

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. and
QUALCOMM INCORPORATED,
Petitioner,¹

v.

NETWORK SYSTEM TECHNOLOGIES, LLC.,
Patent Owner.

IPR2024-00338
Patent 7,373,449 B2

Record of Oral Argument
Held: March 20, 2025

Before CHARLES J. BOUDREAU, STEVEN M. AMUNDSON, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

¹ Qualcomm Incorporated filed a petition and a motion for joinder in IPR2024-01081 and has been joined as a petitioner in this proceeding. *See* Paper 16. After Qualcomm Incorporated was joined as a petitioner, Samsung Electronics Co., Ltd. was terminated as a petitioner. *See* Paper 17.

APPEARANCES:

ON BEHALF OF THE PETITIONER:

PETER M. KOHLHEPP, ESQ.
J. DEREK VANDENBURGH, ESQ.
AARON W. PEDERSON, ESQ.
NATHAN D. LOUWAGIE, ESQ.
Carlson Caspers Vandenburg & Lindquist, P.A.
Capella Tower
225 South Sixth Street
Suite 4200
Minneapolis, MN 55402
pkohlhepp@carlsoncaspers.com
dvandenburg@carlsoncaspers.com
apederson@carlsoncaspers.com
nlouwagie@carlsoncaspers.com

ON BEHALF OF THE PATENT OWNER:

BENJAMIN HOLT, ESQ.
ANGELO J. CHRISTOPHER, ESQ.
PETER C. KRUSIEWICZ, ESQ.
JENNIFER HAYES, ESQ.
Nixon Peabody LLP
799 9th Street NW
Suite 500
Washington, DC 20001
bholt@nixonpeabody.com
achristopher@nixonpeabody.com
pkrusiewicz@nixonpeabody.com
jenhayes@nixonpeabody.com

The above-entitled matter came on for hearing Thursday, March 20, 2025, commencing at 1:49 p.m. EDT, via video-conference.

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

JUDGE AMUNDSON: Good morning or afternoon, depending on where you are located. I'm Judge Amundson and with me on the panel are Judges Boudreau and Ahmed. We have our final hearing in IPR2024-00338, involving U.S. Patent Number 7,373,449 between Qualcomm Incorporated and Network System Technologies, LLC. Let's start by getting the parties appearances.

Who do we have for the Petitioner?

MR. KOHLHEPP: Good afternoon, Your Honors. Peter Kohlhepp on behalf of the Petitioner, and I'm with the Carlson Caspers firm. Also with me on the call today is Derek Vandenburg and Nathan Louwagie and Aaron Pederson, all of the Carlson Caspers firm.

JUDGE AMUNDSON: All right. Thank you. And who do we have for the Patent Owner?

MR. HOLT: Good afternoon, Your Honor. This is Benjamin Holt with Nixon Peabody on behalf of Patent Owner, Network System Technologies. And joining me today are my colleagues, Dan Stringfield, lead counsel, as well as Angelo Christopher, Peter Krusiewicz, and Jennifer Hayes.

JUDGE AMUNDSON: All right. Thank you. And welcome to everyone. Just to be brief here, so all of these suggestions from the hearing earlier today, such as muting when not speaking and identifying things by slide number or exhibit number also apply to this hearing. So we set forth the procedure for today's hearing in the order granting the request for oral argument, Paper 52. That order provided that each party will have

1 60 minutes of total argument time to present arguments. After that -- after
2 issuing that order, the Board granted Patent Owner's LEAP request for Mr.
3 Holt and gave Patent Owner an additional 15 minutes of argument time.

4 So Petitioner will have 60 minutes of total argument time and
5 Patent Owner will have 75 minutes of total argument time. Procedurally,
6 Petitioner bears the ultimate burden of proof and will go first. And
7 Petitioner may reserve time for rebuttal. Patent Owner will go next. And
8 Patent Owner may reserve time for surrebuttal. But Patent Owner's
9 surrebuttal must be limited to the issues in Petitioner's rebuttal. And also as
10 with the hearing earlier today, please do not interrupt the other party while
11 that party is presenting its argument. If you have an objection, please raise it
12 during your argument. We note that the Patent Owner has objected to a
13 couple of Petitioner's slides.

14 Anyway, I will keep time and try to give you a warning when
15 you're nearing the end of your time. So with that said, are there any
16 questions before we begin the arguments? Mr. Kohlhepp?

17 MR. KOHLHEPP: Thank you, Your Honor. I'll go ahead and
18 get started. As I mentioned, I'm --

19 JUDGE AMUNDSON: All right. Let me -- yeah, just before --

20 MR. KOHLHEPP: Oh, I'm sorry.

21 JUDGE AMUNDSON: I guess there's no questions. Okay.
22 Fine. Let's start with your argument. And before we start with your
23 argument, let me ask if you want to reserve any rebuttal time.

24 MR. KOHLHEPP: Yes, Your Honor. And my apologies for
25 misunderstanding. Yes. I would like to reserve about 15 minutes of rebuttal
26 argument time.

1 JUDGE AMUNDSON: All right, very well. So then you may
2 start whenever you're ready.

3 MR. KOHLHEPP: Thank you. I'm going to go ahead and
4 share my screen hopefully. Try anyway. Let me try that one more time
5 here.

6 Okay. Can everyone see that?

7 JUDGE AMUNDSON: Yes.

8 MR. KOHLHEPP: Thank you. Your Honor, I would like to
9 begin today with a reminder of how we got here and I will go to slide 2.
10 Slide 2 shows that the challenge claims were allowed during prosecution
11 because the applicant amended the claims to add a resource manager
12 limitation and the examiner found that the prior art did not disclose that
13 limitation. A problem with this, I'm going to flip to slide 3, was that the
14 examiner was unaware of the inventor's own prior art publications that
15 disclosed most, if not all, of what was claimed. And this was because the
16 applicant did not disclose any of the inventor's own prior art publications.

17 And on slide 4, there's an example showing just how similar
18 those publications were, using the Goossens2003 reference that is the subject
19 of the Ground 2 challenge in this IPR. So turning to the invalidity
20 challenges at issue today, Petitioner has raised two grounds each challenging
21 the same set of claims and based alternatively on the inventor publications
22 that were not disclosed during prosecution --

23 JUDGE AMUNDSON: Mr. Kohlhepp, this is -- we seem to
24 have lost the screen.

25 MR. KOHLHEPP: I -- I'm sorry. I should have mentioned I
26 will be flipping off the slides at some point.

1 JUDGE AMUNDSON: All right. Thank you.

2 MR. KOHLHEPP: So my apologies for the confusion. So I
3 will reshare the screen when I -- when there's a slide I -- I'd like to direct our
4 attention to. So for the argument today, I'm going to focus on the ground 2
5 challenge in the Petition. And that's the one that's based on the later
6 Goossens2003 reference. And I'm going to do that for two reasons. The
7 first is that after the IPR was instituted, the Patent Owner did not try to
8 establish that it was entitled to the earlier foreign application filing date that
9 would've predated the later Goossens2003 reference. So for the purpose of
10 this proceeding the relevant priority date is October 7th, 2003. And the
11 second reason is that there is one claim limitation requiring that the
12 properties of the channels be independently configurable that the Patent
13 Owner is contesting only for Ground 1, which is based on the earlier
14 Goossens2002 reference and not for Ground 2, which is based on the later
15 Goossens2003 reference.

16 So turning now to the Ground 2 challenge, I'm going to share
17 screen again and put up slide 5. And slide 5 shows an overview of this
18 Ground 2 challenge. It was, or is Goossens2003 plus Drake's teachings of a
19 quality of service management system. That combination was clearly laid
20 out in the Petition and it has not changed throughout this trial. The
21 Goossens reference on the left teaches a system on chip that includes first
22 and second IP modules highlighted in yellow and teaches providing
23 guaranteed services via connections. Drake, on the right, teaches a quality
24 of service management system that includes a communication manager, and
25 in Drake that's called the QoS Requester Manager 12, and that's in red, and a
26 resource manager called the QoS Allocator 20, which is depicted in blue.

1 Now, I turn to Slide 6. The Petition explained that
2 Goossens2003, and I'm reading from the highlighted portion on the lower
3 left of Slide 6, Goossens2003 does not describe a specific component or
4 mechanism for managing resource usage within the NoC or determining the
5 availability of resources. Therefore, the Petition explained, a POSITA
6 would've been motivated to combine Goossens with Drake's disclosures
7 regarding, and then now I'm reading from the right of Slide 6, Drake's
8 disclosures regarding a system for QoS management to obtain the benefits of
9 Drake's known solution to ensuring the availability of network resources for
10 guaranteed services.

11 And if we go to Slide 6, I'm sorry, Slide 7, the Petition further
12 explained that a POSITA would have understood, and I'm reading from the
13 left side of Slide 7, would've understood that using Drake's QoS
14 management process would improve the performance and efficiency of
15 Goossens2003's NoC. And we jumped to slide 9 through 11 in the
16 demonstrative. I'll just flip through these very quickly. These are some
17 examples of the supporting evidence, the evidence that was filed with the
18 Petition that supports these motivations. It included testimony from Dr.
19 Todd Mowry, who is a professor of computer science at Carnegie Mellon
20 University. And it was not just Dr. Mowry's testimony. His testimony --
21 and now I'm on slide 12. His testimony was corroborated by a stack of
22 additional publications from the field, textbooks, and articles.

23 Now I'm going to go to slide 23. So in view of this record and
24 the Petition's description of how the teachings would be combined and the
25 associated motivations, the Board instituted this trial. And in deciding to
26 institute, the Board explained that Patent Owner's pre-institution opposition

1 mischaracterized the Petition's proposed modification. And the Institution
2 Decision correctly noted that the invalidity ground, quote, I'm reading the
3 highlighted portion of Slide 23, proposes implementing Drake's QoS
4 management process in the NoC, not modifying an IP block of Goossens.

5 So now I want to turn to the arguments I want to focus on
6 today. The Patent Owner has made many different arguments in an effort to
7 oppose what is really a straightforward showing of invalidity. The Patent
8 Owner initially argued that on-chip and off-chip networks have different
9 premises, and therefore a POSITA would not have been motivated to
10 combine the teachings of Drake, which is an on-chip system -- I'm sorry,
11 Goossens, which is an on-chip system and of Drake, which is an off-chip
12 network. The Board preliminarily rejected this argument in its Institution
13 Decision and the Patent Owner does not really continue to press that.

14 So the Patent Owner's remaining arguments fall into what I
15 would call five different buckets. The first is that Patent Owner continues to
16 argue that the Petitioner has not explained sufficiently why and how the
17 teachings could be combined. Second, the Patent Owner argues that there is
18 not a motivation to combine because the specific communication manager
19 component that the Drake reference discloses would have been redundant.
20 Third, the Patent Owner argues that the references teach away and in
21 particular that Drake teaches away because its off-chip system shows this
22 communication manager component located in what Drake calls a source
23 station. Fourth, the Patent Owner contends that certain claim elements are
24 not disclosed by the combination. And then finally, the Patent Owner
25 continues to argue that the Goossens publications have not been proven to be

1 prior art. Now, there's some amount of overlap in the Patent Owner's
2 various arguments, but I'll try to address them in roughly that order.

3 So I will start with the first set of arguments. And that is Patent
4 Owner's contentions that Petitioner has not identified specifically enough
5 why and how Drake's QoS requester manager 12 component, the
6 communication manager would be implemented in Goossens NoC. This
7 argument just entirely misses the mark. As to the why, as I just previously
8 walked through, the Petition identified more than sufficient motivations to
9 combine the teachings. And notably, Patent Owner does not really dispute
10 any of those motivations that are identified in the Petition. And that's the
11 how the claims do not require any specific location on the chip for the
12 quality of service components. So to show -- in particular for the
13 communication manager. So to show obviousness, it's not necessary to
14 explain precisely how and where on the chip the circuits of those
15 components would be implemented.

