

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

PORTSMOUTH NETWORK CORP.,
Patent Owner.

IPR2024-00503
Patent 7,035,279 B2

Record of Oral Hearing
Held: May 5, 2025

Before ST. JOHN COURTENAY III, JUSTIN T. ARBES, and
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

APPEARANCES:

ON BEHALF OF THE PETITIONER:

THEODORE M. FOSTER, ESQ.
BRIAN C. KWOK, ESQ.
DAVID L. McCOMBS, ESQ.
EUGENE GORYUNOV, ESQ.
Haynes and Boone, LLP
2801 North Harwood Street
Suite 2300
Dallas, Texas 75201
(214) 651-5000
ipr.theo.foster@haynesboone.com
brian.kwok.ipr@haynesboone.com
davidmcombs.ipr@haynesboone.com
eugene.goryunov.ipr@haynesboone.com

ON BEHALF OF THE PATENT OWNER:

JAMES R. NUTTALL, ESQ.
KATHERINE D. CAPPAERT, ESQ.
HEATHER P. HILDRETH, ESQ.
Steptoe LLP
1330 Connecticut Avenue, Northwest
Washington, District of Columbia 20036
202-429-3000
jnuttall@steptoe.com
kcappaert@steptoe.com

The above-entitled matter came on for hearing on Monday, May 5, 2025, commencing at 1:00 p.m. EST, via video-conference.

P R O C E E D I N G S

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(1:00 p.m.)

JUDGE BOUDREAU: Good morning or afternoon, depending on where you're located. This is Judge Boudreau. And joining me are Judges Courtenay and Arbes. We're here for the oral arguments in case IPR2024-00503, which is Cisco Systems, Incorporated v. Portsmouth Network Corporation. Following the arguments in this case, we'll hear oral arguments in case IPR2024-00505, involving the same parties. Let's get started with party appearances.

Who do we have for the Petitioner?

MR. FOSTER: Good morning or good afternoon, Your Honors. This is Theodore Foster with Haynes Boone appearing for Petitioner, Cisco Systems.

JUDGE BOUDREAU: Thank you, Mr. Foster. Is there anyone else appearing on behalf of Petitioner today?

MR. FOSTER: No, Your Honor. I believe we have some attendees on the public listening line, but I will be the only presenter for the Petitioner in the first case today. Did you want --

JUDGE BOUDREAU: All right. Thank you.

MR. FOSTER: Did you want introductions for the second case?

JUDGE BOUDREAU: We'll do that at the beginning of the second case. I think we'll set up a separate transcript for that case.

MR. FOSTER: Okay.

1 JUDGE BOUDREAU: Thank you. And who is -- who's online
2 for Patent Owner?

3 MS. CAPPAERT: Kate Cappaert from Steptoe for Patent
4 Owner, Portsmouth Network Corp. And with me is my colleague, James
5 Winn, and a representative from Portsmouth, Richard Baker.

6 JUDGE BOUDREAU: Thank you. Welcome everyone. So
7 we set forth the procedure for today's hearing in our order that was entered
8 on April 3rd, which was Paper 20 in this case, granting the party's request
9 for oral argument. Before we begin, I'd like just to highlight a few items
10 from that order. First, we have copies of the entire record, including the
11 party's demonstrative exhibits, which were filed last week. And you are free
12 to share your screen during your presentation, or we can just follow along on
13 our own copies of the papers, whatever you prefer. Either way, we just ask
14 that you please refer to the demonstratives, papers, and exhibits clearly and
15 explicitly by slide or page number during your presentation to assist in the
16 preparation of an accurate transcript of the hearing.

17 Second, we'd like to remind you not to interrupt the other
18 party's presentation, but to hold any objections that you might have until it's
19 your turn to present. And you should also mute your microphone when you
20 aren't speaking to avoid any possible feedback, the like. If you encounter
21 any technical difficulties over the course of the hearing that you think might
22 undermine your ability to adequately represent your client, please let us
23 know immediately.

24 And finally, just a reminder that there is a public line, so you
25 should be aware of that if there are any confidential matters that are being
26 discussed. And with that, I think we're ready to begin.

1 As our hearing order has stated, each party will have a total of
2 one hour today to present arguments in each case, although judging from the
3 number of PowerPoint slides that we saw, it appears unlikely that you'll need
4 all of the time that's allotted. We'll take a brief break after the hearing in the
5 first case before we start the second case. And just in terms of procedure,
6 Patent -- Petitioner has the burden of proof as to whether the challenge
7 claims are unpatentable and will go first. Patent Owner will then present
8 opposition arguments. And to the extent Petitioner has reserved any time,
9 Petitioner will present rebuttal. If Petitioner does so and Patent Owner has
10 reserved time, then Patent Owner will present sur-rebuttal. With that, I think
11 we can begin, Mr. Foster. And if you could just let me know how much
12 time, if any, you'd like to reserve for rebuttal.

13 MR. FOSTER: I'd like to reserve 15 minutes, Your Honor,
14 please.

15 JUDGE BOUDREAU: Fifteen. Okay, thank you. And the
16 time right now is 10:06 a.m. Pacific time, 1:06 p.m. Eastern time. So with
17 that, you may proceed.

18 MR. FOSTER: Thank you, Your Honor. And may it please the
19 Board. Most of the arguments presented in the Patent Owner Response were
20 raised pre-institution and the Board's Decision on Institution correctly
21 rejected them. Now, with the full record developed, we encouraged the
22 Board to reaffirm its preliminary decision and find all claims unpatentable.
23 Before I turn to my first substantive point, I want to note that the Sur-reply
24 filed by Patent Owner raised multiple improper new arguments and issues
25 for the first time in this proceeding. Based on the Board's Trial Practice
26 Guide, we have not sought a formal motion to strike, based on the guidance

1 that the Board is more than capable of identifying improper new arguments
2 and disregarding them. However, if the panel would prefer to have formal
3 briefing on the issue, we would be happy to provide that.

4 Turning to Slide 3, there are just a few points that I plan to
5 address today, but of course I'm ready to answer any questions that the panel
6 may have. And the first point that I'd like to talk about is the obviousness of
7 combining the two references in Ground 1, Kovvali and Kalman. Turning to
8 Slide 4, I just want to first remind the panel regarding the level of ordinary
9 skill here, that by agreement of the parties, the POSITA skill level is
10 relatively high. The hypothetical POSITA would have a master's degree,
11 two years of relevant working experience, and would be familiar with topics
12 such as network allocations in a ring network. And so looking at Kovvali, a
13 portion of which is illustrated there on Slide 4, a POSITA of would've seen
14 that there -- Kovvali has a disclosure of an optical ring network with both
15 clockwise and counterclockwise directions for transmitting traffic.

16 Now, certainly, Kovvali's disclosure is mainly about a
17 unidirectional ring, but it does expressly contemplate bidirectional
18 communications in Column 8, beginning around Line 32. And so the Figure
19 4 shown in -- on Slide 4 and included in the Petition, which was prepared --
20 and this figure was annotated and prepared by our expert, it shows a
21 modification of Kovvali's original Figure 4 to include the bidirectional
22 communication capability that Kovvali suggests. For any node on that
23 network, as we can see, there would be a -- two ways that data could be
24 transmitted to another node. From Node B to Node C, data could be
25 transmitted either clockwise or counterclockwise, and the same is true for
26 any node on the network. In Kovvali, the network includes an arbiter,

1 shown at the top of the figure and labeled also as Node A, and that arbiter is
2 the node that makes bandwidth allocation decisions.

3 And so it would've been that arbiter that faced the decision in
4 allocating bandwidth, whether data for any particular communication from
5 one node to another, whether that data should be transmitted clockwise or
6 counterclockwise. Bidirectional optical rings like this were certainly known
7 in the art and, of course, naturally, that means that techniques had already
8 been developed in the prior art for making ring direction decisions like this.
9 And it would've been obvious for a POSITA to look to those known
10 techniques addressing the issue, and one very good example of that is the
11 Kalman reference. So turning to Slide 5, we have a portion of the Petition
12 explaining and discussing Kalman's substantive disclosure, including how
13 Kalman discloses the technique for selecting a preferred direction for traffic
14 traveling between two nodes, and it does this based on choosing the
15 direction with the lowest cost.

16 Now cost, as Kalman explains, can take into account a wide
17 variety of different considerations, including traffic congestion. And so
18 whether the choice is to put traffic -- put data onto the ring network in a
19 direction that already has some congestion, but where the traffic will fit, that
20 would be one way of optimizing a network because, as Dr. Mir explains on
21 the right side of Slide 5, it leaves more contiguous network bandwidth
22 available for some other connection in the future. On the other hand, it
23 might make sense and be obvious to put the traffic on a less congested
24 portion of the network for load-balancing purposes, for example. In either
25 case, Kalman is describing a straightforward way of deciding how traffic

1 should be routed on a bidirectional optical ring network, and that disclosure
2 fits precisely with the needs of Kovvali.

