

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION and AFFIRMED NETWORKS, INC.
Petitioner

v.

LEMKO CORPORATION
Patent Owner.

IPR2023-00529 (Patent 7,653,414 B2)
IPR2023-00531 (Patent 7,855,988 B2)

Record of Oral Hearing
Held: July 11, 2024

Before FRANCES L. IPPOLITO, BRIAN D. RANGE, and
SCOTT RAEVSKY, *Administrative Patent Judges*.

IPR2023-00529 (Patent 7,653,414 B2)

IPR2023-00531 (Patent 7,855,988 B2)

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P R O C E E D I N G S

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JUDGE RANGE: Good morning, everyone. I'm Judge Brian Range, and with me today are Judge Scott Raevsky and Judge Frances Ippolito. This is a hearing for two *inter partes* post grant reviews. The first matter is number IPR2023-00529 and is captioned Microsoft Corporation and affirmed Networks, Inc., Petitioner, versus Lemko Corporation, patent owner. This IPR concerns U.S. Patent Number 7,653,414 B2. The second matter is IPR 2023-00531. It has also captioned Microsoft Corporation interfered Networks, Inc., Petitioner, versus Lemko Corporation, patent owner. The second matter concerns Patent Number 7,855,988 B2.

Let's start by having counsel make appearances. Who will we have speaking for Petitioner today?

MR. RUECKHEIM: Thank you, Your Honors. Michael Rueckheim of Winston and Strawn for Petitioners. And with me is lead counsel for IPR 2023-0529, Matt Hopkins. And lead counsel for IPR 2023-00531, Rob King. But I will be doing all the speaking today on behalf of Petitioners.

JUDGE RANGE: Thank you, counsel. And who will be speaking for patent owner today?

MR. HANNAH: Good morning, Your Honor. Or I should say afternoon. James Hannah, on behalf of the patent owner. And then with me is my partner, Aaron Frankel. I will be arguing for the '988 patent, and then he'll be handling -- Mr. Frankel -- will be handling the '414 patent.

JUDGE RANGE: Great. Thank you. Before we begin the arguments with just a couple of administrative matters. First, we have your demonstratives. For clarity of record, and so that we can follow your

1 argument, we ask that you identify what page of your demonstratives you're
2 speaking about as you argue. Also, for clarity of the written transcript,
3 please state your name for clarity to help the court reporter if it's not clear
4 who's speaking.

5 Second, I wanted to talk about timing. We allotted each side 90
6 minutes to present its argument. That 90 minutes will be for both cases, and
7 you can choose to distribute that time amongst the two cases however you'd
8 like. The transcript will be entered for both matters. We will begin with
9 Patent's opening arguments regarding unpatentability, and patent owner may
10 respond. We will try to keep track of time and we'll try to indicate if you're
11 running short on time. But please also try to keep track of time a bit
12 yourselves in case we lose track. We may not give you that warning.

13 Petitioner, you may reserve some of your time for rebuttal. How
14 much time would you like to reserve for rebuttal?

15 MR. RUECKHEIM: 30 minutes, Your Honor.

16 JUDGE RANGE: Okay. So you'll have 60 minutes initially and 30
17 for rebuttal, roughly. And patent owner, how much would you like to
18 reserve for rebuttal?

19 MR. HANNAH: 20 minutes. And we'll probably split it 10 and 10
20 between the two cases, but we'll see how it goes.

21 JUDGE RANGE: Okay, that sounds good. So that would be 70
22 minutes for opening and 20 minutes for rebuttal. Okay. We'll probably take
23 a short break at some point, potentially after Petitioner's opening 60 minutes,
24 we can take a short break. Okay. And with that, Petitioner may begin
25 Petitioner's argument.

1 MR. RUECKHEIM: Thank you, Your Honor. May it please the
2 Board. I am hopefully sharing demonstrative slides marked as Exhibit 1023
3 for IPR 2023-00529 and Exhibit 1015 for IPR 2023-00531. Can everybody
4 see my slides?

5 JUDGE RANGE: Yeah, I see your slide. It's good. It's not like full
6 screen mode. I don't know if you want to change that, but it's -- it's also fine
7 if that's hard to change.

8 MR. RUECKHEIM: Well, I'm not sure I can. I do know how to
9 change it, but I can make it large. Is it coming in too small?

10 JUDGE RANGE: Well --

11 MR. RUECKHEIM: Is that more helpful?

12 JUDGE RANGE: That's better. Yeah, the bigger you can make it, the
13 better it is for us.

14 MR. RUECKHEIM: Okay. Yeah. We will try it this way. Hopefully
15 this works.

16 JUDGE RANGE: Okay.

17 MR. RUECKHEIM: Okay, so we're dealing with two IPRs here, and
18 on Slide 2, generally, I have a roadmap for what I'm going to be talking
19 about. Today we have the IPR 2023-529 where we're challenging patent
20 pwner's '414 patent. And the primary prior art there is the Waylett prior art,
21 which we've combined with the Mauer prior art. We're going to also then
22 talk about the challenge '988 patent. And there we have the floor prior
23 art. We're going to give just a brief description of the floor prior art to give
24 an overview of the patent and the challenge prior art that we're using. We're
25 going to spend some time on the claim instruction issue for this key term
26 "distributed mobile architecture" that's been present throughout the

1 briefing. And I'm going to address the Board's identification of two
2 additional dictionary definitions as part of that discussion. And then we're
3 going to go through the disputes for each of the IPRs, the more substantive
4 disputes beyond claim construction.

5 So the '414 patent, Slide 3, includes language from the background of
6 the '414 patent, and it includes the '414 patent's Figure 1. The patent really
7 recognizes in the background of the patent this problem of existing
8 telephone systems that will include something called an MSC, a BSC, and
9 things called HLRs and VLRs. And the patent says that these are expensive
10 systems that include -- these components are expensive and limited in rural
11 areas. The patent also recognizes that the use of systems that have MSCs,
12 BSCs, HLRs, VLRs in rural environments can be very environmentally
13 challenging and harsh to have systems that have all these components in it.
14 The Figure 1 of the patents shown on the right-hand side of Slide 1 provides
15 this purported improvement, distributing or spreading out the telephone
16 system to different cell coverage areas.

17 Slide 4 is also from the background of the patent here. The patent
18 really describes this purported improvement in various ways, but the main
19 way it starts is that its invention provides flexibility. It says, "The present
20 disclosure provides a flexible telecommunications device, this DMA."

21 The patent calls the Figure 1 that's shown on the slide, "A diagram of
22 a distributed and associative communication system," a system that's
23 distributed out to different cell areas, provides this flexibility by spreading
24 this system out into different areas. The patent does not define what is in its
25 flexible device.

26 The parties here have not argued that there's a definition in here of

1 what a flexible device is, what a DMA is in the patent. Instead, it just
2 describes a flexible device in terms of different options that this device could
3 include. Here you see on the slide that the DMA is described as "can
4 operate with multiple air interfaces, CDMA, IS-95, 1X, EVDO, GSM."

5 In others, the patent says it can provide real time
6 monitoring -- monitoring, call detail record. And it could even have
7 integrated prebilling AAA functionality in others. The patent uses
8 permissive optional language in describing the flexible features that its
9 DMA can potentially have.

10 Slide 5 is showing a primary figure from our Waylett prior art
11 reference. And the interesting thing about Waylett is the amount of overlap
12 between Waylett's background and the '414 patent's background. Both are
13 directed to this issue of expanding distributing networks into rural areas,
14 underserved areas, and dealing with the -- the issues of distributing or
15 scaling as Waylett calls it this wireless network to underserved areas.

16 Waylett's different than the '414 patent. Waylett does not recognize a
17 harsh environmental challenge to including in this distributed system, an
18 MSC, BSC. Instead, Waylett describes this NIB. It's a network in a box.
19 And Waylett actually says this network in a box is a commercial product,
20 and it identifies as the actual preexisting commercial product at Column 9,
21 lines 39 to 41 of Waylett. And Waylett actually says that this NIB will
22 include an MSC, a BSC, and a BTS in a single enclosure.

23 So while the '414 patent describes that you can distribute these
24 telecommunication systems by having an MSC and a BSC in these
25 distributed devices are a challenge, Waylett actually says it's going to
26 include this MSC and BSC and BTS in this NIP.

1 And it uses the word -- and I'd like to call -- call out to the Board's
2 attention. Waylett, says the NIB -- this is highlighted on the bottom of Slide
3 5. It says that its NIB 224 includes an MSC, a BSC and a BTS. It doesn't
4 say "can include."

5 It doesn't say that the NIB can be a device with an MSC like the '414
6 patent says. It actually says -- the -- the actual language of included, it
7 doesn't use just permissive language, like the '414.

8 Waylett's Figure 6 shown on the right-hand side of, Slide
9 6 -- sorry -- Slide 5 shows in highlighting this NIB and how the NIB part
10 310 can expand on communication system 200. This communication system
11 200 includes a landline 206, a cell system 204, an internet interface 208.
12 And it shows how this network in a box can go into this existing
13 communication system and provide this distributed functionality.

14 Slide 6 identifies additional language in Waylett about using the
15 network in a box to distribute the mobile architecture components to
16 underserved or unserved even communities. And what's notable here for the
17 Board is just really the complete overlap between the background problem
18 discussed by Waylett and the '414 patent and the similar proposed solutions
19 of distributing telephony components into rural areas, into underserved
20 areas.

21 I've argued comparisons between prior art and challenged patents to
22 the PTAB multiple occasions, and I haven't seen anything closer than here
23 where the backgrounds just literally mirror each other.

24 Slide 7 is just a quick overview of our Mauer reference. We
25 combined Waylett with the Mauer reference really just to show how Mauer's
26 mobile architecture can be distributed further with Waylett's network in a

1 box.

2 Mauer's Figure 1 identifies the first mobile architecture, the
3 WWAN -- sorry -- the WWAN 14 in a second mobile architecture, the
4 WLAN 18. When you distribute these mobile architectures further by
5 including Waylett's NIBs, you have distributed mobile architectures.

6 For Slide 8, Slide 8 is really just showing the Figure 1 of Mauer. And
7 I'd like to call the Board's attention to the 10 notation on the top of Figure 1
8 shown on Slide 8.

9 This 10 is labeled as a wireless communication system, but, of course,
10 that doesn't mean that everything in 10 is part of a wireless communication
11 system. And the best evidence for that is shown on part 56 on the top. It's a
12 landline. It's not wireless. It's an old -- old-school telephone park.

13 Part 24 on the bottom, again, a landline. It's not a wireless device.
14 Lemko's expert, and we've noted it in the briefing at Exhibit 1022 -- and this
15 is from his deposition Column 74, Lines 18 to 22. He admitted that the
16 phone 16 and the access point 18 are really all he considers to be part of this
17 wireless LAN that's shown on the bottom of Mauer's Figure 1.

18 So not everything in this Figure 1 is really a part of the wireless
19 network, although it is depicted as in communication with the party's dispute
20 whether the voicemail server is part of the wireless network. And we'll get
21 to that when we get to the substantive disputes.

22 So going on to Slide 9, Slide 9 shows the other patent that is being
23 challenged here in IPR2023-531. This is the '988 patent.

24 The '988 patent has very similar discussion in the background as to
25 really the issue of rural areas being underserved with telephone systems and
26 then using something to distribute out telephone systems to these rural areas.

1 The '988 patent, just like the '414 patent, discusses that including all of the
2 functionality of telephone systems such as an MSC, a BSC, an HLR, and a
3 VLR can be a challenge.

4 They're both directed to a flexible device that including everything
5 that a traditional telephone system would have can be a challenge based on
6 the background of the '988 patent and the '414 patent.

7 Slide 10 is from the background, again, of the '988 patent. Really
8 what the '988 patent is talking about here -- and this is the focus of the
9 claims -- is providing some type of medium -- the claims call it a
10 gateway -- to communicate with newly developed systems and
11 interfacing -- interfacing these calls for handovers.

12 Slide 9, we use the Flore reference -- I'm going to pronounce it
13 Flore -- the Flore reference to challenge the '988 patent claims. And the
14 Flore -- we used this reference -- we chose this reference really because of
15 its focus on using DMA systems in order to -- in the interoperability of
16 DMA systems through gateways.

17 So Flore's Figure 1 is shown on the right-hand side of Slide 11. It
18 depicts a UTRAN network, an existing UTRAN network that uses an SGSN
19 gateway shown in green that communicates with an inter-AS gateway for the
20 E-UTRAN network shown on the right. Notably, both -- notable is that both
21 of these networks are distributed networks. They both include -- for
22 example, the UTRAN network includes three different Node B processors.
23 And then the E-UTRAN network includes three different eNodeB. There's
24 multiple components here spread out over a distance.

25 Slide 14 takes us to our primary claim construction issue. Let's skip
26 ahead here. So the claim construction that goes across both of these IPR

1 challenges is for the term distributed and mobile architecture or DMA. The
2 '414 patent claims recite a DMA network or a DMA system. The '988 patent
3 claim recites this DMA gateway.

4 Petitioners have proposed plain and ordinary meaning for this term.
5 "Distributive," "mobile" and "architecture" are commonplace terms, and
6 there's no definition -- special definition in the patent.

7 Patent Owner's proposal is shown on Slide 14, a network architecture
8 where DMA systems have distributed call routing functionality and are
9 connected with other DMA systems through peer-to-peer connections, i.e.,
10 without connecting through a hierarchical network hub architecture.

11 So as you can see, as the Board can see, networks -- Lemko's proposal
12 attempts to stretch out these three words, "distributed mobile architecture,"
13 into 32 words.

14 They want to add in concept of peer-to-peer connections. They want
15 to add in concept of distributed call routing functionality. They want to add
16 in concept of connecting or without connecting to an hierarchical hub.

17 And right away, the Board can see major problems in Lemko's
18 proposal. In my experience, it is -- it is an extremely rare case when you
19 have a three-word claim term that stretched into a construction that's ten
20 times the amount of words. It also is a very rare case where the term being
21 construed, "DMA," is actually repeated in the proposed construction twice.
22 Here Lemko has used the word "DMA" in its construction two times.

23 Lemko went further than that. As DMA stands for "distributed
24 mobile architecture," and Lemko uses the term "distributed" and
25 "architecture" in its proposal but strangely does not include the word
26 "mobile." So there's a lot of issues here defining the term with its own term,

1 but also leaving out parts of the term while adding in other parts.

2 So we're going to go there and tell you why we think that the plain
3 and ordinary meaning applies here and why the Board should reject Lemko's
4 proposal.

5 And this is moving onto Slide 16. One of the first issues with
6 Lemko's proposal is that it really relies upon importing embodiments into
7 the claim language. And this is a fundamental claim construction canon. It's
8 a -- it's a no-no. TalexMedical is shown on Slide 16, that -- basically the
9 Federal Circuit has said this is an error to import limitations from
10 embodiments into the claim language.

11 Many other Federal Circuit opinions say the same thing for a long
12 time now. And if the patentee here had intended to claim embodiments that
13 use peer-to-peer connections, that use something other than a hierarchical
14 connection, or any of the other concepts included in Lemko's proposal, the
15 time to have done that would have been during prosecution. Or the time to
16 have done that would have been a motion to amend during this PTAB
17 proceeding. Lemko did neither.

18 Slide 17, what we're showing on Slide 17 is really just patent owner's
19 expert admitting that there is no special definition provided in the '414 patent
20 or the -- really the '988 patent as well.