16 And this is reinforced, for example, in the *Intel* case that the
17 Petitioner cites at Page 7 of its Reply. And in that case, the Federal Circuit
18 reversed a Board finding a non-obviousness. And it explained that the
19 Board legally erred in requiring evidence of how one reference's caching
20 mechanism would've been modified in order to be implemented into another
21 reference's bus system. And the Patent Owner here is asking the Board to do
22 exactly what the Federal Circuit found to be improper in that *Intel* case.

23 And on top of that, even though it -- it's not necessary to show
24 obviousness, the Petitioner's evidence does show how the communication
25 manager component would be implemented with Goossens' chip. For the
26 communication manager component taught by Drake, the Petition explained

1 that those teachings could be implemented as, I'm quoting here from Page 38
2 of the Petition, "as a circuit on the same integrated circuit chip as Goossens'
3 IP blocks and network on silicon." And then the -- that was for ground two
4 of the Goossens2002 reference. The Petition explained the same thing at
5 Page 63 for the Goossens2003 reference, and this was supported by
6 testimony from Dr. Mowry.

7 JUDGE AMUNDSON: This is Judge Amundson. Just so we
8 have a clear record. When you talk about the Petition, are you talking about
9 the Qualcomm Petition from the 1081 case or the Samsung Petition from the
10 338 case?

11 MR. KOHLHEPP: A fair question. And thank you for the
12 clarification. I should have clarified that at the beginning. I'm -- the page
13 numbers I'm referencing are actually from the Qualcomm's Petition filed in
14 the 1081.

15 JUDGE AMUNDSON: Okay. Good. Thank you.

16 MR. KOHLHEPP: All the other exhibits and paper numbers
17 that I will reference are from the 338 IPR.

18 Okay. So I do want to pull up Slide 55 on the screen. So in
19 addition to the Petition explaining that the communication manager
20 component could be implemented as a circuit on the Goossens chip along
21 with IP modules and the network on silicon, Dr. Mowry has also
22 consistently explained that a natural place to implement the communication
23 manager would be in the network interface of Goossens. And he explained
24 this at his first deposition, again at his second declaration. And in fact, if
25 you look at the left of Slide 55 in Dr. Mowry's first declaration, he explained

1 that Goossens2003 itself actually already teaches to put communication
2 management functionality in its network interface.

3 Now I expect that the Patent Owner may argue, or will argue
4 because they have argued in the briefing, that Dr. Mowry was, quote,
5 "inconsistent about specifically where on the chip the communication
6 manager would be implemented." So first, again, the Patent Owner is trying
7 to impose a legal requirement that just doesn't exist. And second, none of
8 that testimony is inconsistent. Instead, Dr. Mowry consistently explained
9 that a natural place to implement the communication manager would be in
10 Goossens network interface. And he's also said that that is not necessarily
11 the only place, so it would certainly be a very obvious place. So there's just
12 nothing inconsistent about that.

13 Also, if we go to Slide 16, the Patent Owner entirely ignores the
14 Petition's explanation that Goossens2003 itself actually discloses a
15 communication manager located in the network interface under at least the
16 construction Patent Owner has proposed in District Court. And --

17 JUDGE AMUNDSON: This is Judge Amundson. I had a --
18 while you're on that subject, and correct me if I'm wrong. As I understand
19 the situation in the District Court in the Western District of Texas,
20 Qualcomm says "communication manager" should be a means-plus-function
21 limitation. And NST says no, "communication manager" should not be a
22 means-plus-function limitation. Do I have that right?

23 MR. KOHLHEPP: Yes.

24 JUDGE AMUNDSON: Okay. So he -- what -- I'm not sure
25 I've seen in the briefing in this proceeding before the Board a clear statement

1 from Qualcomm whether "communication manager" should or shouldn't be a
2 means-plus-function limitation. Does Qualcomm have a position on that?

3 MR. KOHLHEPP: Yes, Your Honor. I think Qualcomm --

4 JUDGE AMUNDSON: Well, that's a compound question, but -

5 -

6 MR. KOHLHEPP: That's right.

7 JUDGE AMUNDSON: Is there a clear statement? And if there
8 is, where is it? And if not, what's your position?

9 MR. KOHLHEPP: Okay. Fair question. Understood.

10 So the position is, as laid out in the Qualcomm Petition, which
11 is in the 1081 IPR, where Qualcomm's position in the district court is that
12 "communication manager" is a means-plus-function term, and that it is
13 indefinite. However, a petitioner cannot raise indefiniteness as a defense in
14 an IPR. So as Qualcomm's Petition explained, therefore, as part of the
15 motion to join the already instituted Samsung IPR, Qualcomm had agreed,
16 for the purpose of this proceeding, to apply any of the constructions that
17 were applied in that Samsung Petition. So that is Qualcomm's position in
18 this IPR.

19 JUDGE AMUNDSON: Well, okay. That -- but if we look at --
20 we -- I don't know if you have it. If we look at the Samsung Petition Paper
21 2, Claim Construction on Page 15 of Paper 2 --

22 MR. KOHLHEPP: I can pull that up.

23 JUDGE AMUNDSON: Okay. If you -- if you -- yeah, that's
24 right. Let me know when you have that.

25 MR. KOHLHEPP: Okay. I'm there.

1 JUDGE AMUNDSON: It's like one paragraph. It is one
2 paragraph on claim construction. And I don't see any position taken there
3 about whether a "communication manager" should or shouldn't be a means-
4 plus-function limitation. So that's the -- that's kind of contributing to my
5 confusion here.

6 MR. KOHLHEPP: Sure. And I think maybe part of the
7 confusion is, for the purpose of this proceeding, neither party has argued that
8 Your Honors need to construe "communication manager." In other words,
9 the -- for the purpose of resolving this dispute, nobody is disputing that
10 Drake discloses a "communication manager" under anyone's construction.

11 JUDGE AMUNDSON: All right. I seem to recall from the
12 briefing that NST did dispute that, and you can correct me if I'm wrong, but
13 that Qualcomm has not proven that the references show a communication
14 manager as that term was construed by the District Court in the Texas
15 Instruments litigation, right? Did I misunderstand that or am I missing
16 something here?

17 MR. KOHLHEPP: I think they have argued that. Well, I'm not
18 sure if they've actually argued that. So there's two responses to that. One
19 response is, NST has never argued that the term should be construed as a
20 means-plus-function term. And Qualcomm, in joining the instituted
21 Samsung IPR, agreed to apply the construction -- the constructions in that
22 IPR. And the sort of first construction or the -- I would say the primary
23 construction applied in the Samsung Petition is no construction. So I think
24 as far as the parties in this dispute are concerned, and for the purposes of this
25 dispute, there isn't really a dispute about whether it needs to be construed as
26 means-plus-function or not.

1 JUDGE AMUNDSON: All right, then, I do have a follow-up
2 question. But assuming that the Board construes the "communication
3 manager" in the same way as the District Court in the Texas Instruments
4 litigation, under that assumption, what does that do to your obviousness
5 theory, if anything?

6 MR. KOHLHEPP: So I would say the result is the same and
7 that the -- there is evidence in what I was submitted with the Petition that
8 even under that construction, Drake discloses a communication manager and
9 --

10 JUDGE AMUNDSON: All right, just --

11 MR. KOHLHEPP: -- the Patent Owner has not disputed that.
12 And I can point Your Honors to where that is. So for example, the Petition -
13 - let's go to -- I believe it's Page 36 of the 1081 Petition.

14 So yes, Page 36, it says, "To the extent the claimed
15 communication manager must have the ability to request that the resource
16 manager release reserved connections and resources, that too is disclosed by
17 Drake" and then there is support from Dr. Mowry's side of there as well. So
18 the Patent Owner has never disputed that Drake discloses the
19 "communication manager" under any of the constructions, the ordinary
20 meaning, the construction from this other Texas District Court case that does
21 not involve Qualcomm or under the construction that Patent Owner itself is
22 proposed in the District Court litigation.

23 JUDGE AMUNDSON: All right. Thank you.

24 MR. KOHLHEPP: I hope that answers your question.

25 JUDGE AMUNDSON: Yes. Thank you.

26 MR. KOHLHEPP: Okay. Thank you.

1 Okay. I do want to now turn to what I'll call the second bucket
2 of arguments that the Patent Owner has made in this proceeding. And that is
3 that the QoS requester manager 12 component, which is the communication
4 manager. And again, no one disputes that that is a communication manager.
5 Would've been redundant in the Goossens reference.

6 Now, this is wrong for two separate reasons. So one, it ignores
7 the combination set forth by the Petition and also black-letter obviousness
8 law. So in the combination for ground two, it's Goossens combined with
9 Drake's quality of service system teachings. It's not just Goossens2003 plus
10 Drake's quality of server -- quality of service requester manager component
11 alone. And the Petition explains that while Goossens2003 discloses resource
12 management, it does not disclose a specific component or mechanism for
13 doing that. So an obvious straightforward way to remedy that the Petition
14 explains was to use Drake's quality of service system, which also has a
15 communication manager.

16 Now, the issue of whether Goossens2003 itself already
17 disclosed communication management functionality similar to one part of
18 Drake's quality of service system, that's not relevant to whether the overall
19 combination would have been obvious.

20 And I would like to go to Slide 39 and direct Your Honors'
21 attention to another case involving Intel that's cited in the Reply brief at
22 Page 8. And in that case, the Board had found that because the Kabemoto
23 reference already addresses the problem through the use of a known
24 technique similar to that of Bauman, the secondary reference, that meant that
25 the Bauman technique would not be an obvious modification to Kabemoto.
26 But the Federal Circuit reversed and explained that obviousness merely

1 requires showing that the proposed modification is, quote, a suitable option.
2 And notably, I think, the Patent Owner has not even attempted to distinguish
3 this case. Instead, it just continues to argue redundancy and urges the Board
4 to make the same legal error that was made in the *Intel* case.

5 Now, there's a second independent reason that the redundancy
6 argument is wrong, and that's because it ignores the known role of
7 interfacing in the art. The Petitioner has -- or -- I'm sorry, the Patent Owner
8 has argued that Goossens can already send a request to a resource manager
9 directly without using Drake's QoS requester manager 12 component. But if
10 we go to slide 42, Dr. Mowry, Petitioner's expert, has explained that this
11 ignores the known role of interfacing, particularly for the generic reusable IP
12 blocks like Goossens discloses using. And at paragraph 67, Dr. Mowry
13 explains, and this is the highlighted language, a POSITA at the time knew
14 that it was good design practice to raise the level of abstraction for requests
15 so that the requesting module did not need to be redesigned for different
16 implementations. A POSITA would have recognized that Drake's QoS
17 requester manager 12 was an interface that understood how to forward the
18 QoS request from the requesting module to the resource manager. So -- and
19 then as we can see if we go to slide 41, Goossens2003 does disclose that it
20 has decoupled solutions that allow IP reuse, meaning using generic IP
21 module blocks. So as Dr. Mowry's explanation indicates, a person of
22 ordinary skill would not have wanted the IP blocks in Goossens to somehow
23 be able or to somehow be specifically designed and programmed to know
24 how to speak directly to the resource manager. That would be contrary to
25 Goossens' teachings of using generic reusable IP blocks. I do want to --

1 JUDGE AMUNDSON: This is Judge Amundson. I had a
2 follow-up question on slide 42.

3 MR. KOHLHEPP: Sure.

4 JUDGE AMUNDSON: And the concept of Drake's QoS
5 requester manager 12 being an interface component. I -- as I understand
6 what NST argues is that at one point Qualcomm calls QoS requester
7 manager 12 a QoS component. And now Qualcomm's changed position and
8 calls QoS requester manager 12 an interface component. And that's a new
9 argument. Could you address that?

