

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

SANDPIPER CDN, LLC,
Patent Owner.

IPR2025-00826
Patent 9,021,112 B2

Record of Oral Hearing
Held: August 6, 2026

Before: JEFFREY S. SMITH, SHEILA F. McSHANE, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

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P R O C E E D I N G S

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JUDGE CYGAN: Good afternoon. This is Judge Cygan. Judges McShane and Smith are present on the panel. We will now hear argument in case number IPR2025-00826 between Petitioner, Google, and Patent Owner, Sandpiper CDN, concerning U.S. Patent number 9,021,112. Counsel for the parties, starting with Petitioner, please introduce yourself.

MR. BOYER: May it please the Board, Your Honor. Alex Boyer on behalf of Petitioner, Google. With me today is my colleague, Kara Specht, and also Lead Counsel, Erica Arner. And on the public line, Marisa Williams, in-house Counsel and representative of Google, is in attendance.

MR. PAPPAS: Good afternoon, Your Honors. Steve Pappas for Patent Owner, Sandpiper CDN. With me today is also Jason Eisenberg.

JUDGE CYGAN: Thank you and welcome to the Board. Per our hearing order, each party is provided with 60 minutes of oral argument. Parties need not use the entirety of that time. Petitioner will argue first and may reserve time for rebuttal. Patent Owner will respond to Petitioner's argument and may reserve time for surrebuttal. We have the demonstratives from each party. Please identify the number of the demonstrative slide you are referencing as you present your argument. Petitioner, how much time would you like to reserve for rebuttal?

MR. BOYER: Twenty minutes, Your Honor.

JUDGE CYGAN: And you may begin when ready.

MR. BOYER: May it please the Board. Alex Boyer on behalf of Petitioner, Google. Today's hearing involves the '112 patent, which relates

1 to content delivery networks. And I'll turn to Slide 2 to begin my
2 presentation. Specifically, the use of content distribution networks and the
3 use of anycast addressing in order to reach distributed content servers, which
4 store content on behalf of content providers.

5 And in this way, the patent describes that the use of anycast
6 addressing, which it describes as an IP address that may identify multiple or
7 be available on multiple servers, allows multiple content servers to be
8 distributed across the geographic region, and therefore, store content closer
9 to a requesting user. And the use of anycast addressing would allow a
10 content server in closer proximity to a requesting user, whether that's
11 geographic or topological, to be responsive to a user's request and for the
12 user to request that content from the more localized content server.

13 The '112 patent itself includes 23 claims, seven of which are
14 independent claims. And the petition challenges all of the claims based on
15 two tracks of challenges, where the A Grounds can be considered based on
16 the primary reference, Glines, which is Exhibit 1002. And then the B
17 Grounds in the petition are a combination of base references, Glines and
18 Gupta, where Gupta is Exhibit 1003.

19 Now turning to Slide 3 of my demonstratives. Patent Owner raises
20 several disputes in its Patent Owner response that can be resolved and
21 addressed by four primary issues, and these are the issues that I'd like to
22 discuss today and take these issues in order. Of course, I'm happy to jump
23 around and move to any issue the Board wishes to start with, but my plan is
24 to start with Claim 1, and specifically the claim element causing said
25 hostname to be resolved by an ISP DNS server, and address the arguments

1 regarding the sufficiency of Glines' teachings of this, and Patent Owner's
2 arguments for this claim element.

3 And after that, I would like to jump to the motivation to combine
4 arguments, which are -- touch on all of Petitioner's B Grounds. And really,
5 it addresses one of Patent Owner's arguments. And in addition, the Patent
6 Owner challenges motivation to combine but also raises this issue when
7 Patent Owner is arguing that the claim element, the plurality of content
8 providers. And so, I'll talk about both of those issues when I talk about
9 motivation to combine.

10 And then finally, I'll switch gears and I'll talk about Claim 23's
11 multiple requests for content, and the switch claims that touch on several
12 independent claims here highlighted in underline and also dependent Claim
13 11. So, turning first to Claim 1, and I believe this is element 1D in the
14 petition. Let's turn to Slide 5, if we could. Before reaching Patent Owner's
15 arguments and the teachings of Glines, I think it would be helpful to review
16 Claim 1 in its entirety and specifically, how the claim elements are described
17 in the specification.

18 So, Claim 1 begins with laying out the system elements. What you
19 have is a plurality of CDN DNS servers, and then each one of those are
20 associated with a content server. And now if we look at Figure 5 here,
21 which is Figure 5 from the patent, the CDN DNS servers are represented by
22 the elements 78, so 78A, B, and C, and each one of those has one or more
23 content servers that are associated with the CDN DNS servers, which are
24 labeled 80A, B, and C here in Figure 5.

25 After Claim 1 establishes what the system is, there are two steps

1 that are described in the patent and recited in the claim, and those are
2 highlighted here in steps C1 and C2. And what the patent talks about is
3 really a two-step resolution process, where the traditional DNS resolution
4 process would be more of a single step, where a user requests content and
5 that goes to a DNS server. And that ultimately goes to an authoritative name
6 server, and an IP address is returned for the user, and the user can use the IP
7 address to go to that machine and get the information.

8 But what's in steps C1 and C2 here is a two-step process, as it's
9 claimed and as it's described in the specification. The first step is causing
10 said hostname to be resolved to the ISP DNS server, and the patent describes
11 that as the user, the end user, which is in Figure 5 here, labeled 66, sends a
12 request to content, a request for content, and that goes to an ISP DNS server,
13 which is identified in red here in Figure 5, which is element 70A.

14 And the specification discloses this. The way that the ISP DNS
15 server is described as causing resolution of the hostname is by a query
16 process, where the ISP DNS server, instead of having the information itself
17 and responding, it consults an authoritative name server, and in this case,
18 what is labeled green in Figure 5, which has the lookup table, has the
19 information, and returns the anycast address to the ISP DNS server.

20 And you can see in Figure 5 labeled green, which is the
21 authoritative name server 64 -- you could see the little callout bubble that
22 says, the requested content is www.abcd.com, and the response, the lookup
23 that it provides, says ask IP address 4.2.2.19. That's the anycast address.
24 That is returned to what's labeled red, the ISP DNS server, and that's really
25 step C1.

1 After that, you have a follow-on step where there's a second
2 resolution to a particular content server. So, the ISP DNS server will send a
3 request to the anycast address and based on network protocols, a particular
4 CDN DNS server, particular name server, will respond and the IP address of
5 an associated content server will be returned.

6 So, traditional DNS resolution is a one-step to an IP address and
7 what we have here is a two-step process -- first to the anycast address and
8 then to the IP address. Now, I'd like to transition and talk a little bit about
9 the teachings of Glines as it relates to this step C1, the causing said
10 hostname to be resolved.

11 JUDGE CYGAN: Counsel, before you start on that, why would
12 we look to that description that you pointed to, particularly that Figure 5, as
13 corresponding to the claim steps? Why is that the best description?

14 MR. BOYER: So, Figure 5, really -- it does correspond with
15 Claim 1, but the way that the specification -- with the way the written
16 description is laid out, the first two figures are described as how the prior art
17 would perform DNS resolution and then Figures 3 and Figures 5 correspond
18 to how the two step anycast address and then to the IP address would
19 happen.

20 Figure 3 talks about how the network would figure out which
21 content server or CDN DNS server to go to, and Figure 5 is really when you
22 get to this two-step process and it does correspond with Claim 1. And so,
23 there's really no other embodiments in the spec to point to. It's really Figure
24 1 and Figure 2 of the prior art. And then after that, Figures 3 and 5 are
25 where you get to the corresponding disclosure for Claim 1.

1 And so, when we turn to Glines, which is the basis for Petitioner's
2 A Grounds, what you have here is essentially the same process, at least with
3 respect to -- well, not only the initial resolution to the anycast address, but
4 the follow-on to a particular IP address. And if we compare the two -- if we
5 look to the left here on Slide 6, we have Figure 5, again, which corresponds
6 to Claim 1. And it describes, as I said, the ISP DNS server receives a
7 request for content and instead of providing the answer itself, performing a
8 lookup, it needs to query another server that has the answer. It needs to
9 query the name server, and that's exactly what Glines teaches.

10 If we look here on Figure 1 of Glines, which has been annotated,
11 Glines tells us that a user, which is labeled 12, when that user is associated
12 with an ISP, the first step in any content request is going to go to its local
13 resolver 18, which is labeled red. The local resolver will look to see first,
14 does it have the information cached already. And if it doesn't have that
15 information, then it's going to do exactly what the '112 patent describes. It
16 causes resolution by querying an authoritative name server to get the answer.

17 And so, there's really no daylight between how the patent describes
18 this process and causing resolution by the ISP DNS server, and the teachings
19 of Glines. And if we transition to Slide 7, I just want to talk about Patent
20 Owner's arguments in its Patent Owner response, but also, how they relate to
21 the claims at issue. And then after that, I want to talk about the intrinsic and
22 extrinsic record, if I may.

23 So, in Patent Owner's response, Patent Owner asserts that the ISP
24 DNS server, for this causing resolution step, C1, according to the Patent
25 Owner, the ISP DNS server must perform the resolution itself. It must have

1 the information, it must perform a lookup, and really, is advancing a claim
2 construction argument that has no basis in the intrinsic record or in the
3 claims themselves. And I think a good starting point is with the claims.

4 We look again, reproduced on Slide 7, are the two-step process
5 that I previewed already -- steps C1 and C2. And you can see the
6 highlighted passages, you have differences in claim language, which
7 correspond to differences in the way that the patent describes those two
8 processes. In step C1, you have, causing said hostname to be resolved. And
9 if you look at the corresponding description in the patent, that corresponding
10 description is, as I just said, it's a query process. The ISP DNS server is
11 being asked to resolve something, and it queries an authoritative name server
12 to get the answer.

13 By contrast, if we look at step C2, you have different claim
14 language. Instead of causing resolution, you have by one of the CDN DNS
15 servers that are responding to the anycast address. The claim says that CDN
16 DNS server resolves the hostname to identify an IP address, and that
17 different claim language, again, is borne out in the description. The
18 description of this step, this second resolution step, is more of a direct
19 resolution, where the responding CDN DNS server, instead of querying
20 another server it already has content servers associated with it and can
21 provide the IP address in response to that. So, really, if we start with the
22 claim language, you have differences between causing resolution and
23 resolving, and this really does not -- Patent Owner's arguments just do not
24 conform with the plain language of the claims.

25 And if we transition, I'd like to briefly touch on -- I know I've

1 talked about the specification, but I'd like to review it just in a little bit more
2 detail, just to make the point clear that there's no intrinsic support for Patent
3 Owner's argument that the ISP DNS server has to perform the lookup itself.
4 Instead, I've pointed here to passages. Again, this is Slide 8. Passages
5 related to the description of Figures 3 and 5, which I discussed pertains to
6 how the process is claimed in Claim 1. And each one of those passages in
7 the description, you have this DNS resolution by query when it comes to the
8 initial resolution step. The user sends a request to the ISP DNS server and
9 that queries the authoritative name server.

10 And if we look at the bottom highlighted passage, it's the
11 authoritative name server DNS64 that has the address lookup table. That's
12 the name server that has the answer and that's what the ISP DNS server has
13 to query in order to get the Anycast address.

14 And if we move on to Slide 9, even when we move away from the
15 description that corresponds with Claim 1 -- I talked about Figures 1 and 2,
16 which are labeled prior art. Again, what you have in the patent is another set
17 of -- well, it's a description of how DNS resolution would occur in the art
18 generally without anycast, where it's a direct resolution. And even there, the
19 patent describes a resolution process by an ISP DNS server that involves a
20 query. The ISP DNS server generally doesn't have the answer unless it's
21 cached. But generally what would happen is the ISP DNS server would
22 have to go out and query what's labeled green here, which is the
23 authoritative name server.

24 So, really the intrinsic record is entirely on Petitioner's mapping of
25 Glines, where causing said hostname to be resolved is broader and

1 encompasses Glines' teachings of a query process to resolve the anycast
2 address. And if we transition to the extrinsic record, the extrinsic record,
3 again, only supports Petitioner's mapping of Glines.

4 If we look to what Patent Owner cited in its Patent Owner
5 response, Patent Owner does not identify any part of the intrinsic record to
6 support its narrowing argument. And the only thing it points to in the
7 extrinsic record is Dr. Russ' testimony, which more or less repeats what's in
8 Patent Owner's response without more.