21 JUDGE RANGE: Counsel -- Counsel, this is Judge Range. I think
22 that one of patent owner's arguments is that distributed mobile architecture,
23 DMA, is a phrase that doesn't have a known meaning in the art. It's sort of a
24 coined phrase specific to the patent. How would -- how would you respond
25 to that argument?

26 MR. RUECKHEIM: In two different ways. Give me one second,

1 Your Honor.

2 The first is -- I'm going to go to Slide 21. Okay. So Slide 21, this is
3 from patent owners -- now it's too big for me to see the whole screen. One
4 second.

5 This is from patent owner's response at 20. And what's interesting is
6 that the first sentence on Slide 21, patent owner's response at 20, states that
7 "The term 'distributed mobile architecture' should be construed consistent
8 with the plain meanings of the words, which require a mobile architecture
9 with distributed functionality, a set of centralized functionality, and
10 hierarchical organization."

11 And so I did see in patent owner's surreply an argument that there
12 is -- this is some type of -- this term is not a term that's known in the art. But
13 that's a -- that's a far cry from what they argued prior to the surreply where
14 they said this should be construed consistent with the plain meaning.

15 And this is -- these words are very simple, "distributed," "mobile,"
16 and "architecture."

17 These are not scientific words. These are not confusing words. These
18 are commonplace words here. And you know they're commonplace because
19 the words "distributed" and "architecture" are even used unaltered in patent
20 owner's proposed construction.

21 And what I think is interesting about the quote on Slide 21 is that
22 patent owner is saying that the plain meaning of the words "distributed
23 mobile architecture" require a mobile architecture with distributed
24 functionality instead of centralized functionality. This plain meaning isn't
25 even patent owner's proposed construction.

26 So I think that, you know, we can -- we can see two things by this.

1 One, there is a plain meaning here to these words. They're commonplace
2 words. And, two, that plain meaning doesn't comport -- well, patent owner
3 can't figure out what that plain meaning is at least. They're adding in these
4 concepts of centralized functionality and not hierarchical organization. But
5 it doesn't match the proposal they're actually giving to the board for its claim
6 construction, which I think weighs against finding in terms -- in favor of
7 Lemko on this construction.

8 So going back to Slide 16, briefly -- sorry -- Slide 18.

9 The other big issue here is this concept of peer to peer. So everything
10 in patent owner's proposed construction -- and I'll show you why in a
11 minute -- really requires the Board to find this term means "peer-to-peer
12 connections."

13 And there's -- there's big problems with comports this concept of
14 peer to peer into this DMA term. The first is that every example in the
15 patent is -- is really just an optional language. It's permissive language. It's
16 not mandatory. We have a couple examples on the screen. The patent uses
17 the term "e.g.," for example, not "i.e.," and it will include peer to peer.

18 The patent says it's a nonlimiting exemplary embodiment that uses
19 peer to peer. And notably -- and we -- we put -- we identify this in our
20 briefing reply, patent -- petitioner's reply at 3 that Lemko -- Lemko's expert
21 actually admitted during deposition that the term does not require peer to
22 peer.

23 So we asked -- I asked Lemko's expert, "Is it your opinion that the
24 proper construction of DMA requires a peer-to-peer connection between
25 each and every DMA server in a system?"

26 And his answer was very clear. He said, "Not necessarily between

1 each and every DMA system." Sorry -- "Not necessarily between each and
2 every DMA server."

3 So you have the patent owner's expert admitting that DMA does not
4 require peer-to-peer connections or at least not necessarily.

5 To make it even stronger, I'm going to skip ahead to Slide 20. Slide
6 20 --

7 JUDGE RAEVSKY: Can I stop you for -- can I stop you for a
8 second?

9 MR. RUECKHEIM: Sure.

10 JUDGE RAEVSKY: This is Judge Raevsky. I didn't see the citation
11 to the transcript on that previous slide. Could you just let us know what that
12 is for the record?

13 MR. RUECKHEIM: Yes. So we cite the transcript in our
14 reply -- petitioner's reply at 3. And it is a citation to the deposition transcript
15 Exhibit 1022 at 59, 15 to 20.

16 JUDGE RAEVSKY: Thank you.

17 MR. RUECKHEIM: So I believe that's 1022 from IPR 2023-529.
18 The depo transcripts in both proceedings, but I believe the 1022 refers to the
19 '414 patent proceeding.

20 So we have Lemko's expert admitting that DMA does not require
21 peer-to-peer connections. What does Lemko have to say about it? Well, we
22 can see that on Slide 20, and this is from the '988 patent. And Lemko says
23 in the '988 patent, "In not all cases will the DMA servers be able to
24 participate as peers in an IP" -- "in an IP network."

25 So we have their expert saying peer to peer is not required, and we
26 have Lemko itself saying peer to peer is not required. We have -- I'm going

1 back to the Slide 19 briefly. We have a potential claim differentiation issue
2 that's discussed in the briefing where the patent discusses that an Internet
3 protocol network creates a peer-to-peer connection. But then the dependent
4 claim tries to limit the DMA server even further by saying the connection
5 here is over an Internet protocol peer-to-peer connection. So we have a few
6 issues with importing this peer-to-peer idea into the claims.

7 And so what is patent owner's response? That's when we get to Slide
8 21, which I'm going to skip over here because we just discussed. It's Slide
9 22. So this is -- this is why -- I think with this, with these admissions, it
10 would be improper to import this concept of peer to peer into the claims.

11 And if peer to peer isn't there, the rest of Lemko's proposal drops
12 away. And you know that because as shown on Slide 22 -- and this is from
13 the patent owner's response at 21 to 22 -- patent owner is really hinging and
14 relating all the other concepts in its proposed construction to this concept of
15 having peer-to-peer connections.

16 Patent owner says, "It is this distributed nature of DMA network that
17 allows the DMA systems to seamlessly route messages without having to
18 traverse a centralized switching hub. The DMA is interconnected through
19 peer-to-peer connections, and in this way, it can hand off communications
20 without going to this hub."

21 And so if there is no requirement for peer to peer, the other aspects of
22 Lemko's construction fall away as well.

23 Slide 23, so we attempted -- and I'm going to go through this
24 quickly -- to identify for the Board all of the evidence that Lemko alleges
25 supports this concept of importing peer to peer and no centralized hub into
26 the claim language.

1 This is from patent owner's response at 22. They say that the '414
2 patent at Column 10, lines 35 to 46 describe DMA systems link to each other
3 through an IP network. This is the IP network. This is what the patent has
4 discussed will create a peer-to-peer connection. And the language is "can
5 be." It's permissive language. It says it can be connected.

6 The next cite, again, 16, 55 to 57, in a -- described as in a particular
7 environment -- sorry -- in a particular embodiment, the connection is a peer
8 to peer. It doesn't say the connection is a peer to peer. It limits that concept
9 to a certain embodiment.

10 The next citation, 4, 58 to 60, again, the language here is "can be."
11 This is on Slide 25.

12 Slide 26 and 27 are interesting here because the other -- there are
13 other features. So it says that the DMA can include, again, permissive
14 language, this MSC and a base station controller. But it also says the DMA
15 can include other things that for some reason, some unexplained reason,
16 Lemko is not trying to import into its claim construction such as voice
17 trunks, a gatekeeper, HLR, VLR.

18 If the language of "can be" is a requirement as Lemko may be
19 alleging -- it's unclear -- there's no reason why other aspects that are
20 described as "can be" shouldn't be imported into the claim as well. And
21 that's really where the problem of importing embodied language into the
22 claim, you know, really lies.

23 Where do you stop? You have this permissive language just as a
24 whole bunch of options that -- where do you stop on what should go into the
25 claim?

26 27, again, it's the "can" language here that's included with an AA

1 model. Can also be included as well.

2 Slide 28, again, "can be" is included as a language.

3 Slide 29 -- 29 is interesting because the patent owner at 22 is citing
4 the '414 patent at 5, 37 to 54 and stating that this section discusses -- this in
5 the parenthetical in patent owner's response. They say, "This portion of the
6 '414 patent discusses routing a call between two UEs between different
7 DMA systems in the same DMA network locally without the need to
8 traverse expensive backhaul communications."

9 But that language is just not present. There's no comparison here
10 between expensive backhaul connections at all. It's basically -- all the
11 language says is that these calls can be connected locally without discussing
12 the connecting pipe in any way.

13 Slide 30 is again embodiment language is what Lemko is relying upon
14 for its support, for its construction.

15 And moving on to Slide 31, Slide 31 identifies Lemko's primary claim
16 construction arguments that the DMA is self-healing and decentralized. And
17 there's two points here. That centralized language is -- again, it's "can be"
18 language. And it's not even -- the primary "can be" language is at the end of
19 this -- this paragraph of different options. And it says that it can be
20 decentralized to avoid single points of failure.

21 Also, the "self-healing" language as shown on the screen, it says that
22 the control logic within DMAs can be distributed and associated. But when
23 it talks about the term "associated," it says associated systems are
24 self-healing. It really just calls distributed systems can be snapped together.
25 But self-healing here would be if the term was "associated." Maybe that's an
26 A -- MA. I'm not sure, but it's not DMA as Lemko is asserting.

1 So turning to the Board has identified here two additional -- a couple
2 of additional dictionary definitions. And so first, I don't think it's
3 appropriate to rely upon these definitions because neither party has and
4 neither party's, more importantly probably, expert has relied upon these
5 dictionary definitions.

6 And the definitions don't really address -- they're a little bit attenuated
7 in that they don't actually use the term at issue, "distributed mobile
8 architecture." But I do think these definitions support petitioner's view of
9 what the plain and ordinary meaning of the term to spread out this
10 architecture actually means.

11 And I can show you that if we turn to Slide 34. Slide 34 shows that
12 Waylett itself uses -- it

13 refers to its NIBs as a distributed architecture because it allows for an
14 expansion. And Your Honor had asked earlier about Lemko's view that this
15 is somehow -- distributed mobile architecture is somehow a coined term that
16 it made up -- that it invented it in its patents. Well, if it's coming up with a
17 coined term, it should have provided a definition for it. It didn't. It's just not
18 there. The parties agree on that.

19 But Slide 34 shows that this is not a coined term. Other prior art had
20 used similar terminology before. Your Honors have even seen it in the
21 dictionary definition of "distributed architecture" prior to Lemko's patents.

22 Slide 35, it's interesting because going back to the Board's
23 construction of distributed, this is how the '414 patent and the '988 patent are
24 really discussing distributed and associative communication systems. It's
25 showing them spread out to different coverage areas.

26 It says, "Figure 1 is a diagram of a distributed communication system

1 and associative." And it shows this different coverage areas -- components
2 going to different coverage areas. What it's not showing is that these
3 components have MSCs, BSCs, avoiding centralized hierarchical
4 architectures at all.

5 JUDGE RANGE: Counsel, this is Judge Range. You're -- you're a
6 little bit more than halfway through your time for the initial, and I do want to
7 make sure we have enough time to get to the DPR and CLR issues also. So
8 just -- just to be aware that -- it's your presentation, but I do want to hit those
9 other issues.

10 MR. RUECKHEIM: Understood. I will skip ahead. Slides 36 and 37
11 really are just expert testimony as to "distributed" just means to spread out or
12 have distinct components from both experts.

13 And I will skip one more ahead to the -- Slide 40 shows patent
14 owner's proposed construction for the same term, distributed mobile
15 architecture. And it shows that they're adding a concept here of that is not in
16 a legacy communication network.

17 And we'll just note for the record that the best evidence that the Board
18 should not adopt this construction is that its -- patent owner didn't even
19 propose this construction for the other -- for the same uses of the term in the
20 other proceeding.

21 Okay. Slide 58 is a roadmap for the challenges in the IPR2023-529.

22 On Slide 59, this is our primary combination. We're
23 proposing -- petitioners are proposing including Waylett's network in a box
24 into Mauer's WAN and WLAN systems in order to create two distributed
25 mobile architectures.

26 To the extent the Board does adopt Lemko's proposed construction,

1 the Mauer/Waylett combination actually does meet this connection because
2 we have shown here that -- through Lemko's illustration of Waylett's, that
3 the NIBs can communicate with each other without using centralized MSCs.

4 You also have Waylett's Figure 11 that depicts two network in a
5 boxes, shown at 224A and 224B, connected over a peer-to-peer connection.

6 We're going to go straight to Slide 64 because this is where the actual
7 discussion of Lemko's argument regarding the DPR begins. So the petition
8 identified that the '414 patent discusses a DPR in terms of a preferred call
9 path to route outside of the network. Expert opinion established that a
10 person of ordinary skill in the art would understand that Mauer's voicemail
11 server 66 is a DPR path. And it's obvious to store information for the path in
12 order to route calls there.

13 We can go right ahead to Slide 70. Petitioner's expert identified four
14 reasons why it would be obvious here why there be a motivation to combine
15 to store information pertaining to Mauer's voicemail server. Add a DPR in
16 the DMA server.

17 Information on the voicemail server would be the type of information
18 that would be needed to share across DMA systems. You would need to
19 store this information in order to find the voicemail server. It's just -- that's
20 part of the -- part of the way to address calls to the voicemail server.

21 It's consistent with the GSM standard. Waylett, of course, discusses
22 storing similar type of information, such as a VLR, in its NIBs. And storing
23 this type of information is really just the simplest form of you're using a
24 known element to perform the same function to yield expected results.

25 Slide 71 to 72 show Lemko's primary arguments here. They're
26 arguing that the voicemail server is not external to the network.

1 And so we discussed this earlier. We're identifying this voicemail
2 server 66 on Slide 72 from Mauer's Figure 1 as our external path. And the
3 parties dispute whether this voicemail server is part of the wireless
4 communications system or outside.

5 And I -- I mentioned earlier the best way for the board to know if this
6 voicemail server is outside of the wireless communication system is that not
7 everything inside of Figure 10 is part of a wireless communication system.
8 That's not disputed. Lemko's expert admitted that for the WLAN, the only
9 parts that are part of the wireless communication system are the phone and
10 the wireless access point.

11 I would also say the IP PBX, the private branch exchange, would be
12 part of it. But the landline 24 is not, and the voicemail server is several
13 components past the landline. And so I think the Board can take knowledge
14 of that admission to find that the voicemail server is actually an external path
15 here.

16 JUDGE RANGE: Counsel, this is Judge Range. I found myself
17 struggling with this issue a little bit because I can -- I can conceptualize how
18 I've got all these physical components. And some of them transmit, you
19 know, wirelessly to each other. Some of them may transmit through wires to
20 each other and whatnot. But it seems sort of abstract and arbitrary, I guess,
21 where you draw the lines in terms of, like, where one network stops and
22 where the next one starts. I was wondering if you can speak to that at all?

23 MR. RUECKHEIM: Well, I think the best way to look -- the best
24 place to look is the claim language where it discusses outside of a DMA
25 network. And one thing that's not disputed in any sense is that the "M" in
26 DMA stands for "mobile." And so we're talking about wireless. We're

1 talking about cellular. And we know that the voicemail server here is
2 outside of these cellular networks because their expert actually agreed
3 that -- basically, on the bottom right-hand side of Mauer's Figure 1, where it
4 says 22, the network stops there. The wireless network that we're pointing at
5 the, the WLAN, stops. It becomes a landline oriented, and it starts up again
6 at a different network. Then it goes to the voicemail server.