3 Turning to Slide 6, Patent Owner's response to the combination
4 of Kovvali and Kalman is to principally argue that the two networks
5 disclosed in the references are completely different. I think that is simply
6 untrue and shown on Slide 6, we have the bidirectional network of Kovvali
7 as annotated by Dr. Mir, and an annotated copy of Kalman's disclosed
8 bidirectional network, and we can see that they're in fact structured very
9 similarly. They're both optical ring networks with nodes interconnected by
10 optical links. Those links transit the network in both clockwise and
11 counterclockwise directions. Data transits the network by coming into a
12 node, being transmitted over links in the network, and then exiting another
13 node. So in terms of communication and network structure, we submit that
14 the two references are, in fact, quite similar and readily combinable.

15 If the panel has no questions about motivation to combine, I'll
16 move on to Slide 7 and discuss Patent Owner's primary argument on the
17 merits of the limitations in Claim 1. The Petition explained that local
18 dynamic channel data received at one of Kovvali's nodes is a request to use
19 resources because that local dynamic channel data needs to use network
20 resources on the optical ring, including bandwidth and the nodes' processing
21 power to be transported to its destination. I think the parties at least agree
22 that bandwidth is a network resource, and so transmitting traffic from --
23 received on a dynamic channel from one node to another node is going to
24 use a portion of the bandwidth available on Kovvali's network between those
25 nodes, either in the clockwise or in the counterclockwise direction. And so

1 traffic received on a dynamic channel at a node is indeed a request to use
2 resources of the network.

3 JUDGE BOUDREAU: Mr. Foster, this is Judge Boudreau. So
4 in Kovvali, where are those requests being received, in your mapping of
5 Kovvali onto the claim language?

6 MR. FOSTER: So the request would be received, for example,
7 at either Node B or Node C. We identified both Node B and Node C as
8 examples of the claimed first node in the network. And as you can see on
9 Slide 7, the dynamic channels are illustrated as bidirectional
10 communications both into and out of Nodes B and C.

11 JUDGE BOUDREAU: Doesn't Kovvali teach that it's the
12 arbiter node, Node A, rather than Node B or C that receives the requests to
13 carry the data between the nodes?

14 MR. FOSTER: So Kovvali's arbiter receives requests for
15 allocation of bandwidth, and so those requests are requests to allocate or de-
16 allocate bandwidth. But the claim language was notably amended in
17 prosecutions. We discussed this in the -- in the Petitioner Reply. The claim
18 language presented originally in prosecution referred to a request to allocate,
19 and that language was changed to recite a request to use network resources.
20 So the claimed request is no longer it -- and is not a request to allocate
21 resources, it's a request to use resources. And so yes, there are requests for
22 allocation and de-allocation that are received at the arbiter, but those are, as I
23 said, allocation requests. The claim language recites a request to use
24 resources. And so the packets received on the dynamic channels are what
25 we identified and what mapped to the claimed requests to use a portion of
26 the resources on the network.

1 JUDGE BOUDREAU: What is the significance of that change
2 from "allocate" to "use"?

3 MR. FOSTER: Well, I think it just -- it changes what the claim
4 language is directed to. I'm not going to speculate as to what the prosecuting
5 attorney had in mind, what their intent was, but it's enough for us, I think, to
6 see that the claim language reciting a request to use a resource is -- you
7 know, corresponds to data that wants to traverse the network and use a
8 portion of the available bandwidth and other processing and queuing and
9 scheduling resources of the network.

10 JUDGE BOUDREAU: Well, what I'm trying to get at is why
11 that amendment from "allocate" to "use" -- why that makes a difference in
12 determining whether it's Nodes B or C that receive the request that's recited
13 in Element 1.2 versus Node A, the arbiter, receiving requests.

14 MR. FOSTER: Sure. I think the importance of the amendment
15 is that Patent Owner's arguments are effectively reading the claim language
16 as if it still said, a request to allocate. And so that's why the Patent Owner is
17 very focused on the allocation and de-allocation messages that are received
18 at the arbiter.

19 But that is not what the Petition identified -- the arbiter was not
20 what the Petition identified as the first node and the allocation/de-allocation
21 messages are not what the Petition identified as a request to use a portion of
22 network resources. And so the Patent Owner's arguments are really directed
23 toward a different claim and a different petition argument, right? And so I
24 think, looking at the arguments raised and the claim language as it is written,
25 we have shown the obviousness of the claim language.

1 JUDGE ARBES: Well, Counsel, I -- this is Judge Arbes. I
2 guess I understood Patent Owner's position to be a little bit different in that
3 there is -- there is a distinction between a request and normal data flow, and
4 that you are maybe reading this a little bit too broadly to say that that data
5 itself can be the request.

6 Let me ask a few different questions about that. One, doesn't
7 the term "request" imply something that can be granted or denied? Do you
8 agree with that?

9 MR. FOSTER: I -- yes. At a high level, I think that that can be
10 true. And as we discussed in the Petitioner Reply, the data received on a
11 dynamic channel that seeks to be transported across the network and to use
12 its resources -- it can be denied access, right? It -- Kalman talks about
13 dropping packets, and Kovvali also talks about this traffic being best effort
14 traffic. Best effort is -- as we know, is traffic that does not have a
15 guaranteed reservation or a guaranteed allocation of bandwidth. It may or
16 may not reach its destination. And so the possibility of dropping packets on
17 the dynamic channel, I think, is what would correspond to a denial of the
18 request to be transported across the network.

19 JUDGE ARBES: So not sending along the data then is a -- is a
20 denial of the request in your view?

21 MR. FOSTER: That's correct.

22 JUDGE ARBES: Okay. Can you respond as well, the best
23 effort argument that you had made in your Reply -- I did not see that in the --
24 in the Petition. Was that -- was that argument made in the Petition, and, if
25 not, why was that proper to bring in, in the Reply?

1 MR. FOSTER: Well, so I don't recall. I don't believe the
2 Petition used the phrase "best effort," but the Petition was very clear in our
3 identification of what we believed the request -- the claimed request was.
4 And looking at Slide 7, we have highlighted language from the Petition
5 where we have identified that the receipt of data on the local dynamic
6 channels -- that is a request for the node to process and multiplex data onto a
7 portion of the network resources. And so that is what we said corresponded
8 to the claim receiving a request at the first node to use a portion of the
9 resources.

10 So the phrase "best effort" was not in the Petition, but, you
11 know, we were responding to Patent Owner's arguments that seemed to
12 indicate or attempted to construe this claim language of a request to use
13 resources to correspond, instead, to claim language that would be more
14 appropriate if it still said, a request to allocate resources.

15 And so we were just making the point -- making the point, in
16 response to the Patent Owner's argument, that the data being transmitted
17 here, right -- it's bursty, dynamic, variable bandwidth, variable data rate
18 traffic that is going to be transmitted as best the network can, but it does not
19 have a formal reservation. It's not guaranteed to reach its destination. And
20 in this technology space, "best effort" is commonly used to describe that
21 kind of traffic.

22 JUDGE ARBES: Okay. If we can talk about the claim
23 language, as well, because I understand Patent Owner to be, again, drawing
24 a distinction between the request and the data flow. So that in -- limitation
25 1.2 is receiving a request at the first node to use a portion of the resources

1 and that to -- so as to carry the data flow, and then, later on, in Step 1.3, is
2 actually directing the data flow.

3 So is there not a distinction in the claim itself between making a
4 request and then data being sent?

5 MR. FOSTER: Yes. There is a distinction, but it need not be a
6 very significant one, right? The -- receiving a request can be receiving a
7 packet that just needs to be transported across the network if there is
8 available bandwidth. Actually transmitting that packet across the network is
9 not the request. It's fulfilling that request. It's actually, you know, sending
10 the packet along.

11 And so that would be, you know -- you know, in terms of the
12 claim language, looking at that first if clause, right -- if there are resources
13 available and sufficient already allocated directing the data flow, right, that's
14 what Kovvali describes. If the node already has, from the spare bandwidth -
15 - because the allocations are quantized in these columns. If it already has
16 room in the -- in its columns that have been allocated, but there is no data,
17 you know, scheduled to be transmitted using those columns, then the node
18 can use that prior allocation to transmit the data without seeking further
19 allocation.

20 And that's the heart of what the claim language is about, right,
21 is there is a free allocation from Step 1.1, right, allocating quanta to each of
22 the nodes and doing that before there is any traffic that might need to use
23 those quanta.

24 JUDGE ARBES: But that has to be, according to the language
25 of the claim in Limitation 1.3, in response to the request. And you seem to
26 be reading this as just in response to receiving the data packet rather than an

1 explicit request. I guess I'm trying to figure out, is there -- is there any type
2 of incoming data that would not be a request in your view? Obviously, data
3 might not reach its destination for an -- for a number of reasons, and it
4 would make its best effort to pass along the data. But it may not -- may not
5 reach that.