9 By contrast, if you look at Dr. Mowry's testimony, which is
10 Petitioner's expert, he explained that DNS resolvers -- the way these -- the
11 way resolution typically occurs in the art, in particular for ISP DNS servers,
12 it's generally these DNS servers operate as an intermediary where there may
13 be several steps to walk through, multiple DNS servers to be consulted
14 before you reach the ultimate authoritative server who has the table, who has
15 the answer, and that can be recursively worked through and back to the ISP
16 DNS server.

17 JUDGE CYGAN: Counsel, would it be accurate to say that the
18 parties are looking at two different possible constructions of C1? In your
19 view, you read C1 as causing by an internet service provider DNS server
20 said hostname to be resolved, whereas in Patent Owner's construction,
21 they're looking at causing said hostname to be resolved by an internet
22 service provider DNS server. Is it really sort of a question of whether the
23 internet service provider DNS server is doing the causing or doing the
24 resolving? Is that the distinction we're looking at?

25 MR. BOYER: So, Petitioner is not proposing any construction. I

1 think it's Patent Owner that is proposing a narrowing construction. And
2 your point is well taken. Is the causing language operative on the resolving
3 by the ISP DNS server? And I think the answer to that is, we look at the
4 language of the claim and the differences between the claim, and we also
5 look at how the process is described in the patent. And the way it's
6 described in the patent and throughout the intrinsic record is when the ISP
7 DNS server is resolving or causing to be resolved, it's always described as a
8 query process.

9 So, I think that's the primary dispute. But I think even if the Board
10 does not agree that causing is operative, that the ISP DNS server still has to
11 perform the resolution, I think you could still find in our favor because this
12 is generally how DNS functions in the art. If a server is asked to resolve
13 something and has to go to another server to get the answer and then provide
14 it back, whether it's caused or it resolves directly, it's still giving the answer
15 back to the user or back to the ISP DNS server. And in that way, whether
16 you read causing as operative or not, we believe that the mapping in the
17 petition is correct. And so, with that, Your Honors, I'd like to switch gears
18 unless there are further questions on Claim 1.

19 So, I want to talk next about motivation to combine Glines and
20 Gupta for Petitioner's B Grounds. And if we jump to Slide 15, what we have
21 here, we put together just a high-level overview of what the combination
22 would look like. And there's a lot on the screen here, but what we have is
23 the basis in Glines -- the petition laid out how Glines alone satisfies the
24 elements that are provided in the combination. Specifically, the combination
25 is used to address the ISP DNS server, the "plurality of content servers", and

1 the plurality of content providers.

2 And in the petition, Petitioner argued that Glines alone satisfies
3 these features. Labeled in blue here, Glines alone discloses that when a user
4 is associated with an ISP, the first step in any resolution is to this local
5 resolver 18. And what we described in the petition is, to the extent there's
6 any argument that Glines does not sufficiently disclose that that resolver 18,
7 the local DNS resolver, is not associated with an ISP and it's not a server,
8 then it would have been obvious to take those implementation details from
9 Gupta and implement Glines in the way that Gupta discloses, which is Gupta
10 describes these point-of-presence locations, and one of which is the ISP
11 Cluster 60, in which the users can reach the internet through the ISP, and the
12 ISP has an associated Client DNS 170.

13 And it would have been obvious for the reasons laid out in the
14 petition to implement Glines' local resolver 18 as one that's associated with
15 an ISP, and one that is a server. And I'll get to this in a little bit, but I'll
16 preview it that in that combination, Petitioner is not proposing to take the
17 functionality of Gupta, the way that Gupta resolves content, which it uses a
18 unicast method. Basically, the more traditional one-step resolution process.

19 Petitioner is not proposing to take that functionality and combine it
20 with Glines. What we're really doing is saying if the local DNS resolver is
21 not explicitly related to an ISP and it's not a server, then Gupta readily
22 renders this obvious for the reasons that are provided in the petition. And
23 with that, I want to jump to the other claim features.

24 So, in addition to the ISP DNS server, the Claim 1 and some of the
25 other independent claims require you have multiple or plurality of content

1 servers associated with each of the CDN DNS servers, and we have these
2 labeled in red here in Glines Figure 1, but essentially Glines gets you there.
3 Glines has multiple CDN DNS servers, there are 53, the bubbles that are
4 labeled DNS, and it discloses multiple content servers, 51, in the red boxes.

5 And maybe not in this figure, but in Glines' disclosure, Glines
6 describes those CDN DNS servers and content servers as service groups and
7 talks about how there can be load balancing where the CDN DNS server
8 picks a particular content server that's associated with it, and that's the IP
9 address that is provided back to the ISP DNS server.

10 But, Your Honors, to the extent that there's anything missing in
11 Glines, to the extent Glines does not provide disclosure that each one of the
12 CDN DNS servers has a plurality of content servers, again, this
13 implementation detail would have been readily obvious based on the
14 teachings of Gupta, where Gupta teaches for each one of its name servers,
15 there are multiple web cache-associated servers that store the content. And
16 the IP address of one of those can be returned in the second part of the
17 resolution process. And for each one of these, I have a few slides on some
18 of the specific rationales, but I'm happy to jump there if you have any
19 questions.

20 Finally, the claim term plurality of content providers. Again, we
21 assert that Glines alone gets us there. Glines tells us that a user may request
22 particular content, and it uses a placeholder in example.com. And Glines
23 also tells us that the content can be stored across multiple domains in its
24 content servers. But to the extent there's an argument that Glines doesn't get
25 us there, Gupta discloses that --

1 JUDGE SMITH: Can you tell us where the petition says that the
2 -- where the petition relies on Glines' disclosure of the multiple domains?

3 MR. BOYER: Yes, I think we brought that up mostly in the reply,
4 I would say.

5 JUDGE SMITH: But where is it? Yeah, but I mean, Patent Owner
6 is saying that's a new argument because you brought it up in a reply. That's
7 why I'm asking, where is it in the petition?

8 MR. BOYER: Yeah, I would say we brought it up in response to
9 Patent Owner's argument in the POR.

10 JUDGE SMITH: Well, let me ask you this. Is it in the petition?

11 MR. BOYER: I don't think we identified this particular line from
12 Gupta, which says that multiple domains -- content from multiple domains
13 may be in each one of its content servers. But Glines does teach this, and in
14 response to Patent Owner's argument, we did identify this from Glines.

15 JUDGE SMITH: So, you're saying it's a proper argument because
16 it's a response to --

17 MR. BOYER: Correct. We didn't change the grounds. We
18 identified additional reasons why Glines alone would have rendered this
19 feature obvious. But I think the critical point here is I don't think the Board
20 even needs to reach this argument because the combination of Glines and
21 Gupta gets us there.

22 JUDGE SMITH: Okay. So, let me ask you this then, if we're
23 going to rely on Glines and Gupta. The motivation that you discussed a
24 moment ago about -- I forget what you said about the motivation, but it was
25 basically for the -- is that the slide that has the motivation or --

1 MR. BOYER: I can move. I have individual motivations for each
2 --

3 JUDGE SMITH: Yeah, that individual -- what slide was that? I'm
4 sorry, I --

5 MR. BOYER: Are we talking about the multiple content
6 providers?

7 JUDGE SMITH: Yeah, yeah, the multiple --

8 MR. BOYER: So, 17.

9 JUDGE SMITH: -- content providers. Slide 17?

10 MR. BOYER: Yes.

11 JUDGE SMITH: Okay. So, let's say we agree with you that
12 Glines by itself has multiple -- Glines by itself, the way you presented it,
13 teaches it doesn't need the combination with Gupta to have the causing to be
14 resolved. Glines by itself has it -- let's say we find that Glines has
15 everything except this plurality of content providers. In that case, if we're
16 just looking to Gupta to teach plurality of content providers, is it enough for
17 us to rely on the motivation that you provided for the plurality of content
18 providers in the petition?

19 MR. BOYER: Yes.

20 JUDGE SMITH: So, we don't need -- the initial motivation on
21 pages 7 and 8 of the petition, we don't need to address that. We can just go
22 to what you said in petition on pages --

23 MR. BOYER: 40 and 41.

24 JUDGE SMITH: -- 40 and 41.

25 MR. BOYER: Correct.

1 JUDGE SMITH: And that's enough?

2 MR. BOYER: Yes, and this came up in some of Patent Owners'
3 arguments, where we have an initial section that's labeled Motivation to
4 Combine Glines and Gupta, where we preview the combination. We talk
5 about some high-level reasons why a POSITA would have looked to Gupta
6 in view of Glines. But in the particular claim features where we are
7 modifying or implementing Glines based on Gupta's teachings, we have
8 particular motivations and specific reasons for the combination or the
9 modification.

10 And so, to answer your question, yes, for this claim element, the
11 plurality of content providers, the reason to modify Glines to the extent we
12 need to would be found in the petition at pages 40 and 41, and Dr. Mowry's
13 testimony accompanying the petition at paragraph 267.

14 JUDGE SMITH: Okay. And so, and the motivation that you have
15 there, it was a combination of known elements, and it leads to the benefit of
16 providing service to more than one customer or provider?

17 MR. BOYER: That's correct.

18 JUDGE SMITH: Okay. And if you could kind of give us a
19 preview of Patent Owner's contention with that motivation and how you
20 would respond to it.

21 MR. BOYER: Yeah, I think there might have been some
22 confusion in the briefing. I don't think Patent Owner directly addressed this
23 motivation. What Patent Owner did --

24 JUDGE SMITH: Oh, I see.

25 MR. BOYER: -- is they looked at the institution decision and said

1 that the institution decision somehow used the most -- they essentially
2 argued that we were pointing to motivation for a plurality of content servers,
3 and that motivation is not sufficient to provide a reason to combine Gupta
4 for a plurality of content providers. So, there was some confusion in the
5 briefing, and I don't think the Patent Owner in its Patent Owner response
6 actually addressed this specific reason, which is -- of course, we're talking
7 about CDN networks, we're talking about Glines. This is just how CDN
8 networks would be used in the art.

9 And in order to maximize the value of Glines, in order to provide
10 the user with more available content to different content requests, it would
11 have been natural and understood and taught by Gupta to have content from
12 multiple content providers stored across Glines system, right, so then you
13 could distribute that system globally or geographically and place it in closer
14 proximity to a user. And so, Glines is not limited to -- at least in the
15 combination, we do not believe that it makes sense to limit Glines to one
16 content provider. And in the combination, Gupta provides teachings of this
17 expressly.

18 JUDGE SMITH: So, all the arguments that Patent Owner made
19 about the combination of the anycast versus unicast wouldn't work, and all
20 those don't really apply to --

21 MR. BOYER: I don't think they apply to this particular claim
22 element, but I'm happy --

23 JUDGE SMITH: Okay.

24 MR. BOYER: -- to talk about that.

25 JUDGE SMITH: Okay.

1 MR. BOYER: And that's a good transition. Why don't we go to
2 Slide 18, if you have no other questions.

3 JUDGE SMITH: I have no other questions.

4 MR. BOYER: Okay. So, the other claim element, and you
5 previewed this, is the ISP DNS server. Again, to the extent Glines alone
6 doesn't get us there, combination with Gupta, implementing it as Gupta
7 describes, where it's a server and it's associated with an ISP. And the
8 petition laid out the reasons for this, and Dr. Mowry's testimony is
9 highlighted here on 18.

10 Glines already tells us that the user is associated with an ISP, so it
11 would have been obvious to implement the DNS server 18 as one that's also
12 associated with an ISP, and to implement it as a server for all the speed and
13 efficiency benefits that come along with implementing these name servers as
14 a server. But critically, and it's labeled on the screen here, is the
15 combination -- Petitioner did not propose a combination where, again,
16 Gupta's unicast addressing -- it's prior art teaching of typical DNS resolution,
17 that functionality is not imported into Glines in the combination.

18 And so, Patent Owner's arguments to this effect that somehow
19 Glines and Gupta are so different and they're disparate because they teach
20 different things, is really avoiding what the combination is. We did not
21 propose wholesale combining the systems in any way. We proposed Glines
22 would operate with its two-step resolution to the anycast and to the IP
23 address. And then it would just implement, based on Gupta's teachings, the
24 local resolver 18 as an ISP DNS server. And if there are no further
25 questions on this claim element, I'd like to transition to Claim 23, if I may.