7 So you know it's outside there. And Lemko's argument is to the
8 contrary. They identify disclosure from the GSM standard, which really
9 does relate to wireless-connected voicemail servers outside of the concept of
10 what we're talking about in Mauer. And so I would think that the Court can
11 give those references less weight because they're really talking about
12 something different.

13 JUDGE RANGE: This is this Judge Range again. That patent owner
14 testimony you just mentioned, is that cited in your reply brief?

15 MR. RUECKHEIM: It's in their surreply. It's in Lemko's surreply.
16 They -- they cite to a few examples of why they think the voicemail server is
17 part of or should generally be considered part of wireless networks. And if
18 you have a wireless network -- I'm not going to argue there's other systems
19 that are possible. But what we're pointing to is the Mauer system here where
20 there are breaks in the wireless DMA network directly.

21 JUDGE RANGE: And I guess what's the evidence that that -- that it
22 becomes a landline to get to the voicemail server?

23 MR. RUECKHEIM: Sure. That is -- and I can give you the exact
24 citation to the record there. If we can go there a second. But this is from
25 patent owner's -- this is Slide 77.

26 So there's two things. I'm going to start with our expert first. Our

1 expert, Dr. -- Mr. Proctor, provided the expert analysis that he does not
2 believe the voicemail server would be part of this DMA network. And that's
3 on Slide 74.

4 On Slide 75, this is again Mr. Proctor saying that the voicemail server
5 is not part of the DMA network here.

6 And then that's -- that's our guy. But then when you get to their guy
7 on Slide 77, this is Dr. Cooklev. Dr. Cooklev says -- you know, I asked him,
8 "Well, what is this WLAN? What are the components that make up this
9 WLAN DMA architecture? Is it everything in this orange box?"

10 And he said, "Well, no." He said, "Well, Part 18 is." That's your
11 wireless access point, right? Because we're talking about mobile here. It's
12 going to be wireless. But "I think" -- he said -- this is his language -- "I
13 think the wireless local area network in Figure 18 is between the mobile
14 phone 16 and the access point 18. Those are the only two devices that have a
15 wireless local area network capability as shown."

16 You have the -- the line. I know it's hard to tell. I mean,
17 the -- actually, it's not hard to tell. Figure 1 shows when it's dealing with
18 wireless between 16 to 18, a lightning bolt to indicate wireless. And it's
19 using, on 22, a solid line to indicate more of a landline.

20 So that's -- that's the actual depiction of Mauer. And that's what Dr.
21 Cooklev looked at to say that the voicemail -- sorry -- the wireless system
22 here is really just these two parts, and the voicemail server is a several parts
23 removed from that.

24 JUDGE RANGE: That's helpful. Thank you.

25 MR. RUECKHEIM: We can go to Slide 78 and 79. This is the next
26 dispute. Lemko is arguing that the claim recital of the call requires the call

1 make it to the second mobile subscriber and not a voicemail system. And
2 here, Lemko's really just importing again more requirements into the claim
3 language than the claim language requires. The claims do not require
4 connection to a second mobile subscriber.

5 It just says the call is -- is met by the original person making the call.
6 That call is, of course, being connected to a voicemail server. It's the same
7 call. When I call somebody and they answer, that's a call. I say, Hello.
8 They say, Hello back. If I call somebody and they don't answer, it's still my
9 call to that person. But it goes to voicemail, and it's routed to voicemail.

10 And that's what the patent is talking about here in the claims. There's
11 a destination path to somewhere different, but my call is being routed to
12 voicemail. And I'm not going to -- you know, if I'm calling my co-counsel
13 here, Mr. Kang, and he answers, I'll go, Hello, Mr. Kang. If I call and it
14 goes to his voicemail, I'm going to say, Hello, Mr. Kang, again, because I'm
15 making the same call. I'm going to leave him a message.

16 JUDGE RANGE: This is Judge Range again. You're -- you are kind
17 of addressing this. But one question I had is what a call is in the context of
18 Claim 1, because it seems like in ordinary parlance, we might consider the
19 call to be the actual people speak to each other. That's the call. They have a
20 conversation. It goes over whatever communication means to have that call.

21 But the entirety of the claims happens before anyone's speaking at all.
22 Right? So it's a little bit weird for me to understand what a call is in that
23 context prior to -- prior to there even being a connection, I guess.

24 MR. RUECKHEIM: I think Your Honor's exactly right. And I will
25 say that first, if you look at the '414 patent at Column 17, lines 37 to 45, it
26 discusses using voicemail. It's discussed a couple times in the patent. So

1 voicemail is part of this.

2 But Your Honor is exactly right. The claims relate to activities that
3 happen before. It's really the point of view of the person making the call.
4 And if I -- like I said, if I make a call to Mr. Kang and it goes to voicemail,
5 I'm not going to just start talking to Mr. Hopkins because I know I was
6 calling Mr. Kang.

7 And so that's -- that's the fundamental disagreement. The patent
8 owner here is trying to import a requirement of a call being received by the
9 person who is expected to receive the call and not voicemail. And the claim
10 just doesn't require that.

11 JUDGE RANGE: This is Judge Range again. Would it make any
12 sense for the word "call" in this context to be more like a call request or
13 request for a connection?

14 MR. RUECKHEIM: So I'm hesitant to change the -- the terminology
15 of the claim. But I do know when I'm making a call, I think it's fair to say
16 that I'm making a -- a call request. I'm placing a call. It doesn't require at all
17 anybody to pick it up.

18 JUDGE RANGE: That's fair.

19 MR. RUECKHEIM: Slides 80 to 83 addresses Lemko's argument that
20 Mauer's alternative communication option is not triggered when the call is
21 directed to a destination device outside the network.

22 So this is -- this is what we're talking about. The claims recite when
23 the second mobile subscriber is not located within the first, second, or third
24 wireless coverage area. You determine this preferred call path based on
25 information stored at the DPR.

26 And that is exactly what -- that is exactly what is done here in this

1 Mauer/Waylett combination. Voicemail is reached when a user is outside of
2 the network area. When the user is inaccessible to the networks, it goes to
3 voicemail.

4 Slides 84 to 85 --

5 JUDGE RANGE: This is Judge Range again. One -- one question on
6 that point is that it seems that Mauer -- it goes to voicemail in other
7 circumstances also. So I guess the one question might be whether the claims
8 require that a determination actually be made that the person is outside of a
9 particular area.

10 Like, for -- like, for example, the way I would understand Mauer, it
11 might go to voicemail if the phone was off. Like, maybe the person's in the
12 area, but the phone is off. Or maybe they have it on "do not disturb" or
13 something.

14 MR. RUECKHEIM: I don't have the claim language in front of me
15 right at this moment, but I can -- I can bring it up and address that on my
16 rebuttal time if that works.

17 JUDGE RANGE: That'd be excellent. Thank you.

18 MR. RUECKHEIM: Okay. Slides 84 to 85 discusses the idea of a
19 community -- community location register. Lemko's arguing that Waylett's
20 configuration table is not a CLR. But the claims here require the -- CLR has
21 some type of determination whether the -- I'm sorry. You're going to make
22 this determination whether the second mobile subscriber is located within a
23 second wireless coverage area based on information stored at a community
24 location register.

25 And Waylett's communication table -- configuration table does just
26 that because it identifies the IMSI and the HLR for a different subscriber.

1 And it uses this information to locate a mobile station in a second wireless
2 network.

3 Lemko argues that this claim requisite determination must be made
4 based solely on the information in Waylett's configuration table, but nothing
5 in the claims require this determination to be based solely, only that the
6 information from the -- here or the configuration table is used in making this
7 determination.

8 JUDGE RANGE: On -- this is Judge Range again. On this CLR, I
9 was wondering if you had thoughts on how communicating -- community
10 location registers should be construed or what -- or what that is.

11 MR. RUECKHEIM: It's -- really it's -- we know what the word
12 "register" is, and we know what the word "location" is. And so neither party
13 is really proposing an argument that the term needs to be construed beyond
14 that. And I don't think there's an argument -- and the patent owner can
15 correct me if I'm wrong on -- on their time. But there's -- that the
16 configuration table here could not constitute a CLR.

17 So I don't think that the -- the main argument here is whether or not
18 the -- all the information needs to be from what we're calling a configuration
19 table CLR and not whether or not a CLR can be a configuration table. It can
20 be a readable medium.

21 JUDGE RANGE: So -- so just -- just to crystallize that a little bit,
22 this -- I guess -- I guess Waylett is -- what you're pointing to in Waylett is
23 essentially -- it's not exactly this, but analogous to if you used an area code
24 to know that there's people in a different area. So it's not information about
25 particular individuals. And patent owner's arguing, no, the CLR needs to
26 have information about individual people or individuals.

1 MR. RUECKHEIM: I don't even know if it's gotten that specific.

2 JUDGE RANGE: Okay.

3 MR. RUECKHEIM: I think it's just more patent owner is trying to
4 argue that the claims require taking -- making this determination based
5 solely upon the information so that -- and in Your Honor's example
6 potentially, if patent owner is arguing, you're going to have to look at
7 something else to get even more specific. But we're arguing that all the
8 claim requires that some information is used in making this determination.

9 JUDGE RANGE: What -- what's does -- what distinguishes a
10 community location register from just like any database?

11 MR. RUECKHEIM: I think that's a great question. Other than the
12 fact -- I'd answer it. I don't want to construe the claim because we have it
13 and the other party has.

14 JUDGE RANGE: Okay.

15 MR. RUECKHEIM: But it does use the term "location" in it. And so
16 I would think that it would have to be some type of -- database is going to be
17 more generalized.

18 JUDGE RANGE: Okay. Thank you.

19 MR. RUECKHEIM: Mm-hmm. 87 to 88 involved this -- this claim
20 limitation of a CRM. Lemko is arguing the claims require some kind of
21 software-based MSC, BSC. But as we've shown in the briefing, the -- the
22 network module cards include both processors and locally stored instructions
23 to operate the processors.

24 Slide 90 shows here that -- and this is from Exhibit 2012 -- that the
25 NIBs here are implemented through a -- they can be interchangeable through
26 a software configuration. So even if software-based MSCs were required,

1 we think they're shown because the hardware cards here would use
2 processors in the locally stored structure to be software. And Waylett itself
3 actually says that they're using software configurations for these features.

4 This is very similar, as shown on Slide 92, to Lemko's Node1 product
5 that -- it's unclear because Lemko is pointing to a number of different
6 products. That's what practices claim. But Lemko's Node1 product also
7 uses network cards.

8 Slide 93 starts the discussion of secondary considerations. The
9 takeaway for the board here is nexus. And Lemko's expert admitted -- this
10 is, I think, shown on Slide 93. That's just the start.

11 What we have in the briefing -- and I can find the reference for the
12 Board on rebuttal. But Lemko's expert admitted that he did not map
13 Lemko's product to the claims. And what was not shown -- oh, here it is on
14 Slide 96. This is Lemko's admission that he did not map the product to the
15 claims.

16 And what's missing is the DPR. And the Federal Circuit requires
17 nexus in order to show a strong showing of secondary considerations. So we
18 have a lack of nexus, and we also have Lemko pointing at various different
19 products and mixing mass and features in order to prove up that some
20 features of some products meet these claims, which also weighs against
21 finding nexus.

22 And so what's important for the Board to know is secondary
23 considerations is a weighing feature here against the motivation to combine
24 the obviousness case here.

25 And here, as I said earlier, the background problems addressed by
26 these patents by Waylett and the patents at issue are so similar. The strength

1 obviousness here is so strong. Secondary considerations do not detract.

2 And so I'm going to move on to another -- the second patent, the '988
3 patent on Slide 105 unless the Board has other questions. I know I'm going
4 to have to rush through this, but fortunately, we don't have a lot of disputes
5 for the '988.

6 JUDGE RANGE: That would be great.

7 JUDGE IPPOLITO: Counsel, you've got about 7.5 minutes.

8 MR. RUECKHEIM: Thank you. Slide 107 is our roadmap. And
9 really, there's just four issues here besides the claim construction issue,
10 which we've already discussed. So as I said, we chose Slide 108. We chose
11 the Flore reference for this IPR because of the focus on these handover
12 communications. We have a distributed network, that UTRAN with various
13 NodeBs. We have the distributed network, the UTRAN network with the
14 distributed eNodeBs shown on Slide 108 and Flore's Figure 1. The gateway
15 here are shown in green and red, the SSGN and the inter-AS anchor.

16 Slide 109, the first dispute between the parties is easily dismissed.
17 Lemko is accusing petitioners of shifting their analysis that the DMA servers
18 were -- at one point, I think they said that we called them the NodeBs. At
19 another point, we called them the AGW and the RNC.

20 And I think the Board can just look at the briefing. The Board can
21 look at Lemko's own copy of this annotated figure shown on Slide 105.
22 That's clearly labeled in a blue box, "DMA Servers," so the board knows
23 what we're talking about. There's been no shifting of analysis here.

24 Turning into Slides 110 to 111, the primary dispute for the '988 patent
25 is this term "communications information." So the petition identified how
26 the gateways will exchange information, exchange messages. And I think

1 Lemko's demonstratives show the Figure 7 from the Flore reference. That
2 really shows the whole flowchart of how this process happens.

3 The -- what we've identified as the DMA servers will exchange
4 information between the gateways, and then the gateways will send a PDP
5 context that includes the routing information for these gateways.

6 So Lemko's primary argument appears to be that the -- the PDP
7 context that we've identified does not identify a network accessible by a
8 second gateway because they admit -- first, they admit that the SGSN here in
9 Flore, so what we're calling the second gateway, DMA gateway, sends its
10 identity to the first DMA gateway, this Inter-AS anchor. But they're saying
11 that that alone does not identify a second gateway.

12 Well, all the communication information the claims require is some
13 type of communication information for a network accessible by second
14 gateway. And it's got to be -- it has to be indicating one or more devices
15 accessible by the DMA server and the legacy communication network.

16 The best as I can tell, Lemko is arguing that there needs to be an
17 identity -- there needs to be a -- a UE that is accessing a first network and a
18 second network at the same time. Because Lemko is arguing that before a
19 handover occurs, the UE, the phone, is not accessible to the second network.
20 And that just doesn't make any sense.

21 We have the information coming over to show how to get into that
22 network through the SGSN. And while the handover is occurring, the
23 device is now accessible by the second network when it was at one point
24 being accessed present tense by the first network. Accessible is potential
25 language. And here, the communications information does just that.

26 And on Slide 112, this is the admission from Lemko that the SGSN

1 actually sends over the identity of the second network to the Inter-AS
2 anchor. And as I said earlier, you can see the same flowchart they -- they
3 brought. I mean, it just makes sense. You have to have -- you have to know
4 where the second network is. So I think it's Figure 7 in Flore that says
5 these -- these networks exchange information, and then the identity is sent
6 over to the Inter-AS anchor. And that's how the PDP context is going to
7 show -- provide the information for routing.

8 Slides 113 to 115 discusses the next dispute, communications
9 information indicating one or more devices. So Flore discusses this
10 limitation as well. Flore identifies the IP addresses of the UE involved in the
11 handover. This UE is accessible by the DMA server and the UTRAN
12 network.