6 What kind of data would not be a request, in your view?

7 MR. FOSTER: I haven't really thought about what would not
8 meet the claim limitation. You know, the claim recites a request to use a
9 portion of the resources. I think that language certainly covers a packet that
10 wants to be transported across the network. The -- you know, the prior art
11 here included techniques like the RSVP protocol for explicit bandwidth
12 reservations. And that, I believe, is discussed in the background of the 279
13 Patent, and it's distinguished, right?

14 That's the prior art way, where it -- before any substantive
15 communication can happen, there has to be a formal reservation protocol
16 and a formal reservation of bandwidth made. And the distinction over that
17 kind of prior art that the 279 was seeking to draw is that there is going to be
18 just, you know, bandwidth allocated but without a guaranteed purpose,
19 right? There is -- there is loose bandwidth available for the nodes to use, as
20 they wish, to transmit packets on these bursty dynamic data type channels
21 that have variable data flows. And so I'm --

22 JUDGE COURTENAY: Mr. Foster?

23 MR. FOSTER: Yeah.

24 JUDGE COURTENAY: This is Judge Courtenay. I -- I'm
25 looking at 1.2, receiving request at the first node. Use a portion of the
26 resources so as to carry the data flow. I see that as a statement of -- literally,

1 a statement of intended use in the body of the claim. But the use is actually
2 defined as carrying data flow. And according to the plain meaning, as I
3 understand this claim, allocating is just -- 1.1, allocating a respective number
4 of quanta. You're just allocating bandwidth for future use.

5 Is that how you understand the claim?

6 MR. FOSTER: In terms of the --

7 JUDGE COURTENAY: Allocation is equivalent to reserving,
8 as you alluded to just a moment ago before I interrupted you. Yes or no?

9 MR. FOSTER: As a -- as a general thing, I mean, I -- I'm not
10 intending to take a formal claim construction position here, but, I think, in
11 general, yes. The idea of allocating is that means that there is bandwidth set
12 aside and reserved for some purpose. And at the point of performing Step
13 1.1, that allocation is for the transport of future data packets that we don't
14 know who or what they may be yet, right?

15 They're -- it's -- the allocation is not made, right? The
16 allocating in Step 1.1 is not in response to any request. It's just the -- you
17 know, there is a -- there is an allocation made by the network to each node
18 of, here is bandwidth to do with what you will. And later on --

19 JUDGE COURTENAY: Okay. I do understand your claim
20 construction there, even though you don't really want to do claim
21 construction. But I think, speaking for myself, I agree with you. Not
22 speaking for the panel.

23 MR. FOSTER: Thank you. I'm happy to answer more
24 questions about --

25 JUDGE BOUDREAU: This is Judge Boudreau again. So it --
26 Kovvali repeatedly refers to requests. And as far as I can tell, every time

1 that it mentions a request, it's a request being sent from a client node to the
2 arbiter. I'm looking, for example, at Column 9, lines approximately 6 to 11:
3 "Requests to assign dynamic channels for communication between particular
4 nodes sent from a client node to the arbiter. The arbiter responds to the
5 request by assigning dynamic channels to particular nodes." There are
6 similar disclosures later on in Column 9, Column 10, and various other
7 places.

8 Is there any support that you can cite for any client node other
9 than the arbiter receiving a request?

10 MR. FOSTER: So Kovvali uses "request," I would submit, in a
11 different way than the claim language, as you pointed out. I'm also looking
12 at Kovvali, the first paragraph of Column 9, right? The requests there are
13 requests to assign dynamic channels, right? It's a request for an assignment
14 of a channel. That sounds to me like a reservation of bandwidth or an
15 allocation, you know, the sorts of language we were just using before.

16 And so those are not requests seeking to use already allocated
17 bandwidth. Those are requests for the allocation or the assignment of
18 bandwidth. And that's the distinction that, I think, needs to be carefully
19 considered between the disclosure of Kovvali and how it's using the word
20 "request" And the way the claim language here is using the word "request"
21 to refer to a request to use bandwidth or a request -- as actually recited in the
22 claim, a request to use a portion of network resources.

23 In terms of -- Judge Boudreau, your question to me, I believe,
24 was -- is there a disclosure that we would point to to support interpreting
25 Kovvali's request is corresponding to the claimed request?

1 JUDGE BOUDREAU: Yes, that's right. Yeah. A request to
2 use.

3 MR. FOSTER: Yeah. We did not map Kovvali's request to
4 assign dynamic channels to the claimed request to use bandwidth or request
5 to use a portion of network resources. And so --

6 JUDGE BOUDREAU: I understand that. I -- I'm trying to
7 figure out what you did map to the limitation.

8 MR. FOSTER: We mapped it to the receipt of data on one of
9 Kovvali's local dynamic channels. So if we look again at the Petition around
10 Page -- I think it's page 33, IP, Page 35, it's Slide 7. We have a portion of it
11 quoted. And the Petition identified the receipt of data on local dynamic
12 channels as the request. And then we further clarified that Patent Owner
13 appeared to fully understand our position and our meaning, in their Patent
14 Owner responses. And we reiterated and further explained, this is our
15 mapping, right? It's the receipt of this dynamic bursty data that does not
16 have its own previously allocated bandwidth for its transmission, but it seeks
17 to transit the network. Those packets on the dynamic channel, those are the
18 requests to use a portion of network resources because they're seeking to use
19 network bandwidth to be transmitted across the network. And we clarified
20 that in the Petitioner Reply as well.

21 JUDGE BOUDREAU: So your position is that the receipt of
22 data constitutes the request. And what I'm trying to understand is whether
23 there's any support in Kovvali for interpreting it that way? Or in Kalman for
24 that matter?

25 MR. FOSTER: Sure. Well, I mean, the -- I guess the support
26 would be how Kovvali then handles those packets. They -- if there is

1 available bandwidth, they do get transported across the network, right? And
2 so it confirms that the dynamic channel data was asking -- was seeking to
3 use bandwidth to be transported across the network. I can -- I can look again
4 at our Petition and maybe have a more fulsome answer for you on rebuttal,
5 Judge Boudreau.

6 JUDGE BOUDREAU: Okay. I think I understand your
7 position. All right.

8 MR. FOSTER: Thank you.

9 Turning then if we're ready to move on to the next topic.
10 Turning to Slide 8, the last point I want to make in case in chief here,
11 regards the claim language of predetermined quanta. And I think it's pretty
12 clear that Kovvali is allocating bandwidth in terms of quanta. Looking at
13 Slide 8 and the portions of the Petition and of Kovvali that we identified,
14 right? Kovvali discloses the allocations are made in terms of columns, of a -
15 - of a dynamic frame. Each column has nine rows, each row and column,
16 right? Which each cell is an eight bit byte. So one column would be nine
17 bytes in size or 72 bits.

18 We explained that in the Petition and those are the quanta.
19 They are predetermined because the size of those quanta, right? The size of
20 the column is disclosed in Kovvali itself, right? And so that's a network
21 design decision made in the disclosure itself. Well, before any network is
22 constructed. And so it's predetermined under any construction of
23 predetermined we would submit.

24 JUDGE COURTENAY: This is Judge Courtenay again, Mr.
25 Foster. I just see three bits in that request column of Kovvali, in your Slide

1 8. I -- three bits. They count from zero to seven, in base 10. You convert
2 base --

3 MR. FOSTER: Yes.

4 JUDGE COURTENAY: -- two to base 10?

5 MR. FOSTER: Yes. So that first column on Slide 8 in
6 Kovvali, the REQ column in the disclosure, that is the bit pattern that
7 Kovvali discloses for the communications between nodes and its arbiter, for
8 making these allocation and allocation changes to the -- to the bandwidth.
9 And so those are not the bits that are used for data communication across the
10 network. Those are the signaling that's --

11 JUDGE COURTENAY: Oh, okay. I understand that. So what
12 that teaches, basically, we have eight different possibilities of request for
13 bandwidth?

14 MR. FOSTER: Yes. That's correct.

15 JUDGE COURTENAY: So you're reading the quanta and 1.1
16 on those eight different possibilities, that's the quanta.

17 JUDGE BOUDREAU: Well, would the quanta be the -- be the
18 one, three, six or 10, that's either being allocated or deallocated?

19 MR. FOSTER: Right. I'm just looking at the claim language,
20 the -- it -- the phrase predetermined quantum comes up at the end of Claim 1
21 and the claim language is, "Increasing the allocation of the resources to the
22 first node on the selected path by a predetermined quantum."

23 And so that predetermined quantum would be the number of
24 columns that were in requested. And so it wouldn't be the bit values in the
25 REQ column, it would be the number of columns actually allocated. So it
26 would be, yes, the one, three, six or 10 additional columns.

1 JUDGE COURTENAY: Okay. Okay. I -- in your slide, you
2 know, a column is the smallest discreet unit of bandwidth that can be
3 allocated to a dynamic channel. So I see that. Yes, Right. So there are eight
4 of them total, zero to seven; right?