1 JUDGE CYGAN: Can you first explain the reason why -- the
2 reason for the combination of Gupta for Claim 1 with Glines?

3 MR. BOYER: Yes, so that would be for this element, the internet
4 server or ISP DNS server, which I believe is only in Claim 1. So, again, to
5 the extent Glines doesn't get us there, Gupta provides that implementation
6 detail. And I apologize, I take that back. We also relied on the combination
7 for a plurality of content servers. Let me transition to Slide 16.

8 JUDGE CYGAN: If I'm correct, Claim 1 is the content servers
9 and Claim 13 is content providers, right?

10 MR. BOYER: That's correct. You're right. I apologize if I mixed
11 that up. Yes. Plurality of content providers. If we go to Slide 15, is for
12 some of the later independent claims -- 13, 18, 22, and 23. The plurality of
13 content servers, each one of the CDN DNS servers having an associated
14 plurality of content servers, that's in Claim 1.

15 JUDGE CYGAN: And what's the motivation, the reason to
16 combine Gupta's plurality of content servers with a single content server of
17 Glines, assuming Glines doesn't teach that already?

18 MR. BOYER: Yes, assuming Glines does not teach that already,
19 as outlined in the petition and supported by Dr. Mowry's testimony, I
20 transition to Slide 16. Dr. Mowry explained all of the benefits of having
21 more servers associated with each one of those CDN DNS servers. If you
22 have multiple servers, you have more storage to begin with. You can deal
23 with issues of server outages.

24 So, if you have multiple servers and one of them goes out, you can
25 have a fallback policy where a user's request would not be dropped. It

1 would be serviced by another one of the associated content servers, and the
2 CDN DNS server could pick which one may not be overloaded. So, there
3 are a number of benefits. They essentially improve the performance, the
4 reliability of the system, and overall scalability. And those were the reasons.
5 And really what we're talking about here is, to the extent Glines doesn't get
6 us there already, we're just replicating what's already in Glines for each one
7 of the CDN DNS servers.

8 JUDGE CYGAN: Is that what is behind your reasons at page 24
9 of the petition? I'm trying to map this to where it's in the petition.

10 MR. BOYER: Um-hum. You said 24?

11 JUDGE CYGAN: Yes. Is that a different element or is that the
12 same element?

13 MR. BOYER: 24 would be the ISP DNS server.

14 JUDGE CYGAN: So, we're really looking at 14 and 15 then, is
15 that correct, in the petition?

16 MR. BOYER: That's correct.

17 JUDGE CYGAN: And in that, you're relying on known elements
18 yielding predictable results and the load balancing aspect of it, correct?

19 MR. BOYER: That's correct. We're relying on a POSITA's
20 understanding of Glines in the A Grounds and what a POSITA would have
21 understood from Glines and found obvious based on its disclosure alone.
22 But in the combination, yes, we're relying on this teaching in Gupta where it
23 discloses for every one of its name servers there are multiple web cache
24 servers, and it would have been obvious to implement Glines based on this
25 teaching and for the reasons that are laid out in the petition and called out by

1 Dr. Mowry.

2 JUDGE SMITH: Those include load balancing, redundancy,
3 failure tolerance, those types of things?

4 MR. BOYER: That's correct.

5 JUDGE SMITH: Okay.

6 MR. BOYER: Right, so if you have multiple servers, content
7 servers that are associated with each one of the CDN DNS servers, you're
8 just improving the availability of the overall system. So, if you have server
9 outages, you can have another server that's associated provide the content,
10 assuming that content server has the content. Does that answer your
11 question?

12 JUDGE CYGAN: Yes, thank you.

13 MR. BOYER: With that, I think I have some limited time here. I
14 want to jump quickly to Claim 23, if I may, and I'll go to Slide 21. So,
15 Claim 23 is an independent claim and I'll jump right to Slide 22, which has
16 the claim language. Again, Claim 23 is an independent claim that has three
17 steps. The first step, which is step A, really lays out the system elements of
18 the claim, and it's very similar to Claim 1. You have plurality of DNS
19 servers, and then you have a plurality of content servers that are associated
20 with those DNS servers, and then you have the DNS servers are responsive
21 to the anycast address. They're authoritative for particular content.

22 And then when we get to steps B and C, what we have is a
23 particular use case of that same system. And the way that we mapped it in
24 the petition is it's really a use case of Glines. And I'd like to talk a little bit
25 about the claim language first before we get into the mapping. Well, you

1 start with step B, and what you have is a first request by a user for content
2 that is associated with a first content provider. And then in step C, you have
3 a second request for second content that's associated with a second content
4 provider.

5 But the wrinkle here is that steps B and C have to essentially go to
6 the same website. Both of the requests have to include at least the first
7 hostname, which is essentially a domain name or URL. So, you have two
8 requests for content, and the content in the two requests have to be
9 associated with different content providers, but they have to flow through
10 the same website or have a common hostname.

11 And so, if we turn to Slide 23, the way that we map this into
12 Petition is based on Glines. So, the question is how would a POSITA have
13 read Glines and rendered this use case obvious? What does Glines tell us?
14 Glines tells us that it can resolve content using the two-step resolution
15 process, and that a user may request content by submitting a URL in the
16 browser, or clicking on a link, and that may be for particular content. And
17 Glines uses a placeholder for whatever that particular content may be. And
18 that example is -- that placeholder is example.com.

19 And so, if we transition to slide 24, what we identified in the
20 petition is how a POSITA would have understood Glines, and that particular
21 disclosure, what does it mean for a user to request particular content and for
22 the system of Glines to be used to resolve a placeholder, an example.com.
23 And what we explained is that a POSITA would have understood this to be a
24 use case of Glines to fetch content that was available at the time -- at the
25 time of the '112 patent, at the time of Glines.

1 And the evidence we identified in the petition is that particular use
2 case that a POSITA would have been aware of, where Dr. Mowry explained
3 that this particular use case would have been obvious in view of news
4 aggregator websites. Really, you're talking about two requests to the same
5 website for content that is associated with two different content providers.
6 And what we have here in Exhibits 1024 and 1025 are those two different
7 pieces of content. The first is Yahoo News' splash page, which is associated
8 with Yahoo News. And the first hostname is dailynews.yahoo.com. And
9 the second request is through yahoonews.com, but it's requesting content
10 associated with Reuters. And that includes the first hostname again, the
11 dailynews.yahoo.com.

12 And if we turn to Slide 25, there's some argument -- Patent Owner
13 has made several arguments here for this claim, the first of which is that the
14 petition did not identify sufficiently the teachings or the general knowledge
15 of a POSITA, as a POSITA would understand the state-of-the-art reading,
16 reading Glines. In particular, our request for particular content and this
17 placeholder example.com. And that's really not the case.

18 In the petition, we identified internet archive exhibits to the
19 particular use case, and Dr. Mallory explained that this example was known
20 to POSITAs, and a POSITA reading the lines would have understood when a
21 user requests content, it's not very -- it's very obvious that that content would
22 be to a particular website. And POSITAs were well aware of these content
23 or news aggregator websites. And then in Dr. Mowry's supplemental
24 declaration, he further explained, provided explanatory evidence, under the
25 same theory that this was the state of the art. POSITAs understood this use

1 case, and this use case would have been obvious in view of Glines.

2 JUDGE CYGAN: Counsel, in this situation, you're looking at the
3 second request as something which is not taught by Glines, and you're
4 looking to the knowledge of skill in the art for that limitation, correct?

5 MR. BOYER: So, you are correct that Glines does not provide
6 express disclosure of all of the available content that would be available to a
7 user if they use Glines' system. Glines provides example.com. It provides
8 description that a user using Glines' system would search for particular
9 content. And then the difference between that teaching in the prior art and
10 the claim, we have to view it under the lens of how a POSITA would have
11 understood Glines.

12 And we all know that a POSITA's knowledge is part of the
13 universe of information we have to consider for obviousness. And so, to
14 answer your question, no, the particular requests that are provided here in
15 Exhibit 1024 and 1025 are not in Glines, but a POSITA would have found it
16 readily obvious based on the teachings of Glines in view of available content
17 at the time.

18 JUDGE SMITH: So, it's a person of skill with this background
19 knowledge, reading Glines' example.com, with this background knowledge
20 that example.com could be the news site of yahoo.com. In that case, that
21 person of skill could access content from another provider other than
22 Yahoo?

23 MR. BOYER: That's correct. I think you are getting to one of
24 Patent Owner's arguments where the first and second requests here -- and
25 correct me if I'm wrong -- Patent Owners argue that the first and second

1 requests we identified here are from the same content provider. Is that what
2 your question was?

3 JUDGE SMITH: Well, no, I was just making sure I understood
4 your position about a person of skill. I didn't really -- I just want to make
5 sure. So, you're saying about person of skill, with this background
6 knowledge of the Yahoo News website.

7 MR. BOYER: Correct.

8 JUDGE SMITH: Reading Glines' example.com would understand,
9 example.com, includes the Yahoo News website, and that Yahoo News
10 website. So, there's the request to go to example.com or Yahoo News
11 website. And then there, there can be a second request to access an article
12 provided by Reuters?

13 MR. BOYER: That's correct.

14 JUDGE SMITH: And that's -- so, it's Glines that has this in light
15 of the knowledge of one of skill in the art.

16 MR. BOYER: Correct.

17 JUDGE SMITH: That's how one of skill in the art would read
18 Glines' example.com?

19 MR. BOYER: That's correct. That's how we explained it in the
20 petition. Glines provides the hook and says, a user is going to search for
21 content. It's going to use Glines' system. It's going to submit a URL or click
22 on a link. And then how does a POSITA -- how would a POSITA
23 understand what that means? And a POSITA would have the knowledge as
24 laid out in the petition and further, in Dr. Mowry's supplemental declaration
25 where he explained the state of the art.

1 And in response to Petitioner's argument that this particular use
2 case was known. Yahoo News was known. It was described in the yard as
3 providing access to multiple -- to content associated with multiple content
4 providers. And then it would've been obvious to simply apply this to Glines,
5 where Glines' system is just used twice for particular content. And this is
6 just one example use case that would've been obvious to apply.

7 JUDGE SMITH: I'm just curious. I know I'm into your rebuttal
8 time. Forgive me for --

9 MR. BOYER: No, please.

10 JUDGE SMITH: In a sentence or two, just in terms of technology,
11 like the technology behind going to a website, such as example.com or
12 yahoo.com and then clicking further in that website, even if it's within
13 yahoo.com and the content itself is -- like, is there a technological difference
14 between that -- going to Yahoo and then clicking on content from Yahoo,
15 versus going to Yahoo and then clicking on content on that Yahoo website
16 that's from a different provider, in terms of -- it just seems like it's an
17 argument about the author of the data rather than -- am I missing something?

18 MR. BOYER: No, there's no technical detail that's unique here.
19 And maybe I'll answer it this way and let me know if I'm answering your
20 question or not. I'll go back to the claim language in Claim 23. Claim 23
21 does not require the two separate requests for content to go to the origin
22 -- two different origin sources. Really, you're flowing through one website,
23 really.

24 The two requests have to have the same first hostname. And then
25 what you're searching for is content that's just associated with different

1 content providers. And so, there's no technological difference in Yahoo
2 News where it provides links. And it would just be really -- when you go to
3 Yahoo News, you click on a link and it provides content associated with
4 Reuters or associated with another content provider that flows through
5 Yahoo News' website.

6 JUDGE SMITH: Thank you. That answers my question. Thank
7 you.

8 MR. BOYER: Thank you.

9 JUDGE CYGAN: And one final question.

10 MR. BOYER: Yes.

11 JUDGE CYGAN: Because you're looking at this through the lens
12 of someone understanding accessing www.example.com, for that reason you
13 don't need a motivation to do a second request? Was that your approach in
14 the petition, or did you apply a motivation to that?

15 MR. BOYER: I don't think we proposed a modification of Glines.
16 What we proposed is Glines alone renders this obvious based on its
17 teachings and how a POSITA would have read the reference. A POSITA's
18 understanding is part of the obviousness case. It's the store of public
19 knowledge that has to be consulted for any obviousness analysis. So, we
20 were not proposing that Glines be modified in any way.