13 Slides 116 to 118 involves this concept of storing the communications
14 information in a home DMA register. So we know that from Flore and from
15 the Exhibit 1006 -- this is the 3GPP specification -- that there is this GGSN
16 that's a register for SG the SGSN. And this GGSN stores location
17 information. So that's pretty clear cut.

18 We also know from Flore that the Inter-AS anchor emulates the
19 GGSN, and so we present an expert analysis that a person of ordinary skill
20 would know that the Inter-AS anchor also has this location information.
21 And that just makes sense because the PDB context is being sent between
22 the two different gateways.

23 Lemko up here is apparently arguing that this GGSN does not store
24 location information because the only thing that's stored in GGSN is the
25 UE -- sorry -- is the address of the UE and the address of the gateway that
26 serves it. And petitioner's point of view is that is location information, and

1 that is all that the claim requires.

2 We've shown -- and this is at Exhibit 1006 at 13 to 14 -- what's being
3 stored in here is also subscription information and routing information,
4 information needed to tunnel the packet across these gateways.

5 Slide 118, this is the expert analysis that GGSN includes location
6 information and that the Inter-AS anchor is going to emulate the GGSN so
7 that both gateways will include the location information.

8 That takes us to the disputes as to the dependent claims. Slides 120 to
9 123 deal with Dependent Claims 7 and 8. The arguments here are covered
10 by the arguments that we've already made and we've already discussed.
11 Features identify that the update PDP context response is forwarded from the
12 alleged first DMA to the alleged second DMA. And that contains portions
13 of the communication information.

14 JUDGE IPPOLITO: Counsel. Counsel, you're out of time for the
15 time that you had set aside for your opening arguments, but you can use your
16 rebuttal time.

17 MR. RUECKHEIM: Thank you. Just -- just that two more points.
18 Claim 9 recites that the comm information, the communications information
19 includes at least one of three things. Petitioner provided expert
20 testimony -- this is on Slide 124 to 125.

21 The demonstrated claim is met because the HLR is the location
22 registered to which the mobile subscriber is -- is assigned for record
23 purposes.

24 We also identified in the briefing that the PDP contacts also contains,
25 in addition to HLR information, the VLR data. It's undisputed that the PDP
26 contacts include the identity of the SGSN. This is also shown in Exhibit

1 1006 at 19. And --

2 JUDGE RAEVSKY: And so did you raise that VLR argument for the
3 first time in your reply, or was that in the petition somewhere and I missed
4 it?

5 MR. RUECKHEIM: I can find that. I believe it was in the reply, in
6 response to their argument, as properly raised in the reply, but in response to
7 the argument that the HLR is not sufficient. But I can find -- I can answer
8 that question for you on the rebuttal.

9 JUDGE RAEVSKY: That would be fine.

10 MR. RUECKHEIM: That takes us to Dependent Claim 20, Slides
11 126 to 127.

12 And so here, Dependent Claim 20 says that the communication
13 information is sent from your second DMA gateway to the first. And so
14 based on the mapping we did for Claim 1, the second DMA server is your
15 SGSN. The first is the Inter-AS anchor.

16 We identified in the petition how it could also go the other way. But
17 no matter how you do it, it's undisputed here that these two gateways
18 exchange information, including the identity of the different gateways. So
19 whichever way you do it, you're going to get this communication
20 information sent between the two gateways. And then the other gateway
21 that's receiving the information is going to respond with a PDP context that
22 includes the routing information for the UEs at issue involved in the
23 handover.

24 So unless there's any questions, I will rest my time until the rebuttal.

25 JUDGE IPPOLITO: You have about 27.5 minutes.

26 MR. RUECKHEIM: Thank you.

1 JUDGE RANGE: Thank you, counsel. Let's go off the record for just
2 a moment.

3 (A brief recess was taken)

4 JUDGE RANGE: So patent owner will have 90 minutes total to
5 argue. We allotted 70 minutes for the opening part and 20 minutes for
6 surrebuttal.

7 And with that, patent owner may begin.

8 MR. FRANKEL: Thank you, Your Honor. This is Aaron Frankel on
9 behalf of Lemko. And I'll be -- I'll start by addressing the '414 patent, and
10 then Mr. Hannah will address the remaining issues.

11 Here's a summary of the points that we'll address. I'm going to -- with
12 respect to Issue No. 4, which is the computer readable medium argument,
13 we'll just submit that on the papers.

14 And before we get into the claim construction issues, which I will
15 address, I want to start by just giving you an overview of the real problem
16 that the '414 patent was focused on and then get into some specific claim
17 language over which there's no claim construction dispute. And that should
18 be dispositive.

19 So it won't even be necessary to reach the construction of DMA to
20 conclude that petitioner has failed to carry its burden to show obviousness
21 here.

22 So just taking a step back, you know, Lemko made a really successful
23 product, a really successful line of products that really changed the industry
24 and solved some problems it received. And I'll talk more about secondary
25 conditions, secondary evidence at the end if there's time. But there was a lot
26 of industry recognition from cellular carriers and from customers who said

1 that Lemko's product was the only one that could solve their problems.

2 And then Microsoft went out and bought their -- Lemko's biggest
3 competitor, Firm Networks. That's why we're here today.

4 The -- what -- what Lemko did was flip the network paradigm on its head.
5 You know, at the time that Lemko filed its patents, cellular networks were
6 very hierarchical in nature with -- the routing smarts was all located at these
7 centralized hubs, the MSCs. And that just made it very expensive and
8 infeasible to handle calls in local areas.

9 You know, there's -- the patent talks about the problem of getting
10 cellular service out into rural communities. There is -- one of Lemko's first
11 deployments was in a small fishing village out in Alaska, and just a couple
12 of hundred people lived out there. And the only connection to the MSC was
13 by satellite.

14 So it was very expensive. You know, two people could be calling
15 each other from across the street, and the calls would go to the one cell
16 tower in town. Then would go up to a satellite, back to mainland to talk to
17 an MSC, back up to the satellite, back down to the cell tower. And that's
18 how two phones would end up talking to each other, which was a very
19 expensive and wasteful way to communicate when people could be right
20 next to each other.

21 So they developed this concept, the distributed mobile architecture,
22 which is a mobile architecture, but one where the routing functionality is
23 distributed. And that really changed the way that the industry operated. It
24 led to -- there was a lot of copying of that idea.

25 But the -- you know, moving the routing from up high in a centralized
26 hub down to the individual nodes created some specific challenges and

1 problems. And that's -- there are many patents in Lemko's portfolio. And
2 each of the patents deals with different subproblems or challenges that are
3 created by the decentralization.

4 So the first problem that the '414 patent addresses is how do you
5 figure out where the destination device is. Because if each -- if the idea is
6 that each DMA system is supposed to be an independent hub that can figure
7 out how to connect a call without going up to the MSC, it needs to be able to
8 determine if the target is within range of another DMA system that it can
9 communicate with.

10 And the solution for that, you know, is to give each of the nodes its
11 own HLR that tells it who's registered with that device and a VLR that tells
12 it which devices are visiting. So if you're in that Alaskan fishing village, and
13 there's a tourist in town for the week to do some fishing, their phone would
14 be registered and stored in the VLR. And then there's the CLR.

15 Now, there is no claim construction dispute about the CLRs because
16 it's -- it's explicitly defined in the patent. The caller contains copies of the
17 HLR, VLR information from the other DMA systems. So if there are five
18 DMA systems that are communicating to form a DMA network, then each of
19 them would have a CLR for each of the other DMA system that would tell it
20 which devices it can reach at those DMA systems. And that's how it knows
21 how to route the call without involving the MSC.

22 That was totally a new concept. There's nothing in either of the
23 references or the prior art that relates to that CLR concept.

24 But then there's a second problem, which is how do you -- how do you
25 reach someone if they're not within range of one of the DMA systems that
26 are in the DMA network. And to do -- to do that, you have to reach out to an

1 outside network.

2 And there could be different ways to reach out to the outside network.

3 You could use VoIP and ISDN. And that's where the concept of the DPR
4 comes in, which is to say that depending on where the phone is that you're
5 trying to reach, you would pick a different path to reach that phone. And the
6 user could set preferences. It might be that they want to prioritize saving
7 costs, so they'll use VoIP to make the connection. Or it might be that they
8 want a really good quality of connection, so they use the ISDN.

9 And that's -- that's the DPR concept. That's also not found in either of
10 the -- of the references at issue or anywhere else. And, in particular, both
11 Mauer and Waylett, neither of them show a DMA network. Neither of them
12 have a DPR. And neither of them have a CLR. They don't have a local
13 copy at what's accused of being the DMA server of the HLR data from the
14 other DMA servers in the network. That's nowhere in any of those
15 references.

16 JUDGE RAEVSKY: This is Judge Raevsky. Do we need to construe
17 CLR or DPR in order to find for you?

18 MR. FRANKEL: I don't think you do because the claim limitations
19 that we'll talk to include the requirements that we're relying on.

20 But to the extent that construction is necessary, it's that the CLR
21 contains a copy of HLR or VLR data from the other DMA systems in the
22 DMA network.

23 JUDGE RAEVSKY: And is your basis for that
24 construction -- that -- that alternative theory you just proposed, is your basis
25 some definition in the specification, or you're again relying on the plain and
26 ordinary meaning?

1 MR. FRANKEL: That's in the specification, and I'll come back with
2 cites in the -- in the reply portion.

3 I mean, CLR is not a term of art, and it does not -- just take -- just
4 looking at the words "community location register" does not immediately
5 convey to a person of ordinary skill in the art what's meant. The
6 specification makes very clear in multiple figures and passages exactly what
7 the CLR is at -- as does the claims.

8 So let's talk about the references that are being asserted here. And,
9 you know, what petitioners have done is take two references that are really
10 premised on just plain, old conventional networks at the time and make very
11 small modifications.

12 And they've completely reimagined them to try to read on the claims
13 here. And, you know -- I mean, let's start with the Mauer reference. So
14 Mauer has the idea of a dual mode or a multimode cellular phone. So you
15 can use it to connect to the WWAN, which is just a conventional cellular
16 network. There's nothing in Mauer that purports to change what the WWAN
17 is.

18 So you've got a phone that can talk to a cell network, and then you've
19 also got a phone that can talk to a WiFi network. And the problem that
20 Mauer tries to deal with is if you could reach a phone in two ways, you need
21 a strategy for managing that process. You want to try both.

22 So Mauer -- the solution the Mauer comes up with is let's have a soft
23 switch. And instead of calling the phone directly, you call the soft switch.
24 And then the soft switch will first try to reach the phone, maybe through the
25 cellular network. And if that works, great. The process stops. If that
26 doesn't work, you'll try to reach the phone through the WiFi network. And if

1 that works, that's great, and the process stops.

2 And then if it fails -- and this isn't an extensive focus of Mauer, but it
3 does say if that doesn't work, then you could send the call as a booby prize.
4 You know, the -- if you can't get in touch with the person you're trying to
5 reach, you can go to this voicemail server.

6 Now, to be clear, there's nothing about the why -- the wireless local
7 area network. There's nothing about the cellular network. And there's
8 nothing about the voicemail server that are presented as new or inventive at
9 all. There's nothing in the record to suggest that's the case, and it is
10 completely undisputed in the record.

11 There's just unrebutted testimony from Dr. Cooklev that at that time, a
12 cellular voicemail server would be implemented at the MSC. So that is
13 clearly part of the cellular network.

14 And petitioner's argument as to the voicemail server is, well, it's not
15 part of the wireless network because the only wireless connections -- or if
16 you look at Figure 1, the phone either is talking to the WiFi network or to
17 the cell tower. And everything that happens after that is done by wired
18 connections.

19 And that's true, but that's irrelevant. You know, if you -- if that -- the
20 cellular networks at the time, the cell phone is connected by radio to the
21 tower. And then the tower goes to the BSC, and then it goes to the MSC.
22 And those are by wired backhaul connections.

23 Now, no one would say that the MSC is not part of a mobile network
24 or cellular network. It's actually at the core of the network. It's literally
25 called the network core, and that's where the voicemail server would be
26 located. There's no teaching in Mauer of putting the voicemail server

1 anywhere else. And that's why it's considered part of the entire network,
2 which is viewed as Network 10.

3 And in the petition, petitioners said that 10 represented the DMA
4 network. So it's clear that the voicemail server is -- it's undisputed that the
5 voicemail server would be located at an MSC and as part of Network 10 and
6 is not something that's outside of the DMA network.

7 And another part about --

8 JUDGE RANGE: Counsel. Counsel, this is Judge Range. I guess I'd
9 pose to you the same question I posed to them, which it's a little bit hard for
10 me to conceptualize how do I know where one network starts and where
11 another network stops and so forth. It feels kind of arbitrary, so if you could
12 just address that.

13 MR. FRANKEL: I completely agree, Your Honor. The -- what
14 petitioners have done is taken Figure 1 and just arbitrarily drawn boxes in a
15 way that -- try -- you know, to try to -- to generate an argument here and
16 then use different colors and say, Well, this is one network. This is another
17 network.

18 The -- for purposes of the claims, it doesn't even matter where the
19 lines are drawn because it just doesn't map to what the '414 patent claims are
20 talking about. But the voice -- what is clear is that the voicemail server is
21 part of the overall controlled network.

22 If you're the operator providing the cellular network, you own and you
23 control the voicemail server. That's not something that you need to figure
24 out do you want to use path A or path B to get to. That is an integral part of
25 the network core.

26 And as -- as we'll get to, the claims are not talking about, for the DPR,

1 how do you get to something that's part of your network. That's when you're
2 trying to get to something that's outside of the DMA network, and you don't
3 know the best path to get there.

4 But I want to -- if we could just focus for a minute on the softswitch.
5 The softswitch is -- is in a way a dumb device in Mauer. The softswitch
6 does not know where the phone is. That's the whole point in Mauer. If you
7 knew where the phone was, you wouldn't need the softswitch.

8 So the algorithm that Mauer teaches is, is first try to reach the phone
9 through the cellular network. See if that works. If that doesn't work, try to
10 reach the phone through the WiFi network. And if that doesn't work, you
11 give up on trying to reach the phone, and you can go to the voicemail server.

12 So it doesn't have an HLR-type functionality. It doesn't have a
13 VLR-type functionality. It certainly doesn't have a CLR-type functionality.
14 Softswitch is just ignorant as to where the phone is, and it tries to reach it.

15 And by the way, if it fails, it could be that the person who has the
16 phone is just asleep. You know, they may be sitting right next to the cell
17 tower, and the battery ran out. Or they're on a call with someone else, or
18 they got a call from someone that they just don't want to talk to.

19 And if they don't pick up, then the system will try to connect through
20 the WiFi network. And if that doesn't work, it gives up, and it will send the
21 call to voicemail. So when we get to the claim, the specific claim
22 limitations, we'll see that it's just not lining up at all with what the claims
23 require.

24 And actually, let me just jump over now. So you had asked the
25 question of petitioner, if it's -- if the claims require that a determination be
26 made, that the phone is actually not within range of the DMA systems. And

1 the answer is yes. The claims do require that.

2 So just taking Claim 1, for example, first, you determine that the -- the
3 phone, the target phone is not within range of the first DMA system.

4 And -- well, if it is, great. You just connect through the first DMA system.

5 But then if it's not, it's -- we're in the upper-right portion of the claim
6 here -- determining whether the second mobile subscriber is located within a
7 second wireless coverage area of the DMA network that's associated with
8 the second DMA system based on information stored at a community
9 location register associated with the second DMA system.