10 MR. KOHLHEPP: Oh, sure. So yes. So I guess the answer is
11 it's both. And that is not inconsistent. So Drake teaches a QoS management
12 system. Part of that system includes the QoS requester manager 12 and part
13 of the role of QoS requester manager 12 is to be the interface or the thing
14 that talks to the QoS requester -- the QoS allocator 20, which is the resource
15 manager. So it is both part of the QoS system, and it is also the interface
16 that can talk to the application 11 in Drake and then translate. And then the
17 QoS requester manager 12 is the thing that knows, oh, there's a resource
18 manager out there on the network. And that's the thing that can talk to the
19 resource manager. And what Dr. Mowry explains is that you wouldn't want
20 to have Goossens IP module itself be able to talk to that -- directly to that
21 resource manager. The QoS allocator 20. Because if that was a design, the
22 IP module on Goossens would have to be specifically programmed to know
23 how to do that. And that's contrary to Goossens' teachings of, hey, we want
24 to use hundreds of these reusable IT blocks in our system.

25 And I guess in response to your question about, is that a new
26 argument? The answer is no. That -- that's a direct response to the Patent

1 Owner's argument in their Response brief that, well, the QoS requester
2 manager would be redundant. So the response from Dr. Mowry was, no, it
3 wouldn't. It's part of the -- it's how the -- it's part of how the system works.
4 It's the thing that needs to talk to the resource manager in Drake. Does that
5 answer your question?

6 JUDGE AMUNDSON: All right. Thank you. Yes. Thank
7 you.

8 MR. KOHLHEPP: Okay. And I believe I think that was also
9 the subject of the motion to strike, which we did receive the order a couple
10 days ago, which denied that motion. And I think that was the Patent
11 Owner's argument that this interfacing discussion was new and improper.
12 And we had explained how it directly responded to what the Patent Owner
13 had raised in its Response brief.

14 Okay. I do want to turn now to the -- what I'll call the third
15 bucket of arguments that the Patent Owner makes. And that's the set of
16 arguments that Drake teaches away from implementing Drake's QoS
17 requester manager 12 component. Again, the communication manager in or
18 with Goossens NoC because Drake shows that component located in its
19 source station. So I want to go to slide 47. So the problem with this
20 argument, this teaching away argument, is that it ignores the undisputed
21 evidence of what was already known in the art regarding on-chip versus off-
22 chip architectures. And slide 47 shows that in the off-chip context, so a
23 traditional LAN network, which is what Drake shows, the experts agree that
24 network interface components, which Petitioner's expert also calls network
25 adapters, were usually located within the host or personal computer.

1 And Patent Owner's expert at paragraph 77, the second
2 sentence. I'm sorry. The third sentence says that, "embedded within these
3 computers are specific network adapters that connects the computer to the
4 network." And then if we go to slide 48 for the on-chip context, and that's
5 Goossens, the experts also agree that network interfacing components in that
6 on-chip context were located on the chip, but outside of IP modules. And
7 that was because -- it was because of what we just talked about, that in the
8 on-chip context, and Goossens expressly teaches this, it was common to use
9 generic IP modules. So you didn't want to have to program the IP module to
10 be able to interface with or talk with the rest of the network.

11 And then at slide 49, in particular at paragraph 61, the
12 highlighted sentence, Dr. Mowry explained that POSITAs in this field
13 looked at components and how they interact, which a POSITA would have
14 understood was the same for both on-chip and off-chip networks. In other
15 words, Dr. Mowry explained that POSITAs understood that the components
16 in each of those contexts were in the same functional locations. So what
17 does this mean? It means that Drake's showing of the QoS requester
18 manager 12 in the source station does not teach away from the combination.
19 And again, this is all the more obvious in the context of Goossens2003
20 because Goossens2003 already teaches locating QoS functionality outside of
21 the IP modules. And it specifically teaches locating communication
22 management functionality in its network interface.

23 Okay. I want to go to slide 51. The Patent Owner also makes
24 some arguments about teaching way based on purported space and resource
25 constraints in the on-chip environment. And this is just not supported in the
26 record or by the evidence. As Dr. Mowry explained in the lower left in

1 paragraph 21 on slide 51, "the capacity of integrated circuit technology has
2 improved exponentially over the years, and it has enabled larger portions of
3 computer systems to be integrated onto single chips." If we go to slide 50,
4 that's exactly what Goossens2003 was disclosing. It was a system on chip
5 that had what used to be an off-chip computer system integrated onto a
6 single chip.

7 Okay. I want to go briefly to slide 53. Patent Owner also
8 makes an argument about teaching away where it argues that Drake teaches
9 it would be complex to implement quality of service in the network. And
10 that is not what Drake teaches. What the Patent Owner points to is merely
11 Drake's discussion of keeping the QoS allocator 20, the resource manager,
12 concentrated in a single station on the LAN. The proposed combination
13 does not alter this architecture at all. For example, on slide 54, Dr. Mowry
14 explained that a POSITA would've been motivated to implement the
15 functionality of Drake's QoS allocator, that's the resource manager, in a
16 circuit on the same integrated circuit chip as the IP blocks and the NoC.
17 And that the resource manager could go anywhere on the chip that's
18 connected to the network. That's exactly the architecture that Drake shows
19 for the off-chip environment.

20 Okay. I want to turn to the fourth bucket of arguments. And
21 that's that Patent Owner's arguments that certain elements are not disclosed.
22 The Patent Owner first contends that the Reply did not dispute that Drake
23 did not disclose a communication manager under Patent Owner's
24 construction. That's not true. And I want to make sure I clarify when -- you
25 know, under Patent Owner's construction. So there -- there's sort of two
26 issues here. One is the means plus function issue that we talked about

1 earlier. And as to that issue, no one is disputing that a communication -- that
2 Drake discloses a communication manager under any construction, whether
3 you apply means plus function or plain and ordinary meaning, it doesn't
4 matter Drake discloses it. What the Patent Owner is arguing is a different
5 construction, and that is their construction that they introduced in the Patent
6 Owner Response where the Patent Owner argues that the first module and
7 the communication manager should be construed as distinct claim elements.
8 So that's kind of -- that's just an entirely separate issue. And they're saying
9 under that construction, Drake does not disclose a communication manager
10 because Drake shows the communication manager component in a source
11 station, which Patent Owner contends is a first module, therefore it's not --
12 somehow not a communication manager.

13 So that's wrong for a couple of reasons. One, ignores the
14 combination. As the Petitioner's Reply brief pointed out, in the combination,
15 the communication manager, which would be Drake's QoS or the equivalent
16 of Drake's QoS requester manager 12, and the first module, which Goossens
17 has, are separate components.

18 It's also wrong, because if we go to Slide 59, Dr. Mowry
19 explained that even if one looks only at Drake, and only what Drake calls the
20 source station, that block 10 on the slide, Drake itself discloses the
21 communication manager, the QoS Requester Manager Component 12, and a
22 first module, which Dr. Mowry explains is the Application 11 requesting the
23 QoS connection, that are separate components. And, in fact, Drake itself
24 calls them, quote, "components."

25 JUDGE AMUNDSON: This is Judge Amundson. I have -- I
26 have you at about 41 minutes into your initially --

1 MR. KOHLHEPP: Thank you.

2 JUDGE AMUNDSON: -- requested time.

3 MR. KOHLHEPP: Appreciate that. So just to wrap up this
4 communication manager discussion, so Dr. -- I'm on Slide 60 now. Dr.
5 Mowry did specifically talk about the new construction that the Patent
6 Owner proposed in its Response brief, and he explained that it would not
7 alter his opinions as to whether the communication manager was disclosed,
8 both because, in the combination, the components are separate, the first
9 module and the communication manager, and because -- and this is the last
10 sentence in his Paragraph 7. He also points to a first module and
11 communication manager components in the prior art that are separate and
12 distinct.

13 So I want to also talk briefly about Claim Elements 6A and 6D,
14 and the corresponding Claim 10 elements.

15 For those elements, the Patent Owner has argued that the
16 combination does not disclose requesting and establishing a connection
17 between the said first and second modules, and, again, this ignores the
18 combination.

19 The Petition expressly explained, for example, in Ground 2,
20 that Goossens discloses the first and second modules, and that a connection
21 is established between them for each of Elements 6A and 6D, and that's at
22 Pages 65 and 67 of the Petition.

23 And Patent Owner's Sur-reply also argues that the Petitioner did
24 not explain any comparison or relationship between Goossens and Drake for
25 the first module. And again, that's not correct.

1 We go to Slide 26, and this is in -- or this is part of the evidence
2 submitted with the Petition. Dr. Mowry expressly explained that Drake
3 itself discloses that the application in the source station, i.e. the first module
4 - and he highlights Application 11 - communicates the request to the QoS
5 Requester Manager, the communication manager, and he highlights that in
6 yellow.

7 So he specifically explained that here, the thing that directly
8 corresponds to the Goossens first module is the application requesting the
9 QoS service, the Application 11 inside the source station.

10 Now, the Patent Owner makes a few other arguments about
11 elements of Claim 6, 6B, and 6C, that these are purportedly not disclosed by
12 the combination, but these ignore Drake's disclosed data path.

13 So if we go to Slide 62, Dr. Mowry explained that Drake's
14 quality of service system teaches only one data path. That's shown on the
15 left of Slide 62. And Dr. Mowry explained that that same data path is used
16 for returning messages, and that's indicated by the arrows on the right side of
17 Slide 62.

18 And going to Slide 63, the Patent Owner's expert agreed, and at
19 his deposition, he drew the path that Drake discloses on the left, and then he
20 agreed that the return data path was the same.

21 So we go to Slide 64. The Patent Owner argues that
22 specifically for 6B, Drake does not teach that the QoS 12 component
23 forwards the request to the QoS allocator. That's not through. That is
24 expressly what Drake discloses, both by its data path and its description of
25 how the -- on the right side of the screen, how the data flows through
26 Drake's quality of service management system.

1 And I want to briefly address -- the Patent Owner makes -- I'm
2 on Slide 65 now. Patent Owner makes an argument that if anything
3 forwards the request, it's the MAC 15 -- I'm sorry, the Protocol Stack 15 and
4 the MAC Entity 16 in Drake, not the QoS Requester Manager 12.

5 Now, Dr. Mowry explains why that's not correct, and this is at
6 the lower right-hand side of Slide 65. Dr. Mowry explains that Drake
7 teaches the QoS Requester Manager, realizes it must first send a message
8 somewhere else, meaning not to the target station; it needs to send it to the
9 allocator station, which is the resource manager.

10 And the QoS Requester Manager 12 and Drake, that's the thing
11 that knows the resource manager exists on the network, and that's the thing
12 that has to talk to that resource manager.

13 If we go to Slide 66, the other argument that the Patent Owner
14 makes is that Drake does not disclose that the resource manager responds to
15 the communication manager, and again, this is not correct.

16 In Slide 66, it shows that Drake teaches that the resource
17 manager, which is the QoS Allocator 20, sends a response regarding the
18 resource availability, and Drake shows that that response goes back along
19 the same data path to QoS Requester Manager 12.

20 I do want to just, in one minute or so here, briefly address
21 Patent Owner's fifth set of arguments that the Goossens references have not
22 been shown to be printed publications.

23 If we go to Slide 71, this should be a pretty straightforward
24 inquiry. Goossens2003 was a chapter in a textbook that was cataloged at
25 two separate -- at two separate libraries prior to October 7th, 2003, and

1 Goossens2002 was a publication by IEEE Computer Society, which is a
2 well-known, respected publisher in the field.

3 The law says that if something is published by a recognized
4 publisher, there is a presumption of public accessibility as of the publication
5 date. That's the VidStream case.