21 The only thing that we did say is that implementing Glines for this
22 particular use case, and this is on page 55 of the petition, this would've been
23 nothing more than applying Glines in understood ways to resolve particular
24 content. So, we also said that it would've required no modifications of
25 Glines to implement. It really would've been applying Glines' teachings of a

1 user requesting particular content, where Glines is not going to provide
2 detail of all the websites that would have been available at the time. It just
3 provides a placeholder, and then you just repeat that process twice. And we
4 looked to how a POSITA would have understood that, and that's how we
5 laid it out in the petition.

6 JUDGE CYGAN: So, essentially, Glines teaches a generic go to a
7 website, and the art supplies the specific two-step process using the same
8 internet, the hostname, correct? The same first hostname?

9 MR. BOYER: So, Glines teaches the system the way that it
10 resolves content through the two steps -- to the anycast and to the IP address.
11 And yes, it uses just a placeholder for what that content could be. So, what
12 is that? What would that mean to a POSITA? You would apply Glines to
13 content that was available and known in the art. So, really, it becomes a
14 question of what was the state of the art? And that sort of information can
15 come from a POSITA and can come from expert testimony. And that's what
16 we relied on.

17 JUDGE CYGAN: Okay. There's no further questions. Do you
18 have any concluding statement, or do you want to save the rest of your time?

19 MR. BOYER: How much time do I have remaining?

20 JUDGE CYGAN: I have 12 minutes left.

21 MR. BOYER: Twelve minutes?

22 JUDGE CYGAN: Yeah. You're 8 minutes, 8-and-a-half minutes
23 into your rebuttal.

24 MR. BOYER: I would just like to touch briefly on the switch
25 claims just for potentially a minute here so I can talk about it in my rebuttal.

1 So, there were some arguments the Patent Owner made that Glines' layer 4
2 switch was insufficient to teach this claim element. We're on Slide 28 here.
3 And the representative claim is 11, where the claim recites using a switch
4 select the particular content server.

5 So, the way Glines discloses this limitation is if we see Figure 1 of
6 Glines here, every one of those blue groups is what Glines describes as a
7 service group. And it describes those DNS servers and associated content
8 servers as a group. And it describes what happens in that service group, if
9 you have outages or failures of particular content servers and how does the
10 system handle that. And it talks about a number of different ways in which
11 it can deal with overload of the system or provide redundancy.

12 And one of them, which is here on Slide 28, is that Glines says
13 within the service group, standard load balancing may apply, including use
14 of a layer 4 switch. And we explained in the petition that this renders
15 obvious or teaches using the layer 4 switch within the service group to select
16 the content provider in order to carry out what Glines is talking about here,
17 is to avoid overload to one particular content server, distribute the load
18 across multiple content servers, and picking a particular IP address of a
19 content server using the layer 4 switch.

20 And briefly, I just want to jump to Slide 30 because I just want to
21 make the point that to the extent Glines alone does not get us there, we
22 identified a combination with Colby that provides disclosure of what it calls
23 a content-aware flow switch. Colby, which is Exhibit 1006, teaches us this
24 switch used to identify and select a particular content servers based on a load
25 balancing policy.

1 And I'll just say in closing that Patent Owner does not dispute the
2 teachings of Colby and only really argues in one line in its Patent Owner
3 response that it wouldn't have been obvious to combine Colby with Glines
4 because Glines teaches load balancing using different methods without the
5 use of a switch. But we just submit, as it's provided in the petition, that the
6 mere fact that Glines teaches load balancing using a number of alternative
7 means, one of those is using a switch, and it would have been obvious to
8 apply Glines based on Colby's teachings here of its content-aware flow
9 switch. And I'll just pause there and rest if there are no further questions.

10 JUDGE CYGAN: Okay. Thank you, Counsel.

11 MR. BOYER: Thank you.

12 JUDGE CYGAN: I have you at nine minutes remaining for your
13 rebuttal. Patent Owner?

14 MR. PAPPAS: Just give me a moment to try to get set up here.

15 JUDGE CYGAN: Okay, whenever you're ready. How much time
16 would you like to reserve for a rebuttal?

17 MR. PAPPAS: Fifteen minutes, please.

18 JUDGE CYGAN: Okay. Now I'll set 45 minutes for you, and you
19 can begin when you're ready.

20 MR. PAPPAS: Okay. Good afternoon, Your Honors. I'd like to
21 start on Slide 7 of Patent Owner's demonstratives. There were a number of
22 issues that were discussed by Petitioner. I'd like to start by addressing Claim
23 1, resolving the hostname to an anycast address by an ISP DNS server.
24 Then I think our time is best spent addressing independent Claim 23, which
25 you just talked about with respect to the second content and second content

1 provider. And then I'd like to touch on switch limitations, and I'm happy to
2 answer any questions that Your Honors have on the other elements as we go
3 through. If you have any immediate questions, I'm happy to answer those
4 now, but otherwise I will start on Claim 1 on Slide 8.

5 So, Claim 1, as you talked about with Petitioner, requires two
6 resolutions. They're recited here in what is marked element C1 and C2 in
7 the claim itself. C1 recites causing said hostname to be resolved by said
8 common anycast address by an internet service provider ISP DNS server.
9 That's really the focus of the dispute here.

10 Petitioner focused a lot on what the causing means and basically
11 saying that causing is what modifies what needs to resolve what the ISP
12 DNS server is doing, but that's the wrong inquiry. And I think that's what
13 Your Honors had recognized in your original institution decision. Petitioner
14 said that a good starting point is the claim language. I agree. I think that's a
15 good place to start. And so, if you look at the claim language here, just by
16 its plain language, and this follows normal grammatical rules, as well.

17 The claim language says, causing said hostname to be resolved to
18 said common anycast address by an internet service provider. But what by
19 an internet service provider, ISP DNS server is modifying there is the
20 resolution to be resolved by an ISP DNS server. That's the plain meaning of
21 the claims.

22 If you agree with that -- and I'll explain why that's supported by the
23 intrinsic record -- but if you agree with that, you don't even need to reach the
24 issue of whether Glines' local resolver causes the hostname to be resolved.
25 That is dispositive to this case. Petitioners only pointed to the local resolver

1 as the ISP DNS server. The claim requires the hostname to be resolved by
2 the ISP DNS server. The only thing they've pointed to there is the root DNS
3 server of Glines, not the local resolver. And so, if you do agree --

4 JUDGE SMITH: Well, I mean --

5 MR. PAPPAS: -- with that interpretation of the claim --

6 JUDGE SMITH: -- to be fair, they also pointed to your disclosure
7 in the specification, and they said that the claim encompasses the disclosed
8 embodiment, and they said the only disclosed embodiment is the same as
9 what's disclosed by Glines. So, I mean, to look at the claim language by
10 itself, given that Petitioner also said the disclosed embodiment does what
11 Glines does, it seems incomplete. I mean, can you show us any disclosed
12 embodiment that doesn't do what Glines does?

13 MR. PAPPAS: So, yes, I will. So, there's multiple layers of the
14 intrinsic record that will support this, and I can start at the specification.

15 JUDGE SMITH: Okay.

16 MR. PAPPAS: Not everything that I have is on a specific slide,
17 but let me --

18 JUDGE MCSHANE: Counsel, I'm sorry. Just briefly, while
19 you're on the claim language, just -- and I'm sorry --

20 MR. PAPPAS: Okay, it's fine.

21 JUDGE MCSHANE: -- but you'll get here.

22 MR. PAPPAS: Absolutely.

23 JUDGE MCSHANE: You can go back in a minute, but sort of
24 where I'm having a problem is I look at the line 161, and it says to be
25 resolved. So, to me, that is sort of a prospective, in my view anyway,

1 prospective language. Do you have a comment on that or a response to that?

2 MR. PAPPAS: I think what you might be getting at, Your Honor,
3 is what I'm saying is required by the claims that the hostname needs to be
4 resolved by the ISP DNS server. That's not the entire claim. The claim has
5 causing. We're not trying to read out the causing portion of that. This is a
6 method claim, and something needs to cause the hostname to be resolved by
7 the ISP DNS server, but that doesn't take away from the requirement that the
8 resolution needs to be performed by the ISP DNS server. That's the plain
9 language I'm trying to point to.

10 JUDGE MCSHANE: Yeah, thank you.

11 JUDGE CYGAN: And you haven't provided a claim construction,
12 so you're going simply off of plain meaning?

13 MR. PAPPAS: Yes, Your Honor. So, we don't think this requires
14 an express construction because we're going off of the plain language, and
15 that is supported by the prosecution history. I'll touch on the specification
16 first to answer your question, Judge Smith. But yes, I think you get to the
17 same point either way.

18 If you decide that a construction is necessary then it would be that
19 that is a requirement of this limitation. It doesn't read out that something
20 needs to cause that to happen, but that is a requirement that the hostname
21 needs to be resolved to the anycast address by the ISP DNS server. I don't
22 think you need an express construction based on the plain language and the
23 plain meaning. But you get the sense of --

24 JUDGE SMITH: But this is kind of a recurring theme for us.
25 Like, Petitioner comes in, we don't need express construction, we're using

1 plain meaning. Plain meaning means this. And then Patent Owner comes
2 in, we don't need express construction, we're relying on plain meaning, and
3 plain meaning means something totally unrelated to what Petitioner says.
4 So, I mean, we have two parties telling us that they're both using plain
5 meaning and reaching opposite results. So, I mean --

6 MR. PAPPAS: There is a dispute to --

7 JUDGE SMITH: I mean, that kind of cries out, if both sides say
8 the plain meaning means something different. I mean, doesn't that at least
9 -- I mean, the resolution is to have some kind of claim construction.

10 MR. PAPPAS: Yes, I think it's sort of semantic in what you want
11 to call it. There needs to be some interpretation of this term, whether it's an
12 express construction or going by the plain meaning and saying the plain
13 language requires the hostname to be resolved by the ISP DNS server.

14 Just going up to -- I'll just flip to Slide 6 of Patent Owner's
15 demonstratives just to show one of the figures in the patent. And so, I think
16 we haven't said exactly what would map to the ISP DNS server. The patent
17 doesn't explicitly call end user 78 the ISP DNS server, but that's what
18 Petitioner has pointed to, and that's what Petitioner tried to show you with a
19 request going from 70A, the end user DNS server, up to the web server DNS
20 64.

21 But there is more disclosure than just that in the patent. So, for
22 example, and I don't have this specifically on the slide, if you look at the
23 '112 patent at column 6, around lines 40 to 46. Here it talks about the end-
24 user DNS system 70A, and in the end-user DNS system 70A, an entry is
25 made to indicate that the CDN DNS system 70A is the authoritative server

1 for the end-user web domain.

2 So, that 70A is what would be referred to as a CDN DNS server.
3 In this case, it's one of those notes that is repeated in the red boxes there.
4 And then it says the entry for abcd.com no longer resolves to a specific
5 address but instead refers the content requester to the CDN DNS 70A at the
6 anycast address. And so, there are instances here where there can be entries
7 in the end-user DNS system. This is one example of support in the patent.
8 This is not necessarily the only example, but an entry in end user DNS
9 System 70A that actually has an entry for the ultimate CDN DNS server.

10 And so, in that case at least, the end user DNS System can directly
11 perform resolution of the hostname to the anycast address. That's part of the
12 description in this embodiment, in Figures 3 and 5, which I won't call a
13 single embodiment necessarily, but that's one example of support. And
14 that's just one example there. I think the prosecution history --

15 JUDGE SMITH: Well, before you get to the prosecution history,
16 let me ask you this. That's an example of support, but it's not necessarily
17 limiting the claim. I mean, the claim is broad enough to encompass it, but
18 it's not necessarily limited to that. The Petitioner made a significant point
19 about Figure 5 of the '112 patent and said the claim covered Figure 5. Are
20 you saying that the claim doesn't cover what was shown in Figure 5 of the
21 patent?

22 MR. PAPPAS: This description actually is, I think -- what I read
23 to you is with respect to Figure 5. So, that's one example of what can
24 happen in Figure 5.

25 JUDGE SMITH: So, the DNS 70A reaching out to server 64, and

1 64 responding to 70A, you're saying that, I guess, A, that is covered by the
2 claim, and B, that that's not disclosed in Glines?