10 So the phone is in the range. The -- the outgoing phone is in the range
11 of the first DMA system. And the first DMA system checks its HLR. It
12 checks its VLR. It says, Well, I have no idea where the person you're trying
13 to reach is. That's what the claim requires.

14 Then at the first DMA system, it has to check the CLR. That's the
15 local copy of the HLR or the BLR from the other DMA system. And it
16 checks that, and it says, Yeah, I don't know where this phone is either.

17 That's how it makes the determination that the phone or the person it's
18 trying to reach is not in range of either the first or the second DMA system.
19 There's nothing like that in Mauer at all. It just does not work that way. It
20 doesn't disclose it. It doesn't suggest it. It actually teaches away from it. It
21 says --

22 JUDGE RANGE: So -- so, Counsel, when Mauer checks to see if a
23 phone is just generally unavailable, which could be possibly for any reason,
24 maybe the phone shuts off. Or it's in the wrong place. Or it's on do not
25 disturb. You're saying that wouldn't meet the claim? Because
26 there's -- there's never a determination -- there's never this second

1 determination determining whether the second mobile subscriber is located
2 within a second wireless coverage area dot, dot, dot?

3 MR. FRANKEL: Correct. It never -- all it -- all it knows is that when
4 it tried to reach the phone through the second network, it failed. Could be
5 because it was out of the range. Could be because it was turned off. Could
6 be because the person didn't want to talk.

7 So it's not -- it's -- all that it's determining is that the call was not
8 completed. The claim requires determining whether it's located within the
9 second wireless coverage area. but also important is that the determination
10 has to be based on CLR data about the second DMA system that is stored at
11 the first DMA system.

12 So, you know, talking about just a brute force, try to reach someone
13 through a first network, try to reach them through a second network, and
14 then if you fail, you know, give up, that has nothing to do with using CLR
15 information.

16 Now, this is not a trivial limitation. I mean, this is a core concept of
17 the problem that the '414 patent is trying to solve, which is how do you
18 figure out if you -- if you've got these different DMA systems and you want
19 them to cooperate to be able to connect calls, how can you do that without
20 having a central hierarchy? And the answer is the DMA systems talk to
21 each other, and they have local copies, that's the CLR, of which phones can
22 be reached, by which of their DMA system friends, the peers.

23 Now, you don't need to construe the claims to require peer-to-peer
24 connections to find that neither Mauer nor Waylett says anything about
25 using a CLR to figure out which phones are within range of which DMA
26 systems as the claims require.

1 So let's talk about Waylett. You know, the Waylett idea also -- and
2 counsel pointed out that Waylett wants to reduce --

3 JUDGE IPPOLITO: Counsel, I know we're sharing screens, but I'm
4 just going to remind you to let us know what slide you're on just so that we
5 have it in the transcript as well. Thank you.

6 MR. FRANKEL: Thank you. I apologize. So we're on Slide 10 now.
7 Slide 10 is one of

8 the figures from Waylett. And the purported invention of Waylett is
9 the so-called network in a box. And it's important to look at what the
10 network in the box is and is not.

11 That idea of the network in a box is you take functionality that would
12 normally be in an MSC. You put it in a small single housing, and then you
13 can use that to run a small local network. But that network in a box, to reach
14 anyone outside of the network, goes to a conventional cellular network.
15 There's nothing inventive about the network that the network in a box goes
16 back to.

17 So that might be you -- you have a summer camp. You set up a
18 network in a box that's going to let people communicate locally. But if
19 they're not in range of that single network in a box, then it's just going to
20 send the call back to Verizon or T-Mobile or some other carrier. And that's
21 where everything else will get worked out.

22 There's nothing in Waylett that talks about enabling multiple networks
23 in a box to form a local network where they cooperate together by sharing
24 CLR data.

25 So, you know, Waylett doesn't have the concept, and Mauer doesn't
26 have the concept. And you can't put the two -- you know, one plus one can't

1 equal five. Neither of them talked about a DPR, and neither of them talk
2 about a CLR. And to try and combine the two references and then say,
3 Well, it would have been obvious if you push these two together to then add
4 on a CLR and add on a DPR, that's just using hindsight to try to recreate the
5 claims by working backwards from the claims in the first place.

6 The network in a box is a single node. It's a single local node. It
7 doesn't talk to any other node. That would be bad from the Waylett concept.
8 The Waylett concept -- concept is make the box as cheap as possible for a
9 little local area network, and then everything else goes back to the main hub.

10 Now, to try and invent from Waylett, having the distributed mobile
11 architecture that the Lemko patents have is just pure hindsight. It's -- it's a
12 different solution to the problem, which is one noncooperative node, and
13 everything else goes back to the main network.

14 And then Mauer doesn't purport to make any changes to the networks.
15 It's just how do you reach someone if it's possible that their phone could be
16 talking to one network or another network. And that's it.

17 In fact, the whole concept of Mauer is a dual mode phone. So Mauer
18 is saying if you have a phone that can either communicate by cellular or
19 wireless, we're going to use the softswitch as a way to sort of try one and
20 then try the other.

21 But Mauer -- so, you know, that's a very different paradigm from
22 what -- why don't we actually connect the cell network and the wireless
23 network and merge them together so they can cooperate and together figure
24 out how to reach the cell phone. That's not suggested, and Mauer actually
25 teaches away from that.

26 And petitioners suggested -- they didn't talk about this during oral

1 argument, but their suggestion is, Well, if you combine Mauer and Waylett,
2 you would put one network in a box as the WWAN. And you would have
3 another network in a box and make that the -- the WiFi network.

4 The problem with that is that also teaches against the very concept of
5 Waylett, which is put everything into one cheap box. You know, Waylett
6 explains that its network in a box can handle both cellular connections and
7 local WiFi connections.

8 So if a person of ordinary skill in the art was going to combine -- a
9 person of ordinary skill in the art would not combine the two because they're
10 dealing with different problems and different solutions. But if they did, you
11 would just put one network in a box to manage the connections. There's no
12 reason you would use two and then set up some kind of peer-to-peer network
13 where the two network in a boxes were sharing information with each other.

14 To try to make that argument, it's again, just pure hindsight and
15 working backwards to try and pick and choose from here and there and then
16 say that the person of ordinary skill in the art would just bridge over
17 whatever is missing because it's obvious.

18 And because Waylett -- the idea is to put everything in one box to
19 handle anyone that's within range. And if you can't reach them, just send it
20 to the main network. There'd be no reason to add CLR functionality into
21 Waylett. Because the only purpose the CLR has is to make mobile nodes
22 that are cooperating with each other be able to figure out where other people
23 are so you can figure out which node you need to reach out to connect a call
24 if someone is in range.

25 So turning to the DPR limitation, again, this is solving the problem of
26 what happens if the person you're trying to reach is not within range of either

1 the first or the second DMA system. They're outside of the DMA network at
2 this point. And the point of the DPR is to figure out where that person is
3 located and then have a preferred path to reach that person, which might be
4 VoIP. It might be ISDN. And there's nothing in these references that talks
5 about doing that.

6 The -- you know, looking at the claims for starters, it's the call from a
7 first mobile subscriber to a second mobile subscriber. Talking to a
8 voicemail server is not a call to a second mobile subscriber. And everything
9 in the claims is about using the HLR or VLR and CLR to determine the
10 location of the subscriber so that you know if you reach the subscriber
11 through the first DMA system, the second DMA system, or you have to take
12 a different path to a different external network to reach the subscriber. That
13 is not --

14 JUDGE RAEVSKY: Yes. How do you address petitioner's point in
15 their opening argument that if someone is calling someone else and they get
16 voicemail instead of reaching that person, they're still making a call to that
17 person?

18 MR. FRANKEL: They're not making a call to that person as this
19 claim is talking about. Because if you look at every limitation of the claim,
20 it's about finding where the subscriber is located to reach the subscriber.
21 The voicemail server is not the subscriber. The voicemail server is what
22 happens when you can't get in touch with the subscriber.

23 The claim requires determining the location of the subscriber, which
24 is not the -- all the -- the most you could say about the voicemail server is a
25 determination was made that it cannot connect to the subscriber. It failed, so
26 that's not --

1 JUDGE RANGE: This is Judge Range. I have a -- I guess, a
2 follow-up question to my colleague -- colleague's question, which is I asked
3 petitioner the same thing. Do you have thoughts on what a call is in the
4 context of the claim? Because again, it doesn't seem -- it seems like it can't
5 possibly be voice-to-voice communication because the entire claim is geared
6 at what happens before that. But I'm not sure, like, just a request to connect
7 quite fits the claim either. So I'm a little bit unclear as to what a call is.

8 MR. FRANKEL: A call is an attempt to connect to the second mobile
9 subscriber. And in Claim 11, it's an attempt to connect to the device that's
10 associated with the second mobile subscriber. And that's made clear by
11 looking at the claim as a whole as well as the individual parts.

12 It's a call from a first mobile subscriber to a second mobile subscriber.

13 And then the next limitation is determining whether the second mobile
14 subscriber is located within the first wireless coverage area. I mean, that's
15 clearly referring to the location of the actual subscriber, or in Claim 11, the
16 location of the subscriber's device. It is not referring to determining the
17 location of the voicemail server.

18 And the voicemail server is not part of the HLR or VLR. These
19 limitations talk about using the HLR, VLR, and CLR data to see if the first
20 network -- I'm sorry, the first DMA system or the second DMA system can
21 be used to connect the call.

22 And when the answer is no, then, again, that has to be based on HLR,
23 VLR, and then CLR data. That's when you look to the DPR and say, Okay.
24 Given this person's number, this is the route we want to take to try and reach
25 them. That cannot be talking about connecting to a voicemail server that is
26 part of the MSC.

1 There is nothing in Mauer, certainly nothing in Waylett that would
2 suggest that that would be the case. And, in fact, Mauer has at lines 832
3 through 34 and 1259 through 1303 talks about -- by the way, we're on Slide
4 19 now. I apologize.

5 You know, Mauer talks about establishing a call to a voicemail server
6 when the multimode mobile station intended to receive the call does not
7 answer it. And at 1259 through 1303, it talks about canceling the attempt to
8 connect to the phone and then initiating a connection to the voicemail server.

9 So the voicemail server was never the target of the original call. It
10 was the second mobile subscriber. Figure out where the second mobile
11 subscriber's located, and then figure out which DMA system or which path
12 to the outside world can be used to actually connect to the second mobile
13 subscriber.

14 Turning now to Slide 20, just briefly, is Claim 11. There's some
15 differences in -- in Claim 11. For example, it's the AAA, the authentication,
16 authorization, and accounting module information that's used to determine
17 the location. But the claim goes on to say that the AAA information
18 includes HLR and VLR and CLR data.

19 So that's not the case for Mauer. It's -- again, the softswitch is just a
20 dumb switch that tries network one, tries network two. If both of those fail,
21 it gives up and sends you over to the voicemail server. So that cannot satisfy
22 the requirements of Claim 11.

23 Unless there are further questions, I'll now talk about the claim
24 construction of DMA.

25 So I do want to note that in the two patents, there are different terms at
26 issue. In the '414 patent, it's the DMA system and the DMA network.

1 In the '988 patent, there's discussion of the DMA -- of a DMA server
2 and a DMA gateway. So -- and also the discussion in the specification is
3 different as this Mr. Hannah will discuss, which is why there's an additional
4 limitation that should be part of the construction for purposes of the '988
5 patent.

6 But DMA is a coined term. It does not -- it's not a term of art.
7 No -- there's no -- there's nothing in the record suggesting that anyone has
8 ever used the term "DMA" or "distributed mobile architecture" before. We
9 agree with the Board that a distributed architecture is one where
10 functionality is distributed to different nodes. The same functionality gets
11 distributed to different nodes.

12 Now, here, it's a distributed mobile architecture, which is specifying
13 the type of functionality that is distributed to the nodes. It has to be mobile
14 functionality, and when you look at the at the claims, for example, in the
15 '414, it's talking about equipping each of the nodes, the DMA servers with
16 the HLR, the VLR, and CLR data, which and the only purpose for doing that
17 is to allow these nodes to figure out where the destination target is so that the
18 call can be connected.

19 That's why it's not even necessary to construe the term DMA to find
20 that the asserted references in the grounds cannot satisfy these claims.

21 But to understand what is meant by DMA, it's necessary to look at the
22 specification. Petitioners cite a lot of cases that say, generally, terms should
23 be given their plain and ordinary meaning. But the Federal Circuit has made
24 clear that that's when the terms have a plain and ordinary meaning.

25 And the case like here where there is no plain and ordinary meaning
26 for distributed mobile architecture, then you have to look at the scope of the

1 specification to understand what the claims -- what the claim term means.

2 And in particular --

3 JUDGE RAEVSKY: This is Judge Raevsky. One thing I'm
4 struggling with in this argument is that in both cases, it appears that your
5 POR advocates for the plain and ordinary meaning, as well as looking at the
6 specification. And then the sur-reply in both cases then appears to suggest
7 that there is no plain and ordinary meaning.

8 So should we understand your argument in the sur-reply for both
9 cases to be abandoning the plain and ordinary meaning argument in the
10 PORs? Or is there some other way to help us understand the apparent
11 inconsistency?

12 MR. FRANKEL: Yeah. Your Honor, there is no inconsistency. And
13 petitioners cite to Page 20 of the POR. And, in particular, they're reading
14 from the topic sentence, which is the first page of a six-page -- actually,
15 almost a ten-page section. The -- the topic sentence does not state that DMA
16 has a plain and ordinary meaning.

17 It says that "distributed mobile architecture should be construed
18 consistent with the plain meaning of its words, which require a mobile
19 architecture with distributed functionality instead of centralized functionality
20 and hierarchical organization."

21 So we agree with the Board that "distributed" and "architecture" have
22 meaning, and "mobile" has meaning. And the construction that we've
23 proposed is consistent with the meaning of those terms.

24 But the next ten pages that follow in the POR point to all of the
25 support in the specification that clarifies what -- what it means when you put
26 those terms together. And it's consistent with those terms. It's not taking a

1 new approach, but it's necessary to understand what they're referring to.

2 I do want to point out, you know, distributed mobile architecture is a
3 core concept in these patents. It's in the title of the patents. It appears over
4 500 times in the '414 patent. It's in the abstract. The first figure that was
5 selected to be shown on the cover, Figure 1, shows the peer-to-peer
6 connections between the different nodes in the network.

7 DMA cannot just mean "a network." I mean, that -- you know, to
8 come to that conclusion and give petitioners -- to just say it's any network
9 where there's multiple nodes that do stuff is to completely ignore what's the
10 teachings of the specification as viewed in the claims.

11 You know, like, just looking at Claim 11, which we have up on -- on
12 Page 20, the whole claim is about putting the functionality at the nodes that
13 allow the nodes to figure out where the target is and which nodes to connect
14 to. And that's what the construction is that we're advocating for, that the
15 routing, the HLR, VLR, CLR functionality, which would normally be at an
16 MSC, is located at the individual nodes. And that those individual nodes can
17 connect to each other without going through a centralized hub like an MSC.
18 To not read the claims that way is to render them nonsensical.

19 JUDGE RAEVSKY: There's a couple of questions that I have about
20 that. I'll pose both of them, and you can address them in whatever order you
21 see fit.