5 MR. FOSTER: I'm sorry. Judge Courtenay, when you say
6 there are eight of them total, eight of what? I'm --

7 JUDGE COURTENAY: Well, if you have a -- you have a --
8 Kovvali has two columns, request and requested bandwidth and 000, you
9 know, three zero bits is no bandwidth is required. And the maximum is 111,
10 and that's allocate 10 additional columns. So that would be the maximum
11 requested bandwidth, right? So we just have eight different increments or
12 eight discrete units, if you will, of bandwidth.

13 MR. FOSTER: Yes. And so the allocations here are
14 incremental.

15 JUDGE COURTENAY: Okay. And those are the increments,
16 right? That -- that's what I'm referring to.

17 MR. FOSTER: Yes. These are the increments that Kovvali
18 discloses are available, right? The number of columns, additional columns
19 or fewer columns to change the allocation. And both the -- you know, in
20 terms of the quanta of the claim, right? The quanta is quantizing allocation
21 amounts, right? And so it's in -- they distinguish this in prosecution from the
22 idea of reserving the exact amount of bandwidth requested or required for a
23 communication.

24 The idea here is that there's always because it's quantized, the
25 need will not precisely match the allocation. And so there's leftover and it's
26 that leftover that then, you know, can be used on an ad hoc, on demand basis

1 for other unscheduled things, for example, right? That's -- that, you know,
2 fitting --

3 JUDGE COURTENAY: Okay.

4 MR. FOSTER: -- back to the idea from the 279 Patent of
5 having allocations of bandwidth, that the nodes themselves get to decide
6 what to do with and can use those for dynamic data transmission.

7 JUDGE COURTENAY: Thank you very much

8 MR. FOSTER: Good.

9 JUDGE ARBES: Counsel, can you -- can I ask one last
10 question about the prosecution history that you referred to, specifically
11 Exhibit 1002, Page 112? I see your point that the claim originally said,
12 "receiving a request to allocate resources." And that was amended to add an
13 additional step before that of allocating a respective number of quanta. And
14 then that, what became Limitation 1.2, became, "teceiving a request at the
15 first node to use a portion of the resources."

16 I see your point that that is different from a request to allocate --
17 a request to allocate is different from a request to use. But how does that
18 support your position that just receiving the data meets that limitation? I
19 mean, the limitation still says, "receiving a request to use resources so as to
20 carry the data flow."

21 MR. FOSTER: Right.

22 JUDGE ARBES: It's not a request to allocate because the
23 resources have already been -- at least a number of quanta of the resources
24 have already been allocated, but it's still a request to use. It doesn't just say
25 receiving data; right?

1 MR. FOSTER: I -- it does not say receiving data. You are
2 correct, Your Honor. But the question is, is receiving data that needs to use
3 resources to transit the network, a request to use those resources?

4 And our position is that it is. Because if the resources don't get
5 used, the traffic -- the data is not getting there. And so it's, I think we said
6 we used the word implicitly -- at a minimum implicitly in our Petitioner
7 response. But I don't know how to interpret this language to say, one,
8 consistent with the adjustments they made to the scope and direction of the
9 claim in prosecution. I don't know how to interpret this claim language in
10 light of the prosecution history to say that data seeking to use resources to
11 transit the network is not a request to use those resources.

12 JUDGE ARBES: And neither -- just to confirm, neither party
13 has offered a -- an interpretation of the term request or any of the language
14 in that limitation?

15 MR. FOSTER: I don't believe either party has offered a
16 construction for request. That's correct. Yes.

17 JUDGE BOUDREAU: And just to clarify one additional point,
18 would you -- is it Petitioner's position that the assignment of dynamic
19 channels is a form of allocation, as opposed to a request to use?

20 MR. FOSTER: Yes. The dynamic -- the bandwidth that's made
21 available to the nodes for handling the dynamic channels, that is in
22 allocation.

23 JUDGE BOUDREAU: Okay. Thank you. Well, it looks like
24 you have about 23 minutes left if you want to reserve the rest of your time.

25 MR. FOSTER: Very good. Thank you --

26 JUDGE BOUDREAU: Unless anyone --

1 MR. FOSTER: -- Your Honor.

2 JUDGE BOUDREAU: -- has any other questions.

3 MR. FOSTER: Thank you.

4 MS. CAPPAERT: Good morning and afternoon, Your Honors.
5 This is Kate Cappaert, counsel for Patent Owner, Portsmouth.

6 I'll start -- I'm going to jump a little bit out of order in my slides
7 to start with kind of the point that we were just talking about -- that you were
8 just talking about with counsel for Petitioner. Which is that it is Patent
9 Owner's position that the combination of Kovvali and Kalman does not
10 disclose receiving a request at the first node to use a portion of the resources,
11 as to carry the data flow between the first and second nodes.

12 And looking at Slide 10, both Claims 1 and claim 15, both
13 independent claims, do recite that receiving a request at the first node. And
14 as it is Patent Owner's position that receiving a request and the request is an
15 active item. A request is something that -- as one of Your Honors
16 recognized could be denied or it could be granted. So in common parlance,
17 or in the plain and ordinary meaning, you ask a request -- you request
18 permission to do something, for example. And here, the request is
19 requesting whether or not there is -- or sufficient resources that can be used
20 for a data flow.

21 So there is an actual request that needs to be present to
22 determine kind of a gating step, whether or not the data can or cannot flow.
23 Which is why you receive the request in step -- in Claim Limitation 1.2.
24 And then in Claim Limitation 1.3, there's, in response to the request further
25 events happen. But you need that actual request and it's Patent Owner's
26 position that Petitioner tries to gloss over that request. And really just

1 ignores the word request in general and just says that the receipt of data is a
2 request.

3 And Patent Owner, respectfully, submits that receiving
4 something is not actually requesting something. I can receive a letter in the
5 mail, but if it doesn't ask me to do anything, it's not requesting that I actually
6 comply. For example, if I receive a birthday card, I don't necessarily have to
7 do anything with it. If I receive jury summons, it's a request that I appear for
8 jury duty. So there's a difference between what receipt and actual requesting
9 information and Patent Owner respectfully submits that Petitioner's -- what
10 Petitioner is pointing to as the receipt of data is not actually a request as
11 required by the claim limitations.

12 For example, Petitioner now points to the best effort traffic and
13 tries to argue that, well, best effort traffic doesn't always go through. So the
14 fact that it doesn't always go through means that there's some sort of use or
15 situation where requests may be being -- or where there's a denial of some
16 sort. But there's no request. Best effort traffic is just based on network
17 hardware capacity and network traffic load. So there is no actual request or
18 determination that's made actively to determine whether or not the data will
19 flow. And so we think that that is the difference between what Petitioner is
20 pointing to and what is actually required by the claim limitation with respect
21 to request. Looking at slide 11 --

22 JUDGE ARBES: Counsel, before you -- before you do that,
23 can you -- can you point us to the best support in the specification of the 279
24 patent for that reading of the word "request"? That it does have to be
25 something active that can, for instance, be granted or denied? What is the
26 best support for that?

1 MS. CAPPAERT: Sure. Give me one moment and I can do
2 that. I think in general, most of the patent itself, I would argue, the request,
3 what it is talking about, it is -- we're talking about kind of an active request
4 that is being made for the use of bandwidth. So for the use of resources in a
5 network. And I -- but I can find, if you give me one moment, the exact --
6 one second.

7 I think -- just looking. I mean, I think that with respect to
8 Figure 3, there's the discussion of the node requesting the resource. And if
9 you look in the specification in terms of just general discussion, it's talking
10 about actual request steps. So it's in column 6, starting at line 11, "When a
11 node receives a request from one of its clients to send data to another node,
12 the node first checks to determine whether it has sufficient resources already
13 allocated in order to service the request."

14 I would submit that though that discussion and that -- the -- in
15 column 6 talking about the request is talking about the actual -- it's not just
16 the receipt of data that's being discussed. It's talking about a node receiving
17 an actual request from a client to send data to the other node and performing
18 a step determine whether or not that data can be sent.

19 And so I think that that discussion and really the flow chart in
20 column 3, talking about the -- how the requests are made and how the data
21 flows is an example of the request being what is being claimed in Claim 1 of
22 the 279 patent.

23 JUDGE ARBES: Well, I see -- couple questions. First of all,
24 that is a request that takes place after the allocation, right? So in -- if we
25 were to tie that to the language of Claim 1, the allocation takes place first,

1 then there is a request to use a portion of the resources. And this -- that's
2 what this portion of column 6 is referring to, in your opinion?

3 MS. CAPPAERT: Yes. It's referring to this -- you have the
4 dispatcher, the dispatcher knows your topology and in column 6, what's
5 being discussed is you have already allocated resources and that's talked
6 about in line 14, if the allocated resources are inadequate. So the allocation
7 has already occurred of resources.

8 Then the request is made about whether the data can be sent and
9 that, once that request is made, the node checks to determine whether it has
10 those sufficient resources that were already allocated and then makes a
11 determination as to whether the data can flow or not.