3 MR. PAPPAS: So, yes, it's not disclosed in Glines, and there are
4 distinctions. There hasn't really been briefing on whether or not that specific
5 operation would meet this specific claim language with the ISP DNS server,
6 because as you know, the ISP DNS server is not recited in every claim, but I
7 will tell you, there are distinctions between what Glines does. And what
8 Glines is doing is reaching out to a root DNS server. It's just a pass-through,
9 it's local resolver. Well, let me start with the patent because I want to
10 address your question --

11 JUDGE SMITH: Okay.

12 MR. PAPPAS: -- first with respect to that.

13 JUDGE SMITH: Okay. So, for the first point, Figure 5 is within
14 the scope of the claim?

15 MR. PAPPAS: I mean, at least portions of the disclosure. I don't
16 think there's been any briefing, so I'm reluctant to give you a straight answer
17 of that operation. I think it would be because it's -- the end-user DNS
18 system 70A is directly involved in forming --

19 JUDGE SMITH: You're pointing to Figure 3. So, Figure 3 is --

20 MR. PAPPAS: Yeah, sorry, I do not have Figure 5 on the slides
21 here.

22 JUDGE SMITH: Figure 3 is within the scope of the claim?

23 MR. PAPPAS: Figure 3 is basically a block diagram of Figure 5.

24 JUDGE SMITH: Okay.

25 MR. PAPPAS: And so, that's sort of what I'm pointing to.

1 JUDGE SMITH: And it's within the scope of the claim, or you
2 don't know if it is?

3 MR. PAPPAS: Well, it's the architecture. So, there's, there's
4 different things described with respect to Figure 3 and Figure 5. I think
5 you're specifically referring to when the end user DNS server makes a
6 -- sends a request to the web server 64.

7 JUDGE SMITH: Right. That's right.

8 MR. PAPPAS: Yeah. And so, in that case, we haven't had explicit
9 briefing on that. But what I'm trying to say is it is different than what Glines
10 discloses, because --

11 JUDGE SMITH: I'm just asking you, it's just either yes, no, or I
12 don't know. Is it within the scope of the claim?

13 MR. PAPPAS: I don't know.

14 JUDGE SMITH: Okay.

15 MR. PAPPAS: I don't know for sure.

16 JUDGE SMITH: Okay.

17 MR. PAPPAS: But what I'll tell you with respect to that is if you
18 look at the patent -- and I don't have these on the slides -- around column 4,
19 line 20, it talks about DNS system 64 being a DNS system for web server
20 62, something like the origin server, a content provider. And then in the
21 '112 patent, column 5, around line 21, the end user DNS system 70A
22 resolves to the common address and it says that the end user DNS system
23 70A knows which DNS system, in this example DNS system 64, it knows to
24 contact that specific DNS server. And that's not the case in Glines.

25 And what Glines is doing, if we turn to Slide 10 of Patent Owner's

1 demonstratives -- what Glines does, its local DNS resolver is basically just a
2 pass-through. There's a request from a browser, and if the local DNS server
3 can't resolve it to a local IP address, it passes that request through to a top-
4 level root DNS server. It doesn't have a specific knowledge of who  proofing
5 Case 00826 from USPTO CASES 00806 & 00826 2026-08-06 is going to be
6 able to return that anycast address. It just passes it to a root DNS server.

7 So, there is a distinction, but I don't think you need to worry about
8 that distinction because the claim itself, supported by disclosure that I read
9 in column 6 of the patent, and then the prosecution history specifically
10 requires the hostname to be resolved by the ISP DNS server to an anycast
11 address. And all they've pointed to for that is the root DNS server in Glines.
12 And everybody agrees the root DNS server is not an ISP DNS server. They
13 do not allege that it is.

14 And I just want to hit that point home before I move on, because I
15 think it's important. If you turn to Slide 9 of Patent Owner's demonstratives,
16 the prosecution history here provides more intrinsic support. It basically
17 -- what happened here is if you look in Exhibit 1007, page 132, there was an
18 amendment to put this by an ISP DNS server where it appears in the claims.
19 And then on the right, page 140 of that, after making that amendment, the
20 Applicant stated, thus using the invention of Claim 1 in response to a request
21 associated with a content provider, the hostname is resolved to the common
22 anycast address by an ISP DNS server.

23 It's very clear-cut. The applicant made that statement consistently
24 through prosecution. Another place is Exhibit 1007 at page 38 in its appeal
25 brief. And there it said, in element C1, the hostname is resolved to the

1 common anycast address by the ISP DNS server. That's part of the
2 prosecution history. That's informative of what is required by the claim, but
3 that's not the end of it.

4 Both experts in this case agreed with that requirement. If you look
5 at Patent Owner's expert first -- and I'm pointing you to certain things that
6 aren't on the slides, so I apologize, but I'll make sure that they're clear for the
7 record. Exhibit 2018, paragraph 54, that's Patent Owner's expert. And
8 we've made this assertion all along. He says, Claim 1 expressly requires the
9 ISP DNS server to resolve the hostname to an anycast address. And then
10 Petitioner's expert, Exhibit 1008, paragraph 46, when he's addressing the
11 prosecution history, stated the applicant amended the claims in response to
12 these office actions, referring to prosecution history here, including requiring
13 the hostname to be resolved to the common anycast address by an internet
14 service provider ISP DNS server.

15 The petition itself refers to the same thing when it discusses the
16 prosecution history. Page 3 of the petition says, the Applicant amended the
17 claims during prosecution to require a hostname to be resolved to a common
18 anycast address by an internet service provider ISP DNS server. And that's
19 the full quote. There's no ambiguity there. That's what all the parties and all
20 the experts have said. And yet when you get into the mapping that Petitioner
21 put forth, and that's on Slide 12 of Patent Owner's demonstratives, Petitioner
22 only points to the local resolver, but it points to the -- for the ISP DNS server
23 -- and it points to the root DNS server that is programmed to return the
24 anycast address to do the resolution.

25 It never makes an argument that the local resolver actually

1 performs resolution of the hostname to an anycast address, and that's
2 dispositive. That's not something that can be filled in later. I know
3 Petitioner said you can still find for them in that case because of general
4 knowledge, but you can't. That's not an argument that was ever made --

5 JUDGE SMITH: Well, no --

6 MR. PAPPAS: -- in the petition.

7 JUDGE SMITH: -- there was -- I mean, to the extent I understand
8 their argument, they were saying it's because of a claim construction that
9 you were proposing in the response.

10 MR. PAPPAS: Yes, if that's the portion, this is, this is assuming
11 that you agree with Patent Owner's requirement of the claim.

12 JUDGE CYGAN: I'm having trouble squaring this discussion with
13 page 7 of your surreply. Judge Smith asked you earlier if you agreed or
14 disagreed or couldn't say whether Figure 5 was an embodiment of that Claim
15 1. But looking at what you've written at page 7, page 7 is talking about
16 Figure 5, and I believe that if I understand it correctly, you were saying that
17 the '112 patent is using DNS server, the DNS server 70A, to directly query
18 the DNS server 64 for the anycast address. And you're not saying that the
19 64, which is the one that returns the anycast address, is the one which is
20 resolving it. You're saying there that it's 70A, which is causing the
21 hostname to be resolved because it's directly involved in performing it. That
22 seems to be exactly what Petitioner is saying. What am I missing there?

23 MR. PAPPAS: Yeah. So, I think this is getting at what Petitioner
24 said in its reply where it's focusing on the causing. And so, this was sort of
25 addressing distinctions in the causing. So, if you were to find for some

1 reason that what I'm talking about, the requirement is not required in the
2 claim, that all the ISP DNS server needs to do is cause. And then this is
3 showing distinctions, right, between what Figure 5 is showing and what
4 Glines is disclosing. And so, there is direct involvement. And I think that
5 gets into the question then, if you were to agree with Petitioner on the
6 causing, right, this is sort of a question of what does causing mean? I'm
7 trying to avoid you even needing to go there because I don't think you need
8 to. And so, this was partially trying to address what they were what they're
9 proposing and why we still don't think Glines would meet it.

10 JUDGE CYGAN: But if causing is required, it seems to me that
11 what you're saying in 7 is that causing can be a two-step process. Correct?

12 MR. PAPPAS: Certainly causing is broader. Yeah.

13 JUDGE CYGAN: Okay, so causing would be broader. When we
14 go back to your reasoning why causing isn't required --

15 MR. PAPPAS: Um-hum.

16 JUDGE CYGAN: -- you pointed us to Figure 3, I believe.

17 MR. PAPPAS: I was just displaying Figure 3 on the slide.

18 JUDGE CYGAN: Right, but you also said that Figure 3 is just a
19 block diagram of Figure 5, correct? So --

20 MR. PAPPAS: I don't --

21 JUDGE CYGAN: -- what's the distinction?

22 MR. PAPPAS: I don't recall the exact differences in description
23 between Figure 3 and Figure 5. But yes, all of these figures are basically
24 trying to show the architecture --

25 JUDGE CYGAN: Um-hum.

1 MR. PAPPAS: -- and then they have different descriptions
2 associated with it. And so, with Figure 5, I think what Petitioner was
3 pointing to is pointing to operation of a certain content request or multiple
4 content requests. Right.

5 JUDGE CYGAN: So, going back to Judge Smith's question from
6 earlier, is there something in your patent you'd like to point to where the ISP
7 DNS server is directly resolving it, which is your -- I believe your proposed
8 construction is that it has to directly resolve it without going to another
9 anycast server?

10 MR. PAPPAS: The direct construction is that it has to directly
11 perform resolution. I'm not sure that we're reading in that it can't necessarily
12 consult something else, but yes, it is -- I think that the portion that I pointed
13 to, which is column 6, 40 to 46, talks about a specific entry within the end
14 user DNS server 70A. And that entry is linked to a specific -- it says refers
15 to the content requester to the CDN DNS server 70A. And so in that case, if
16 it has an entry, doesn't need to grab the anycast, retrieve the anycast address
17 from another location.

18 JUDGE CYGAN: So, in that situation, can you point me to that
19 part of the patent again?

20 MR. PAPPAS: Yes, column 6, around line 40.

21 JUDGE SMITH: And this would be -- if it has it in its own cache,
22 it doesn't reach out?

23 MR. PAPPAS: That could be an example.

24 JUDGE SMITH: Okay.

25 JUDGE CYGAN: And which lines should I be looking at?

1 MR. PAPPAS: Starting at line 40 to 46. I will verify. Or line 39,
2 perhaps. And I think my ultimate point here is this is one example of
3 support, but it is -- it has been made clearly in the prosecution history. And
4 if you want to go as far as claim construction, this would be the Applicant
5 telling the patent office what is required of the claim. And I'm not sure how
6 you can go against such a clear statement in the prosecution history. And it
7 aligns with the claim language where the most -- the by the ISP DNS server
8 most recently before that is the resolution of the hostname.

9 JUDGE CYGAN: Do you have an explanation of this portion of
10 the patent in your briefing?

11 MR. PAPPAS: I don't believe we specifically addressed it because
12 we didn't think it was necessary. This is something I wanted to raise now
13 after seeing the slides, because I thought this might come up in oral
14 argument. But the point is, alone from the claim language, from the
15 prosecution history, you can reach this. This is just another example of
16 support.

17 JUDGE CYGAN: Thank you.

18 MR. PAPPAS: So, if there are no other questions on this element,
19 in the interest of time, I'd like to move to Claim 23, but I'm still happy to
20 answer any more questions that you have. So, I'll turn to Slide 21 of Patent
21 Owner's demonstratives. And this refers to -- Claim 23 has elements B and
22 C as it denotes in the claim itself. And Claim 23 requires performing certain
23 actions, both responsive to a first request for first content, associated with
24 the first content provider, and then responsive to a second request for second
25 content, associated with a second content provider.

1 And if you look on the next slide, this is what Petitioner has been
2 talking about as what they're pointing to, to meet this claim element. So, on
3 Slide 23, Petitioner points -- sorry, Slide 22 of Patent Owner's
4 demonstratives, Petitioner relies on exhibits completely outside the grounds.
5 But for the first content, it's pointing to this Yahoo News webpage that's in
6 Exhibit 1024. It displays a number of different articles. I think Petitioner
7 referred to as a splash page, but it's showing various articles here.

8 And I think it's important to note that the articles on this webpage
9 may or may not have been originally authored by Yahoo News, but the
10 content provider, according to Petitioner, and we agree with this, is Yahoo
11 News. You can see that also on Petitioner's Slide 24, what they're circling as
12 the content provider. Then on Slide 23, Petitioner points to another Yahoo
13 News webpage that displays a news article that appears to be originally
14 authored by Reuters. But this time, even though Yahoo News is providing
15 the webpage, Petitioner alleges that the content provider is Reuters and not
16 Yahoo News.