6 That's exactly the case here for both of these references, and the
7 Patent Owner has not rebutted that presumption. Patent Owner has argued
8 that that's a new argument, but it's not a new argument. It's just the law.

9 And on top of that, as the briefing shows - and I will largely rest
10 on the briefing for this - there's additional evidence corroborating the public
11 accessibility of both of these references.

12 So with that, I'll reserve the remaining amount of my time.

13 JUDGE AMUNDSON: All right. I have you at about 49
14 minutes into the 60 minutes allotted, so you -- I -- you will have 11 minutes
15 for your rebuttal, if you need that much.

16 MR. KOHLHEPP: Thank you.

17 JUDGE AMUNDSON: All right. I guess we'll turn it over to
18 Mr. Holt, who's on mute.

19 MR. HOLT: Thank you, Your Honor.

20 Counsel, could you please cease sharing so that I may share?

21 MR. KOHLHEPP: Yes, thank you. I will do that.

22 JUDGE AMUNDSON: And so while that's happening, could
23 you let us know, Mr. Holt, if you would like to reserve any surrebuttal time?

24 MR. HOLT: Yes, Your Honor. We intend to reserve 15
25 minutes.

1 JUDGE AMUNDSON: Okay. Very well. So you can -- you
2 may begin whenever you're ready.

3 MR. HOLT: All right. Thank you, Your Honor.

4 May it please the Board, my name is Benjamin Holt on behalf
5 of Patent Owner.

6 To start, I want to discuss as background some of the 449
7 patent, and I'll go to Slide 4 for that.

8 So the 449 patent involves a System-on-a-Chip, or SoC, which
9 is an integrated circuit where the system components, otherwise called
10 modules or IPs, are integrated onto the chip, and the chip also includes some
11 interconnects for these modules to communicate.

12 For the interconnect, conventional SoCs used a bus, but this
13 presented problems of overloading and bottlenecking, so to solve such
14 problems, the 449 instead is directed to a relatively new interconnect at the
15 time, which is a Network-on-Chip, or a NoC.

16 The 449 explains that it's presented advantages such as allowing
17 to for decoupling of the computation performed by the modules from the
18 communication being performed by the network.

19 The 449 explains, though, that NoCs presented certain
20 challenges both compared to other on-chip interconnects and off-chip
21 networks. So for example, it explained that NoCs were fundamentally
22 different from the other traditional on-chip interconnects like buses, but on
23 the other hand, a NoC or an on-chip network was also fundamentally
24 different from existing off-chip networks, such as a local area network, or a
25 LAN.

1 Now the invention of the challenge claims such as Exemplary
2 Claim 10 shown on Slide 5 involves an SoC with a NoC in blue, and
3 establishing a connection between two modules where the connection
4 comprises a set of channels with independently configurable properties.

5 To do this, the claims involve several different claim elements
6 and claim limitations regarding how those different elements work together.

7 For example, specifically for 10A, the first module in red issues
8 a request to a communication manager, which I'm going to refer to today as
9 the CM for clarity.

10 And then for 10B, the CM forwards the request to the resource
11 manager, which I'll refer to as the RM. And then the RM determines
12 whether a target connection with the desire properties is available. And for
13 10D, that RM responds to the CM with the availability. And in 10E, the
14 target connection between the first and second module is established.

15 For your reference, the claims at issue in this proceeding are 2,
16 6, and 10.

17 10 is essentially comparable to the sum of 1, 2, and 6, where 2
18 recites and introduces the CM, and Claim 6 then recites various operations
19 between the first module, the CM, and the RM, and establishing the
20 connection as a result.

21 So looking at Slide 8, Grounds 1 and 2 here are based on
22 primary references Goossens2002 and Goossens2003, which I'll refer to
23 collectively as just Goossens, along with a secondary reference, Drake.

24 Now, Petitioner's demonstratives and the beginning of
25 Petitioner's argument tried to make a big deal about the prosecution history
26 of the 449 patent, such as the reasons for allowance and Petitioner also

1 pointed to alleged similarities between the Goossens references and the 449
2 specification. But those are irrelevant for our purposes in this proceeding.
3 The only issue here is whether the challenge claims are obvious over the
4 asserted combinations of Goossens and Drake, and these grounds fail for
5 multiple reasons, including that Petitioner failed to specifically explain the
6 combinations and motivation for several of the specific elements and
7 limitations. And as the POR explained, a POSITA actually would not have
8 been motivated to make the alleged combinations for reasons such as
9 redundancy and contradictory teachings in the references and that,
10 regardless, the combination would not meet the claims. The Reply then
11 came back with some additional theories, try to fix those gaps and problems.
12 But those Reply theories fail as we'll discuss.

13 Looking at Slide 11, Petitioner's demonstrative suggests that the
14 Goossens references are similar to the 449 specification as these Goossens
15 references are earlier papers by one of the 449 inventors. But importantly,
16 the 449 inventors described and claimed an invention in the 449 patent that
17 is not disclosed in the Goossens references. And indeed, the Petition as
18 shown here on Pages 16 through 17 and Page 51 recognizes that the
19 Goossens references essentially just teach an SoC with IP blocks connected
20 by an NoC and that the Goossens references do not provide any specific
21 details for the -- for the QoS management, for the IP seeking to
22 communicate via that NoC, for the challenged claims here is those details
23 that matter. So instead the Petition turns to Drake as the secondary reference
24 for the grounds. Now, Drake is not about a NoC or even SoC, rather Drake
25 discloses a -- an off-chip system for managing QoS for sending multimedia
26 transmissions in an existing prior art local network or LAN by attaching

1 components to that network. Now, the Petitioner looks to Drake because of
2 buzzwords, such as QoS and manager. And then the Petitioner cherry-picks
3 these two components here outlined on Slide 12, the QoS allocator 20 as the
4 claimed RM and the QoS requester manager 12, which I'll refer to as just the
5 QoS 12, just for clarity. And they rely on that as the CM.

6 Your Honor has raised questions regarding claim construction
7 for the CM, and I just take a moment to address those issues. First, there's
8 the issue of Section 12, Paragraph 6, means-plus-function construction for
9 the CM. The POR explains on Page 39 and 62 that the Petitioner does not
10 analyze whether any of the prior art meets the claimed CM under, that it
11 means-plus-function construction and indeed Petitioner's expert admitted
12 that he offered no opinions under Section 12, Paragraph 6. So if the Board
13 were to adopt the district court's Section 12, Paragraph 6 construction, the
14 grounds would fail.

15 JUDGE AMUNDSON: This is Judge Amundson. On that
16 point, Mr. Kohlhepp directed us to Page 36 in the Qualcomm Petition, and I
17 don't know if you have that or not, the Qualcomm --

18 MR. HOLT: Yes. The co-petition.

19 JUDGE AMUNDSON: And at least, if you -- well, let me
20 know when you get there.

21 MR. HOLT: I'm there now.

22 JUDGE AMUNDSON: Okay. So that first full paragraph, the
23 one that starts out "To the extent the claim communication manager must
24 have the ability to" blah, blah, blah. It looks like, at least to me on first
25 glance, that's an attempt to address the means-plus-function construction

1 adopted by the district court in the Texas Instruments litigation. But go
2 ahead, could you address that --

3 MR. HOLT: Yes, Your Honor.

4 JUDGE AMUNDSON: -- paragraph?

5 MR. HOLT: That is the theme with much of the Petition. This
6 paragraph is unclear as to what exactly it's arguing. And indeed, as
7 explained in the POR, Petitioner's expert admitted that he has not formed
8 any opinions under that construction. So it's our position that the Petitioner
9 has not met its burden to show that any of the prior art discloses the claimed
10 CM under the district court's 12(6) construction.

11 JUDGE AMUNDSON: Okay. So I have another question, sort
12 of more -- maybe more of a foundational question, and I didn't see, and
13 correct me if I'm wrong, anywhere in NST's briefing that NST took a
14 position in this proceeding as to whether the Board should construe the
15 communication manager as means-plus-function or not construe it as means-
16 plus-function. Did I miss something there?

17 MR. HOLT: Your Honor, no. Patent Owner disagrees with the
18 district court's means-plus-function construction and disputes that, but we
19 are not specifically advocating for the Board's adoption of that construction
20 here. We do not believe that adoption of that construction is necessary to
21 dispose of the grounds in this proceeding.

22 JUDGE AMUNDSON: All right. And so but -- all right. All
23 right. Then I had another question about a statement in the Sur-reply. Do
24 you have that there?

25 MR. HOLT: Yes, Your Honor. If you could just direct me to
26 the page number.

1 JUDGE AMUNDSON: Okay. Right. Let's go to Page 20 in
2 the Sur-reply. And then near the bottom of the page, there's a heading D and
3 a subheading 1 communication manager and limitations 6[A] slash 10[A].
4 And then the first sentence under that subheading begins, "The Reply does
5 not dispute that Drake does not disclose a CM under Patent Owner's
6 construction," and then the sentence continues. So my question is, what is
7 Patent Owner's construction as referenced in that sentence?

8 MR. HOLT: So Your Honor, that sentence refers to Patent
9 Owner's -- sorry, construction, that the claimed CM must be separate and
10 distinct from the first module.

11 JUDGE AMUNDSON: Oh, okay. And it -- and it -- and it
12 doesn't address means-plus-function. Is that it right?

13 MR. HOLT: Yes. That's correct, Your Honor.

14 JUDGE AMUNDSON: Okay. All right. Thank you.

15 MR. HOLT: While we're on the topic of claim constructions, I
16 want to point out one other thing that I believe came up during Petitioner's
17 argument and that is the Goossens for Ground 2, specifically. The Petition's
18 suggestion that Goossens2003's network interface, which I'll refer to as the
19 NI, whether that constitutes the claimed CM. So that argument, Your
20 Honor, is predicated on Patent Owners' proposed district court construction.
21 So one, that proposed district court construction was not adopted by the
22 Court there and two, Petitioner does not advocate for the Board here to adopt
23 that Patent Owner's proposed district court construction for the CM. So
24 based on that, the Petition's argument about Goossens2003's NI constituting
25 the claimed CM fails. And so the only alleged component in any of the prior
26 art still standing as potentially meeting the claimed CM is Drake's QoS 12.

1 So looking back to Drake, the secondary reference here, the two
2 components that Petitioner has cherry-picked to rely on as the RM and CM,
3 Drake's QoS allocator 20 here in Drake is attached to the prior art LAN and
4 its function is to receive the QoS request and determine if the available path
5 meets the request. In the QoS 12, on the other hand, it is within the source
6 station 10 attached to the prior art LAN and it works with another
7 component 13 to assemble and format the QoS request. Looking at Slide 13,
8 critically, the Petition here fails to specifically explain how these two
9 components of Drake would work with any of the existing components and
10 processes in Goossens, including where the QoS 12 would be located in
11 Goossens, such as the IP or the NoC.

12 The explanation you just heard from Petitioner about
13 interfacing and often teaching of decoupling computation communication,
14 you'll note that critically none of that was explained in the Petition with
15 respect to Drake or the combination. Now, although the claims themselves
16 do not recite a location on the chip for the claimed CM and RM, for
17 purposes of obviousness, combining these references for obviousness
18 requires an explanation of how the references would've been combined. So
19 how these two relied upon components of Drake would work with the
20 existing components and processes of Goossens. The callouts from the
21 Petition on Page 17 and 52 here on Slide 13. They show the only discussion
22 of these two relied upon components of Drake in the Petition's motivation to
23 combine section for Grounds 1 and 2. And as you can see here, there's no
24 mention of Goossens, much less how these two components from Drake
25 would work with Goossens. And similarly, these statements here failed to
26 explain any motivation for these two components specific to the claim

1 limitations. Instead, as shown on Slide 14, the Petition just relies on generic
2 motivations about implementing Drake's QoS management process as a
3 whole in Goossens. For example, on Page 17 of the Petition, it argues to
4 combine Goossens2002's disclosures with Drake's disclosures regarding a
5 system is not specific to Drake's components or specific to the claim
6 limitations.