12 Q Okay. I see your point. I see your point there. I don't really
13 see much language there describing what the request is or what it -- what it
14 needs to be. Can you give a -- maybe a few examples of what a -- what a
15 request would be in your view? Can it just be setting a bit, setting a bit flag
16 in the -- in the incoming data?

17 A I think so. I think it's sending information, sending a flag,
18 sending some sort of notification or message, a bit to the client saying, hey,
19 we're going to -- like, this is going to be sent through. And then making a
20 determination as to whether or not there's sufficient resources to handle what
21 is going to be sent through or whether additional resources need to be
22 allocated.

23 JUDGE ARBES: But it has to be something distinct from the
24 data itself, in your view?

25 MS. CAPPAERT: Yes. In -- it is Patent Owner's view that it
26 has to be something, just sending the data is not sufficient. It has to be a

1 request that the data be a gating request, to some extent. That the data -- an
2 assessment is made before determining whether or not the data can flow or
3 not.

4 JUDGE BOUDREAU: Counsel, this is Judge Boudreau. In the
5 Patent Owner Response, you argued that it's clear that the dynamic channels
6 are assigned prior to traffic flowing on them, and that the -- if a node is
7 processing data, it stands to reason that it's already been assigned by the
8 arbiter in Kovvali to process that dynamic channel. How do you reconcile
9 that with the fact that the claim requires a separate step of allocating prior to
10 receiving the request?

11 MS. CAPPAERT: I apologize, Your Honor. So are you asking
12 how do we -- the fact that Kovvali has the arbiter that is determining data
13 flow already?

14 JUDGE BOUDREAU: Right. So I think the point of your
15 argument there, if I understood it correctly, is that the assignment of data --
16 of dynamic channels would correspond to receiving the request in Claim 1,
17 for instance.

18 MS. CAPPAERT: So --

19 JUDGE BOUDREAU: But as I think we heard Petitioner's
20 counsel explain, assigning a dynamic channel is simply allocating, and that's
21 a separate step in Claim 1.

22 MS. CAPPAERT: So I think that there's a distinction, and I
23 think that in Kovvali, it's more the understanding of how requests -- what --
24 where requests are -- occur. And I think that Kovvali's only discussion of
25 requests are with requests to assign the dynamic channels. So to the extent
26 the dynamic channels are allocated data that is allocated, that is -- those are

1 what the -- that request, I would say, and I would potentially agree with
2 Petitioner, is different in Kovvali than what is recited in the claim in terms of
3 what the claimed request is.

4 But Kovvali understands and uses the term request for a
5 specific item, but it doesn't just -- it doesn't disclose -- just because it -- the
6 way it uses the word request is for the allocating step doesn't mean that it
7 also discloses requests as recited in Claim 1 of the 279 patent. So I think
8 that there can be differences in terms of what a request -- how the request is
9 used in Kovvali and that Kovvali's only discussion of requests, I -- do relate
10 more to the allocation of the dynamic channels for communication, which is
11 done by the arbiter node. But there is still no disclosure in Kovvali of an
12 actual request to transmit the data flow. Or request to use resources to
13 transmit the data flow.

14 JUDGE COURTENAY: Counselor, this is Judge Courtenay.
15 I'm just looking at 1.1 and it seems like we're allocating the resources in the
16 network at 1.1, and at 1.2, the receiving a request at the first node, it -- it's a
17 request to use just a portion of the previously allocated resources from 1.1.
18 A subset of the resources, if you will. Is that your understanding of your
19 claim?

20 MS. CAPPAERT: That it is -- it is receiving a request to use --

21 JUDGE COURTENAY: A portion. Is that --

22 MS. CAPPAERT: A portion of --

23 (Simultaneous speaking.)

24 JUDGE COURTENAY: -- what's in the -- in the claim? I
25 mean, I prefer to keep our focus on the claim and we interpret the claim to
26 the extent that claim construction is required, and we read it on the

1 reference. And I don't like reading or interpreting the reference and reading
2 it on the claim in reverse. I think that's incorrect. So I understand 1.1 is
3 allocating the resources in the network and 1.2, the request involves just a
4 request to use a portion of those previously allocated resources that were
5 allocated in 1.1; do you agree with that or disagree?

6 MS. CAPPAERT: I think that it is -- it -- as written, it is a
7 request to use a portion. However, you need to look at -- look -- in looking
8 at the full context of the claim, it is possible that the -- those allocated
9 resources and the portion that would be used, the portion that you are
10 requesting to use may actually be larger than what was allocated.

11 Or that there may -- there may not be sufficient resources that --
12 in that portion that remain to be used. So it is -- it is a portion of the
13 allocated, but additional steps need to be determined to determine whether or
14 not more resources need to be provided in order for the data flow to occur
15 and those resources to be used.

16 JUDGE COURTENAY: Well, if they're insufficient, we get
17 into 1.4, the conditional limitations. And you have both sides of the
18 condition claimed. Whether your allocated -- I -- I'm sorry. Allocate --
19 allocated resources are sufficient, that would be 1.3, and if they're -- if the
20 resources already allocated to the first node are insufficient, you perform
21 these two steps, 1.5 and 1.6, and then you've got 1.7, 1.8. It's interesting.
22 All the -- all the dependent claims are methods. That's interesting. You got
23 dependent claims 2 through 14, and they're all methods depending from
24 Claim 1, which is an apparatus, so.

25 MS. CAPPAERT: I -- claim 1, I believe, is still a method for
26 rounding a data flow, Your Honor.

1 JUDGE COURTENAY: Well, the preamble says otherwise. It
2 says it's a -- in a communication network. Well, I stand corrected. It does
3 say a method. It does say a method. So we -- all right. So if we have a
4 method here, then we have conditional limitations and a method claim in
5 Claim 1, right?

6 MS. CAPPAERT: There are conditional limitations, Your
7 Honor. Yes.

8 JUDGE COURTENAY: Okay.

9 JUDGE BOUDREAU: Now, Petitioner's counsel focused on
10 the amendment to Claim 1 that amended "receiving a request to allocate," to
11 change that to "receiving request at the first node to use a portion of the
12 resources." Can you address the -- that argument that Petitioner made with
13 regard to the significance of that amendment?

14 MS. CAPPAERT: Of course. I think that it -- it's really just
15 taking -- it -- it's adding another step in. So it is not -- I think that use and
16 allocate and the request -- well, a request to allocate is different than a
17 request to use, but it is more just because that amendment added another step
18 that the allocation had already occurred of the one or more resources in the
19 network.

20 And then the next step is that you were requesting to use the
21 resources so that this -- it add -- the amendment added another step into the
22 method that's claimed in Claim 1. I think --

23 JUDGE BOUDREAU: As Judge Courtenay pointed out, we
24 should be focusing on what's in the patent itself rather than focusing on
25 what's in the alleged prior art. So what does the "receiving a request at the

1 first node to use a portion of the resources," what does that correspond to in
2 the disclosure of the 279 patent?

3 MS. CAPPAERT: I think that it again relates to request -- what
4 we were talking about previously in column 6 and the flow chart that's
5 depicted in Figure 3, that the node is receiving a --

6 JUDGE BOUDREAU: Figure 3?

7 MS. CAPPAERT: -- a request from its clients from another
8 node. And so the resources are already allocated in that figure and in this
9 portion of the specification discussing Figure 3 and the flow chart that --
10 that's depicted there. And so it's receiving a request to use those allocated
11 resources and then determining whether or not their -- those resources are
12 sufficient to allow for the data flow.

13 JUDGE BOUDREAU: All right. And that disclosure in
14 column 6 is the best support that you have for that interpretation?

15 MS. CAPPAERT: I believe that column 6 and Figure 3 and
16 then also Figure 4. Figure 4 also discusses the request step itself and how --
17 what the node is checking in order to determine whether it has the sufficient
18 resources already allocated. So Figure 3 is kind of your overarching system
19 of how the request is made in the allocation versus the flow, and then Figure
20 4 on the flowchart therein, shows the request step. And just -- it's discussing
21 that you received that resource request from the client in Column 6, lines 39
22 to 60 or thereabouts. That you're receiving the request. And then after you
23 receive that resource request, that node first checks to determine whether it
24 already has the sufficient resources allocated, and then if it needs additional
25 it can -- it can continue in -- along with the flowchart.

1 I'm happy to answer any additional questions, if Your Honors
2 have it on request. Otherwise, I can talk about the combination in general of
3 Kovvali and Kalman. So --

4 JUDGE BOUDREAU: Yeah. What don't you go on to that.
5 And I realize that I didn't ask you at the beginning how much time you
6 wanted to reserve for sur rebuttal?