17 That's wrong in our opinion. If you turn back briefly to Slide 21,
18 the claim requires a second request for second content associated with a
19 second content provider, that includes the first hostname, and that request for
20 second content comes in the form of a URL in both the patent and in
21 Petitioner's proposed grounds.

22 If you turn to Slide 26, that's what we tried to clarify with
23 Petitioner's expert. So, we asked Petitioner's expert to clarify what would be
24 considered the second content. And he confirmed that the content requested
25 is the webpage at the Yahoo News URL that displays the news article. It's

1 not just some portion or some text within the webpage. It is the webpage.
2 That's what's requested in the URL. And you can see on Slide 25, Petitioner
3 points to two URLs that are requested. It's a bit hard to see here, but if you
4 look at the tops of Exhibits 1024 and 1025, they have URLs that point to
5 Yahoo News.

6 That is the request in the claim. It's what the client or what the
7 client device would be, the browser would be requesting to be returned back
8 to the client, it's this entire webpage. And you can see on -- let me see
9 which slide. So, both of these you can see display content of news articles
10 but yet Petitioner is pointing to Yahoo News for the first content provider
11 and then pointing to Reuters for the second content provider. It's the
12 webpage and not the content that should be considered. It doesn't really
13 matter that the articles might have been authored by somebody else. The
14 content provider in the patent isn't referring to the person sitting at a desk
15 writing an article. It's referring to content providers in a technical sense.

16 Yahoo News here is still the content provider of both of the
17 webpages. So, they haven't pointed to a first content provider and a second
18 content provider. And that's consistent with how the '112 patent describes a
19 content provider. If you stay on actually Slide 25 of Patent Owner's
20 demonstratives, the '112 patent first says a content provider refers to an
21 entity having a website on a network. That entity may operate a web server
22 system or may use the hosting services of a hosting provider.

23 This is really what the patent is getting at. This is talking about
24 origin servers and these content providers having web servers that would
25 normally serve content to client browsers that are requesting it, but instead

1 they provide it to the CDN so that the client can access it at a closer location.
2 That's how we're talking about content providers. This is web content.
3 Other areas of the patent that aren't on this slide that support that same
4 understanding.

5 If you turn to the patent at column 3, lines 18 to 21, it talks about
6 with reference to Figure 1, the web server 12 is a computer system
7 containing content, e.g. webpages for a content provider, with the ability to
8 provide this content in response to a web request via the HTTP protocol. So,
9 when we're talking about the content and the content provider, we're talking
10 about what is requested from the browser. It's what's in the URL. In the
11 case of Petitioner's mapping, that is the webpage.

12 JUDGE CYGAN: So, Counselor, if I'm understanding you
13 correctly, the content is the webpage, but it's not the material on the
14 webpage that's being displayed?

15 MR. PAPPAS: That's right. Yes. It could be depending on where
16 that content comes from, but there's no evidence from Petitioner that the
17 content is being provided from another content provider in the sense that the
18 patent is talking about. The patent's just talking about two -- it's talking
19 about web content, it's talking about webpages, and Petitioner has just
20 pointed to two webpages from Yahoo News.

21 JUDGE CYGAN: I mean, is that consistent with your patent, that
22 the content is not the information, but it's the webpage itself? I don't
23 understand the distinction there.

24 MR. PAPPAS: Yes, absolutely. So, I think that what I just read
25 you is a good example of that. There's other areas. So, I'll point you to that

1 again. That's column 3, lines 18 to 21. And that is talking about web server,
2 you know, the computer system containing content, e.g. webpages for a
3 content provider. That's what the patent is referring to when it's talking
4 about the origin server. It's the content provider that's going to be providing
5 these webpages or web content, whatever is at a URL.

6 JUDGE CYGAN: Right, but I'm not sure that really makes sense
7 because in the next section of the patent, it says that it's permitting an end
8 user to perform web browsing, that is to view webpages. It's talking about
9 the end user wishing to view the webpage. How is that not the end user
10 viewing the content of the webpage? I don't understand how you get a
11 webpage and you don't get the content of the webpage.

12 MR. PAPPAS: You do, but I think this is almost getting to sort of
13 a meta distinction. We're talking about the technical content, whatever -- the
14 content is what is sent back to the browser. And what's sent back to the
15 browser includes the article. I agree with that, but it is the HTML for the
16 webpage, that is the content that the user is viewing.

17 JUDGE CYGAN: But the HTML for the webpage, you're saying,
18 doesn't include the images and the text inside of it?

19 MR. PAPPAS: It does. It does, but that's not being provided by
20 Reuters. That's being provided by Yahoo News.

21 JUDGE CYGAN: So, Yahoo News is providing a page, and the
22 page is from Yahoo News because it's from that hostname. But the claim
23 only requires that the content be associated with the second provider. And
24 that seems to be where I'm not catching your point, because if the webpage
25 that's displayed has the name Reuters to it, and we have evidence on record

1 that says Reuters is an entity having a website on a network. So, Reuters is
2 also a content provider under that definition. Why isn't Reuters associated
3 with that webpage's content and not -- I'm trying to understand your
4 argument here.

5 MR. PAPPAS: Sure. So, I think multiple answers to that. The
6 first is, this is back in 2001. We don't have evidence from Petitioner that
7 Reuters had a website on the network that was providing content. Reuters
8 wrote articles. It allowed other providers to distribute it, but we don't have
9 specific evidence. And I think they had pointed to Exhibit 2016 of our
10 evidence to say that Reuters had a website on the network, but that was a
11 webpage pulled from Amazon, from AWS in 2025, talking about Reuters.
12 We have to look back in 2001.

13 But I think that gets away from the point that matters, which is that
14 the patent isn't talking about the -- who wrote the content. They're talking
15 about who is providing it in the architecture of the patent. And there's no
16 evidence that Reuters is providing this to the user, that it's even -- that it is a
17 content provider in that sense. The patent, column 3, lines 18 through 21,
18 I've already read. Column 2, lines 11 through 13 talk about a performance
19 benefit being gained because a content requester can generally retrieve
20 content from a content site closer than the origin server of the content
21 provider. It's talking about --

22 JUDGE CYGAN: Yes, but does the claim require a content
23 provider provide the content in Claim 23, or does it just require that the
24 content be associated with the content provider?

25 MR. PAPPAS: I think it's that it's associated with the content

1 provider, but the fact is that Petitioner hasn't shown that Reuters is a content
2 provider, that's really what I'm getting at in the context of the patent. They
3 haven't proposed any construction of content provider that would allow just
4 the person who authored the article to be considered a content provider. It
5 needs to be providing web content within the context of the patent, which is
6 within the context of an origin server.

7 JUDGE SMITH: Where is that in the claim? To Judge Cygan's
8 point, where is that in the claim? I mean, you keep saying they need to
9 provide content. A first request for first content associated with the first
10 content provider, a second request for second content associated with a
11 second -- I don't see any of these providers providing content. Where is that
12 in the claim?

13 MR. PAPPAS: Well, it can't be a content provider if you're not
14 providing content.

15 JUDGE SMITH: So, it's not in the claim?

16 MR. PAPPAS: What I'm saying is -- and I know you're going --

17 JUDGE SMITH: I mean, this is the method claim, right? I mean,
18 what you're saying is a positive step of providing content, and what method
19 step provides content from different content providers?

20 MR. PAPPAS: So, there needs to be a request for content
21 associated with a second content provider. And so, you have to determine
22 what qualifies as that second content provider. And it's our position that
23 Reuters isn't that second content provider. And at a minimum, Petitioner
24 hasn't shown that. It hasn't shown that Reuters has a website or network,
25 doesn't show that Reuters has hosting services that it would be providing

1 content.

2 This is talking about content providers that are going to use the
3 services of the CDN, if you read it in the context of the patent. And in any
4 event, it would be inconsistent, right, with Petitioner's arguments because if
5 you go back to slide -- let's go to Slide 25 of Patent Owner's demonstratives,
6 right. Under what I think Your Honors are saying, all of these articles here
7 in Exhibit 1024, all of those could be content providers, but Petitioner is not
8 pointing to those as the content providers. It even has the Reuters article that
9 the user would click on, but they're not pointing to Reuters as the content
10 provider there. They're pointing to Yahoo News.

11 And so, in one case, they're pointing to a webpage provided by
12 Yahoo News. And then in the other case, they cherry-pick out the article
13 within it. And so, if you read this consistently, then they can't really have
14 their cake and eat it too. There has to be a content provider. If they're
15 pointing to Yahoo News for the content provider, there's no reason they've
16 provided why Yahoo News is not the content provider, of the second
17 content, the second webpage.

18 JUDGE MCSHANE: Counsel, I'm going to just back you up to
19 what I think -- well, you just have to repeat it for me because I just don't,
20 frankly, don't understand.

21 MR. PAPPAS: Sure.

22 JUDGE MCSHANE: You were suggesting that at column 3, line
23 18, right, that that's the web server, so on, that that's indicative of what the
24 claim is saying, and I am just not getting that. So, could you just explain
25 how that is indicative of what the claim is saying?

1 MR. PAPPAS: Sure. My point there, Your Honor, is that when
2 it's talking about content, it's talking about the web content, which is why it
3 says, e.g. webpages. It's not talking about something from within the
4 webpage. It's talking about --

5 JUDGE MCSHANE: Right.

6 MR. PAPPAS: -- the webpage as a whole.

7 JUDGE MCSHANE: Yeah, yeah, yeah.

8 MR. PAPPAS: Yes.

9 JUDGE MCSHANE: But you have here -- I think what you're
10 saying is that, okay, it has to have the same hostname. The exact same
11 hostname, right? So, if you have the exact same hostname, what is that
12 telling me? You're going to a particular web server, right? So, it's going to
13 have some content, which is some webpage, right? So, why is it going to
14 -- where is it getting one content and then getting a second content?

15 MR. PAPPAS: I think that's part of what Petitioner is ignoring
16 here and saying this is just standard operating procedure for the internet.
17 The claim does have specific requirements that the second request for
18 second content associated with the second content provider has to have the
19 same first hostname. And so, it's not a matter of just clicking on Yahoo
20 News and then going to another link, a link to Reuters or something like
21 that.

22 JUDGE MCSHANE: Right.

23 MR. PAPPAS: It has to be accessing --

24 JUDGE MCSHANE: So, that's the point. But you're not saying
25 that at column 3, line 18, whatever, that that's support for this claim as

1 written?

2 MR. PAPPAS: I think that's support for what a content provider is
3 referring to.

4 JUDGE MCSHANE: Okay.

5 MR. PAPPAS: And I'll go back to Patent Owners Slide 26 --

6 JUDGE MCSHANE: Right.

7 MR. PAPPAS: -- because I think that that's part of the distinction
8 here is, as Petitioner's expert said, the second content is what is at the URL.
9 It is the webpage.

10 JUDGE SMITH: Where's support for that in the spec? The
11 second content, is it a second webpage from a second content provider?
12 Where is that in the spec?

13 MR. PAPPAS: I think what I pointed to you in terms of what we
14 were just talking about in column 3 is one example where it's talking about
15 what the content is. I don't know that the specification has a specific method
16 listed that talks about the first request and the second request in this way, but
17 I think if you read the specification in full, in whole, then it makes clear that
18 the content provider is providing this sort of web content and not just an
19 article, not just the entity that authors an article, right, outside of technical
20 context.

21 And so that's all I wanted to make clear here on Slide 26 is we're
22 talking about the webpage. And no matter what you find about what a
23 content provider is, Petitioner hasn't provided any evidence that that
24 webpage, what's retrieved at the URL, what Petitioner's experts said they're
25 mapping to the second content is associated with Reuters. It's associated

1 with Yahoo News. It's just another Yahoo News webpage.

2 JUDGE SMITH: Just one last question on this --

3 MR. PAPPAS: Sure.

4 JUDGE SMITH: -- and then I'll let it go. I mean, that column 3, it
5 says the web server is a computer system containing content, and then in
6 parentheses, e.g. From what I remember from Latin, e.g. is for example. Is
7 that right?

8 MR. PAPPAS: Yes, yes. So --

9 JUDGE SMITH: The webpages. So, it's not necessarily
10 webpages. It could be -- this is just an example, but it could be just be
11 containing content for a content provider.