22 In the '988 patent, at least, in Column 9, line 12, as we pointed out in
23 our institution decision, it says, "In not all cases will the DMA servers be
24 able to participate as peers." And your briefing appears to suggest that that's
25 just a temporary situation, as I understand it, that eventually, they will
26 participate as peers. I don't see that in the specification. So my first

1 question is to -- for you to please address that and help illuminate how that
2 works in the specification.

3 My second question is you spend a lot of time talking about how these
4 are peer to peer and not hierarchically connected. But in Figure 6, it looks
5 like the DMA servers participate in a hierarchy with the DMA gateways. So
6 it does appear to be a hierarchy in the patent.

7 And so if you could help me resolve those issues, that would be
8 helpful.

9 MR. FRANKEL: Yeah. Thank you for that question. And that
10 reminds me to respond to that point made by petitioner.

11 The -- the structure -- and this is particularly an issue in the '988
12 patent, so Mr. Hannah will address it in more detail. But the idea is you
13 have a DMA network where DMA servers are communicating with each
14 other. And you can have two of those networks that can be disjointed. And
15 to allow the -- the participant in one of those networks to reach someone in
16 range of the other network, the DMA gateway is used to connect it to.

17 So it's non-hierarchical and peer to peer within the individual DMA
18 network. But then to reach out to an external legacy network or different
19 DMA network, that would be done through the DMA Gateway. So
20 when -- when --

21 JUDGE RAEVSKY: I just want to make sure I understand that. So
22 when you're using DMA network, you mean the network amongst the DMA
23 servers? So the DMA servers are peer to peer, but not necessarily peer to
24 peer with the gateway?

25 MR. FRANKEL: You can have multiple DMA networks. So
26 imagine in that fishing village in Alaska, you've got ten DMA servers that

1 form of DMA network. And then there's somewhere in the Hawaiian
2 Islands where there's another ten DMA servers that have made their own
3 DMA network. Within the Alaska network, those ten servers can talk to
4 each other as peers. Within the Hawaiian network, those ten servers can talk
5 to each other's peers. But if someone from the Alaska network wants to talk
6 to someone in the Hawaiian network, they'll use the Alaskan gateway to get
7 to the Hawaiian gateway.

8 So it's nonhierarchical within the DMA network. And the DMA
9 gateway allows the two disjointed networks to communicate with each other,
10 and the DMA gateways connect as peers to each other.

11 JUDGE RAEVSKY: Okay, I'm going to ask another question,
12 realizing I haven't allowed you to answer both of my questions yet. But just
13 to make sure we loop all the concepts in, the '414 patent recites the DMA
14 network, but the '988 does not.

15 And instead, I think one of petitioner's points is there's only a DMA
16 server recited. So another question that's in my mind is why do we read in
17 this peer-to-peer concept when there's only one DMA server in at least the
18 '988 claims?

19 MR. FRANKEL: I'll defer to my colleague, Mr. Hannah, to field that
20 one. I'm just -- I'm going to wrap up now on the '414 issues.

21 JUDGE RAEVSKY: That's fine.

22 MR. FRANKEL: And don't -- so on the issue of the so-called
23 admissions of Dr. Cooklev that not every DMA server can reach every DMA
24 server, what he was talking -- he was talking about two concepts during his
25 depositions, and the issue came up in both cases.

26 One is the fact that a DMA gateway can be needed to connect one

1 DMA network to another, disjointed DMA network. And the other is the
2 patent talks about if you add a new node to the network, sometimes it would
3 be in a different area. And that would be the start of a new DMA of a
4 disjointed DMA network.

5 So the deposition -- that's -- in the '988, that's Exhibit 1014, starting at
6 Page 40, line 20. And in the '414, it's Exhibit 1022, starting at Page 59, line
7 8. He was not suggesting that within a single DMA network, you would
8 have DMA servers that are not able to connect to each other as peers. In his
9 testimony, it was quite clear he was talking about a different situation.

10 So with that, I'll just make two quick points, and then I'll turn it over
11 to Mr. Hannah.

12 The first is on the claim construction issue. We cited several cases
13 that petitioners did not address in their reply, the Indacon v. Facebook case,
14 824 F.3d 1352; the Medicines v. Mylan case, 853 F.3d 1296; and the Alloc
15 v. ITC case, 342 F.3d 1361. In all three of those cases, the Federal Circuit
16 made the same point, which is when you're talking about a claim term that
17 does not have a plain and ordinary meaning, you must look at the
18 specification. And the construction of the term cannot be broader than
19 what's in the specification.

20 And the Indacon v. Facebook case from 2016 makes clear that that
21 can be -- you know, even if the specification keeps saying "exemplary
22 embodiment or e.g.," if that's all there is in the patent that describes what the
23 term means, then that's how it should be construed.

24 So that's how DMA network should be construed here. But it's
25 not -- again, it's not necessary to reach that construction in view of the CLR,
26 VLR, and DPR limitations, which are plainly not met by Mauer and Waylett.

1 And just very briefly on the secondary considerations point, you
2 know, given that what petitioner is -- is really doing here is trying to
3 combine references with -- in hindsight, using the claims as the roadmap to
4 do that, the secondary considerations evidence is an important check on the
5 claim of obviousness.

6 There was clearly market pressure at the time to come up with a
7 better, less expensive way to reach remote areas. That's reflected in the
8 2012 white paper. Waylett itself acknowledges the problem, although it has
9 a very different way to try and solve it.

10 And the only two arguments that petitioner really makes against the
11 secondary considerations are, first, they claim that there's no evidence that
12 Lemko's product line included DPR functionality. Exhibit 2038 from the
13 '414 case includes the DPR data from the Node1 product.

14 And the declaration of Dr. Pan at Paragraph 20 links that -- explains
15 what the DPR data is, links it to the commercial product. That's un rebutted.
16 Petitioners decided they didn't want to depose Dr. Pan. They don't have any
17 expert testimony talking about the DPR data, and they didn't even respond to
18 that in their reply. So that's un rebutted that the Lemko product did, in fact,
19 have DPR data.

20 And then the other argument they make is that the product manual is
21 only for 2G, whereas the commercial success was for 4G. And that's also
22 just simply incorrect.

23 Exhibit 2037 is about 700 pages. That's the product manuals for
24 multiple iterations of the Lemko products, including the 2G product, a 3G,
25 product and a 4G product. They're combined into a single exhibit, but the
26 manual is there for 4G, 2G, and 3G. Each of those product manuals includes

1 the CLR functionality, and those are the products that were recognized by
2 AT&T as a, quote, radical change that merited further investigation and that
3 multiple customers said was the only solution that worked for them.

4 And all of that evidence is un rebutted and really goes to show that,
5 you know, if it really was obvious to combine Mauer and Waylett, then
6 someone else would have done it a long time ago.

7 If there no further questions, I'll pass it on to Mr. Hannah.

8 JUDGE IPPOLITO: You have about 21 minutes and two seconds left
9 of your time.

10 MR. HANNAH: All right. Thank you very much. May it please the
11 Board.

12 First of all, I want to echo what Mr. Frankel said, and thank you.
13 Thank you for your time and consideration. This is important to our client,
14 these cases, to an innovative company who came up with a great solution for
15 a problem that's been plaguing the industry for a long time. And -- and these
16 patents are part of the things that they can show for it.

17 The '988 patent is the patent that I'm going to address, and it addresses
18 a -- some similar issues with the '414. But it also has particulars that are
19 addressing how the network is going to be formed with the gateways, the
20 DMA gateways and the DMA servers, and how it's going to be able to use
21 that type of architecture in order to have this decentralized system.

22 And I think that that is one of the most important aspects that we have
23 for the '988 patent, in particular, when we talk about this distributed mobile
24 architecture. This distributed mobile architecture it is a distributed system,
25 which means that you have to be able to share certain functionalities with
26 multiple processes or nodes within -- within the network, and that is simply

1 not disclosed in the Flore reference.

2 The Flore reference, as you've seen in the briefing, is about a
3 centralized system, a traditional legacy centralized system. And the problem
4 that it's trying to solve is being able to do a handoff with a cell phone
5 between one system and another system. But the systems are centralized.
6 Both systems are centralized. There is nothing disclosed in Flore about any
7 type of distribution of the load or of any of the processing at all.

8 And so I want to kind of pick up where Mr. Frankel left off when he
9 was talking about this -- this construction of this distributed architecture and
10 what does it mean.

11 So as the Board had pointed out during the opening remarks, the
12 Board has offered a couple of dictionaries that shed light on what does this
13 distributed architecture mean or distributed mobile architecture and e some
14 dictionary definitions. And I think those dictionary definitions are
15 helpful -- are helpful in light of the specification, which does provide the
16 additional context that you need in order to provide these definitions.

17 In each of these definitions -- and I'm starting with Exhibit 3002, this
18 is the dictionary definition that was from the IEEE that the board set forth.
19 And it talks about the distributed architecture and how it's an architecture
20 characterized by its suitability for distributed processing.

21 And -- and what does -- and what does that mean? This distributed
22 processing to one of skill in the art means that you're going to have -- you're
23 not going to have a centralized system. You're going to have a decentralized
24 system.

25 And I think that is the point that we have to focus on and what one of
26 skill in the art would understand. And I know the Board pointed us to look

1 at distributed architecture as one of the definitions in 3002. But I'd also like
2 to point the Board to distributed computer network.

3 That's the -- that's the definition that falls -- it's two down from
4 distributed architecture, and it also gives some context and some -- some
5 light in terms of what does it mean to be distributed when you're talking
6 about these different computer resource -- resources. And there it says it's "a
7 network in which all node pairs are connected, either directly or through
8 redundant paths through intermediate nodes. See also decentralized
9 computer network."

10 I think that's important to understand is that if you're talking about a
11 distributed system, it's a decentralized system. And so when we're -- and
12 when I get in to -- to Flore in a little bit more detail, everything that we have
13 there is about a centralized system.

14 And because it's an anticipation ground and Flore is all about
15 centralized system, there's no way that it can read on the DMA gateways or
16 the DMA servers because by virtue of them being decentralized and
17 distributed.

18 The other definition that the Board pointed to was look at our
19 distributed processing. And again, I think that does also help provide
20 context in that it says that it's "a design in which all data is not processed in
21 one processor. Multiple processors in the master station or in the remote
22 stations or show" -- "or both share the functions."

23 And I think that's what's important, is that when you look at Flore and
24 you're looking at the various components, each component has its own
25 function. There is no sharing of functions.

26 When you look at the '988 patent, you share these functions amongst

1 the gateways and amongst the servers in order to be able to provide this
2 robust system to address this problem in rural areas and whatnot.

3 But again, I would take a little -- I would take a step down and look at
4 the "distributed system" definition as well that's in this reference. And it
5 says "a computer system in which several interconnected computers share
6 the computing tasks assigned to the system."

7 Again, more context. When one of skill in the art looks at what a
8 distributed system means, it means that it's a system that shares the tasks,
9 shares the functions. You do not have a centralized component that if it goes
10 down, the whole system is going to go down because you can't do the MSC
11 routing like the traditional backhaul. It's a -- it's a decentralized system.

12 The same thing happens when you look at the other -- this is going to
13 be 3003 that the Board submitted, the dictionary definition. Again, it
14 provides additional context for "distributed."

15 Again, we still have to look to the specification because it is a coined
16 term, "distributed mobile architecture." But in addition to look at distributed
17 processing, which helps, which talks about the plain distributed processing
18 and this true distributed processing, I would take a look at the next
19 distributed system, which follows, again, two down from "distributed
20 processing" to look for more context. And what does it say there?

21 The very first part of it, it's "a non-centralized network." That's what
22 a distributed system is to one of skill in the art. It's a non-centralized
23 network that is able to be able to share these tasks, share these functions
24 amongst them.

25 And that's the core of what Lemko created in order to solve these
26 problems with this backhaul networks that are very expensive to put up.

1 They take a lot of time, and it's very difficult in order to do so.

2 Now, the interesting thing is that the Board actually recognized that
3 that's what the '988 patent is about. It's not about a centralized system. It's
4 about a decentralized system. And we can see that in the institution decision
5 at Page 3.

6 If you look at Page 3 of the institution decision on the second -- or the
7 first full paragraph, it says, "Accordingly, the '988 patent proposes a
8 distributed and associative telecommunication system with controlling logic
9 distributed and decentralized."

10 That's -- of course, that's the problem -- that is the solution to the
11 problem that Lemko was trying to solve. But as we're --

12 JUDGE RAEVSKY: I want to jump in here. This is Judge Raevsky
13 again.

14 MR. HANNAH: Yes.

15 JUDGE RAEVSKY: So I recognize that your colleague has already
16 addressed Figure 6 of the '988 Patent. But, you know, the claim -- Claim 1
17 mentions both of these DMA gateways, which appears -- and I understand
18 your colleague's position that the DMA servers themselves form a DMA
19 network that are peer-to-peer connected, et cetera, decentralized.

20 But when you start putting DMA gateways on top, which is what this
21 claim is about, isn't that centralized again? Maybe it's not centralized MSCs,
22 but it's centralized in a different way.

23 MR. HANNAH: I would -- no. Because it's going to be still sharing
24 the functions that -- each of the DMA gateways is going to have -- sharing
25 the functions of what the DMA gateways can do. And so -- and that's
26 actually a point that when you look at their -- the Petitioner's analysis, kind

1 of how it falls apart is they're pointing to two different components within
2 Flore that do two completely different things for two completely different
3 networks.

4 Wherein in the claim, we have a first DMA gateway and a second
5 DMA gateway. One of skill reading -- reading that would understand that
6 those DMA gateways have to have the same functionality or be able to
7 perform the same functions because they're both DMA gateways.

8 That's not going to map to a system in which you have two separate
9 systems that have a -- that have a -- that have a centralized routing
10 functionality or other functionality for the -- for those systems.

11 The other thing is if you -- in the specification, it actually talks about
12 if one of those gateways can fail, you can be able to create another network
13 with an existing gateway or with existing servers in order to form another
14 peer-to-peer network.

15 And so you have this redundancy. That's what -- one of the first
16 points that we -- that I pointed out is that you have this redundancy in these
17 paths. And I can point you to Column 6, line 63, which talks about this.
18 And let me see if I can show it on the screen. Might not be as easy, and --

19 JUDGE RAEVSKY: Counsel, while you're looking for that, can
20 you -- we're trying -- we're trying to remember -- I can't remember if your
21 briefing addressed this issue of the Inter-AS anchor in Flore and the SGSN
22 in Flore having different functionality and therefore not being able to meet
23 the first and second DMA gateway limitations of the term of the claim. Can
24 you point us to where you argued that in your briefing?

25 MR. HANNAH: Yes, Your Honor. Let me -- I'll find that. I
26 have -- I'll have a final rebuttal, and I'll point it to you. But we absolutely

1 point to the fact that this -- the functionality between the Inter-AS and the
2 SGSN have different functionalities for different networks.

3 And so my point was -- I was just answering your question, saying,
4 Okay. So where is -- you know, why isn't it decentral- -- you know, why is
5 it decentralized when you're looking at Figure 6. And what I was trying to
6 point to is if you're actually doing the mapping to Flore, it doesn't work
7 because Flore is two centralized systems.

8 And so if you tried to do that, mapping doesn't work. But I can
9 find -- I'll find some description where we talk about how the functionality is
10 different amongst the servers. And I don't think there's actually going to be
11 any disagreement with that.