7 MS. CAPPAERT: I would say 15 minutes, but --

8 JUDGE BOUDREAU: Okay. Thank you.

9 MS. CAPPAERT: Or the remainder of time that I -- that I have
10 remaining after this. Thank you, Your Honor.

11 JUDGE BOUDREAU: Okay.

12 MS. CAPPAERT: It is also --

13 JUDGE BOUDREAU: You may -- you may proceed to talk
14 about the combination.

15 MS. CAPPAERT: It is also Patent Owner's position that
16 Kovvali and Kalman, there is no motivation to combine Kovvali and
17 Kalman. And I think -- you've just you heard Patent Owner and -- or sorry,
18 Petitioner pointed to Slide 6 of Petitioner's demonstratives and said, well,
19 they're the same. And really, I think that Slide 6 of Petitioner's
20 demonstratives shows kind of the -- of -- I would say it's a little bit of a
21 sleight of hand, that Petitioner is trying to use to show that they are the same.
22 They're talking about that they are both bidirectional, node rings.

23 Well, I -- to start with the figure that is shown on Slide 6 of
24 Kovvali is actually an annotated figure that Petitioner has prepared. That
25 includes both two paths as Petitioner's Counsel recognized. Kovvali, while
26 it talks about bidirectional is primarily directed to unidirectional

1 communications. And while they are color coded and show at a high level
2 that there are two ring networks that have two paths. I think that you need to
3 take a step further down and see what the actual disclosures and purposes of
4 Kovvali and Kalman are and whether or not a person of ordinary skill in the
5 art would be motivated to look at Kalman to modify Kovvali.

6 I think, and this is an -- as an example, I would say what
7 Petitioner is doing in some ways is saying, like it would be, like if I said,
8 well, there's two cars and they're both blue. Well -- and so it would be
9 obvious to look from one car to the other. Well, if one car is a minivan and
10 the other car is an F1 race car, I'm not going to modify the -- it wouldn't be
11 obvious to a person of ordinary skill in the art to add a sliding door from
12 your minivan to your F1 race car, because the two are directed to completely
13 different purposes.

14 And that's the same that we -- issue that we have here. Kovvali
15 and Kalman, while they may both be ring networks and while they may
16 disclose bidirectional communication, the purposes and how they are
17 implemented are substantially different. And we respectfully submit that a
18 person of ordinary skill in the art would not be motivated to look at -- or
19 Kalman's disclosures to modify Kovvali.

20 Looking at Slide 5, Kovvali uses Essential Arbiter in order to
21 identify the optimal path between the terminal nodes that are pictured: nodes
22 B, C, D. And is really directed to assessing and handling bursty data. So
23 Kovvali has your centralized arbiter node, which is the node that is making
24 the determinations.

25 If you look at Slide 6, while Kalman also has a bidirectional
26 ring network, the purpose of Kalman is different. In Kalman, you don't have

1 one specific node that is making those determinations as to where -- how the
2 data will flow. Each node is making those determinations. And so each
3 node is equipped with the ability and understanding in order to make those
4 determinations, which goes against the purpose of Kovvali. The two -- the
5 two are not directed to the same purpose or methods of handling data
6 transmissions in a ring network.

7 And I think if you look at Slide 7, that's established just in the
8 discussion in general of SONET networks. Kovvali is talking about how it
9 is working to efficiently use SONET technology, and it's -- is directed to
10 SONET technology. Whereas Kalman is saying we're not doing that. This
11 is -- this is not linked to SONET technology.

12 And I think that's just one of many examples within the two
13 references and more discussed in our Patent Owner response and our Sur-
14 reply that relate to the fact that the two references, it -- a person of ordinary
15 skill wouldn't look from Kovvali and say, oh, if I'm trying to modify, I
16 wouldn't be motivated to look to the teachings of Kalman to implement it in
17 Kovvali's system.

18 Instead, I think that while Petitioner puts forth four reasons why
19 it would be -- Petitioner submits, it would be obvious to combine Kovvali
20 and Kalman. All of them are based on hindsight bias, which Patent Owner
21 submits is inappropriate and is not the correct way of performing an obvious
22 miscombination and that a person of ordinary skill in the art, would not be
23 motivated and would not look to modify or improve Kovvali's system, in
24 view of Kalman because the two are significantly different.

25 Moving ahead, in terms of motivation to combine. As going to
26 Slide 14, there's a similar situation with respect to Slide 14 and Ground 3,

1 which relates to Dependent Claim 7 and 8. So for Dependent Claim 7 and 8,
2 Petitioner adds in RFC2892 for that combination. And in general just says
3 that it would be obvious to add in RFC2892 because it relates to a spatial
4 reuse protocol.

5 But just because two references are in the same field does not
6 mean that it would be obvious to implement the disclosures of RFC2892 into
7 the combination of Kovvali and Kalman, to the extent that a person of
8 ordinary skill would've been motivated to combine them in the first place.
9 And even if the combination would've been made and it were obvious,
10 Patent Owner submits that RFC2892 does not disclose a resource budget, as
11 recited in Claim 7 and 8.

12 So you can see that Dependent Claim 7 and 8 relate to the -- or
13 discuss a claim, a resource budget that's assigned to the first node or reset
14 resource budget assigned for each of the resources. And again, you need to
15 look at Claim 1 in general, with respect to what is meant by the budget. And
16 the resource budget is talking about the entire, and looking at Slide 18, the
17 maximum amount of resource that a node can receive, for example, on the
18 inner ring or on the outer ring.

19 So the 279 Patent is more -- is talking about a macro level
20 budget with respect to this the resource budget and the entire system as a
21 whole. But what, as shown on Slide 19, Petitioner points to in RFC2892 is
22 micro level congestion management. So it's not taking into account the
23 resources for the entire node, it's taking only into account low priority
24 traffic.

25 So SRPFA governs access to the ring, but really only relate --
26 applies to low priority traffic, as shown on Slide 19, which is an excerpt

1 from RFC2892. And as RFC2892 acknowledges, high priority traffic does
2 not follow these rules. And so the disclosure in RFC2892, is not -- is not the
3 same as the resource budget that is being recited in Claims 7 and 8.

4 And so Patent Owner would submit that Petitioner's also failed
5 to establish that Claim 7 and 8 are obvious for this reason. In addition to the
6 fact that Kovvali and Kalman wouldn't have been obvious to combine and
7 also that Petitioner has failed to establish that the combination and the
8 Kovvali recites claim -- the -- receiving our request limitations recited in
9 Claims 1 in 15.

10 And if there are no further questions, I'll reserve the rest of my
11 time for responding to Petitioner.

12 JUDGE BOUDREAU: All right. Well, I don't have any further
13 questions. So it looks like you have just about half of your time --

14 MS. CAPPAERT: Thank you.

15 JUDGE BOUDREAU: -- left. Thank you.

16 Mr. Foster?

17 MR. FOSTER: Thank you, Your Honor. I'd like to begin the
18 rebuttal to continue the discussion regarding the Request to Use. And I'd
19 like to draw the Board's attention again to the file history here. The other
20 portion of the file history that we discussed in the Petitioner's Reply was in
21 Exhibit 1002, around Page 190.

22 And there, Patent Owner in prosecution distinguished a prior art
23 system called Drake on the basis that in Drake, quote, "The nodes must
24 request a reservation of facilities for each new data stream." Close quote.
25 That's again, from Exhibit 1002, Page 190.

1 And this language I would submit, corresponds to the formal
2 bandwidth reservation concept that it was known in the prior art through
3 RSVP and protocols like that. And that is what was being distinguished
4 with their change to the claim language, away from a request to allocate and
5 rewriting the claim language to be directed to a request to use. And if we
6 look at the top of Page 190 and the sentence that spills over from the
7 previous page, Page 189, we can see that they've somewhat characterized
8 what their claim amendment to -- their amendments to claim one were
9 supposed to be.

10 And they write and the sentence spanning Pages 189 and 190,
11 quote, "When a given node, such as the first node recited in Claim 1,
12 receives a request to carry a data flow to another node." Close quote.

13 So they're recharacterizing. They're -- what they're referring to
14 is what's claimed in Claim 1 and recited as being a request to use a portion
15 of the resources. And they're saying that using a portion of the resources
16 would be carrying a data flow. And that's what we've identified in Kovvali
17 with the dynamic channels that, you know, packets or other data are being
18 received and they're addressed and they need to get across the optical ring
19 network to another node to exit and get onto their destination.

20 Those packets are each themselves a request to be carried to
21 another node. And so that is consistent with the petitions we outlined in the
22 -- in our -- the positions we outlined in the Petition and the arguments that
23 were made, distinguishing formal bandwidth reservation techniques in the
24 prior art, during prosecution.

25 JUDGE ARBES: But counsel, the language at the very top of
26 Page 190 of Exhibit 1002, still says the word request. And for whatever that

1 word means, it is there, "receives a request to carry a data flow to another
2 node." Which very much mirrors Column 6, Line 12 of the challenged
3 patent. So the word request is still there. It does not just say receives data
4 flow. So request has to have some meaning, right? Or -- you can see our
5 difficulty perhaps in trying to figure out what that meaning is.

6 MR. FOSTER: Yes. The language from the file history there
7 on Page 190, it does still use the word request. Regarding the specification
8 disclosure and the Figure 4 discussion that was had with Patent Owner.