7 JUDGE AMUNDSON: This is Judge Amundson. There was,
8 like, a momentary audio-video glitch. So we may not have heard, like, the
9 last 30 to 40 seconds of what you were saying.

10 MR. HOLT: Okay. Thank you for letting me know, and
11 apologies for any connectivity issues coming from my end. I was referring
12 to Slide 14 and the generic motivations shown on Page 17 and 18 of the
13 Petition, and essentially explaining how these motivations are not specific to
14 Drake's components or the claim limitations, and thus are not sufficiently
15 specific for motivation to combine. On Slide 15, you'll see instances where -
16 - several instances where the POR pointed out the Petition's insufficiencies
17 with respect to combining Drake's QoS 12 into Goossens. For example,
18 point -- we pointed out that the Petition's Claim 2 analysis for which the
19 Petition relies on Drake's QoS 12 just refers back to the Petition's motivation
20 of combined section, which only mentions Drake's QoS 12 once with no
21 explanation of how it refer -- how it would work in Goossens.

22 Also, we pointed out how Goossens2002 was cited only twice
23 in the Petition's entire analysis for Claim 6 and not at all for the Petition's
24 analysis for limitation 6B and 6D. The POR also explained the Petition's
25 insufficiencies with respect to incorporating Drake's QoS allocator 20 into
26 Goossens because the Petition does not explain where it would receive

1 requests from in the alleged combinations. For example, from Goossens' IP
2 or the alleged CM or elsewhere. In line with the Petition's ambiguity on this
3 issue and lack of detail as to how and why Drake's QoS 12 would be
4 implemented in Goossens. This is also demonstrated by Dr. Mowry's first
5 deposition where he merely testified that Drake's QoS 12 could go anywhere
6 in Goossens, so possibly the IP or the NoC or even elsewhere. The Petition's
7 showing fails under ActiveVideo shown in the first bullet on slide 18, which
8 says that obviousness requires that the petitioner both explains specifically
9 how the references would be combined and establish motivations
10 specifically tied to the claim limitations, not just a generic motivation, and
11 the next three bullets on slide 18 demonstrate this. Those are instances
12 where, like here, the petitioner failed to explain specifically how the
13 references would purportedly work together. For example, here, including
14 how Goossens' teachings would be modified to implement Drake's QoS 12.
15 The Petition, because it failed to do -- explain this combination and specific
16 motivation, fails for that reason alone.

17 I'm going to go to slide 26. So as previously discussed, the
18 Petition and Dr. Mowry's first deposition provided zero explanation of
19 where and how Drake's QoS 12 would be implemented in Goossens, and
20 based on the Board's finding that the Petition identifies the claimed first
21 module as Drake's source station 10, which contains the QoS 12, the
22 corresponding place for Drake's QoS 12 in Goossens would've been the IP,
23 but as Dr. Bagherzadeh explained, Goossens teaches away from including
24 such communication components as Drake's QoS 12 within Goossens' IP,
25 and the Reply later admitted that a POSITA would not put Drake's QoS 12
26 in Goossens' IP.

1 However, as the POR explained, a POSITA would also not take
2 Goossens, or excuse me, would not take the QoS 12 from Drake's source
3 station shown in red on slide 27 and put it in Goossens NoC shown in blue.
4 Drake's abstract, background, specification all make clear that Drake is
5 premised on attaching its QoS components to an existing prior art LAN as
6 shown by figure one and not changing the network. For example, the
7 background explains a need related to existing LANs, and the abstract says
8 that Drake's system is attached to the LAN.

9 Dr. Bagherzadeh explained as well that Drake is premised on
10 QoS components being attached to an existing network where the network
11 stays the same. He explained the bottom left in paragraph 179, that Drake
12 teaches that its QoS 12 is intentionally within source station 10. And then
13 on slide 28 on the top right, Dr. Bagherzadeh explained in paragraph 180
14 that Drake does not suggest that QoS 12 can go outside of the source station.
15 And then in paragraph 181, he explained implementing Drake's QoS 12
16 outside of Goossens' IP would constitute a modification of Drake's
17 teachings, and that the Petition presents no motivation for modifying Drake's
18 teachings in that way.

19 JUDGE AMUNDSON: This is Judge Amundson. But as a
20 follow-up on that, as I understand Qualcomm's position, they're saying that
21 the Drake's QoS requester manager 12, it functions both as a QoS
22 component and as an interface between the application 11 and the network,
23 and a logical place to put it would be at a network interface, which is not in
24 the network, but which is at the perimeter of the network. Could you
25 explain what's wrong with that theory?

1 MR. HOLT: Yes, Your Honor. One, as an initial matter,
2 actually I will refer us to Slide 61. So as an initial matter, this is not an
3 explanation or a theory that was included in the Petition. Counsel for
4 Petitioner pointed to paragraphs 184 and 185 of Dr. Mowry's initial original
5 declaration as discussing interfacing, but it's clear whenever you look at that
6 analysis and also the Petition that any discussion of a network interface or
7 interfacing for claims two or six in the Petition related to reliance on
8 Goossens2003 own network interface as the communication manager.
9 Those discussions do not relate to incorporating or implementing Drake's
10 QoS 12 in a network interface in Goossens as the CM. So as an initial
11 matter, this network interface theory as demonstrated on Slide 61 is a new
12 theory. That new theory is predicated, first, on the idea that Drake's QoS 12
13 itself is an NI component in Drake as shown in yellow on Slide 61. This
14 theory next says that, in the combination, Drake's QoS 12 would thus be
15 implemented in Goossens NI and that the motivation for this implementation
16 in Goossens NI is so that Drake's QoS 12 would allow Goossens IP to
17 communicate with its network shown in blue.

18 This theory, to your question, fails for multiple reasons. So the
19 Reply and Dr. Mowry's first, or excuse me, Dr. Mowry's reply declaration
20 tried to support this new theory by pointing to a single sentence in Dr.
21 Mowry's first deposition and arguing that he said that Goossens NI would be
22 the place to put Drake's QoS 12. But critically, that misquotes Dr. Mowry's
23 testimony because he actually said that the NI is merely a place to
24 potentially put it, which is consistent with the rest of his first deposition
25 testimony where he said that Drake's QoS 12 could go anywhere in
26 Goossens. This misquoting is shown on Slide 65 in the yellow highlighting.

1 In the orange highlighting on Slide 65, you'll see that the Reply and Dr.
2 Mowry's reply declaration also sought to disavow certain subsequent
3 answers that he gave in his first deposition claiming that he misunderstood
4 those questions.

5 Regardless of that single misquoted statement about the NI and
6 the disavowal of other certain testimony based on alleged misunderstanding,
7 Dr. Mowry repeatedly testified throughout the first deposition that Drake's
8 QoS 12 could go anywhere in either Goossens references, not that it would
9 go in Goossens NI, and this is after being asked repeatedly these questions
10 of where Drake's QoS 12 would go in Goossens, and also included
11 testimony on redirect. When asked by Petitioner's own counsel where
12 specifically to implement Drake's QoS 12 in Goossens, Dr. Mowry said it
13 could go anywhere on the chip as long as it's connected to the interconnect.

14 Thus, Dr. Mowry's first deposition is inconsistent and actually
15 undermines Petitioner's new NI theory, because for example, if Drake's QoS
16 12 can go anywhere in Goossens, this shows that it's not actually needed in
17 Goossens NI. Petitioner's NI theory is also inconsistent with Dr. Mowry's
18 second deposition. After the Patent Owner requested a motion to strike this
19 NI theory as new and improper, Dr. Mowry seemingly backtracked from this
20 theory in his second deposition by saying, for both grounds, that Goossens'
21 NI is only a place, a possible place, that Drake's QoS 12 could go and that
22 there are other possibilities where Drake's QoS 12 could go. This fails under
23 case law, such as Berk-Tek, which instructs that obviously this is not about
24 whether a POSITA could have, but rather would have been motivated, to
25 make the combination in the alleged manner.

1 I want to point out that Dr. Mowry's second deposition is also
2 internally inconsistent on this issue for ground two with respect to
3 Goossens2003, because as shown on the left on pages 82 and 89 of Dr.
4 Mowry's second deposition, in some answers, he said that Drake's QoS 12
5 would not be limited to Goossens2003 NI, but then as shown on the right on
6 Slide 68 on page 95, he, in other answers, said that Drake's QoS 12 would be
7 limited to Goossens2003 NI. So in sum, Dr. Mowry's positions have been
8 constantly changing on this issue, just as Petitioner's own theories have
9 evolved. He said in his first declaration and first deposition that Drake's
10 QoS 12 could go anywhere in Goossens. Then in the second declaration, he
11 said that it would go in Goossens NI. And then in his second deposition, he
12 said that it could go in several possible places in either Goossens reference,
13 and then he also said that it would go specifically in Goossens2003 NI, but
14 not in Goossens2002 NI.

15 These inconsistent and unclear positions undermine not only
16 the Petitioner's NI theory, but also Dr. Mowry's credibility on this issue as a
17 whole. Looking at Slide 70, the NI theory of Drake's QoS 12 would be
18 implemented in Goossens also fails because, as an initial matter, Drake's
19 QoS 12 is not an NI component in Drake itself. As you see on the top for
20 the NI theory, Dr. Mowry's second declaration argues in Paragraph 2 and
21 paragraph 114, and this is on Slide 70, he argued that Drake's QoS 12 would
22 be implemented in Goossens NI to assemble and format a request that could
23 be understood by the network, but that argument fails because, as Dr.
24 Mowry admits in his second deposition on page 61, QoS 12 assembles and
25 formats a request to be understood by the QoS allocator 20, not to be
26 understood by the network.

1 He was asked specifically, "The QoS requestor manager 12
2 assembles and formats the QoS request so that it can be understood by the
3 allocator station 20, correct?" And he answered, "So yes. That is the
4 intention is to -- is to assemble and format the request so that it can be
5 understood by the QoS allocator 20." So by this alone, Drake's QoS 12 is
6 not actually an NI component in Drake. Drake's QoS 12, which just
7 assembles and formats the QoS request, is not an NI component, and instead,
8 Drake's NI components as shown in yellow on Slide 71 are instead it's LAN
9 transport protocol stacks and MAC entities, which are highlighted in yellow,
10 such as components 15 and 16. And these are the NI components because
11 they format and launch the request packet on the packet-based LAN
12 network. This is shown by Drake's disclosure at the top of Slide 71.

13 You'll see on the top left that the only disclosures regarding
14 Drake's QoS 12 just say that it assembles and formats the request, whereas
15 on the right at 4:37, Drake discloses that components 15 and 16 handle a
16 packet. This is supported by Dr. Mowry's second deposition on the bottom
17 left. He admitted at pages 48 and 49 that Drake's LAN 17 is a packet-based
18 network, and he admitted on page 38, the bottom right of Slide 71, that the
19 components 15 and 16 allow QoS 12 to communicate over LAN 17.
20 Specifically, he was -- he was asked, "You would agree that the transport
21 protocol stack 15 and MAC 16 allow the QoS requestor manager 12 to
22 communicate with the LAN, correct?" He responded, "The role of the
23 transport protocol stack 15 and the MAC 16 is to facilitate that
24 communication over the LAN. Yes, that's true."