12 MR. PAPPAS: Yes, I think to answer your question, the example
13 is a webpage, but that doesn't change that we're referring to web content.
14 So, you could --

15 JUDGE SMITH: But --

16 MR. PAPPAS: -- have other things accessible at URLs, other than
17 a webpage. You could have a content file.

18 JUDGE SMITH: Well, I mean, if webpages is an example, I
19 mean, the sentence, if we just say it's broader than the example of the
20 sentence and becomes -- it's a computer system containing content for a
21 content provider. You're asking us to read webpage into the claim. It's not
22 even required by the disclosure in your spec.

23 MR. PAPPAS: Well, to be clear, I'm not asking you to read
24 webpage into the claim. I'm just trying to provide examples of context in the
25 patent that clarify what a content provider is.

1 JUDGE SMITH: Okay.

2 MR. PAPPAS: That it is somebody having -- somebody like
3 associated with an origin server. That's how the patent is really talking
4 about this. That provides content to the user and is now going to do that
5 through the CDN.

6 JUDGE SMITH: Okay, thank you. I don't have any --

7 MR. PAPPAS: Yeah.

8 JUDGE SMITH: -- more questions about that.

9 MR. PAPPAS: Okay. So, in the interest of time, I'll move to the
10 switch limitations very quickly.

11 JUDGE CYGAN: Counselor, I do have one question --

12 MR. PAPPAS: Yes, Your Honor.

13 JUDGE CYGAN: -- on Claim 23. Your counterpart earlier
14 discussed his interpretation of the first and second request in that it's how a
15 person of ordinary skill in the art would understand the use of
16 www.example.com. Did you have any response to that in your briefing?

17 MR. PAPPAS: Yes, absolutely, we did. And I think you pointed
18 out the fact that this is -- they're not relying on -- well, let me just turn to
19 Slide 27 because I think that's easier here. So, those exhibits are not in the
20 grounds at all. And the www.example.com is the only thing disclosed in
21 Glines. It doesn't talk about these multiple requests to different news
22 aggregation sites that would be retrieving this type of content, right? This is
23 more than filling in the knowledge of a person of skill in the art. This is
24 supplying a completely missing claim element.

25 And so, we did bring that up in the Patent Owner response. It's

1 around pages 34 to 36. In the surreply, it's pages 13 to 15, just to point those
2 out. But the point to hit that very quickly is we don't think this is a proper
3 use of knowledge in the art. This is supplying a missing claim limitation.
4 They haven't pointed to anything in Glines that even suggests that it would
5 perform this operation. And it's important to note also that, as we talked
6 about, this is a method claim and requires performance of the first request
7 and the second request. And all they're doing, all they're pointing to, is
8 extraneous exhibits completely outside the context of Glines, where Glines
9 doesn't even talk about those multiple requests. It just talks about
10 example.com. It doesn't talk about multiple content providers.

11  MR. BOYER: Thank you.

12 MR. PAPPAS: So, just very quickly turning to -- let's turn over to
13 the switch limitations very quickly. And so I'll point you to Slide 43 of
14 Patent Owner's demonstratives. This issue affects claims 13, 18, 19, 21, and
15 22. Those are all independent claims, and then dependent Claim 11, as well.
16 I'll turn to Slide 44 -- sorry, Slide 43. And so, I think what Petitioner talked
17 about -- and I realize I'm into my rebuttal time, but I'll use a little bit of it
18 -- talked about Glines having this disclosure here. This is really all that
19 Glines discloses about switches, but this passage of Glines doesn't specify in
20 any way how the layer 4 switches would be used in Glines' load balancing
21 and replication scheme. It's simply discussing techniques that can be used as
22 part of a general load balancing and replication scheme.

23 On Slide 45, that's exactly what our experts said. It doesn't state
24 the role of the layer 4 switch in performing load balancing or replication,
25 and that's important because if you look back at the claim language, the

1 claim language doesn't just recite a switch. This is a method that recites a
2 switch that performs a specific task. It selects the content server from said
3 respective plurality of content servers associated with the CDN DNS. And
4 that's reading from Claim 11 on patent under Slide 43.

5 They haven't shown anything in Glines that teaches that you would
6 do that. And they actually ignore what Glines teaches. So, I'll go back to
7 Slide 43 quickly. All right. I'm sorry, I'll go to Slide 44. So, Glines actually
8 suggests that it would be some other device that would be performing the
9 actual selection. And switches don't necessarily need to be used for
10 selection. That's not their default capability. There's a decision plane and
11 there is a forwarding plane. They haven't shown that you would use a
12 switch in Glines for making the decision of which content server to send the
13 user to.

14 And it's not shown on this slide, but if you look in the next
15 paragraph of Glines, and that's page 19 or column 19, lines 17 through 22,
16 that also discusses that the DNS server in the service group can measure the
17 load of local content servers. And by doing that, it can make a decision of
18 where to send the client. And so, it actually provides ways of performing
19 this selection because it has these CDN DNS servers that can measure the
20 load of their local content servers and then make the decision without using
21 a switch to make that decision. Glines says that a switch could be part of the
22 overall scheme of load balancing and replication, but it doesn't specify that
23 it's going to be used for the selection.

24 And then if you jump to Slide 46 of Petitioner's demonstratives,
25 Colby doesn't fill in the gap there. So, Petitioner points to a general switch

1 in Colby that does perform some sort of load balancing techniques, and we
2 haven't argued specifically that it doesn't. But Petitioner doesn't explain
3 anywhere why you would use that switch in Glines when Glines already has
4 a different architecture, and it has CDN DNS servers that can measure the
5 local -- the load on the local servers and they can make the decision.

6 And it's in its alleged motivation to combine, which is not shown
7 here, but in the petition on page 68, Petitioner just says that combining
8 Glines with Colby would have distributed load across multiple content
9 servers at each location, and maintain server stability across Glines' content
10 servers, but the combination isn't even clear as to where you would put
11 Colby's switch.

12 I'll bring up Petitioner's Slide 30 very quickly. If you look at
13 Colby, Colby has a flow switch here that's actually connected in a very
14 different architecture than Glines. It's connected between clients and the
15 web servers. And so, in Colby, it may make sense to use that to make the
16 decision of which web server to send the client traffic to, and it uses a
17 network probe that can measure traffic to do that, I believe.

18 But if you put this into Glines' system now that has these CDN
19 DNS servers that are already measuring the load on its local content servers,
20 it's not clear how you'd use this. And it would be duplicative to do that.
21 There's no reason provided why you would do that, why you would use
22 Colby's specific switch in Glines' architecture. So, that's where I'll leave it
23 because I know I'm over time, but I'm happy to answer questions on it.

24 JUDGE CYGAN: Thank you, Counsel.

25 MR. PAPPAS: Thank you.

1 JUDGE CYGAN: You are four minutes over, so you have five
2 minutes left for your rebuttal.

3 MR. PAPPAS: Would that be --

4 JUDGE CYGAN: I'm sorry, you have --

5 JUDGE SMITH: Ten minutes.

6 JUDGE CYGAN: -- ten minutes. Sorry.

7 MR. PAPPAS: Okay, thank you.

8 JUDGE CYGAN: Petitioner, you may begin your rebuttal when
9 you're ready.

10 MR. BOYER: Thank you, Your Honors. Alex Boyer again for
11 Petitioner, Google.

12 JUDGE CYGAN: And Counselor, not to jump on you right away,
13 but I have a question for you about the evidence about Reuters being a
14 content provider. I wanted to ask you now so maybe you could have
15 someone help you find this before the end of your time. But your
16 counterpart brought up the question of is there any piece of evidence that
17 shows that Reuters was a content provider at the pertinent time. And you
18 have a couple different pieces of evidence that says Reuters was a content
19 provider. That was a more recent, I think, article in Exhibit 2008. And you
20 had a couple of other statements from their declarant. I'm not sure if we
21 have one that says Reuters was a content provider in, let's say, 2001, if that
22 was the pertinent time. So, if you have a cite for that, I'd appreciate it. And
23 I will let you continue on with your rebuttal.

24 MR. BOYER: Thank you. Well, to that point, what I would first
25 say is the Board is viewing the claim correctly and let me jump to the

1 appropriate slide. The Board is viewing Claim 23 correctly that the --

2 JUDGE SMITH: What slide is this?

3 MR. BOYER: This is slide 22.

4 JUDGE SMITH: Twenty-two. Okay.

5 MR. BOYER: And this is just an overview of the language of
6 Claim 23. And I would just like to reiterate, I think the Board is viewing the
7 two pieces of content, the first and second content. The claim language says
8 that those pieces of content have to be associated with content providers.
9 The claim doesn't require that the two pieces of content flow from two
10 different origin sources. Instead, by its plain language, those two pieces of
11 content, they're associated with two different content providers, and they
12 have to flow through essentially the same website, the first hostname.

13 To the point that the content provider has to have its own website,
14 the evidence that we provided was in Exhibit 1024 and 1025, where that web
15 content associated with Reuters was made available through Yahoo News.
16 There's no requirement, as the Board correctly identified that any particular
17 statement from the specification that the content provider has to have a
18 website by itself, there's no requirement of the claim to establish that in
19 order to reach Claim 23.

20 JUDGE SMITH: Just real quickly, because I know you don't have
21 much time, but the Patent Owner is telling us content provider is a technical
22 term that means somebody who provides content on the web using
23 webpages, that that's a content provider, as opposed to just the normal
24 meaning of content provider, is somebody who provides content.

25 MR. BOYER: Um-hum.

1 JUDGE SMITH: It may be on the web, it may be pen and paper
2 content, but how should we interpret the term content provider?

3 MR. BOYER: So, I think it is correct that content provider, we're
4 talking about web content. And I think if I jump here to Slide 25, Yahoo
5 News is a news aggregator website, and what that does is it aggregates web
6 content and specifically news articles that are available online.

7 I don't think there's anything that we need to meet in the claim to
8 specify that Reuters itself has a standalone website. I think it did, but all we
9 need to do is identify first and second content associated with a first content
10 provider and a second content provider. And that's what we have. I mean,
11 we provided exhibits 1024 and 1025, and 1025 shows that web content from
12 Reuters. That is web content that was available at the time on a website that
13 was aggregated by Yahoo News and provided through Yahoo News' system.

14 JUDGE SMITH: Okay. And then real quickly, just to Patent
15 Owner's point that the claim requires two separate steps, the Glines reference
16 only has one step of selecting example.com, and the reliance on the
17 background knowledge is more than to show how one could skill an art with
18 weak lines. It's actually to provide the selecting -- there are two selecting
19 steps required by -- or I forget exactly how it's claimed, but there are two
20 requests that need to be made. Glines only shows one request and you're
21 relying on background knowledge to provide the second request, a missing
22 claim limitation. How do you respond to that?

23 MR. BOYER: Yes, we respond to Claim 23 as a use case. It's a
24 use case of Glines. And what we have is mere replication of what Glines
25 already teaches.

1 JUDGE SMITH: This use case, is there case law on this point, the
2 use case that you're talking about?

3 MR. BOYER: Well, the case law tells us that we look at the prior
4 art and what it teaches and how a POSITA would look at the disclosure of
5 the references, and any difference between the prior art and the claims, we
6 have to consider within the view of a POSITA, and we bring to bear a
7 POSITA's knowledge. And so, a POSITA would understand that this is the
8 system of Glines. It performs this two-step resolution process, and it
9 discloses a user seeking particular content and entering a URL, for example,
10 example.com. And a POSITA would understand that, of course, you can
11 perform that twice and you could identify and resolve different types of
12 content that were available at the time.

13 JUDGE SMITH: Okay, thank you.

14 MR. BOYER: And I just want to jump from here to Claim 1 just
15 very briefly. Let me jump to Slide 5. So, I think I heard my counterpart say
16 that they were not proposing a claim construction in the Patent Owner
17 response, and I think that's false. What Patent Owner is arguing is
18 essentially that the claim has to be narrowed. They point to things in the
19 specification, including things that were not briefed, as you just heard. This
20 citation to column 6, lines 40 to 46, citations to the prosecution history, that's
21 nowhere in the briefing. They didn't argue that.

22 But even if they did, they are asking the Board to look at that
23 example and the examples that we pulled out of a broader disclosure of a
24 query-based resolution process, and they're asking the Board to pick one.
25 They're asking for a narrowing construction that is just not supported. We

1 are saying that the language of the claim itself, causing said hostname to be
2 resolved, by the ISP DNS server encompasses both of those things. It
3 encompasses Glines' teachings. The ISP DNS server can resolve it itself, or
4 it can as Glines does and as the Patent Owner describes, perform a query to
5 the authoritative name server. And that's really all I have to say about that.