9 I want to draw the Board's attention to the process in Figure 4
10 and in particular, some of the language from Column 6. As we -- as we see,
11 right? One of the first steps around Line 41 of Column 6, it says, "As noted
12 above, after receiving a resource request from one of its clients, the node
13 first checks to determine whether it has sufficient resources." It continues
14 on.

15 I want us to skip down then from receiving a resource request
16 checking to see if there's sufficient resources, let's skip down to Column six,
17 Line 54 and see what happens When the node identifies that there are
18 sufficient resources. The specification says, beginning at Line 54, "Then if
19 there are sufficient resources on the outer ring, the node carries out the
20 transmission on the outer ring."

21 There's no further intermediate steps of receiving whatever it is
22 that's going to be transmitted. What happens is there's a resource request,
23 there are sufficient resources, and a transmission happens. I think that is
24 consistent with the interpretation that we've taken and the mapping that
25 we've made to the prior art, where data is received on a dynamic channel, the
26 node will look at its allocated -- previously allocated bandwidth for those

1 dynamic channels, see if the data fits in the previous allocations, and if it
2 does, it gets transmitted.

3 JUDGE ARBES: I see. So you're saying because there is no
4 discussion of in between receiving a resource request and that conditional
5 step of what happens if there are sufficient resources or not, there is not an
6 intervening step of actually receive the data?

7 MR. FOSTER: Right. There's no disclosure --

8 JUDGE ARBES: Okay.

9 MR. FOSTER: -- that the data being transmitted is anything
10 other than what was received at the beginning of the step -- the process of
11 Figure 4.

12 JUDGE ARBES: I guess my question then is, so why use the
13 word request -- so why use the word request?

14 MR. FOSTER: What was written and what was meant and
15 what was disclosed. And looking at this, I think it is possible and correct to
16 interpret the claim language and the request to use a portion of the resources
17 as encompassing a packet that wants to get across the network and is asking
18 to be transmitted across the network. That packet --

19 JUDGE ARBES: Well, can I ask you --

20 MR. FOSTER: Yeah.

21 JUDGE ARBES: So -- but part of -- part of the language that
22 the applicant did add in was that the request is going to trigger something.
23 The request is going to trigger a determination of whether the resources
24 already allocated to the first node are sufficient or not. That's limitations 1.3
25 and 1.4. And those are, quote, "in response to the request." So the request is

1 meant to do something. It's meant to trigger this -- these two divergent
2 paths, right?

3 MR. FOSTER: Correct. And as we outlined in the Petition,
4 Kovvali and -- mostly Kovvali, but with a little help from Kalman, discloses
5 either going ahead and transmitting the packet because there is sufficient
6 bandwidth or, alternatively, you know, a request in Kovvali would be sent to
7 the arbiter, and the arbiter would be looking at the two directions that
8 packets could go and the different ways that it could respond to a request for
9 an increase in the dynamic channel bandwidth, either clockwise or
10 counterclockwise, looking at congestion, and making a determination of
11 whether and in what direction it should adjust the dynamic channel
12 bandwidth allocations. And that then corresponds to the two alternatives
13 recited in the claim.

14 JUDGE COURTENAY: Mr. Foster, if I understand you, the
15 request is really -- I mean, the packet would have a destination address as
16 part of the packet, right? Source and destination address? And you're
17 saying that destination address is actually a request as claimed; is that --

18 MR. FOSTER: I -- we're -- per se, Your Honor --

19 JUDGE COURTENAY: Am I understanding you correctly
20 there or incorrectly?

21 MR. FOSTER: Mostly correctly, Your Honor. I wouldn't say
22 that the destination address per se is what we're identifying as the request.
23 We're saying that the packet or the data to be transmitted is the request. And
24 --

25 JUDGE COURTENAY: So the payload. The actual data that
26 just could be any data is the request, is what you're saying?

1 MR. FOSTER: It would -- it would be the whole packet, not
2 just the payload. And so it would -- it would be the source and the
3 destination and the other protocol headers and the payload, right? It's the --
4 it's the whole data packet or data flow. It's the whole thing that is, you
5 know, arriving at a node that's connected to an optical network that needs
6 and wants to be transmitted on the optical network to somewhere.

7 And that packet is implicitly asking for the node on the network
8 to use its previously allocated bandwidth to get it there. And that
9 corresponds to the request to use a portion of the previously allocated
10 resources in the claim.

11 JUDGE COURTENAY: Well, I mean, doesn't the plain
12 meaning of request, it sort of corresponds to a command? And in
13 networking, you have, like, responses like ACK or NACK, yes or no, if you
14 will, to a request, you know? Clients are generally requestors of services,
15 and servers are generally providers of services.

16 And if the server can't accommodate the request, it'll send a
17 NACK. And if it can, it'll send an ACK, A-C-K. So isn't a request sort of
18 like a command and not just a payload of data with all the, you know, source
19 and destination address and the headers -- the complete header and
20 everything? That is part of the packet.

21 MR. FOSTER: So Your Honor, your question gets a little bit
22 deeper into a hypothetical implementation than the parties have explored in
23 the papers. But to answer your question, right? If the packet was, for
24 example, an IP packet --

25 JUDGE COURTENAY: Right. Which is typical.

26 MR. FOSTER: -- and -- yeah.

1 JUDGE COURTENAY: TCP/IP.

2 MR. FOSTER: Right. If that packet can't be transmitted, the
3 way the IP protocol works is that there is no acknowledgement for a failed
4 delivery, right? IP is a classical best-effort communication protocol. And so
5 there would not be a negative acknowledgement, a NACK, you know,
6 response sent. But the claim doesn't require sending a NACK response
7 would be, you know, my first observation.

8 JUDGE COURTENAY: Okay.

9 MR. FOSTER: And so you know, the question of, well, it can
10 only be a request if it's part of a protocol that has a negative
11 acknowledgement for failed delivery, I don't think is an interpretation
12 supported by their specification or, you know, a correct interpretation given
13 the record that we have here, you know? The word request, you know, is
14 not really limited in the specification to some particular form of protocol or,
15 you know, it's -- it -- I think the Patent Owner would like the panel to think
16 that the request has to be some kind of signaling message, that it can't be a,
17 you know -- a data packet or a, you know -- a message in itself that's fully
18 addressed, has its full payload, has it -- all of its headers, and is ready to go
19 across the network, that that somehow can't be a request to use the resources
20 of the network.

21 And I don't understand Patent Owner's position that somehow a
22 packet like that is not going to use resources or that such a packet is not
23 seeking to be transmitted across the network using resources. And if it is
24 seeking to be transmitted across the network using network resources, then I
25 would say it is a request to use the resources of the network. And I don't
26 understand Patent Owner's position as to how that's not a request.

1 JUDGE COURTENAY: Okay. Well, in this claim -- in this
2 Claim 1, we don't have a response ACK or NACK, but we do have these
3 conditional limitations in response to the request in 1.3. You know, we have
4 sufficient resources. We direct the data flow from the first node to the
5 second node over the -- one of the -- over one of the paths. We have a
6 negative limitation without requesting additional resources.

7 And 1.4 of the resources are already allocated to the first node.
8 "If the resources already allocated to the first node are insufficient, we
9 perform the following steps."

10 So the -- there is something that happens within the scope of
11 Patent Owner's claim that is in response to the request. It's sort of analogous
12 to ACK or NACK. Either we have bandwidth or we don't. And in each
13 case, we do something.

14 MR. FOSTER: Yes, Your Honor. And I don't think Patent
15 Owner has disputed that the limitations, you know, that are performed in
16 response to the request are taught in the prior art as analyzed and presented
17 in the Petition. They dispute whether those are performed in response to the
18 request because they dispute whether there is a request at all. But they -- in
19 terms of the substantive steps of requesting an increase in an allocation,
20 determining levels of use on the available paths, and making decision about
21 what path the packet should go on, et cetera, Patent Owner has not disputed
22 that the prior art teaches those substantive limitations.

23 JUDGE COURTENAY: Okay. If I understand you correctly,
24 Mr. Foster, just a generic data packet could be a request?

25 MR. FOSTER: That's correct.

26 JUDGE COURTENAY: Okay.

1 MR. FOSTER: And the reason for that is because a generic
2 data packet, in order to get to its address destination, requires the use of
3 network resources such as bandwidth.

4 JUDGE COURTENAY: And that's because it has a destination
5 address as part of the header to the packet, right?

6 MR. FOSTER: So it --

7 JUDGE COURTENAY: Getting back to my first point, so --
8 right?

9 MR. FOSTER: Yeah. Again, the claim doesn't recite what
10 protocol we're talking about, and there could be protocols where the --

11 JUDGE COURTENAY: That's right. And that's -- you're
12 correct there. So --

13 MR. FOSTER: Yeah. There could be protocols where the --
14 there might not be a destination address as we would commonly think of
15 them, but a data packet is generally trying to get somewhere. And even if
16 it's a broadcast packet, well, it's still seeking to get transmitted either on the
17 network or over the network, and transmission itself will necessarily require
18 the use of bandwidth on the network. And bandwidth is a resource in the
19 claim language. And so any packet that wants to be transmitted is a request
20 to use network resources.