25 JUDGE AMUNDSON: This is Judge Amundson, but on that --
26 on that point, it seems to me that when the application 11 in the source

1 station 10 wants to, I don't know, stream audio or video, as Drake discloses
2 as a couple of examples, the application 11 sends something to the QoS
3 Requester Manager 12, and then the QoS Requester Manager 12 works with
4 the QoS Protocol Machine 13 to come up with a QoS request. And then the
5 Transport Protocol Stack 15 and the MAC Entity 16, they packetize the QoS
6 request into a packet that's launched onto the LAN. So it seems to me, in
7 that scenario, the QoS Requester Manager is, at some level, still interfacing
8 between the Application 11 and the LAN 17.

9 Could you address that?

10 MR. HOLT: Yes, Your Honor. Drake merely teaches, as you
11 pointed out, you're correct that the application 11 makes an internal message
12 request to components 12 and 13 that then format and assemble the QoS
13 request. However, Drake makes clear that the only components involved
14 with communicating that request across the network -- so the only network
15 interfacing components are the transport protocol stack and MAC 16. And
16 this is demonstrated by the fact that those components are the only standard
17 components in every station on the network. For example, Target Station 29
18 can communicate with the network without needing the -- without needing a
19 QoS Requester Manager like QoS 12.

20 As shown on Slide 62, Drake expressly discloses that these
21 components, such as 15 and 16, are standard parts in all stations, unlike the
22 QoS 12, and also further explains that it's -- the details of components 15
23 and 16 are determined by the network. It doesn't likewise disclose that the
24 details of the QoS Requester Manager are in any way determined by or
25 related to the LAN network itself.

1 JUDGE AMUNDSON: All right. I think I understand your
2 position.

3 MR. HOLT: Looking at the Slide 72, on that second point
4 regarding details being determined by the network, Dr. Mowry, in his
5 second deposition, on Page 37 and 38 in the middle of the slide, he admitted,
6 as shown on the left, that the fact that components 15 and 16, their details
7 are determined by the LAN itself. This allows components 15 and 16 to
8 communicate with the LAN. And then he said, on the right, in contrast, that
9 Drake does not similarly disclose that the details of QoS 12 are determined
10 by the LAN. This matches with his admission on Slide 71 that components
11 15 and 16 actually allow or permit or enable the QoS 12 to communicate
12 across the network.

13 If you look at the callout on the bottom of Slide 72 from Page --
14 from Paragraph 51 of Dr. Mowry's second declaration, you'll see that, based
15 on this, he defines a network interfacing component as enabling their host or
16 IP to communicate without requiring specific knowledge of the network. So
17 based on his own definition, the QoS 12, which is not based on the network
18 and its details aren't determined by the network, based on that alone, the
19 QoS 12 is not an NI component according to Dr. Mowry's own definition.

20 JUDGE AMUNDSON: This is Judge Amundson. I had -- like,
21 a -- maybe this is coming from left field, but is there anything in the record
22 as to what the transport protocol stack would correspond to in the seven --
23 the OSI seven layer model, what layers in the seven layer model or not?
24 Maybe that's not in the record, but that thought I'd ask.

25 MR. HOLT: This actually gets to a point, which is that,
26 because this networking interface theory was raised for the first time in the

1 Reply, this goes to the point of Patent Owner being -- by not having the
2 opportunity based on the belated presentation of the theory to insert our own
3 expert declaration on this issue.

4 But we do note that -- based on the record, that the transport
5 protocol stack and MAC being the network interface components in Drake
6 would correspond the corresponding network interface in Dawson's is part of
7 the network.

8 JUDGE AMUNDSON: All right, but it -- but in terms of a --
9 direct mapping, the record doesn't have anything on that? Am I correct on
10 that?

11 MR. HOLT: No. Based on the -- I believe you're correct on
12 that, Your Honor.

13 JUDGE AMUNDSON: What I was trying to understand is
14 with the Goossens2003 says that the network interfaces are used between --
15 to -- as to whatever -- translate between the transport layer and the network
16 layer. And so I was trying to understand if there was something comparable
17 in Drake, that concept, but I guess -- I guess not.

18 MR. HOLT: I -- we don't have anything in the record as far as
19 the comparable comparison with that. But, Your Honor, I would go to Slide
20 33 and this is the issue of redundancy. And this gets at the same problem,
21 which is the comparable element for Drake's QoS 12 in Goossens is
22 Goossens' IP. So the POR explained that one of the reasons there is no
23 motivation to implement Drake's QoS 12 in Goossens is because Drake's
24 QoS 12 and the function that the Petitioner alleges it would perform
25 would've been redundant of Goossens' existing IP and its function.

1 So this is looking at Slide 34. For Claim 2, the Petitioner
2 argues that Drake's QoS 12 be implemented in Goossens and constitutes the
3 claim's CM because it assembles a QoS request. However, Goossens' IP
4 already does this. That is, Goossens' IP already generates and issues a QoS
5 request as the Petitioner admits, on Pages 40 and 65, were able -- the
6 Petitioner admits that Goossens' IPs can set up and remove connections and
7 that IPs do so by making a service request and that the IPs issue requests for
8 connections. The redundancy between Drake's QoS 12 and Goossens' IP is
9 shown by the callout from the bottom of Slide 34, where Drake and
10 Goossens both explained that the QoS 12 and IP both make a QoS service
11 request.

12 For Claim 2, the Petitioner also asserted that Drake's QoS 12
13 allegedly sends the QoS request to Drake's QoS Allocator 20, the alleged
14 RM. But Dr. Bagherzadeh explained that Goossens' IP is already sending a
15 request that's similar to the request in Drake that gets sent to the QoS
16 Allocator 20. And that if fixed QoS Allocator 20 is implemented in
17 Goossens as the Petitioner alleges, then Goossens' IP would just send its
18 existing request to the QoS allocator directly.

19 On Slide 36, this is the entirety of the Petitioner's analysis for
20 6A. First, it asserts that both Goossens' IP and Drake's application 11 have
21 similar descriptions about a QoS request. And next it asserts that it includes
22 a further step of Drake's application 11 sending its QoS request to QoS 12
23 for subsequent transmission.

24 But critically, as you can see here, the Petitioner's 6A analysis
25 contains no motivation for incorporating this further step from Drake into
26 Goossens. That is, there is no motivation for why Goossens' IP should send

1 its existing request to Drake's QoS 12 as an intermediary as opposed to
2 sending its request directly to the RM.

3 For 6B and 6C, as shown on Slide 37, the Petitioner's analysis
4 for these limitations contains no discussion or explanation of why Drake's
5 QoS 12 should be included in Goossens for these limitations.

6 On Slide 38, the testimony from Dr. Bagherzadeh, he explained
7 that a POSITA would not have been motivated to implement Drake's QoS 12
8 in Goossens to meet these limitations 6A and 6C. He explained that if
9 Drake's QoS Allocator 20 is implemented in Goossens as the alleged RM,
10 then the QoS allocator 20 would just communicate directly with Goossens'
11 IP for requests and responses with no need for Drake's QoS 12 as an
12 intermediary such that including Drake's QoS 12 would be redundant and
13 unnecessary.

14 Based on the case law, here on Slide 39, when you have this
15 type of situation where the secondary references component is redundant of
16 the primary references component, there is no motivation.

17 The Reply fails to rebut this redundancy argument. First, with
18 respect to Claim 2, the Reply mischaracterizes and fails to actually Patent
19 Owner's redundancy argument. It mischaracterizes it as simply being that
20 two references address the same problem, whereas Patent Owner's actual
21 argument is more specific that Drake's QoS 12 component and its function is
22 the same as and redundant of Goossens' existing IP.

23 Now I'll explain the reason that the Reply tries to
24 mischaracterize the Patent Owner's redundancy argument like this is because
25 the Petitioner is trying to apply the *Intel* case that Petitioner's counsel earlier
26 discussed, but that case is inapposite for several reasons. The *Intel* case

1 involved replacing the cache component in a primary reference with a cache
2 component of a secondary reference based on those references in their
3 entirety addressing the same problem.

4 Here, on the other hand, the issue is adding Drake's QoS 12 to
5 Goossens, not replacing an existing component in Goossens. And the issue
6 is that the component to be added, Drake's QoS 12, performs the same
7 function as an existing component in Goossens, its IP, not that the references
8 in their entirety address the same problem. So *Intel* does not address the
9 issue here of adding a redundant component.

10 Also, Intel --

11 JUDGE AMUNDSON: This is Judge Amundson. On that
12 point, though, I -- I'm just trying to understand the situation here, but
13 whether there's complete redundancy in the two components or not. But --
14 and in -- I'm kind of talking while I'm thinking, but it seems to me that
15 Qualcomm argues that under NST's District Court claim construction for a
16 communication manager, Goossens2003 discloses that.

17 But if you got to go further and you got to -- and
18 communication manager is a means plus function limitation, well, then
19 Drake would disclose the communication manager. So they're not really
20 entirely duplicative, or maybe they are, maybe they aren't depending on
21 claim construction.

22 Could you -- could you kind of address that?

23 MR. HOLT: Yeah. So to your first point about Goossens2003
24 itself, its NI constituting the claimed CM, as I noted earlier, that argument is
25 predicated on Patent Owner's proposed District Court construction. That
26 construction was not adopted by the District Court. And also --

1 JUDGE AMUNDSON: Yeah. But will -- but let -- but we
2 don't have to file. We don't -- we don't have the same briefing that the
3 District Court has in the -- and in the briefing that we have here, I don't see
4 any arguments as to why the presumption against the means-plus-function
5 claiming has been overcome for the communication manager. But go ahead.

6 MR. HOLT: My other point is that, while their argument about
7 Goossens' NI itself constituting the claimed CM under Patent Owner's
8 proposed but not adopted claim -- District Court claim construction, they are
9 not actually advocating or have not argued that the Board should adopt that
10 construction. So they themselves have not argued for the predicate
11 construction of that argument.

12 JUDGE AMUNDSON: Well, yeah, that goes to -- I -- it seems
13 to me that both sides, it's not just Qualcomm, it's NST, too. Both sides
14 haven't argued one way or the other whether the Board should construe
15 communication manager as means-plus-function. That's a little of -- a bit of
16 a problem I'm having with the briefing, but anyway, and how, what we
17 should do with the means -- with what we should do with the
18 communication manager limitation. That's just, we'll have -- we'll have to
19 iron that out. But go ahead.

20 MR. HOLT: Your Honor, I want to refer back to the Petition's
21 argument for Claim 2, which is shown here on the top left of Slide 34.
22 Claim 2 is the claim that introduces the claimed CM. And you see here that
23 the Petition argues that Drake's QoS 12 constitutes the claimed CM
24 regardless of claim construction, because it assembles -- the requestor
25 assembles this QoS request. This goes again to the redundancy issue. The
26 Petition did not explain why you would include Drake's QoS 12 to assemble

1 and issue a request. If this was already being done, as the Petitioner admits
2 in other places of the petition, this was already being done by Goossens' IP
3 itself.

4 Going back to the Reply's attempted response, another point
5 regarding the *Intel* case. In *Intel*, the Federal Circuit also relied on the fact
6 that the cache -- the substitute component in the secondary reference, again,
7 here, we're not dealing with substitution but addition. But regardless, the
8 Federal Circuit also relied on the finding that the secondary -- the
9 substitution component in the secondary reference in *Intel* was a known and
10 established solution for the primary reference and its problem. Here,
11 Drake's QoS 12 was an off-chip component and not a known and established
12 solution for an on-chip network, such as Goossens, and the Petitioner has not
13 established, otherwise. So to the point, the *Intel* case has both
14 distinguishable facts, and Petitioner has not established motivation here
15 under *Intel's* test.

16 The Reply also tried to rebut Patent Owner's redundancy
17 argument by pointing to the mere existence of QoS 12 in Drake. You see
18 here from Reply page, Page 8, shown on Slide 40, "Petitioner argued that an
19 obvious way to do so would've been to implement Drake's QoS 12
20 functionality with a communication manager rather than modify Drake
21 further." But this fails under Berk-Tek because Berk-Tek says that the mere
22 fact that this possible arrangement existed in Drake does not provide
23 motivation for including it in Goossens. And also, this suggests that not
24 only Drake's QoS 12, but also other components of Drake, such as its
25 protocol machine 13, should have been implemented as well under this
26 reasoning, but Petitioner doesn't argue that.