12 I mean, the Inter -- the Inter-AS component of the -- of one system
13 functions in a completely different way than the -- than the old system, than
14 the SGSN system. I mean, that's just because it's a completely different
15 network in terms of how it operates. So I don't think there's actually any
16 dispute on that. But what I want --

17 JUDGE RAEVSKY: I think you -- at the same time, just to follow
18 up, I think you might agree that the claim itself does not specify the
19 functionality of the two gateways. Is that correct?

20 MR. HANNAH: I think -- I think it does. In terms of the
21 functionality, in terms of -- maybe I'm not understanding the question. But
22 you have to receive communication information. You have to store the
23 communication information in the register of the gateway. So I think that it
24 does talk about what the gateway has to do in terms of the functionality.

25 I think that the focus on these claims is the DMA Gateway and the
26 DMA server and the legacy and the communications network. But maybe

1 I'm missing -- maybe I misunderstood.

2 But in any case, let me just show you, you know, in terms of -- to
3 answer your question, you know, where is this concept of this
4 decentralization and what about the different gateways?

5 And if you can look right here on -- this is at the bottom of Column 6.
6 It talks about that within the distributed communications, the controlling
7 logic can be distributed and -- can be distributed and decentralized. This is
8 directly from the '988 patent. And it says, "Moreover, the wireless coverage
9 provided by the disclosed system is self-healing and redundant. In other
10 words, due to the interconnectivity via the IP network, if one or more of the
11 servers loses power, fails or it's otherwise" -- "otherwise inoperable, it can
12 be rerouted to one of the remaining DMA servers."

13 And then it goes on to talk about how the user data can be stored in
14 the database. And this is kind of more talking about the CLR information
15 that Mr. Frankel talked about in terms of the '414.

16 But this concept of the decentralization and distributed nature is
17 throughout the '988 -- the '988 patent. And -- and it's important to
18 understand that when we're looking at these claims and what it means to
19 have a distributed mobile architecture.

20 And if you apply -- and I think it's at this point, based on the briefing
21 that's been submitted, if -- if it is -- a distributed mobile architecture means
22 that it is decentralized, then I don't think there's any dispute that Flore
23 doesn't teach that.

24 Flore is very specific. Flore teaches a -- two different networks. Both
25 of them are -- have a centralized system in order to route the various
26 information. And all Flore really discusses is being able to handoff between

1 those systems.

2 And so it's a very different concept than building this -- this system,
3 this gateway system with these DMA servers in order to facilitate the
4 solution that Lemko was trying to solve.

5 So with that, I want to take a look at the slide -- let's take a look at our
6 Slide 15. And I want to talk a little bit about what the -- the difference
7 between the two in terms of the additional limitation that is provided for.

8 JUDGE IPPOLITO: Counsel, you have about 5.5 minutes left.

9 MR. HANNAH: Okay. So if we look at Slide 15, we had this
10 additional limitation for DMA that's not present that Mr. Frankel alluded to,
11 which is that the legacy server -- the legacy network, cannot be part of the
12 DMA. And that's just based on the plain language of the claims.

13 The plain language of the claims talks about a legacy network as a
14 separate component of the DMA gateway and the DMA server. And so
15 because of that context that's provided in the claims, DMA cannot be the
16 legacy server. And that's an additional reason for the '988, why it is going to
17 be patentable over Flore because Flore is talking about these legacy
18 traditional backhaul systems and not these distributed mobile architectures.

19 JUDGE RAEVSKY: Just a quick question on that, Counsel. We
20 have case law that does say there's a presumption when two different terms
21 are used like this. So they have different meanings, but that presumption
22 may be overcome.

23 I didn't see this addressed in the briefing, but I was intrigued to note
24 that in Figure 5 of the challenged patent, that it appears that the DMA server
25 includes the MSC and the -- the BSC functionality. So I'd be interested to
26 hear your thoughts on, is it -- is it really the case that the DMA does not

1 incorporate the functionality of a legacy communication network.

2 MR. HANNAH: Well, I would say that it can incorporate some of the
3 functionality of the MSC, but that's -- that is part of this distributed system
4 and that each of those gateways and servers is going to be able to do that,
5 right? That's the part of the distributed system.

6 It's not just a single -- it's not just a single point that contains the
7 routing functionality and that each of these is going to. And so if you look at
8 the descriptions of Figure 5, that's what it's actually talking about, is that
9 you're going to have each of this routing functionality.

10 And this is described in our briefing, being able to do the routing and
11 to be able to share this function of routing, whereas Flore does not have that.
12 Flore has the -- a single MSC that's going to be able to do that functionality.

13 Let me -- in the limited time I got -- I have left here, I do want to hit
14 on this communications information for a communication network. And so
15 if we're looking at -- let's jump to Slide 23.

16 You know, as you saw in the briefing, there's absolutely no disclosure
17 of a communication information or device accessible by the second -- by the
18 second network. The first thing -- the only thing that the petitioner points to
19 for this is this PCP context.

20 And if you look at Paragraph 46, this is what their support is. The
21 PCP context does not contain any information about what they're pointing to
22 as the second DMA -- the second DMA. It only has information regarding
23 the first DMA.

24 Now, petitioner said, Oh, they admitted in the POR Page 36 that it
25 contains this information. Well, if you read that closely, what we said was at
26 most, if you're going to -- if you're going to assume argue window, it

1 includes this.

2 We said at most, it doesn't teach the second part of our argument,
3 which is that there's no identification of a communications network at all.
4 But that is not an admission saying that the SGSN information is actually
5 within the PCP context.

6 If you look at 46, Paragraph 46 of the Flore reference, there is no
7 indication of the SGSN information in any of the PCP context data.

8 And again, this is an anticipation ground. And so each of this -- all of
9 this information has to be explicitly shown in the art. And there's no
10 inherency arguments that have been raised anywhere in this briefing.

11 And so you can -- you can look at Paragraph 46 time and time again,
12 and you will see no information in any of the PCP context that has any
13 information about the second -- the second -- the alleged -- or what they
14 point to as the second DMA.

15 The other point with this communication information -- information is
16 there's simply no information about the network itself.

17 It says -- the claim states that you have to have a communications
18 information for a communications network. You have to have information
19 about that communicate network. There is simply no indication of that at
20 all.

21 The only argument that we have from petitioner was that, well, it's
22 only connected to one, so it must -- it must be able to identify that. That is
23 not taught anywhere in Flore. Flore doesn't care what the communication
24 network is for this purpose.

25 You won't see any disclosure in Paragraph 46 of any type of
26 communication network because it doesn't care if it's UTRAN, E-UTRAN, if

1 it's 2G, 3G. It simply doesn't matter at all about the communications
2 network information. And so that can't be part of the -- the communications
3 information that is going to be received and that's going to be stored in the
4 home register of the DMA Gateway.

5 The same kind of -- it goes through in terms of highlights also.
6 The -- the disagreement with regard to the dependent claims -- the dependent
7 claims, also specifically specify that you have to have this kind of
8 communications information, and there's nowhere in this disclosure -- and,
9 again, we're going back to Paragraph 46 -- that talks about the location for
10 any device and where that information is going to be stored. It's simply
11 telling you --

12 JUDGE IPPOLITO: Counsel, you are at time, but you can use your
13 surrebuttal time if you'd like to continue.

14 MR. HANNAH: I'll use a minute or two. But just to finish this point
15 is that with regard to the dependent claims -- and if you look at Paragraph
16 46, the only information that's in that PCP context is the information of the
17 device. And the -- the AG.

18 There's not going to be any information regarding the second -- the
19 second network and where that information is stored.

20 With that, unless you have any questions, we'll collectively reserve the
21 rest of our time for rebuttal.

22 JUDGE RAEVSKY: And, Counsel, I'm just going to jump in and
23 thank you for your detailed answers to our questions. And I recognize it's
24 difficult to look on the fly through the briefing. I did look through the
25 briefing, and I cannot find the argument that you highlighted that the first
26 and second DMA have different meanings and that those are not meant for

1 because they have different functionality. So I think that's important for you
2 to hit early on in your -- in your surrebuttal.

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

4 MR. RUECKHEIM: I'm not sure if you're turning to me or not, but if
5 I could -- if it's possible to beg the Board's indulgence for a short bio break.

6 JUDGE RANGE: That'd be fine. I was debating whether or not we'd
7 do that. So let's go ahead and do that. Let's -- let's cut back in at about 4:35
8 Eastern, about five minutes.

9 MR. RUECKHEIM: Thank you.

10 JUDGE RANGE: Thanks.

11 (A brief recess was taken)

12 JUDGE RANGE: Okay. So we're back on the record.

13 Petitioner, I believe you have 27.5 minutes left for your rebuttal
14 argument, and you may proceed with that.

15 MR. RUECKHEIM: Thank you, Your Honor. As a follow-up to the
16 opening argument, the

17 Board asked if the argument about VLR in our petitioner's reply, I
18 think on Page 19, was cited in the petition. And the answer is no.

19 In our reply, we state that even to the extent that Lemko's arguments
20 with respect to the HLR is true, PDP context contains a portion of VLR data.
21 And then we identify how the VLR data includes the SGN -- SGSN identity.
22 And as we referenced our statement, we put, even to the extent Lemko's
23 arguments, they show to the Board that we are properly responding to an
24 argument raised in Lemko's patent owner response.

25 The Board had a question about whether the '414 patent claims require
26 any determination about whether a mobile subscriber is not located within a

1 first or second coverage area. And I believe counsel for Lemko said
2 the -- the '414 patent claims require a determination that a subscriber is not
3 within a first or second coverage area.

4 And that's not true. The claims require individual determinations
5 about whether a mobile subscriber is within a first coverage area and then a
6 second coverage area. And if the mobile subscriber is in a unique location,
7 that connection is established. But then the claim provide a condition that
8 when the second mobile subscriber is not located within the first
9 wireless -- sorry.

10 The claim requires a -- a "when" statement that the call be routed to
11 the preferred path when the subscriber is not located within -- when the
12 subscriber's outside of the network.

13 JUDGE RANGE: Can we turn to that claim language?

14 MR. RUECKHEIM: Yes. I have it here. So the claim language is
15 determining whether

16 the second mobile subscriber is located within a first wireless
17 coverage area.

18 JUDGE RANGE: Can you press the share screen. I don't know if
19 you have that on.

20 MR. RUECKHEIM: One second.

21 JUDGE RANGE: Looks like it's probably your Slide 15 has the
22 claim. I don't know if that's where you are.

23 MR. RUECKHEIM: I have the actual patent up if that works.

24 JUDGE RANGE: Okay. That works.

25 MR. RUECKHEIM: So the claim says, "Determining whether the
26 second mobile subscriber is located within a first wireless network area."

1 And then it says, "When the second mobile subscriber is not located within
2 the first area, then you determine if they're within a second wireless location
3 area. When the second mobile subscriber is not located within the first area
4 and not located within the second, then you determine the preferred call
5 path."

6 So there's two determinations. Is the person in the first area? Is the
7 person in the second area? When neither of those happen, you go to the
8 preferred path, which was identified as a voicemail server.

9 JUDGE RANGE: Okay. Thank you. I think you -- I think you just
10 answered the question I had. But that final "when" is
11 the -- it's -- it's -- it's -- if you -- if you get a "no" for the first determination
12 and you get "no" for the second determination, that's when that "when"
13 should trigger for that final "when."

14 MR. RUECKHEIM: That to me, sounds correct, Your Honor.

15 JUDGE RANGE: That's going to be awful on the transcript, but that's
16 how it is.

17 MR. RUECKHEIM: Okay. That takes us to just briefly going to
18 responding to some of the arguments made by Lemko's counsel.

19 Counsel seem to argue that Dr. Cooklev, Lemko's expert, did not
20 suggest that DMAs within a single DMA network do not need a peer to peer.
21 There's a lot of negatives in there.

22 But we urge the board to look at Dr. Cooklev's deposition for the '414
23 patent at 5915 to 20, because I -- the question and answer are very clear.

24 I said, "Is it your opinion that the proper construction of DMA" -- so
25 we're talking about the construction of DMA -- "requires a peer-to-peer
26 connection between each and every DMA in a system?" And then to be very

1 clear, I said, "Correct that. Between each and every DMA server in a
2 system."

3 I didn't say "in separate networks." I said, "In a system, does" -- "do
4 you need to have a peer-to-peer connection between each and every DMA
5 server?"

6 His answer was, "Not necessarily between each and every DMA
7 server."

8 He didn't qualify, Well, you may have another network, and you can
9 go through a gateway. There is no discussion about that.

10 Counsel for Lemko looked at different dictionary definitions that I'm
11 not -- believe is proper because I'm not even sure our side has seen these
12 definitions. But from what I heard, none of these definitions described or
13 defined "distributed mobile architecture" as something that's decentralized.

14 And they -- it'd be hard if they did because Lemko's expert, Dr.
15 Cooklev, there in deposition of the '988 patent proceeding -- and this is at
16 35, line 3 to 36, around line 2. We asked him.

17 He said, "The distributed mobile architecture is described as
18 distributed and decentralized in the patents."

19 And he said yes, he sees that. And we asked him, "Are distributed
20 and decentralized -- are these synonyms?" And he said, "These are not
21 synonyms." We asked, "Are the terms 'mobile' and 'decentralized'
22 synonyms?" And he said, "They are not synonyms." And "The plain and
23 ordinary meaning of the word 'mobile' does not mean 'decentralized'?" He
24 said, "Yes, 'mobile' is a different term than 'decentralized.'"

25 So we direct the Board to his that -- his deposition at 35, lines 3 to
26 line -- 36, line 2. And we direct the Board to the same passage that Lemko's

1 counsel put up in the '988 patent at 6 -- Column 6, lines 60 to 65, which
2 state, "Within a distributed and associative telecommunications system, the
3 controlling logic can be distributed and decentralized."

4 These -- the Board mentioned earlier a presumption when dealing
5 with claim language. When you have two different words used in the same
6 claim here, two different words used in the same sentence, they're presumed
7 to have different meaning. Counsel seems to be trying to construe the term
8 "distributed" it to mean "decentralized." The patent uses these as different
9 terms, with different meanings.

10 Counsel was discussing this concept of including -- our including the
11 different than a legacy network in the claim construction for DMA in the
12 '988 patent.

13 And we urge the Board to look at how the '988 patent discusses the
14 difference between legacy networks and distributed mobile architectures.
15 Every example in the '988 patent that discuss that a legacy network, such as
16 Legacy Network 610 in Figure 6 or Legacy Network 710 in Figure 7, show a
17 simple single box and a single phone, not a distributed system.

18 That's the distinction that's being made here. "Legacy" just means
19 "existing." And they're not showing distributed legacy networks because
20 they're trying to show some kind of distribution, some expansion of a legacy
21 network.

22 Another legacy network would be the three single boxes in Figure 10,
23 and those are boxes 1020, 1030, and 1040.

24 Counsel argued --

25 JUDGE RAEVSKY: Just on that point, do you agree or disagree that
26 Figure 5's depiction of a DMA server, including MSC functionality and BSC

1 functionality suggests that we shouldn't interpret these terms differently? In
2 other words, we shouldn't require a DMA server to not include a legacy
3 network?