21 JUDGE COURTENAY: Okay. Well, I would certainly agree
22 that bandwidth is a resource on a network, speaking for myself, again, not
23 the panel, but all right. Thank you. That's very helpful.

24 MR. FOSTER: Thank you.

1 Judge Boudreau, you also had asked a question during my case-
2 in-chief about the prior art's disclosure in Kovvali about the handling of data
3 on the data -- the dynamic data channels in the -- in the receipt process.

4 With respect to that, I would direct you to look at the Petition
5 around Page 32, which, of course, is where the analysis of that limitation
6 begins. But including the discussion of Figure 6 on Page 34 of the Petition,
7 where we talk about how within Kovvali's nodes, there's a packet processor,
8 and that's what receives data on the dynamic data channels and then feeds
9 those packets after packet processing and scheduling queuing and whatnot --
10 feeds them into a packet transmitter that feeds into the SONET framer,
11 right? The optical data framer. And then ultimately out onto the optical
12 communication network.

13 JUDGE BOUDREAU: Thank you. Those were the sections of
14 the Petition that I had focused on as well. Thank you.

15 MR. FOSTER: And then --

16 JUDGE BOUDREAU: I just wanted to see if you had anything
17 else beyond that --

18 MR. FOSTER: I'm sorry, Judge Boudreau?

19 JUDGE BOUDREAU: No. I was just trying to clarify whether
20 there was anything else beyond that that we should be focusing on, but all
21 right. Thank you.

22 MR. FOSTER: And then finally, just to briefly respond on
23 Claim 7 and 8 in Grounds 3 and 4, or maybe it's just Ground 4, that Ms.
24 Cappaert addressed in her response presentation.

25 I just want to point out and reiterate a point we made in the
26 Petitioner Reply that Kovvali expressly discloses and refers to a spatial reuse

1 protocol, and the only standard for the spatial reuse protocol that's of record
2 in this proceeding and the only one that Patent Owner's expert was even
3 aware of is the one in the RFC that we've identified and relied on as an
4 obvious combination.

5 So we think that the disclosure and reference to that protocol
6 would've led the person of ordinary skill in the art to look at and consider
7 that RFC. Regarding the substantive claim limitations, I would just reiterate
8 what we put in the Petitioner Reply that the claim language doesn't talk
9 about high priority and low priority. And so the distinctions based on
10 priority that Patent Owner is attempting to draw are not based on the claim
11 language.

12 If there are no further questions from the panel, I'll cede the
13 remainder of my time.

14 JUDGE BOUDREAU: Thank you, Mr. Foster.

15 All right. Ms. Cappaert, you have --

16 MS. CAPPAERT: Thank you. Just very --

17 JUDGE BOUDREAU: -- thirty minutes left.

18 MS. CAPPAERT: -- very briefly. I do not think that I will take
19 all of the 30 minutes. Just with respect to the request portion and the
20 discussions that Counsel for Petitioner, Mr. Foster, just raised. I think that,
21 as the Board correctly pointed out, in the prosecution history, there was still
22 a discussion of the receipt of a request to carry data flow. And in looking at
23 the actual claim language of the -- of Claim 1 of the 279 patent as well.

24 Petitioner is trying to say that any receipt of data is a request,
25 but -- and it will either flow or it won't flow, but that's not what is being
26 claimed in Claim 1.

1 Claim 1 is saying you -- there has to be a determination that's
2 made about whether or not there are sufficient resources in response to that
3 request, and then either -- if there are, the data will flow, and if there aren't,
4 then there will be another step that happens to determine whether they can --
5 there can be an increase in allocated resources.

6 So it isn't just the case of this best-effort packet that would
7 potentially just get dropped if there weren't enough resources available, or
8 there wasn't enough bandwidth for it to flow. There has to be some other
9 step that happens, and that step would -- I would submit is triggered by the
10 receipt of the request that then results in the other conditions recited in
11 Claim 1 being performed.

12 So we would submit that Petitioner is trying to read the word
13 "request" out of the claim language of the 279 patent, and that it's
14 inappropriate. The claim should be interpreted as it is written, and that
15 Petitioner has failed to establish that the claims of the 279 patent are invalid,
16 because -- at least because they do not disclose the receipt of a request.

17 If the Board has no further questions, I would just --

18 (Simultaneous speaking.)

19 JUDGE BOUDREAU: Miss -- Ms. Cappaert, Mr. Foster had
20 pointed out that in Column 6, down around lines 54 to 57, the patent states
21 that "if there are sufficient resources on the outer ring, the node carries out
22 the transmission on the outer ring, at an outer ring transmission step 48," and
23 that there isn't a separate step of receiving -- that there isn't separate
24 disclosure of receiving data.

25 Can you address that point?

1 MS. CAPPAERT: I think that that's -- that is what is written
2 there, that there is not a separate step of receiving data, but I think that it's
3 more of a -- there isn't a separate step necessarily recited in the claim either
4 with respect to receiving data. It's the request and -- is sent that triggers your
5 determining steps, which are discussed in the intermediate part of that
6 portion of Column 6 that Petitioner's Counsel skipped over.

7 So starting at Line 41 of Column 6, that, "At the inner ring
8 checking to determine -- at the -- at an inner ring checking Step 42, the node
9 test, whether it's current used in per each resource to the desired destination,
10 added to the required amount of new resources required is less than or equal
11 to its current allowed in for the destination, and if so, it carries out the
12 requested transmission on the inner ring without having to communicate
13 with the dispatcher going down to 50 to 51."

14 And then it says, "If it does not have sufficient resources on the
15 inner ring, it performs a similar check with respect to the outer ring."

16 So the request -- it isn't just that the request is sent and then the
17 data either flows or it doesn't flow. There are additional steps, and the
18 additional conditional steps that are made between the packet being received
19 and flowing, and that that is triggered by the request itself.

20 JUDGE ARBES: And, Counsel, can you respond to Petitioner's
21 argument that if I have a data packet that specifies a destination, and I'm
22 sending it to an intermediary node, that I'm implicitly making a request to
23 send it to that destination, so -- so that is a request in some sense?

24 MS. CAPPAERT: I don't know whether that would rise to the
25 level of a request. I -- one, I don't know the Petitioner has actually put that
26 in the Petition itself or made that argument prior to today, but I think that

1 having a destination may provide additional information that would
2 determine whether or not there is the bandwidth amount, and what would be
3 -- need to be used, but isn't actually a formal request or an asking step that
4 can be an -- either a yay or a nay determination.

5 If there are no further questions, I would just close by finishing
6 that it is Patent Owner's -- submits that Petitioner has failed to establish that
7 the challenge claims of the 279 patent are unpatentable, and thus they should
8 be held valid, in that --

9 (Simultaneous speaking.)

10 JUDGE COURTENAY: Counselor, I'm not sure how to
11 pronounce your name. Is it miss -- Ms. Cappaert? Cappaert?

12 MS. CAPPAERT: It's Cappaert.

13 JUDGE COURTENAY: Cappaert. Okay. So you would -- if
14 given a generic data packet, okay, that has a source address and a destination
15 address, you would say that does not fall under the scope of your claim to
16 request; is that your position? It's not enough?

17 MS. CAPPAERT: I don't know that that has been -- I don't -- I
18 don't know whether it would or wouldn't be enough. I think that there may
19 be additional information that is needed with respect to the packet and
20 respect to the system to determine how the data is going to flow and how the
21 system would process it, and whether or not it would be viewed as a request,
22 but I think that a packet standing by itself that is simply received, the receipt
23 is not equivalent to a request.

24 JUDGE COURTENAY: Okay. And for a given generic data
25 packet on a network, if there's insufficient bandwidth, it's just going to be
26 discarded, correctly? Is that -- is that correct? I'm sorry.

1 MS. CAPPAERT: That is -- that is my understanding, that it
2 would -- it may just be discarded, and that the purpose of the patent in the
3 additional conditional steps in the 279 are that, instead of just discarding,
4 you would seek whether you -- there's additional bandwidth, or allocate
5 additional resources.

6 JUDGE COURTENAY: All right. Thank you very much.

7 MS. CAPPAERT: Thank you, Your Honor.

8 JUDGE BOUDREAU: All right. Well, thank you, Counsel.
9 This concludes our hearing in IPR2024-00503. So we'll go off record now,
10 and let's reconvene in 15 minutes for oral arguments in IPR2024-00505.

11 (Whereupon, the above-entitled matter went off the record at
12 2:38 p.m.)

PETITIONER:

Theodore Foster
Brian Kwok
David McCombs
Eugene Goryunov
HAYNES AND BOONE, LLP
ipr.theo.foster@haynesboone.com
brian.kwok.ipr@haynesboone.com
david.mccombs.ipr@haynesboone.com
eugene.goryunov.ipr@haynesboone.com

PATENT OWNER:

James Nuttall
Katherine Cappaert
STEPTOE LLP
jnuttall@steptoe.com
kcappaert@steptoe.com