1 The only actual alleged motivation that the Reply identifies
2 specific to Drake's QoS 12 is that the network interface theory that we
3 discussed partly earlier, which fails for multiple reasons, including that it's
4 undermined by Dr. Mowry's inconsistent testimony and because Drake's
5 QoS 12 is not actually a network interface component in Drake.

6 Also, I want to address the issues of motivation for Claims 6
7 and 10. The Reply for Claims 6 and 10 merely referenced its motivation
8 arguments above for different Claims 1 and 2. This is insufficient under
9 ActiveVideo, which tells us that the motivation has to be specific to the
10 claim limitations. And in Claims 6 and 10, obviously, require include
11 limitations not recited in Claims 1 and 2.

12 Also, similar to Slide 40, on Slide 41, you see that the Reply
13 argued on Page 15 that there was no motivation to change Drake's data path.
14 But this, again, mischaracterizes the motivation requirement and fails under
15 the Berk-Tek case, which says that, as stated before, the mere fact that this
16 possible arrangement existed in Drake is not motivation to include it in
17 Goossens.

18 I want to go back to the network interfacing theory, and we'll
19 start at Slide 73. So previously, we discussed how the QoS 12 in Drake is
20 not actually a network interfacing component in Drake because it's not based
21 on the details of the network, and it doesn't assemble or request anything that
22 can be understood by the network. Regardless of that, there is no motivation
23 for -- including Drake's QoS 12 in Goossens NI, as the Reply alleges.

24 So first, according to the Reply on Page 9, the alleged
25 interfacing that Drake's QoS 12 performs is to assemble a request.
26 Similarly, Dr. Mowry's reply declaration, Paragraph 28, identifies Drake's

1 QoS 12 as an NI component because it assembles and formats the requests.
2 But as we just discussed in Goossens, the IP already does this, as the Petition
3 at Page 40 admits. Goossens' IP already makes a service request, so there
4 would be no need for Drake's QoS 12 for that alleged interfacing purpose in
5 Goossens.

6 Secondly, on Slide 74, Dr. Mowry's reply declaration at
7 Paragraph 52 and the Reply itself at Page 9 argue that the alleged need for
8 interfacing in Goossens is to translate the IPs different protocols to be
9 understood by the network. Dr. Mowry's reply declaration at Paragraph 52
10 said that Goossens would have used a component such as Drake's QoS 12
11 requester manager 12 to assemble and format a request that could be under --
12 one second.

13 Oh, yeah. Sorry. Apologies, Your Honor.

14 As you can see from Dr. Mowry's reply declaration in
15 Paragraph 52, he's discussing using Drake's QoS requester manager 12 to
16 translate different protocols so that they can be understood by the network.
17 However, this is not what Drake's QoS 12 does. The only disclosures in
18 Drake about the QoS 12 are shown on the top right of Slide 54 -- 74. And
19 these just say that the QoS 12 assembles a request and formats a request.
20 This does not say that the QoS 12 can interface different protocols or with a
21 network.

22 JUDGE AMUNDSON: This is Judge Amundson. I have you
23 about 56 minutes into your initially requested 60 minutes.

24 MR. HOLT: Thank you. Thank you, Your Honor.

25 Also, as shown on Slide 75, the interfacing component and
26 function for which Drake's QoS 12 would allegedly be needed in Goossens

1 is actually already obvious in Goossens, according to Petitioner itself.
2 You'll see, for example, Dr. Mowry's reply declaration at Paragraph 52 said,
3 "The Goossens' NoC would have been expected to use a component such as
4 Drake's QoS 12," and that "a POSITA would not expect that Goossens2003's
5 network would have been able to perform its QoS functionality without a
6 component such as that." So based on Petitioner's own argument, the
7 component and functionality for which it alleges Drake QoS 12 would be
8 implemented in Goossens. That would've already been obvious in Goossens
9 to begin with.

10 I want to go to Slide 20 and discuss the first module issue. So
11 again, because the Petition gave no details about how Drake's QoS 12 would
12 work in Goossens, we tried to look to context, such as the first module issue,
13 to figure it out what component that the Petitioner identifies in Drake as
14 corresponding to Goossens IP for the claim. First module is important
15 because, first, as shown by these callouts from the Petition, Claims 2 and 6
16 recite the claimed first module underlined in black and its operation relative
17 to the claimed CM in red, as well as related processes, such as 6D.

18 And second, the Petition clearly relies on Drake for these
19 Claims 2 and 6, including relying on Drake's QoS 12 for the claimed CM in
20 particular. So because of that, to show that Drake meets these limitations in
21 Claims 2 and 6, the Petitioner must identify some component in Drake as
22 corresponding to the first module. And which component in Drake
23 corresponds to the first module affects whether or not these claim limitations
24 are met. Because the Petition contains some ambiguity, Patent Owner raised
25 this issue in preliminary briefing, and the Qualcomm Institution Decision
26 found that the Petition consistently identifies the first module as the source

1 station 10 as a whole and not application 11 specifically, therein, as the
2 Petitioner argued in their argument today and in the reply briefing.

3 We go to Slide 43. I want to point out that, under that scenario
4 where the source station of Drake corresponds to the first module in the
5 claims, the POR explained, and the Reply did not dispute, that in that
6 scenario, Drake's QoS 12 does not meet the claimed CM. This is because, as
7 the POR explained, the claim should be construed such that the first module,
8 and the CM are separate and distinct, and the Reply did not dispute that
9 claim construction. So if, as the Institution Decision found, the Petition
10 relies on Drake's source station 10 as corresponding to the first module, then
11 Drake's QoS 12, which is inside the source station 10, therefore cannot be
12 the claimed CM.

13 For 6A, this is similar. The POR explained, and the Petition --
14 the POR explained, and the Reply did not dispute, that if Drake's source
15 station 10 corresponds to the claimed first module, then this fails to meet 6A,
16 because Drake's source station 10 does not issue a request to QoS 12 within
17 source station 10.

18 On the other hand, however, as the Reply argued, and as
19 Petitioner's counsel argued today, that the application 11 corresponds to the
20 claimed first module. In that situation, the POR explained, and the Reply
21 did not dispute, that if Drake's application 11 corresponds to the first
22 module, then 6D is not met because the Petition's analysis for 6D, never
23 even mentions Drake's application 11, much less shows that there is a
24 connection established between Drake's application 11 and its target station
25 29, the alleged second module. Tellingly, Petitioner's demonstrative today
26 never addressed limitation 6D and 10E.

1 The Reply tries to get around these issues with the first module
2 by instead relying solely on Goossens' IPs and disclaiming any reliance on
3 Drake's application 11 or Source Station 10 for the first module. One, I want
4 to point out that this is inconsistent with the Petition itself, which relied on
5 Drake's Source Station 10 for the first module for claims two and six,
6 including as found by the Institution Decision. I also want to point out that
7 this -- that the Reply's reliance on only Goossens' IP for the claimed first
8 module for those claims two and six is also inconsistent with Dr. Mowry's
9 testimony. He testified in his first deposition at pages 173 and 174, as
10 shown on slide 49, that he agreed to mapping Drake's components to the first
11 module without qualification as to any certain claim limitations. And then in
12 his second deposition, he identified in Drake's application 11 as the claimed
13 first module for the combination as a whole without any qualification as to
14 certain claim limitations.

15 These inconsistencies fail under the Board's rules, which
16 require the Petition to specify where the first module element is found in the
17 prior art, and the cited cases here show that in such situations such as this,
18 where there are inconsistent arguments about what elements in the
19 combination constitute the first module, Petitioner failed to meet the Board's
20 rule. Regardless, as pointed out earlier, relying on only Goossens' IPs for
21 claims two and six fails because claims two and six recite these interactions
22 between the first module underlined in black and the CM underlined in red,
23 along with other related processes, such as limitation 6D. So the Petition
24 recognizing this relies on Drake for claims two and six, including for the
25 CM. So now to say that Drake meets claims two and six, the Petitioner has

1 to identify some element and rely on some element in Drake as constituting
2 the first module.

3 I also want to briefly address Petitioner's reliance on application
4 11 as the first module. The Reply at Page 3 argues that Drake's application
5 11 is the quote thing specifically making the service request. It's unclear
6 exactly what Petitioner means here, but since the claim element that issues
7 the request in the claims is the first module, the Reply here seems to be
8 suggesting that Drake's application 11 corresponds to the first module. And
9 if so, that contradicts the Reply's arguments for limitations 6A and 6D that
10 instead purport to rely only on Goossens' IP for the first module.

11 Regardless, the Reply's reliance on application 11 as
12 corresponding to the first module is inconsistent with the Petition, which,
13 again, clearly relied on the source station for the first module, and it's also
14 inconsistent with Dr. Mowry's testimony. He testified at least once in his
15 first deposition that he identified the first module as Drake's Source Station
16 10 as a whole, and then he also testified in his second deposition as shown
17 on slide 55 that he referred to Drake's Source Station 10 as a module in the
18 449 terminology, and then he also testified in pages 84 through 85, shown on
19 the right of slide 55, that he associated Goossens2003's IP module with
20 Drake's Source Station.

21 Also, this is inconsistent with the Petition's reliance on Target
22 Station 29 as a whole for the second module, as opposed to just the
23 application 26 within that target station. Lastly, I want to point that Dr.
24 Bagherzadeh himself explained that, both in his declaration and his
25 deposition, that a POSITA would have understood Goossens' IP to

1 correspond to Drake's Source Station 10 for the first module, not application
2 11. Your Honors, may I kindly ask for a time check?

3 JUDGE AMUNDSON: Yes. So I have you about at 67
4 minutes in.

5 MR. HOLT: Yes, Your Honors, unless you have any other
6 questions, I will reserve the remainder of my time for rebuttal.

7 JUDGE AMUNDSON: All right. Very well. Then, you
8 should have around eight minutes for the surrebuttal.

9 MR. HOLT: Thank you, Your Honors.

10 JUDGE AMUNDSON: All right. And so Mr. Kohlhepp, you
11 can begin when you're ready.

12 MR. KOHLHEPP: Okay. Thank you, Your Honors. I want to
13 start by just briefly revisiting this issue of the construction of the term
14 communication manager that we've talked about a few different times. And
15 I just want to make sure that, you know, you're clear and we're you know,
16 answering your questions fully on that. If you have a question, I'll answer it,
17 but I would like to speak on that.

18 JUDGE AMUNDSON: Go ahead.

19 MR. KOHLHEPP: Okay. So the Patent Owner confirmed,
20 both in its briefing and here today, that it is not advocating applying a
21 section 112 construction in this proceeding for the term communication
22 manager. And as Your Honor pointed out, there is a presumption against
23 means plus -- means plus function, because that term doesn't say the word
24 means. And Patent Owner does not dispute that under either its District
25 Court proposed construction, which is not a means plus function
26 construction or under just plain and ordinary meaning, that Drake discloses

1 what would be considered a communication manager. So there does not
2 seem to really be a dispute that needs resolving in this proceeding.

3 And the only other thing that I would point out about that is
4 Your Honor referred to the construction from the Eastern District of Texas
5 that did construe the term as a means plus function. I would just point out
6 that actually both Qualcomm and Patent Owner in their District Court case
7 disagree with that Eastern District of Texas construction. And I would cite
8 Your Honors to docket numbers 105 and 106 if you're interested in the
9 Qualcomm District Court case where Qualcomm explains that that
10 construction is incorrect because just the language in the specification in situ
11 is just more functional language, which is the problem in that situation. So
12 hopefully we're clear on that claim construction issue. Happy to answer any
13 more questions.