4 MR. RUECKHEIM: Well, I'm having a hard time answering that
5 question as posed. I will tell you there's been some suggestion that the
6 claim -- claims in the '988 patent used the terms differently. DMA
7 server -- sorry -- DMA and legacy network. And they don't because the
8 claims of the '988 patent discuss a DMA server and not an architecture, a
9 DMA server and a legacy network. So a device can be accessible by a
10 legacy network or a DMA server.

11 And so I'm not sure how to answer Your Honor's question, but I will
12 say that legacy networks can be distributed -- or we showed an example in
13 Flore of a legacy -- two legacy networks, the UTRAN and the E-UTRAN
14 that have distributed components throughout their three different Node Bs or
15 eNodeBs in each.

16 There was a discussion that it's undisputed or some allegation it's
17 undisputed that the voicemail server in Mauer's Figure 1 is on the MSC
18 node, and that's just not true. Mauer's Figure 1 shows a voicemail server
19 very far away from the MSC depicted in the figure in the WW -- WWAN.

20 There's a softswitch between the server -- sorry -- the voicemail server
21 and the MSC. There's a gateway between the voicemail server and the
22 MSC. And there's a packet switch network between the gateway and the
23 voicemail server.

24 There was an argument about a softswitch being a dumb device. I'm
25 not sure how that would make a voicemail server part of wireless network or
26 not. But it's a new argument that the extent that that was the implication.

1 Counsel seemed to try to run away from its admission that the SGSN
2 identification is sent by Flore's disclosure of SGSN. And so we identified in
3 the briefing, we identified in argument today exactly where counsel made
4 that admission. Counsel said that their description of, at most, the SGSN ID
5 is sent means assuming arguendo.

6 They didn't say "assuming arguendo." They made an admission. But
7 to the extent the Board has any questions here, we urge you to look at the
8 Figure 7 in Flore where it describes that you have these two gateways, and
9 they exchange information and messages. And this is how the routing
10 information is determined for handover between these two gateways.

11 Common sense dictates that the ID is being sent. The SGSN ID is
12 being sent. And we have more than just common sense here. We have
13 expert analysis exactly explaining that.

14 There -- there is a discussion about Claims 1 and 8 in this call for the
15 '414 patent, routing the call. And we urge the Board to look at the -- the
16 claim language here because counsel seems to indicate that the call has to be
17 to the target somehow, or the recipient, either a device or the actual person.

18 And the claim here says you're going to receive a first distributed
19 mobile architecture system of a DMA network a call from a first mobile
20 subscriber to a second mobile subscriber. The DMA system is what's
21 receiving it. That's the target.

22 I mean, yes, you're on the phone, know who you're calling. But the
23 target of the call is the DMA system. It reroutes the call somewhere else.
24 This is the same call that is -- there's no -- you're not placing a separate call
25 here to a voicemail.

26 There was a discussion, counsel said very -- a couple of times, very

1 confidently, that there's nothing in Waylett to indicate multiple networks in a
2 box, multiple NIBs will extend a network that could be connected together.
3 And that's simply not true.

4 Figure 11 in Waylett shows 224A and 224B, two NIBs connected peer
5 to peer. This is discussed in Waylett 17 -- column 17, lines 7 to 17. It
6 discusses how this connection allows for the private HLRs and authenticated
7 server -- servers and the NIBs to be linked by the private WAN 366 for
8 distributing -- there's that word again -- HLR registration and authentication
9 loads.

10 So to the extent that peer to peer is even required, it's right there in
11 Waylett.

12 JUDGE RANGE: I had -- I had a question about the '414. I think in
13 the briefing, both petitioner and patent owner took a plain and ordinary
14 meaning approach to CLR, communication location register, during the
15 argument.

16 I think patent owner said that if it had to be construed, it might mean
17 something like -- and I may not have this exact -- but something along the
18 lines of the CLR contains VLR data from other DMA systems.

19 Would you dispute that construction? And if so, why?

20 MR. RUECKHEIM: Well, I would because without a express
21 definition or disclaimer, I think it's improper to change the plain meaning of
22 the claim, that it seems like patent owner there would -- is trying to import
23 something to do with other CLR systems or CLR registers. And I think the
24 best -- very likely, the best source of what a community location register is,
25 is the claim language.

26 And first off, you know from the claim language that it has to be

1 associated with the second DMA system. And you know that it has to be
2 some type of register. That's the word. And it's got to be some type of
3 location register or community location register. And so basically, the data
4 within has to relate to its location information stored in the register.

5 And importing any other concepts that there has to be other CLRs or
6 any kind of decentralization would be improper without an express
7 definition.

8 JUDGE RANGE: Thank you.

9 MR. RUECKHEIM: And that -- that kind of -- I know that you were
10 talking about CLR, and really the coined term argument really relates to this
11 argument of DMA. And, you know, it's our position as I think the Board
12 may recognize, that the petition raises up in its surreply. This is late attorney
13 argument, not supported by any expert analysis. In fact, the experts are the
14 opposite, that they used the plain and ordinary meaning here.

15 Counsel said that DMA should be construed because of the core
16 concept. But the core concept here is just using something in order to have a
17 flexible extension to a network. In fact, the patent itself, the '414 and '988
18 discuss when you include these MSCs and BSCs in these rural
19 environments, well, that's harsh.

20 You need some kind of flexibility. And it recognizes that if you
21 include all this MSC, BSC in these rural environments, that's going to be
22 harsh. Patent says you could also include other functionality in these
23 DMAs, integrated pay servers, gateways.

24 And if this is a core concept, I think that begs the question of well,
25 why -- why wasn't DMA defined in these patents. And why wasn't it
26 claimed to have peer-to-peer connection or decentralization? Why

1 did -- you know.

2 And the answer here is obvious. Lemko wanted to have a very broad
3 term DMA, distributed mobile architecture. They wanted broad examples of
4 what a DMA could include and have it cover the universe. So they have a
5 nice broad patent, and that's fine.

6 Patent owners are -- are -- can claim as broadly as they want. The law
7 allows for that. But the law creates a problem when you run into prior art
8 like Mauer and Waylett, like Flore, that reads spot-on to the invention, the
9 broad invention at issue, for its invalidity problem. And that's what we have
10 here.

11 We thank you for your time.

12 JUDGE RANGE: Thank you, Counsel.

13 MR. FRANKEL: All right. I'll -- this is Aaron Frankel. I'll briefly
14 address the couple of points on the '414 and then turn it over to Mr. Hannah.

15 JUDGE RANGE: Thank you. And patent owner has 19 minutes for
16 its surrebuttal.

17 MR. FRANKEL: Thank you. So every claim of the '414 patent
18 requires a DPR. The DPR has to be located at the first DMA system. The
19 only thing that's purported to be a DPR by petitioners is the connection to
20 the voicemail server in Mauer. That's it.

21 There is no information about the voicemail server in Mauer that is
22 stored at what is alleged to be the DMA system, which is either the cellular
23 network or the -- the WiFi network. The only connection to the voicemail
24 server is a softswitch.

25 Now, it would be turning Mauer upside down to move that routing
26 function from the softswitch to one of the networks.

1 So the whole idea of Mauer is how do you -- how do you figure out
2 you -- if you want to reach the caller, instead of calling different networks,
3 you call the softswitch. And then the softswitch will first try to reach the
4 first network. And then it will try to reach a second network. If it can't
5 reach the phone through either of those two networks, then as a fallback, it'll
6 route you to the voicemail server.

7 So there is literally nothing that corresponds to or is alleged to be a
8 DPR that is located at either of the two networks.

9 If you agree with us on that, there's no invalidity for any of the claims
10 of the '414 patent. It's that simple.

11 Now, second, every claim requires CLR data. And even without
12 construction, just looking at the limitations that are expressly recited in the
13 claims, the CLR data has to be stored at the first DMA system, and it has to
14 have location information that is associated with a second DMA system.
15 And it has to be used to determine if the targeted subscriber is located within
16 the area in the reach of the second DMA system.

17 That's express claim requirements. "Determining whether" -- I'm
18 reading from Claim 1 now on Slide 6. "Determining whether the second
19 mobile subscriber is located within a second wireless coverage area of the
20 DMA network that is associated with the second DMA system based on
21 information stored at a community location register, CLR, associated with
22 the second DMA system, wherein the CLR associated with the second DMA
23 system is stored at the first DMA system."

24 And counsel for petitioners agreed that it has to be -- location
25 information has to be in a register. It has to be stored at the first EMA.
26 Now, they don't point to anything in Mauer for satisfying this limitation.

1 The only thing that petitioners point to as purportedly being the CLR is the
2 configuration data in Waylett's NIB.

3 Now, all that's disclosed in Waylett about that is there's a -- a range of
4 IMSI numbers. And then depending on which of the ranges the target phone
5 falls within, it will then point to the HLR of a different network.

6 Let's break that down for a little bit. The -- the Waylett model is you
7 have a local NIB that's going to handle local calls. And if whoever you're
8 looking for is not around, then it's going to reach out to the external legacy,
9 traditional cellular network. So what does that mean?

10 The IMSI number is the identifier for a particular phone, but an IMSI
11 range is just saying this block of numbers is Verizon. This block of numbers
12 is an AT&T customer. This block of IMSIs is a T-Mobile customer. So all
13 that Waylett is saying is if you're trying to reach someone and they're not
14 within range of the NIB, it's going to look up and say, this caller is
15 associated with AT&T's system, so we're going to reach out to AT&T to
16 handle this call.

17 There's no disclosure of the NIB having any idea where in the world
18 that second target is located. That's what the claim requires. There has to be
19 location information stored locally at the DMA system that can determine
20 where the target is located.

21 Now, that goes against everything that Waylett teaches. Waylett is,
22 let's make a cheap box. We're going to make it rugged, so it can survive bad
23 weather. We're going to put as little as we need to, just enough functionality
24 that it can handle people in a small area. And after that, we give up. We're
25 going to kick it out to the big carrier and handle the rest of the calls.

26 So there's nothing in the CLR, in Mauer, and Waylett does not teach

1 keeping location information that's saying this person is in range of this area
2 that's associated with the second server.

3 If you agree with us on that, that's a completely independent basis to
4 find no obviousness.

5 Unless you have further questions about the '414, I'll turn it over to
6 Mr. Hannah.

7 MR. HANNAH: Thank you, Your Honors. So, Your Honor, to -- to
8 answer your question and give you some citations, specifically for the
9 argument that the Inter-AS anchor and SGSN are not the DMA gateways
10 and that the mapping to the DMA servers was also incorrect, the first -- the
11 first one is the surreply at Page 25.

12 This is where we address their new argument in reply. And
13 specifically, there's an argument here. But we say, "Petitioners waived their
14 theory" -- "The Petitioner's wave theory also fails on the merits because the
15 Inter-AS and SGSN are not DMA gateways. As shown in the POR, the
16 claim DMA gateways interface the DMA network with another network
17 such as a different DMA network or legacy communications network like
18 the 3G UTRAN, and 4G E-UTRAN networks disclose in 4. However,
19 neither the SGSN nor the Inter-AS anchor interfaces with the DMA
20 network."

21 The other citation that I would provide to Your Honor is on -- in our
22 POR. So on the POR starting at Pages 25 to 27, this is where we talk about
23 how the DMA architecture works and how it has to be able to be a
24 peer-to-peer communication between those so that each of the -- each of the
25 DMAs are -- are going to be peers.

26 And so that description goes on 25 through 26. And then on 27, we

1 talk about how this, quote, specification further differentiates between the
2 two -- I'm sorry -- the two architectures by separating the distributed mobile
3 architecture network from the legacy communications network and depicting
4 them as having separate -- different components and architecture.

5 I'd also go to Pages 29 through 32. Here, we address head-on the
6 contention that the RNC and the AGW are -- that the petitioner maps those
7 as DMA servers.

8 We specifically say at the bottom of 29 to 30 that they are not DMA
9 servers because they do not have the ability to route calls. And we have an
10 explanation of that.

11 It continues on to Page 31 where it talks about the distributed mobile
12 architecture and where the DMA servers have call routing functionality.
13 And those aren't there.

14 And then 31 through 32 continues with the reason that the DMA
15 network -- the Flore does not teach the DMA network because of the
16 peer-to-peer connections. And we contend that they incorrectly contend that
17 they are DMA servers, and we give the reasons -- reasons for that.

18 So all those, I think, are going to support the notion that the DMA
19 gateway, as we specifically identified, are not going to be the Inter-AS the
20 AGW.

21 And then also in our POR -- we did that in the surreply. And then in
22 the POR, we explain why the networks are different based on the routing
23 functionality, the peer-to-peer nature and just how the distributed
24 decentralized system works.

25 JUDGE RAEVSKY: So it seems like the one thing that I didn't hear
26 you say is pointing in your briefing, explaining that the first and second

1 DMA gateways need to be interpreted to have the same functionality and
2 that the Inter-AS anchor and SGSN have different functionality and
3 therefore don't meet those limitations. Did I miss that?

4 MR. HANNAH: Well, I think that that's by the notion that they're
5 peers, Your Honor, that the fact -- we describe how the functionality -- I
6 mean, that's -- I think that's in a broader sense. I could probably find more
7 citations and all the -- is identical.

8 But when we describe how the system works and you look at how
9 these -- how they are peers in the network and they'll be able to have the
10 ability to route calls and have the same functionality, and then contrast that
11 with Flore, which we specifically say are not gateways and are not servers, I
12 think that's the -- I think it's the same -- the same argument.

13 I hope I answered your question. Two -- a couple of points with
14 regard to what the petitioner raised in their rebuttal. I want to make it clear
15 for the record, petitioner said that they were not aware of the dictionary
16 definitions that I discussed. For the record, these are the exact dictionary
17 definitions that were filed by the Board, and this is Exhibit 3002 and 3003.

18 And I was literally just reading from the second page, which is labeled
19 Page 327 at the top. And there's a definition of "distributed architecture." I
20 read the definition of "distributed computer network." Then on the very next
21 page, which is 328, I read the definition of "distributed processing." And
22 then I just went down the page and read "distributed system." So
23 that -- those dictionary definitions are absolutely in the record and
24 were -- counsel should have been aware of them.

25 With regard to 3003, I read the -- the definition of "distributed
26 processing" appears on Page 168. And then just two down on the same page

1 is "distributed system," which says that it's a non-centralized network. So,
2 again, these are in the record. These are the dictionary definitions, just to
3 make that perfectly clear.

4 And then -- and then finally, one thing that I heard with regard to the
5 '988, it was with regard to the information being sent, the SGSN information
6 being sent.

7 But what caught my ear was counsel, you know, tried to point to
8 something in the Flore reference but couldn't find a specific citation of
9 where the SGSN system was sent. And they said, Well, it's common sense
10 that the SGSN information is sent.

11 Well, common sense doesn't apply to anticipation, right? We need an
12 explicit -- an explicit disclosure of that information being sent. And because
13 there's no inherency arguments, then I think that's dispositive of the issue
14 with regard to the '988.

15 Unless there's any further questions, I'm happy to cede the rest of our
16 time.

17 JUDGE IPPOLITO: None for me.

18 JUDGE RANGE: No further questions for me. Okay. We can go off
19 the record.

20 JUDGE RAEVSKY: Actually, I just want to thank counsel for their
21 arguments and for your time today. It was helpful in understanding these
22 issues.

23 And we can go off the record.

24 (Whereupon, the proceedings at 4:06 p.m. were concluded.)

IPR2023-00529 (Patent 7,653,414 B2)

IPR2023-00531 (Patent 7,855,988 B2)

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