claims are already read in light of the specification. It's not our
18 argument that the claims are read outside the scope of the
19 specification or the prosecution history. Our point was to
20 emphasize that specific words of specific claims do have meaning,
21 and that's what that -- what those quotes cite. That's not to say that
22 the specification doesn't have an effect on how you read the
23 claims.
24 The second point I'd like to make, and this is just to
25 clarify a statement I made to Judge Lee prior to the break, even if

1 we were to acknowledge that the Cheng system could perform a
2 backup to a storage service as the second processor, that still does
3 not get around the fact that there is not a motivation to combine
4 Cheng and Challener and Kesanupalli to arrive at that system. So
5 even if we do say, yes, that that could work, we're still lacking the
6 motivation to combine. And with that, I'll open it up for any
7 questions or.
8 JUDGE PESLAK: All right. Judge Lee, Judge
9 Amundson, any questions? Okay.
10 JUDGE LEE: No.
11 JUDGE PESLAK: The hearing is complete. We'll take
12 the matter under advisement and issue our final written decisions
13 in due course. I thank both sides for an excellent and informative
14 presentation today. Mr. Fishback, this is your first appearance
15 before the Board, and we look forward to seeing you appear before
16 us again. And with that, thank you and have a good day. And if
17 you could both stay on a line for a minute to see if the Court
18 Reporter needs any spellings.
19 MR. FISHBACK: Thank you, Your Honors.
20 MR. O'BRIEN: Thank you, Your Honors.
21 (Whereupon the above-entitled matter went off the
22 record at 3:06 p.m.)

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