14 JUDGE AMUNDSON: I don't think I have any further on --
15 questions on that claim construction. Thank you.

16 MR. KOHLHEPP: Okay. Thank you. I would also like to
17 address the discussion from Patent Owner about cherry-picking and
18 purported redundancy and the focus on there's no need for the Drake CM
19 communication manager component in Goossens. And if I could point,
20 Your Honor, back to Slide 5, and given that you have it in front of you, I
21 probably won't screen share. Again, that gives the overview of the
22 combination that the Petition explained and the combination is
23 Goossens2003 combined with Drake's teaching regarding its quality of
24 service management system.

25 And the Patent Owner just kind of keeps ignoring that and
26 really focuses in on that communication manager component, the QoS in

1 red. But if you go to Slide 6, the Petition expressly explained, and again,
2 that's the highlighted language on the lower left-hand side of Slide 6, that
3 Goossens2003 does not describe a component or mechanism for managing
4 resource usage within the NoC or determining the availability of the
5 resources required for requested connection.

6 So one thing that Goossens2003 does not disclose, if we go
7 back to Slide 5, is that resource manager, the thing in blue, and the Patent
8 Owner just ignores that when it makes this redundancy argument. And I
9 think that is -- that's one thing that makes this case on all fours with the *Intel*
10 case, because here, the Petitioner has identified a reason, a need, for the
11 secondary reference teachings of a QoS management system. One of those
12 things expressly identified is, again, if we go to Slide 6, Goossens does not
13 describe a component or mechanism for managing resource usage. That's
14 what Drake gives you.

15 I do also want to talk briefly about, again, the purported
16 inconsistent testimony from Dr. Mowry about where that Drake
17 communication manager component would specifically go in Goossens
18 NoC. Again, as we pointed out, the claims don't require any specific
19 location for that communication manager. So there's no legal requirement as
20 a matter of disclosing the elements or motivation to show a motivation to put
21 it in any particular place. And on top of that, there is no inconsistency in Dr.
22 Mowry's testimony. What they point to as inconsistency is just a reflection
23 of the fact that there is more than one obvious place to implement the
24 communication manager in Goossens NoC, and Dr. Mowry very clearly and
25 consistently testified that, one, as he called it, natural place, another way to
26 phrase that is one very obvious place, is in Goossens' network interface.

1 Okay. I want to talk briefly about limitation 6D. The Patent
2 Owner's counsel argued that the Petition never points to Goossens for that
3 element, and that's just incorrect. I would point Your Honors to Page 67 of
4 the Petition, and there, for element 6D specifically, the Petition identifies
5 Goossens as disclosing the first and second modules, between which the
6 connection is established, as required for that element.

7 And the other point I think that maybe gets lost a little bit is that
8 claim six, including element 6D, is a dependent claim. It depends from
9 Claim 1. So by virtue of claim structure, the modules where the connection
10 is ultimately established between are already disclosed and discussed in
11 earlier claims. So when you get to the 6D, we've already discussed the
12 modules and then 6D itself does expressly at Page 67 discuss that as well.

13 I do want to also briefly talk about this idea that Dr. Mowry
14 was inconsistent in what he identified as the first module in Drake. Again,
15 what specifically constitutes a first module in Drake is not critical to the
16 obviousness challenge as our Reply brief points out. Goossens provides the
17 first module and the second module. But on top of that, Dr. Mowry has not
18 been inconsistent. He has consistently identified application 11 as the thing
19 in Goossens that specifically issues the request to the communication
20 manager and as the thing that is directly corresponding to the Goossens IP
21 module.

22 Now, the Patent Owner points to several places in the
23 deposition testimony where Dr. Mowry also refers to Drake's Source Station
24 as a module, which again, that's not inconsistent. That's just a recognition
25 that module is a broad term and certainly in Drake, from the perspective of
26 the LAN, when the LAN looks out, yeah, it sees the source station and the

1 target station, but Drake discloses more than that. Drake discloses what is
2 actually going on inside those things, and that's what Dr. Mowry explains.

3 Finally, I want to just -- counsel mentioned several times this
4 ActiveVideo case. I want to briefly distinguish that that case does not stand
5 for proposition that one must have a motivation specific to every claim
6 element. That's not the law, and that's not what ActiveVideo says at all. In
7 that case, that was just a case where the expert had simply said you could
8 combine any number of six references in many different ways. And on top
9 of that, there was no explanation of why you would do that or a need to do
10 that. Here, it's a very different situation. It's two references. There is a very
11 specific claim by claim explanation of how and why it would be combined.

12 And then finally, I wanted to just very briefly just talk about the
13 Berk-Tek case that Patent Owner mentioned, and this was a case Patent
14 Owner cited in its Sur-reply brief for the first time, and Patent Owner argued
15 that the mere existence of Drake as a possible quality of service system
16 arrangement out there in the prior art, but that's not enough to show
17 obviousness, and then cites the Berk-Tek case for that proposition. But here,
18 that's not the only thing that's in the evidence. The Petition specifically
19 identified a need, and in particular, it could be since 2003, it talks about how
20 one thing it does not have is a resource manager. It talks about resource
21 management, but it doesn't give the component to actually do that. It doesn't
22 explain how one would actually do that, and that's what Drake provides. So
23 you have the need and you also have the solution in Drake. So with that, I
24 will wrap up unless Your Honors have further questions.

1 JUDGE AMUNDSON: Nothing further from me. All right. It
2 looks like nothing further from my colleagues. And so all right. Let's go to
3 Mr. Holt.

4 MR. HOLT: So Your Honor, if you give me one second, I'll
5 just get the share going again. Okay. Your Honors, if you heard Petitioner's
6 counsel reference the combination and cherry-picking, and I want to direct
7 your attention to slide 80. Slide 80 is demonstration that the fact that the
8 combinations in this proceeding are based on hindsight and not proper
9 motivation. The reason that the Petitioner has a problem with identifying
10 specific motivation, for example, to include Drake's QoS 12 and Goossens is
11 because these combinations are based on hindsight and not a proper specific
12 motivation. The hindsight is evident from the Petition picking out Drake's
13 QoS 12 outlined in black here, but not QoS protocol machine 13 in red,
14 despite the fact that these two components are combined and work together
15 in assembling and formatting the request in Drake, which is what the
16 Petitioner relies on the QoS 12 for. In fact, as shown on slide 80, this is the
17 only disclosure of QoS 12 in Drake.

18 And in each of these disclosures, Drake says that these two
19 components are only ever described as working together, never
20 independently. Dr. Mowry himself admitted in his second deposition that
21 QoS protocol machine 13 is utilized in order to format the QoS request, and
22 that between the two components 12 and 13, they're able to assemble the
23 request, yet Petitioner only picked one of these two components, which
24 shows that the combination is based on hindsight.

25 I want to also address the issue of that Petitioner pointed to
26 their slides five and six for. They pointed to slides five and six in their

1 presentation on rebuttal as evidencing the fact that, or evidencing the
2 argument that you would need Drake's QoS 12 as the CM in Goossens in
3 order to communicate with the RM. They're saying that, oh, well you're
4 incorporating this RM into Goossens, and so you would also need to
5 incorporate the CM into Goossens or Drake's QoS 12 in order to talk with
6 that QoS allocator 20. However, as pointed out, this goes back to the
7 redundancy issue because Dr. Bagherzadeh explained that Goossens IP is
8 already sending a request similar to the request that the QoS Allocator 20
9 receives in Drake. So if Drake's QoS Allocator 20 is implemented in
10 Goossens as Petitioner alleges, then Goossens IP would just be able to send
11 its existing request to that QoS Allocator directly without any need for
12 incorporating Drake's QoS 12 to also generate and send the request as an
13 intermediary.

14 I want to speak briefly as well about the ActiveVideo case cited
15 on slide 18. Petitioner tries to distinguish the active video case, but the
16 ActiveVideo case is more similar than different to the situation here. In that
17 case, the expert provided an alleged motivation by arguing that the
18 motivation to combine would be because you wanted to build something
19 better. You wanted a system that would be more efficient and cheaper and
20 would have more features and such, and that is similar to the alleged
21 motivations here as shown on Slide 14, where Petitioners have merely
22 argued that you would combine Goossens 2002 with Drake to obtain the
23 benefits of Drake's solution, and that it would improve the performance and
24 efficiency of Goossens' NoCs. The ActiveVideo panel of the Federal Circuit
25 found that these types of generic motivations such as in this proceeding and
26 such as in the ActiveVideo case saying that this testimony is generic and

1 bears no relation to any specific combination of the prior elements, just as
2 the motivation in this IPR bears no relation specifically to Drake's QoS 12.

3 I want to also touch on 6D as Petitioner did. Petitioner -
4 limitation 6D is part of the group of claim six limitations that also recite the
5 claimed CM and related operations, and Petitioner relies on Drake for the
6 CM and other limitations of claim six, and reading the Petition clearly relies
7 on Drake for 6D, including for ground one and ground two. Indeed, the -- it
8 must because Petitioner realizes that it must identify a first module in Drake
9 to meet claim 6D, just as it must to meet all the limitations of claim six.

10 It's only now after the POR has pointed out the Petition's
11 deficiency on this issue that Petitioner is now trying to fall back and say that
12 it's relying only on Goossens' IP, even though Goossens' IP is not discussed
13 for Petitioner's 6D analysis. With that, unless Your Honors have questions
14 on any other issues we've covered or haven't covered, I would make one
15 suggestion, which is that if Your Honors would like, the parties could do
16 additional briefing on the claim construction issue to the extent you find it
17 helpful. But otherwise, as explained today, the Petition's showing has been
18 deficient on the combination and the motivation for specifically
19 incorporating Drake's QoS 12 into Goossens. And as far as the combination
20 meeting the limitations, we ask that the grounds be denied. And unless Your
21 Honors have any other questions, I'll seed the rest of my time.

22 JUDGE AMUNDSON: Well, just one follow up question,
23 maybe, whatever, I wasn't, you know, more clear with my questions, but am
24 I correct to understand that NST has not proposed a construction for
25 communication manager in this proceeding?

1 MR. HOLT: You're correct, Your Honor. Patent Owner has
2 not advocated for a specific construction of the communication manager in
3 this proceeding, except for the argument that the communication manager
4 must be separate and distinct from the first module.

5 JUDGE AMUNDSON: All right. Okay. And then let me -- I
6 wonder -- I'll see if my colleagues have any further questions.

7 JUDGE BOUDREAU: No further questions from me. Thank
8 you.

9 JUDGE AHMED: No questions from me.

10 JUDGE AMUNDSON: All right. And on the suggestion for
11 further briefing, I think there's been plenty of briefing, but the panel will
12 take that suggestion under advisement. And if we deem further briefing on a
13 claim construction issue warranted, we'll issue an order to that effect, but
14 thank you for the suggestion. And with that, that concludes our hearing, and
15 thank you to both parties for your time and your helpful presentations. The
16 case is submitted, and the hearing is adjourned.

17 (Whereupon, the above-entitled matter went off the record at
18 4:17 p.m.)

PETITIONER:

John Derek Vandenburg
CARLSON CASPERS VANDENBURGH & LINDQUIST, P.A.
dvandenburg@carlsoncaspers.com

Greg Arovas
Alan Rabinowitz
F. Mizzo
greg.arovas@kirkland.com
alan.rabinowitz@kirkland.com
chris.mizzo@kirkland.com

PATENT OWNER:

Jennifer Hayes
Angelo J. Christopher
Hang Zheng
Daniel S. Stringfield
NIXON PEABODY LLP
jenhayes@nixonpeabody.com
achristopher@nixonpeabody.com
hzheng@nixonpeabody.com
dstringfield@nixonpeabody.com