6 JUDGE MCSHANE: Counsel, on the prosecution history, to the
7 extent that we would consider Patent Owner's argument today, what's your
8 view of what the import of the prosecution history is?

9 MR. BOYER: I don't think it's limiting. I think what the Patent
10 Owner is arguing is a prosecution history disclaimer argument that would
11 take the remarks from an Applicant and rewrite the claims. The claims say
12 causing said hostname to be resolved. That is described as a query-based
13 process. And if we take additional citations that are now being brought up,
14 of a direct resolution, what Patent Owner is asking is to take remarks and to
15 limit the claim language. And there's just no briefing to support a
16 prosecution history disclaimer argument that way. Instead, the claim
17 language, by -- on its face, it may support a direct resolution, but I think it
18 certainly encompasses a broader resolution process where the ISP DNS
19 server queries the authoritative name server. Does that answer your
20 question?

21 JUDGE MCSHANE: Yes.

22 MR. BOYER: And I'll just circle back, if I can. Let's just talk
23 about Claim 23 because I want to make a final point. I know I don't have
24 much time, but this whole idea that Reuters is not a separate content
25 provider and whether we provided evidence of that. If you look at the

1 Exhibit 1024 and on the left-hand side you have various news topics and
2 various citations to different news outlets. And we submit that Reuters is
3 one of those news outlets that provides web content and has its own website.

4 And so, we would direct the Board to these links, which show this
5 type of news content was available at the time. Yahoo News, as POSITAs
6 knew, aggregated it. It made its way online somehow, and Yahoo News
7 aggregates it into one source.

8 JUDGE SMITH: I see. And one of the links is abcnews.com, it
9 looks like.

10 MR. BOYER: Right. And there's AP, there's Motley Fool, there's
11 ABC News, there's Reuters to the very left under sports in the middle of the
12 page. There's a link to Reuters itself. So, we would point to this evidence as
13 satisfying the additional claim language the Patent Owner would like to
14 introduce in the claim of the content provider having to have its own
15 website.

16 JUDGE CYGAN: Counselor, I don't think that that link on the left
17 helps you, because some of the other links are San Francisco Bay Area. So
18 --

19 JUDGE CYGAN: But your main contention is that it doesn't need
20 to be a web provider, it needs to be a content provider.

21 MR. PAPPAS: That's right.

22 JUDGE CYGAN: Okay.

23 MR. BOYER: Unless there are any other questions, thank you for
24 your time.

25 JUDGE CYGAN: Patent Owner, I'm going to add on two more

1 minutes. That'll give you 12 minutes.

2 MR. PAPPAS: Okay. Thank you, Your Honors. I will try not to
3 take the whole 12 minutes here. Just on Claim 23, I think we've said a lot
4 about it, but I just want to point out that there is a bit more to Claim 23 than
5 the Petitioner is letting on. And if you look in step C, it talks about a second
6 request for second content associated with a second content provider. It says
7 of said plurality of content providers.

8 And when you go back up to step A, it's talking about the DNS
9 servers and content servers specifically being configured to support content
10 delivery for those plurality of content providers. And so, just as another
11 thing for you to look at, if you look on the petition at page 54, that's where it
12 addresses this language, and it just refers back to Claim 13. And in Claim
13 13, there's no discussion of Reuters or Yahoo News or anything like that.

14 JUDGE SMITH: Let me ask you this. On slide 23 of your
15 demonstratives --

16 MR. PAPPAS: Slide 23, sure.

17 JUDGE SMITH: Yeah. So, if you could -- you have an image of
18 Exhibit 1025. And to Petitioner's point, he's saying at the top of this, there
19 are these hyperlinks to Reuters, AP, AP US, abcnews.com. Why doesn't it
20 show, like, for example, abcnews.com, as content that's coming from
21 abcnews.com? Why isn't that enough?

22 MR. PAPPAS: Sure. So, obviously this isn't a briefed issue, but if
23 you look at this, these are links to Yahoo News websites. So, my
24 interpretation of this, looking at this, is that these are links to Yahoo News
25 showing articles from these content, from these authors of the articles. So, if

1 you clicked on Reuters, for example, or you clicked on AP, for example, it
2 would show specific articles authored by them. That doesn't change.

3 JUDGE SMITH: But doesn't abcnews.com -- doesn't that mean it's
4 from the website abcnews.com? What does that mean?

5 MR. PAPPAS: I don't know. A lot of businesses at the time
6 actually had .com in their name, so I don't actually know. I don't have any
7 knowledge this would go to their specific website.

8 JUDGE SMITH: Okay.

9 MR. PAPPAS: And yes, I mean, abcnews.com probably had a
10 website. I still, for the reasons we've said, don't think that's a content
11 provider in the context of the patent. But to the extent we're focusing on
12 whether they had a website on the network, abcnews.com might be the only
13 one that you could indicate does from this evidence. I don't think having a
14 Reuters link says that it's going to the Reuters website, and there's no
15 testimony on that point. And I just will go back to its Petitioner's burden to
16 establish.

17 And I also just want to reiterate these are not exhibits that are part
18 of the ground. This is purely being relied on for knowledge in the art. And I
19 think Petitioner actually said that in their Petitioner reply, that they're not
20 relying on -- they're not relying on this for the element itself, just for the
21 knowledge in the art and how you would interpret Glines. And Glines says
22 nothing about that.

23 The other point I wanted to make was on Claim 1, and we were
24 talking about -- the Petitioner at least was talking about that we're trying to
25 make a prosecution disclaimer argument. I'll go back up to Slide 9 of Patent

1 Owner's demonstratives. I will answer this in two ways -- my own question
2 in two ways.

3 One, we still think this is based on the plain language of the
4 claims. And the prosecution history supports the plain language of the claim.
5 It doesn't have to come to the point of prosecution history disclaimer. And
6 I'll give you a case on that which actually supports both points. If you look
7 at Biogen v. IDEC, which is at 713 F.3d 1090 -- around 1094 and 1095, it
8 says the prosecution history can often form the meaning of the claim
9 language by demonstrating how the inventor understood the invention and
10 whether the inventor limited the invention in the course of prosecution.

11 It doesn't necessarily have to rise to the level of prosecution history
12 disclaimer, but that same case also talks about when the Patentee
13 unequivocally and unambiguously disavows certain meaning to obtain a
14 patent, then prosecution history disclaimer narrows the meaning of the
15 claim. If you decide that this needs to be construed and we need to rise to
16 the level of prosecution history disclaimer. I think this does that. This is
17 unambiguous. It's unequivocal. The Patent Owner, the Applicant in
18 prosecution, said the hostname is resolved to the common anycast address
19 by an ISP DNS. And that is a requirement of the claim, separate from what
20 needs to cause it. That needs to be a requirement of the claim under any way
21 that you try to analyze this. I'll leave it at that, unless you have specific
22 questions.

23 JUDGE SMITH: I just have one question.

24 MR. PAPPAS: Sure.

25 JUDGE SMITH: Does that read the word causing out of the

1 claim?

2 MR. PAPPAS: No, absolutely not, Your Honor. So, under that
3 interpretation, this becomes a requirement of the claim, which is -- I
4 encourage you to go back and actually look at grammatical rules and even
5 put this into AI for that to figure out how you would construe this
6 grammatically. But it becomes a requirement of the claim, and then
7 something still is causing the hostname to be resolved. So, it doesn't read
8 causing out, it just takes the phrase within that element and makes it a
9 requirement of the claim. It says what it says. It says the hostname is
10 resolved, and I'll go back up to that slide just so that you can see it.

11 It says the hostname to be resolved to said common anycast
12 address by an ISP DNS server, that by an ISP DNS server must resolve the
13 hostname to a common anycast address, separate from what otherwise might
14 cause it to happen. So --

15 JUDGE SMITH: And if we were taking a look at Figure 3 --

16 MR. PAPPAS: Sure.

17 JUDGE SMITH: -- which was your explanation of that, I believe.

18 MR. PAPPAS: Yes, I think that was one example of --

19 JUDGE CYGAN: Can you show me on Figure 3, I guess, maybe
20 Slide 5 -- your Slide 5 -- how both parts of that claim would be met?

21 MR. PAPPAS: So, again, we didn't specifically address this
22 because we didn't think this was necessary for the issue of resolution.

23 JUDGE CYGAN: Right, but if you're talking prosecution estoppel
24 --

25 MR. PAPPAS: Um-hum.

1 JUDGE CYGAN: -- even just informing it, you're trying to read
2 out, I think, the description of Figure 5, and that brings you back to some
3 other description there that has to support it. I mean, I don't know that we
4 could accept a statement in the prosecution history that would limit it to
5 something that there was no description for in the patent, that would be a
6 very odd result.

7 MR. PAPPAS: Um-hum.

8 JUDGE CYGAN: And we, I think, would want to avoid that. So,
9 could you explain how, if we're taking a look at this portion of column 6,
10 which you described in Figure 3, there's the steps C1 and C2, and C1 and C2
11 are being done by different things. Can you explain how that's still met by
12 those, both of those C1 and C2 steps?

13 MR. PAPPAS: Yeah. So, at least in the example I pointed out,
14 where there's an -- that was in column 6, where we were talking about --

15 JUDGE CYGAN: Um-hum.

16 MR. PAPPAS: -- lines 40 through 39 through 46, I think. The
17 end-user DNS 70A would have an entry that refers to the DNS system 78.
18 So, those are denoted here, I think 78A, B, and C in the red boxes, did you
19 follow that?

20 JUDGE CYGAN: So, you're in column 6, around line 39 or so,
21 correct?

22 MR. PAPPER: Yes, correct. And so, in that instance, at least,
23 where there is an entry in end user DNS system 70A, then when the browser
24 requests content, then it goes to end user DNS 70A, which has a reference to
25 DNS system 78. That DNS system then is, in all instances, I think,

1 described in the patent, that's performing C2. That's where the address of
2 the anycast system -- sorry, the anycast address referring to DNS system 78
3 is reached out to by the browser, and then that returns the IP address of the
4 associated web cache. And so, that would be one example.

5 JUDGE CYGAN: So, 70A is doing the anycast resolution; is that
6 correct?

7 MR. PAPPAS: In that example, in the column of the patent, yes,
8 because it has an entry, it can do that.

9 JUDGE CYGAN: Okay. And then 78, which is a different one, is
10 doing C2?

11 MR. PAPPAS: Yes, correct.

12 JUDGE CYGAN: I really don't see the distinction between that
13 and the Figure 5 description, which you talked about in your survey reply.

14 MR. PAPPAS: No, I --

15 JUDGE CYGAN: It's relying on the same 70A and 78, for those
16 same things you're talking about now.

17 MR. PAPPAS: I think, yes, to the extent there was any confusion
18 there --

19 JUDGE CYGAN: Um-hum.

20 MR. PAPPAS: -- I'm only pointing to Figure 3 here because I
21 have it on my slide.

22 JUDGE CYGAN: Right.

23 MR. PAPPAS: Otherwise, I would have pointed to Figure 5.

24 JUDGE CYGAN: Right, but if the anycast resolution is being
25 done at 70A, 70A is not the ISP DNS as you've described it, correct?

1 MR. PAPPAS: I'm not sure I'm following why it couldn't be the
2 ISP DNS. It's still in contact with the browser and it can have a mapping
3 within it. So, and Petitioner has pointed to end user 70A and called it the
4 ISP DNS server --

5 JUDGE CYGAN: Okay.

6 MR. PAPPAS: -- in the patent. So, I would say it can be, in that
7 case, it is unambiguously performed -- it would unambiguously be involved
8 in resolving the hostname to an anycast address.

9 JUDGE CYGAN: Okay, thank you.

10 MR. PAPPAS: Okay. If no other questions, I will cede the rest of
11 my time.

12 JUDGE CYGAN: I'd like to thank Counsel for both parties for
13 your attendance and presentations. We appreciate the well-preparedness of
14 Counsel today, your good command of the record. It was very helpful for
15 the Board. We'd like to compliment your colleagues who did a fine job of
16 handling the demonstrative exhibits. This case is now submitted, and a final
17 written decision will be issued in due course. We're now off the record.
18 Thank you.

19 (Whereupon the above-entitled matter went off the record at 3:10
20 p.m.)

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